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Revision Letter For Cycle 01-2014

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## General Information

Location: Hannover Deu  
IATA Code: HAJ  
Lat/Long: N52° 27.6' E009° 41.0'  
Elevation: 183 ft

Airport Use: Public  
Magnetic Variation: 2.0°E

Fuel Types: 100 Octane (LL), Jet A-1  
Repair Types: Major Airframe, Major Engine  
Customs: Yes  
Airport Type: IFR  
Landing Fee: Yes  
Control Tower: Yes  
Jet Start Unit: No  
LLWS Alert: No  
Beacon: Yes

Sunrise: 0731 Z  
Sunset: 1523 Z,

## Runway Information

Runway: 09C  
Length x Width: 2559 ft x 74 ft  
Surface Type: asphalt  
TDZ-Elev: 178 ft  
Displaced Threshold: 197 ft  
Stopway: 558 ft

Runway: 09L  
Length x Width: 12467 ft x 148 ft  
Surface Type: concrete  
TDZ-Elev: 169 ft  
Lighting: Edge, ALS, Centerline, REIL, TDZ  
Displaced Threshold: 984 ft

Runway: 09R  
Length x Width: 7677 ft x 148 ft  
Surface Type: concrete  
TDZ-Elev: 172 ft  
Lighting: Edge, ALS, Centerline, REIL

Runway: 27C  
Length x Width: 2559 ft x 74 ft  
Surface Type: asphalt  
TDZ-Elev: 174 ft  
Displaced Threshold: 558 ft

Stopway: 197 ft

Runway: 27L  
Length x Width: 7677 ft x 148 ft  
Surface Type: concrete  
TDZ-Elev: 179 ft  
Lighting: Edge, ALS, Centerline, REIL

Runway: 27R  
Length x Width: 12467 ft x 148 ft  
Surface Type: concrete  
TDZ-Elev: 169 ft  
Lighting: Edge, ALS, Centerline, REIL, TDZ  
Displaced Threshold: 984 ft

**Communication Information**

ATIS 136.575  
Hannover Tower 120.4  
Hannover Tower 120.175  
Hannover Tower 37.495 Military  
Hannover Ground Control 121.95  
De-Icing Ramp/Taxi Control 135.225  
De-Icing Ramp/Taxi Control 121.6 Secondary  
Hannover Director Approach Control 119.6  
Hannover Director Approach Control 25.972 Military

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**1. GENERAL**

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**1.1. ATIS**

\*D-ATIS 136.57

**1.2. NOISE ABATEMENT PROCEDURES****1.2.1. NIGHT FLYING RESTRICTIONS**

Between 2200-0559LT, aircraft exceeding the noise limits pursuant to ICAO Annex 16, Volume 1, Chapter 3 are not permitted to operate.

If any ACFT are to take-off or land between 2300-0559LT, a copy of the noise certificates shall be submitted in advance.

Between 2300-0559LT, only the following ACFT movements and ACFT are permitted:

1. Take-offs and landings of turbo-jet ACFT with noise certificate in accordance ICAO with Annex 16, Chapter 3 or 4 which are more than 8 EPNdB below the limits laid down in ICAO Annex 16, Volume 1, Chapter 3, and
  - a) which are usually scheduled for the APT of Hannover, or
  - b) which are used for night airmail service of a universal service provider as defined in the Postal Universal Service Ordinance (PUDLV) if the night flight is required to meet the quality standard in accordance with Article 2, item 3 of the PUDLV (service provider shall prove this in advance to the airport), or
  - c) which are operated by air carriers whose main base and maintenance facilities are in Hannover.
2. Take-offs and landings of turbo-jet cargo ACFT with noise certificate in accordance ICAO with Annex 16, Chapter 3 or 4, and
  - a) which are more than 8 EPNdB below the limits laid down in ICAO Annex 16, Volume 1, Chapter 3, or
  - b) all jet ACFT up to 25000 KGS MTOW which are more than 5 EPNdB below the limits laid down in ICAO Annex 16, Volume 1, Chapter 3, as well as the following ACFT types:

|                                        |                                        |
|----------------------------------------|----------------------------------------|
| A300                                   | CANADAIR RJ                            |
| A310                                   | DASH 8-400                             |
| A319                                   | FOKKER 70/100                          |
| A320                                   | GULFSTREAM IV/V                        |
| A321                                   | LOCKHEED L1011 - take-off only         |
| A330                                   | DC 8-70 - series                       |
| A340                                   | DC 10 - take-off only                  |
| BAe 146/AVRO RJ-series                 | DC 10-30 (all versions) - landing only |
| B717                                   | MD 11                                  |
| B727-100 re-engined with 3 tay engines | MD 80 (all versions) - landing only    |
| B737-300/400/500/600/700/800           | MD 90                                  |
| B747-400                               | TUPOLEV 204                            |
| B757                                   |                                        |
| B767                                   |                                        |
| B777                                   |                                        |
3. Landings of ACFT not exceeding the limits pursuant to ICAO Annex 16, Volume 1, Chapter 3, operated by air carriers whose main base and maintenance facilities are in Hannover.
4. Take-offs and landings of ACFT with different means of propulsion in commercial and corporate air traffic complying with the provisions of ICAO Annex 16, Volume 1, Chapters 3, 4, 5, 6, (-4 dBA), 8, 10 (-3 to -8 dBA) or 11 and/or Chapters III, IV 2.4, VII or X 2.4 of Noise Requirements for ACFT as well as landings of ACFT with different means of propulsion and noise certificate stationed at Hannover Airport in business air traffic.
5. Landings of delayed ACFT which are part of scheduled air services or regular air inclusive tours, which do not exceed the noise limits pursuant to ICAO Annex 16, Volume 1, Chapter 3 and which are scheduled to arrive at Hannover prior to 2300LT.
6. Landings of ACFT provably using the airport as alternate aerodrome for meteorological, technical or other safety reasons.

## 1. GENERAL

7. Calibration flights conducted by DFS Deutsche Flugsicherung GmbH as far as necessary for maintaining flight safety.
8. Take-offs and landings in emergency cases.
9. Take-offs and landings in exceptional cases with special permission from the aviation supervision office of the "Niedersaechsisches Ministerium fuer Wirtschaft, Arbeit und Verkehr".

Subject to further restrictions of this provision, between 2200-0559LT take-offs and landings by ACFT as listed below are only permitted on the northern RWYs 09L/27R.

Exceptions for urgent technical, meteorological or operational reasons are possible.

|                                        |                |
|----------------------------------------|----------------|
| A300                                   | LOCKHEED L1011 |
| A310                                   | DC 8-70-series |
| A330                                   | DC 10          |
| A340                                   | MD 11          |
| B727-100 re-engined with 3 tay engines | MD 80-series   |
| B737-200                               | MD 90          |
| B747-400                               | TUPOLEV 154    |
| B757-300                               | TUPOLEV 204    |
| B767                                   |                |
| B777                                   |                |
| and                                    |                |

propeller-driven ACFT with more than 5.7t MTOW.

### 1.2.2. LOCAL FLYING RESTRICTIONS

1. Arrivals and departures immediately following one another as well as circling flights for ACFT **over 5.7t MTOW** and for ACFT **up to 5.7t MTOW not complying** with the conditions of ICAO Annex 16, Volume I, Chapter 3, 4, 5, 6 (-4 dB [A]), 8, 10 (-3 to -8 dB [A]) or 11 pursuant to ICAO and/or LSL Chapters III, V, VI 2.4, VIII or X 2.4:  
Only permitted MON-FRI between 0600-2059LT and SAT between 0800-1259LT.
2. Arrivals and departures immediately following one another as well as circling flights for ACFT **up to 5.7t MTOW complying** with the conditions of ICAO Annex 16, Volume I, Chapter 3, 4, 5, 6 (-4 dB [A]), 8, 10 (-3 to -8 dB [A]) or 11 pursuant to ICAO and/or LSL Chapters III, V, VI 2.4, VIII or X 2.4:  
Only permitted MON-SAT between 0600-2059LT and SUN, HOL between 0800-2059LT.
3. Arrivals and departures immediately following one another, not represented at the APT by an ACFT operator, are subject to permission by the "Luftaufsicht" at Hannover APT.

### 1.2.3. RUN-UP TESTS

Run-up tests of jet engines shall be conducted exclusively in a noise suppression facility which is ready for operation.

If the noise suppression facility is not ready for operation, run-up tests of jet engines may be conducted only from 0600-2200LT. Between 2200-2400LT as well as between 0400-0600LT run-up tests of jet engines may, however, also be conducted outside the noise suppression facility which is not ready for operation if required for urgent maintenance due to safety reasons shortly before a take-off after landing. This provision does not apply to idle test runs.

## 1.3. LOW VISIBILITY PROCEDURES

ACFT will be guided onto RWY by Follow-me car.

Enquiries via HANNOVER Ground.

## 1. GENERAL

### 1.4. AUXILIARY POWER UNIT (APU)

To avoid additional noise and reduce further immissions, utilization of the APU shall be reduced to a minimum. This is the responsibility of the pilot.

The APU shall be operated only:

- to start the engines; 15 min prior to EOBT; at the earliest;
- for necessary maintenance work on the ACFT;
- if the stationary or mobile ground equipment of the APT is not available or suitable for certain ACFT types.

In special cases, extended hours of operation for the APU may be granted by the APT duty officer (Tel : +49 511 977 1455).

### 1.5. TAXI PROCEDURES

When taxiing, ACFT shall maintain constant radio contact with control tower.

Any requested frequency changes shall be made immediately.

To increase safety of RWYs RWY guard lights have been installed on both sides of CAT I holding positions of RWYs 09L/27R and 09R/27L, as well as of holding positions of RWY 09C/27C.

On aprons ACFT are permitted to taxi only at the indispensable minimums engine speed. TWYs A1, D1, F1 and L1 on the apron are ACFT stand taxilanes with reduced minimum separation distances between taxilane centerlines and stationary objects. The separation distances between taxilane centerline and the red obstacle limitation lines are:

- 156'/47.5m in the area of the parallel TWY F1 between positions 42 and 61 and L1 between positions 4 and 27. The separation between the parallel guidelines is 256'/78m.
- 139'/42.5m in the area of TWY D1.
- 136'/41.5m in the area of taxilane A1 between positions 23 and 42.
- 125'/38m in the area of positions 1 and 2.
- 85'/26m in the area of positions 12, 13 and 20.

When entering positions 1 to 20, the oversteering procedure shall be used.

TWY B MAX wingspan 118'/36m, 59'/18m wheel base.

TWY P MAX wingspan 56'/17m.

TWY O MAX wingspan 66'/20m.

TWY Q MAX wingspan 118'/36m.

While taxiing to and from RWY 09L/27R pilots will need crossing-clearance for RWY 09C/27C, which is an active VFR daytime RWY. To avoid RWY incursions pilots are referred to the published hot spots on 10-9 page.

### 1.6. PARKING INFORMATION

#### 1.6.1. GENERAL

On stands 1 thru 27 and 40 thru 61, except R-stands push-back required.

Stands 1 thru 20, except A-stands equipped with visual docking guidance system.

For stand graphic refer to 10-9 charts.

#### 1.6.2. GENERAL AVIATION 1

All ACFT will be guided by Follow-me.

MAX wingspan 66'/20m between hangar 11, 12 and posn 72-75.

MAX wingspan 56'/17m in front of hangar 13.

MAX wingspan 52'/16m on other parts of apron.

#### 1.6.3. GENERAL AVIATION 2

MAX wingspan 49'/15m.

#### 1.6.4. GENERAL AVIATION 3

MAX wingspan 118'/36m; ACFT with wingspan over 95'/29m will be towed.

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**2. ARRIVAL**

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**2.1. SPEED RESTRICTIONS**

MAX 250 KT below FL 100 or as by ATC. Not applicable within airspace C.

**2.2. NOISE ABATEMENT PROCEDURES****2.2.1. REVERSE THRUST**

Between 2100-0600LT reverse thrust, other than idle thrust, shall only be used to an extent necessary for safety reasons.

**2.3. CAT II/III OPERATIONS**

RWY 09L/27R approved for CAT II/III operations, special aircrew and ACFT certification required.

**2.4. OTHER INFORMATION****2.4.1. FUEL SAVING AND NOISE REDUCING ILS APPROACH PROCEDURES  
(CONTINUOUS DESCENT APPROACH - CDA)****2.4.1.1. GENERAL**

For the purpose of fuel-saving and noise abatement during approach the following approach procedure is announced. It may be requested by the pilot or offered by the controller. It can be conducted only in connection with an ILS approach.

**2.4.1.2. PROCEDURE**

ACFT will be guided by the approach control unit by means of radar vectoring and will be cleared for a continuous descent to the intermediate approach altitude in such a way that after reaching this intermediate approach altitude on the localizer course, about 1NM will be left for intercepting the glide path in level flight. This intermediate approach segment will serve to reduce speed.

Intermediate approach altitude: 2000'. It is assumed that the continuous descent will be performed at a rate of 300ft/NM (descent angle approx 3°), down to the cleared altitude.

If, for specific reasons (e.g. separation, airspace structure, obstacles), altitudes above the intermediate approach altitude have to be initially assigned, these restrictions will be lifted early enough to allow a continuous descent at a rate of 300ft/NM.

Details about the distance from touchdown will be transmitted to the pilot together with the clearance for descent and usually at 20, 15 and 10NM from touchdown. This should enable the pilot to correct the rate of descent as required.

In case of traffic situations allowing no CDA (e.g. approaches of ACFT with different performance data), pilots will be informed by the notice NO CDA POSSIBLE. In this case, approaches must be conducted according to the previous procedures.

**2.4.1.3. NOISE ABATEMENT**

On approaches in accordance with the CDA, pilots are also expected to use the approach techniques recommended for noise abatement in the vicinity of APTs (see AIR TRAFFIC CONTROL page GERMANY-1).

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### 3. DEPARTURE

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#### 3.1. DE-ICING

##### 3.1.1. GENERAL

The de-icing of ACFT will take place on defined de-icing areas (DPs), exclusively. These areas are located at the Western part of the apron.

De-icing on other parking positions - with the exception of the regulation described below - is not permitted.

##### 3.1.2. De-icing Areas

The special areas assigned for the de-icing of ACFT are designated DP1 and DP2 (see 10-9B). In exceptional cases, de-icing may take place on the positions located in between. The actual de-icing position will be assigned by the de-icing operator. The de-icing of jet-propelled ACFT will be carried out with running engines and switched off auxiliary power units (APU). The same regulation applies for ACFT types ATR 42/72 with applied propeller brakes.

##### 3.1.3. De-icing

A de-icing operation shall be reported to the de-icing operator in good time (30min in advance prior to OFB/CTOT) under the phone number (0511)-9771415 however, when obtaining start-up clearance for the engines on frequency **121.95**, at the least.

The order of notifications has no influence on the actual de-icing sequence. This will be determined by ground control, exclusively.

After start-up clearance/push-back, ACFT will be guided by ground control to the immediate vicinity of the de-icing areas. The ACFT will then be guided by a Follow-me car to a vacant de-icing position.

After parking the ACFT on the de-icing area, the pilot will report on HANNOVER De-icing **135.22** together with his flight number. After the de-icing process has been completed, the pilot in command shall report "ready to taxi" to HANNOVER Ground. If the engines have to be started up again, this shall be reported to ground control. During the de-icing process, the pilot shall maintain constant listening watch on the respective de-icing frequency. When the de-icing procedure has been completed, the de-icing code will be transmitted and the ACFT handed over by the de-icing operator to the ground controller.

Taxiing manoeuvres from the de-icing areas may only be carried out after express clearance by the ground controller and with the absolute minimum number of engine revolutions required, only.

After de-icing has taken place, the de-icing areas shall be vacated as quickly as possible after receiving taxi clearance.

Pre de-icing measures with water can be conducted on parking positions if notified in good time. This pre de-icing serves merely to guarantee safe taxiing to the de-icing pads. All other special services, such as the de-icing of the undercarriage or de-icing beneath the wings, will be conducted on the pads with engines switched off, only.

The Hands-on check will generally only be carried out by representatives of the air transport company concerned or by a crew member of the de-iced ACFT on the respective de-icing pad. A Hands-on check shall be requested by the crew through a handling agent, only. On instructions from the de-icing operator, an ACFT may be towed to another position for the hands-on check or planned for another de-icing position in the pre-planning stage already. If a hands-on check becomes necessary, the control tower shall be informed in time, but at the latest when requesting start-up clearance. The employees of FHG and AGS (de-icing personnel) will not carry out these checks.

#### 3.2. TAXI PROCEDURES

ACFT may leave nose-in positions only by the aid of towing cars.

Reverse thrust or variable pitch propellers shall not be used.

Leaving positions 1 thru 23B, 27 and 40 thru 61 (except R stands) ACFT have to be pushed back.

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### 3. DEPARTURE

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#### 3.3. NOISE ABATEMENT PROCEDURES

For additional depiction refer to 10-4.

The starting points for the take-off runs of 3200m in length are located at the level of the eastern edge of RWY N for landing direction 27 and at the level of the western edge of RWY H for landing direction 09. The starting points located 300m in front of THR 09L for take-offs in an eastern direction and 300m in front of THR 27R for take-offs in a western direction may only be used by ACFT requiring a take-off run exceeding 3200m for the forthcoming take-off

#### 3.4. OTHER INFORMATION

##### 3.4.1. DATALINK DEPARTURE CLEARANCE (DCL)

DFS (Deutsche Flugsicherung GmbH) is offering start-up and enroute clearances using Datalink. The procedures have been described in an AIC.

Temporal parameters:

- $t_i$  25 min prior to EOBT for unregulated flights.  
30 min prior to CTOT for ATFM regulated flights.
- $t_{\uparrow}$  11 min prior to EOBT for unregulated flights.  
16 min prior to CTOT for ATFM regulated flights.
- $t_1$  5 min

BREMEN Radar (APP)  
131.32 118.05 118.15

Apt Elev  
183'

Alt Set: hPa (IN on request)  
Trans level: By ATC Trans alt: 5000'

The MRVA (Minimum Radar Vectoring Altitude) is the lowest altitude which may be used for radar vectors for IFR flights taking into account the minimum safe height (1000' above the highest obstacle within a radius of 8 km) and airspace structure (lower limit of the controlled airspace plus a buffer of 500'). Below the MRVA, IFR flights will normally be cleared on published IFR procedures only. Altitudes in brackets apply between AIRAC date NOV and AIRAC date MAR in order to meet required obstacle clearance at cold temperatures.

SWEDEN ESAA  
FIR (G)

COPENHAGEN  
EKDK FIR (G)  
BREMEN EDWW FIR

120NM

3500

ALTITUDE  
NOT PUBLISHED

80NM

4000  
2000  
CONTOUR  
INTERVALS

3500

3000

NIENBURG  
NIE VOR

WUNSTORF  
WUN NDB

2000  
(2100)

2500  
(2800)

CELLE  
CEL NDB

BRAUN-  
SCHWEIG  
BRU NDB

3300

40NM

2000

1800

4500

4100

BUCKEBURG  
BYC NDB

LEINE  
DLE VOR DME

BREMEN  
EDWW FIR

2281'

4118'

2043'

3047'

2474'

3393'

2377'

3052'

HW NDB

HA NDB

2933'

2740'

2587'

08-00

08-30

09-00

09-30

10-00

10-30

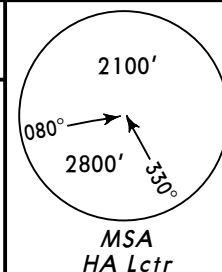
11-00

11-30

12-00

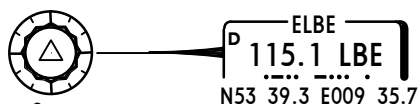
12-30

|   |             |
|---|-------------|
| ③ | 1900 (2200) |
| ④ | 2500 (2600) |
| ⑤ | 2800 (3000) |
| ⑥ | 3000 (3100) |
| ⑦ | 3600        |
| ⑧ | 2900        |
| ⑨ | 2100 (2400) |
| ⑩ | 3400        |
| ⑪ | 2000        |
| ⑫ | 2000 (2200) |

\*D-ATIS  
136.57 115.2Apt Elev  
183'Alt Set: hPa (IN on request)  
Trans level: By ATC Trans alt: 5000'

DIRBO FOUR PAPA (DIRBO 4P) [DIRB4P]  
ELBE EIGHT PAPA (LBE 8P)  
RWYS 27L/R ARRIVALS

DIRBO FOUR ROMEO (DIRBO 4R) [DIRB4R]  
ELBE SIX ROMEO (LBE 6R)  
RWYS 09L/R ARRIVALS



DIRBO 4R: Clearance limit is CEL.  
LBE 8P: Clearance limit is NIE.

LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼  
In case of radio communication  
failure proceed to:  
① DIRBO 4R: NIE.  
② LBE 8P: CEL.  
▲ SWW03 1S01 ▲ SWW03 1S01 ▲ SWW03 1S01 ▲

**VERTICAL PLANNING INFORMATION**

Pilots should plan for possible descent clearance as follows:

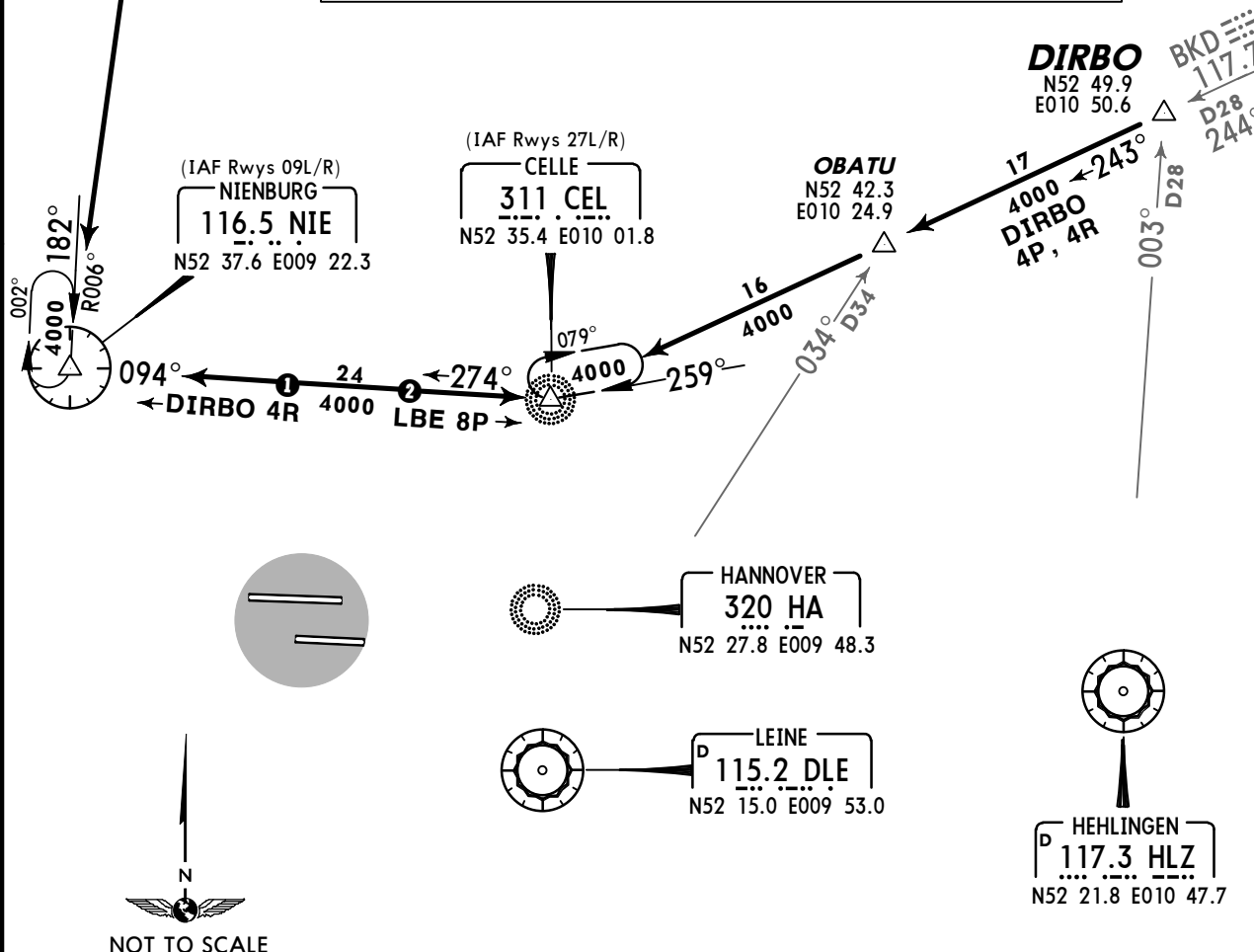
DIRBO 4P: at or below FL70 by CEL.

DIRBO 4R: at or below FL110 by CEL.  
at or below FL80 by NIE.

LBE 8P: at or below FL110 by NIE,  
at or below FL70 by CEL.

LBE 6R: at or below FL80 by NIE.

**ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED  
BY ATC.**



Alt Set: hPa (IN on request)  
Trans level: By ATC    Trans alt: 5000'

ELNAT ONE ROMEO (ELNAT 1R) [ELNA1R] ①  
GITEX TWO ROMEO (GITEX 2R) [GITE2R] ①  
RWYS 09L/R ARRIVALS

**1** BRNAV equipment necessary.

**VERTICAL PLANNING INFORMATION**  
Pilots should plan for possible descent clearance as follows:  
**ELNAT 2P, GITEX 2P:**  
at or below **FL80** by DLE.  
**ELNAT 1R:**  
at or below **FL80** by ROBEG.  
**GITEX 2R:**  
at or below **FL110** by CEL,  
at or below **FL80** by NIE.  
**ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC.**

**2** GITEX 2R: In case of radio communication failure proceed to NIE.

**3** Between ELNAT & NORTA  
BRNAV equipment necessary.

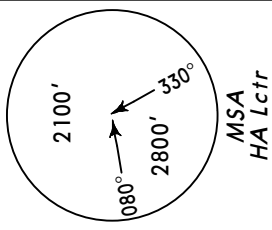
**GITEX 2R: Clearance limit is CEL.**

**GITEX 2R: Clearance limit is CEL.**

\*D-ATIS  
136.57 115.2

Apt Elev  
183'

Alt Set: hPa (IN on request)  
Trans level: By ATC Trans alt: 5000'

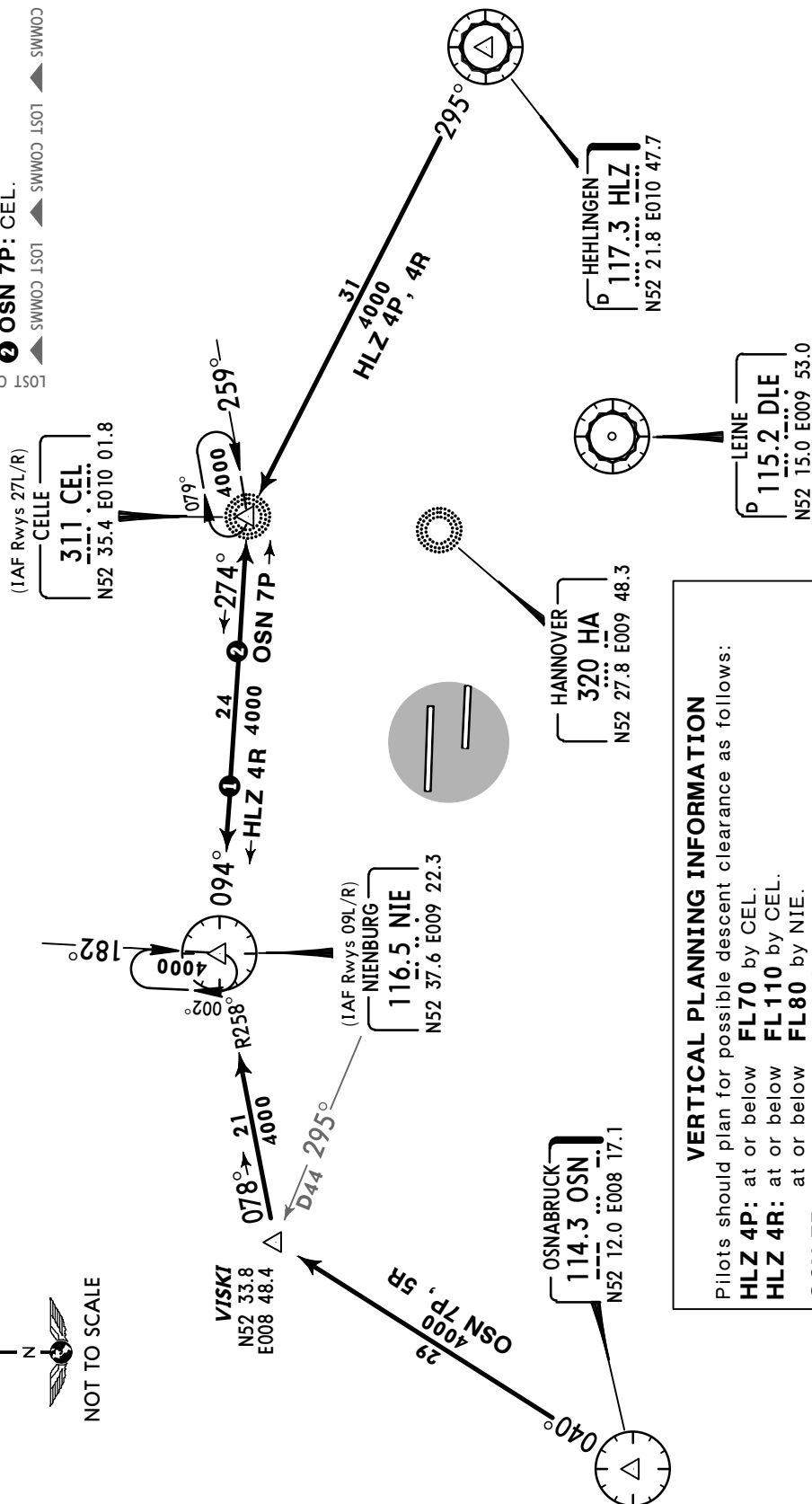
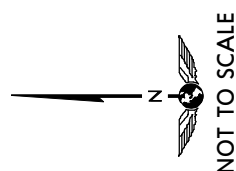


HEHLINGEN FOUR PAPA (HLZ 4P)  
OSNABRUCK SEVEN PAPA (OSN 7P)  
RWYS 27L/R ARRIVALS

HEHLINGEN FOUR ROMEO (HLZ 4R)  
OSNABRUCK FIVE ROMEO (OSN 5R)  
RWYS 09L/R ARRIVALS

LOST COMMS  
In case of radio communication failure proceed to:  
1 HLZ 4R: NIE.  
2 OSN 7P: CEL.  
LOST COMMS

HLZ 4R: Clearance limit is CEL.  
OSN 7P: Clearance limit is NIE.



### VERTICAL PLANNING INFORMATION

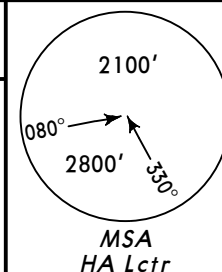
Pilots should plan for possible descent clearance as follows:

HLZ 4P: at or below FL70 by CEL.  
HLZ 4R: at or below FL110 by CEL.  
at or below FL80 by NIE.  
OSN 7P: at or below FL110 by NIE.  
at or below FL70 by CEL.  
OSN 5R: at or below FL80 by NIE.  
**ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC.**

\*D-ATIS  
136.57 115.2

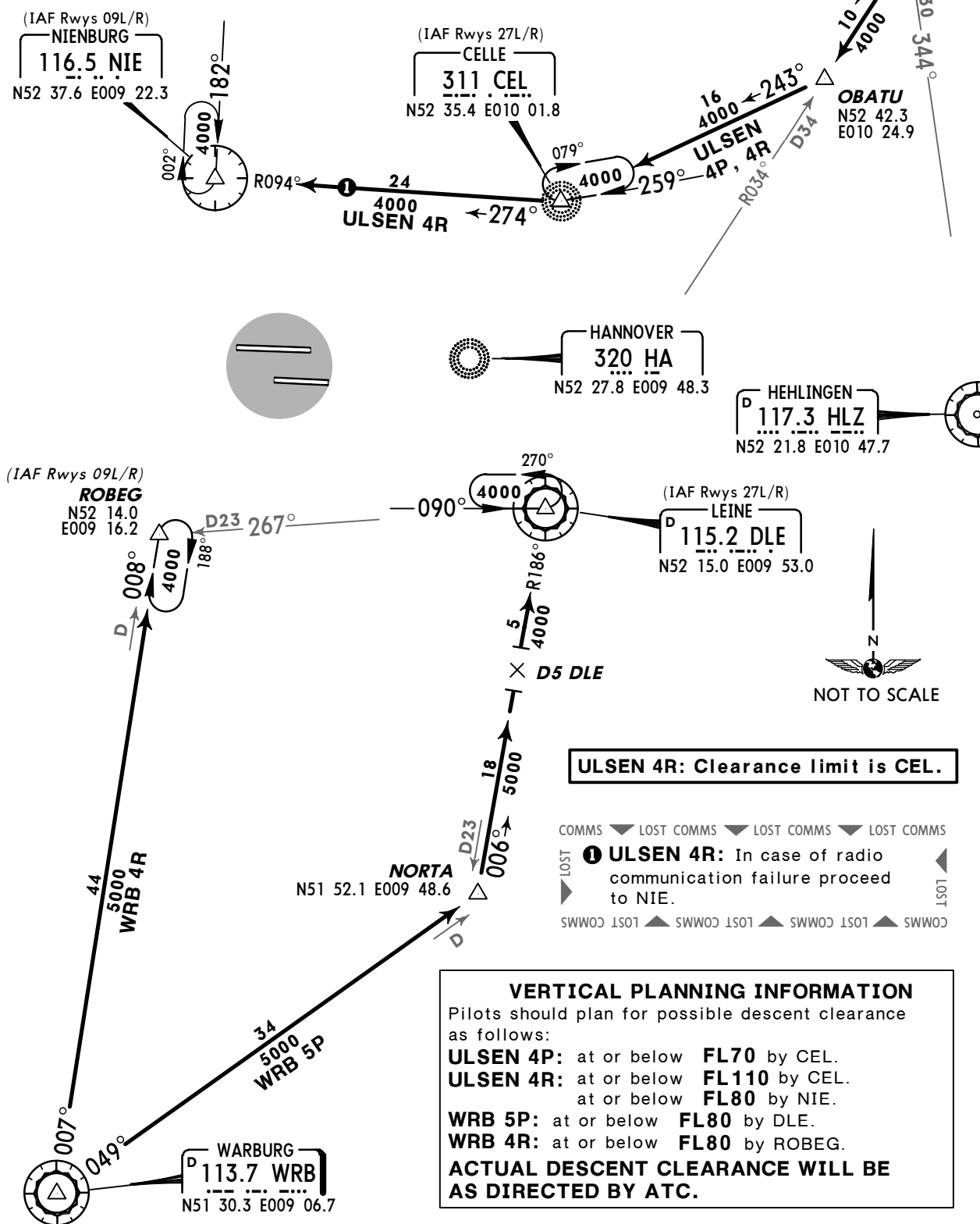
Apt Elev  
183'

Alt Set: hPa (IN on request)  
Trans level: By ATC Trans alt: 5000'



ULSEN FOUR PAPA (ULSEN 4P) [ULSE4P]  
WARBURG FIVE PAPA (WRB 5P)  
RWYS 27L/R ARRIVALS

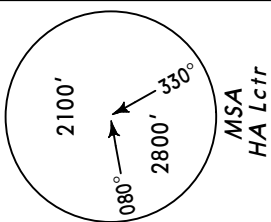
ULSEN FOUR ROMEO (ULSEN 4R) [ULSE4R]  
WARBURG FOUR ROMEO (WRB 4R)  
RWYS 09L/R ARRIVALS



\*D-ATIS  
**136.57**  
**115.2**

*Apt Elev*  
**183'**

Alt Set: hPa (IN on request) Trans level: By ATC Trans alt 5000'  
1. On downwind transition expect vectors to final. 2. Speed limits are mandatory from the respective waypoint throughout the entire transition route unless cancelled by ATC. 3. Altitude assignments will be issued by ATC.

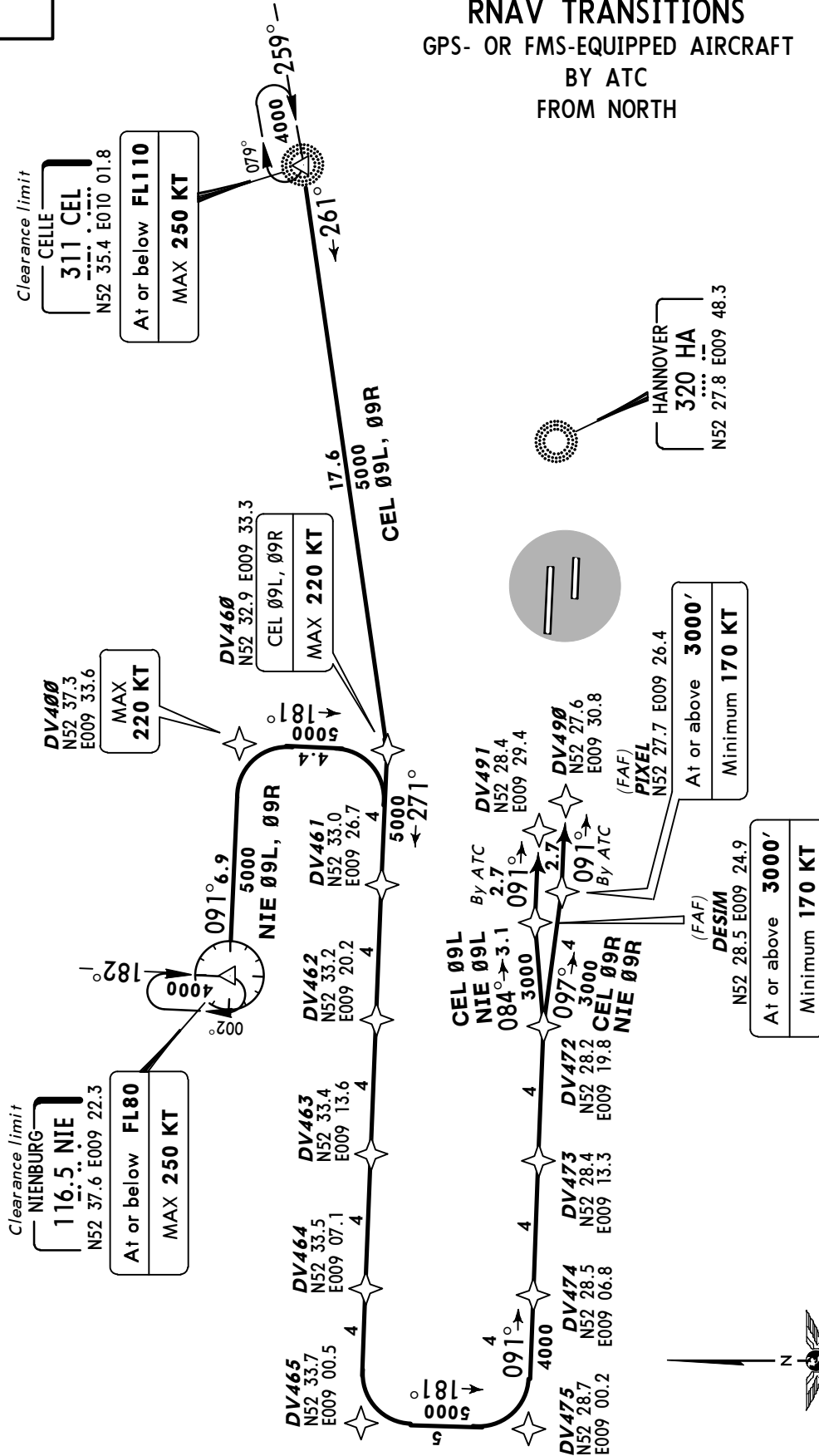


CEL 09L [CE09L], CEL 09R [CE09R]  
NIE 09L [NI09L], NIE 09R [NI09R]  
RWYS 09L/R

**RNAV TRANSITIONS**  
GPS- OR FMS-EQUIPPED AIRCRAFT  
BY ATC  
FROM NORTH

### ROUTING

| TRANSITION | RWY | ROUTING                                                                                      |
|------------|-----|----------------------------------------------------------------------------------------------|
| CEL 09L    | 09L | CEL (FL110-; K250-) - DV460 (K220-) - DV465 - DV475 - DV472 - DESIM (3000' +; K170+).        |
| CEL 09R    | 09R | CEL (FL110-; K250-) - DV460 (K220-) - DV465 - DV475 - DV472 - PIXEL (3000' +; K170+).        |
| NIE 09L    | 09L | NIE (FL80-; K250-) - DV400 (K220-) - DV460 - DV465 - DV475 - DV472 - DESIM (3000' +; K170+). |
| NIE 09R    | 09R | NIE (FL80-; K250-) - DV400 (K220-) - DV460 - DV465 - DV475 - DV472 - PIXEL (3000' +; K170+). |



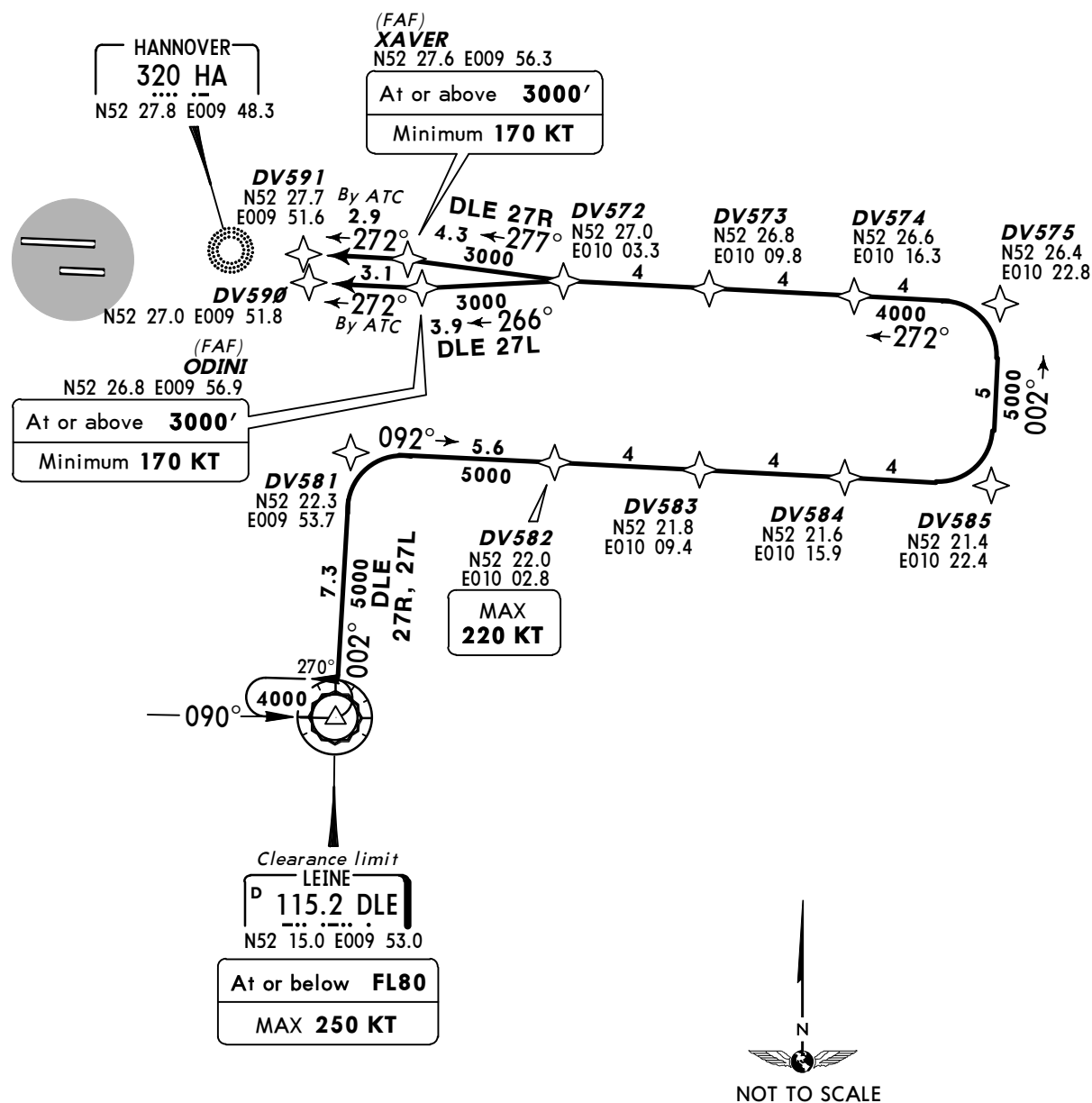
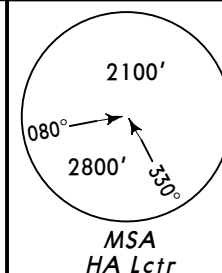
© JEPPESEN SANDERSON, INC., 2003, 2008. ALL RIGHTS RESERVED.

\*D-ATIS  
136.57  
115.2Apt Elev  
183'

Alt Set: hPa (IN on request) Trans level: By ATC Trans alt 5000'

1. On downwind transition expect vectors to final. 2. Speed limits are mandatory from the respective waypoint throughout the entire transition route unless cancelled by ATC. 3. Altitude assignments will be issued by ATC.

DLE 27L [DL27L], DLE 27R [DL27R]  
RWYS 27L/R  
RNAV TRANSITIONS  
GPS- OR FMS-EQUIPPED AIRCRAFT  
BY ATC  
FROM SOUTH



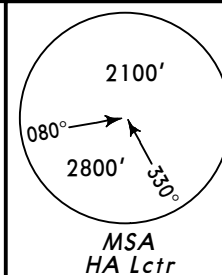
| TRANSITION | RWY | ROUTING                                                                                     |
|------------|-----|---------------------------------------------------------------------------------------------|
| DLE 27L    | 27L | DLE (FL80-; K250-) - DV581 - DV582 (K220-) - DV585 - DV575 - DV572 - ODINI (3000'+; K170+). |
| DLE 27R    | 27R | DLE (FL80-; K250-) - DV581 - DV582 (K220-) - DV585 - DV575 - DV572 - XAVER (3000'+; K170+). |

\*D-ATIS  
136.57  
115.2

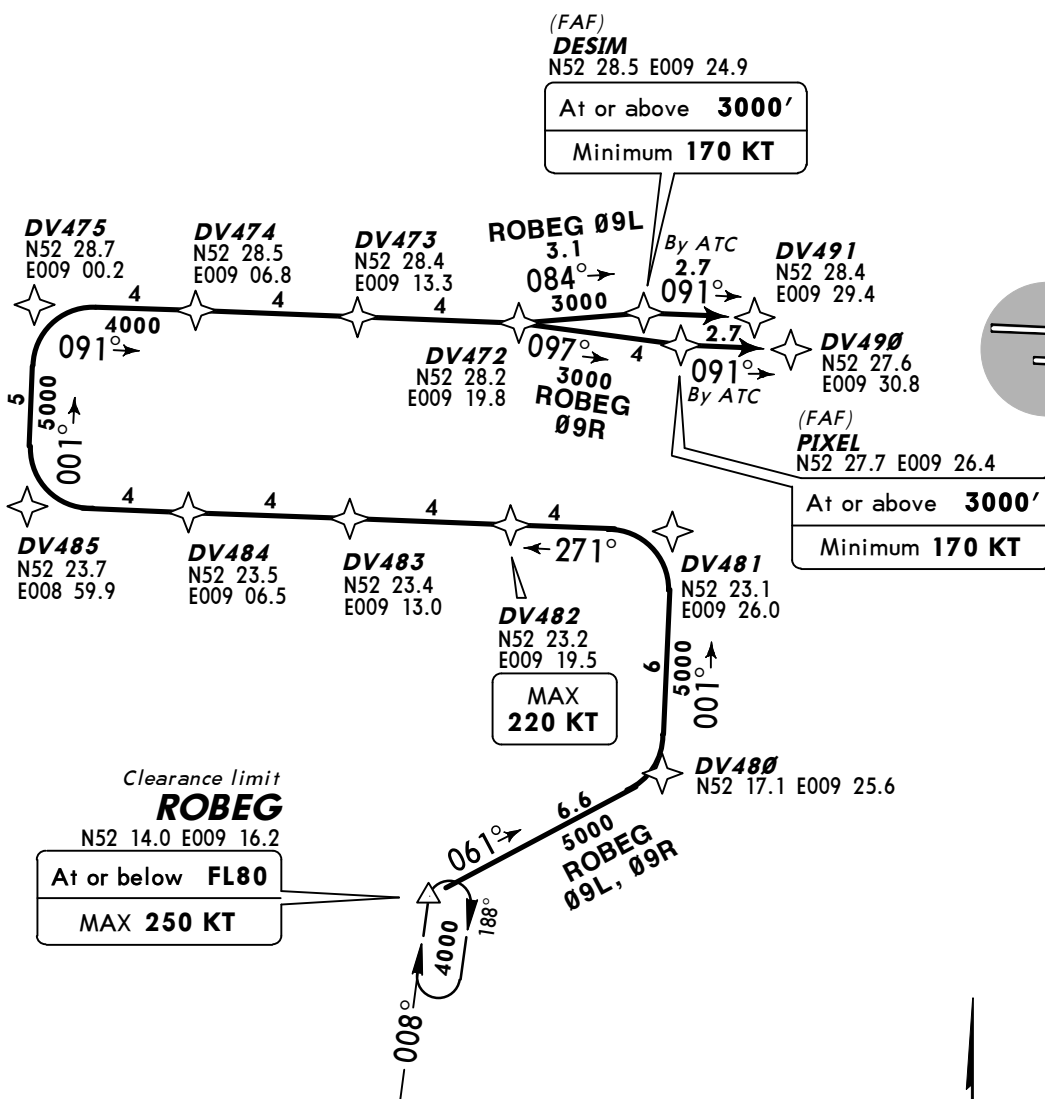
Apt Elev  
183'

Alt Set: hPa (IN on request) Trans level: By ATC Trans alt 5000'  
1. On downwind transition expect vectors to final. 2. Speed limits are mandatory from the respective waypoint throughout the entire transition route unless cancelled by ATC. 3. Altitude assignments will be issued by ATC.

ROBEG 09L [RO09L]  
ROBEG 09R [RO09R]  
RWYS 09L/R  
RNAV TRANSITIONS  
GPS- OR FMS-EQUIPPED AIRCRAFT  
BY ATC  
FROM SOUTH



HANNOVER  
320 HA  
N52 27.8 E009 48.3



| TRANSITION | RWY | ROUTING                                                                                               |
|------------|-----|-------------------------------------------------------------------------------------------------------|
| ROBEG 09L  | 09L | ROBEG (FL80-; K250-) - DV480 - DV481 - DV482 (K220-) - DV485 - DV475 - DV472 - DESIM (3000'+; K170+). |
| ROBEG 09R  | 09R | ROBEG (FL80-; K250-) - DV480 - DV481 - DV482 (K220-) - DV485 - DV475 - DV472 - PIXEL (3000'+; K170+). |

\*ATIS  
136.57Apt Elev  
183'

Alt Set: hPa (IN on request) Trans level: By ATC Trans alt 5000'  
When cleared for "Transition and Profile" aim for a low noise continuous descent approach (CDA) within the constraints as laid down in the procedure description.

