

|                                                                                                                                                                                 |                          |                                                                                                                                                                                                                                                                                                                                                  |                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| <p align="center">KINGDOM OF BAHRAIN</p> <p align="center"><b>Ministry of Transportation<br/>and Telecommunications</b></p>                                                     |                          |                                                                                                                                                                                                                                                                 | <p>مملكة البحرين</p> <p><b>وزارة المواصلات والاتصالات</b></p> |
| <p align="center"><b>BAHRAIN FIR</b></p> <p align="center"><b>Air Traffic Management Directorate</b></p> <p align="center"><b>Aeronautical Information Management (AIM)</b></p> |                          | <p><b>Post:</b> Aeronautical Information Management<br/>MTT / Civil Aviation Affairs<br/>P.O. Box 586<br/>Manama<br/>Kingdom of Bahrain</p> <p><b>TEL:</b> +973 17321181 / 17321182</p> <p><b>FAX:</b> +973 17323876 / 17321025</p> <p><b>AFTN:</b> OBBBYNYX</p> <p><b>E-MAIL:</b> sdc@mtt.gov.bh</p> <p><b>URL:</b> https://aim.mtt.gov.bh/</p> |                                                               |
| <b>AIP AIRAC AMDT 12/22</b>                                                                                                                                                     | <b>EFF Date 1 DEC 22</b> |                                                                                                                                                                                                                                                                                                                                                  |                                                               |

This AIRAC AIP AMDT 12/22 contains:

GEN 0.4  
ENR 1.3  
ENR 4.1  
AD 2-OBBI  
AD 2-OBBS  
AD 2-OBKH

1.

| DESTROY |           |             | INSERT |           |            |
|---------|-----------|-------------|--------|-----------|------------|
| GEN     | 0.4-1     | 16 JUL 2020 | GEN    | 0.4-1     | 1 DEC 2022 |
|         | 0.4-2     | 16 JUL 2020 |        | 0.4-2     | 1 DEC 2022 |
|         | 0.4-3     | 16 JUL 2020 |        | 0.4-3     | 1 DEC 2022 |
| ENR     | 1.3-1     | 17 SEP 2015 | ENR    | 1.3-1     | 1 DEC 2022 |
|         | 1.3-2     | 17 SEP 2015 |        | 1.3-2     | 1 DEC 2022 |
|         | 1.3-3     | 16 JUL 2020 |        | 1.3-3     | 1 DEC 2022 |
|         | 1.3-4     | 16 JUL 2020 |        | 1.3-4     | 1 DEC 2022 |
|         | 4.1-1     | 21 APR 2022 |        | 4.1-1     | 1 DEC 2022 |
| AD      | 2-OBBI-2  | 21 APR 2022 | AD     | 2-OBBI-2  | 1 DEC 2022 |
|         | 2-OBBI-3  | 21 APR 2022 |        | 2-OBBI-3  | 1 DEC 2022 |
|         | 2-OBBI-9  | 21 APR 2022 |        | 2-OBBI-9  | 1 DEC 2022 |
|         | 2-OBBI-11 | 21 APR 2022 |        | 2-OBBI-11 | 1 DEC 2022 |
|         | 2-OBBI-12 | 18 JUN 2020 |        | 2-OBBI-12 | 1 DEC 2022 |
|         | 2-OBBI-13 | 16 JUL 2020 |        | 2-OBBI-13 | 1 DEC 2022 |
|         | 2-OBBI-14 | 18 JUN 2020 |        | 2-OBBI-14 | 1 DEC 2022 |
|         | 2-OBBI-15 | 18 JUN 2020 |        | 2-OBBI-15 | 1 DEC 2022 |
|         | 2-OBBI-16 | 21 APR 2022 |        | 2-OBBI-16 | 1 DEC 2022 |
|         | 2-OBBI-17 | 21 APR 2022 |        | 2-OBBI-17 | 1 DEC 2022 |
|         | 2-OBBI-18 | 22 APR 2021 |        | 2-OBBI-18 | 1 DEC 2022 |
|         | 2-OBBI-23 | 21 APR 2022 |        | 2-OBBI-23 | 1 DEC 2022 |

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| 2-OBBI-25 | 21 APR 2022 | 2-OBBI-25 | 1 DEC 2022 |
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| 2-OBBI-27 | 21 APR 2022 | 2-OBBI-27 | 1 DEC 2022 |
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| 2-OBBI-29 | 22 APR 2021 | 2-OBBI-29 | 1 DEC 2022 |
| 2-OBBI-30 | 18 JUN 2020 | 2-OBBI-30 | 1 DEC 2022 |
| 2-OBBI-31 | 22 APR 2021 | 2-OBBI-31 | 1 DEC 2022 |
| 2-OBBI-32 | 18 JUN 2020 | 2-OBBI-32 | 1 DEC 2022 |
| 2-OBBI-33 | 22 APR 2021 | 2-OBBI-33 | 1 DEC 2022 |
| 2-OBBI-34 | 18 JUN 2020 | 2-OBBI-34 | 1 DEC 2022 |
| 2-OBBI-35 | 22 APR 2021 | 2-OBBI-35 | 1 DEC 2022 |
| 2-OBBI-36 | 18 JUN 2020 | 2-OBBI-36 | 1 DEC 2022 |
| 2-OBBI-37 | 9 SEP 2021  | 2-OBBI-37 | 1 DEC 2022 |
| 2-OBBI-38 | 18 JUN 2020 | 2-OBBI-38 | 1 DEC 2022 |
| 2-OBBI-39 | 22 APR 2021 | 2-OBBI-39 | 1 DEC 2022 |
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| 2-OBBI-43 | 9 SEP 2021  | 2-OBBI-43 | 1 DEC 2022 |
| 2-OBBI-44 | 18 JUN 2020 | 2-OBBI-44 | 1 DEC 2022 |
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| 2-OBBI-46 | 18 JUN 2020 | 2-OBBI-46 | 1 DEC 2022 |
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| 2-OBBI-51 | 22 APR 2021 | 2-OBBI-51 | 1 DEC 2022 |
| 2-OBBI-52 | 18 JUN 2020 | 2-OBBI-52 | 1 DEC 2022 |
| 2-OBBI-53 | 9 SEP 2021  | 2-OBBI-53 | 1 DEC 2022 |
| 2-OBBI-54 | 18 JUN 2020 | 2-OBBI-54 | 1 DEC 2022 |
| 2-OBBI-55 | 22 APR 2021 | 2-OBBI-55 | 1 DEC 2022 |
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| 2-OBBI-57 | 22 APR 2021 | 2-OBBI-57 | 1 DEC 2022 |
| 2-OBBI-58 | 22 APR 2021 | 2-OBBI-58 | 1 DEC 2022 |
| 2-OBBI-59 | 9 SEP 2021  | 2-OBBI-59 | 1 DEC 2022 |
| 2-OBBI-60 | 18 JUN 2020 | 2-OBBI-60 | 1 DEC 2022 |
| 2-OBBI-61 | 22 APR 2021 | 2-OBBI-61 | 1 DEC 2022 |
| 2-OBBI-62 | 18 JUN 2020 | 2-OBBI-62 | 1 DEC 2022 |

| DESTROY    |             | INSERT     |            |
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| 2-OBBI-64  | 18 JUN 2020 | 2-OBBI-64  | 1 DEC 2022 |
| 2-OBBI-65  | 22 APR 2021 | 2-OBBI-65  | 1 DEC 2022 |
| 2-OBBI-66  | 18 JUN 2020 | 2-OBBI-66  | 1 DEC 2022 |
| 2-OBBI-67  | 22 APR 2021 | 2-OBBI-67  | 1 DEC 2022 |
| 2-OBBI-68  | 18 JUN 2020 | 2-OBBI-68  | 1 DEC 2022 |
| 2-OBBI-69  | 22 APR 2021 | 2-OBBI-69  | 1 DEC 2022 |
| 2-OBBI-70  | 18 JUN 2020 | 2-OBBI-70  | 1 DEC 2022 |
| 2-OBBI-71  | 22 APR 2021 | 2-OBBI-71  | 1 DEC 2022 |
| 2-OBBI-72  | 18 JUN 2020 | 2-OBBI-72  | 1 DEC 2022 |
| 2-OBBI-73  | 22 APR 2021 | 2-OBBI-73  | 1 DEC 2022 |
| 2-OBBI-74  | 18 JUN 2020 | 2-OBBI-74  | 1 DEC 2022 |
| 2-OBBI-75  | 22 APR 2021 | 2-OBBI-75  | 1 DEC 2022 |
| 2-OBBI-76  | 18 JUN 2020 | 2-OBBI-76  | 1 DEC 2022 |
| 2-OBBI-77  | 22 APR 2021 | 2-OBBI-77  | 1 DEC 2022 |
| 2-OBBI-78  | 18 JUN 2020 | 2-OBBI-78  | 1 DEC 2022 |
| 2-OBBI-79  | 22 APR 2021 | 2-OBBI-79  | 1 DEC 2022 |
| 2-OBBI-80  | 18 JUN 2020 | 2-OBBI-80  | 1 DEC 2022 |
| 2-OBBI-81  | 22 APR 2021 | 2-OBBI-81  | 1 DEC 2022 |
| 2-OBBI-82  | 18 JUN 2020 | 2-OBBI-82  | 1 DEC 2022 |
| 2-OBBI-83  | 22 APR 2021 | 2-OBBI-83  | 1 DEC 2022 |
| 2-OBBI-84  | 18 JUN 2020 | 2-OBBI-84  | 1 DEC 2022 |
| 2-OBBI-85  | 9 SEP 2021  | 2-OBBI-85  | 1 DEC 2022 |
| 2-OBBI-86  | 18 JUN 2020 | 2-OBBI-86  | 1 DEC 2022 |
| 2-OBBI-87  | 22 APR 2021 | 2-OBBI-87  | 1 DEC 2022 |
| 2-OBBI-88  | 18 JUN 2020 | 2-OBBI-88  | 1 DEC 2022 |
| 2-OBBI-89  | 22 APR 2021 | 2-OBBI-89  | 1 DEC 2022 |
| 2-OBBI-90  | 18 JUN 2020 | 2-OBBI-90  | 1 DEC 2022 |
| 2-OBBI-91  | 22 APR 2021 | 2-OBBI-91  | 1 DEC 2022 |
| 2-OBBI-92  | 18 JUN 2020 | 2-OBBI-92  | 1 DEC 2022 |
| 2-OBBI-93  | 22 APR 2021 | 2-OBBI-93  | 1 DEC 2022 |
| 2-OBBI-94  | 18 JUN 2020 | 2-OBBI-94  | 1 DEC 2022 |
| 2-OBBI-95  | 22 APR 2021 | 2-OBBI-95  | 1 DEC 2022 |
| 2-OBBI-96  | 18 JUN 2020 | 2-OBBI-96  | 1 DEC 2022 |
| 2-OBBI-97  | 22 APR 2021 | 2-OBBI-97  | 1 DEC 2022 |
| 2-OBBI-98  | 22 APR 2021 | 2-OBBI-98  | 1 DEC 2022 |
| 2-OBBI-99  | 22 APR 2021 | 2-OBBI-99  | 1 DEC 2022 |
| 2-OBBI-100 | 22 APR 2021 | 2-OBBI-100 | 1 DEC 2022 |
| 2-OBBI-101 | 21 APR 2022 | 2-OBBI-101 | 1 DEC 2022 |

| DESTROY    |             |  | INSERT     |            |  |
|------------|-------------|--|------------|------------|--|
| 2-OBBI-102 | 22 APR 2021 |  | 2-OBBI-102 | 1 DEC 2022 |  |
| 2-OBBI-103 | 21 APR 2022 |  | 2-OBBI-103 | 1 DEC 2022 |  |
| 2-OBBI-104 | 22 APR 2021 |  | 2-OBBI-104 | 1 DEC 2022 |  |
| -          | -           |  | 2-OBBI-105 | 1 DEC 2022 |  |
| 2-OBBS-1   | 21 APR 2022 |  | 2-OBBS-1   | 1 DEC 2022 |  |
| 2-OBKH-1   | 21 APR 2022 |  | 2-OBKH-1   | 1 DEC 2022 |  |

## 2. Hand amendments

NIL

## 3. Record entry of AIRAC AMDT on the page GEN 0.2-1.

## 4. The following publications have been incorporated in this AIRAC AMDT:

AIP SUP 04/22

AIC NIL

NOTAM A0174/22, A0182/22, A0193/22, A0252/22, A0253/22, A0254/22, A0255/22, A0261/22, A0262/22, A0263/22, A0264/22, A0265/22, A0266/22, A0267/22, A0268/22, A0281/22, A0312/22, A0313/22, A0314/22, A0315/22, A0316/22,A0317/22.

- END -



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| 1.2-1                         | 21 JUN 18 |
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| 1.2-6                         | 21 JUN 18 |
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| 1.5-1                          | 11 OCT 18 |
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| 1.6-1                          | 21 APR 22 |
| 1.6-2                          | 3 MAR 16  |
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| 2.1-1         | 2 MAR 17  |
| 2.1-2         | 21 APR 22 |
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| 2-OBBI-10                    | 21 APR 22 |
| 2-OBBI-11                    | 1 DEC 22  |
| 2-OBBI-12                    | 1 DEC 22  |
| 2-OBBI-13                    | 1 DEC 22  |
| 2-OBBI-14                    | 1 DEC 22  |
| 2-OBBI-15                    | 1 DEC 22  |
| 2-OBBI-16                    | 1 DEC 22  |
| 2-OBBI-17                    | 1 DEC 22  |
| 2-OBBI-18                    | 1 DEC 22  |
| 2-OBBI-19                    | 22 APR 21 |
| 2-OBBI-20                    | 22 APR 21 |
| 2-OBBI-21                    | 22 APR 21 |
| 2-OBBI-22                    | 18 JUN 20 |
| 2-OBBI-23                    | 1 DEC 22  |
| 2-OBBI-24                    | 1 DEC 22  |
| 2-OBBI-25                    | 1 DEC 22  |
| 2-OBBI-26                    | 1 DEC 22  |
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| 2-OBBI-63                    | 1 DEC 22  |
| 2-OBBI-64                    | 1 DEC 22  |
| 2-OBBI-65                    | 1 DEC 22  |

| Page                            | Date      |
|---------------------------------|-----------|
| 2-OBBI-66                       | 1 DEC 22  |
| 2-OBBI-67                       | 1 DEC 22  |
| 2-OBBI-68                       | 1 DEC 22  |
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| 2-OBBI-100                      | 1 DEC 22  |
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| 2-OBBI-103                      | 1 DEC 22  |
| 2-OBBI-104                      | 1 DEC 22  |
| 2-OBBI-105                      | 1 DEC 22  |
| <b>BAHRAIN / ISA AIRBASE</b>    |           |
| 2-OBBS-1                        | 1 DEC 22  |
| 2-OBBS-2                        | 22 APR 21 |
| 2-OBBS-3                        | 17 AUG 17 |
| 2-OBBS-4                        | 17 AUG 17 |
| 2-OBBS-5                        | 22 APR 21 |
| 2-OBBS-6                        | 22 APR 21 |
| 2-OBBS-7                        | 22 APR 21 |
| 2-OBBS-8                        | 22 APR 21 |
| 2-OBBS-9                        | 22 APR 21 |
| 2-OBBS-10                       | 22 APR 21 |
| 2-OBBS-11                       | 21 APR 22 |
| 2-OBBS-12                       | 22 APR 21 |
| 2-OBBS-13                       | 21 APR 22 |
| 2-OBBS-14                       | 22 APR 21 |
| <b>BAHRAIN / SAKHIR AIRBASE</b> |           |
| 2-OBKH-1                        | 1 DEC 22  |
| 2-OBKH-2                        | 26 MAY 16 |
| 2-OBKH-3                        | 18 JUN 20 |
| 2-OBKH-4                        | 17 SEP 15 |
| 2-OBKH-5                        | 17 SEP 15 |
| 2-OBKH-6                        | 17 SEP 15 |
| 2-OBKH-7                        | 17 SEP 15 |
| 2-OBKH-8                        | 17 SEP 15 |
| 2-OBKH-9                        | 17 SEP 15 |
| 2-OBKH-10                       | 17 SEP 15 |
| 2-OBKH-11                       | 21 APR 22 |
| 2-OBKH-12                       | 17 SEP 15 |
| 2-OBKH-13                       | 21 APR 22 |

| <i>Page</i>  | <i>Date</i> |
|--------------|-------------|
| 2-OBKH-14    | 17 SEP 15   |
| 2-OBKH-15    | 21 APR 22   |
| 2-OBKH-16    | 17 SEP 15   |
| 2-OBKH-17    | 21 APR 22   |
| 2-OBKH-18    | 17 SEP 15   |
| 2-OBKH-19    | 21 APR 22   |
| 2-OBKH-20    | 17 SEP 15   |
| 2-OBKH-21    | 21 APR 22   |
| 2-OBKH-22    | 17 SEP 15   |
| 2-OBKH-23    | 21 APR 22   |
| 2-OBKH-24    | 17 SEP 15   |
| <b>AD 3.</b> |             |
| 3-1          | 17 SEP 15   |

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**ENR 1.3 INSTRUMENT FLIGHT RULES****1.3.1 RULES APPLICABLE TO ALL IFR FLIGHTS****1.3.1.1 Aircraft equipment**

Aircraft shall be equipped with suitable instruments and with navigation equipment appropriate to the route to be flown.

**1.3.1.2 Minimum levels**

Except when necessary for take - off or landing except when specifically authorized by the appropriate authority, an IFR flight shall be flown at a level which is not below the minimum flight altitude established by the State whose territory is overflown or, where no such minimum flight altitude has been established:

- a) over high terrain or in mountainous areas, at a level which is at least 2000 FT (600 M) above the highest obstacle located within 8 KM of the estimated position of the aircraft;
- b) elsewhere than as specified in a), at a level which is at least 1000 FT (300 M) above the highest obstacles located within 8 KM of the estimated position of the aircraft.

**Note:** The estimated position of the aircraft will take account of the navigational accuracy which can be achieved on the relevant route segment, having regard to the navigational facilities available on the ground and in the aircraft.

**1.3.1.3 Change from IFR flight to VFR flight**

1.3.1.3.1 An aircraft electing to change the conduct of its flight from compliance with the instrument flight rules to compliance with the visual flight rules shall, if a flight plan was submitted, notify the appropriate air traffic services unit specifically that the IFR flight is cancelled and communicate thereto the changes to be made to its current flight plan.

1.3.1.3.2 When an aircraft operating under the instrument flight rules is flown in or encounters visual meteorological conditions it shall not cancel its IFR flight unless it is anticipated, and intended, that the flight will be continued for a reasonable period of time in uninterrupted visual meteorological conditions.

**1.3.1.4 Orbits on final**

1.3.1.4.1 Orbits on final shall not be approved for IFR aircraft at Bahrain intl airport (OBBI)

**1.3.2 RULES APPLICABLE TO IFR FLIGHTS WITHIN CONTROLLED AIRSPACE**

1.3.2.1 IFR flights shall comply with the provisions of 3.6 of Annex 2 to the Convention on International Civil Aviation when operated in controlled airspace.

1.3.2.2 An IFR flight operating in cruising flight in controlled airspace shall be flown at a cruising level or, if authorized to employ cruise climb techniques, between two levels or above a level, selected from:

- a) the tables of cruising levels in Appendix 3 of Annex 2 or,
- b) a modified table of cruising levels, when so prescribed in accordance with Appendix 3 of Annex 2 for flights above FL 410.

Except that the correlation of levels to track prescribed therein shall not apply whenever otherwise indicated in air traffic control clearance or specified by the appropriate ATS authority in the Aeronautical Information Publication.

For cruising levels within the BAHRAIN FIR / BAHRAIN UIR see **ENR 1.3.3.1**.

**1.3.2.3 Five minutes longitudinal separation**

In accordance with ICAO DOC 4444 PARA 5.4.2.2.1.1 C. Within the AMMAN FIR, BAHRAIN FIR / BAHRAIN UIR, DAMASCUS FIR, JEDDAH FIR and NICOSIA FIR / NICOSIA UIR, a minimum of five minutes longitudinal separation will be applied when the leading aircraft is maintaining a TAS of 20 KTs or more faster than the following aircraft.

The application of this separation minimum may require ATC to impose speed restrictions on aircraft. When subject to speed restrictions, pilots must notify ATC immediately if at any time they are unable to comply with the restrictions.

Pilots should note that speed restrictions applied in one FIR will continue to apply in succeeding FIRs unless specifically cancelled by ATC.

**1.3.3 RULES APPLICABLE TO IFR FLIGHTS OUTSIDE CONTROLLED AIRSPACE****1.3.3.1 Cruising levels**

An IFR flight operating in level cruising flight outside of controlled airspace shall be flown at a cruising level appropriate to its track as specified in:

- a) the tables of cruising levels in Appendix 3 of Annex 2, except when otherwise specified by the appropriate ATS authority for flight at or below 3000 FT (900 M) above mean sea level; or

- b) a modified table of cruising levels, when so prescribed in accordance with Appendix 3 of Annex 2 for flight above FL 410. (Not used at the present in the BAHRAIN UIR)

**Note:** This provision does not preclude the use of cruise climb techniques by aircraft in supersonic flight.

#### 1.3.3.2 Communications

An IFR flight operating outside controlled airspace but within or into areas, or along routes, designated by the appropriate ATS authority in accordance with 3.3.1.2 c) or d) of Annex 2 shall maintain a listening watch on the appropriate radio frequency and established two - way communication, as necessary, with the air traffic services unit providing flight information services.

#### 1.3.3.3 Position reports

An IFR flight operating outside controlled airspace and required by the appropriate ATS authority to:

- submit a flight plan,
- maintain a listening watch on the appropriate radio frequency and establish two - way communication, as necessary, with the air traffic services unit providing flight information service, shall report position as specified in 3.6.3 of Annex 2 for controlled flights.

**Note:** Aircraft electing to use the air traffic advisory service whilst operating IFR within specified advisory airspace are expected to comply with the provisions of 3.6 of Annex 2, except that the flight plan and changes thereto are not subjected to clearance and that two - way communication will be maintained with the unit providing the air traffic advisory service. There is no Advisory Airspace currently designated within the BAHRAIN FIR / BAHRAIN UIR.

### 1.3.4 OPERATIONS ON ATS ROUTES IN THE BAHRAIN FIR / BAHRAIN UIR WHERE AN RNAV TYPE IS SPECIFIED

#### 1.3.4.1 APPLICATION OF RNAV 1 AND RNAV 5 TO ATS ROUTES IN THE BAHRAIN UIR

1.3.4.1.1 Requirements for RNAV capability and aircraft navigation accuracy meeting RNAV 1 and RNAV 5 will be progressively introduced in BAHRAIN UIR.

1.3.4.1.2 RNAV 1 and RNAV 5 requirements may be specified on a route by route basis or by designation of airspace..

1.3.4.1.3 Within BAHRAIN UIR only RNAV equipped aircraft having a navigation accuracy meeting RNAV 1 and RNAV 5 may plan for operations under IFR on those ATS routes, and within those levels bands, which have been specified as requiring RNAV 1 and RNAV 5 in **ENR 1.3.4.2**.

1.3.4.1.4 Aircraft operating under IFR on designated RNAV 1 and RNAV 5 routes shall be equipped with, as a minimum, RNAV equipment meeting the following requirements:

- a) A system use accuracy equal to, or better than, (2.5 NM) for one standard deviation, with a 95 % containment value of plus or minus 5 NM, thereby meeting the accuracy requirements for RNAV 5; and
- b) A system use accuracy equal to, or better than, (0.5 NM) for one standard deviation, with a 95 % containment value of plus or minus 1 NM, thereby meeting the accuracy requirements for RNAV 1; and
- c) An average continuity of service of 99.99 % of flight time.

#### 1.3.4.2 AREA OF APPLICABILITY

Area Navigation "RNAV" will be implemented within BAHRAIN FIR / BAHRAIN UIR within designated airspace on area basis as follows:

- All Lower Routes of Bahrain within TMAs are RNAV 1 with requirements.
- RNAV 5 will be implemented from TMA levels to FL 145. At Upper Routes RNAV 1 will be implemented from FL 150 to FL 460 within TMAs.

#### 1.3.4.3 MEANS OF COMPLIANCE

Conformance to the navigation requirement shall be verified by the State of Registry or the State of Operator as appropriate.

**Note:** Guidance material concerning navigation accuracy requirements is contained in the Manual on Required Navigation performance (RNP) Doc 9613, Chapter 5.

#### 1.3.4.4 FLIGHTS PLANNING

Operators of aircraft fitted with RNAV having a navigation accuracy meeting RNAV 5 shall insert the designator "R" in item 10 of the flight plan.

#### 1.3.4.5 PROCEDURES FOR OPERATION IN RNAV 5 ROUTES

1.3.4.5.1 Correct operation of the aircraft RNAV system shall be verified before joining and during operation on an RNAV 5 route. This shall include confirmation that:

- a) The routing is in accordance with the clearance; and
- b) The aircraft navigation accuracy meets RNAV 5.

1.3.4.5.2 If, as a result of failure of the RNAV system or its degradation to below RNAV 5, an aircraft is unable to enter an ATS route

designated as RNAV 5 or to continue operations in accordance with current air traffic control clearance, a revised clearance shall, wherever possible, be obtained by the pilot.

1.3.4.5.3 Subsequent air traffic control action in respect of that aircraft will be dependent upon the nature of the reported failure and the overall traffic situation. Continued operation in accordance with the current ATC clearance may be possible in many situations. When this cannot be achieved, a revised clearance may be required to revert to VOR / DME.

#### 1.3.4.6 ATC PROCEDURES FOR AIRCRAFT EXPERIENCING FAILURE OR DEGRADATION OF THE RNAV SYSTEM

1.3.4.6.1 If, as a result of failure or degradation of the RNAV system, detected either before or after departure, the aircraft cannot meet the requirements of **ENR 1.3.4.1.4**, the following ATC procedures are applicable.

##### 1.3.4.6.1.1 Coordination messages (PANS ATM / 501 Chapter 11, 11.4.2.3)

- a) *Computer - assisted coordination of estimate messages. In the case of automated messages not containing the information provided in item 18 of the flight plan, the sending air traffic control unit shall inform the receiving air traffic control unit by supplementing the ATC message verbally with the phrase "RNAV OUT OF SERVICE" after the call sign of the aircraft concerned.*
- b) *Verbal coordination of estimate messages. When a verbal coordination process is being used, the sending air traffic control unit shall include the phrase "RNAV OUT OF SERVICE" at the end of the message.*

##### 1.3.4.6.1.2 Pilot phraseology (PANS ATM / 501 Chapter 12)

The phrase "UNABLE RNAV DUE EQUIPMENT" shall be included by the pilot immediately following the aircraft call sign whenever initial contact on an air traffic control frequency is established.

1.3.4.6.1.2.1 All military formation flights are considered NON-RVSM within Bahrain UIR, Regardless of the RVSM status of individual Aircraft in the formation. These Aircraft's shall not be permitted in RVSM Airspace except in exceptional circumstances. These exceptions may be accommodated, subject to prior approval, on a workload or traffic-permitting basis.

#### 1.3.4.7 ATC PROCEDURES FOR STATE AIRCRAFT NOT EQUIPPED WITH RNAV EQUIPMENT MEETING RNAV 5 REQUIREMENTS

##### 1.3.4.7.1 Instructions for the completion of the flight plan (PANS ATM / 501 Appendix 2, A 2 - 3)

1.3.4.7.1.1 Operators of state aircraft not equipped with RNAV equipment meeting RNAV 5 shall not insert "S" or "R" in item 10 of the flight plan.

1.3.4.7.1.2 Since such flight require special handling by air traffic control, "STS / NORNAV" shall be inserted in item 18 of the flight plan.

##### 1.3.4.7.2 Air traffic control clearances (PANS ATM / 501 Chapter 4, 4.5.7)

1.3.4.7.2.1 Within TMAs, state aircraft not equipped with RNAV approved for RNAV 5 should be routed via non - RNAV SIDs and STARs.

1.3.4.7.2.2 Such aircraft operating en - route should be routed via VOR / DME - defined ATS routes.

1.3.4.7.2.3 When the above procedures cannot be applied, the air traffic control unit shall provide the aircraft with radar vectors until the aircraft is capable of resuming its own navigation.

##### 1.3.4.7.3 Coordination messages (PANS ATM / 501 Chapter 11, 11.4.2.3)

- a) *Computer - assisted coordination of estimate messages. In case of automated messages not containing the information provided in item 18 of the flight plan, the sending air traffic control unit shall inform the receiving air traffic control unit by supplementing the ATC message verbally with the phrase "NEGATIVE RNAV" after the call sign of the aircraft concerned.*
- b) *Verbal coordination of estimate messages. When a verbal coordination process is being used, the sending air traffic control unit shall include the phrase "NEGATIVE RNAV" at the end of the message.*

##### 1.3.4.7.4 Pilot phraseology (PANS ATM / 501 Chapter 12)

The phrase "NEGATIVE RNAV" shall be included by the pilot immediately following the aircraft call sign whenever initial contact on an air traffic control frequencies established.

#### 1.3.4.8 EQUIPMENT, REQUIREMENT AND CERTIFICATION

RNAV 5 defines RNAV operations which satisfy a required track keeping accuracy of plus or minus 5 NM for at least 95 % of the flight time in accordance with the requirements set out in ICAO Document 7030 - Regional Supplementary Procedures for the Middle East region, as amended, and ICAO Document 9613 - Manual on RNP.

RNAV equipped aircraft operating on designated RNAV 5 routes in designated RNAV 5 routes airspace must be certified for RNAV 5 operations by the State of Operator or the State of Registry of the aircraft. Conformance to the navigation requirement shall be verified by the State of Registry or the State of Operator, as appropriate.

Foreign air carriers operating within BAHRAIN UIR shall ensure their operations specifications are updated to reflect RNAV 5 approvals.

The address for information regarding RNAV 5 certification is:

Aviation Safety Section  
Air Transport Directorate  
Civil Aviation Affairs  
P.O. Box 586  
Kingdom of Bahrain  
TEL: +973 17321006  
Telefax: +973 17321061  
SITA: BAHAPYF

#### **1.3.4.9 Formation Flights**

##### **1.3.4.9.1 General Rule for Formation Flights**

In general, a formation flight shall operate as a single aircraft in regard to navigation and position reporting and clearances issued by ATC.

Sufficient safety distance between the aircraft comprising a formation flight shall be the responsibility of the formation leader and the individual pilots-in-command at all phases of the flight, which includes take-off and landing, join-up, break-up and all parts of the Enroute flight.

Upon each initial report on a new radio frequency, the formation leader shall indicate to ATC that the flight is a formation, including standard or non-standard formation type and the number of aircraft the formation flight consists of. (E.g. Callsign/ Standard Formation Flight of 4).

##### **1.3.4.9.2 Standard Military Formation**

In a standard military formation, each aircraft/element of this formation shall remain within 1 NM horizontally and 100 ft. vertically from the formation leader.

Only the lead aircraft (formation leader) shall squawk as directed by ATC.

##### **1.3.4.9.3 Non-standard Formation**

Aircraft/elements of a formation flight that are outside the horizontal and/or vertical limits as described in 1.3.4.9.2 are considered a non-standard formation.

Only the lead aircraft (formation leader) shall squawk unless otherwise directed by ATC.

Non-standard Formation flights represent an unusual aerial activity. It is an ATC decision to approve or disapprove a non-standard formation and to determine special conditions for the conduct of a non-standard formation flight.



## ENR 4. RADIO NAVIGATION AIDS/SYSTEMS

## ENR 4.1 RADIO NAVIGATION AIDS - EN-ROUTE

| Name of station<br>(VAR)<br><i>VOR: Declination</i>     | ID  | FREQ<br>(CH)          | Hours of<br>operation | Coordinates            | ELEV<br>DME<br>Antenna | Remarks |
|---------------------------------------------------------|-----|-----------------------|-----------------------|------------------------|------------------------|---------|
| 1                                                       | 2   | 3                     | 4                     | 5                      | 6                      | 7       |
| BAHRAIN<br>DVOR/DME<br>(2.49° E)<br>(decl: 2.72°E 2017) | BHR | 111.80MHZ<br>(CH 55X) |                       | 261530.00N 0503919.18E | 36.8 FT<br>EGM_96      |         |
| DOHA/HAMAD INTL<br>DVOR/DME<br>(2.6°E)                  | DOH | 114.4MHZ<br>(CH 91X)  |                       | 251459.66N 0513634.80E | 39.343 FT<br>EGM_96    |         |

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## AD 2. AERODROMES

## OBBI AD 2.1 AERODROME LOCATION INDICATOR AND NAME

## OBBI - BAHRAIN INTERNATIONAL

## OBBI AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

|   |                                                                                   |                                                                                                                                         |
|---|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| 1 | ARP coordinates and site at AD                                                    | 261615N 0503801E Mid - point of RWY on CL                                                                                               |
| 2 | Direction and distance from (city)                                                | 3.3 NM NE of Manama                                                                                                                     |
| 3 | Elevation/Reference temperature                                                   | 8 FT / 38° C                                                                                                                            |
| 4 | Geoid undulation at AD ELEV PSN                                                   | -83.18 FT                                                                                                                               |
| 5 | MAG VAR/Annual change                                                             | 2.49° E (2020) / 0°3' per year                                                                                                          |
| 6 | AD operator, address, telephone, telefax, e-mail address, AFS and website address | Undersecretary for Civil Aviation<br>P.O. Box 586<br>Kingdom of Bahrain<br>TEL: +973 17321100<br>Telefax:+973 17339060<br>AFS: OBBIYAYX |
| 7 | Types of traffic permitted (IFR/VFR)                                              | IFR/VFR                                                                                                                                 |
| 8 | Remarks                                                                           |                                                                                                                                         |

## OBBI AD 2.3 OPERATIONAL HOURS

|    |                            |                         |
|----|----------------------------|-------------------------|
| 1  | AD Operator                | SUN - THU 04:00 - 11:15 |
| 2  | Customs and immigration    | H24                     |
| 3  | Health and sanitation      | H24                     |
| 4  | AIS Briefing Office        | H24                     |
| 5  | ATS Reporting Office (ARO) | H24                     |
| 6  | MET Briefing Office        | H24                     |
| 7  | ATS                        | H24                     |
| 8  | Fuelling                   | H24                     |
| 9  | Handling                   | H24                     |
| 10 | Security                   | H24                     |
| 11 | De-icing                   | NIL                     |
| 12 | Remarks                    | NIL                     |

## OBBI AD 2.4 HANDLING SERVICES AND FACILITIES

|   |                                         |                                                                                                                                                                                                                                   |
|---|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Cargo-handling facilities               | BAHRAIN AIRPORT SERVICES                                                                                                                                                                                                          |
| 2 | Fuel/oil types                          | Jet A1 available to contract customers or on cash basis only (for cash pre deposit should be arranged with Bahrain Aviation Fuelling Company BAFCO). TEL: +973 17348280 / 17348272 Mob. +973 66769958 , email: Operation@BAFCO.BH |
| 3 | Fuelling facilities/capacity            | Jet A1 Hydrant Stands 23-26A, 14-22, E1-E4, C1-C4. Jet A1 Bowsers Stands: 1-6, 50-58, 61-63, 71-75, 26B, 27-28, 80-88                                                                                                             |
| 4 | De-icing facilities                     | NIL                                                                                                                                                                                                                               |
| 5 | Hangar space for visiting aircraft      | NIL                                                                                                                                                                                                                               |
| 6 | Repair facilities for visiting aircraft | Gulf Air                                                                                                                                                                                                                          |

|   |         |                                                                                                                                                                  |
|---|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7 | Remarks | 1. Handling Services available H24 from Bahrain Airport Services (BAS)<br>2. Private / Business Aircraft shall carry a tow bar compliant to its type of aircraft |
|---|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**OBBI AD 2.5 PASSENGER FACILITIES**

|   |                      |                                           |
|---|----------------------|-------------------------------------------|
| 1 | Hotels               | In Manama and at Airport                  |
| 2 | Restaurants          | At Airport                                |
| 3 | Transportation       | Taxis and courtesy coaches to Hotels      |
| 4 | Medical facilities   | First aid; Ambulance; Hospitals in Manama |
| 5 | Bank and Post Office | At airport; At airport                    |
| 6 | Tourist Office       | At airport                                |
| 7 | Remarks              | NIL                                       |

**OBBI AD 2.6 RESCUE AND FIRE FIGHTING SERVICES**

|   |                                             |                                                                                                                                                                                                                              |
|---|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | AD category for fire fighting               | CAT 10                                                                                                                                                                                                                       |
| 2 | Specialized Rescue equipment                | 1 Rescue Staircase Vehicle available                                                                                                                                                                                         |
| 3 | Capability for removal of disabled aircraft | Limited                                                                                                                                                                                                                      |
| 4 | Remarks                                     | Trained personal: 13 per shift; Fire vehicles: 5 vehicles, 2 with 13300L of capacity each, 2 with 12500L of capacity each and 1 with 12000L of capacity, 2 of those vehicles are used as backup in case of equipment failure |

**OBBI AD 2.7 SEASONAL AVAILABILITY - CLEARING**

|   |                             |     |
|---|-----------------------------|-----|
| 1 | Types of clearing equipment | NIL |
| 2 | Clearance priorities        | NIL |
| 3 | Remarks                     | NIL |

**OBBI AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA**

|   |                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Apron designation, surface, strength and area | <p>MAIN APRON A: (Stands 07 to 10) Concrete, PCN 86 / R / B / W / T (29,000 m2)</p> <p>MAIN APRON B ( STAND 11 TO 22): (94.000 m2)</p> <p>Stands 11 to 19 Concrete, PCN 86 / R / B / W / T</p> <p>Stands 20 to 22 Concrete, PCN 120/R/B/W/T</p> <p>MAIN APRON C (Stands 23 to 28) Concrete, PCN 120/R/B/W/T (40,000 m2)</p> <p>MIDDLE APRON ( STAND 1 TO 6) Concrete, PCN 104 / R / B / W / T (18,000 m2)</p> <p>EASTERN APRON ( STAND 81 TO 88) Asphalt, PCN 22 / F / B / X / T (16,000 m2)</p> <p>WESTERN A ( STAND 61 TO 63) Concrete, PCN 120 / R / C / W / T (13,000 m2)</p> <p>WESTERN B ( STAND 50 TO 58) Concrete, PCN 82 / R / C / W / T (93,000 m2)</p> <p>EXECUTIVE APRON ( STAND E1 TO E4) Concrete, PCN 120 / R / B / W / T (18,000 m2)</p> <p>CARGO APRON ( STAND C1 TO C5) Concrete, PCN 120 / R / B / W / T (37,000 m2)</p> <p>NORTHERN APRON ( STAND 70 TO 75) Asphalt, PCN 105 / F / A / W / T (45,500 m2)</p> <p>MENA APRON : Concrete, PCN 120 / R / D / W / T(10,000 m2)</p> |
|---|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|   |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 | Taxiway designation, width, surface, strength and shoulder width (m) | <p>TWY A1: 28 M, Asphalt, PCN 120 / F / A / W / T 17.50 West - 17.50 East</p> <p>TWY A2: 25.5 M, Asphalt, PCN 114 / F / A / W / T 17.50 West - 17.50 East</p> <p>TWY A3: 30 M, Asphalt, PCN 69 / F / A / W / T 15.00 West - 15.50 East</p> <p>TWY A4: 31.5 M, Asphalt, PCN 65 / F / A / W / T 17.50 West - 17.50 East</p> <p>TWY A5: 30 M, Asphalt, PCN 120 / F / A / W / T 15.00 West - 16.00 East</p> <p>TWY A6: 23 M, Asphalt, PCN 107 / F / A / W / T 15.00 West - 15.00 East</p> <p>TWY A7: 22 M, Asphalt, PCN 72 / F / A / W / T - 14.00 West - 17.00 East</p> <p>TWY A8: 30 M, Asphalt, PCN 120 / F / A / W / T 17.50 West - 17.50 East</p> <p>TWY A9: 29 M, Asphalt, PCN 87 / F / A / W / T 17.50 West - 18.00 East</p> <p>TWY B1: 23 M, Asphalt, PCN 85 / F / A / W / T 10.50 West - 11.50 East</p> <p>TWY K: 26 M, Concrete, PCN 83 / R / B / W / T No Limit West - No Limit East</p> <p>TWY L: 26 M, Asphalt, PCN 59 / F / A / W / T No Limit West - No Limit East</p> <p>A ( between A1 &amp; Stand 1): 26M, Asphalt, PCN 112 / F / A / W / T 17.50 North - No Limit South</p> <p>TWY M: 34 M, Asphalt, PCN 102 / F / A / W / T No Limit West - No Limit East</p> <p>TWY N: 34 M, Asphalt, PCN 79 / F / B / W / T No Limit West - No Limit East</p> <p>A (Between Stand1 &amp; Stand 6): 11.5m North of( CL) &amp; 51m South of (CL), Asphalt, PCN 112 / F / A / W / T 15.00 North - No Limit South</p> <p>TWY P: 33 M, Concrete, PCN 85 / R / B / W / T No Limit West - No Limit East</p> <p>TWY Q: 49 M, Concrete, PCN 56 / R / C / W / T No Limit - No Limit</p> <p>A (Between Stand 6 &amp; S): 30M, Asphalt, PCN 112 / F / A / W / T 15.00 North - No Limit South</p> <p>TWY R: 49 M, Concrete, PCN 87 / R / B / W / T No Limit - No Limit</p> <p>TWY S: 44 M, Asphalt, PCN 72 / F / A / X / T No Limit - No Limit</p> <p>TWY T: 42M, Asphalt, PCN 72 / F / A / X / T No Limit - 17.00 East</p> <p>TWY U: 42 M, Asphalt, PCN 75 / F / A / W / T 17.50 West - 18.00 East</p> <p>TWY V: 42M, Asphalt, PCN 120 / F / A / W / T 18.50 West - 17.50 East</p> <p>TWY B2, 30 M, Asphalt, PCN 84 / F / A / W / T 7.50 West - 7.50 East</p> <p>TWY Z: 63 M, Asphalt PCN 72 / F / A / X / T (between link R &amp; T) No Limit North - No Limit South</p> <p>PCN 79 / F / A / W / T (between link T &amp; V) 17.50 North - No Limit South</p> |
| 3 | Altimeter checkpoint location and elevation                          | Bays 42 - 46: 6 FT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 4 | VOR checkpoints                                                      | TBN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 5 | INS checkpoints                                                      | See ACFT Parking / Docking charts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 6 | Remarks                                                              | Main Apron A consists of Stands 07 – 10 and can accommodate up to Code F aircrafts with the exception of Stand 07, which accommodates up to Code C aircrafts only. Main Apron B consists of Stands 11 – 22 and can accommodate up to Code F aircrafts with the exception of Stand 14, which accommodates up to Code E aircrafts only. Main Apron C consists of Stands 23 – 28 and can accommodate up to Code F aircrafts with the exception of Stand 28, which accommodates up to Code C aircrafts only.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

## OBBI AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

|   |                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands | <p>Taxiing guidance signs at all intersections with TWY and RWY at all holding positions.</p> <p>Taxi guide lines at all aprons.</p> <p>SAFEGATE Visual Docking Guidance System (VDGS), PLB, 400Hz/PCA pop-up pits, fuel pits installed on stands:</p> <p>MIDDLE APRON ( STAND 1 TO 6),</p> <p>CARGO APRON ( STAND C1 TO C5),</p> <p>EXECUTIVE APRON ( STAND E1 TO E4)</p> <p>MAIN APRON B ( STAND 11 TO 22).</p> <p>MAIN APRON C ( STAND 23 TO 28),</p> <p>FMT Aircraft Positioning and Information System (APIS), fuel pits installed on stands:</p> <p>MAIN APRON A (Stands 07 to 10).</p> |
| 2 | RWY and TWY markings                                                                                          | <p>RWY 12L / 30R: designation, THR, Displaced THR, TDZ, CL, Edges marked and lighted</p> <p>RWY 12R / 30L: designation, THR, Displaced THR, TDZ, CL, Edges marked and Displaced THR &amp; Edges lighted</p> <p>TWY: CL, holding positions at all TWY/RWY intersections, marked and lighted (except TWY B2).</p>                                                                                                                                                                                                                                                                               |
| 3 | Stop bars                                                                                                     | Where appropriate, manually controlled by TWR.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 4 | Remarks                                                                                                       | See also Aerodrome Ground Movement Chart for taxiing guidance. Road Holding positions to RWY: Reflective signs are available.                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

## OBBI AD 2.10 AERODROME OBSTACLES

| In approach/TKOF areas                 |                       |                                                  |                           | In circling area and at AD             |                                                                   |                        |
|----------------------------------------|-----------------------|--------------------------------------------------|---------------------------|----------------------------------------|-------------------------------------------------------------------|------------------------|
| 1                                      |                       |                                                  |                           | 2                                      |                                                                   |                        |
| Obstacle identification or designation | RWY NR/ Area affected | Obstacle type Elevation Markings/LGT             | Coordinates               | Obstacle identification or designation | Obstacle type Elevation Markings/LGT                              | Coordinates            |
| a                                      | b                     | c                                                | d                         | a                                      | b                                                                 | c                      |
| OB-1025                                | 12L APCH              | Lamppost<br>11.41 M, 37.43 FT<br>NIL / NIL       | 261658.36N<br>0503658.50E | OB-1127                                | Comms Mast<br>41.29 M , 135.46 FT<br>NIL / NIL                    | 261704.32N 0503745.26E |
| OB-2273                                | 12L APCH<br>12R TKOF  | Building<br>16.27 M, 53.38 FT<br>NIL / NIL       | 261654.76N<br>0503706.50E | OB-1146                                | ATC Dipole<br>53.56 M, 175.72 FT<br>NIL / NIL                     | 261600.98N 0503751.70E |
| OB-1234                                | 12L TKOF              | ILS FFM<br>7.86 M, 25.79 FT<br>NIL / NIL         | 261534.71N<br>0503910.92E | OB-1209                                | Comms Mast<br>40.85 M , 134.02 FT<br>NIL / NIL                    | 261626.78N 0503856.76E |
| OB-2130                                | 12L TKOF              | Lamppost<br>12.46 M, 40.88 FT<br>NIL / NIL       | 261535.00N<br>0503920.39E | OB-1213                                | Comms Mast<br>36.48 M, 119.68 FT<br>NIL / NIL                     | 261523.53N 0503857.43E |
| OB-1104                                | 12L                   | Lamppost<br>12.92 M, 42.39 FT<br>NIL / NIL       | 261654.60N<br>0503705.60E | OB-1295                                | Comms Mast<br>56.15 M , 184.22 FT<br>NIL / NIL                    | 261605.12N 0503649.33E |
| OB-1105                                | 12L                   | Lamppost<br>12.33 M, 40.45 FT<br>NIL / NIL       | 261652.95N<br>0503708.24E | OB-1321                                | Power Stn Chimney<br>68.21 M, 223.78 FT<br>NIL / NIL              | 261306.68N 0503932.70E |
| OB-1106                                | 12L                   | Lamppost<br>12.40 M, 40.68 FT<br>NIL / NIL       | 261652.55N<br>0503709.23E | OB-2011                                | Water Tower<br>46.32 M 151.97 FT<br>NIL / NIL                     | 261650.15N 0503833.33E |
| OB-1107                                | 12L                   | Lamppost<br>12.32 M, 40.42FT<br>NIL / NIL        | 261652.24N<br>0503710.26E | OB-2024                                | Comms Mast<br>39.99 M, 131.2 FT<br>NIL / NIL                      | 261611.61N 0503915.02E |
| OB-1109                                | 12L                   | Lamppost<br>12.20 M, 40.03FT<br>NIL / NIL        | 261652.06N<br>0503711.30E | OB-2072                                | Building<br>77.30 M, 253.61 FT<br>NIL / NIL                       | 261725.96N 0503954.66E |
| OB-1115                                | 12L                   | Tree<br>7.50 m, 24.61 FT<br>NIL / NIL            | 261650.53N<br>0503711.82E | OB-2078                                | Crane (T)<br>95.81 M, 314.33 FT<br>NIL / NIL                      | 261704.89N 0503951.69E |
| OB-2269                                | 12L                   | Building<br>18.62 M, 61.09 FT<br>NIL / NIL       | 261657.46N<br>0503704.07E | OB-2165                                | Crane (T)<br>191.90 M, 629.59 FT<br>NIL / NIL                     | 261326.11N 0503633.69E |
| OB-2270                                | 12L                   | Building<br>18.65 M, 61.19 FT<br>NIL / NIL       | 261657.24N<br>0503704.26E | OB-2166                                | Crane (T)<br>201.55 M, 661.25 FT<br>NIL / NIL                     | 261324.31N 0503632.51E |
| OB-2272                                | 12L                   | Building<br>17.59 M, 57.71 FT<br>NIL / NIL       | 261655.33N<br>0503707.41E | OB-2233                                | Building<br>82.29 M, 269.98 FT<br>NIL / NIL                       | 261445.33N 0503606.04E |
| OB-5115                                | 12L                   | Mobile Obstacle<br>6.47 M, 21.23 FT<br>NIL / NIL | 261651.07N<br>0503710.26E | OB-2235                                | Crane (T)<br>252.40 M, 828.07 FT<br>NIL / NIL                     | 261427.54N 0503421.34E |
| OB-5116                                | 12L                   | Mobile Obstacle<br>6.38 M, 20.93 FT<br>NIL / NIL | 261650.35N<br>0503711.51E | OB-2240                                | Financial Harbour<br>Building<br>266.57 M, 874.56 FT<br>NIL / NIL | 261415.86N 0503421.56E |

## OBBI AD 2.17 ATS AIRSPACE

|   |                                   |                                                                                                                                                                                         |
|---|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Designation and lateral limits    | BAHRAIN CTR:<br>A Circle, radius 10 NM centered at BAH ARP (261615N 0503801E).                                                                                                          |
| 2 | Vertical limits                   | SFC - 2500 FT                                                                                                                                                                           |
| 3 | Airspace classification           | D                                                                                                                                                                                       |
| 4 | ATS unit call sign<br>Language(s) | BAHRAIN TOWER<br>English                                                                                                                                                                |
| 5 | Transition altitude               | 13000FT                                                                                                                                                                                 |
| 6 | Hours of applicability            | H24                                                                                                                                                                                     |
| 7 | Remarks                           | New ATC Control Tower at 261601.3N 0503751.5E top elevation 53 M (174 FT) AMSL located aprox DIST / MAG BRG at 210 ° / 500 M (0.3 NM) from ARP, penetrates Obstacle Limitation Surfaces |

## OBBI AD 2.18 ATS COMMUNICATION FACILITIES

| Service designation | Call sign           | Channel                                                                | Hours of operation                     | Remarks             |
|---------------------|---------------------|------------------------------------------------------------------------|----------------------------------------|---------------------|
| 1                   | 2                   | 3                                                                      | 4                                      | 5                   |
| APP / TAR           | BAHRAIN APPROACH    | 127.85 MHZ<br>234.95 MHZ                                               | H24<br>H24                             | Alternate Frequency |
| TWR                 | BAHRAIN TOWER       | 118.5 MHZ<br>296.025 MHZ                                               | H24<br>H24                             | Alternate Frequency |
| SMC                 | BAHRAIN GROUND      | 121.85 MHZ                                                             | H24                                    |                     |
| A/G                 | BAHRAIN RADIO       | 2992 KHZ<br>5658 KHZ<br>5667 KHZ<br>8918 KHZ<br>13288 KHZ<br>13312 KHZ | H24<br>H24<br>H24<br>H24<br>H24<br>H24 |                     |
| D - ATIS            | BAHRAIN INFORMATION | 127.2 MHZ                                                              | H24                                    |                     |
| VOLMET              | BAHRAIN VOLMET      | 128.8MHZ                                                               | H24                                    |                     |
| DLV                 | BAHRAIN DELIVERY    | 121.90MHZ                                                              | H24                                    |                     |

## OBBI AD 2.19 RADIO NAVIGATION AND LANDING AIDS

| Type of aid,<br>MAG VAR,<br>CAT of ILS/MLS<br>(For VOR/ILS/MLS,<br>give declination) | ID  | Frequency  | Hours of<br>operation | Position of transmitting<br>antenna coordinates | Elevation of<br>DME<br>transmitting<br>antenna | Remarks                            |
|--------------------------------------------------------------------------------------|-----|------------|-----------------------|-------------------------------------------------|------------------------------------------------|------------------------------------|
| 1                                                                                    | 2   | 3          | 4                     | 5                                               | 6                                              | 7                                  |
| DVOR<br>(2.49° / 2020)<br>(decl: 2.72°E 2017)                                        | BHR | 111.80 MHZ | H24                   | 261530.00N 0503919.18E                          | 36.8 FT                                        | 120° MAG .48NM<br>From THR RWY 30R |
| DME                                                                                  | BHR | CH 55 X    | H24                   | 261530.41N 0503919.53E                          | 36.8 FT                                        | Co-located with<br>DVOR.           |

| Type of aid,<br>MAG VAR,<br>CAT of ILS/MLS<br>(For VOR/ILS/MLS,<br>give declination) | ID   | Frequency | Hours of<br>operation | Position of transmitting<br>antenna coordinates | Elevation of<br>DME<br>transmitting<br>antenna | Remarks                              |
|--------------------------------------------------------------------------------------|------|-----------|-----------------------|-------------------------------------------------|------------------------------------------------|--------------------------------------|
| 1                                                                                    | 2    | 3         | 4                     | 5                                               | 6                                              | 7                                    |
| ILS LOC RWY 12L<br>CAT II<br>(2.49° / 2020)                                          | IBIB | 111.5 MHZ | H24                   | 261534.17N 0503911.85E                          | 15.86 FT                                       | NIL                                  |
| GP RWY 12L                                                                           |      | 332.9 MHZ | H24                   | 261642.07N 0503722.58E                          | 52.97 FT                                       | Angle 3°, RDH 55 FT                  |
| ILS DME RWY 12L                                                                      | IBIB | CH 52 X   | H24                   | 261641.92N 0503722.47E                          | 42 FT                                          | Co - located with GP                 |
| ILS LOC RWY 30R<br>CAT II<br>(2.49° / 2020)                                          | IBIA | 110.3 MHZ | H24                   | 261656.27N 0503650.00E                          | 22.14 FT                                       | 300° MAG 2.18 NM<br>from THR RWY 30R |
| GP RWY 30R                                                                           |      | 335 MHZ   | H24                   | 261555.16N 0503844.83E                          | 53.136 FT                                      | Angle 3°, RDH 55 FT                  |
| ILS DME RWY 30R                                                                      | IBIA | CH 40 X   | H24                   | 261555.16N 0503844.83E                          | 42 FT                                          | Co - located with GP                 |



**OBBI AD 2.20 LOCAL AERODROME REGULATIONS****(i) Operations on the Eastern Apron**

(1) Stands 23 - 28

Following are the source of ground power available and shall be provided accordingly:

1. FEGP when serviceable
2. GPU - when FEGP is not serviceable
3. No APU is to be left running unless either a qualified person is in attendance or the APU has both an auto-shut

**(ii) Operation on TWY (B1)**

TWY (B1) is a viable for night operations subject to the following conditions:-

1. No centre line lights are provided other than the existing CAT-EYE reflectors.
2. Lights are provided.
3. No LEAD ON/LEAD off lights are provided.
4. STOP-BAR, at present, is illuminated continuously, where contrast and ON / OFF functionality still remains uncontrollable by ADC day and night.
5. Clearance to cross the STOP-BAR shall only be issued by ADC when deemed necessary in order for ACFT to proceed day and night.
6. FOLLOW-ME vehicle will be provided for all ACFT entering TWY (B1) down to the engine-shut down markings day and night.
7. FOLLOW-ME vehicle will be provided for all ACFT leaving TWY (B1) from the engine-start markings up to the stop-bar only. Pilot shall then request an individual clearance from ADC to cross the stop-bar for progressive taxiing day and night.

**{iii} Single Engine Taxi**

ICAO resolution A37-19 emphasizes the importance of the International Civil Aviation to limit or reduce the Carbon Dioxide emissions from aircraft within a state boundary. For this reason Bahrain has adopted a procedure which will help in reducing the emission of CO2 from aircraft and allow for airline fuel conservation. Single Engine Taxi Operations may be exercised by multi-engine aircraft provided the following conditions are met:

1. The Pilots should be familiar with Bahrain International Airport in terms of aerodrome layout.
2. Pilots executing Single Engine Taxi Operation, should comply to ATC instructions as may be issued during taxiing without any delay.

In addition to the above, Single Engine Taxi Operations shall NOT be used if one of the following cases prevails:

1. If taxi or parking will involve a turn of 180 degrees or more.
2. The aircraft is on the active RWY or requesting to cross the RWY.

**{iv} Stop Bars Holding**

Aircraft or vehicles shall not cross a runway holding point until they have received verbal clearance from ATC and the STOP BAR has been extinguished.

STOP BARS shall not be crossed without specific ATC clearance as follows. Unable to turn STOP BARS off. Cross Red STOP BAR.

**{v} Transponder Setting**

All Transponder equipped aircraft shall select transponder to standby or off, when fully parked on the stand or gate.

**{vi} Clearance Delivery**

In addition to clearances via radio, Bahrain ATC offers to issue en-route clearances by means of data link. The data link address for Bahrain International Airport is OBBI.

Departing IFR flights shall request their en-route clearance between TOBT -30 and TOBT -5 via radio or CPDLC. With the request for the en-route clearance the requested enroute level/altitude and the parking stand shall be transmitted. When using CPDLC the requested altitude/flight level shall be entered in the pilot remarks free text field. Pilots shall maintain continuous air-ground communication watch on BAHRAIN DELIVERY frequency throughout the complete DCL process via CPDLC.

Departing VFR flights contact BAHRAIN DELIVERY for their VFR departure instructions.

**{vii} RWY 12L Operations on TWY A4**

TWY A4 marking and AGL is not available for aircraft landing on RWY 12L. Aircraft landing on RWY 12L shall not vacate via A4.

**{viii} RWY 30R Operations on TWYs A6 and/or A7**

TWYs A6 and A7 marking and AGL is not available for aircraft landing on RWY 30R. Aircraft Landing on RWY 30R shall not vacate via A6 and/or A7.

**{ix} Code F Operations:**

During landing or takeoff of a Code F aircraft on the Main Runway, portion of Taxiway Alpha, between A1 and A2 shall not have any movement including vehicular movement. Accordingly, ATC will ensure the following in relation to aircraft intended to taxi on the above-mentioned portion:

1. Aircraft at Western Apron A, hold at Taxiway Kilo
2. Aircraft at Western Apron B, hold at Taxiway Lima
3. Aircraft East of Alpha 2, hold abeam Taxiway Mike

**{x} APU Restriction:**

1. Any aircraft that is designated to park at a stand equipped with GSE pop-up pits shall utilize the fixed ground power supply (400Hz) and fixed pre-conditioned air (PCA).

a) Fixed ground supply (400Hz): Aircraft operators are recommended to reduce electric load immediately after parking. 400hz ground power supply shall be connected no more than 05 minutes after on-block time. If fixed ground power supply is out of service, mobile Ground Power Unit (GPU) or Auxiliary Power Unit (APU) may be used with consent from Airside Operations by communicating through GHA operational control centre.

b) Fixed pre-conditioned air (PCA): Aircraft operators are recommended to turn off the cabin air re-circulation system to prevent outside air mixing with PC-Air. If fixed PCA is out of service, mobile Air Conditioning Unit (ACU) may be used with consent from Airside Operations by communicating through GHA operational control centre

2. APU shall not be used more than 10 minutes before off-block time and 05 minutes after on-block time.

3. If the aircraft operator needs to run the APU more than the mentioned time length, they must seek approval from Airside Operations through GHA operational control centre. Any acts of non-compliance by the aircraft operator will result in actions being taken by the airport authority, including the assignment of parking stand to one not equipped with serviceable GSE pop-up pits.

4. Aircraft operators that would like to run the APU for an extended period shall notify the ground staff to ensure that they are prepared for the effect of extra ground noise.

**{xi} Western Apron A Engine shut down procedure:**

-Aircraft proceeding to Western Apron A shall shut down their engines at the designated position near TWY L.  
With the exception for Royal flights.

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**OBBI AD 2.21 NOISE ABATEMENT PROCEDURES****NOISE ABATEMENT PROCEDURES - BAHRAIN**

1. Circuit directions at BAHRAIN INTERNATIONAL airport are:

RWY 30L/ 30R: right hand;

RWY 12L / 12R: left hand.

2. Departing and arriving flights are not permitted to operate within the eighty - degree arc subtended by the 180° and 260° Radials of the BHR DVOR, and containing the main Bahrain Islands. Exceptionally , flights which the Controlling Authority has deemed operationally essential may be permitted to operate within this arc, provided they can remain either visually clear of the land, or be vectored clear by BAHRAIN APPROACH.
3. Usage of reverse thrust:

Usage of reverse thrust more than idle is not permitted during landing between the hours of 2100 and 0300, unless an aircraft is in an emergency and has been cleared to use the reverse thrust by the ATC.

4. Engine Run Ups at BAHRAIN INTERNATIONAL airport

Between the hours of 2100 and 0300, testing of aircraft engines is permissible at ground idle power only. Settings above this, however brief, are not allowed.