ESTAD 1A [EST1A], ESTAD 1E [EST1E]  
KUGAV 1A [KUG1A], KUGAV 1E [KUG1E]  
OBATU 1A [OBA1A], OBATU 1E [OBA1E]  
TOLTA 1A [TOL1A], TOLTA 1E [TOL1E]  
WRB 1A, WRB 1E

## RWYS 09L/R RNAV TRANSITIONS

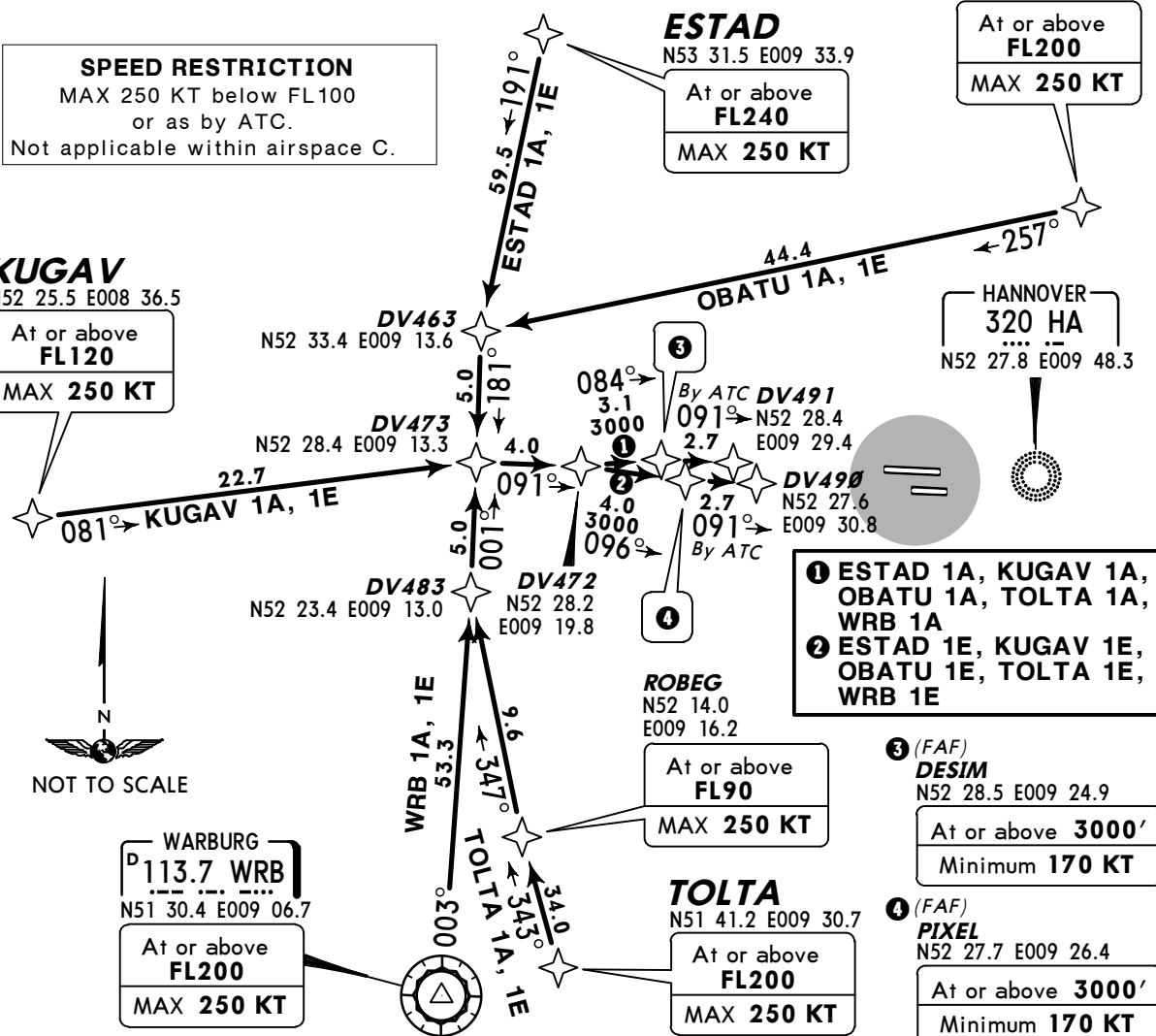
FLY THE TRANSITION AS CONTINUOUS DESCENT APPROACH (CDA)

GPS- OR FMS-EQUIPPED AIRCRAFT

USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC

**SPEED RESTRICTION**  
MAX 250 KT below FL100  
or as by ATC.  
Not applicable within airspace C.

**KUGAV**  
N52 25.5 E008 36.5  
At or above  
**FL120**  
MAX 250 KT

**OBATU**

N52 42.3 E010 24.9

At or above  
**FL200**  
MAX 250 KT

**HANNOVER**  
320 HA  
N52 27.8 E009 48.3

- ① ESTAD 1A, KUGAV 1A, OBATU 1A, TOLTA 1A, WRB 1A  
② ESTAD 1E, KUGAV 1E, OBATU 1E, TOLTA 1E, WRB 1E

③ (FAF) **DESIM**  
N52 28.5 E009 24.9

At or above **3000'**  
Minimum **170 KT**

④ (FAF) **PIXEL**  
N52 27.7 E009 26.4

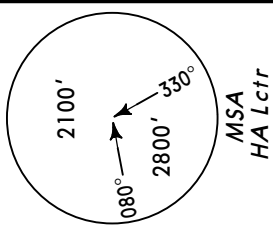
At or above **3000'**  
Minimum **170 KT**

| TRANSITION | RWY | ROUTING                                                                                       |
|------------|-----|-----------------------------------------------------------------------------------------------|
| ESTAD 1A   | 09L | ESTAD (FL240+; K250-) - DV463 - DV473 - DV472 - DESIM (3000'+; K170+).                        |
| ESTAD 1E   | 09R | ESTAD (FL240+; K250-) - DV463 - DV473 - DV472 - PIXEL (3000'+; K170+).                        |
| KUGAV 1A   | 09L | KUGAV (FL120+; K250-) - DV473 - DV472 - DESIM (3000'+; K170+).                                |
| KUGAV 1E   | 09R | KUGAV (FL120+; K250-) - DV473 - DV472 - PIXEL (3000'+; K170+).                                |
| OBATU 1A   | 09L | OBATU (FL200+; K250-) - DV463 - DV473 - DV472 - DESIM (3000'+; K170+).                        |
| OBATU 1E   | 09R | OBATU (FL200+; K250-) - DV463 - DV473 - DV472 - PIXEL (3000'+; K170+).                        |
| TOLTA 1A   | 09L | TOLTA (FL200+; K250-) - ROBEG (FL90+; K250-) - DV483 - DV473 - DV472 - DESIM (3000'+; K170+). |
| TOLTA 1E   | 09R | TOLTA (FL200+; K250-) - ROBEG (FL90+; K250-) - DV483 - DV473 - DV472 - PIXEL (3000'+; K170+). |
| WRB 1A     | 09L | WRB (FL200+; K250-) - DV483 - DV473 - DV472 - DESIM (3000'+; K170+).                          |
| WRB 1E     | 09R | WRB (FL200+; K250-) - DV483 - DV473 - DV472 - PIXEL (3000'+; K170+).                          |

\*ATIS  
**136.57**

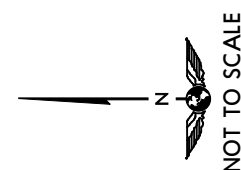
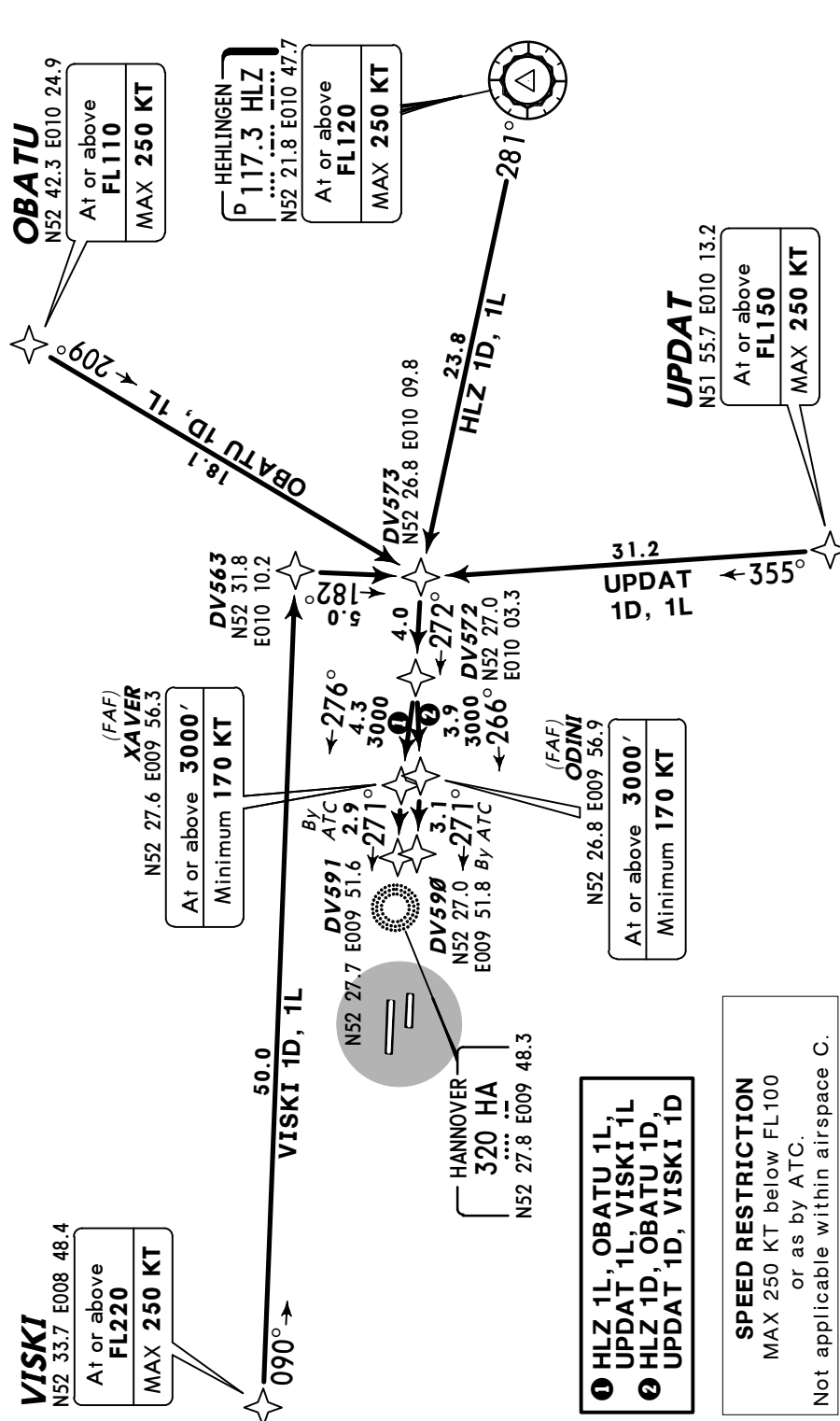
Apt Elev  
**183'**

Alt Set: hPa (IN on request) Trans level: By ATC Trans alt 5000'  
When cleared for "Transition and Profile" aim for a low noise continuous descent approach (CDA) within the constraints as laid down in the procedure description.



HLZ 1D, HLZ 1L  
OBATU 1D [OBA1D], OBATU 1L [OBA1L]  
UPDAT 1D [UPD1D], UPDAT 1L [UPD1L]  
VISKI 1D [VIS1D], VISKI 1L [VIS1L]

**RWYS 27L/R RNAV TRANSITIONS**  
FLY THE TRANSITION AS CONTINUOUS DESCENT APPROACH (CDA)  
GPS- OR FMS-EQUIPPED AIRCRAFT  
USE OF RNAV TRANSITION ONLY WHEN CLEARED BY ATC



| ROUTING    |     |
|------------|-----|
| TRANSITION | RWY |
| HLZ 1D     | 27L |
| HLZ 1L     | 27R |
| OBATU 1D   | 27L |
| OBATU 1L   | 27R |
| UPDAT 1D   | 27L |
| UPDAT 1L   | 27R |
| VISKI 1D   | 27L |
| VISKI 1L   | 27R |

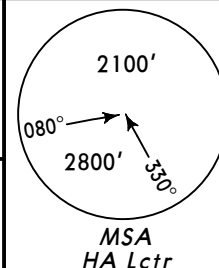
**SPEED RESTRICTION**  
MAX 250 KT below FL100  
or as by ATC.  
Not applicable within airspace C.

① HLZ 1L, OBATU 1L, UPDAT 1L, VISKI 1L  
② HLZ 1D, OBATU 1D, UPDAT 1D, VISKI 1D

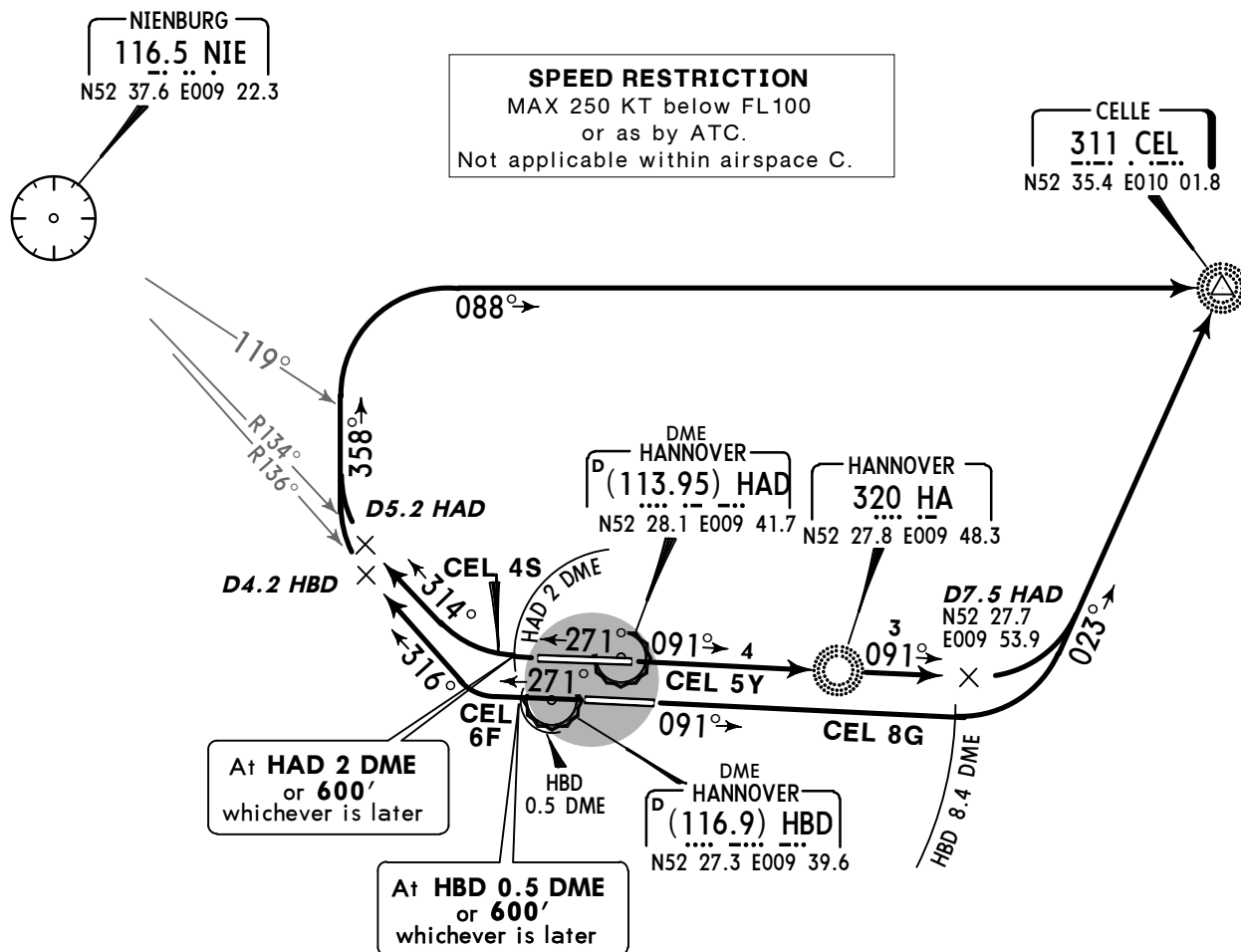
BREMEN Radar  
131.32Apt Elev  
183'

Trans level: By ATC Trans alt: 5000'

1. Contact BREMEN Radar immediately after take-off.
2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



CELLE SIX FOXTROT (CEL 6F)  
CELLE EIGHT GOLF (CEL 8G)  
CELLE FOUR SIERRA (CEL 4S)  
CELLE FIVE YANKEE (CEL 5Y)  
RWYS 27L, 09R, 27R, 09L DEPARTURES

**CEL 6F, 4S**

These SIDs require a minimum climb gradient of 425' per NM (7%) until passing 3500' due to airspace structure.

| Gnd speed-KT | 75  | 100 | 150  | 200  | 250  | 300  |
|--------------|-----|-----|------|------|------|------|
| 425' per NM  | 532 | 709 | 1063 | 1418 | 1772 | 2127 |

If unable to comply advise Tower.

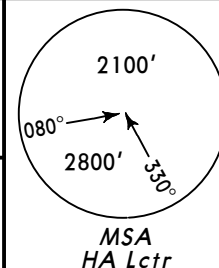
Initial climb clearance **4000'**

| SID    | RWY | ROUTING                                                                                                                                                                                                                          |
|--------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CEL 6F | 27L | Climb on runway track to 0.5 DME WEST of HBD or <b>600'</b> , whichever is later, turn RIGHT, intercept NIE R-136 inbound to D4.2 HBD, turn RIGHT, 358° track, when passing NIE R-119 turn RIGHT, intercept 088° bearing to CEL. |
| CEL 8G | 09R | On runway track to HBD 8.4 DME, turn LEFT, intercept 023° bearing to CEL.                                                                                                                                                        |
| CEL 4S | 27R | Climb on runway track to HAD 2 DME or <b>600'</b> , whichever is later, turn RIGHT, intercept NIE R-134 inbound to D5.2 HAD, turn RIGHT, 358° track, when passing NIE R-119 turn RIGHT, intercept 088° bearing to CEL.           |
| CEL 5Y | 09L | On runway track via HA to D7.5 HAD, turn LEFT, intercept 023° bearing to CEL.                                                                                                                                                    |

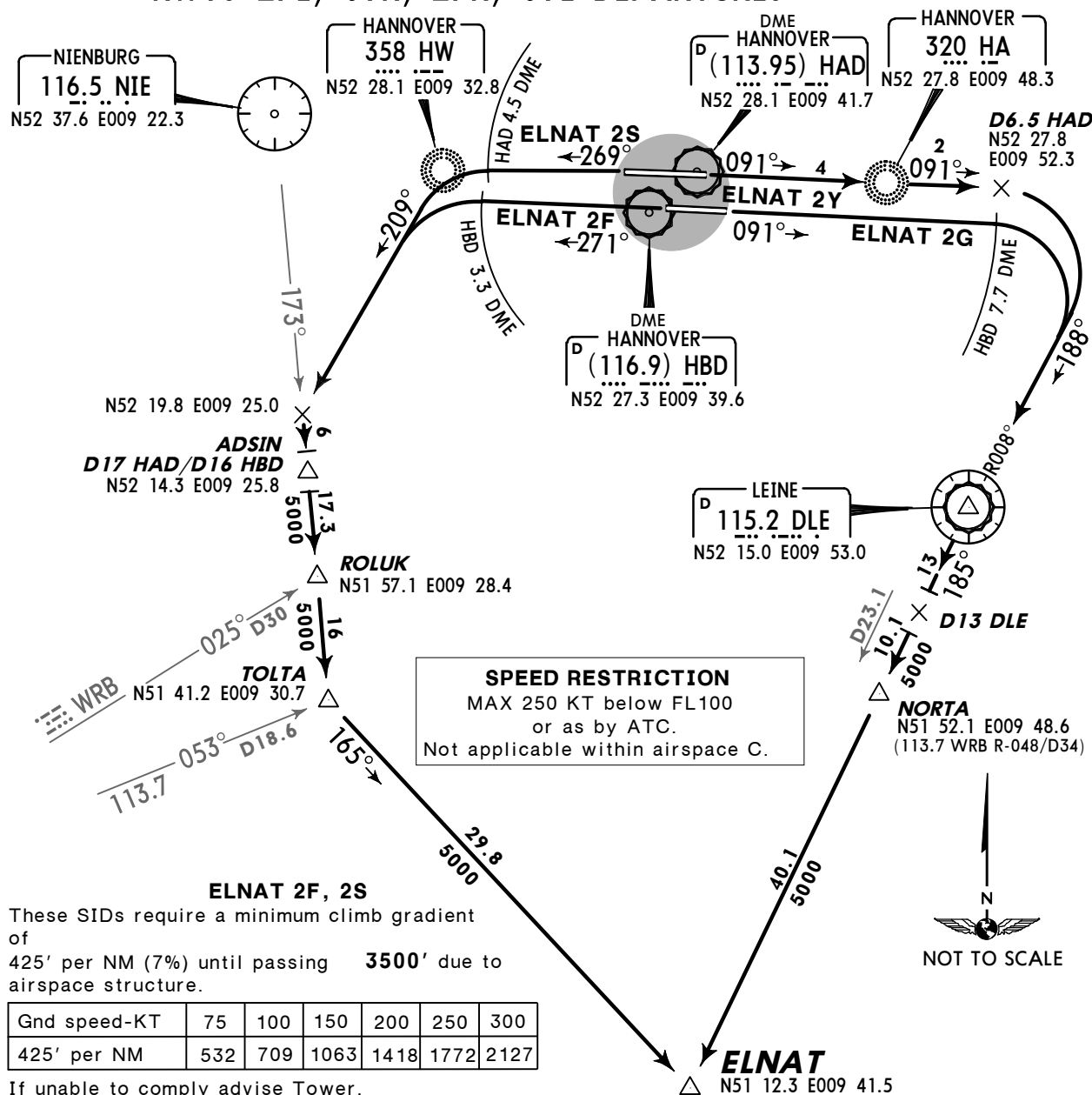
BREMEN Radar  
131.32Apt Elev  
183'

Trans level: By ATC Trans alt: 5000'

1. Contact BREMEN Radar immediately after take-off.
2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



**ELNAT TWO FOXTROT (ELNAT 2F)**  
**ELNAT TWO GOLF (ELNAT 2G)**  
**ELNAT TWO SIERRA (ELNAT 2S)**  
**ELNAT TWO YANKEE (ELNAT 2Y)**  
**RWYS 27L, 09R, 27R, 09L DEPARTURES**



**ELNAT 2F, 2S**  
These SIDs require a minimum climb gradient of 425' per NM (7%) until passing 3500' due to airspace structure.

|              |     |     |      |      |      |      |
|--------------|-----|-----|------|------|------|------|
| Gnd speed-KT | 75  | 100 | 150  | 200  | 250  | 300  |
| 425' per NM  | 532 | 709 | 1063 | 1418 | 1772 | 2127 |

If unable to comply advise Tower.

Initial climb clearance **4000'**

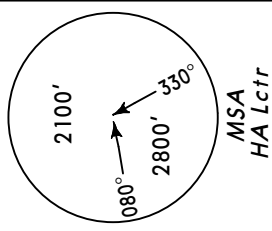
| SID      | RWY | ROUTING                                                                                                                                             |
|----------|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| ELNAT 2F | 27L | On runway track to HBD 3.3 DME, turn LEFT, intercept 209° bearing from HW, intercept NIE R-173 via ADSIN and ROLUK to TOLTA ①, 165° track to ELNAT. |
| ELNAT 2G | 09R | On runway track to HBD 7.7 DME, turn RIGHT, intercept DLE R-008 inbound to DLE, DLE R-185 via NORTA ② to ELNAT.                                     |
| ELNAT 2S | 27R | Towards HW, at HAD 4.5 DME turn LEFT, intercept 209° bearing from HW, intercept NIE R-173 via ADSIN and ROLUK to TOLTA ①, 165° track to ELNAT.      |
| ELNAT 2Y | 09L | On runway track via HA to D6.5 HAD, turn RIGHT, intercept DLE R-008 inbound to DLE, DLE R-185 via NORTA ② to ELNAT.                                 |

After TOLTA ① /NORTA ② BRNAV equipment necessary.

BREMEN Radar  
131.32

Apt Elev  
183'

Trans level: By ATC Trans alt: 5000'  
1. Contact BREMEN Radar immediately after take-off.  
2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



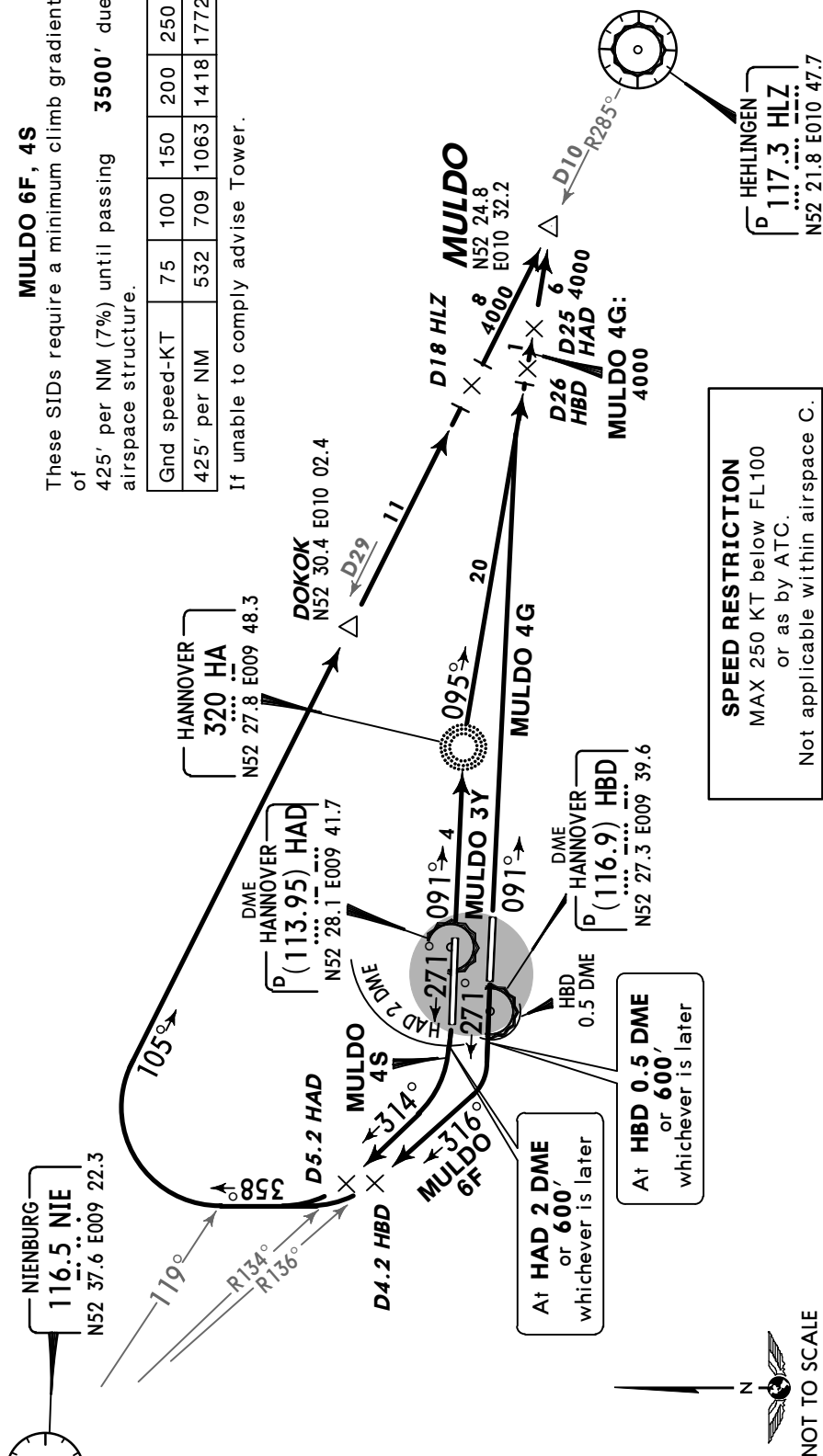
MULDO SIX FOXTROT (MULDO 6F)  
MULDO FOUR GOLF (MULDO 4G)  
MULDO FOUR SIERRA (MULDO 4S)  
MULDO THREE YANKEE (MULDO 3Y)  
RWYS 27L, 09R, 27R, 09L DEPARTURES

**MULDO 6F, 4S**

These SIDs require a minimum climb gradient of 425' per NM (7%) until passing 3500' due to airspace structure.

| Gnd speed-KT | 75  | 100 | 150  | 200  | 250  | 300  |
|--------------|-----|-----|------|------|------|------|
| 425' per NM  | 532 | 709 | 1063 | 1418 | 1772 | 2127 |

If unable to comply advise Tower.