## OBBI AD 2.22 FLIGHT PROCEDURES

Low Visibility Procedures Applicable to ILS CAT II operations at Bahrain International Airport

### 2.22.1. Authorization

All Air operators may conduct Low Visibility Operations (take-off, CAT II approaches and landings) if they are legally authorized-approved by their own aeronautical authority of the state of registration.

Aerodrome Information concerning surface wind and RVR is immediately provided by ATC and significant changes will be reported in accordance with the provisions of PANS - ATM (DOC 4444).

LVP operations for arrivals and departures are limited to the main runway at Bahrain International Airport:

RWY 30R ILS CAT II

RWY 12L ILS CAT II

Any changes in the operational status or the facilities will be promulgated by NOTAM and/or pilots will be advised accordingly by ATIS or on initial contact with ATC.

### 2.22.1.1 Low Visibility Procedures (LVP)

Low Visibility Procedures (LVP) shall be declared at Bahrain International Airport whenever the RVR reading is 1000M or less, or whenever conditions are such that all of the maneuvering area is not visible from the control tower.

The procedures will ensure protection of the ILS sensitive and critical areas to ILS CAT II limits, provide an effective surface movement guidance and control system, and ensure a safe CAT II operations environment.

LVP procedures will not normally be introduced for aircraft carrying out practice CAT II approaches.

### 2.22.1.2 Aerodrome Operating Minima

#### A- Arrival RWY 12L / 30R LVP Minima

-Runway 30R, Refer to AIP chart IAC -ICAO RWY 30R VOR DME ILS CAT A-D

-Runway 12L, Refer to AIP chart AD 2-OBBI-51

-LVP shall be in force

-No aircraft shall be permitted to make an approach to land when the RVR is less than 350 meters.

#### B- Departure RWY 12L / 30R LVP Minima

-LVP shall be in force

-No aircraft departure is permitted when the RVR is less than 350 meters.

### 2.22.1.3 Runway Utilization

To ensure the maximum runway utilization during LVP operations, the runway shall not be used as a taxi/towing route except for aircraft required to exit the runway. The runway shall not be used to cross from taxiways B1 and B2; pilots are expected to comply with the following operational procedures:

#### A- Departures

RWY 30R

1. RWY holding position H shall be used for departure. Intersection departures are not authorized during LVP.
2. On receipt of take-off clearance, pilots should ensure that they are able to commence take-off without delay.
3. Strict adherence to ATC taxi instructions is required, refer to the AIP (LVP DEP Taxi route RWY 12L - 30R AD 2-OBBI-87).
4. Notify ATC immediately of any noncompliance to the above requirements

RWY 12L

1. RWY holding position A1 shall be used for departure traffic. Intersection departures are not authorized during LVP.
2. On receipt of take-off clearance, pilots should ensure that they are able to commence take-off without delay.
3. Strict adherence to ATC taxi instructions is required, refer to the AIP (LVP DEP Taxi route RWY 12L - 30R AD 2-OBBI-87).
4. Notify ATC immediately of any noncompliance to the above requirements.

**B- Arrivals****RWY 30R**

1. Arriving aircraft may exit the RWY to the south at TWY A4 or beyond or,
2. Arriving aircraft may exit the RWY to the north at TWY B1 or TWY B2.
3. Strict adherence to ATC taxi instruction is required, refer to the AIP (LVP ARR Taxi route RWY 12L - 30R LOW VISIBILITY PROCEDURE - ARR RWY 12L - 30R).
4. Report RWY vacated and taxi speed to ATC.

**RWY 12L**

1. Arriving aircraft may exit the RWY to the south at TWY A5 or beyond or,
2. Arriving aircraft may exit the RWY to the north at TWY B1 or TWY B2
3. Strict adherence to ATC taxi instruction is required, refer to the (LVP ARR Taxi route RWY 12L - 30R AD 2-OBBI-89).
4. Report RWY vacated and/or taxi speed to ATC.

**2.22.1.4 Ground Movement Operations Transponder procedures**

Advanced Surface Movement Guidance and Control System (ASMGCS) using Mode-S Multi-lateration had been commissioned at Bahrain International Airport. Aircraft Taxi and Transponder Operating Procedures on the movement area are listed below:

**A- Departures**

While on the apron including pushback operations:

1. Enter the discrete SSR code received from Clearance Delivery/TWR.
2. Enter the three letter ICAO designator followed by the flight number (e.g.GFA123) through the FMS or the Transponder.
3. ATC will verify the data and use it for identification.

**B- Arrivals**

Landing aircraft to maintain their transponder switched - On until they are fully parked on the stand.

**2.22.2 RNAV GNSS APPROACH**

GNSS approach is part of the GPS service and is established at Bahrain, therefore, acquisition of such service could only be done by means of flying towards a number of way points which are prevailed along the approach phases within BAHRAIN TMA after which it will guide an aircraft to the final approach of the landing RWY, such procedure may only be flown using significant position co - ordinates that are stored in the aircraft's navigational data base.

**a) Path Terminators RUNWAY 12L**

| #   | ID           | Latitude     | Longitude     | P/T | Fly-Over | Course ( ° T ) | VPA  | Altitude ( ft ) | Dist ( nm ) | speed limit ( kts ) |
|-----|--------------|--------------|---------------|-----|----------|----------------|------|-----------------|-------------|---------------------|
| 010 | OB1N3        | 262712.8781N | 0503044.3194E | IF  | N        |                |      | +2500           |             |                     |
| 020 | BI502        | 262122.55N   | 0502907.28E   | TF  | N        | 194.01         |      | +1400           | 6           | -210                |
|     |              |              |               |     |          |                |      |                 |             |                     |
| 010 | LOVAL        | 262406.31N   | 0502422.32E   | IF  | N        |                |      | +2500           |             |                     |
| 020 | BI502        | 262122.55N   | 0502907.28E   | TF  | N        | 122.52         |      | +1400           | 5.06        | -210                |
|     |              |              |               |     |          |                |      |                 |             |                     |
| 010 | BI502        | 262122.55N   | 0502907.28E   | IF  | N        |                |      | +1400           |             |                     |
| 020 | BI501        | 261909.61N   | 0503258.24E   | TF  | N        | 122.56         |      | +1400           | 4.1         |                     |
| 030 | RW12L (MAPt) | 261644.33N   | 0503710.28E   | TF  | Y        | 122.58         | -2.8 | @58             | 4.8         |                     |
| 040 |              |              |               | VM  |          | 122.62         |      | @2500           |             |                     |

**b) Path Terminators RUNWAY 30R**

| # | ID           | Latitude     | Longitude     | P/T | Fly-Over | Course ( ° T ) | VPA  | Altitude ( ft ) | Dist (nm) | Speed limit (kts) |
|---|--------------|--------------|---------------|-----|----------|----------------|------|-----------------|-----------|-------------------|
| 1 | OB3N1        | 261454.5833N | 0505204.7346E | IF  | N        |                |      | +2500           |           |                   |
| 2 | BI602        | 261106.96N   | 0504654.00E   | TF  | N        | 230.94         |      | +1400           | 6         | -210              |
|   |              |              |               |     |          |                |      |                 |           |                   |
| 3 | DAXEL        | 260822.45N   | 0505137.90E   | IF  | N        |                |      | +2500           |           |                   |
| 4 | BI602        | 261106.96N   | 0504654.00E   | TF  | N        | 302.72         |      | +1400           | 5.06      | -210              |
|   |              |              |               |     |          |                |      |                 |           |                   |
| 5 | BI602        | 261106.96N   | 0504654.00E   | IF  | N        |                |      | +1400           |           |                   |
| 6 | BI601        | 261320.28N   | 0504303.57E   | TF  | N        | 302.69         |      | +1400           | 4.1       |                   |
| 7 | RW30R (MAPt) | 261545.62N   | 0503852.03E   | TF  | Y        | 302.66         | -2.8 | @57             | 4.48      |                   |
| 8 |              |              |               | VM  |          | 302.66         |      | @2500           |           |                   |

## c) Path Terminators Runway 12R

| #   | ID    | Latitude     | Longitude     | P/T | Fly-Over | Course ( ° T ) | VPA  | Altitude ( ft ) | Dist ( nm ) | speed limit ( kts ) |
|-----|-------|--------------|---------------|-----|----------|----------------|------|-----------------|-------------|---------------------|
| 010 | OB1N3 | 262712.8781N | 0503044.3194E | IF  | N        |                |      | +2500           |             |                     |
| 020 | BI502 | 262122.55N   | 0502907.28E   | TF  | N        | 194.01         |      | +1400           | 6           | -210                |
|     |       |              |               |     |          |                |      |                 |             |                     |
| 010 | LOVAL | 262406.31N   | 0502422.32E   | IF  | N        |                |      | +2500           |             |                     |
| 020 | BI502 | 262122.55N   | 0502907.28E   | TF  | N        | 122.52         |      | +1400           | 5.06        | -210                |
|     |       |              |               |     |          |                |      |                 |             |                     |
| 010 | BI502 | 262122.55N   | 0502907.28E   | IF  | N        |                |      | +1400           |             |                     |
| 020 | OB2F1 | 261836.62N   | 0503342.52E   | TF  | N        | 123.77         |      | +1400           | 4.96        |                     |
| 030 | RW12R | 261610.74N   | 0503755.62E   | TF  | Y        | 122.58         | -2.8 | @58             | 4.5         |                     |
| 040 |       |              |               | VM  |          | 122.62         |      | @2500           |             |                     |

## d) Path Terminators RWY 30L

| #   | ID    | Latitude     | Longitude     | P/T | Fly-Over | Cours e ( ° T ) | Turn Direction | Altitud e ( ft ) | Dist (nm) | Speed limit (kts) |
|-----|-------|--------------|---------------|-----|----------|-----------------|----------------|------------------|-----------|-------------------|
| 010 | OB3N1 | 261454.5833N | 0505204.7346E | IF  | N        |                 |                | +2500            |           |                   |
| 020 | BI602 | 261106.96N   | 0504654.00E   | TF  | N        | 230.94          |                | +1400            | 6         | -210              |
|     |       |              |               |     |          |                 |                |                  |           |                   |
| 010 | DAXEL | 260822.45N   | 0505137.90E   | IF  | N        |                 |                | +2500            |           |                   |
| 020 | BI602 | 261106.96N   | 0504654.00E   | TF  | N        | 302.72          |                | +1400            | 5.06      | -210              |
|     |       |              |               |     |          |                 |                |                  |           |                   |
| 010 | BI602 | 261106.96N   | 0504654.00E   | IF  | N        |                 |                | +1400            |           |                   |
| 020 | OB3F1 | 261305.83N   | 0504316.03E   | TF  | N        | 301.17          |                | +1400            | 3.82      |                   |
| 030 | RW30L | 261533.91N   | 0503859.44E   | TF  | Y        | 302.63          |                | @57              | 4.5       |                   |
| 040 |       |              |               | VM  |          | 302.63          |                | @2500            |           |                   |

**2.22.3 RVR RESTRICTIONS**

No landing and take off will be allowed at BAHRAIN INTERNATIONAL airport if the reported RVR reading is less than 350 M.

**OBBI AD 2.23 ADDITIONAL INFORMATION**

**2.23.1 Minimization of time of the RUNWAY**

A number of recent incidents have led to a reduction in the minimum requirement for runway separation between arriving and departing aircraft. The factors causing these incidents have been found to be:

1. Arriving aircraft delay to vacate the runway after landing and / or stop before the entire aircraft has vacated the runway.
2. Departing aircraft, having reported "ready" and been cleared for takeoff, delay on the runway before commencing takeoff roll.

**Factors ATC considers:**

1. IFR separation on final approach course may reduce to 3NM. This reduced separation minima enhances airspace efficiency and runway utilization.
2. For the purposes of issuing a takeoff or landing clearance to subsequent aircraft, a preceding aircraft is not considered to be clear of the runway until the arriving aircraft is completely clear of the runway or the departing is airborne.
3. in the order to achieve the maximum runway utilization, it is essential that landing aircraft vacate the runway without delay; and that the departing aircraft, once cleared for takeoff, commence takeoff roll without delay.
4. in the event of arriving or departing aircraft delaying on the runway, it may become necessary for the subsequent departing aircraft's takeoff clearance to be delayed; or for the subsequent arriving aircraft to be instructed to go around. Incidents of this nature have serious safety implication for all operators.

Pilots are, therefore, reminded of their responsibilities.

**Arriving Aircraft**

1. Plan their runway exit point prior to landing, it is preferred that aircraft landing Runway 12L vacate via taxiway A6, A7 or before; and that aircraft landing Runway 30R vacate via taxiway 'A4' or before. Advise ATC as soon as practicable if unable to exit the runway as instructed.
2. Do not stop or reduce speed to less than required taxi speed prior to vacating the Runway completely.
3. Vacate the Runway expeditiously.

**Departing Aircraft**

1. Report "ready" only when ready for immediate takeoff.
2. Once cleared for takeoff, commence takeoff roll with minimum delay.



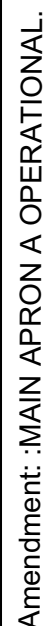
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## OBBI AD 2.24 CHARTS RELATED TO AN AERODROME

| Chart name                                                                       | Page          |
|----------------------------------------------------------------------------------|---------------|
| AERODROME/HELIPORT CHART                                                         | AD 2-OBBI-26  |
| AERODROME GROUND MOVEMENT CHART                                                  | AD 2-OBBI-28  |
| AIRCRAFT PARKING DOCKING CHART ICAO MAIN APRON A                                 | AD 2-OBBI-30  |
| AIRCRAFT PARKING DOCKING CHART ICAO MAIN APRON B                                 | AD 2-OBBI-32  |
| AIRCRAFT PARKING DOCKING CHART ICAO MAIN APRON C                                 | AD 2-OBBI-34  |
| AIRCRAFT PARKING DOCKING CHART MIDDLE AND CARGO APRONS                           | AD 2-OBBI-36  |
| AIRCRAFT PARKING DOCKING CHART EXECUTIVE AND CARGO APRON                         | AD 2-OBBI-38  |
| AIRCRAFT PARKING DOCKING CHART WESTERN APRONS A & B AND CARGO & EXECUTIVE APRONS | AD 2-OBBI-40  |
| AIRCRAFT PARKING DOCKING CHART NORTHERN APRON                                    | AD 2-OBBI-42  |
| AIRCRAFT PARKING DOCKING CHART ICAO EASTERN APRON                                | AD 2-OBBI-44  |
| AERODROME OBSTACLE CHART RWY 12L / 30R                                           | AD 2-OBBI-46  |
| AERODROME OBSTACLE CHART RWY 12R / 30L                                           | AD 2-OBBI-48  |
| PRECISION APPROACH TERRAIN CHART - ICAO RWY 30R                                  | AD 2-OBBI-50  |
| PRECISION APPROACH TERRAIN CHART - ICAO RWY 12L                                  | AD 2-OBBI-52  |
| AREA CHART BAHRAIN                                                               | AD 2-OBBI-54  |
| DEPARTURE CHART (RADAR) RWY 12L                                                  | AD 2-OBBI-56  |
| DEPARTURE CHART (RADAR) RWY 30R                                                  | AD 2-OBBI-58  |
| CIRCLING AUTHORIZATION AREA                                                      | AD 2-OBBI-60  |
| IAC - ICAO RWY 12L VOR DME ILS CAT A-D                                           | AD 2-OBBI-62  |
| IAC - ICAO RWY 12L VOR DME CAT A-D (L)                                           | AD 2-OBBI-64  |
| IAC - ICAO RWY 12L VOR CAT A-D (L)                                               | AD 2-OBBI-66  |
| IAC - ICAO RWY 12R RNAV (GNSS) CAT A-D(L)                                        | AD 2-OBBI-68  |
| IAC - RWY 12L RNAV GNSS CAT A-D (L)                                              | AD 2-OBBI-70  |
| IAC - ICAO RWY 12R VOR DME CAT A-D (L)                                           | AD 2-OBBI-72  |
| IAC- ICAO RWY 30L VOR DME CAT A-D (L)                                            | AD 2-OBBI-74  |
| IAC - ICAO RWY 30R VOR DME ILS CAT A-D                                           | AD 2-OBBI-76  |
| IAC - ICAO RWY 30R VOR DME CAT A-D (L)                                           | AD 2-OBBI-78  |
| IAC - ICAO RWY 30R VOR CAT A-D (L)                                               | AD 2-OBBI-80  |
| IAC - RWY 30R RNAV GNSS CAT A-D (L)                                              | AD 2-OBBI-82  |
| IAC - RWY 30L RNAV (GNSS) CAT A-D(L)                                             | AD 2-OBBI-84  |
| Visual Approach Chart - ICAO                                                     | AD 2-OBBI-86  |
| BIRD CONCENTRATIONS                                                              | AD 2-OBBI-88  |
| RADAR MINIMUM ALTITUDE CHART                                                     | AD 2-OBBI-90  |
| STAR CHART - ICAO RWY 12L-30R RNAV1 - RADIO COMMUNICATION FAILURE STAR           | AD 2-OBBI-92  |
| STAR CHART - ICAO RWY 12L-30R RNAV1 - DENVO 1 ARRIVAL                            | AD 2-OBBI-94  |
| STAR CHART - ICAO RWY 12L-30R RNAV1 - KOBOK 1 ARRIVAL                            | AD 2-OBBI-96  |
| STAR CHART - ICAO RWY 12L-30R RNAV1 - LADNA 1 ARRIVAL                            | AD 2-OBBI-98  |
| STAR CHART - ICAO RWY 12L-30R RNAV1 - SOGAT 1 ARRIVAL                            | AD 2-OBBI-100 |
| LOW VISIBILITY PROCEDURE - DEPARTURE RWY 12L-30R                                 | AD 2-OBBI-102 |
| LOW VISIBILITY PROCEDURE - ARR RWY 12L - 30R                                     | AD 2-OBBI-104 |

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AERODROME GROUND  
MOVEMENT CHART - ICAO

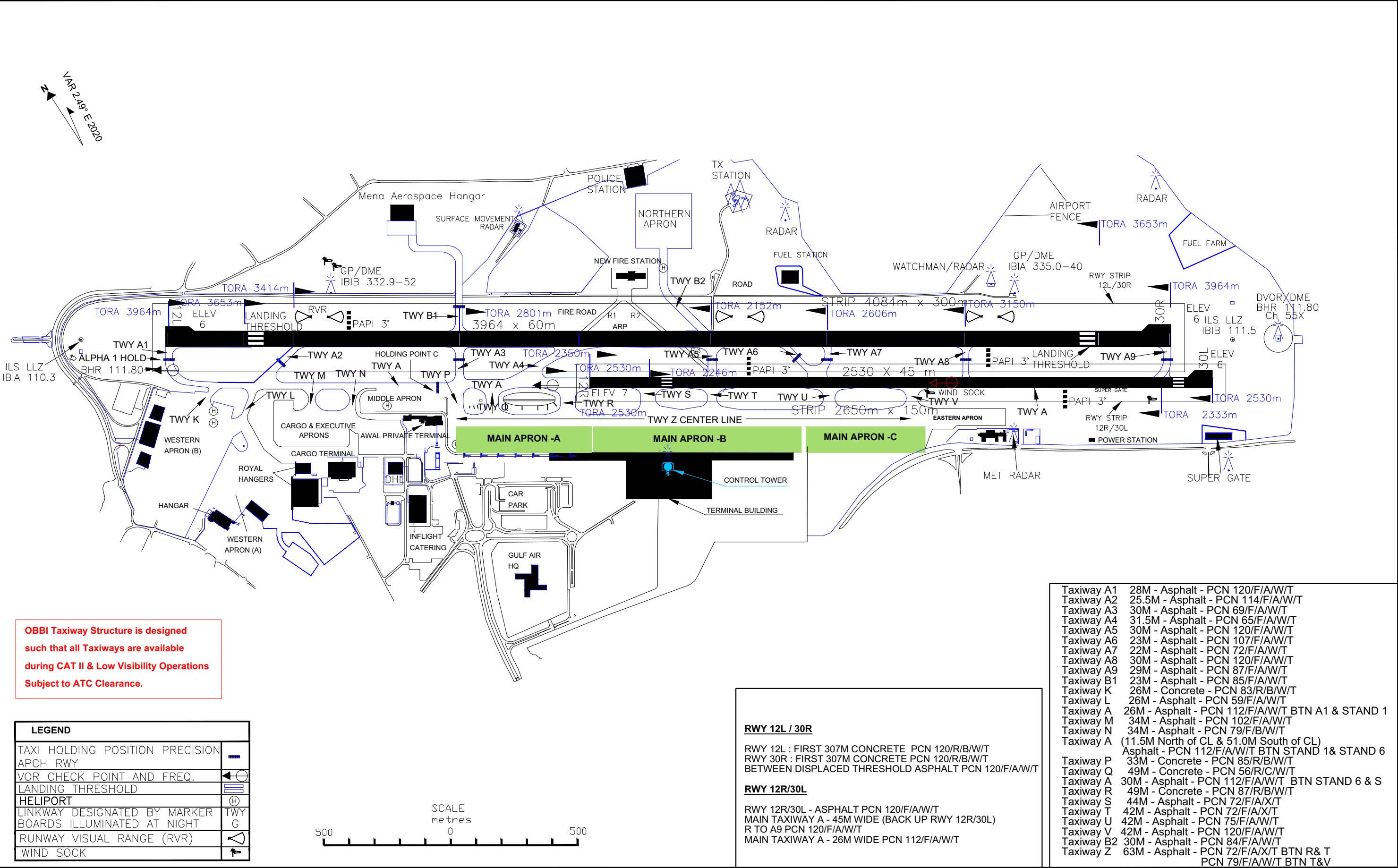
DISTANCES IN METRES  
ALTITUDES, ELEVATIONS AND  
HEIGHTS IN FEET.

26° 16' 14.97"N  
050° 38' 01.17"E

APRON ELEV  
8.92 FT

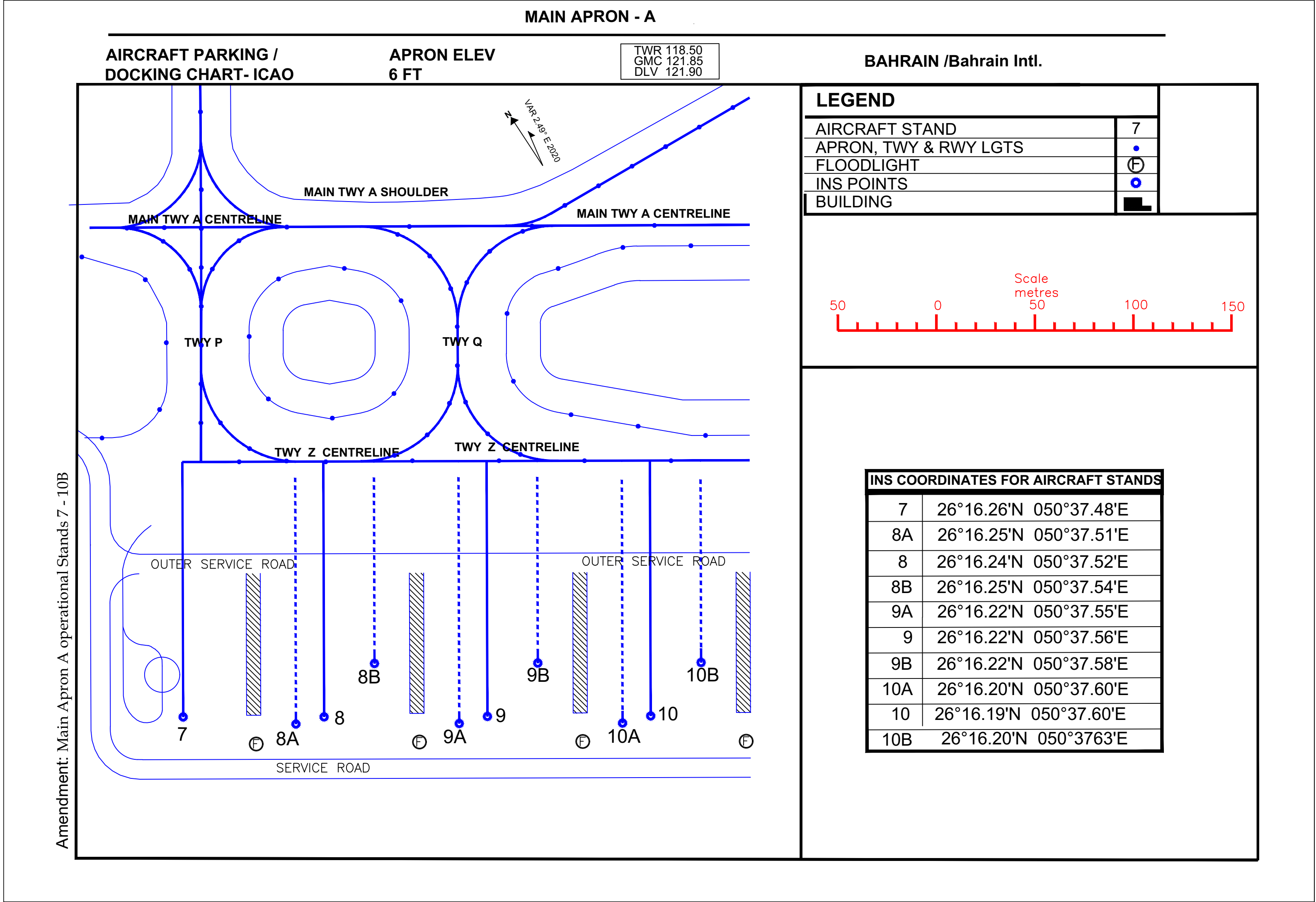
TWR 118.50  
GMC 121.85  
DLV 121.90

BAHRAIN / BAH INTL



Amendment: MAIN APRON A OPERATIONAL.

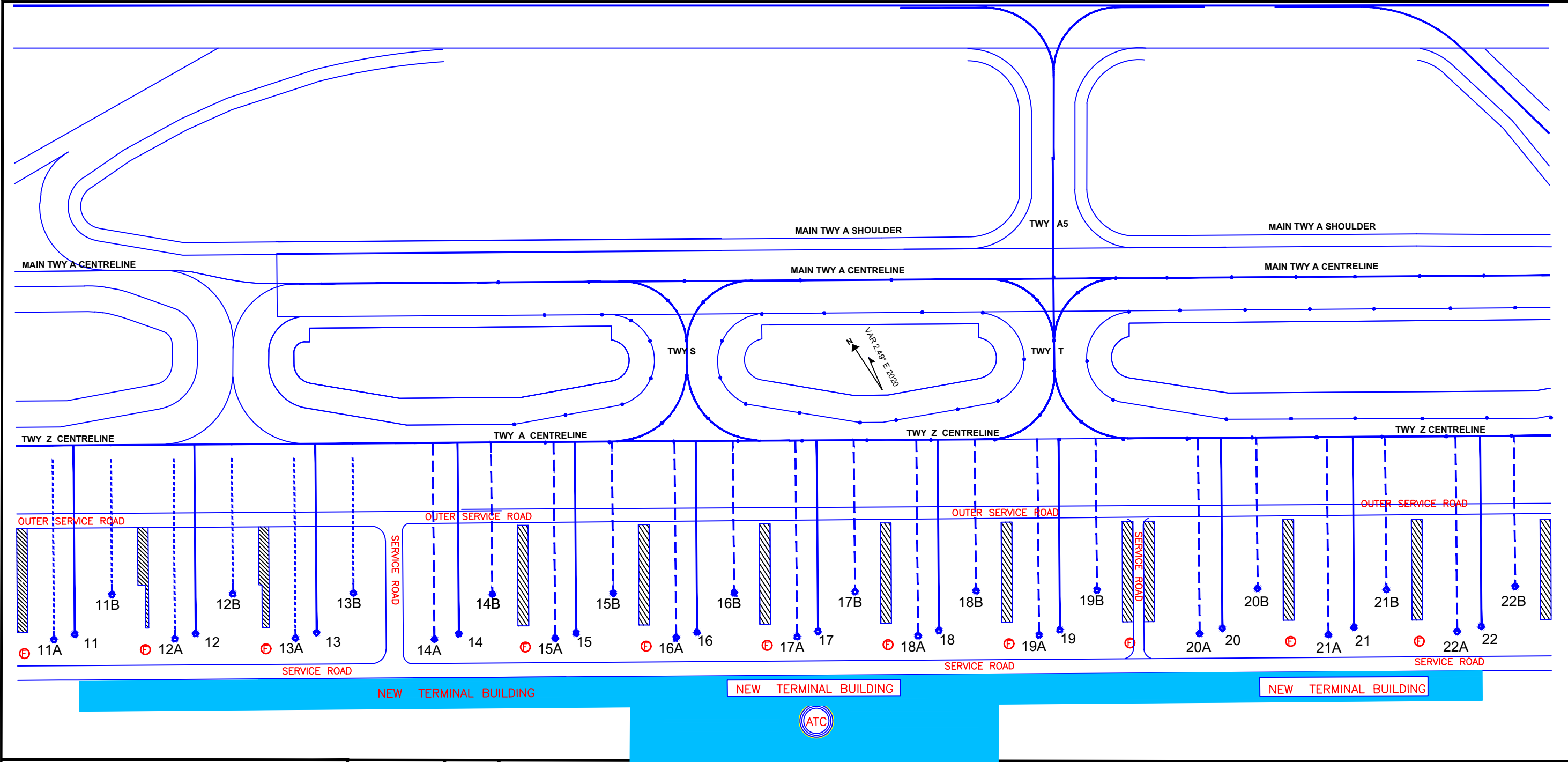
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Amendment: MAIN APRON B-STANDS 11/22.



AIRCRAFT PARKING / DOCKING CHART - ICAO

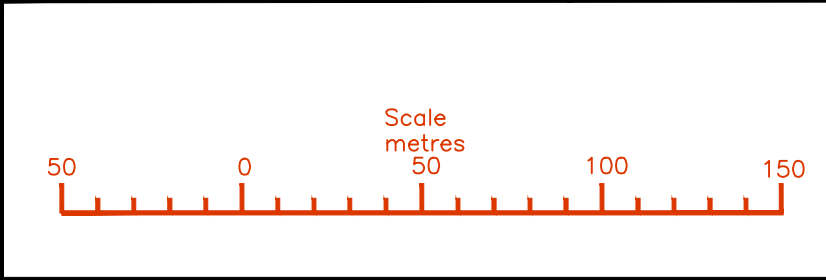
APRON ELEV 7 FT

MAIN APRON - B

TWR 118.50  
GMC 121.85  
DLV 121.90

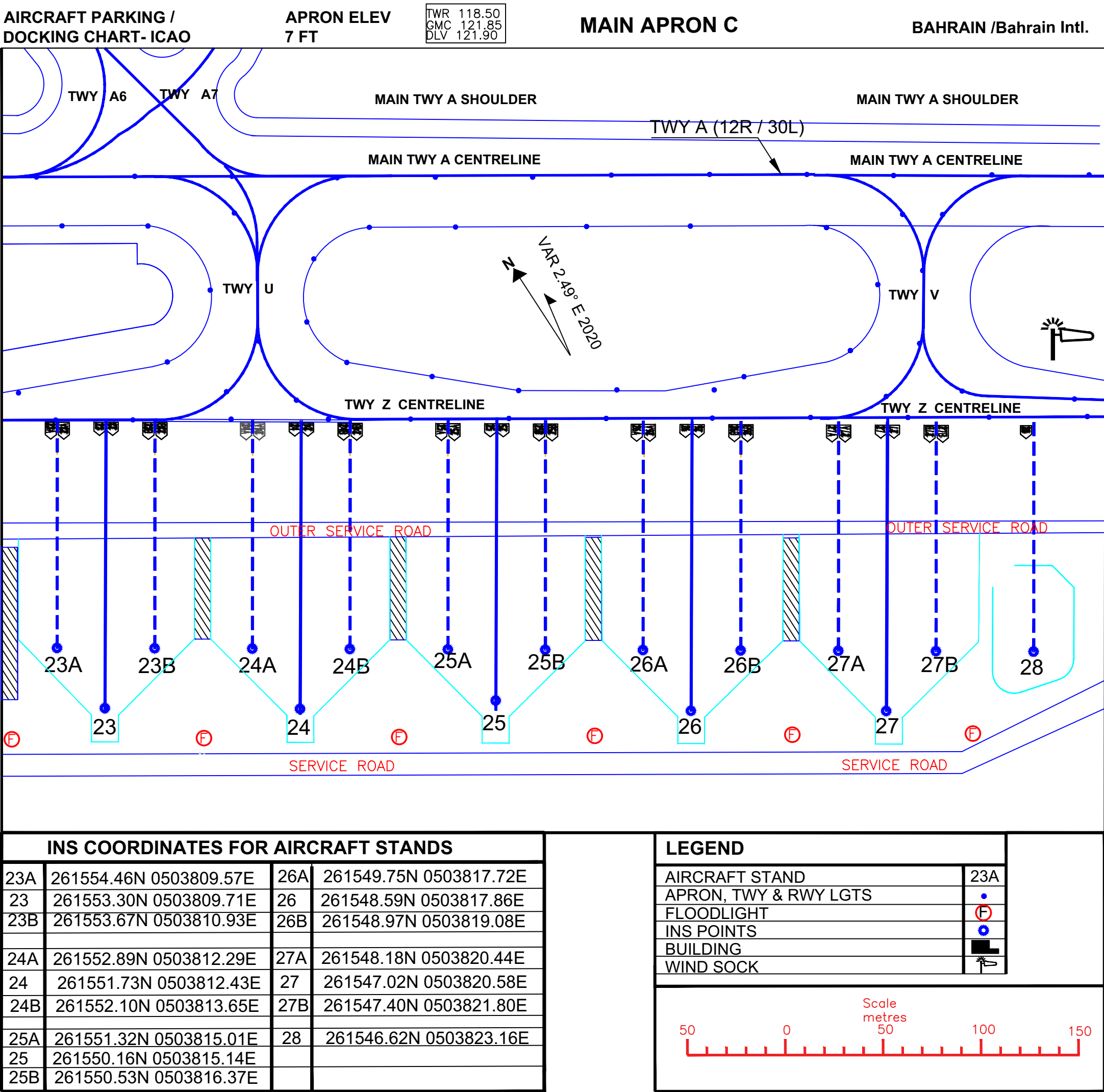
BAHRAIN / Bahrain Intl.

| LEGEND                |     |
|-----------------------|-----|
| AIRCRAFT STAND        | 14A |
| APRON, TWY & RWY LGTS | •   |
| FLOODLIGHT            | ⦿   |
| INS POINTS            | ⦿   |
| BUILDING              | ■   |



| INS COORDINATES FOR AIRCRAFT STANDS |                        |     |                        |     |                        |     |                        |  |  |
|-------------------------------------|------------------------|-----|------------------------|-----|------------------------|-----|------------------------|--|--|
| 11A                                 | 26°16.17'N 050°37.64'E | 14A | 26°16.09'N 050°37.77'E | 17A | 26°16.02'N 050°37.90'E | 20A | 26°15.94'N 050°38.04'E |  |  |
| 11                                  | 26°16.17'N 050°37.65'E | 14  | 26°16.09'N 050°37.78'E | 17  | 26°16.02'N 050°37.91'E | 20  | 26°15.94'N 050°38.05'E |  |  |
| 11B                                 | 26°16.17'N 050°37.67'E | 14B | 26°16.10'N 050°37.80'E | 17B | 26°16.02'N 050°37.93'E | 20B | 26°15.94'N 050°38.07'E |  |  |
| 12A                                 | 26°16.15'N 050°37.68'E | 15A | 26°16.07'N 050°37.81'E | 18A | 26°16.00'N 050°37.94'E | 21A | 26°15.91'N 050°38.09'E |  |  |
| 12                                  | 26°16.14'N 050°37.69'E | 15  | 26°16.07'N 050°37.82'E | 18  | 26°15.99'N 050°37.95'E | 21  | 26°15.91'N 050°38.10'E |  |  |
| 12B                                 | 26°16.15'N 050°37.71'E | 15B | 26°16.07'N 050°37.84'E | 18B | 26°16.00'N 050°37.97'E | 21B | 26°15.92'N 050°38.12'E |  |  |
| 13A                                 | 26°16.12'N 050°37.72'E | 16A | 26°16.05'N 050°37.86'E | 19A | 26°15.97'N 050°37.98'E | 22A | 26°15.89'N 050°38.13'E |  |  |
| 13                                  | 26°16.12'N 050°37.73'E | 16  | 26°16.04'N 050°37.87'E | 19  | 26°15.97'N 050°37.99'E | 22  | 26°15.88'N 050°38.14'E |  |  |
| 13B                                 | 26°16.13'N 050°37.75'E | 16B | 26°16.05'N 050°37.89'E | 19B | 26°15.97'N 050°38.01'E | 22B | 26°15.89'N 050°38.16'E |  |  |

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Amendment: MAIN APRON C STANDS 23-28.

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Diagram illustrating the layout of an airport apron and taxiway area, including various structures, roads, and lighting systems.

**Key Features and Labels:**

- MAIN TWY A SHOULDER
- MAIN TWY A CENTRELINE
- MIDDLE APRON
- SERVICE ROAD
- APRON EDGE
- CARGO APRON
- FROM TWY N
- Scale metres (0 to 100)
- INS COORDINATES FOR AIRCRAFT STANDS
- LEGEND
- ROAD
- AVENTURA TERMINAL
- TWR
- APRON EDGE LIGHTS
- HOLDING POINT C
- TWY P

**Legend:**

| Symbol | Description                                        |
|--------|----------------------------------------------------|
| ○      | AIRCRAFT STAND                                     |
| ○      | TAXIWAY CENTRE LIGHT, APRON EDGE LIGHT & STOP BARS |
| ⦿      | FLOODLIGHT                                         |
| ○      | INS POINTS                                         |
| ■      | BUILDING                                           |
| ■      | RWY GUARD LIGHTS                                   |

**INS COORDINATES FOR AIRCRAFT STANDS:**

| Stand Number | INS Coordinates        |
|--------------|------------------------|
| 6            | 261623.27N 0503728.23E |
| 5            | 261624.17N 0503726.65E |
| 4            | 261625.09N 0503725.08E |
| 3            | 261626.01N 0503723.50E |
| 2            | 261626.94N 0503721.94E |
| 1            | 261627.86N 0503720.36E |

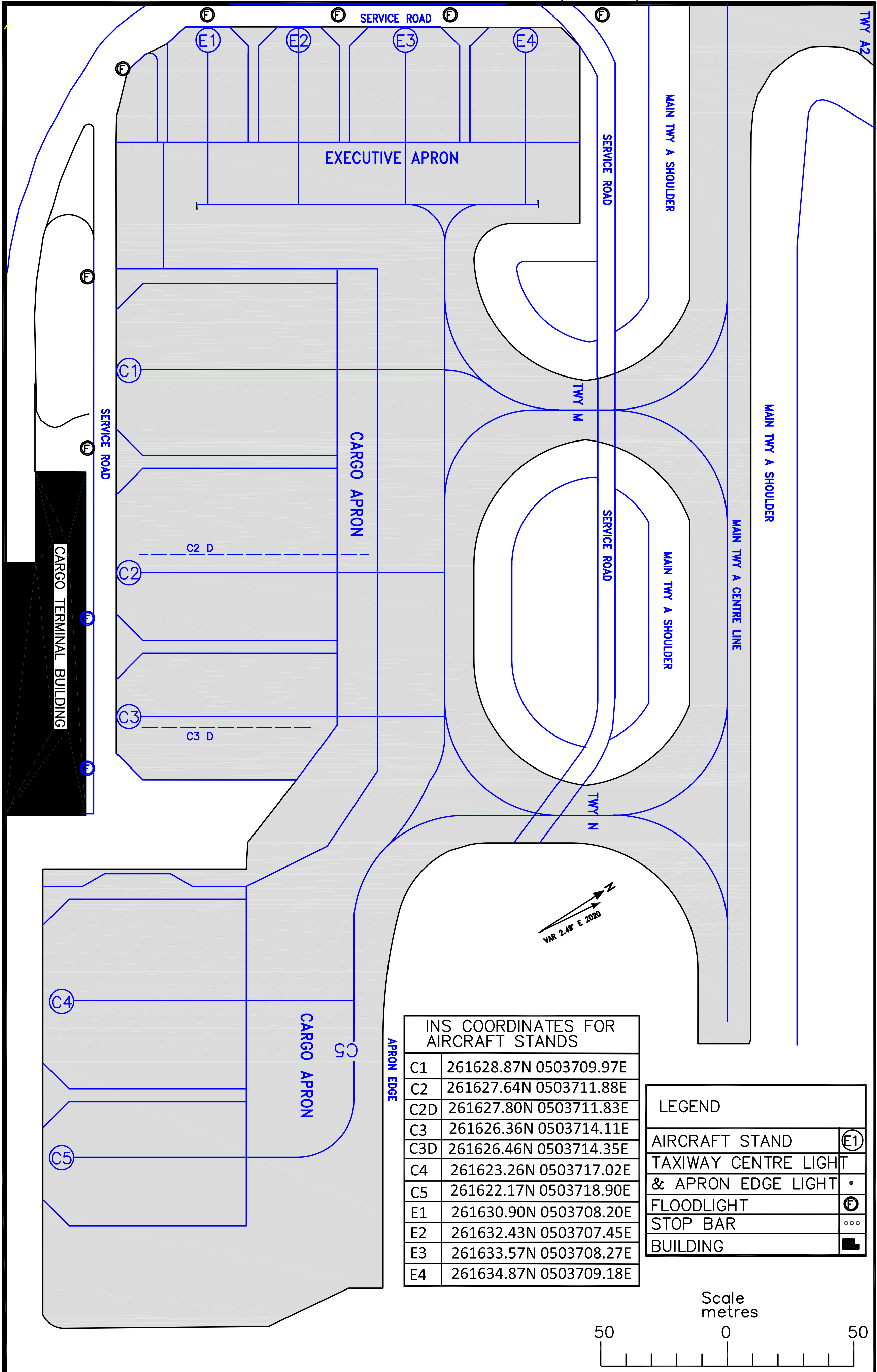
|                                           |                                                                                                     |            |            |            |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------|------------|------------|------------|
| MIDDLE APRON                              |                                                                                                     |            |            |            |
| AIRCRAFT PARKING/<br>DOCKING CHART - ICAO | APRON ELEV<br>7 FT                                                                                  |            |            |            |
|                                           | <table><tr><td>TWR 118.50</td></tr><tr><td>GMC 121.85</td></tr><tr><td>DLV 121.90</td></tr></table> | TWR 118.50 | GMC 121.85 | DLV 121.90 |
| TWR 118.50                                |                                                                                                     |            |            |            |
| GMC 121.85                                |                                                                                                     |            |            |            |
| DLV 121.90                                |                                                                                                     |            |            |            |
| BAHRAIN / Bahrain Intl.                   |                                                                                                     |            |            |            |

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## **AIRCRAFT PARKING/ DOCKING CHART - ICAO**

APRON ELEV  
7 FT

|     |        |
|-----|--------|
| TWR | 118.50 |
| GMC | 121.85 |
| DLV | 121.90 |

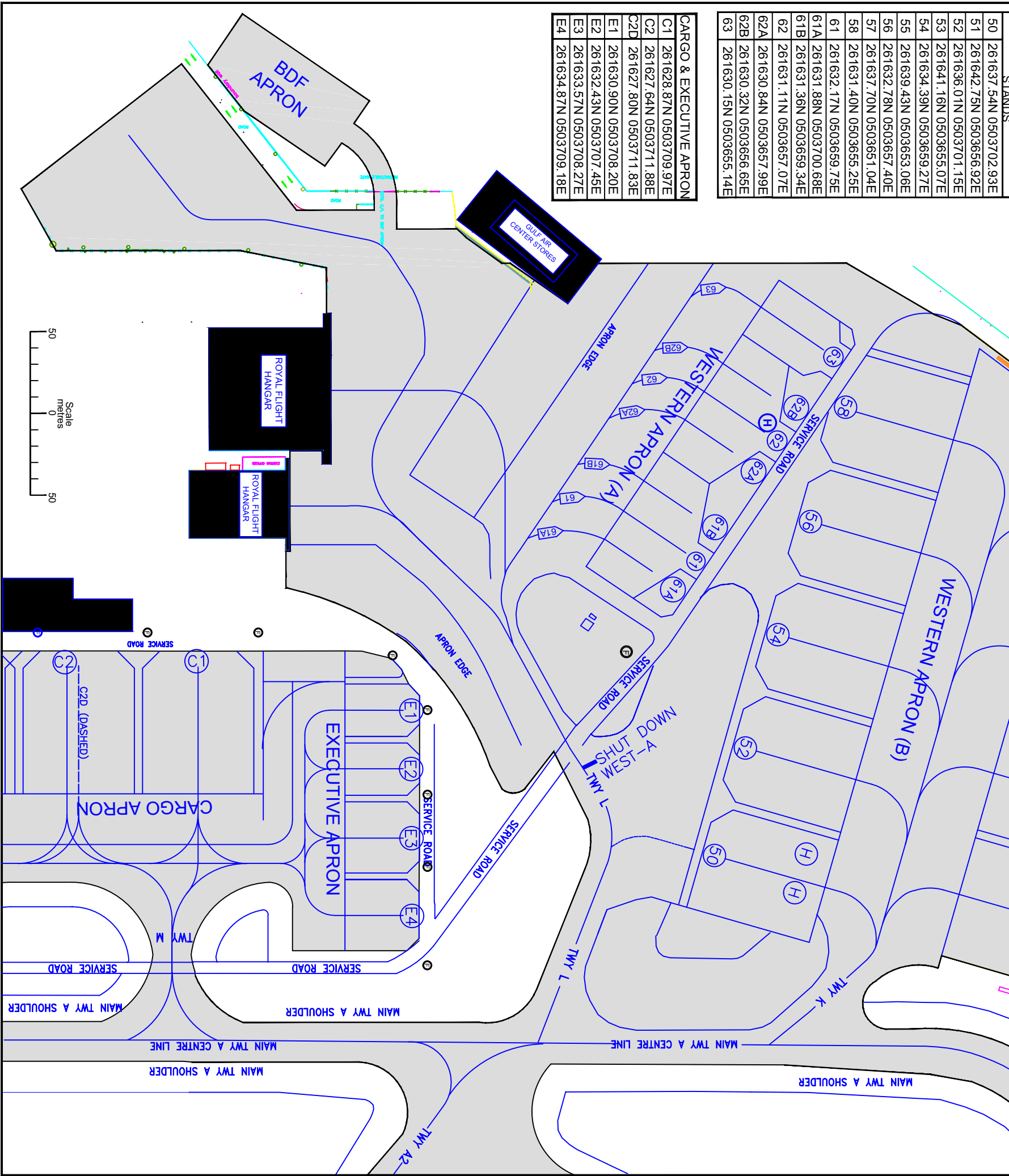
**BAHRAIN / Bahrain Intl.**

Amendment: MAG VAR Updated & DLV FREQ Added.



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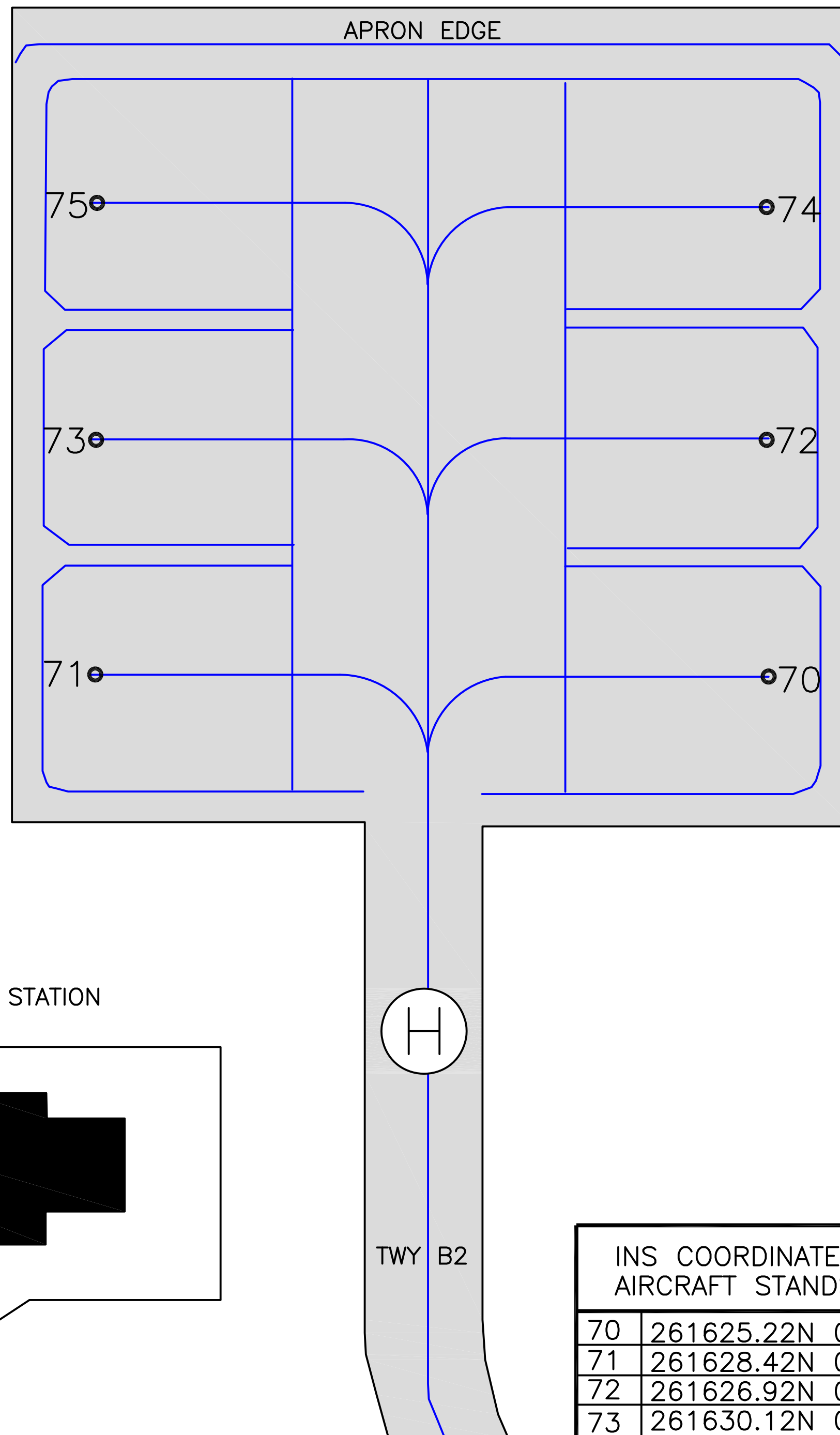
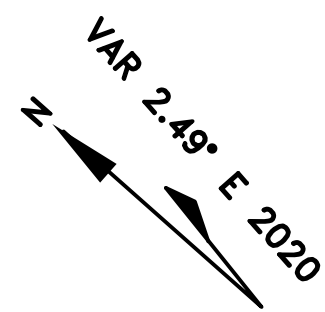
Amendment:WESTERN APRON A SHUTDOWN PROCEDURE .



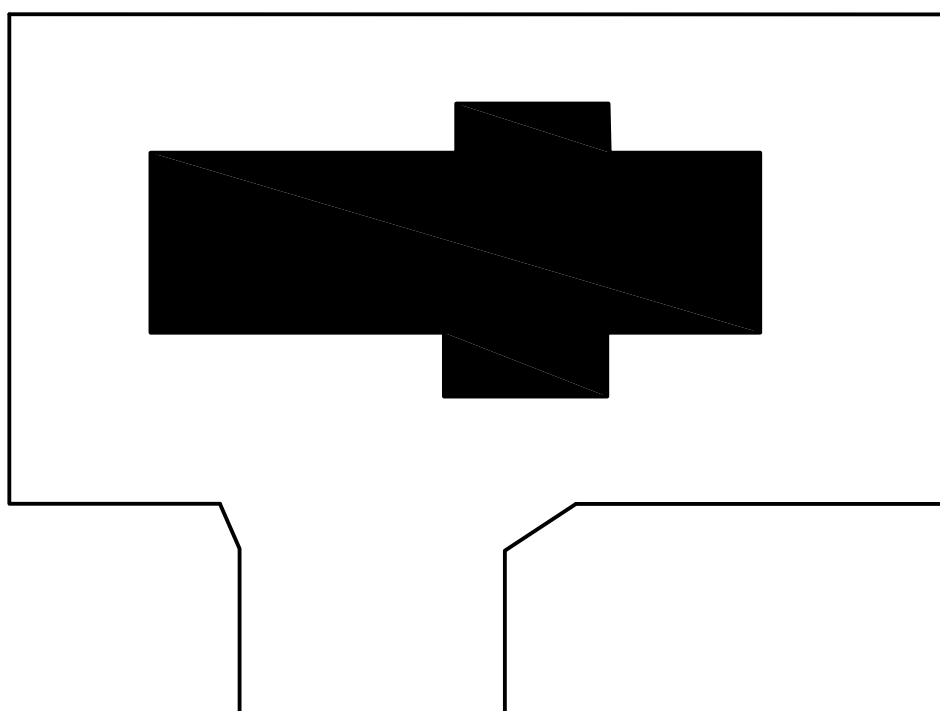
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# AIRCRAFT PARKING/ DOCKING CHART - ICAO

TWR 118.50  
GMC 121.85  
DLV 121.90

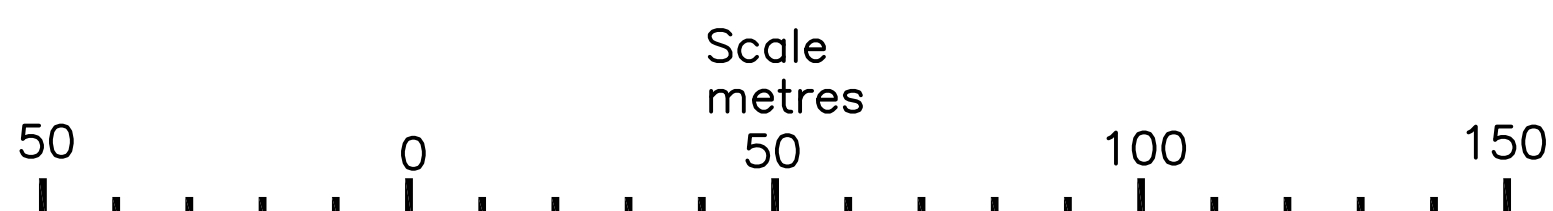
**BAHRAIN / Bahrain Intl.**

NEW FIRE STATION



| INS COORDINATES FOR<br>AIRCRAFT STANDS |            |             |
|----------------------------------------|------------|-------------|
| 70                                     | 261625.22N | 0503811.33E |
| 71                                     | 261628.42N | 0503805.74E |
| 72                                     | 261626.92N | 0503812.53E |
| 73                                     | 261630.12N | 0503806.93E |
| 74                                     | 261628.62N | 0503813.73E |
| 75                                     | 261631.82N | 0503808.12E |

| LEGEND                     |                                                                                       |
|----------------------------|---------------------------------------------------------------------------------------|
| AIRCRAFT STAND             | 70                                                                                    |
| TAXIWAY & APRON EDGE LIGHT | °                                                                                     |
| FLOODLIGHT                 | Ⓢ                                                                                     |
| INS POINTS                 | ●                                                                                     |
| BUILDING                   |  |
| HELIPORT STAND             | Ⓜ                                                                                     |
|                            |                                                                                       |



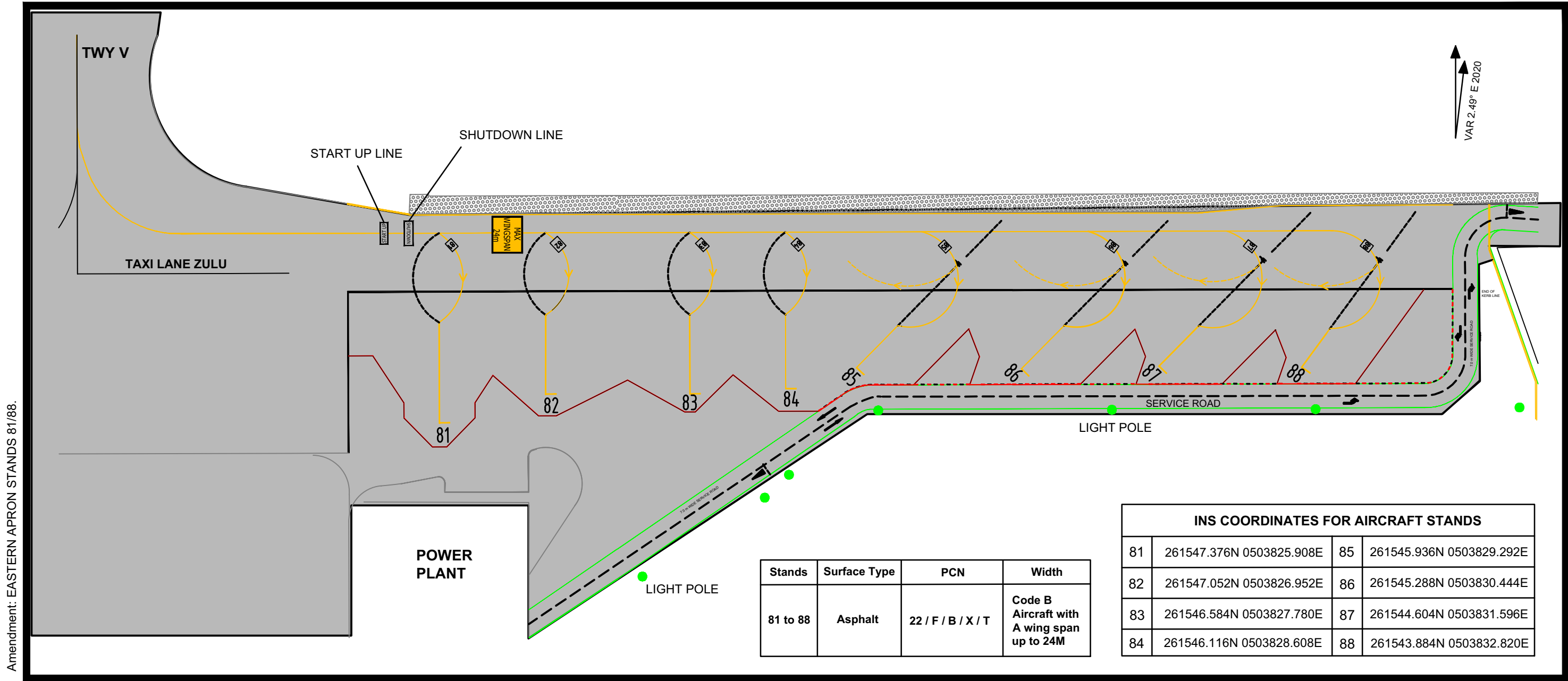
Amendment: MAG VAR value Updated & DLV FREQ Added.