Initial climb clearance 4000'

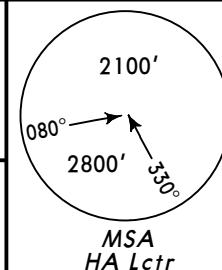
**ROUTING**

| SID      | RWY | ROUTING                                                                                                                                                                                                                                   |
|----------|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MULDO 6F | 27L | Climb on runway track to 0.5 DME WEST of HBD or 600', whichever is later, turn RIGHT, intercept NIE R-136 inbound to D4.2 HBD, turn RIGHT, 358° track, when passing NIE R-119 turn RIGHT, intercept HLZ R-285 inbound via DOKOK to MULDO. |
| MULDO 4G | 09R | On runway track, intercept 095° bearing from HA to MULDO.                                                                                                                                                                                 |
| MULDO 4S | 27R | Climb on runway track to HAD 2 DME or 600', whichever is later, turn RIGHT, intercept NIE R-134 inbound to D5.2 HAD, turn RIGHT, 358° track, when passing NIE R-119 turn RIGHT, intercept HLZ R-285 inbound via DOKOK to MULDO.           |
| MULDO 3Y | 09L | To HA, turn RIGHT, 095° bearing to MULDO.                                                                                                                                                                                                 |

BREMEN Radar  
131.32Apt Elev  
183'

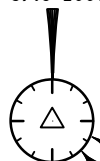
Trans level: By ATC Trans alt: 5000'

1. Contact BREMEN Radar immediately after take-off.
2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

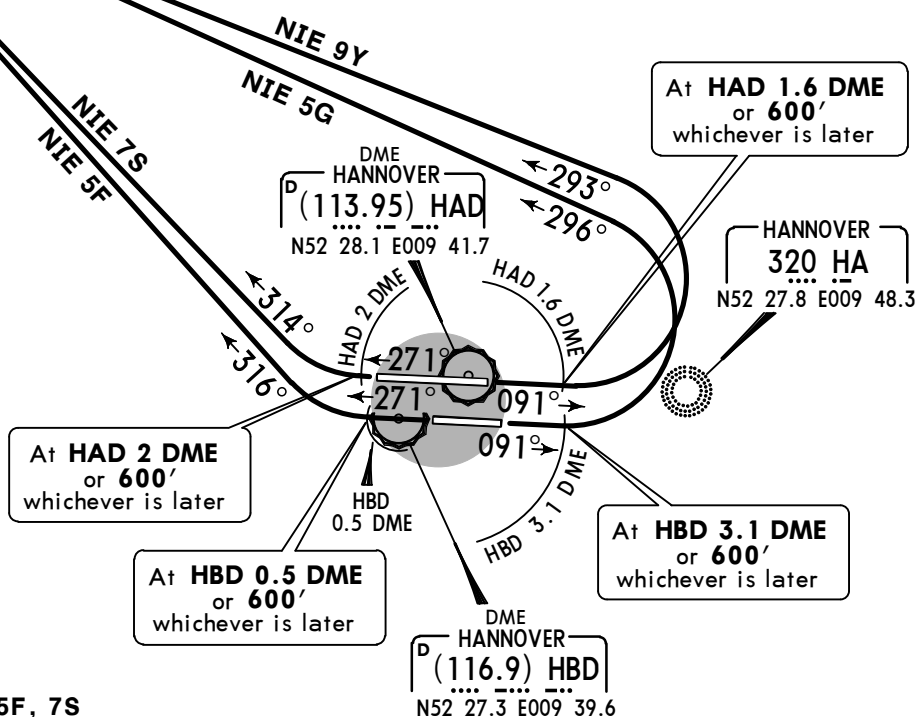


**NIENBURG FIVE FOXTROT (NIE 5F)**  
**NIENBURG FIVE GOLF (NIE 5G)**  
**NIENBURG SEVEN SIERRA (NIE 7S)**  
**NIENBURG NINE YANKEE (NIE 9Y)**  
**RWYS 27L, 09R, 27R, 09L DEPARTURES**

NIENBURG  
116.5 NIE  
N52 37.6 E009 22.3



**SPEED RESTRICTION**  
MAX 250 KT below FL100  
or as by ATC.  
Not applicable within airspace C.



**NIE 5F, 7S**

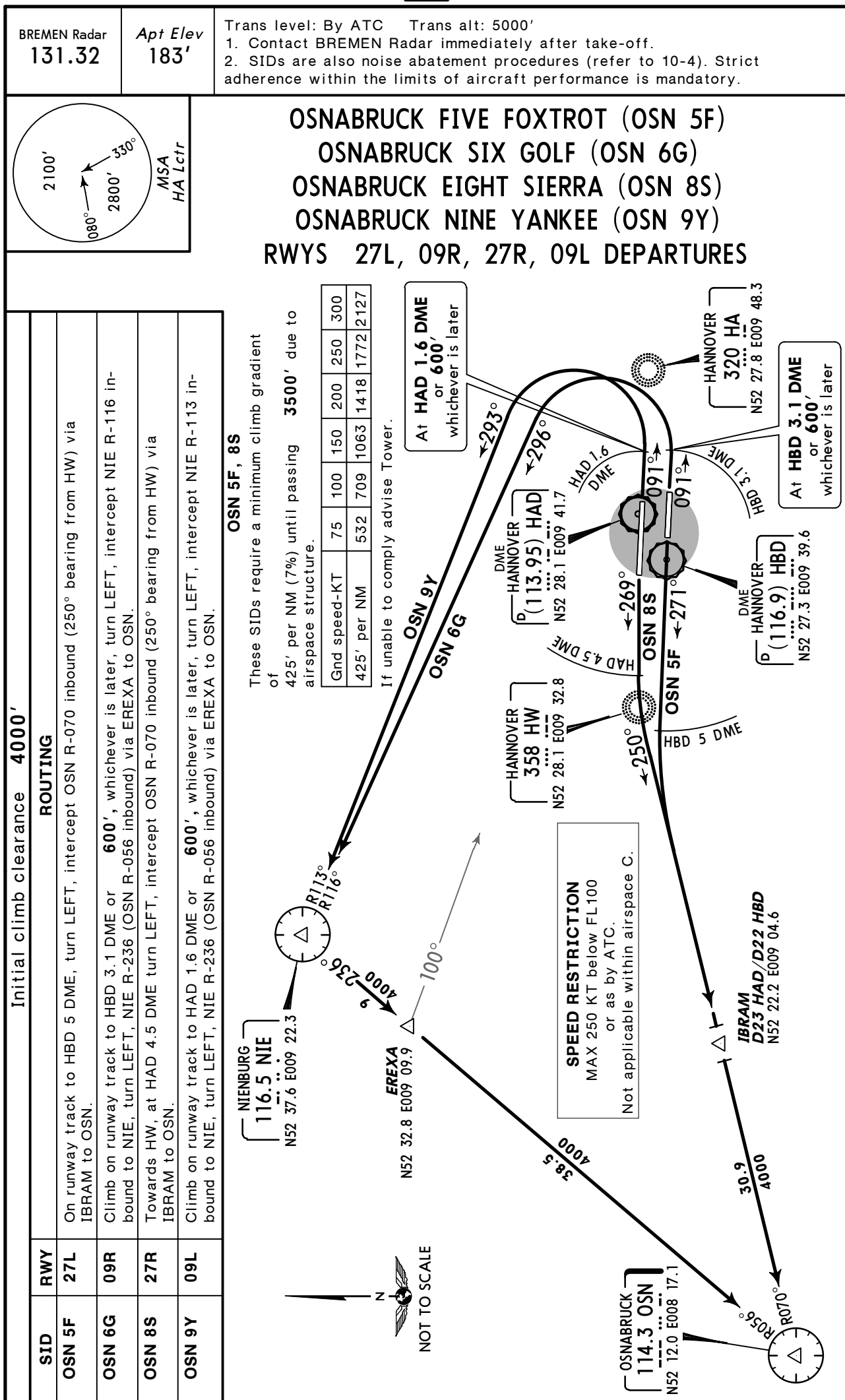
These SIDs require a minimum climb gradient of 425' per NM (7%) until passing 3500' due to airspace structure.

| Gnd speed-KT | 75  | 100 | 150  | 200  | 250  | 300  |
|--------------|-----|-----|------|------|------|------|
| 425' per NM  | 532 | 709 | 1063 | 1418 | 1772 | 2127 |

If unable to comply advise Tower.

Initial climb clearance **4000'**

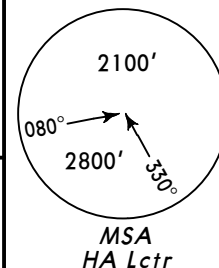
| SID           | RWY        | ROUTING                                                                                                                           |
|---------------|------------|-----------------------------------------------------------------------------------------------------------------------------------|
| <b>NIE 5F</b> | <b>27L</b> | Climb on runway track to 0.5 DME WEST of HBD or <b>600'</b> , whichever is later, turn RIGHT, intercept NIE R-136 inbound to NIE. |
| <b>NIE 5G</b> | <b>09R</b> | Climb on runway track to HBD 3.1 DME or <b>600'</b> , whichever is later, turn LEFT, intercept NIE R-116 inbound to NIE.          |
| <b>NIE 7S</b> | <b>27R</b> | Climb on runway track to HAD 2 DME or <b>600'</b> , whichever is later, turn RIGHT, intercept NIE R-134 inbound to NIE.           |
| <b>NIE 9Y</b> | <b>09L</b> | Climb on runway track to HAD 1.6 DME or <b>600'</b> , whichever is later, turn LEFT, intercept NIE R-113 inbound to NIE.          |



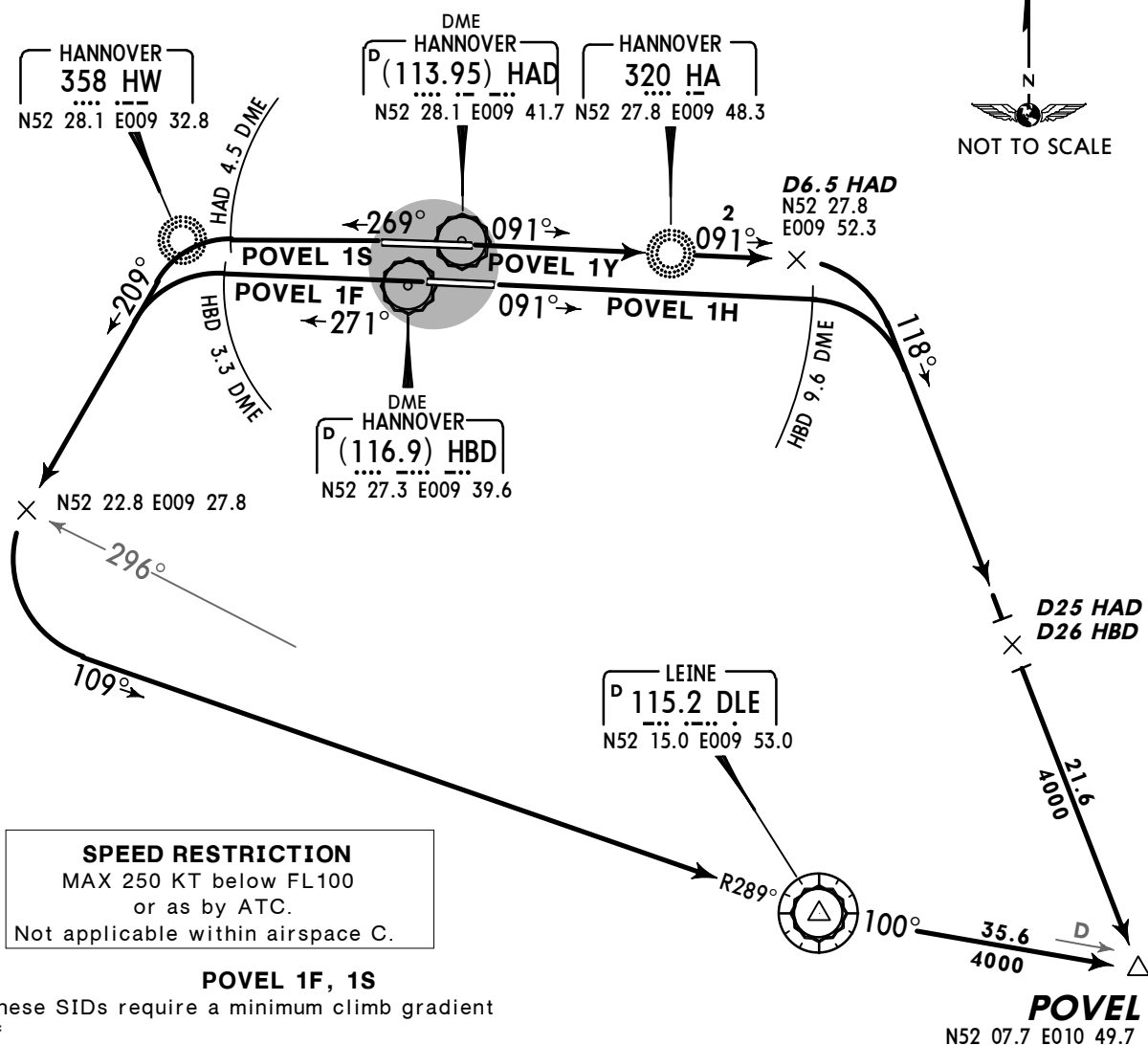
BREMEN Radar  
131.32Apt E/lev  
183'

Trans level: By ATC Trans alt: 5000'

1. Contact BREMEN Radar immediately after take-off.
2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



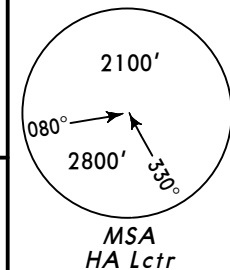
**POVEL ONE FOXTROT (POVEL 1F)**  
**POVEL ONE HOTEL (POVEL 1H)**  
**POVEL ONE SIERRA (POVEL 1S)**  
**POVEL ONE YANKEE (POVEL 1Y)**  
**RWYS 27L, 09R, 27R, 09L DEPARTURES**



BREMEN Radar  
131.32Apt Elev  
183'

Trans level: By ATC Trans alt: 5000'

1. Contact BREMEN Radar immediately after take-off.
2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

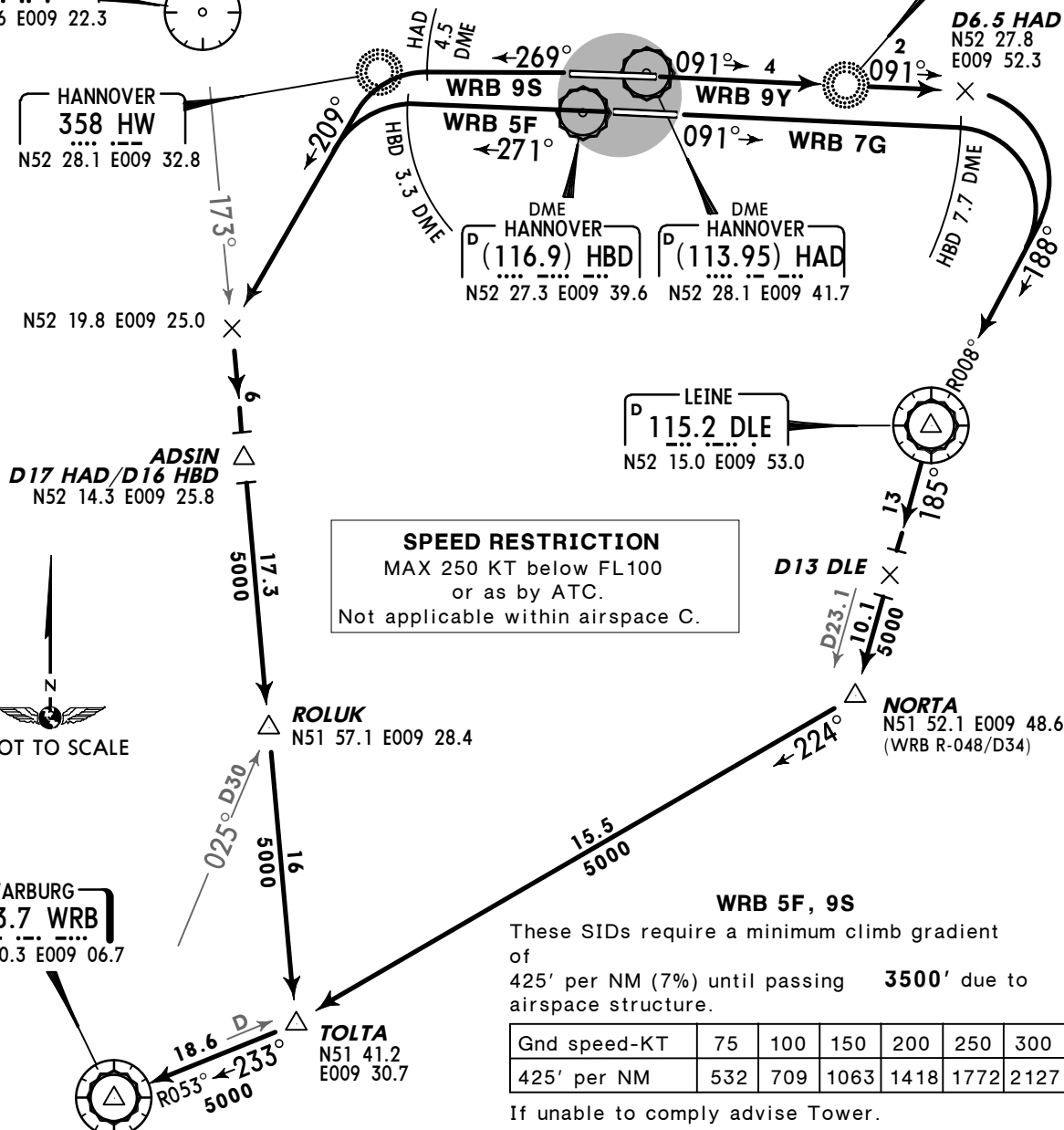


WARBURG FIVE FOXTROT (WRB 5F)  
WARBURG SEVEN GOLF (WRB 7G)  
WARBURG NINE SIERRA (WRB 9S)  
WARBURG NINE YANKEE (WRB 9Y)  
RWYS 27L, 09R, 27R, 09L DEPARTURES  
FLIGHTS TO EDDF END AT TOLTA

NIENBURG  
116.5 NIE  
N52 37.6 E009 22.3

HANNOVER  
358 HW  
N52 28.1 E009 32.8

HANNOVER  
320 HA  
N52 27.8 E009 48.3



Initial climb clearance 4000'

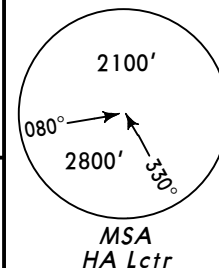
| SID    | RWY | ROUTING                                                                                                                                                            |
|--------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WRB 5F | 27L | On runway track to HBD 3.3 DME, turn LEFT, intercept 209° bearing from HW, intercept NIE R-173 via ADSIN and ROLUK to TOLTA, intercept WRB R-053 inbound to WRB.   |
| WRB 7G | 09R | On runway track to HBD 7.7 DME, turn RIGHT, intercept DLE R-008 inbound to DLE, DLE R-185 to NORTA ①, 224° track to TOLTA, intercept WRB R-053 inbound to WRB.     |
| WRB 9S | 27R | Towards HW, at HAD 4.5 DME turn LEFT, intercept 209° bearing from HW, intercept NIE R-173 via ADSIN and ROLUK to TOLTA, intercept WRB R-053 inbound to WRB.        |
| WRB 9Y | 09L | On runway track via HA to D6.5 HAD, turn RIGHT, intercept DLE R-008 inbound to DLE, DLE R-185 to NORTA ①, 224° track to TOLTA, intercept WRB R-053 inbound to WRB. |

① After NORTA BRNAV equipment necessary.

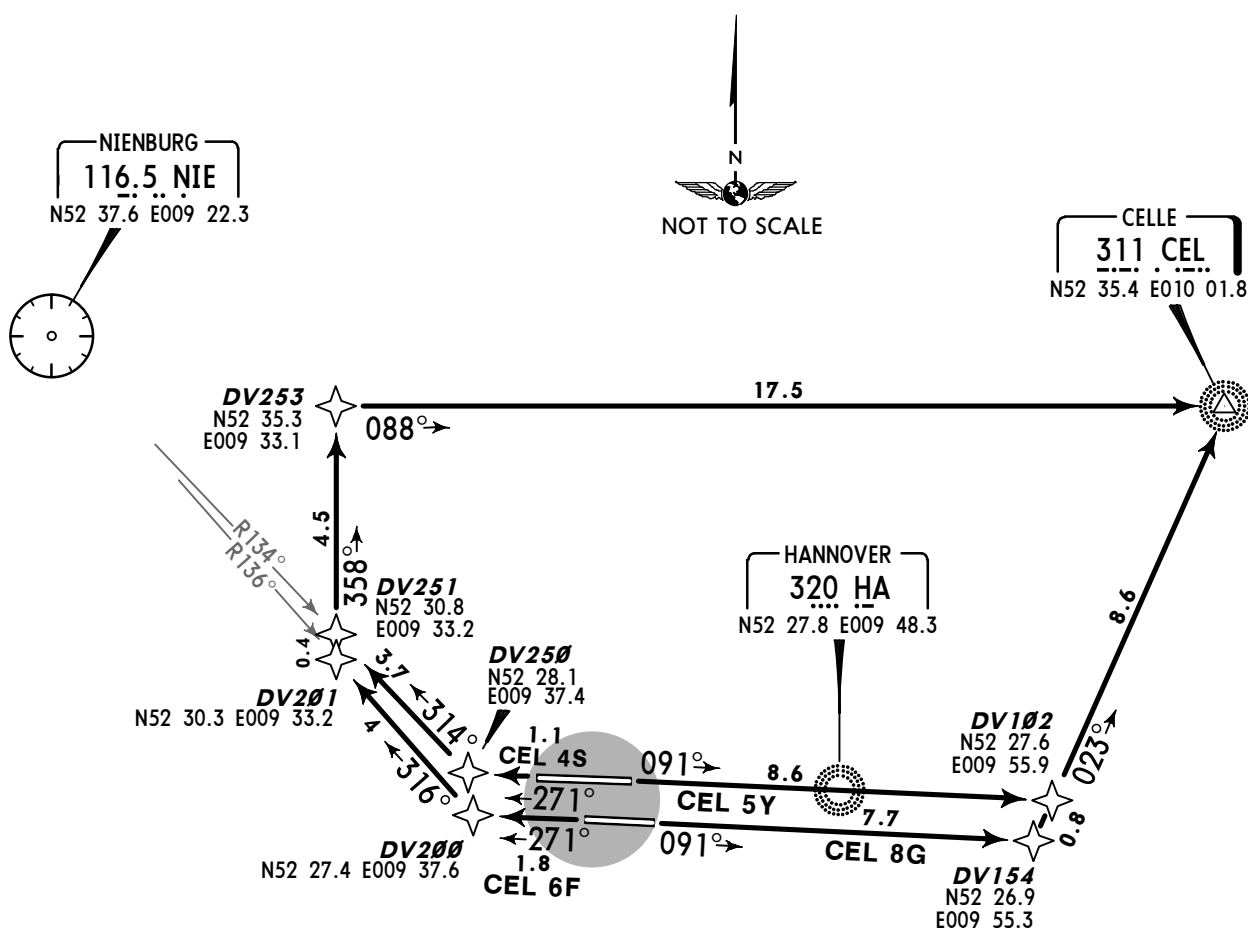
BREMEN Radar  
131.32

Apt Elev  
183'

Trans level: By ATC Trans alt: 5000'  
1. Contact BREMEN Radar immediately after take-off.  
2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



CELLE SIX FOXTROT (CEL 6F)  
CELLE EIGHT GOLF (CEL 8G)  
CELLE FOUR SIERRA (CEL 4S)  
CELLE FIVE YANKEE (CEL 5Y)  
RWYS 27L, 09R, 27R, 09L  
RNAV DEPARTURES (OVERLAY 10-3)



#### CEL 6F, 4S

These SIDs require a minimum climb gradient of 425' per NM (7%) until passing 3500' due to airspace structure.

| Gnd speed-KT | 75  | 100 | 150  | 200  | 250  | 300  |
|--------------|-----|-----|------|------|------|------|
| 425' per NM  | 532 | 709 | 1063 | 1418 | 1772 | 2127 |

If unable to comply advise Tower.

#### SPEED RESTRICTION

MAX 250 KT below FL100  
or as by ATC.  
Not applicable within airspace C.