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AIRCRAFT PARKING/  
DOCKING CHART - ICAO

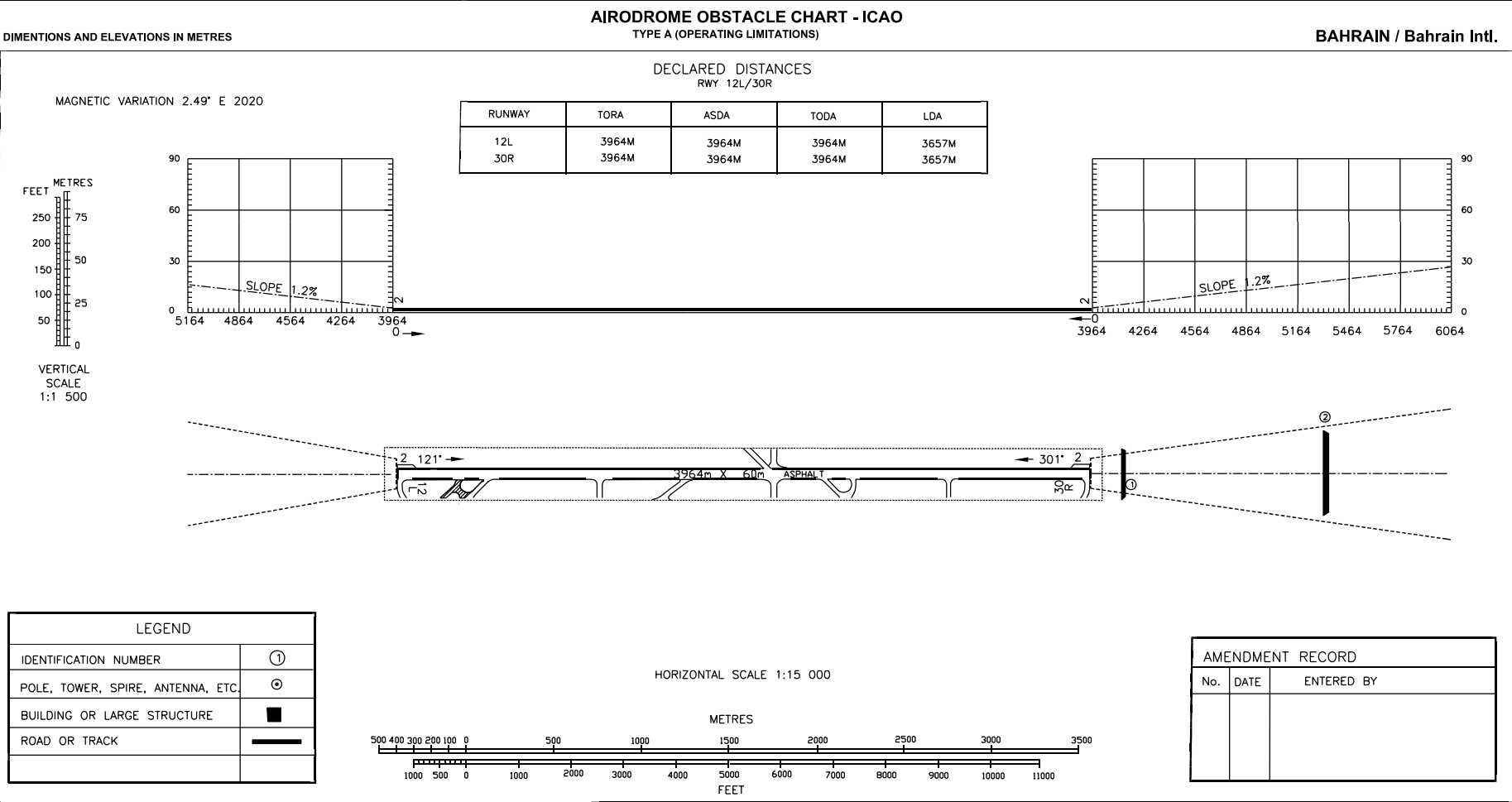
TWR:118.50  
GMC:121.85  
DLV: 121.90

EASTERN APRON





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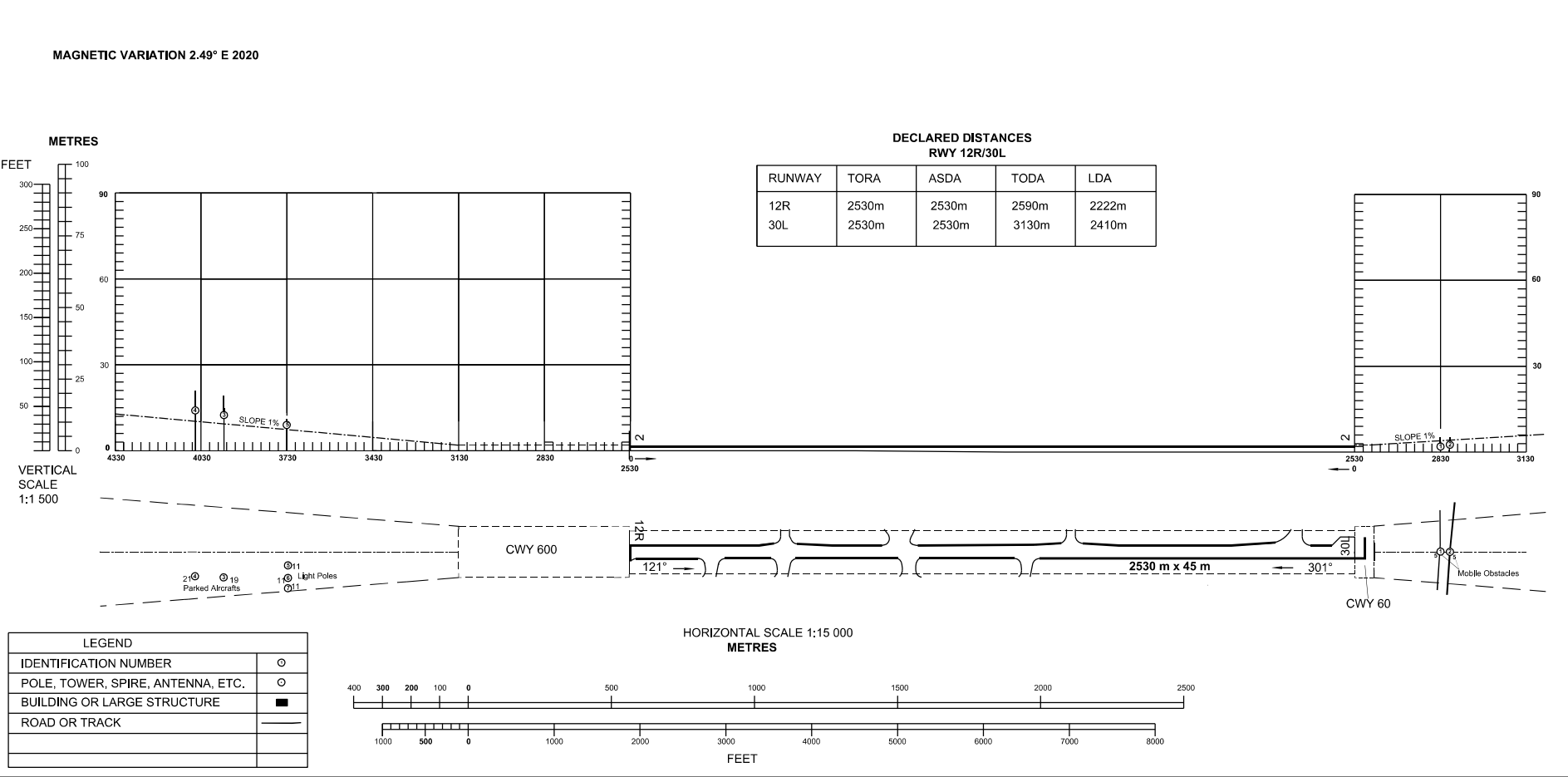
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AERODROME OBSTACLE CHART - ICAO

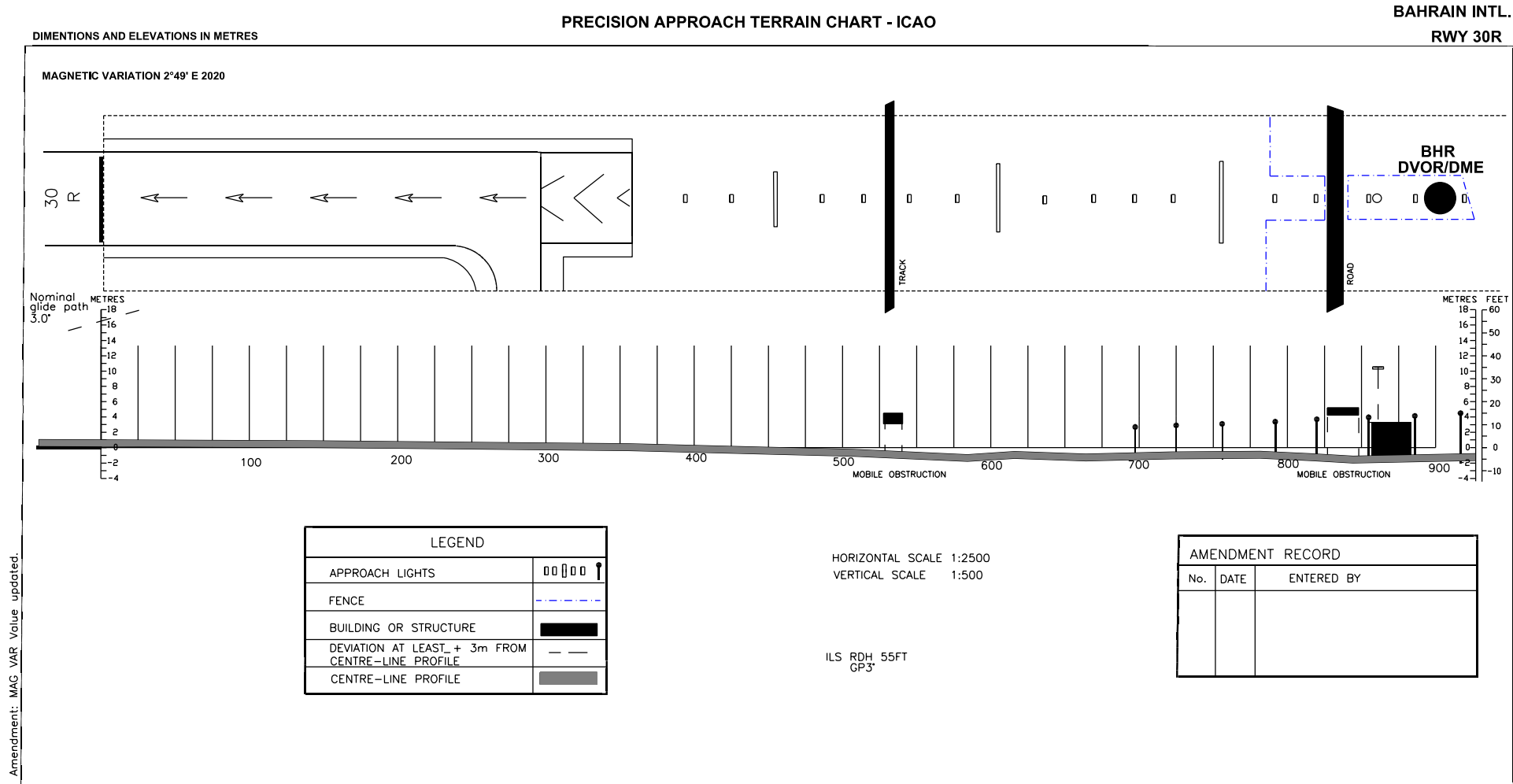
TYPE A (OPERATING LIMITATIONS)

BAHRAIN / Bahrain Intl.

DIMENSIONS AND ELEVATIONS IN METRES



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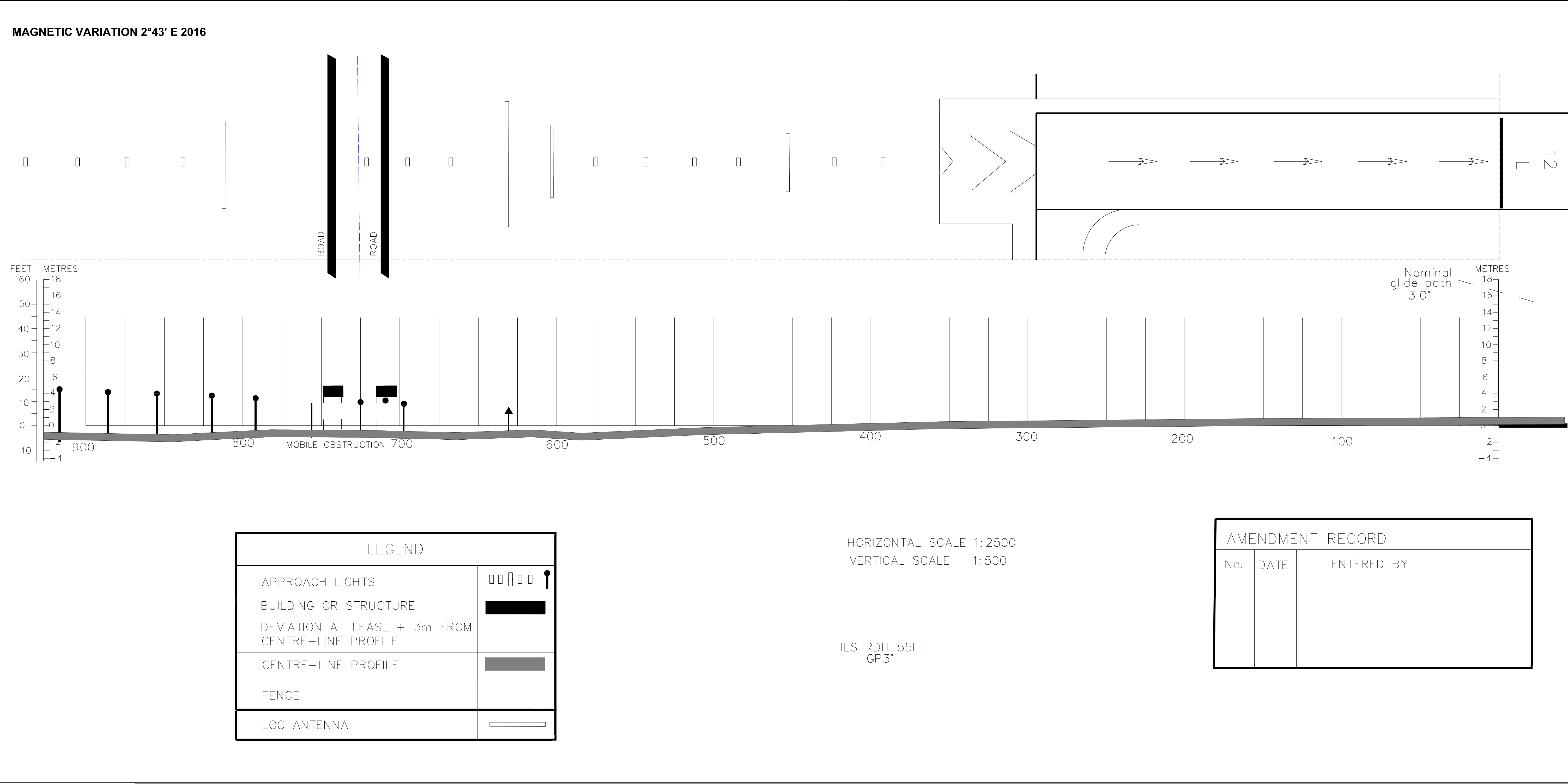
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PRECISION APPROACH TERRAIN CHART - ICAO

BAHRAIN INTL.  
RWY 12L

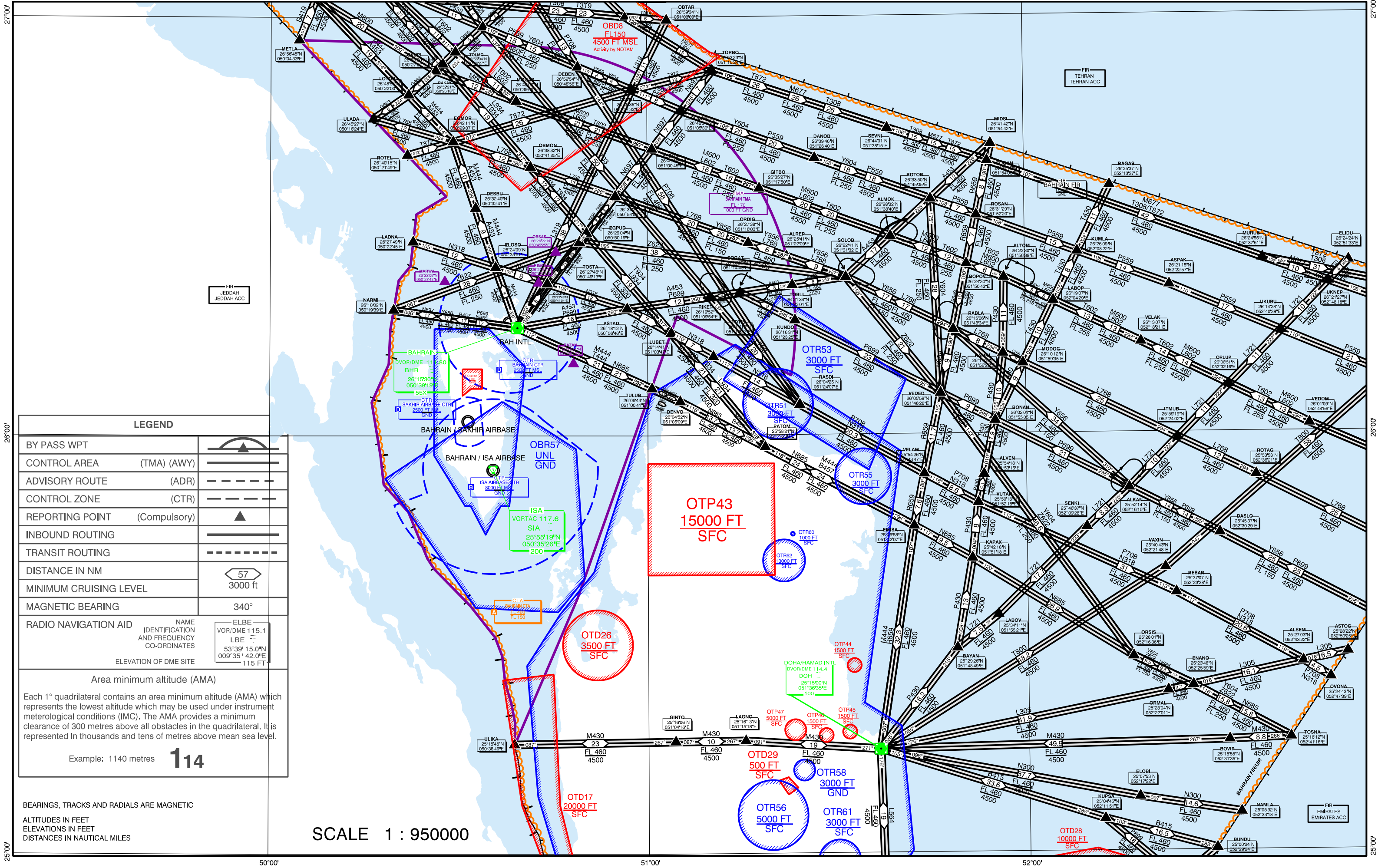
DIMENTIONS AND ELEVATIONS IN METRES



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AREA CHART - ICAO

BAHRAIN TMA  
BAHRAIN INTERNATIONAL

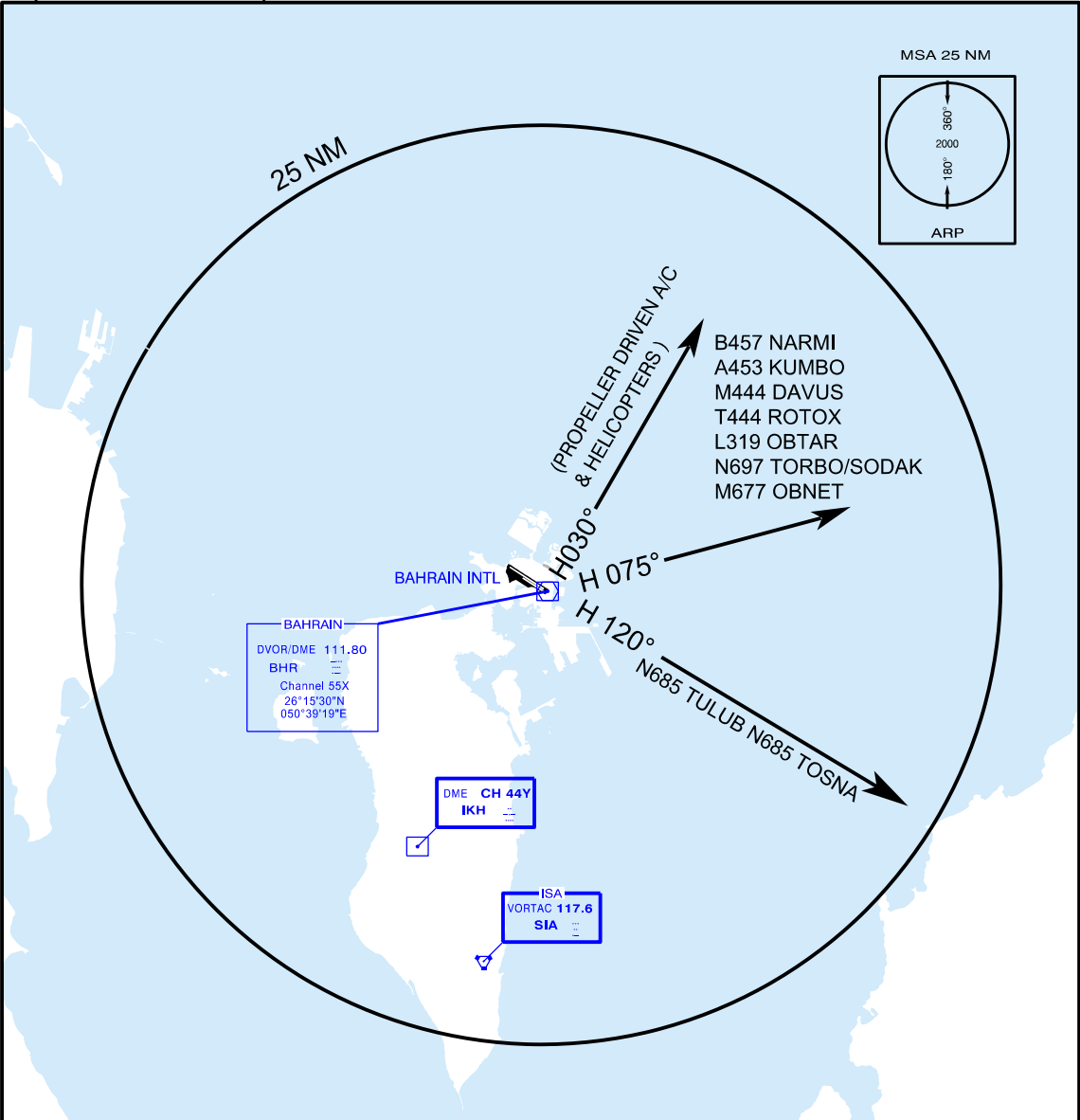




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APP: 127.85 119.100 234.95  
TWR: 118.5 296.025  
GMC: 121.85  
DLV: 121.90  
DATIS: 127.2

DEPARTURE CHART (RADAR) RWY 12L



Unless otherwise instructed by ATC all jet departures  
Heading 120° for FIR exit via N685 TULUB N685 TOSNA  
Heading 075° for FIR exit via B457 NARMI, A453 KUMBO, M444 DAVUS, T444 ROTOX, L319 OBTAR, N697 TORBO T872 DASUT, N697 SODAK, P559 NALPO, M677 OBNET Climb ALT 4000' MSL.

Unless otherwise instructed by ATC all helicopter or propeller driven aircraft  
Heading 120° for FIR exit via N685 TULUB N685 TOSNA  
H 030° for FIR exit via B457 NARMI, A453 KUMBO M444 DAVUS, T444 ROTOX, L319 OBTAR, N697 TORBO T872 DASUT N697 SODAK, P559 NALPO, M677 OBNET Climb ALT 3000' MSL.

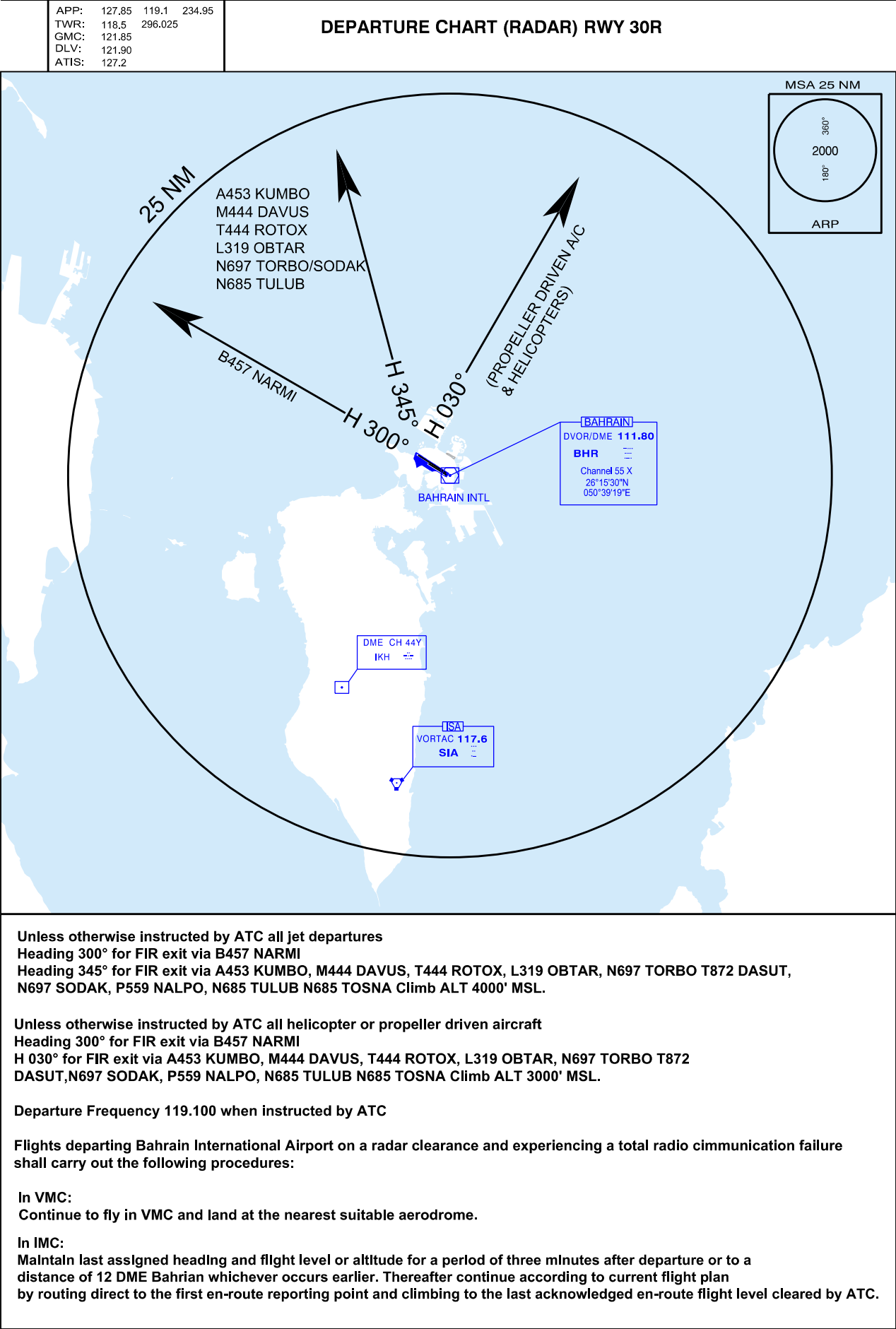
Departure Frequency 119.100 when Instructed by ATC  
Flights departing from Bahrain International Airport on a radar clearance and experiencing a total radio communication failure shall carry out the following procedures:-

In VMC:  
Continue to fly in VMC and land at the nearest suitable aerodrome.

In IMC:  
Maintain last assigned heading and flight level or altitude for a period of three minutes after departure or to a distance of 12 DME Bahrain whichever occurs earlier. Thereafter continue according to current flight plan by routing direct to the first en-route reporting point and climbing to the last acknowledged en-route flight level cleared by ATC.

Amendment : New Procedure.

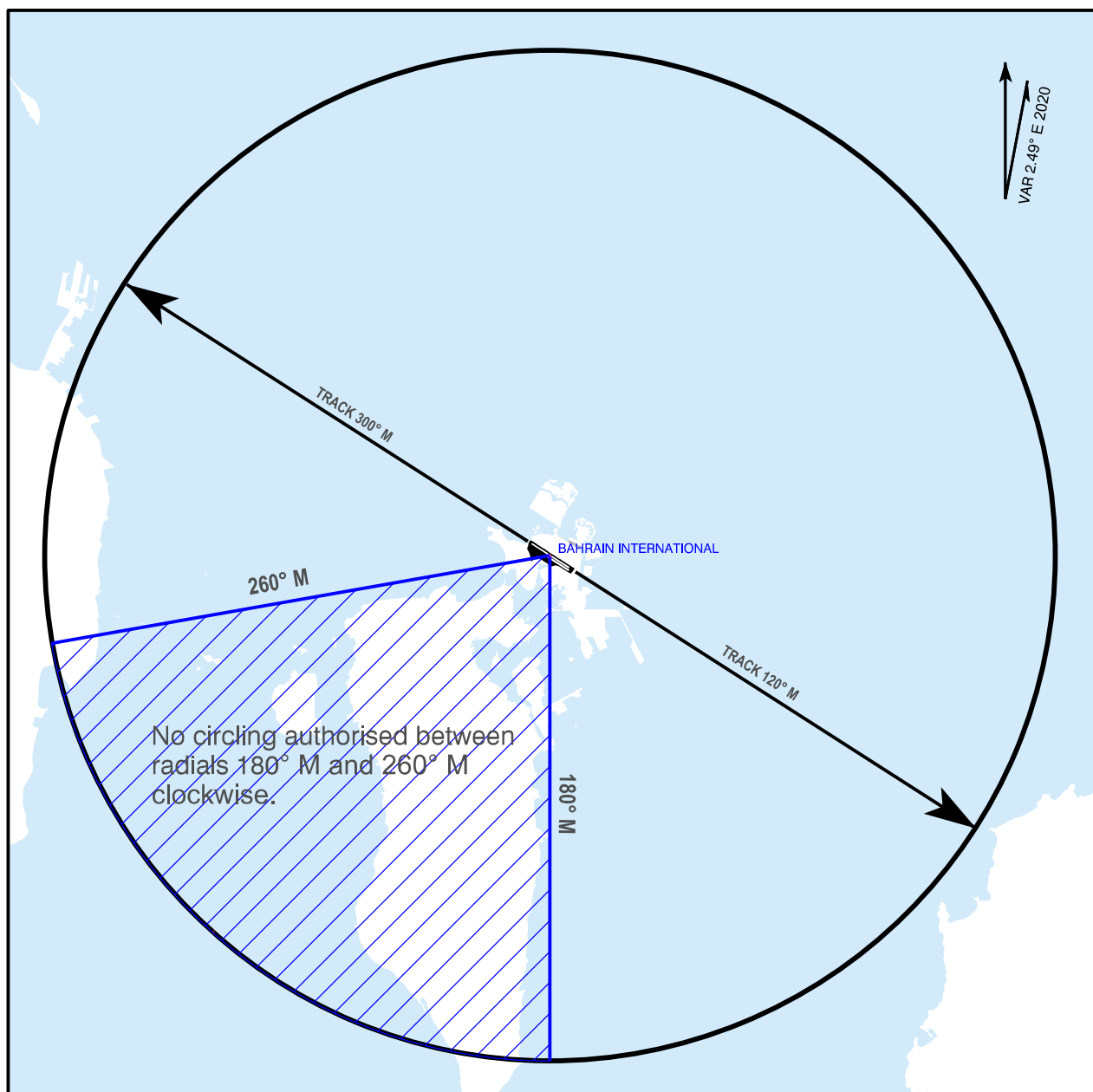
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BAHRAIN INTERNATIONAL

CIRCLING AUTHORIZATION AREA



APPLICABLE TO RWY 12L/30R DEPARTURE.

- 1) RWY 30R Expect right turn heading 345° M or heading 300° M.
- 2) RWY 12L Expect left turn heading 075° M or heading 120° M.
- 3) Departure Frequency 119.100 MHZ.

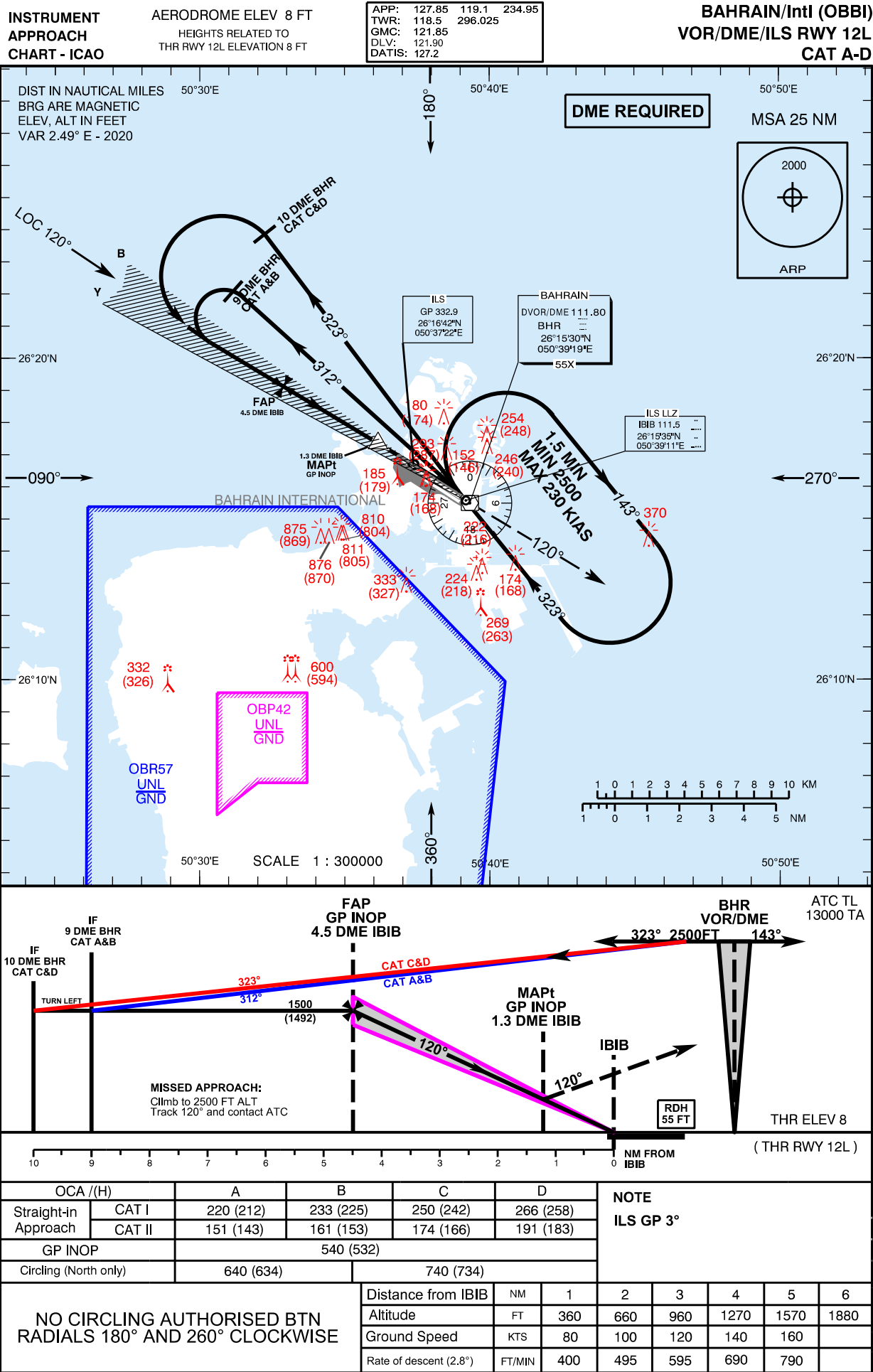
Heading assigned by ATC shall only be between 260° M through north to 180° M.

Procedures are only valid within 25 NM ARP.

No circling authorized between radials 180° M and 260° M clockwise.

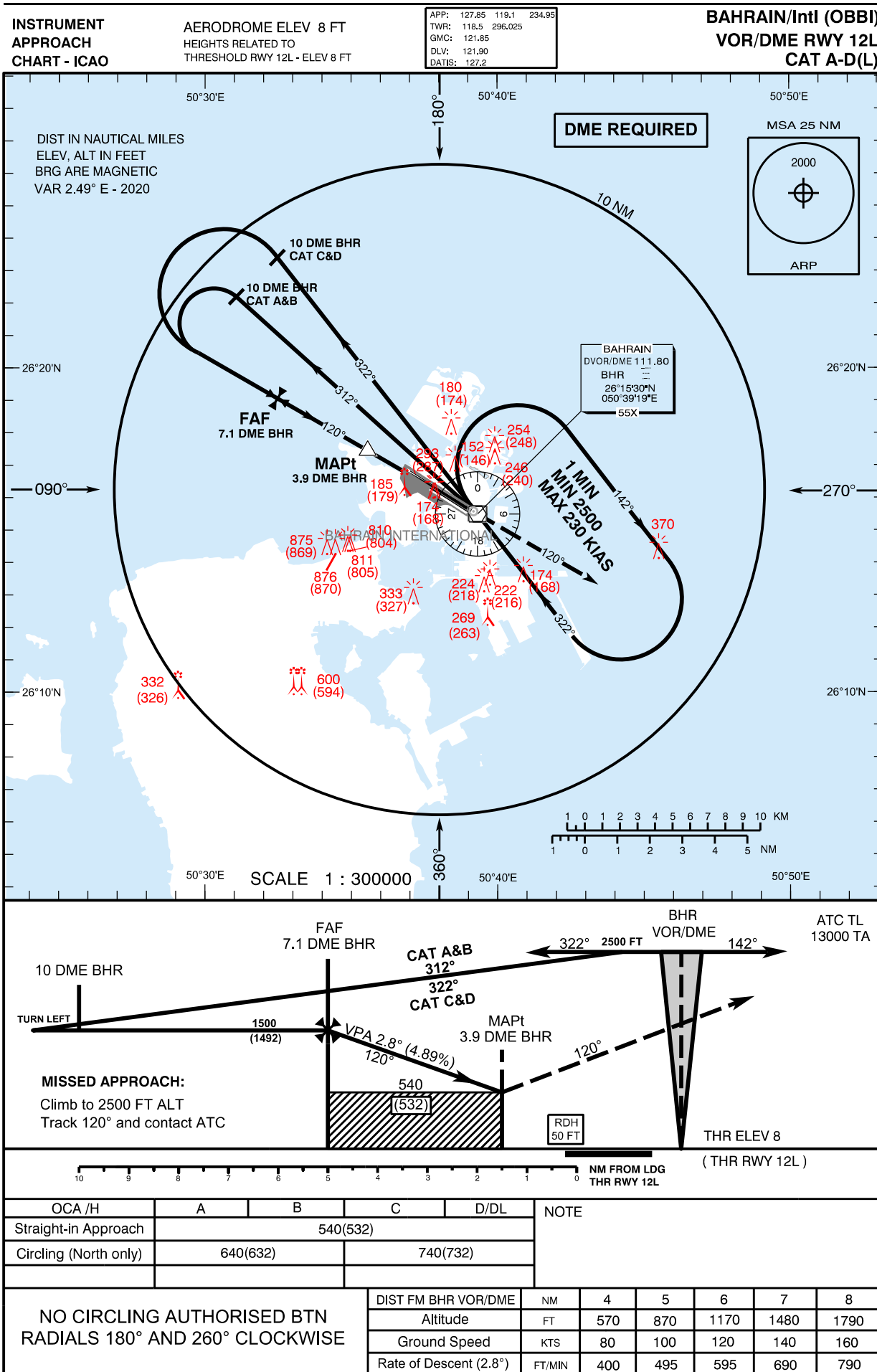
Amendment: Departure headings amended.

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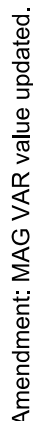


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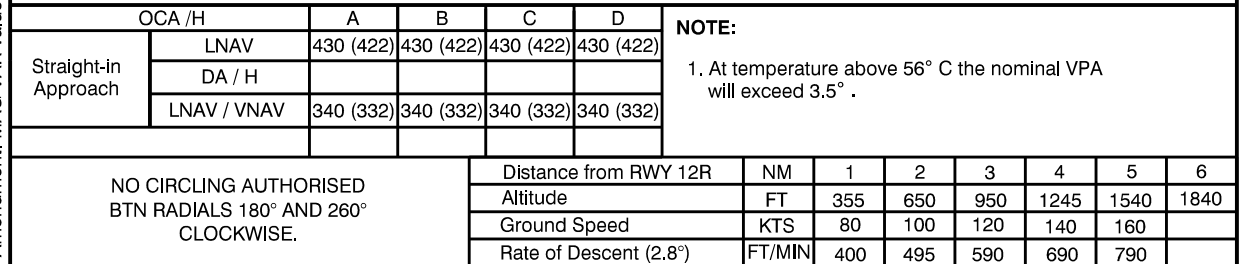


Amendment: MAG VAR value updated.

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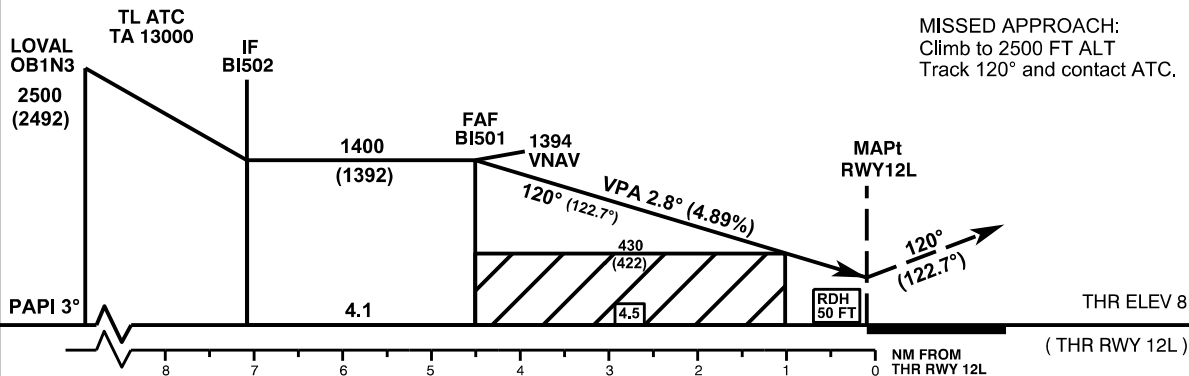
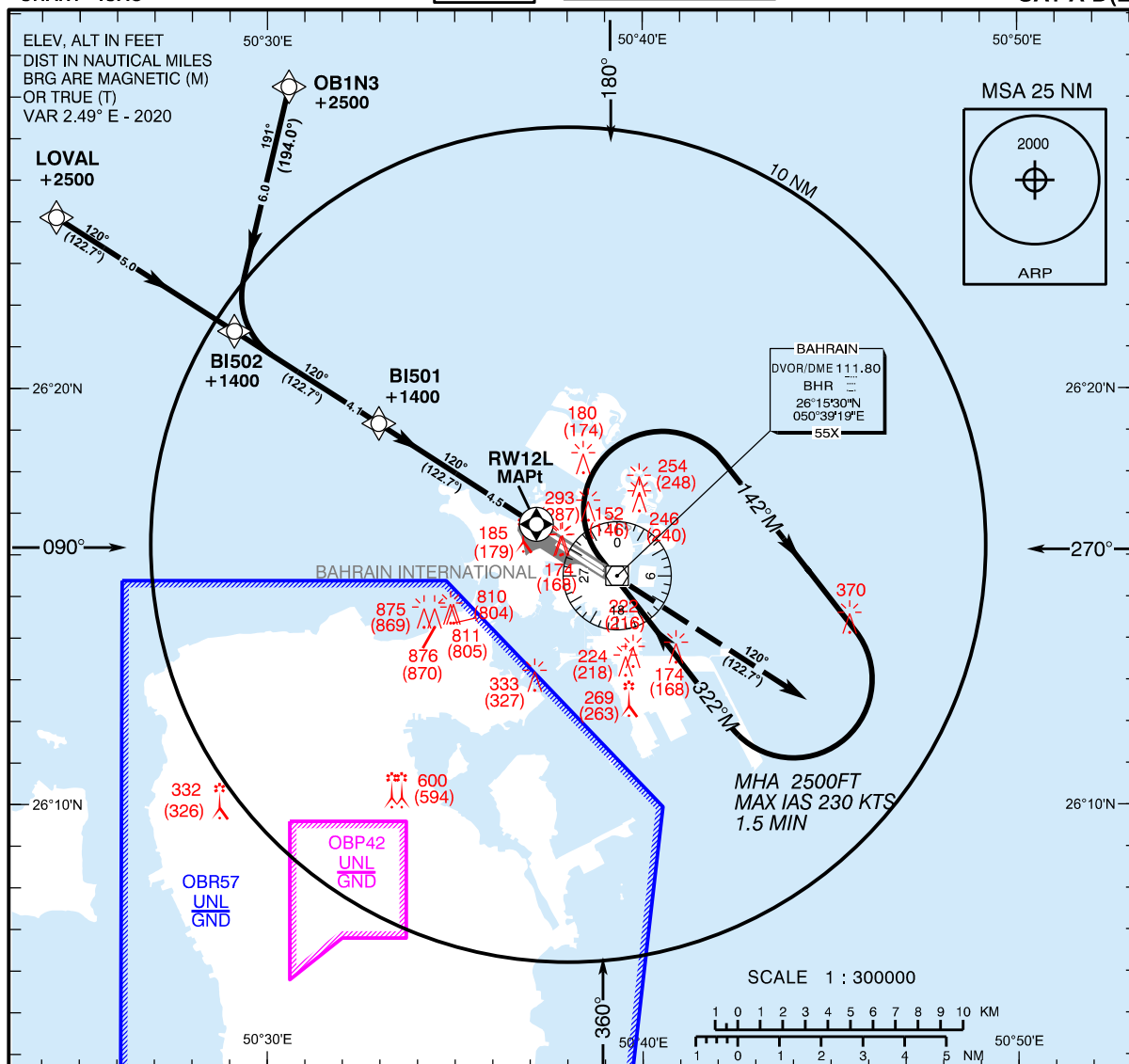
**INSTRUMENT  
APPROACH  
CHART - ICAO**

AERODROME ELEV 8 FT  
HEIGHTS RELATED TO  
THR RWY 12L ELEV 8 FT

**MIN TEMP  
0°C**

APP: 127.85 119.1 234.95  
TWR: 118.50 296.025  
GMC: 121.85  
DLV: 121.90  
DATIS: 127.20

**BAHRAIN/Intl (OBBI)  
RNAV (GNSS) RWY 12L  
CAT A-D(L)**



| OCA/H                | A         | B         | C         | D         |
|----------------------|-----------|-----------|-----------|-----------|
| Straight-in Approach |           |           |           |           |
| LNAV                 | 430 (422) | 430 (422) | 430 (422) | 430 (422) |
| DA/H                 |           |           |           |           |
| LNAV/VNAV            | 340 (332) | 340 (332) | 340 (332) | 340 (332) |

**NOTE:**

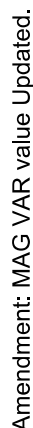
1. At temperatures above 56°C the nominal VPA will exceed 3.5°.

NO CIRCLING AUTHORISED  
BTN RADIALS 180° AND 260°  
CLOCKWISE.

| Distance from RWY 12L  | NM     | 1   | 2   | 3   | 4    | 5    | 6    |
|------------------------|--------|-----|-----|-----|------|------|------|
| Altitude               | FT     | 355 | 650 | 950 | 1245 | 1540 | 1840 |
| Ground Speed           | KTS    | 80  | 100 | 120 | 140  | 160  |      |
| Rate of Descent (2.8°) | FT/MIN | 400 | 495 | 600 | 690  | 790  |      |



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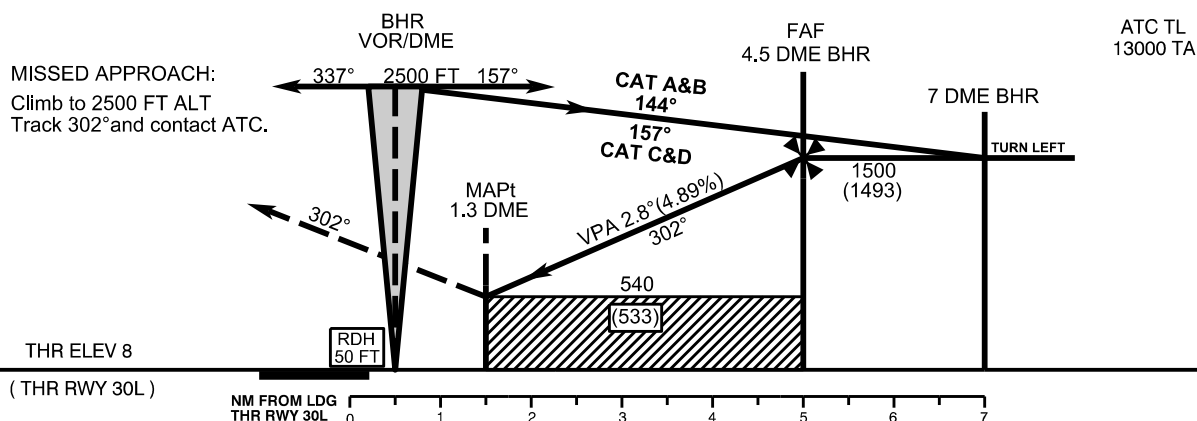
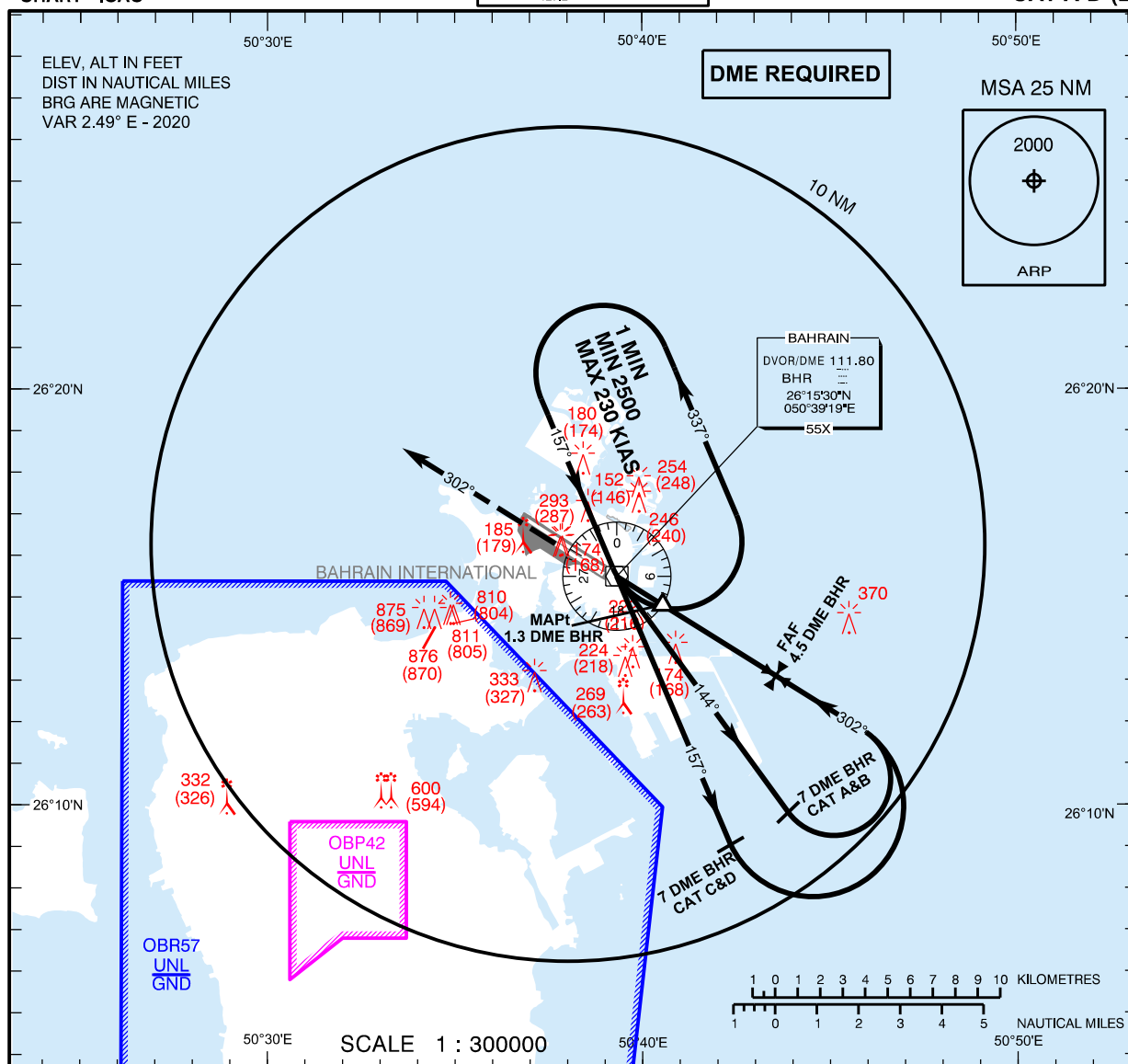
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**INSTRUMENT  
APPROACH  
CHART - ICAO**

**AERODROME ELEV 8 FT**  
HEIGHTS RELATED TO  
THR RWY 30L - ELEV 8 FT

APP: 127.85 119.1 234.95  
TWR: 118.5 296.025  
GMC: 121.85  
DLV: 121.90  
DATIS: 127.2

**BAHRAIN/Intl (OBBI)  
VOR/DME RWY 30L  
CAT A-D (L)**



| OCA (H)               | A         | B | C          | D |
|-----------------------|-----------|---|------------|---|
| Straight-in Approach  | 540 (533) |   |            |   |
| CIRCLING (North only) | 640 (633) |   | 1000 (993) |   |

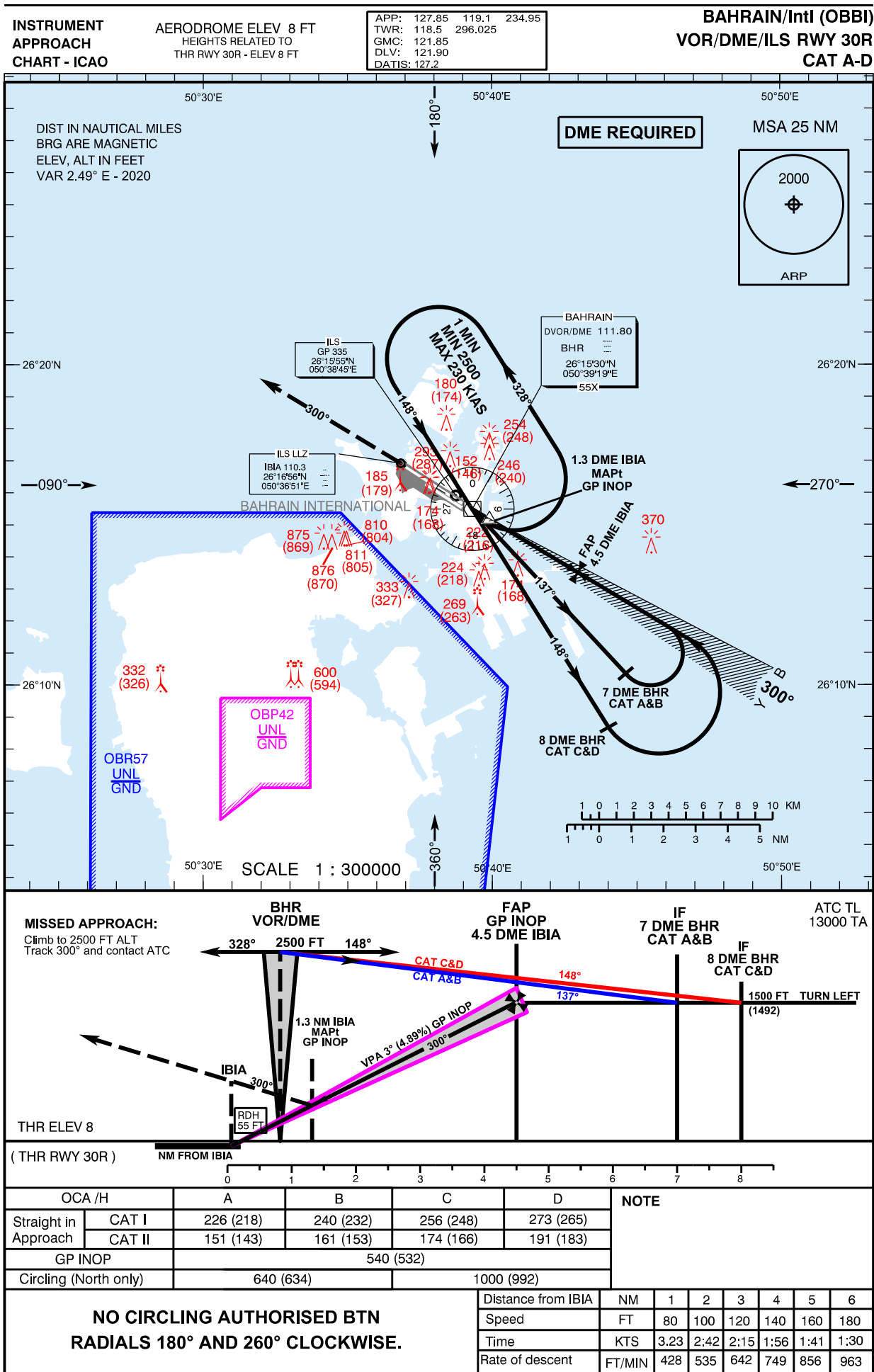
**NOTE:**  
Do not mistake for adjacent parallel runway which may be first visible.

**NO CIRCLING AUTHORISED BTN  
RADIALS 180° AND 260° CLOCKWISE**

| Distance from BHR VOR/DME | NM     | 1   | 2   | 3    | 4    | 5    |
|---------------------------|--------|-----|-----|------|------|------|
| Altitude                  | FT     | 450 | 750 | 1050 | 1360 | 1660 |
| Ground Speed              | KTS    | 80  | 100 | 120  | 140  | 160  |
| Rate of Descent (2.8°)    | FT/MIN | 400 | 495 | 595  | 690  | 790  |

Amendment: MAG VAR value updated.

**INTENTIONALLY BLANK**



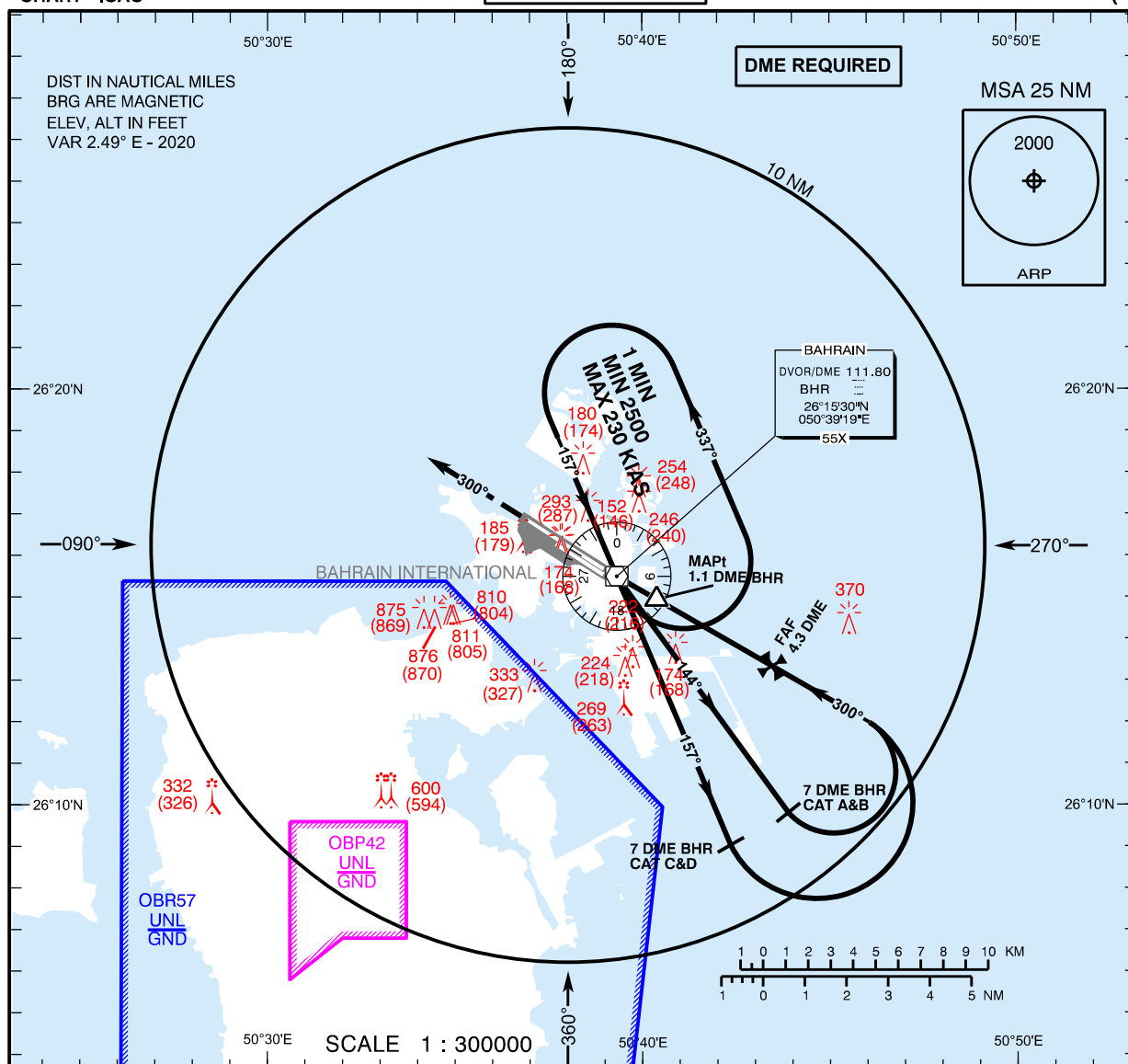
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**INSTRUMENT  
APPROACH  
CHART - ICAO**

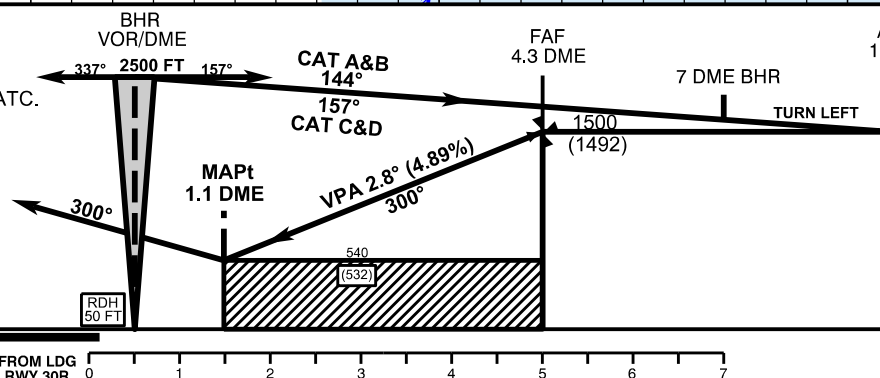
**AERODROME ELEV 8 FT**  
HEIGHTS RELATED TO  
THR RWY 30R - ELEV 8 FT

APP: 127.85 119.1 234.95  
TWR: 118.5 296.025  
GMC: 121.85  
DLV: 121.90  
DATIS: 127.2

**BAHRAIN/Intl (OBBI)  
VOR/DME RWY 30R  
CAT A-D(L)**



**MISSED APPROACH:**  
Climb to 2500 FT ALT  
Track 300° and contact ATC.



| OCA(H)                | A         | B | C          | D/DL |
|-----------------------|-----------|---|------------|------|
| Straight in Approach  | 540 (532) |   |            |      |
| Circling (North only) | 640 (632) |   | 1000 (992) |      |

**NOTE**

Do not mistake for adjacement parallel runway which may be first visible.