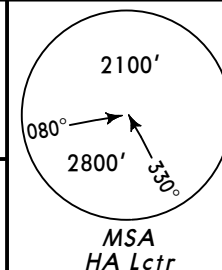
Initial climb clearance 4000'

| SID    | RWY | ROUTING                                |
|--------|-----|----------------------------------------|
| CEL 6F | 27L | (600'+) - DV200 - DV201 - DV253 - CEL. |
| CEL 8G | 09R | (600'+) - DV154 - CEL.                 |
| CEL 4S | 27R | (600'+) - DV250 - DV251 - DV253 - CEL. |
| CEL 5Y | 09L | (600'+) - DV102 - CEL.                 |

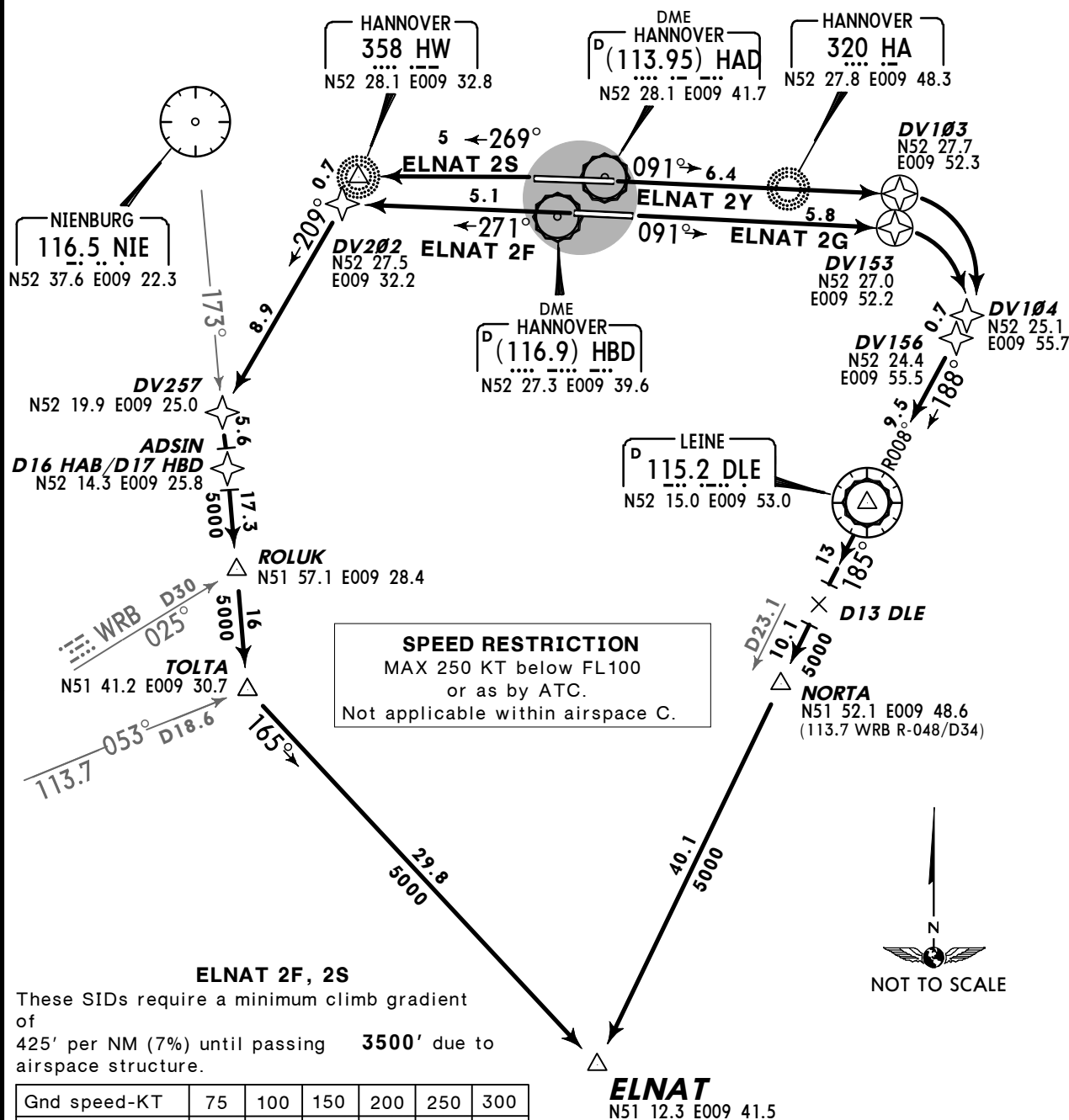
BREMEN Radar  
131.32Apt Elev  
183'

Trans level: By ATC Trans alt: 5000'

1. Contact BREMEN Radar immediately after take-off.
2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



ELNAT TWO FOXTROT (ELNAT 2F) [ELNA2F]  
ELNAT TWO GOLF (ELNAT 2G) [ELNA2G]  
ELNAT TWO SIERRA (ELNAT 2S) [ELNA2S]  
ELNAT TWO YANKEE (ELNAT 2Y) [ELNA2Y]  
RWYS 27L, 09R, 27R, 09L  
RNAV DEPARTURES (OVERLAY 10-3A)

**ELNAT 2F, 2S**

These SIDs require a minimum climb gradient of 425' per NM (7%) until passing 3500' due to airspace structure.

| Gnd speed-KT | 75  | 100 | 150  | 200  | 250  | 300  |
|--------------|-----|-----|------|------|------|------|
| 425' per NM  | 532 | 709 | 1063 | 1418 | 1772 | 2127 |

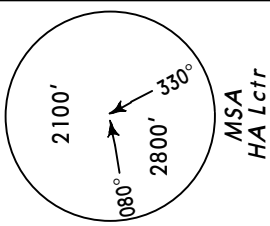
If unable to comply advise Tower.

Initial climb clearance 4000'

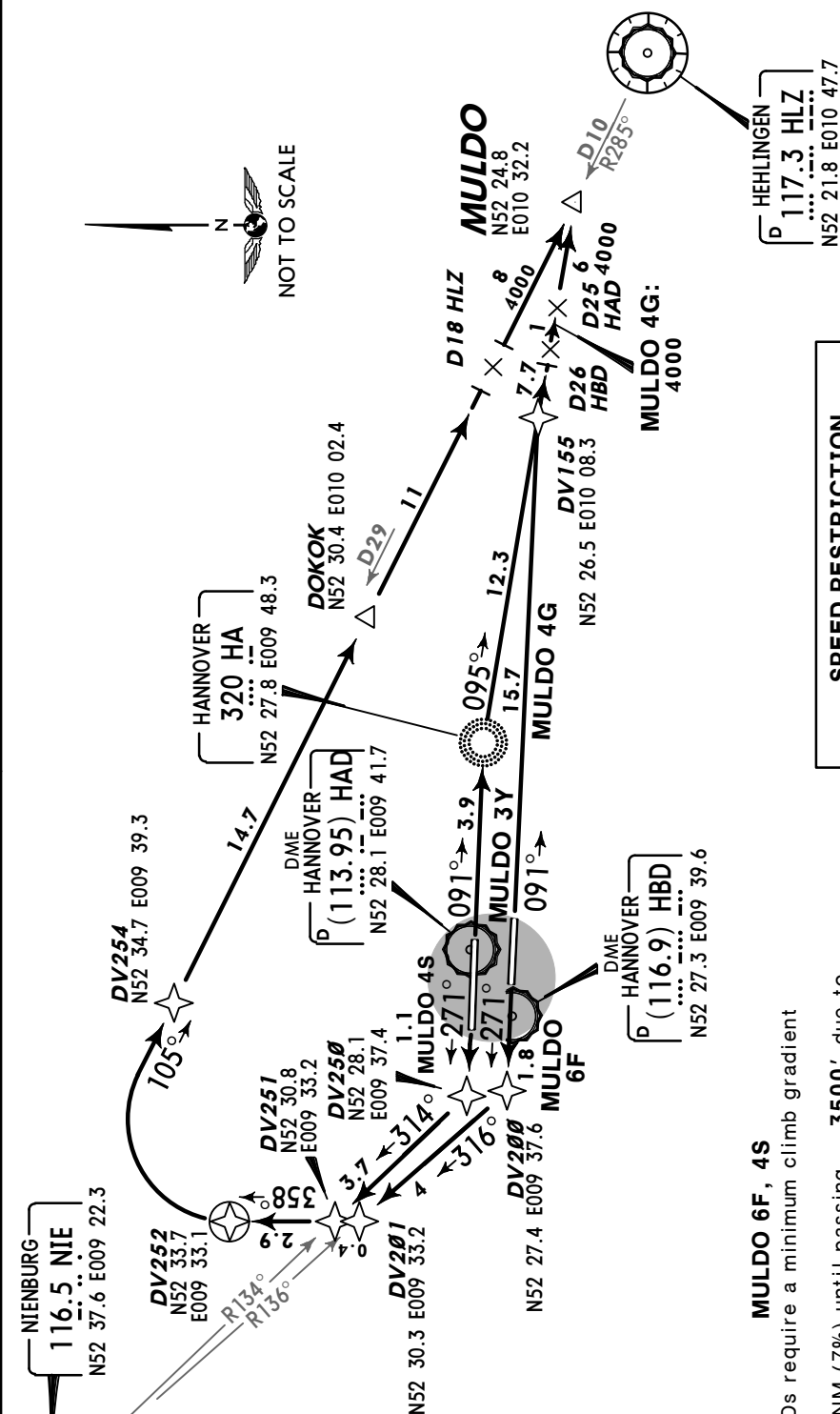
| SID      | RWY | ROUTING                                                  |
|----------|-----|----------------------------------------------------------|
| ELNAT 2F | 27L | (600'+) - DV202 - DV257 - ADSIN - ROLUK - TOLTA - ELNAT. |
| ELNAT 2G | 09R | (600'+) - DV153 - DV156 - DLE - NORTA - ELNAT.           |
| ELNAT 2S | 27R | (600'+) - HW - DV257 - ADSIN - ROLUK - TOLTA - ELNAT.    |
| ELNAT 2Y | 09L | (600'+) - DV103 - DV104 - DLE - NORTA - ELNAT.           |

Trans level: By ATC    Trans alt: 5000'

1. Contact BREMEN Radar immediately after take-off.
2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



MULDO SIX FOXTROT (MULDO 6F) [MULD6F]  
 MULDO FOUR GOLF (MULDO 4G) [MULD4G]  
 MULDO FOUR SIERRA (MULDO 4S) [MULD4S]  
 MULDO THREE YANKEE (MULDO 3Y) [MULD3Y]  
 RWYS 27L, 09R, 27R, 09L  
 RNAV DEPARTURES (OVERLAY 10-3B)



**SPEED RESTRICTION**  
MAX 250 KT below FL100  
or as by ATC.  
Not applicable within airspace C.

**MULDO 6F, 4S**

These SIDs require a minimum climb gradient of 425' per NM (7%) until passing 3500' due to airspace structure.

| Gnd speed-KT | 75  | 100 | 150  | 200  | 250  | 300  |
|--------------|-----|-----|------|------|------|------|
| 425' per NM  | 532 | 709 | 1063 | 1418 | 1772 | 2127 |

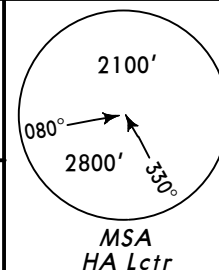
**If unable to comply advise Tower.**

| Initial climb clearance <b>4000'</b> |            |                                                                  |
|--------------------------------------|------------|------------------------------------------------------------------|
| <b>SID</b>                           | <b>RWY</b> | <b>ROUTING</b>                                                   |
| <b>MULDO 6F</b>                      | <b>27L</b> | <b>(600' +) - DV200 - DV201 - DV252 - DV254 - DOKOK - MULDO.</b> |
| <b>MULDO 4G</b>                      | <b>09R</b> | <b>(600' +) - DV155 - MULDO.</b>                                 |
| <b>MULDO 4S</b>                      | <b>27R</b> | <b>(600' +) - DV250 - DV251 - DV252 - DV254 - DOKOK - MULDO.</b> |
| <b>MULDO 3Y</b>                      | <b>09L</b> | <b>(600' +) - HA - MULDO.</b>                                    |

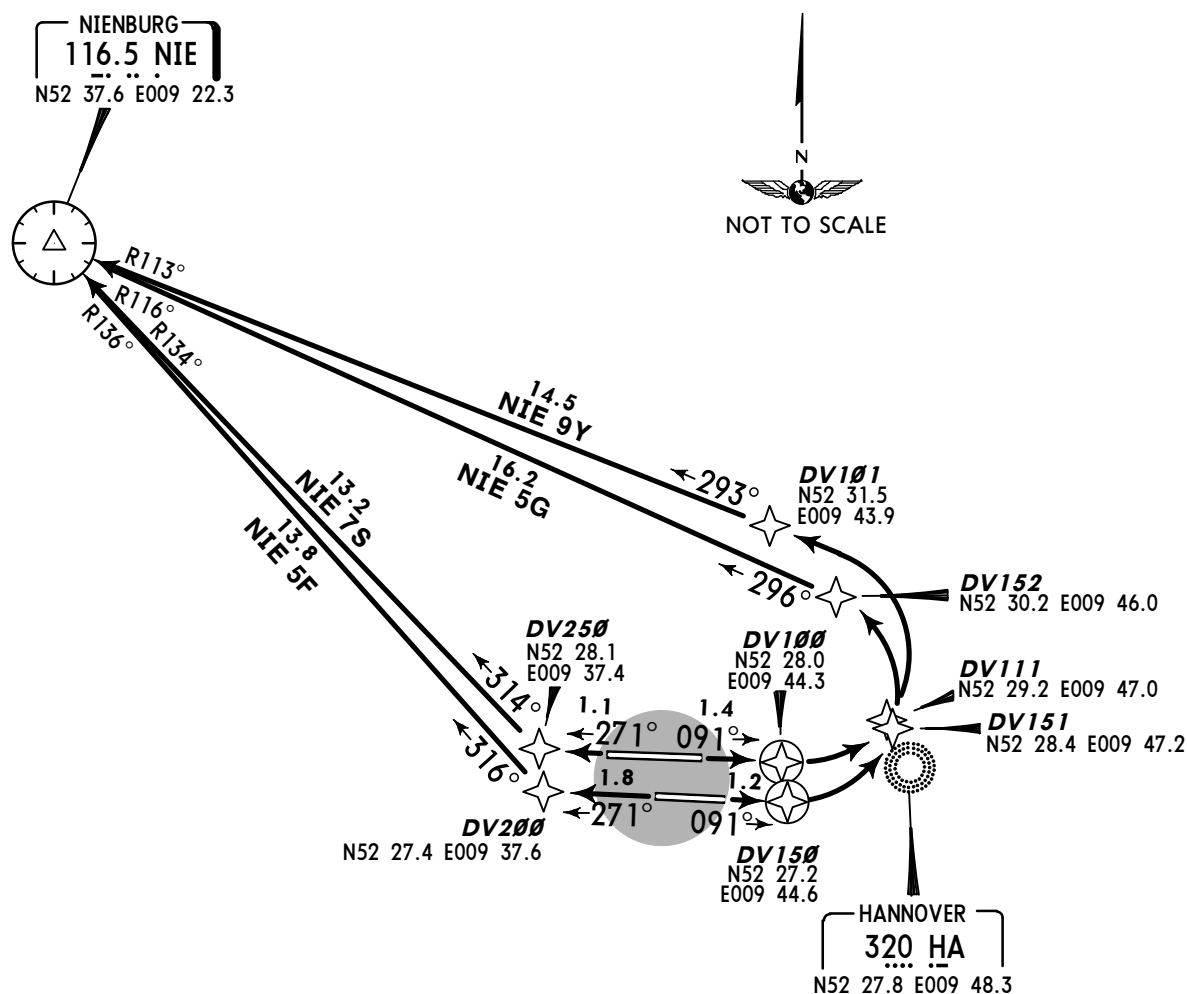
BREMEN Radar  
131.32Apt Elev  
183'

Trans level: By ATC Trans alt: 5000'

1. Contact BREMEN Radar immediately after take-off.
2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



NIENBURG FIVE FOXTROT (NIE 5F)  
NIENBURG FIVE GOLF (NIE 5G)  
NIENBURG SEVEN SIERRA (NIE 7S)  
NIENBURG NINE YANKEE (NIE 9Y)  
RWYS 27L, 09R, 27R, 09L  
RNAV DEPARTURES (OVERLAY 10-3C)

**NIE 5F, 7S**

These SIDs require a minimum climb gradient of 425' per NM (7%) until passing 3500' due to airspace structure.

| Gnd speed-KT | 75  | 100 | 150  | 200  | 250  | 300  |
|--------------|-----|-----|------|------|------|------|
| 425' per NM  | 532 | 709 | 1063 | 1418 | 1772 | 2127 |

If unable to comply advise Tower.

**SPEED RESTRICTION**  
MAX 250 KT below FL100  
or as by ATC.  
Not applicable within airspace C.

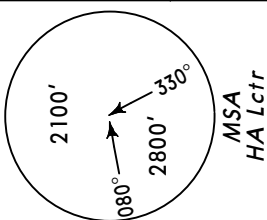
Initial climb clearance **4000'**

| SID    | RWY | ROUTING                                |
|--------|-----|----------------------------------------|
| NIE 5F | 27L | (600'+) - DV200 - NIE.                 |
| NIE 5G | 09R | (600'+) - DV150 - DV151 - DV152 - NIE. |
| NIE 7S | 27R | (600'+) - DV250 - NIE.                 |
| NIE 9Y | 09L | (600'+) - DV100 - DV111 - DV101 - NIE. |

BREMEN Radar  
131.32

Apt Elev  
183'

Trans level: By ATC Trans alt: 5000'  
1. Contact BREMEN Radar immediately after take-off.  
2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



OSNABRUCK FIVE FOXTROT (OSN 5F)  
OSNABRUCK SIX GOLF (OSN 6G)  
OSNABRUCK EIGHT SIERRA (OSN 8S)  
OSNABRUCK NINE YANKEE (OSN 9Y)  
RWYS 27L, 09R, 27R, 09L  
RNAV DEPARTURES (OVERLAY 10-3D)

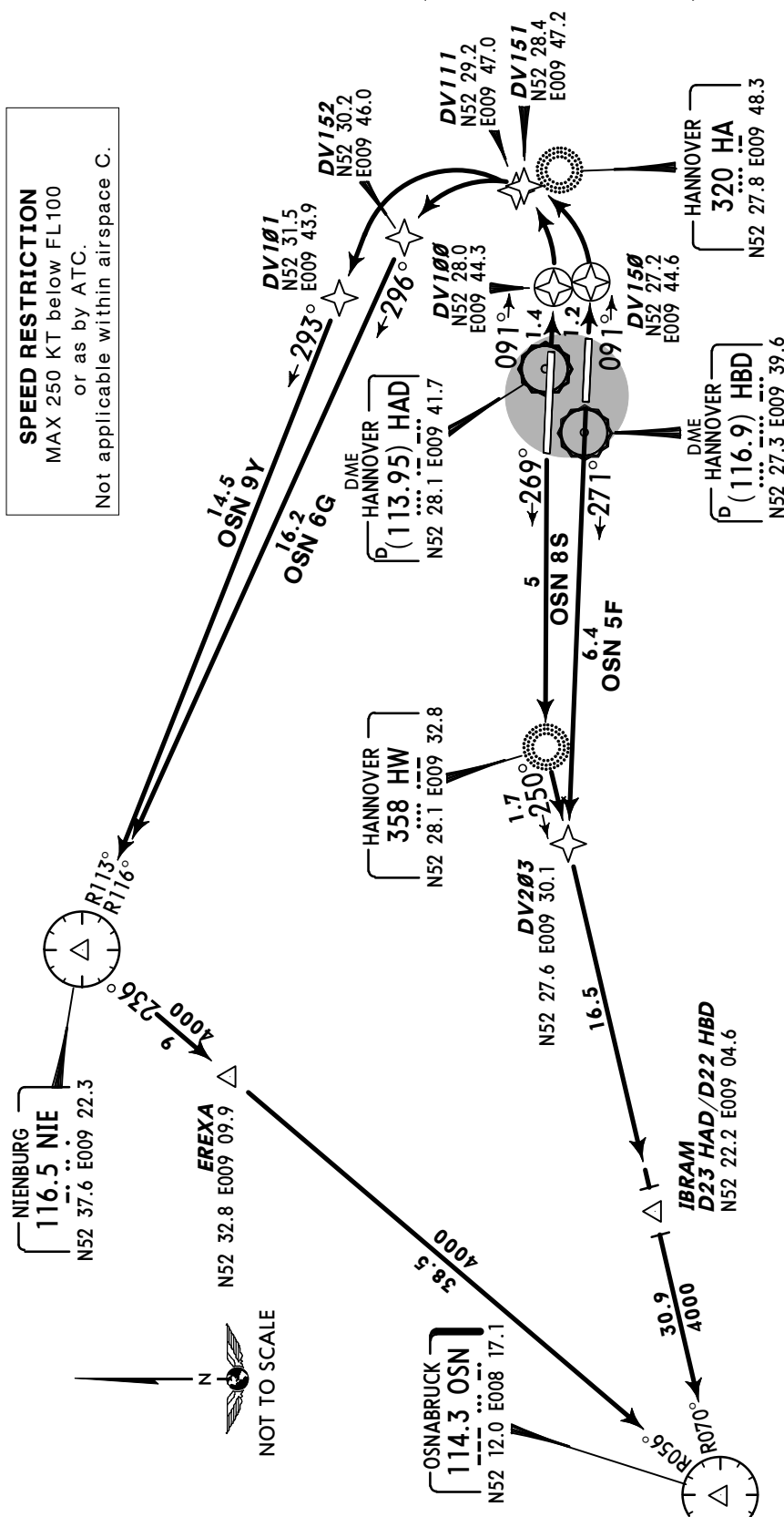
**OSN 5F, 8S**

These SIDs require a minimum climb gradient of 425' per NM (7%) until passing 3500' due to airspace structure.

|              |     |     |      |      |      |      |
|--------------|-----|-----|------|------|------|------|
| Gnd speed-KT | 75  | 100 | 150  | 200  | 250  | 300  |
| 425' per NM  | 532 | 709 | 1063 | 1418 | 1772 | 2127 |

If unable to comply advise Tower.

**SPEED RESTRICTION**  
MAX 250 KT below FL100  
or as by ATC.  
Not applicable within airspace C.



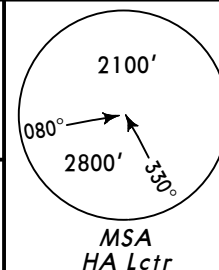
Initial climb clearance 4000'

| SID    | RWY | ROUTING                                               |
|--------|-----|-------------------------------------------------------|
| OSN 5F | 27L | (600' +) - DV203 - IBRAM - OSN.                       |
| OSN 6G | 09R | (600' +) - DV150 - DV151 - DV152 - NIE - EREXA - OSN. |
| OSN 8S | 27R | (600' +) - HW - IBRAM - OSN.                          |
| OSN 9Y | 09L | (600' +) - DV100 - DV111 - DV101 - NIE - EREXA - OSN. |

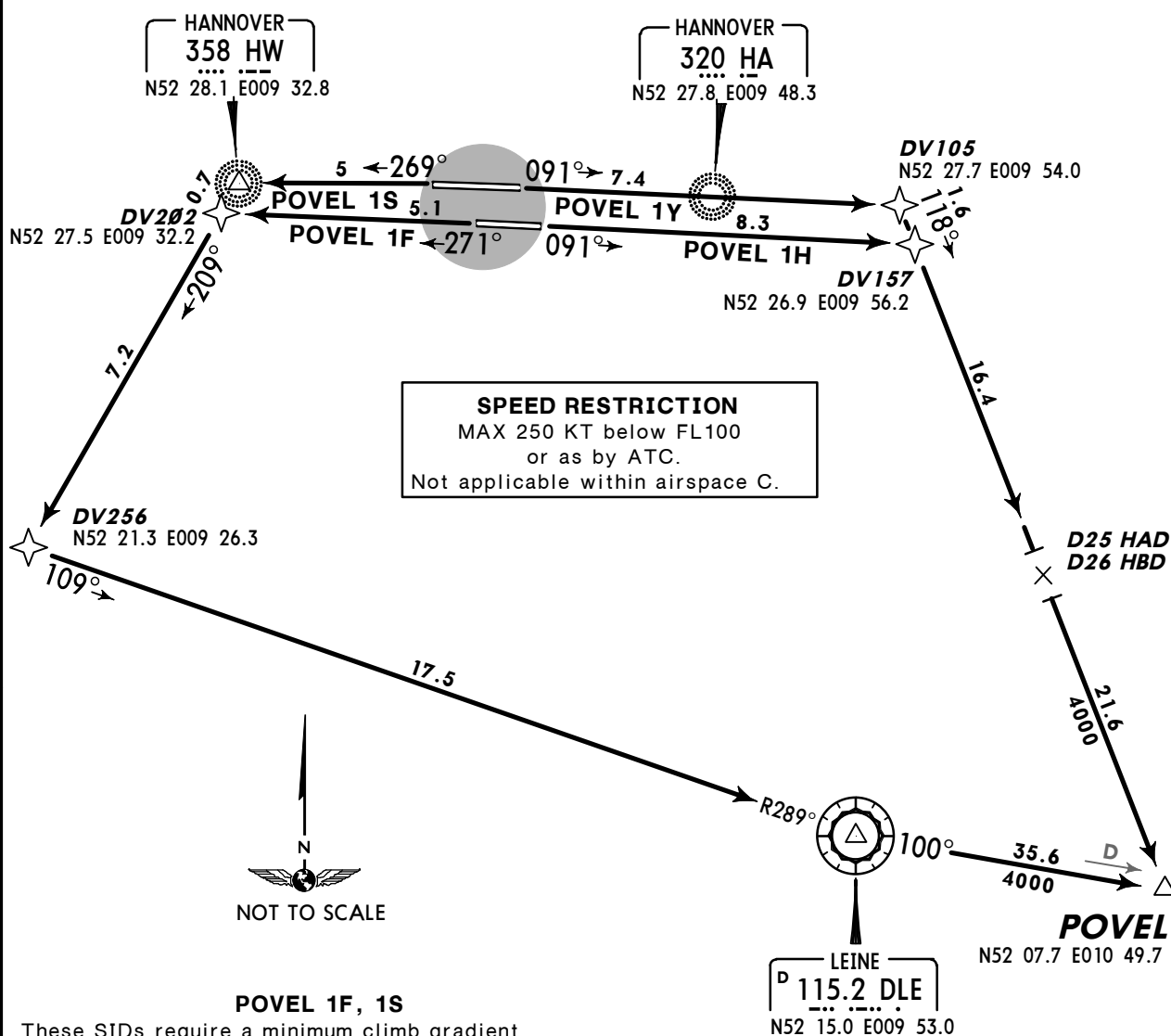
BREMEN Radar  
131.32

Apt Elev  
183'

Trans level: By ATC Trans alt: 5000'  
1. Contact BREMEN Radar immediately after take-off.  
2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.