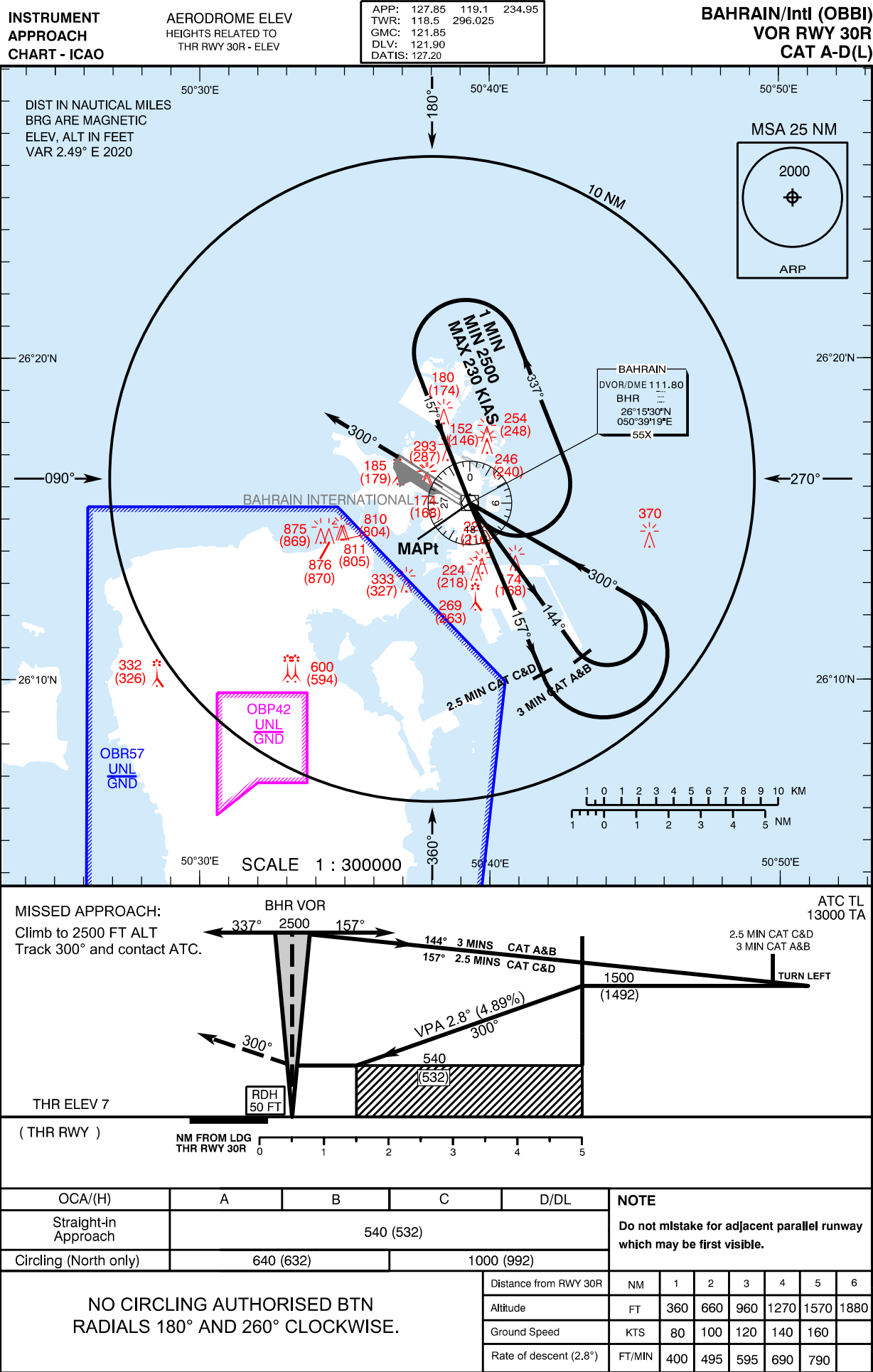
**NO CIRCLING AUTHORISED BTN  
RADIALS 180° AND 260° CLOCKWISE.**

| Distance from BHR VOR/DME | NM     | 1   | 2   | 3    | 4    | 5    |
|---------------------------|--------|-----|-----|------|------|------|
| Altitude                  | FT     | 510 | 810 | 1110 | 1420 | 1720 |
| Ground Speed              | KTS    | 80  | 100 | 120  | 140  | 160  |
| Rate of descent (2.8°)    | FT/MIN | 400 | 495 | 595  | 690  | 790  |

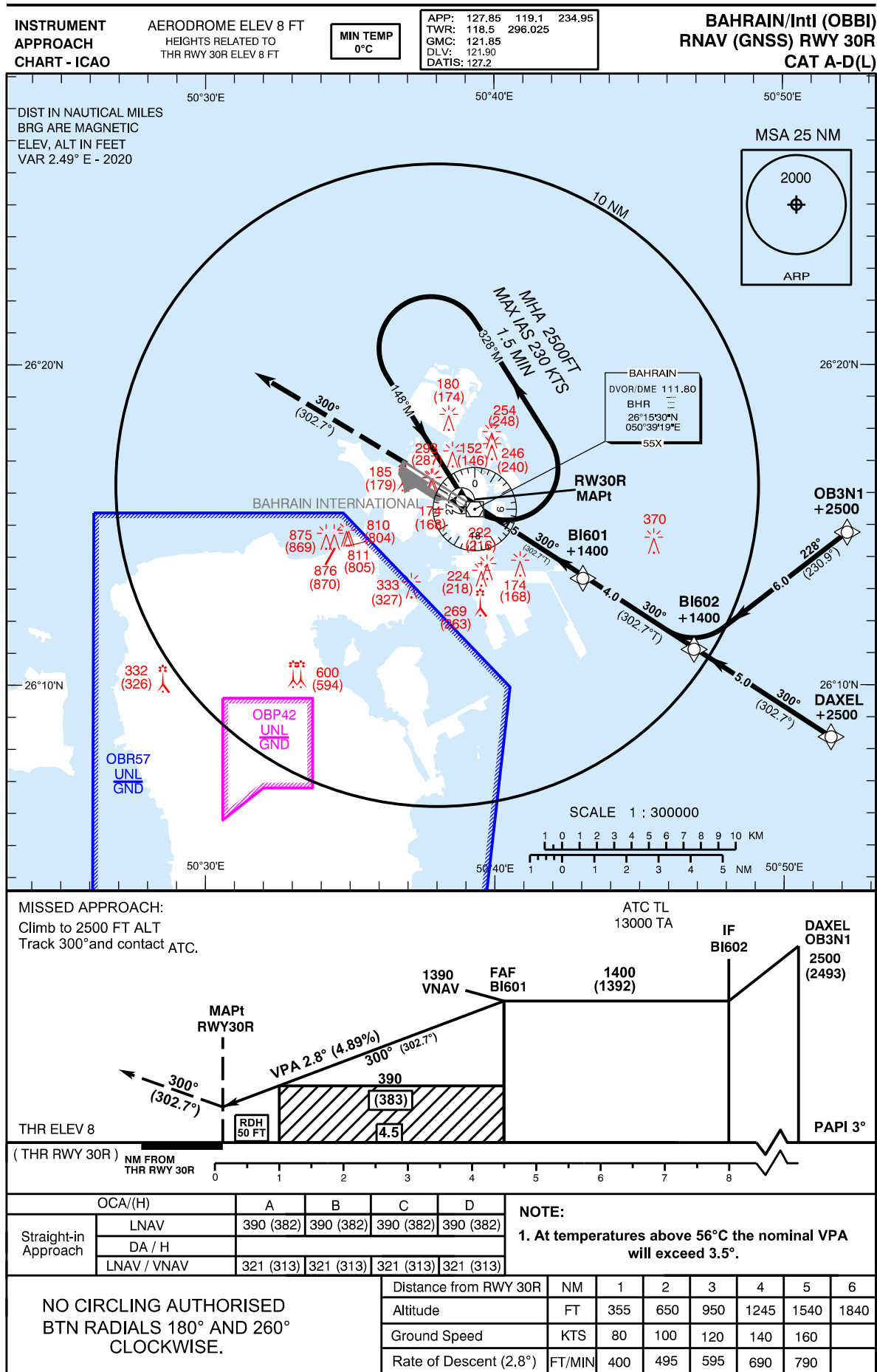
Amendment: MAG VAR value updated.



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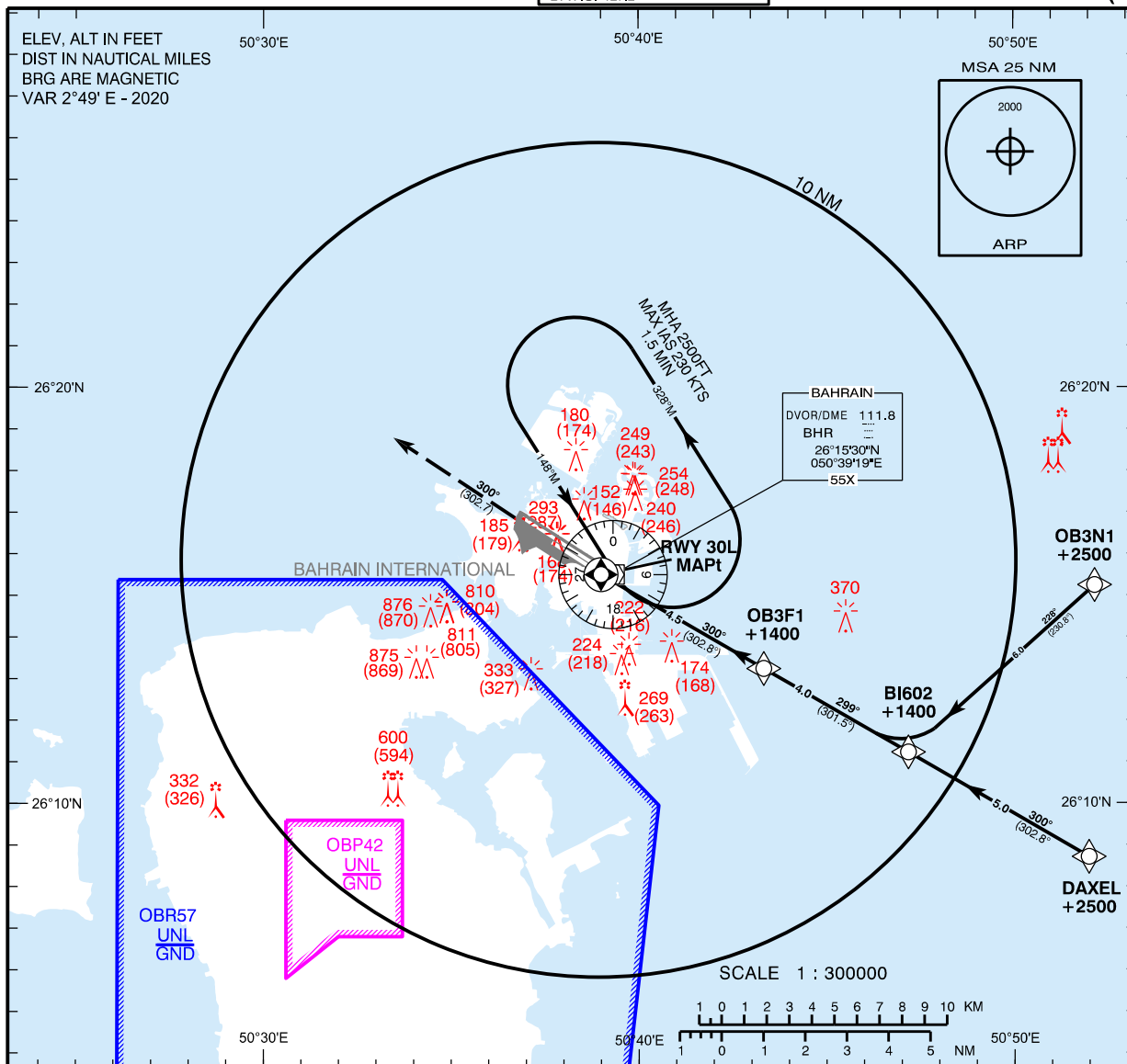
INSTRUMENT  
APPROACH  
CHART - ICAO

AERODROME ELEV 8 FT  
HEIGHTS RELATED TO  
THR RWY 30L - ELEV 8 FT

MIN TEMP  
0°C

APP: 127.85 119.1 234.95  
TWR: 118.5 296.025  
GMC: 121.85  
DLV: 121.9  
DATIS: 127.2

BAHRAIN INTERNATIONAL  
RNAV (GNSS) RWY 30L  
CAT A-D(L)



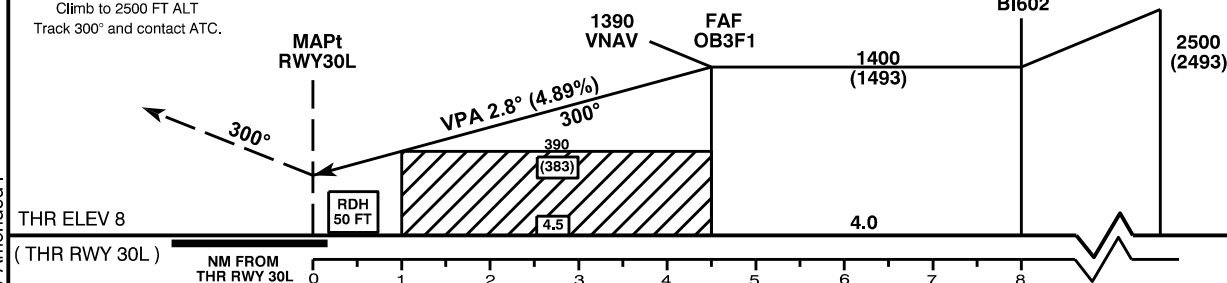
# MISSED APPROACH:

Climb to 2500 FT ALT  
Track 300° and contact ATC.

ATC TL  
13000 TA

IF  
BI602

DAXEL  
OB3N1



| OCA / OCH                                                        |             | A         | B         | C                      | D         | NOTE<br>1. At temperatures above 56°C the nominal VPA will exceed 3.5°. |     |     |      |      |      |
|------------------------------------------------------------------|-------------|-----------|-----------|------------------------|-----------|-------------------------------------------------------------------------|-----|-----|------|------|------|
| Straight-in Approach                                             | LNAV        | 390 (382) | 390 (382) | 390 (382)              | 390 (382) |                                                                         |     |     |      |      |      |
|                                                                  | DA / H      |           |           |                        |           |                                                                         |     |     |      |      |      |
|                                                                  | LNAV / VNAV | 301 (293) | 301 (293) | 301 (293)              | 301 (293) |                                                                         |     |     |      |      |      |
| NO CIRCLING AUTHORISED<br>BTN RADIALS 180° AND 260°<br>CLOCKWISE |             |           |           | Distance from RWY30L   | NM        | 1                                                                       | 2   | 3   | 4    | 5    | 6    |
|                                                                  |             |           |           | Altitude               | FT        | 355                                                                     | 650 | 950 | 1245 | 1540 | 1840 |
|                                                                  |             |           |           | Ground Speed           | KTS       | 80                                                                      | 100 | 120 | 140  | 160  |      |
|                                                                  |             |           |           | Rate of Descent (2.8°) | FT/MIN    | 400                                                                     | 495 | 595 | 690  | 790  |      |

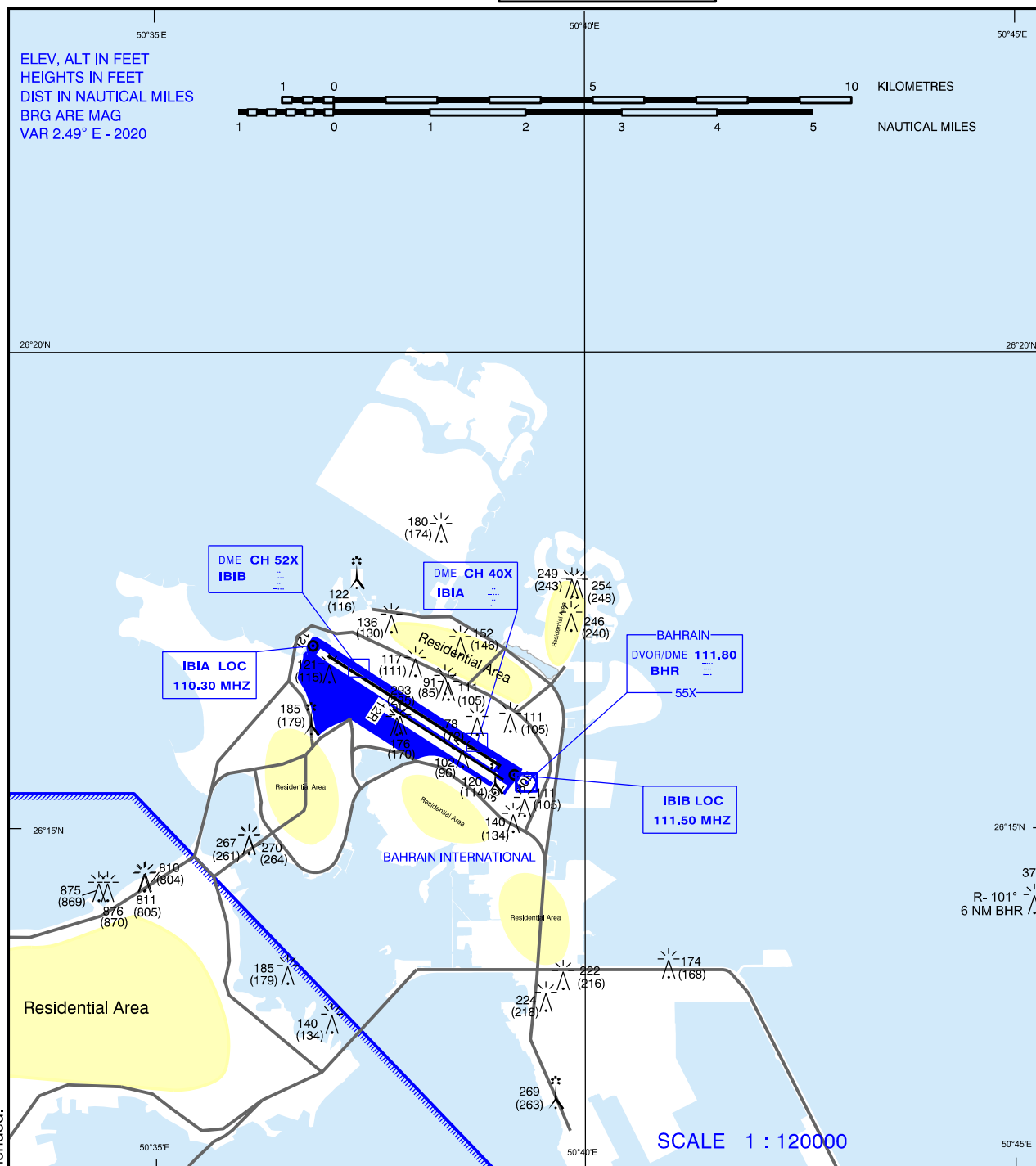
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**VISUAL APPROACH  
CHART - ICAO**

AERODROME ELEV 8 FT  
HEIGHTS RELATED TO AD ELEV

|        |        |         |        |
|--------|--------|---------|--------|
| APP:   | 127.85 | 119.1   | 234.95 |
| TWR:   | 118.5  | 296.025 |        |
| SMC:   | 121.85 |         |        |
| DLV:   | 121.90 |         |        |
| DATIS: | 127.2  |         |        |

**BAHRAIN INTL (OBBI)**



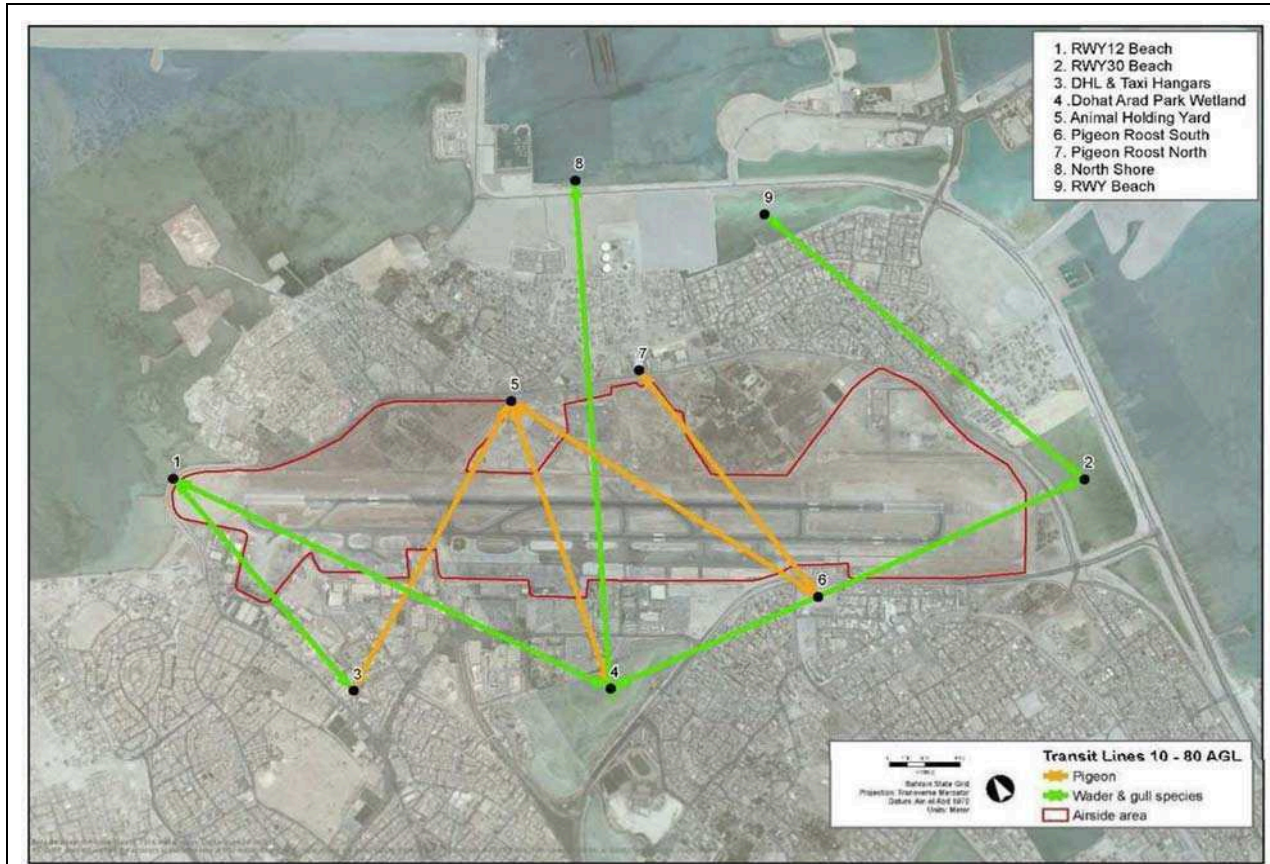
Amendment:RWY 12L/30R headings amended.



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## BAHRAIN INTL.

### OFF-AIRPORT, BIRD HAZARD LOCATIONS



#### Wildlife Information

- Average mass (kg) of birds per survey at RWY12 Beach – Winter: 740kg Summer: 14kg
- Average mass (kg) of birds per survey at RWY30 Beach – Winter: 69kg Summer: 18kg
- Regular transit paths of pigeon, wader and gull species identified for pilot's attention on approach and departure to Bahrain Intl.

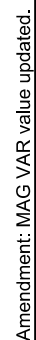
#### Pilot Use Information

- Prior to arrival/departure at BAH request ATC for the presence of birds in the approach and departure paths as well as current wind status request dispersal if location is unacceptable.

#### Warning:

- During periods of rainfall there are significantly higher levels of bird activity within the airport perimeters, especially around areas of standing water. All pilots are advised to maintain vigilance and exercise extreme caution.

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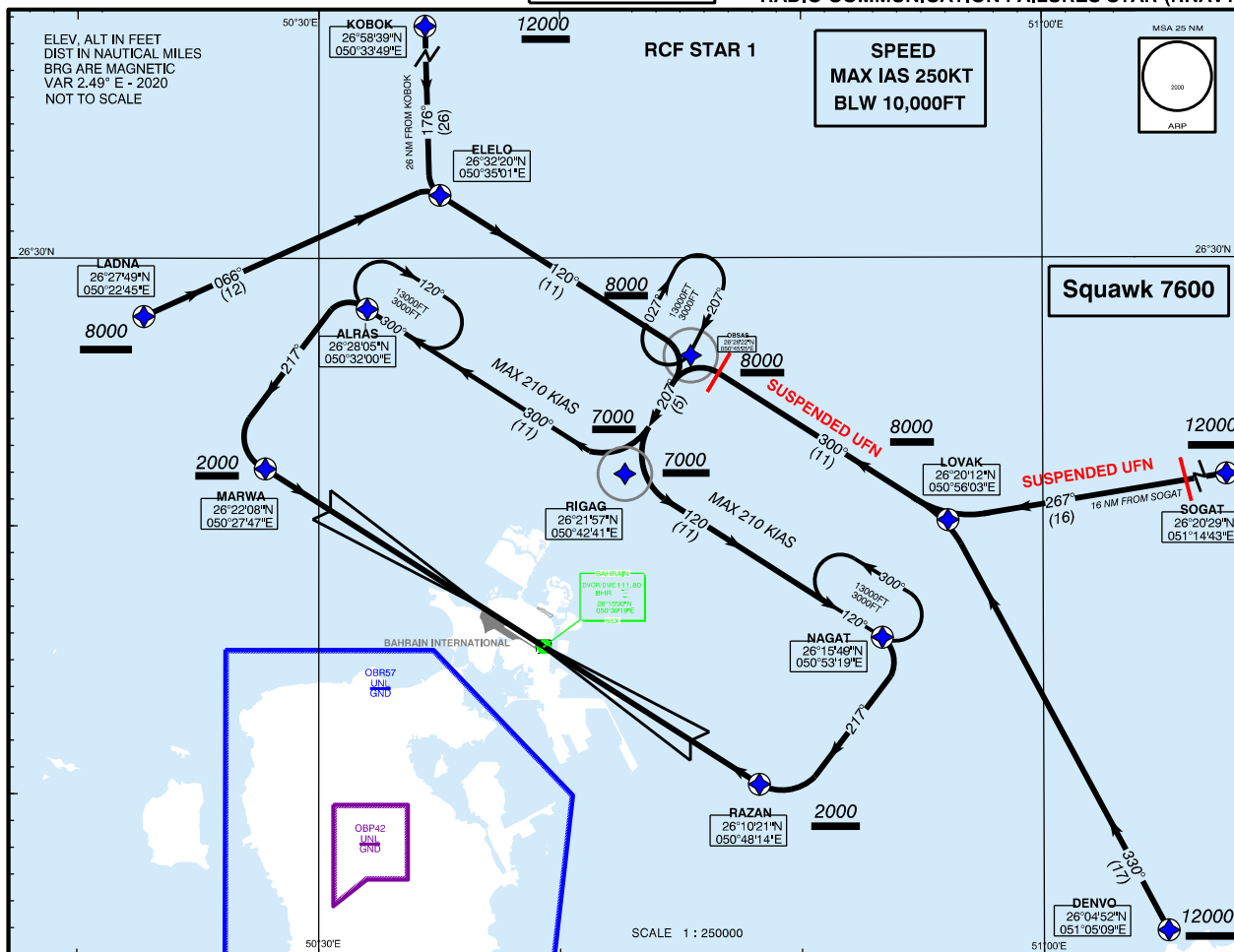
STANDARD ARRIVAL CHART -  
INSTRUMENT (STAR) - ICAO

TRANSITION ALTITUDE  
13000

APP: 127.85 119.1 234.95  
TWR: 118.5 296.025  
SMC: 121.85  
DLV: 121.90  
DATIS: 127.2

BAHRAIN INTL (OBBI)  
RWY 12L/30R

RADIO COMMUNICATION FAILURES STAR (RNAV1)



RADIO COMMUNICATION FAILURES STAR (RNAV1)

DENVO RCF 1 ARRIVAL  
SOGAT RCF 1 ARRIVAL  
LADNA RCF 1 ARRIVAL  
KOBOK RCF 1 ARRIVAL

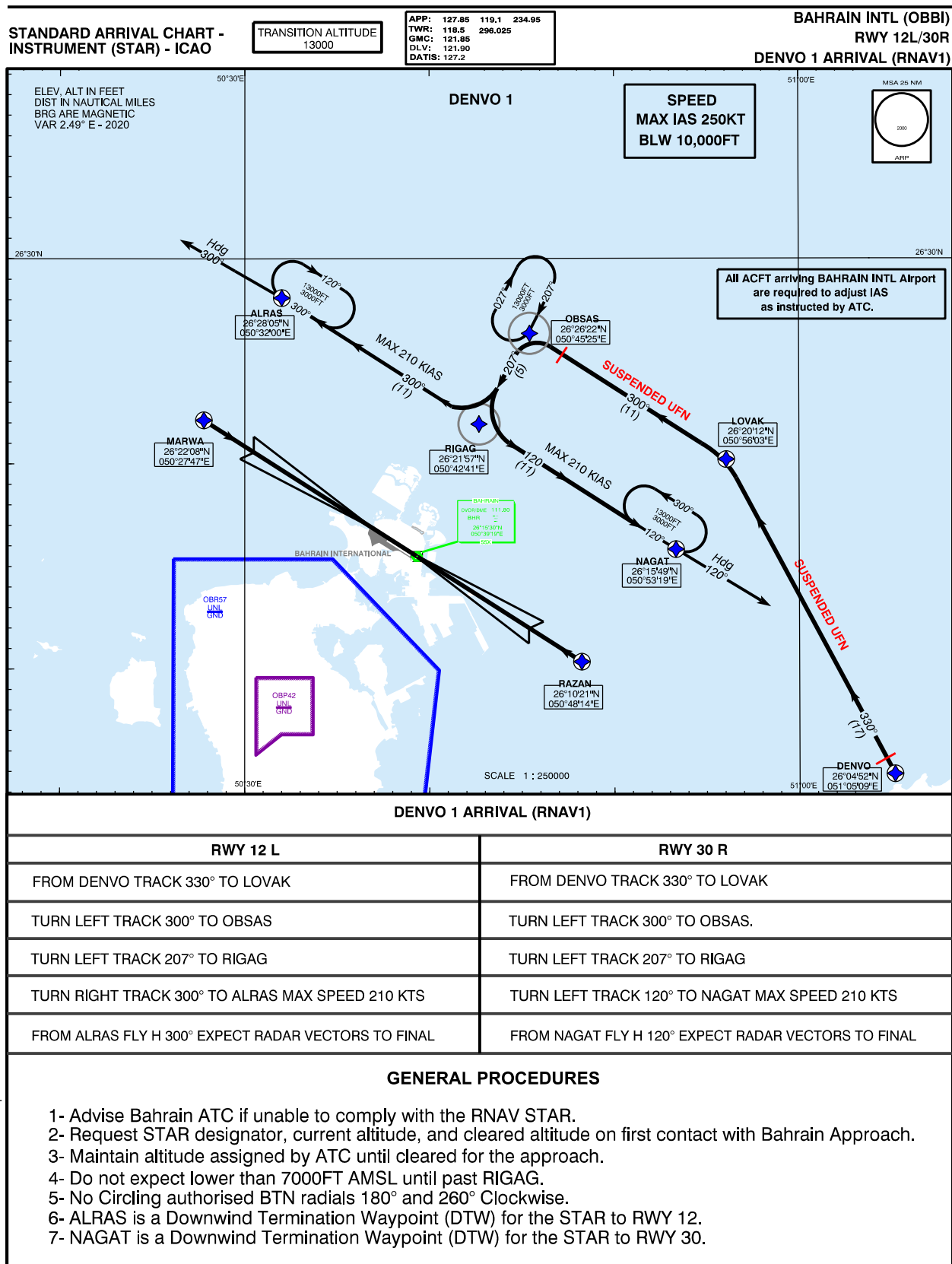
PROCEDURES

Radio Communication Failure : -

- 1- Squawk 7600, comply with vertical navigation requirements, but not below MSA.
- 2- Track via latest STAR clearance to the nominated runway, then fly the most suitable approach as advised by ATC.
- 3- Comply with all allocated flight level and altitude as published in this chart.
- 4- No Circling authorised BTN radials 180° and 260° Clockwise.

Amendment: MAG VAR Value updated & DLV FREQ Added.

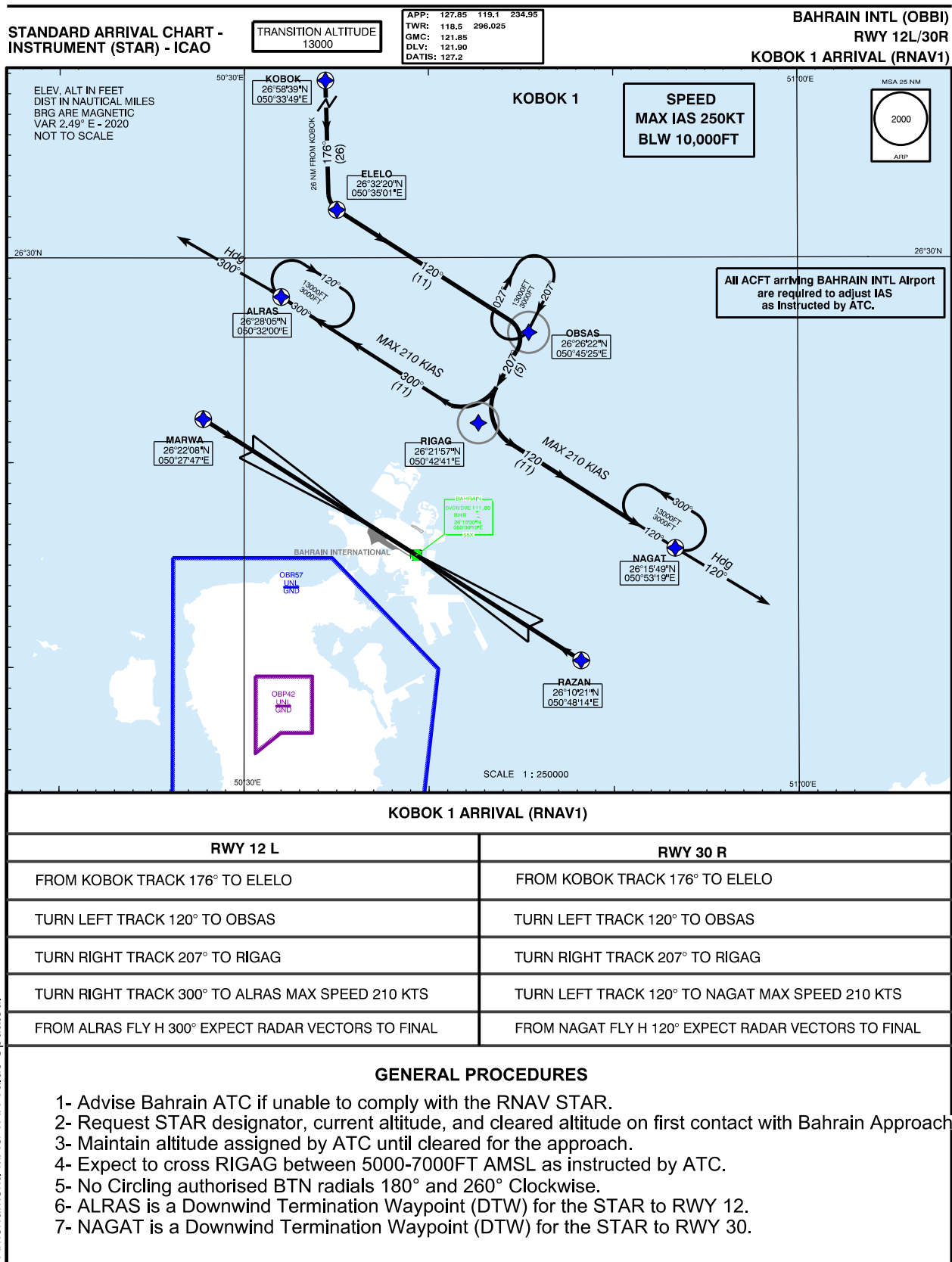
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Amendment: MAG VAR Value Updated.

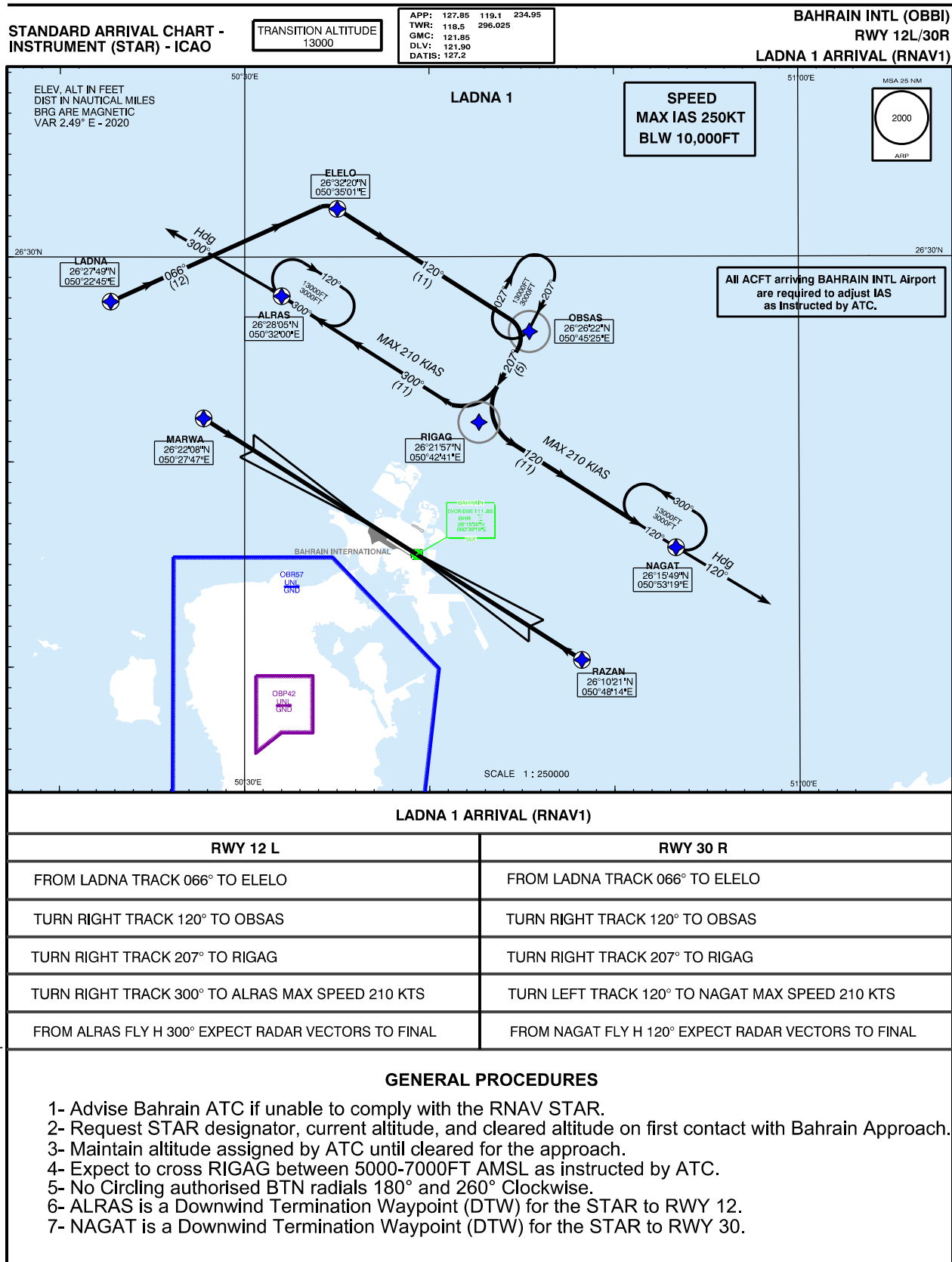


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Amendment: MAG VAR Value Updated.

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Amendment: MAG VAR Value Updated.

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LOW VISIBILITY PROCEDURE  
LVP CHART (DEP RWY 12L/30R)

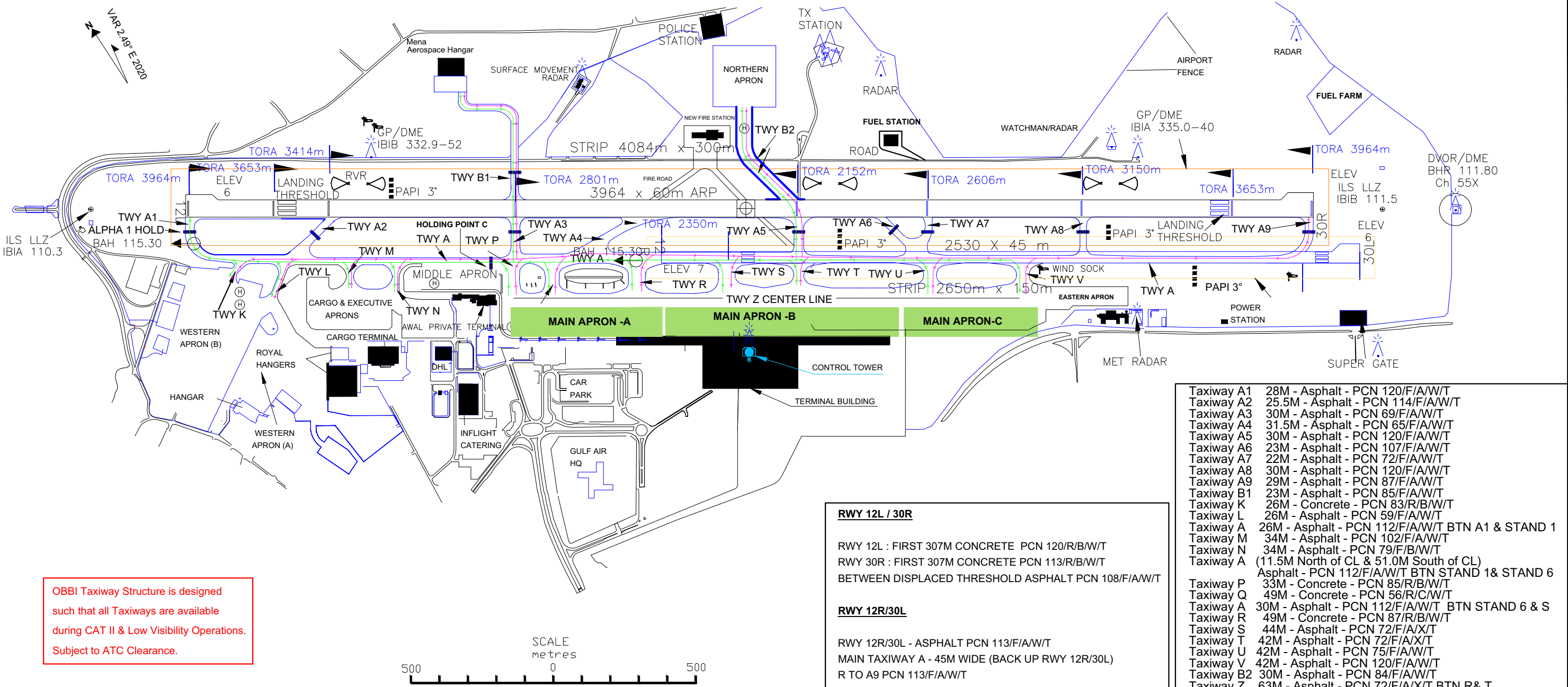
DISTANCES IN METRES  
ALTITUDES, ELEVATIONS AND  
HEIGHTS IN FEET.

26°16'14.97"N  
050°38'01.17"E

APRON ELEV  
8.92 FT

|     |        |
|-----|--------|
| TWR | 118.50 |
| GMC | 121.85 |
| DLV | 121.90 |

| RUNWAY 12L – 30R DEPARTURE |             |
|----------------------------|-------------|
| DEPARTURE RWY 12L          | <div></div> |
| DEPARTURE RWY 30R          | <div></div> |
| STOPBARS                   | <div></div> |



Amendment: MAIN APRON A OPERATIONAL



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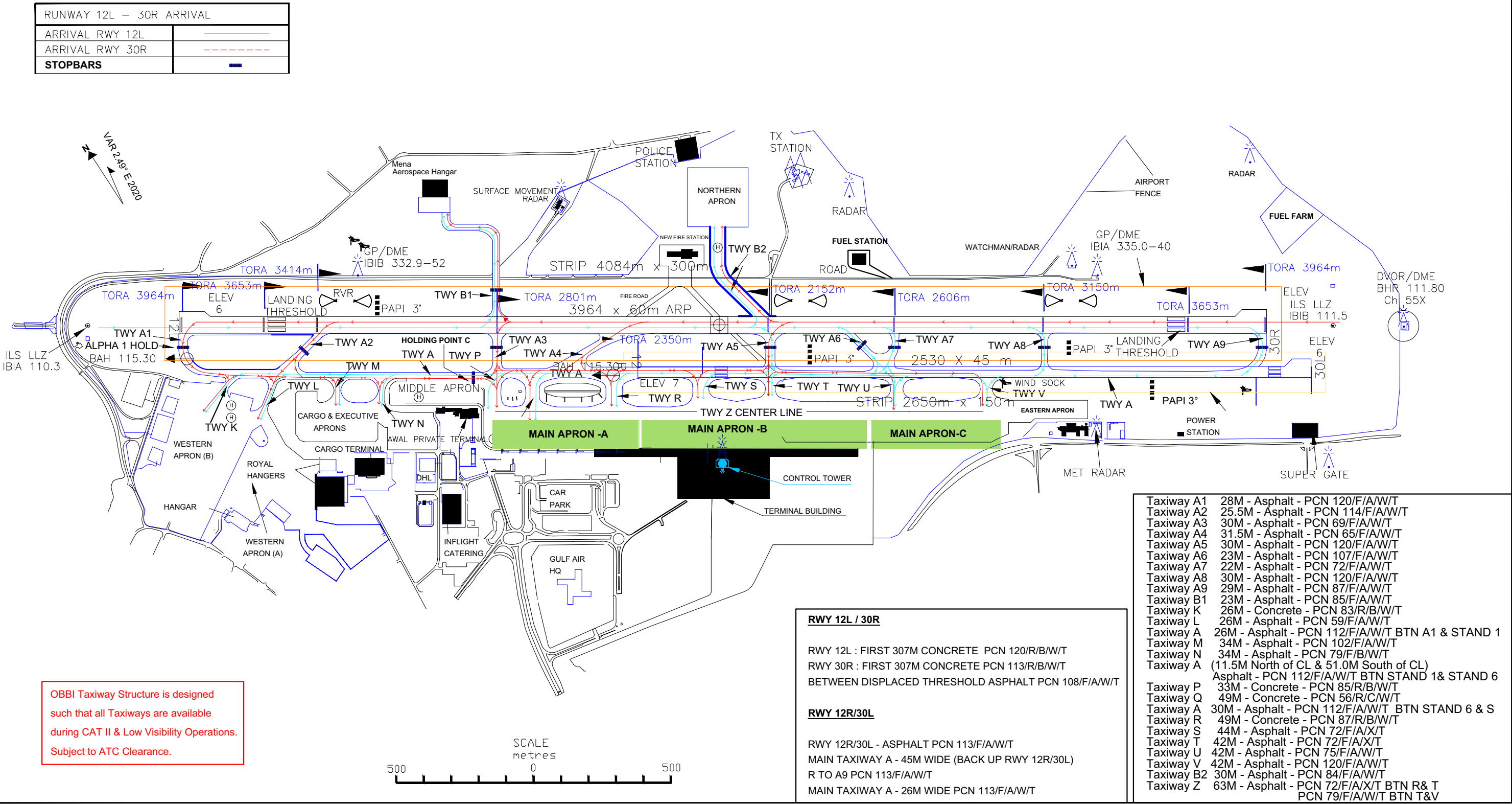
LOW VISIBILITY PROCEDURE  
LVP CHART (ARR RWY 12L/30R)

DISTANCES IN METRES  
ALTITUDES, ELEVATIONS AND  
HEIGHTS IN FEET.

26°16'14.97"N  
050°38'01.17"E

APRON ELEV  
8.92 FT

TWR 118.50  
GMC 121.85  
DLV 121.90



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**OBBS AD 2.1 AERODROME LOCATION INDICATOR AND NAME****OBBS - BAHRAIN / ISA AIRBASE****OBBS AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA**

|   |                                                                                   |                                                                                                                                                                                                           |
|---|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | ARP coordinates and site at AD                                                    | 255506.11N 0503526.16E, Mid - point of RWY on CL                                                                                                                                                          |
| 2 | Direction and distance from (city)                                                | 18 NM S of Manama                                                                                                                                                                                         |
| 3 | Elevation/Reference temperature                                                   | 139 FT / 39° C                                                                                                                                                                                            |
| 4 | Geoid undulation at AD ELEV PSN                                                   | NIL                                                                                                                                                                                                       |
| 5 | MAG VAR/Annual change                                                             | 2.56 E (2021) / 0°3' per year                                                                                                                                                                             |
| 6 | AD operator, address, telephone, telefax, e-mail address, AFS and website address | Royal Bahrain Air Force<br>Air Operations Centre<br>P.O. Box 245<br>Kingdom of Bahrain<br>TEL: +973 17894474<br>Telefax:+973 17620926<br>AFS: RBAF HQ & OPS OBBSYWYX, RBAF ATC OBBSZTX, RBAF MET OBBSYMYX |
| 7 | Types of traffic permitted (IFR/VFR)                                              | IFR/VFR                                                                                                                                                                                                   |
| 8 | Remarks                                                                           | Emergency Diversion only; otherwise strictly PPO                                                                                                                                                          |

**OBBS AD 2.3 OPERATIONAL HOURS**

|    |                            |                                                 |
|----|----------------------------|-------------------------------------------------|
| 1  | AD Operator                | SUN - THU 04:15 - 10:30                         |
| 2  | Customs and immigration    | Prior arrangement                               |
| 3  | Health and sanitation      | Prior arrangement                               |
| 4  | AIS Briefing Office        | by prior arrangement                            |
| 5  | ATS Reporting Office (ARO) | SUN - THU 04:15 - 10:30 or by prior arrangement |
| 6  | MET Briefing Office        | SUN - THU 04:15 - 10:30 or by prior arrangement |
| 7  | ATS                        | SUN - THU 04:15 - 10:30 or by prior arrangement |
| 8  | Fuelling                   | Prior arrangement                               |
| 9  | Handling                   | Prior arrangement                               |
| 10 | Security                   | H24                                             |
| 11 | De-icing                   | NIL                                             |
| 12 | Remarks                    | NIL                                             |

**OBBS AD 2.4 HANDLING SERVICES AND FACILITIES**

|   |                                         |                                                                                               |
|---|-----------------------------------------|-----------------------------------------------------------------------------------------------|
| 1 | Cargo-handling facilities               | NIL                                                                                           |
| 2 | Fuel/oil types                          | Fuel: AVGAS 100 LL by prior arrangement, Jet A1 by prior arrangement, JP8<br>Oil: NIL         |
| 3 | Fuelling facilities/capacity            | ET A1 & AVGAS 100LL from Bowser; contract off base vehicle required; JP 8 from on base Bowser |
| 4 | De-icing facilities                     | NIL                                                                                           |
| 5 | Hangar space for visiting aircraft      | Available in emergency; small aircraft only                                                   |
| 6 | Repair facilities for visiting aircraft | NIL                                                                                           |
| 7 | Remarks                                 | NIL                                                                                           |

**OBBS AD 2.5 PASSENGER FACILITIES**

|   |                      |                                           |
|---|----------------------|-------------------------------------------|
| 1 | Hotels               | In Manama                                 |
| 2 | Restaurants          | NIL; food available in emergency          |
| 3 | Transportation       | Available from BDF in emergency           |
| 4 | Medical facilities   | First aid; Ambulance; Hospitals in Manama |
| 5 | Bank and Post Office | In Manama                                 |
| 6 | Tourist Office       | In Manama                                 |
| 7 | Remarks              | NIL                                       |

**OBBS AD 2.6 RESCUE AND FIRE FIGHTING SERVICES**

|   |                                             |                                    |
|---|---------------------------------------------|------------------------------------|
| 1 | AD category for fire fighting               | CAT 7                              |
| 2 | Rescue equipment                            | 4RB (20) available from Coastguard |
| 3 | Capability for removal of disabled aircraft | Limited                            |
| 4 | Remarks                                     | NIL                                |

**OBBS AD 2.7 SEASONAL AVAILABILITY - CLEARING**

|   |                             |     |
|---|-----------------------------|-----|
| 1 | Types of clearing equipment | NIL |
| 2 | Clearance priorities        | NIL |
| 3 | Remarks                     | NIL |

**OBBS AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA**

|   |                                                  |                                                                                                                                                                                                                                                                                                                                         |
|---|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Apron designation, surface and strength          | MAIN: Concrete, PCN 49 / F / B / X / T                                                                                                                                                                                                                                                                                                  |
| 2 | Taxiway designation, width, surface and strength | PARALLEL /30M/ REMAINDER: Asphalt, PCN 46 / F / B / X / T                                                                                                                                                                                                                                                                               |
| 3 | Altimeter checkpoint location and elevation      | Holding point RWY 33R: 24 FT<br>Holding point RWY 15L: 135 FT                                                                                                                                                                                                                                                                           |
| 4 | VOR checkpoints                                  | VOR: NIL                                                                                                                                                                                                                                                                                                                                |
| 5 | INS checkpoints                                  | Holding Point RWY 33R 255408.40N 0503551.60E<br>THR RWY 33R 255410.69N 0503556.38E<br>Holding Point RWY 15L 255600.36N 0503451.36E<br>THR RWY 15L 255601.55N 0503456.12E<br>255601.55N:<br>NW corner 255459.28N 0503509.12E<br>SW corner 255448.72N 0503516.32E<br>SE corner 255451.36N 0503522.08E<br>NE corner 255502.52N 0503516.80E |
| 6 | Remarks                                          | NIL                                                                                                                                                                                                                                                                                                                                     |

**OBBS AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS**

|   |                                                                                                               |                                                                                                               |
|---|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| 1 | Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands | Taxiing guidance signs at all intersections with TWY and RWY at all holding positions<br>Guide lines at APRON |
| 2 | RWY and TWY markings                                                                                          | RWY: designation, THR, edge, end as appropriate<br>TWY: holding positions at all TWY / RWY intersections      |
| 3 | Stop bars                                                                                                     | Stop bars where appropriate.                                                                                  |
| 4 | Remarks                                                                                                       | NIL                                                                                                           |

## OBKH AD 2.1 AERODROME LOCATION INDICATOR AND NAME

## OBKH - BAHRAIN / SAKHIR AIRBASE

## OBKH AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

|   |                                                                                   |                                                                                                                                                                                                           |
|---|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | ARP coordinates and site at AD                                                    | 260205N 0503128E<br>Mid - point of RWY on CL                                                                                                                                                              |
| 2 | Direction and distance from (city)                                                | 12 NM SW of Manama                                                                                                                                                                                        |
| 3 | Elevation/Reference temperature                                                   | 76 FT / 39°C                                                                                                                                                                                              |
| 4 | Geoid undulation at AD ELEV PSN                                                   | NIL                                                                                                                                                                                                       |
| 5 | MAG VAR/Annual change                                                             | 2.56 E (2021) / 0°3' per year                                                                                                                                                                             |
| 6 | AD operator, address, telephone, telefax, e-mail address, AFS and website address | Royal Bahrain Air Force<br>Air Operations Centre<br>P.O. Box 245<br>Kingdom of Bahrain<br>TEL: +973 17894474<br>Telefax:+973 17620926<br>AFS: RBAF HQ & OPS OBBSYWYX, RBAF ATC OBBSZTX, RBAF MET OBBSYMYX |
| 7 | Types of traffic permitted (IFR/VFR)                                              | IFR/VFR                                                                                                                                                                                                   |
| 8 | Remarks                                                                           | Military Airbase; Traffic otherwise strictly PPR                                                                                                                                                          |

## OBKH AD 2.3 OPERATIONAL HOURS

|    |                            |                       |
|----|----------------------------|-----------------------|
| 1  | AD Operator                | SUN - THU 0415 - 1030 |
| 2  | Customs and immigration    | HO                    |
| 3  | Health and sanitation      | HO                    |
| 4  | AIS Briefing Office        | HO                    |
| 5  | ATS Reporting Office (ARO) | SUN - THU 0415 - 1030 |
| 6  | MET Briefing Office        | SUN - THU 0415 - 1030 |
| 7  | ATS                        | SUN - THU 0415 - 1030 |
| 8  | Fuelling                   | HO                    |
| 9  | Handling                   | HO                    |
| 10 | Security                   | H24                   |
| 11 | De-icing                   | NIL                   |
| 12 | Remarks                    | NIL                   |

## OBKH AD 2.4 HANDLING SERVICES AND FACILITIES

|   |                                         |                                                                                                  |
|---|-----------------------------------------|--------------------------------------------------------------------------------------------------|
| 1 | Cargo-handling facilities               | NIL                                                                                              |
| 2 | Fuel/oil types                          | Fuel: Jet A1 by prior arrangement, AVGAS 100 LL by prior arrangement, JP8<br>Oil: NIL            |
| 3 | Fuelling facilities/capacity            | Jet A1 and AVGAS 100LL from bowser; contract off base vehicle required; JP 8 from on base bowser |
| 4 | De-icing facilities                     | NIL                                                                                              |
| 5 | Hangar space for visiting aircraft      | NIL                                                                                              |
| 6 | Repair facilities for visiting aircraft | NIL                                                                                              |

|   |         |     |
|---|---------|-----|
| 7 | Remarks | NIL |
|---|---------|-----|

**OBKH AD 2.5 PASSENGER FACILITIES**

|   |                      |                                           |
|---|----------------------|-------------------------------------------|
| 1 | Hotels               | In Manama                                 |
| 2 | Restaurants          | NIL; food available in emergency          |
| 3 | Transportation       | Available from BDF in emergency           |
| 4 | Medical facilities   | First aid; Ambulance; Hospitals in Manama |
| 5 | Bank and Post Office | In Manama                                 |
| 6 | Tourist Office       | In Manama                                 |
| 7 | Remarks              | NIL                                       |

**OBKH AD 2.6 RESCUE AND FIRE FIGHTING SERVICES**

|   |                                             |                                     |
|---|---------------------------------------------|-------------------------------------|
| 1 | AD category for fire fighting               | Up to CAT 9 O / R                   |
| 2 | Rescue equipment                            | 4 RB (20) available from coastguard |
| 3 | Capability for removal of disabled aircraft | Limited                             |
| 4 | Remarks                                     | NIL                                 |

**OBKH AD 2.7 SEASONAL AVAILABILITY - CLEARING**

|   |                             |     |
|---|-----------------------------|-----|
| 1 | Types of clearing equipment | NIL |
| 2 | Clearance priorities        | NIL |
| 3 | Remarks                     | NIL |

**OBKH AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA**

|   |                                                  |                                                                                                                                                                                                      |
|---|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Apron designation, surface and strength          | MAIN NORTH: Concrete, PCN 74 / R / A / W / T<br>MAIN SOUTH: Asphalt, PCN 60 / F / A / W / T                                                                                                          |
| 2 | Taxiway designation, width, surface and strength | TWY A, TWY B, TWY C, TWY D: 23 M<br>TWY A, TWY B, TWY D: Asphalt, PCN 52 / F / A / X / T<br>TWY C: Asphalt, PCN 52 / F / A / X / T south of TWY D and Asphalt, PCN 40 / F / A / X / T north of TWY D |
| 3 | Altimeter checkpoint location and elevation      | Holding Point RWY 17: Hold A 63 FT, Hold B 61 FT                                                                                                                                                     |
| 4 | VOR checkpoints                                  | NIL                                                                                                                                                                                                  |
| 5 | INS checkpoints                                  | Holding Point A 63 FT 260255.88N 05031280.11E , Holding Point B 61 FT 260245.67N 0503128.82E<br>Parking Ramp: NIL<br>Stands: On request                                                              |
| 6 | Remarks                                          | NIL                                                                                                                                                                                                  |

**OBKH AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS**

|   |                                                                                                               |                                                                                                                |
|---|---------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| 1 | Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands | Taxiing guidance signs. Guide lines at apron.                                                                  |
| 2 | RWY and TWY markings                                                                                          | RWY: Designation, THR, edge, end as appropriate<br>TWY: Edge, holding positions at all TWY / RWY Intersections |
| 3 | Stop bars                                                                                                     | NIL                                                                                                            |