POVEL ONE FOXTROT (POVEL 1F)[POVE1F]  
POVEL ONE HOTEL (POVEL 1H)[POVE1H]  
POVEL ONE SIERRA (POVEL 1S)[POVE1S]  
POVEL ONE YANKEE (POVEL 1Y)[POVE1Y]  
RWYS 27L, 09R, 27R, 09L  
RNAV DEPARTURES (OVERLAY 10-3E)



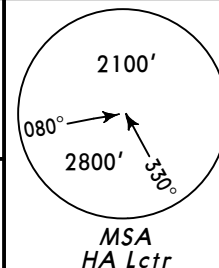
Initial climb clearance 4000'

| SID      | RWY | ROUTING                                 |
|----------|-----|-----------------------------------------|
| POVEL 1F | 27L | (600' +) - DV202 - DV256 - DLE - POVEL. |
| POVEL 1H | 09R | (600' +) - DV157 - POVEL.               |
| POVEL 1S | 27R | (600' +) - HW - DV256 - DLE - POVEL.    |
| POVEL 1Y | 09L | (600' +) - DV105 - POVEL.               |

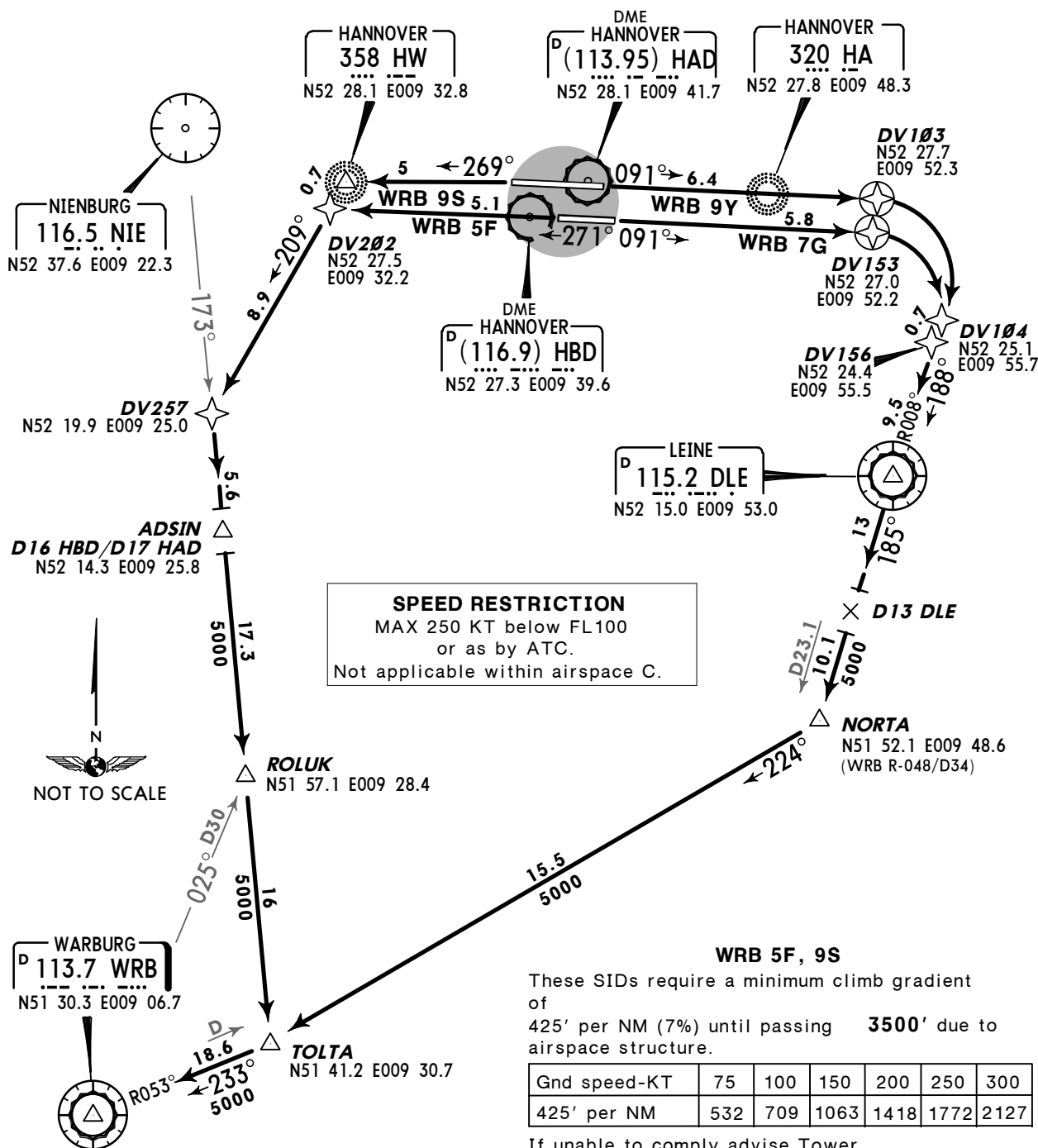
BREMEN Radar  
131.32Apt Elev  
183'

Trans level: By ATC Trans alt: 5000'

1. Contact BREMEN Radar immediately after take-off.
2. SIDs are also noise abatement procedures (refer to 10-4). Strict adherence within the limits of aircraft performance is mandatory.

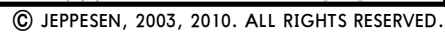


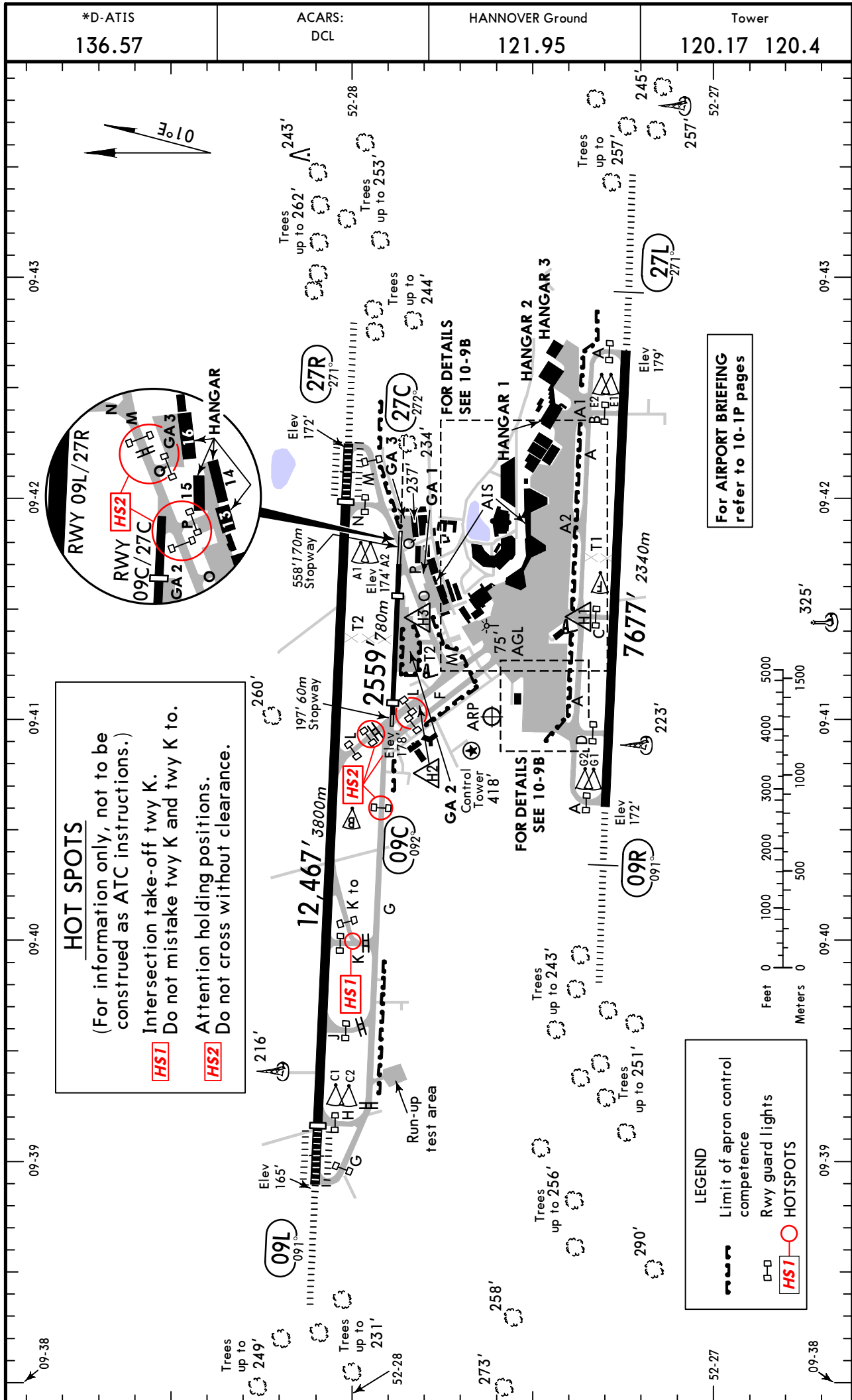
WARBURG FIVE FOXTROT (WRB 5F)  
WARBURG SEVEN GOLF (WRB 7G)  
WARBURG NINE SIERRA (WRB 9S)  
WARBURG NINE YANKEE (WRB 9Y)  
RWYS 27L, 09R, 27R, 09L  
RNAV DEPARTURES (OVERLAY 10-3F)  
FLIGHTS TO EDDF END AT TOLTA

Initial climb clearance **4000'**

| SID    | RWY | ROUTING                                                |
|--------|-----|--------------------------------------------------------|
| WRB 5F | 27L | (600'+) - DV202 - DV257 - ADSIN - ROLUK - TOLTA - WRB. |
| WRB 7G | 09R | (600'+) - DV153 - DV156 - DLE - NORTA - TOLTA - WRB.   |
| WRB 9S | 27R | (600'+) - HW - DV257 - ADSIN - ROLUK - TOLTA - WRB.    |
| WRB 9Y | 09L | (600'+) - DV103 - DV104 - DLE - NORTA - TOLTA - WRB.   |

## NOISE ABATEMENT





**ADDITIONAL RUNWAY INFORMATION**

| RWY |                                                          | USABLE LENGTHS     |             | TAKE-OFF | WIDTH       |
|-----|----------------------------------------------------------|--------------------|-------------|----------|-------------|
|     |                                                          | — LANDING BEYOND — |             |          |             |
|     |                                                          | Threshold          | Glide Slope |          |             |
| 09L | HIRL CL (15m) ALSF-II TDZ REIL PAPI-L(3.0°) RVR          | 10,499' 3200m      | 9466' 2885m | <b>2</b> | 148'<br>45m |
| 27R | HIRL CL (15m) ALSF-II TDZ REIL PAPI-L(3.0°) <b>1</b> RVR |                    | 9527' 2904m |          |             |

**1** HST-Kto**2** Additional 984'/300m starter extension available with PPO.

TAKE-OFF RUN AVAILABLE

RWY 09L:

From rwy head 10,499'(3200m)  
 twy J int 8858'(2700m)  
 twy K int 7382'(2250m)  
 twy L int 4331'(1320m)

RWY 27R:

From rwy head 10,499'(3200m)  
 twy L int 6234'(1900m)

|     |  |            |  |                     |     |
|-----|--|------------|--|---------------------|-----|
| 09C |  | 1804' 550m |  | <b>3</b> 2001' 610m | 74' |
| 27C |  |            |  | <b>4</b> 2362' 720m | 23m |

**3** Includes paved swy West of thr 09C.**4** Includes paved swy East of thr 27C.

|     |                                                          |  |             |          |             |
|-----|----------------------------------------------------------|--|-------------|----------|-------------|
| 09R | HIRL CL (30m) (White) HIALS SFL REIL PAPI-L <b>5</b> RVR |  | 6627' 2020m | <b>6</b> | 148'<br>45m |
| 27L |                                                          |  | 6693' 2040m |          |             |

**5** angle 3.0°**6** TAKE-OFF RUN AVAILABLERWY 09R:

From rwy head 7677'(2340m)  
 twy D int 6463'(1970m)  
 twy C int 4462'(1360m)

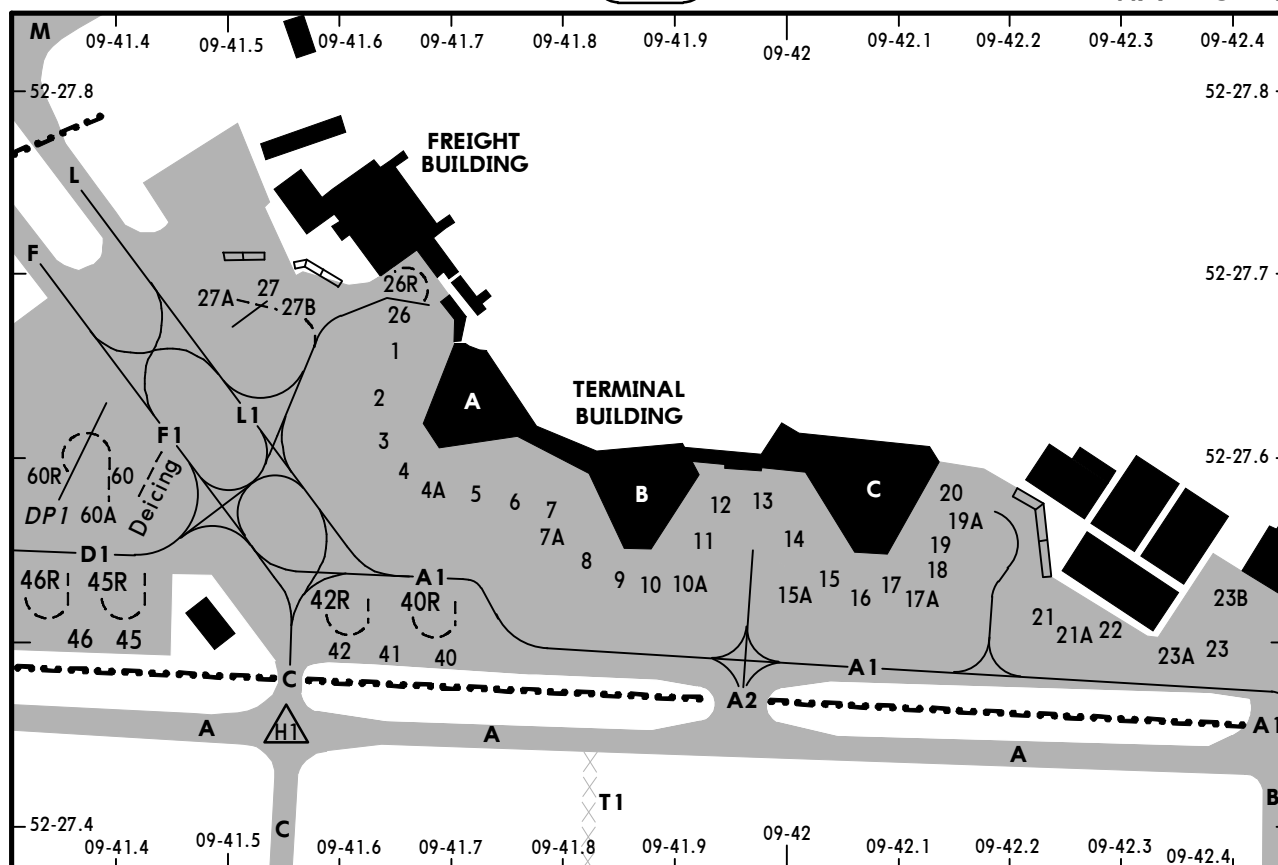
RWY 27L:

From rwy head 7677'(2340m)  
 twy B int 6693'(2040m)  
 twy C int 3281'(1000m)

**Standard**
**TAKE-OFF 1**

|   | LVP must be in Force                              |                           |         |                          | RCLM (DAY only)<br>or RL | NIL<br>(DAY only) |
|---|---------------------------------------------------|---------------------------|---------|--------------------------|--------------------------|-------------------|
|   | Approved Operators<br>HIRL, CL<br>& mult. RVR req | RL, CL<br>& mult. RVR req | RL & CL | RCLM (DAY only)<br>or RL |                          |                   |
| A |                                                   |                           |         |                          | 400m                     | 500m              |
| B | 125m                                              | 150m                      | 200m    | 250m                     |                          |                   |
| C |                                                   |                           |         |                          |                          |                   |
| D | 150m                                              | 200m                      | 250m    | 300m                     |                          |                   |

**1** Operators applying U.S. Ops Specs: CL required below 300m; approved HUD required below 150m.

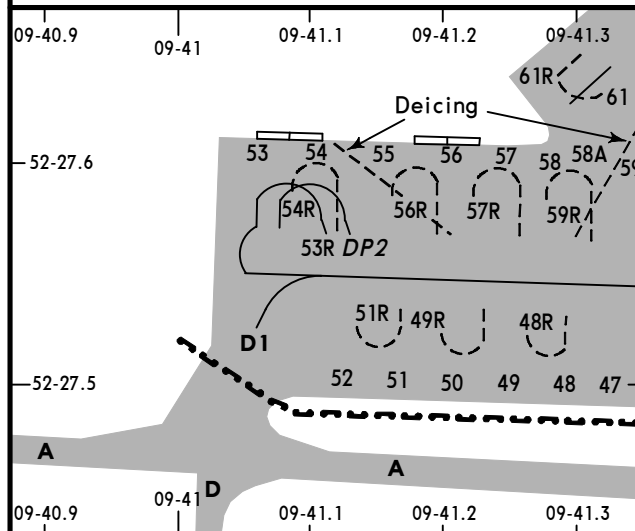


## INS COORDINATES

| STAND No.   | COORDINATES        |
|-------------|--------------------|
| 1           | N52 27.7 E009 41.7 |
| 2 thru 5    | N52 27.6 E009 41.7 |
| 6           | N52 27.6 E009 41.8 |
| 7, 7A       | N52 27.5 E009 41.7 |
| 8           | N52 27.5 E009 41.8 |
| 9           | N52 27.4 E009 41.8 |
| 10 thru 11  | N52 27.5 E009 41.8 |
| 12, 13      | N52 27.5 E009 41.9 |
| 14          | N52 27.5 E009 42.0 |
| 15          | N52 27.4 E009 42.0 |
| 15A, 16     | N52 27.5 E009 42.0 |
| 17 thru 18  | N52 27.5 E009 42.1 |
| 19 thru 20  | N52 27.6 E009 42.2 |
| 21, 21A     | N52 27.5 E009 42.2 |
| 22          | N52 27.5 E009 42.3 |
| 23 thru 23B | N52 27.5 E009 42.4 |
| 26, 26R     | N52 27.6 E009 41.6 |
| 27, 27A     | N52 27.6 E009 41.5 |
| 27B         | N52 27.6 E009 41.4 |
| 40          | N52 27.5 E009 41.6 |
| 40R         | N52 27.4 E009 41.6 |
| 41, 42      | N52 27.5 E009 41.6 |
| 42R         | N52 27.4 E009 41.6 |
| 45          | N52 27.5 E009 41.4 |
| 45R         | N52 27.4 E009 41.3 |
| 46          | N52 27.5 E009 41.4 |
| 46R         | N52 27.4 E009 41.3 |
| 47, 48      | N52 27.5 E009 41.3 |
| 48R         | N52 27.4 E009 41.2 |
| 49          | N52 27.5 E009 41.3 |
| 49R         | N52 27.4 E009 41.1 |
| 50, 51      | N52 27.5 E009 41.2 |
| 51R         | N52 27.4 E009 41.1 |
| 52          | N52 27.5 E009 41.1 |
| 53          | N52 27.6 E009 41.0 |

## LEGEND

- DP1 Deicing stand  
 A2 Taxiway  
 8 Stand  
 --- Limit of apron control competence  
 [ ] Blast fence



## INS COORDINATES

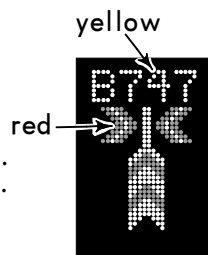
| STAND No.    | COORDINATES        |
|--------------|--------------------|
| 53R          | N52 27.5 E009 41.1 |
| 54           | N52 27.6 E009 41.1 |
| 54R          | N52 27.5 E009 41.0 |
| 55, 56       | N52 27.6 E009 41.2 |
| 56R          | N52 27.5 E009 41.1 |
| 57           | N52 27.6 E009 41.3 |
| 57R          | N52 27.5 E009 41.2 |
| 58 thru 59   | N52 27.6 E009 41.3 |
| 59R          | N52 27.5 E009 41.2 |
| 60, 60A      | N52 27.6 E009 41.4 |
| 60R          | N52 27.5 E009 41.3 |
| 61, 61R, DP1 | N52 27.6 E009 41.3 |
| DP2          | N52 27.5 E009 41.1 |

**ADVANCED VISUAL DOCKING GUIDANCE SYSTEM (A-VDGS)**

**WARNING:** Do not start docking procedure unless one of the routine docking process displays are shown or if a pilot is unsure about the indicated information.

**1. START OF DOCKING**

The floating arrows indicate that the system is activated and in capture mode, searching for an approaching aircraft. It shall be checked, that the correct aircraft type is displayed. The lead-in line shall be followed. **THE PILOT MUST NOT PROCEED BEYOND THE BRIDGE, UNLESS THE ARROWS HAVE BEEN SUSPENDED BY THE CLOSING RATE BAR.**

**2. TRACKING**

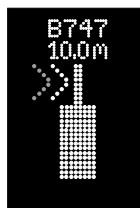
When the aircraft has been caught by the laser, the floating arrow is replaced by the yellow center line indicator. A flashing red arrow indicates the direction to turn.

The vertical yellow arrow shows position in relation to center line. This indicator gives correct position and azimuth guidance.

**3. CLOSING RATE**

The closing rate is the final countdown from 30m distance to the stop position.

A yellow vertical closing rate bar / center line indicator appears with the digital countdown.

**4. SLOW (DECREASE SPEED)**

If the aircraft is approaching faster than the accepted speed, the system will show SLOW as a warning to the pilots.

**5. STOP POSITION REACHED**

When the correct stop position is reached, the display will show STOP with red lights.

**6. DOCKING COMPLETED**

When the aircraft has parked, OK will be displayed.

**7. ON BLOCK TIME**

On block time will be displayed in UTC-time.

**8. CHOCK ON**

CHOCK ON will be displayed, when the ground staff has put the chocks in front of and behind the main gear wheels and pressed the "Chocks on" button on the operator panel. It disappears after 180 seconds.

**DISPLAYED FORMS AT ABNORMAL CONDITIONS**

Form:

Acft type

Display black with red lights

Display complete black

ERROR

ERR10

WAIT

WAIT followed by GATE BLOCK

STOP

STOP followed by ID FAIL

STOP followed by TOO FAST

STOP followed by SBU

STOP followed by OK

STOP / ABORT

TOO FAR

Indication for:

(preselected)

System breakdown - stop

Power failure - stop

System error

System error (communication error with system)

Not allowed object within scanning range - stop

Not allowed object within scanning range when system starts - stand not usable

Emergency stop

Identification failed - stop

Docking system must be restarted or the docking procedure completed by manual guidance

Too far of center line within last 10' / 3m to stop position

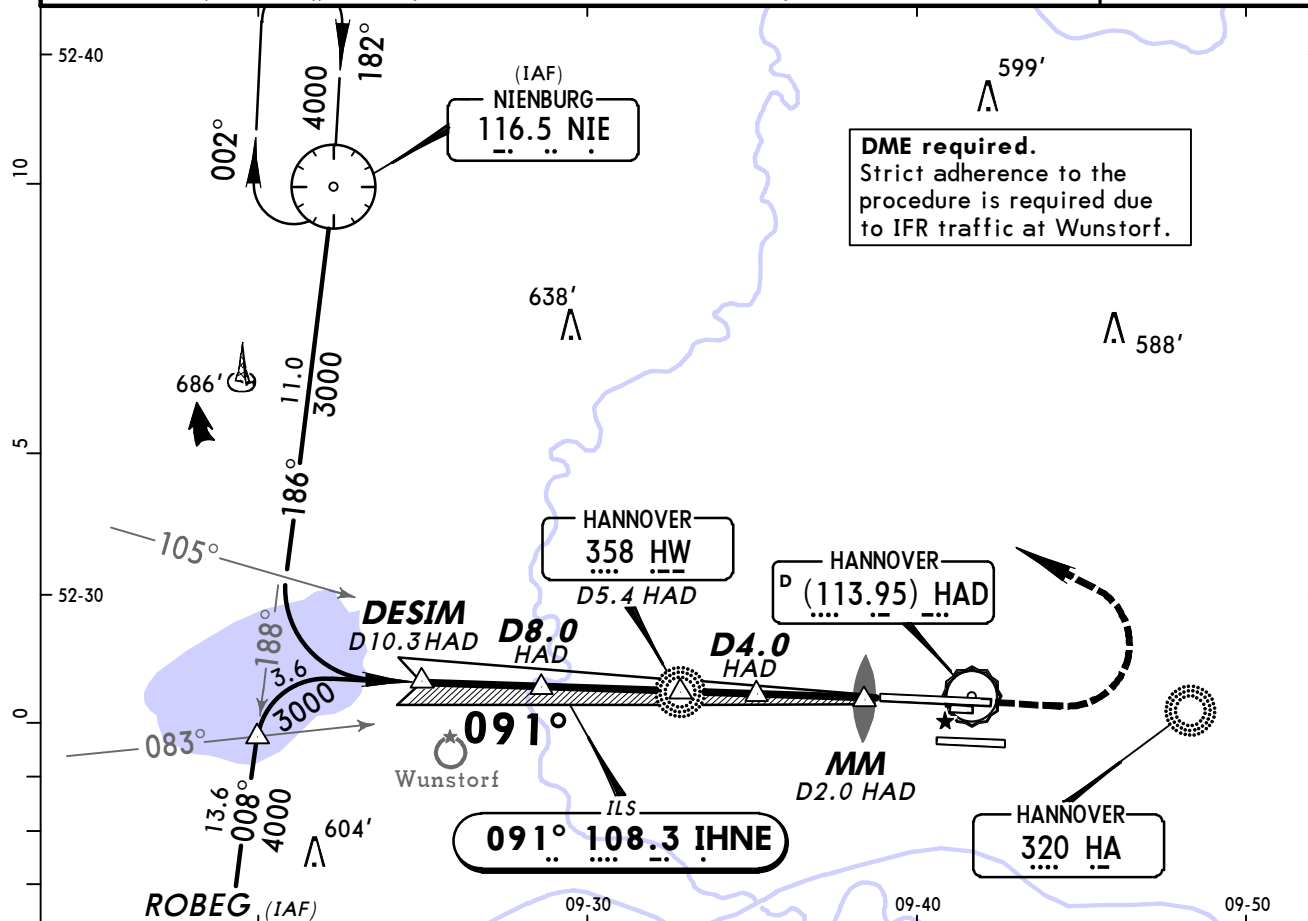
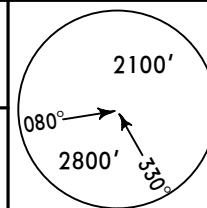
Not correct stop position is reached but within limits

Docking is interrupted by gate operator

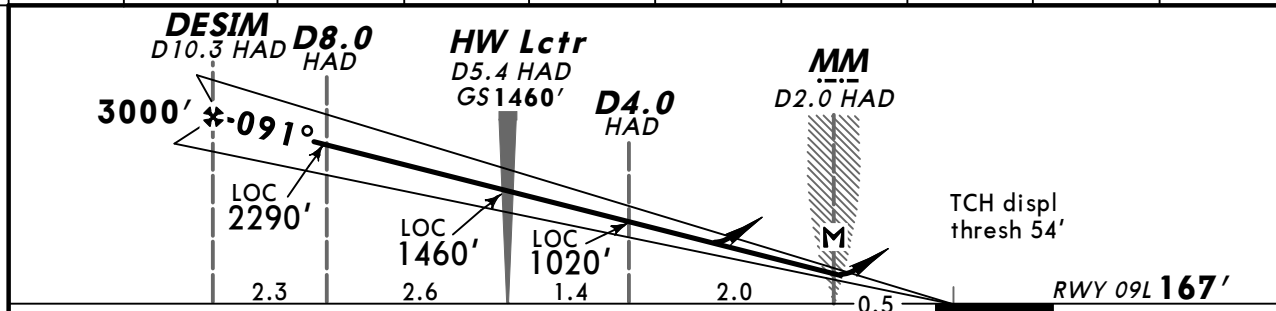
Acft has overshoot the stop position (more than 1m)

BRIEFING STRIP

|                                                                                |                                                   |                                         |                                       |                                         |
|--------------------------------------------------------------------------------|---------------------------------------------------|-----------------------------------------|---------------------------------------|-----------------------------------------|
| *D-ATIS<br><b>136.57</b>                                                       | BREMEN Radar (APP)<br><b>131.32 118.05 118.15</b> | HANNOVER Director (APP)<br><b>119.6</b> | HANNOVER Tower<br><b>120.17 120.4</b> | Ground<br><b>121.95</b>                 |
| LOC<br>IHNE<br><b>108.3</b>                                                    | Final<br>Aptch Crs<br><b>091°</b>                 | GS<br>HW Lctr<br><b>1460' (1293')</b>   | ILS<br>DA(H)<br>Refer to<br>Minimums  | Apt Elev <b>183'</b><br>RWY <b>167'</b> |
| <b>MISSED APCH: Turn LEFT as soon as practicable to VOR climbing to 4000'.</b> |                                                   |                                         |                                       |                                         |
| Alt Set: hPa (IN on req) Rwy Elev: 6 hPa Trans level: By ATC Trans alt: 5000'  |                                                   |                                         |                                       | MSA HA Lctr                             |



| LOC (GS out) | HAD DME  | 10.0  | 9.0   | 8.0   | 7.0   | 6.0   | 5.0   | 4.0   | 3.0  |
|--------------|----------|-------|-------|-------|-------|-------|-------|-------|------|
|              | ALTITUDE | 2930' | 2610' | 2300' | 1980' | 1660' | 1340' | 1020' | 700' |



|                         |     |     |     |     |     |     |                               |                  |
|-------------------------|-----|-----|-----|-----|-----|-----|-------------------------------|------------------|
| Gnd speed-Kts           | 70  | 90  | 100 | 120 | 140 | 160 | <b>4000'</b><br><br><b>LT</b> | <b>NIE 116.5</b> |
| ILS GS or               | 377 | 484 | 538 | 646 | 753 | 861 |                               |                  |
| LOC Descent Angle 3.00° |     |     |     |     |     |     |                               |                  |
| MAP at MM/D2.0 HAD      |     |     |     |     |     |     |                               |                  |

|                                        |          |         |          |         |                                                 |         |           |  |           |
|----------------------------------------|----------|---------|----------|---------|-------------------------------------------------|---------|-----------|--|-----------|
| <b>Standard</b>                        |          |         |          |         | <b>STRAIGHT-IN LANDING RWY 09L</b>              |         |           |  |           |
| <b>ILS</b><br>DA(H) <b>367' (200')</b> |          |         |          |         | <b>LOC (GS out)</b><br>DA(H) <b>550' (383')</b> |         |           |  |           |
| FULL                                   |          | Limited |          | ALS out |                                                 | ALS out |           |  |           |
| A                                      | RVR 550m |         | RVR 750m |         | RVR 1200m                                       |         | RVR 1100m |  | RVR 1500m |
| B                                      |          |         |          |         |                                                 |         |           |  | RVR 1800m |
| C                                      |          |         |          |         |                                                 |         |           |  |           |
| D                                      |          |         |          |         |                                                 |         |           |  |           |

LACFT: DA(H) 376' (209').

PANS OPS 4

EDDV/HAJ  
HANNOVER

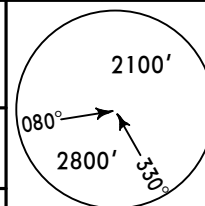
13 APR 12

11-1A

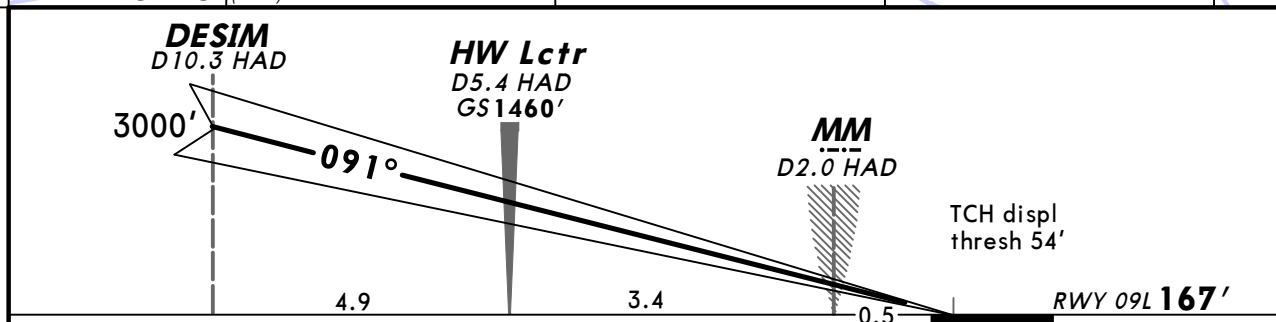
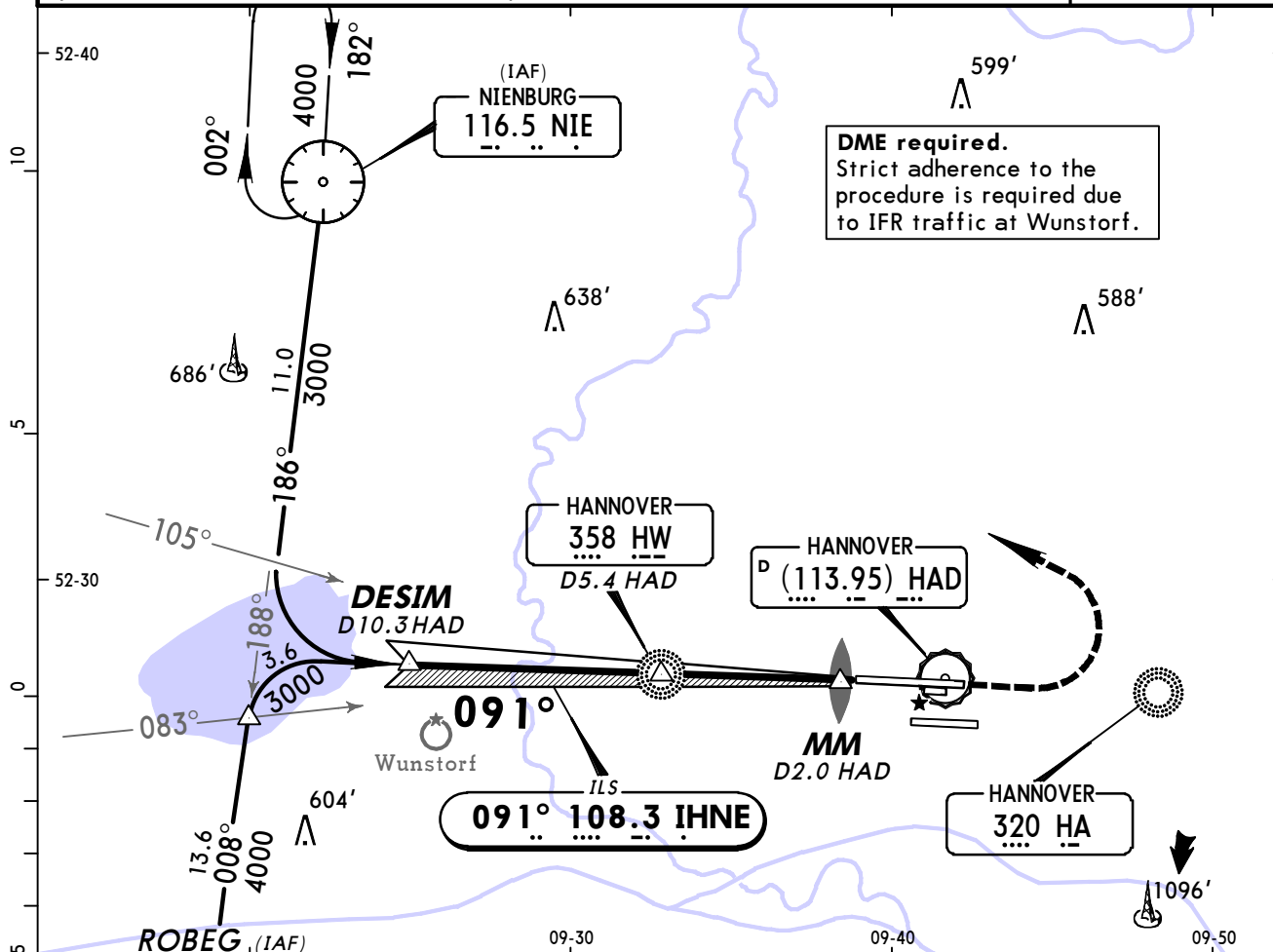
HANNOVER, GERMANY  
CAT II/III ILS Rwy 09L

BRIEFING STRIP™

|                                                                                                                                 |                                                   |                                         |                                              |                                         |
|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-----------------------------------------|----------------------------------------------|-----------------------------------------|
| *D-ATIS<br><b>136.57</b>                                                                                                        | BREMEN Radar (APP)<br><b>131.32 118.05 118.15</b> | HANNOVER Director (APP)<br><b>119.6</b> | HANNOVER Tower<br><b>120.17 120.4</b>        | Ground<br><b>121.95</b>                 |
| LOC<br>IHNE<br><b>108.3</b>                                                                                                     | Final<br>Apth Crs<br><b>091°</b>                  | GS<br>HW Lctr<br><b>1460'</b> (1293')   | CAT II &<br>IIIA ILS<br>Refer to<br>Minimums | Apt Elev <b>183'</b><br>RWY <b>167'</b> |
| <b>MISSED APCH:</b> Turn LEFT as soon as practicable to VOR climbing to 4000'.                                                  |                                                   |                                         |                                              |                                         |
| Alt Set: hPa (IN on req) Rwy Elev: 6 hPa Trans level: By ATC Trans alt: 5000'<br>Special Aircrew & Acft Certification Required. |                                                   |                                         |                                              |                                         |



MSA HA Lctr



|               |       |     |     |     |     |     |                                                        |
|---------------|-------|-----|-----|-----|-----|-----|--------------------------------------------------------|
| Gnd speed-Kts | 70    | 90  | 100 | 120 | 140 | 160 | ALSF-II<br>REIL<br>PAPI<br>4000'<br>LT<br>NIE<br>116.5 |
| GS            | 3.00° | 377 | 485 | 539 | 647 | 755 |                                                        |
|               |       |     |     |     |     |     |                                                        |

|                                                          |                                                                                         |
|----------------------------------------------------------|-----------------------------------------------------------------------------------------|
| <b>Standard</b> STRAIGHT-IN LANDING RWY 09L              |                                                                                         |
| CAT IIIA ILS<br><br>DH <b>50'</b><br><br>RVR <b>200m</b> | CAT II ILS<br>ABCD<br><b>RA 102'</b><br>DA(H) <b>267'</b> (100')<br><br>RVR <b>300m</b> |

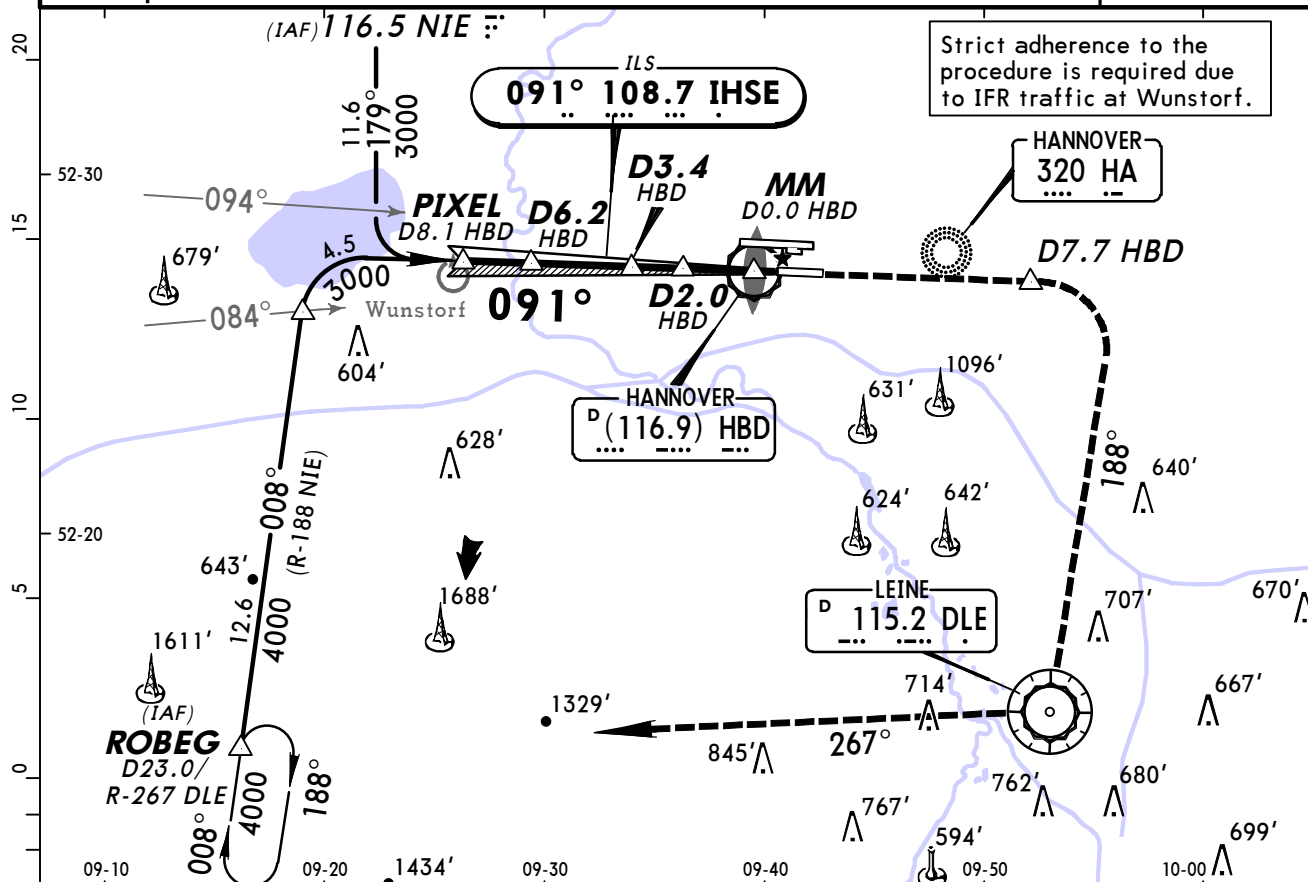
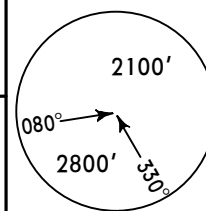
PANS OPS 4

Operators applying U.S. Ops Specs: Autoland or HUD required below RVR 350m.

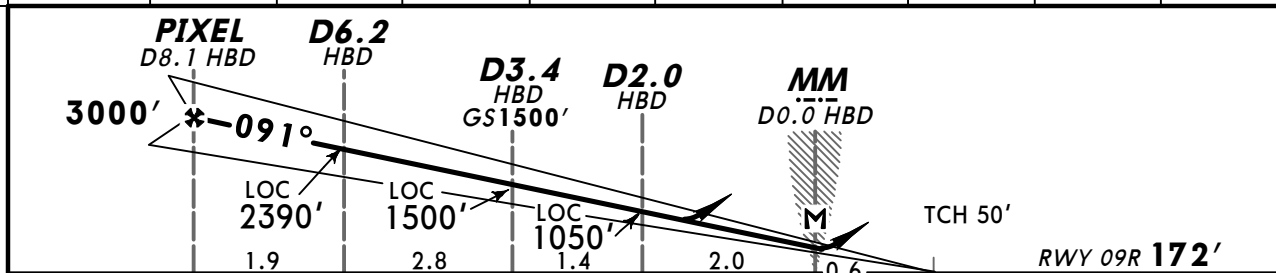
CHANGES: Minimums.

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|                                                                                                                                                                 |                                                   |                                               |                                       |                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-----------------------------------------------|---------------------------------------|-----------------------------------------|
| *D-ATIS<br><b>136.57</b>                                                                                                                                        | BREMEN Radar (APP)<br><b>131.32 118.05 118.15</b> | HANNOVER Director (APP)<br><b>119.6</b>       | HANNOVER Tower<br><b>120.17 120.4</b> | Ground<br><b>121.95</b>                 |
| LOC<br>IHSE<br><b>108.7</b>                                                                                                                                     | Final<br>Aptch Crs<br><b>091°</b>                 | GS<br><b>D3.4 HBD</b><br><b>1500' (1328')</b> | ILS<br>DA(H)<br><b>372' (200')</b>    | Apt Elev <b>183'</b><br>RWY <b>172'</b> |
| <b>MISSED APCH: Climb STRAIGHT AHEAD to D7.7 HBD, then turn RIGHT on R-008 DLE inbound to DLE VOR, then turn RIGHT on R-267 DLE to ROBEG climbing to 4000'.</b> |                                                   |                                               |                                       |                                         |
| Alt Set: hPa (IN on req)    Rwy Elev: 6 hPa    Trans level: By ATC    Trans alt: 5000'                                                                          |                                                   |                                               |                                       |                                         |
| <b>DME required.</b>                                                                                                                                            |                                                   |                                               |                                       |                                         |



| LOC (GS out) | HBD DME  | 8.0   | 7.0   | 6.0   | 5.0   | 4.0   | 3.0   | 2.0   | 1.0  |
|--------------|----------|-------|-------|-------|-------|-------|-------|-------|------|
|              | ALTITUDE | 2970' | 2650' | 2330' | 2010' | 1690' | 1370' | 1050' | 740' |



|                                      |     |     |     |     |     |     |                        |                     |
|--------------------------------------|-----|-----|-----|-----|-----|-----|------------------------|---------------------|
| Gnd speed-Kts                        | 70  | 90  | 100 | 120 | 140 | 160 | HIALS<br>REIL PAPI<br> | <b>D7.7 HBD</b><br> |
| ILS GS or<br>LOC Descent Angle 3.00° | 377 | 484 | 538 | 646 | 753 | 861 |                        |                     |
| MAP at MM/ D0.0 HBD                  |     |     |     |     |     |     |                        |                     |

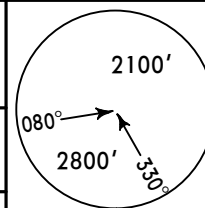
| STRAIGHT-IN LANDING RWY 09R |          |          |                          |           |
|-----------------------------|----------|----------|--------------------------|-----------|
| ILS                         |          |          | LOC (GS out)             |           |
| DA(H) <b>372' (200')</b>    |          |          | DA(H) <b>570' (398')</b> |           |
| FULL                        | Limited  | ALS out  | ALS out                  |           |
| A                           |          |          | RVR 1500m                |           |
| B                           |          |          |                          |           |
| C                           | RVR 550m | RVR 750m | RVR 1100m                | RVR 1800m |
| D                           |          |          |                          |           |

EDDV/HAJ  
HANNOVER

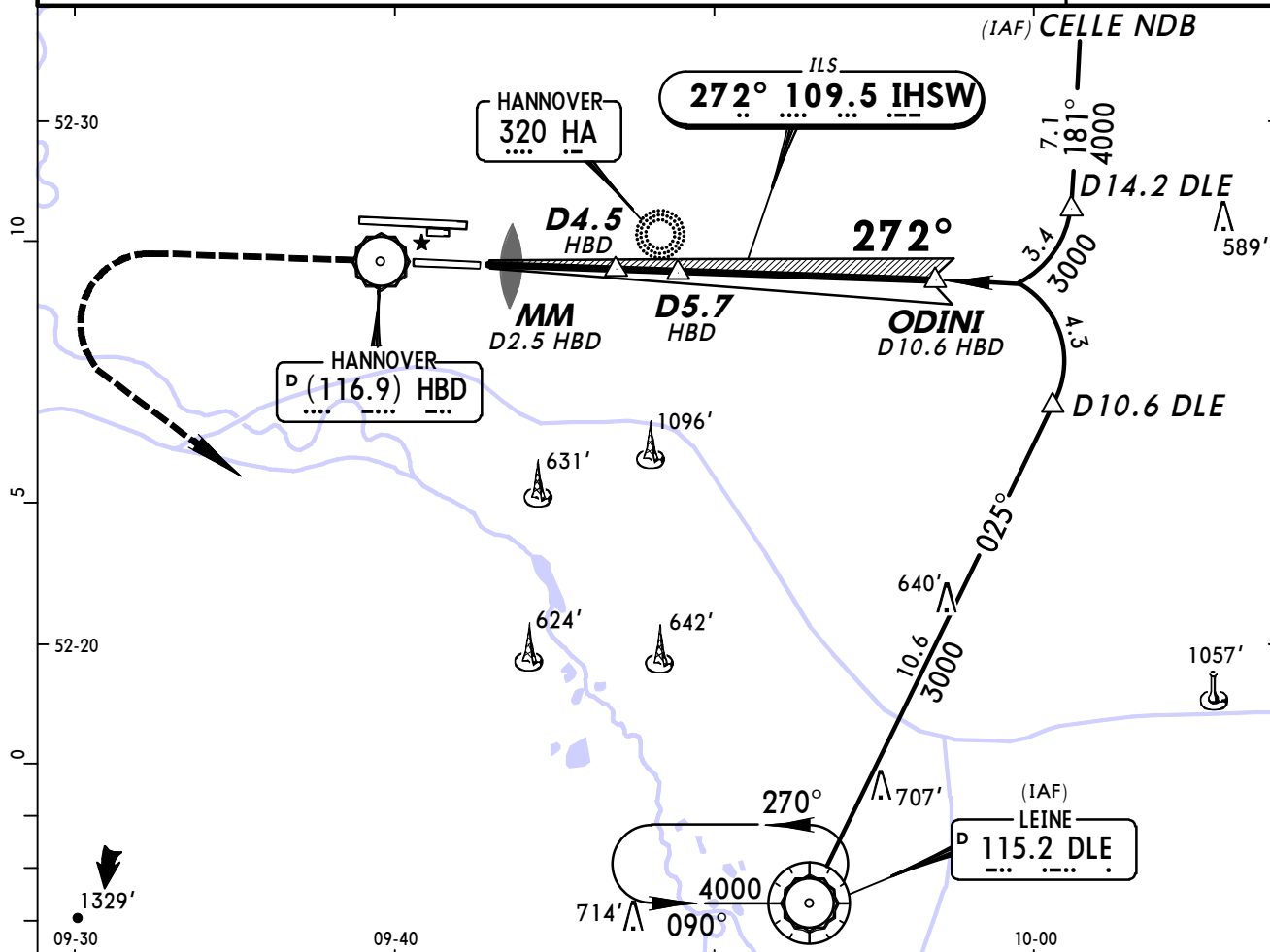
JEPPesen  
13 APR 12 (11-3)

HANNOVER, GERMANY  
ILS or LOC Rwy 27L

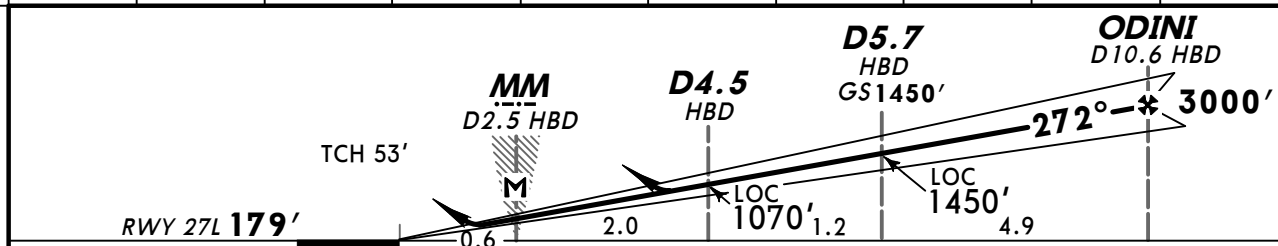
|                                                                                                                |                                                   |                                               |                                       |                                         |
|----------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-----------------------------------------------|---------------------------------------|-----------------------------------------|
| *D-ATIS<br><b>136.57</b>                                                                                       | BREMEN Radar (APP)<br><b>131.32 118.05 118.15</b> | HANNOVER Director (APP)<br><b>119.6</b>       | HANNOVER Tower<br><b>120.17 120.4</b> | Ground<br><b>121.95</b>                 |
| LOC<br>IHSW<br><b>109.5</b>                                                                                    | Final<br>Apch Crs<br><b>272°</b>                  | GS<br><b>D5.7 HBD</b><br><b>1450'</b> (1271') | ILS<br>DA(H)<br>Refer to<br>Minimums  | Apt Elev <b>183'</b><br><b>RWY 179'</b> |
| <b>MISSED APCH: Climb STRAIGHT AHEAD to 1500', then turn LEFT to VOR climbing to 4000'.</b>                    |                                                   |                                               |                                       |                                         |
| Alt Set: hPa (IN on req)    Rwy Elev: 6 hPa    Trans level: By ATC    Trans alt: 5000'<br><b>DME required.</b> |                                                   |                                               |                                       |                                         |



MSA HA Lctr



| LOC<br>(GS out) | HBD DME  | 3.0  | 4.0  | 5.0   | 6.0   | 7.0   | 8.0   | 9.0   | 10.0  |
|-----------------|----------|------|------|-------|-------|-------|-------|-------|-------|
|                 | ALTITUDE | 590' | 910' | 1220' | 1540' | 1860' | 2180' | 2500' | 2820' |



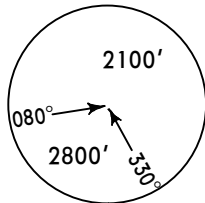
|                         |     |     |     |     |     |     |                                |
|-------------------------|-----|-----|-----|-----|-----|-----|--------------------------------|
| Gnd speed-Kts           | 70  | 90  | 100 | 120 | 140 | 160 | HIALS<br>REIL<br>PAPI<br>1500' |
| ILS GS or               | 377 | 484 | 538 | 646 | 753 | 861 |                                |
| LOC Descent Angle 3.00° |     |     |     |     |     |     |                                |
| MAP at MM/ D2.5 HBD     |     |     |     |     |     |     |                                |

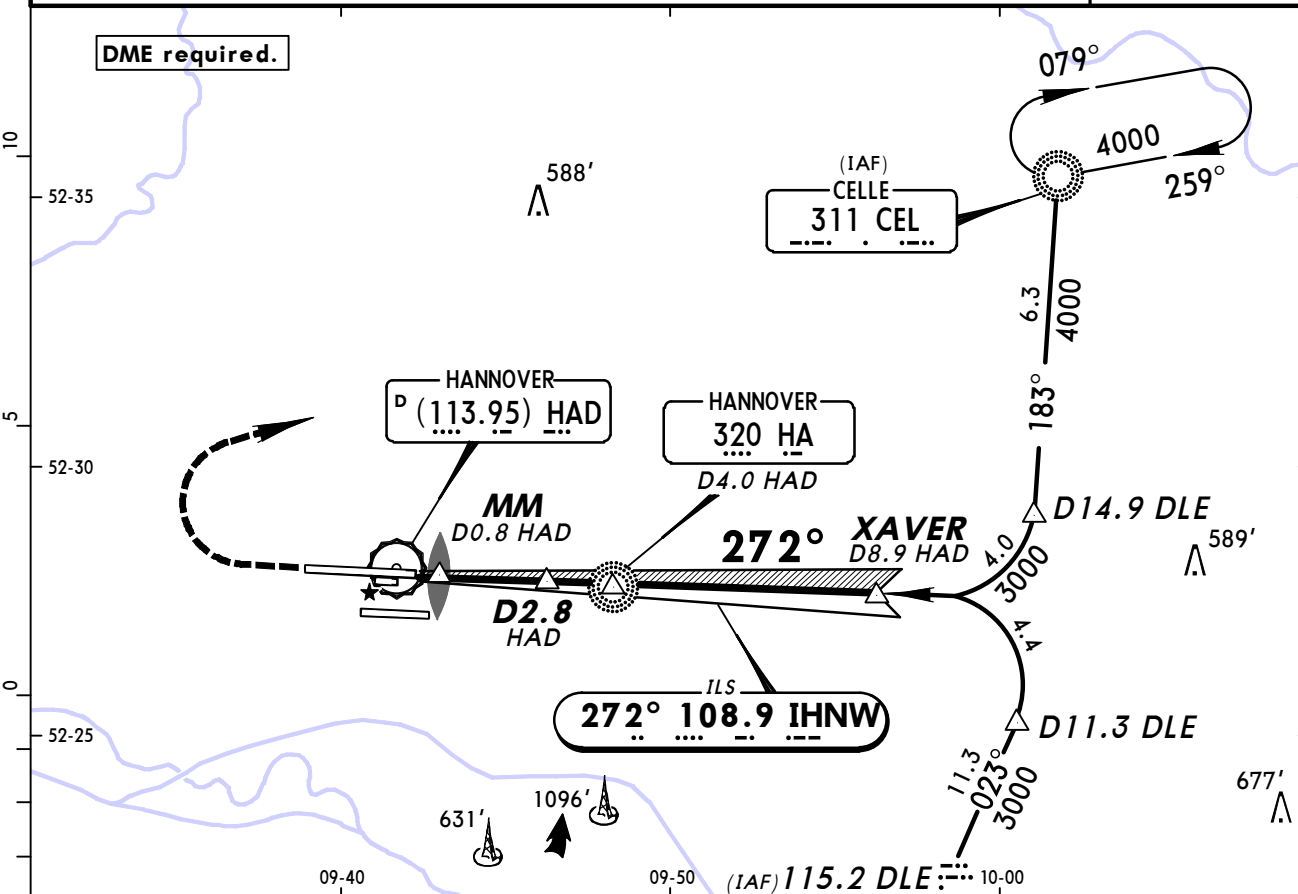
| STRAIGHT-IN LANDING RWY 27L                         |          |          |                          |           | LOC (GS out) |           |
|-----------------------------------------------------|----------|----------|--------------------------|-----------|--------------|-----------|
| ILS                                                 |          |          | LOC (GS out)             |           |              |           |
| DA(H) ABC: <b>379'</b> (200') D: <b>383'</b> (204') |          |          | DA(H) <b>560'</b> (381') |           |              |           |
| FULL                                                | Limited  | ALS out  |                          |           | ALS out      |           |
| A                                                   |          |          |                          |           |              | RVR 1500m |
| B                                                   |          |          |                          |           |              |           |
| C                                                   | RVR 550m | RVR 750m | RVR 1200m                | RVR 1100m |              | RVR 1800m |
| D                                                   |          |          |                          |           |              |           |

CHANGES: Communications. Minimums.

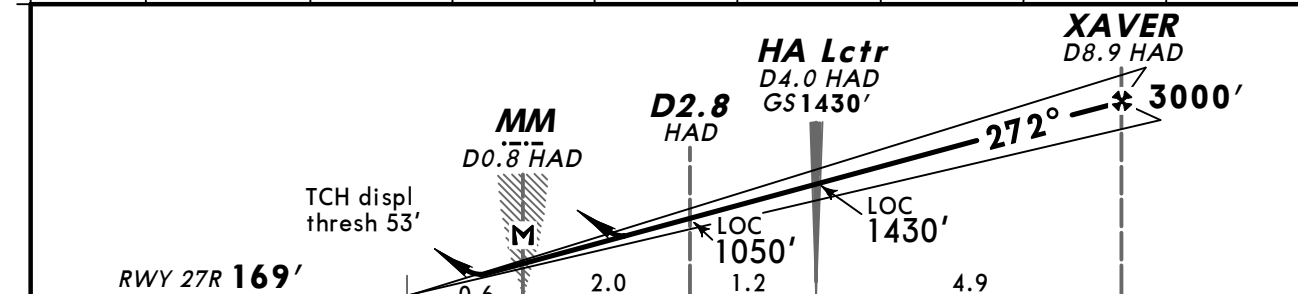
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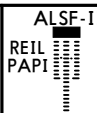
BRIEFING STRIP

|                                                                              |                                            |                                |                                  |                           |                                |                                                                                     |                  |
|------------------------------------------------------------------------------|--------------------------------------------|--------------------------------|----------------------------------|---------------------------|--------------------------------|-------------------------------------------------------------------------------------|------------------|
| *D-ATIS<br>136.57                                                            | BREMEN Radar (APP)<br>131.32 118.05 118.15 |                                | HANNOVER Director (APP)<br>119.6 |                           | HANNOVER Tower<br>120.17 120.4 |                                                                                     | Ground<br>121.95 |
| LOC<br>IHNW<br>108.9                                                         | Final<br>Apch Crs<br>272°                  | GS<br>HA Lctr<br>1430' (1261') | ILS<br>DA(H)<br>369' (200')      | Apt Elev 183'<br>RWY 169' |                                |  |                  |
| MISSED APCH: Turn RIGHT as soon as practicable to CEL NDB climbing to 4000'. |                                            |                                |                                  |                           |                                |                                                                                     |                  |
| Alt Set: hPa (IN on req)                                                     |                                            | Rwy Elev: 6 hPa                | Trans level: By ATC              |                           | Trans alt: 5000'               |                                                                                     |                  |
| MSA HA Lctr                                                                  |                                            |                                |                                  |                           |                                |                                                                                     |                  |



| LOC (GS out) | HAD DME  | 2.0  | 3.0   | 4.0   | 5.0   | 6.0   | 7.0   | 8.0   |
|--------------|----------|------|-------|-------|-------|-------|-------|-------|
|              | ALTITUDE | 800' | 1120' | 1440' | 1760' | 2070' | 2390' | 2710' |



|                                   |     |     |     |     |     |     |                                                                                       |                                                                                       |         |
|-----------------------------------|-----|-----|-----|-----|-----|-----|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------|
| Gnd speed-Kts                     | 70  | 90  | 100 | 120 | 140 | 160 |  | 4000'                                                                                 | CEL 311 |
| ILS GS or LOC Descent Angle 3.00° | 377 | 484 | 538 | 646 | 753 | 861 |                                                                                       |  |         |
| MAP at MM/D0.8 HAD                |     |     |     |     |     |     |                                                                                       |                                                                                       |         |

| STRAIGHT-IN LANDING RWY 27R |          |          |                                       |           | LOC (GS out) |  |
|-----------------------------|----------|----------|---------------------------------------|-----------|--------------|--|
| ILS                         |          |          | LOC (GS out)                          |           |              |  |
| DA(H) 369' (200')           |          |          | DA(H) ABC: 560' (391') D: 590' (421') |           |              |  |
| FULL                        | Limited  | ALS out  | ALS out                               |           |              |  |
| A                           | RVR 550m | RVR 750m | RVR 1200m                             | RVR 1100m | RVR 1500m    |  |
| B                           |          |          |                                       |           | RVR 1800m    |  |
| C                           |          |          |                                       | RVR 1300m | RVR 2000m    |  |
| D                           |          |          |                                       |           |              |  |

PANS OPS 4

EDDV/HAJ  
HANNOVER

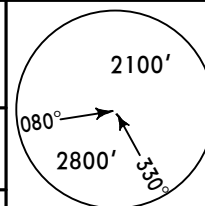
13 APR 12

11-4A

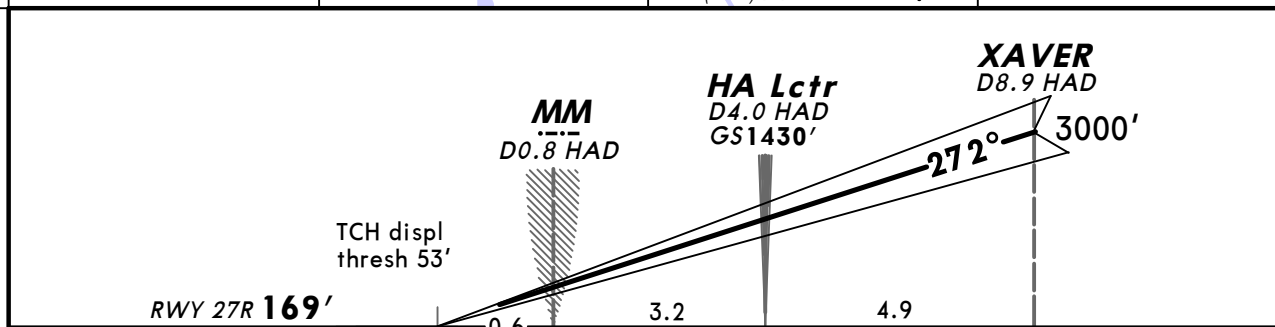
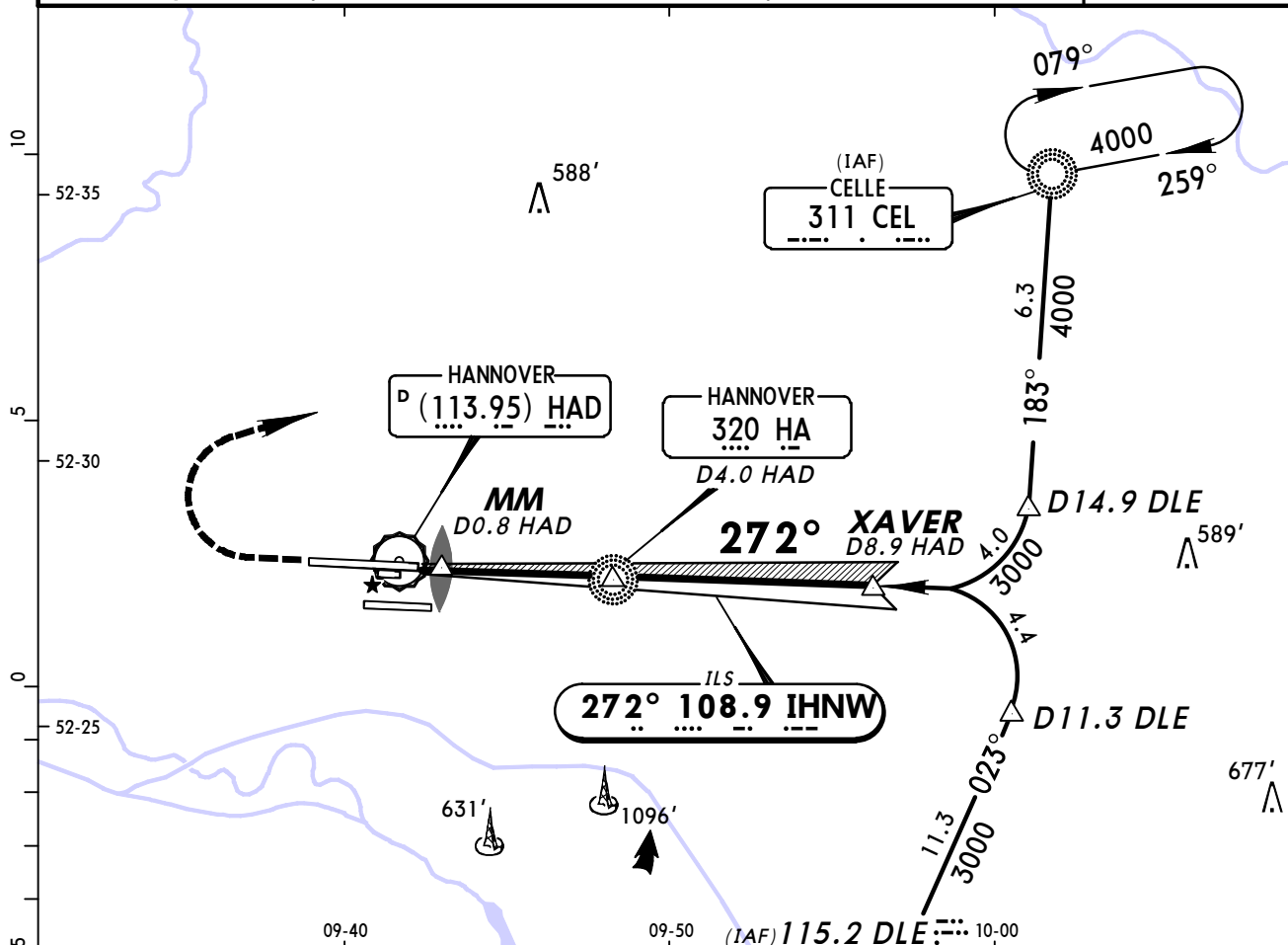
HANNOVER, GERMANY  
CAT II/III ILS Rwy 27R

BRIEFING STRIP

|                                                                                                                                                                |                                                   |                                         |                                              |                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-----------------------------------------|----------------------------------------------|-----------------------------------------|
| *D-ATIS<br><b>136.57</b>                                                                                                                                       | BREMEN Radar (APP)<br><b>131.32 118.05 118.15</b> | HANNOVER Director (APP)<br><b>119.6</b> | HANNOVER Tower<br><b>120.17 120.4</b>        | Ground<br><b>121.95</b>                 |
| LOC<br>IHNW<br><b>108.9</b>                                                                                                                                    | Final<br>Apch Crs<br><b>272°</b>                  | GS<br>HA Lctr<br><b>1430'</b> (1261')   | CAT II &<br>IIIA ILS<br>Refer to<br>Minimums | Apt Elev <b>183'</b><br>RWY <b>169'</b> |
| <b>MISSED APCH: Turn RIGHT as soon as practicable to CEL NDB</b><br><b>climbing to 4000'.</b>                                                                  |                                                   |                                         |                                              |                                         |
| Alt Set: hPa (IN on req) Rwy Elev: 6 hPa Trans level: By ATC Trans alt: 5000'<br><b>1. DME required. 2. Special Aircrew &amp; Acft Certification Required.</b> |                                                   |                                         |                                              |                                         |



MSA HA Lctr



|               |       |     |     |     |     |     |                         |                    |                |
|---------------|-------|-----|-----|-----|-----|-----|-------------------------|--------------------|----------------|
| Gnd speed-Kts | 70    | 90  | 100 | 120 | 140 | 160 | ALSF-II<br>REIL<br>PAPI | <b>4000'</b><br>RT | <b>CEL 311</b> |
| GS            | 3.00° | 377 | 484 | 538 | 646 | 753 |                         |                    |                |
|               |       |     |     |     |     |     |                         |                    |                |

|                                                                     |  |                                                                                                                   |  |                                                                        |  |
|---------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------|--|
| <b>Standard</b><br>CAT IIIA ILS<br>DH <b>50'</b><br>RVR <b>200m</b> |  | STRAIGHT-IN LANDING RWY 27R<br>CAT II ILS<br>ABCD<br><b>RA 97'</b><br>DA(H) <b>269'</b> (100')<br>RVR <b>300m</b> |  | LACFT<br><b>RA 115'</b><br>DA(H) <b>289'</b> (120')<br>RVR <b>300m</b> |  |
|---------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------|--|

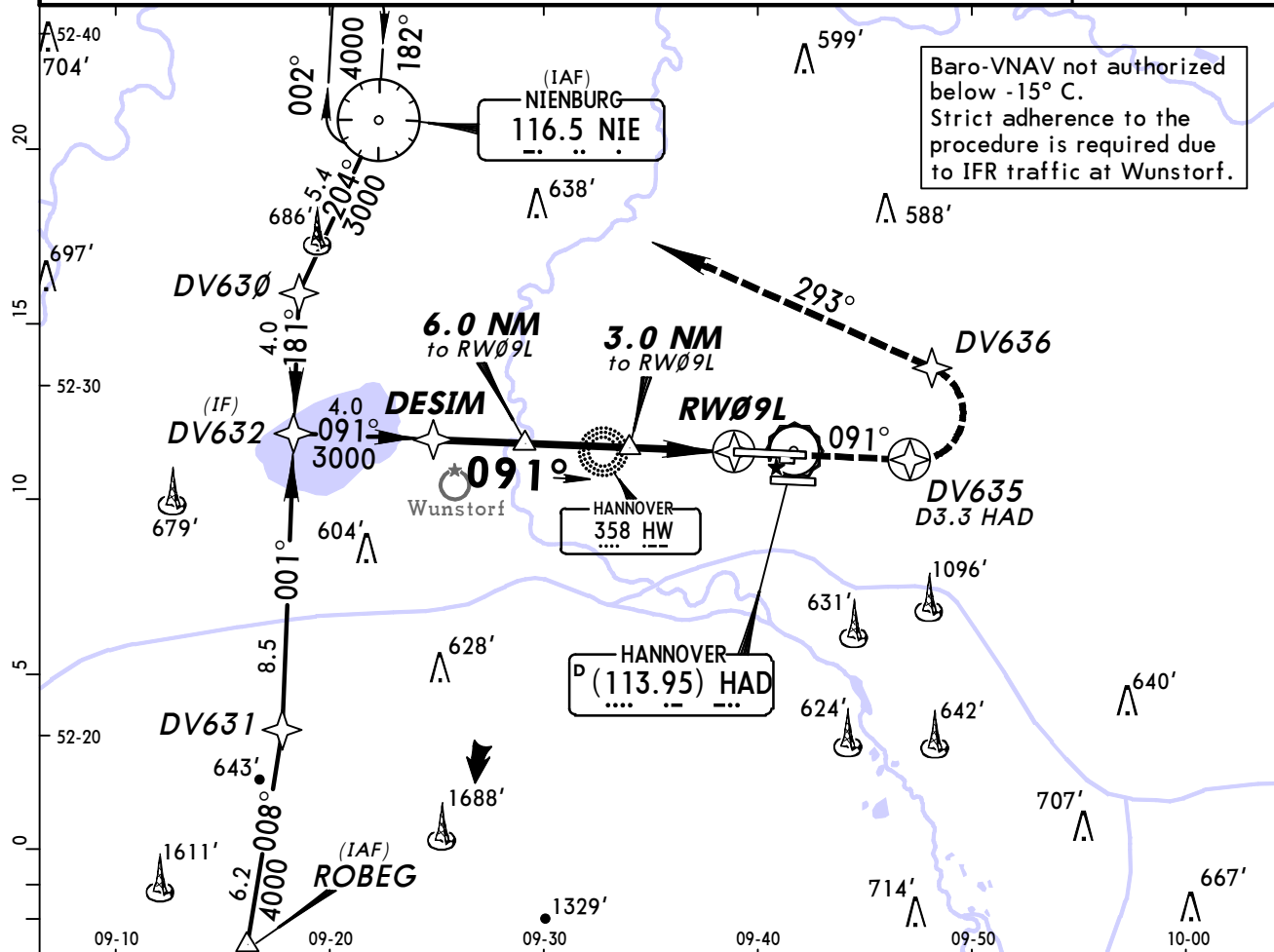
Operators applying U.S. Ops Specs: Autoland or HUD required below RVR 350m.

CHANGES: Communications. Note. OM withdrawn. TCH.

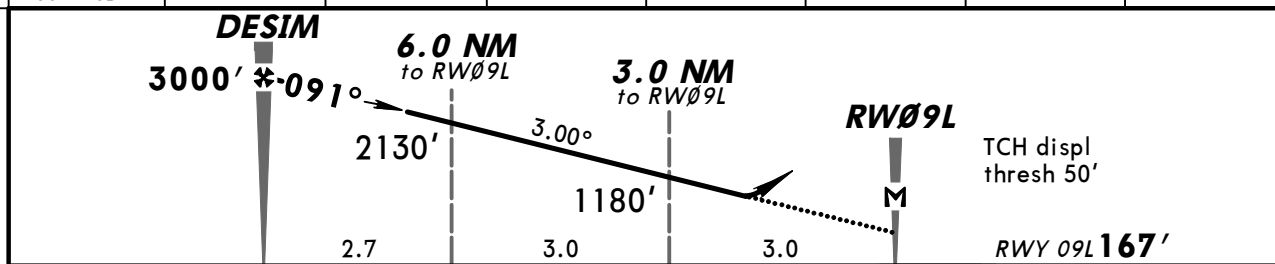
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BRIEFING STRIP™

|                                                                                                                 |                                            |                                       |                                   |                                  |                                     |                  |
|-----------------------------------------------------------------------------------------------------------------|--------------------------------------------|---------------------------------------|-----------------------------------|----------------------------------|-------------------------------------|------------------|
| *D-ATIS<br>136.57                                                                                               | BREMEN Radar (APP)<br>131.32 118.05 118.15 |                                       |                                   | HANNOVER Director (APP)<br>119.6 | HANNOVER Tower<br>120.17 120.4      | Ground<br>121.95 |
| RNAV                                                                                                            | Final<br>Apch Crs<br>091°                  | Minimum Alt<br>DESIM<br>3000' (2833') | LNAV/VNAV<br>DA(H)<br>670' (503') | Apt Elev 183'<br>RWY 167'        | <div>2800'</div> <div>MSA ARP</div> |                  |
| MISSED APCH: Climb on track 091° to DV635/D3.3 HAD, turn LEFT via DV636 on track 293° to VOR climbing to 4000'. |                                            |                                       |                                   |                                  |                                     |                  |
| Alt Set: hPa (IN on req)                                                                                        |                                            | Rwy Elev: 6 hPa                       | Trans level: By ATC               | Trans alt: 5000'                 |                                     |                  |



|               |       |       |       |       |       |       |      |
|---------------|-------|-------|-------|-------|-------|-------|------|
| NM to RWY 09L | 8.0   | 7.0   | 6.0   | 5.0   | 4.0   | 3.0   | 2.0  |
| ALTITUDE      | 2770' | 2450' | 2130' | 1810' | 1500' | 1180' | 860' |



|                |       |     |     |     |     |     |                         |             |           |
|----------------|-------|-----|-----|-----|-----|-----|-------------------------|-------------|-----------|
| Gnd speed-Kts  | 70    | 90  | 100 | 120 | 140 | 160 | ALSF-II<br>REIL<br>PAPI | DV635 4000' | NIE 116.5 |
| Descent Angle  | 3.00° | 372 | 478 | 531 | 637 | 743 |                         |             |           |
| MAP at RWY 09L |       |     |     |     |     |     |                         |             |           |

| Standard |           | STRAIGHT-IN LANDING RWY 09L           |           |                                  |  |
|----------|-----------|---------------------------------------|-----------|----------------------------------|--|
|          |           | LNAV/VNAV<br>DA(H) <b>670'</b> (503') |           | LNAV<br>DA(H) <b>680'</b> (513') |  |
|          |           | ALS out                               |           | ALS out                          |  |
| A        | RVR 1500m |                                       |           | RVR 1500m                        |  |
| B        |           |                                       |           |                                  |  |
| C        | RVR 1600m | CMV 2400m                             | RVR 1600m | CMV 2400m                        |  |
| D        |           |                                       |           |                                  |  |

EDDV/HAJ  
HANNOVER

13 APR 12

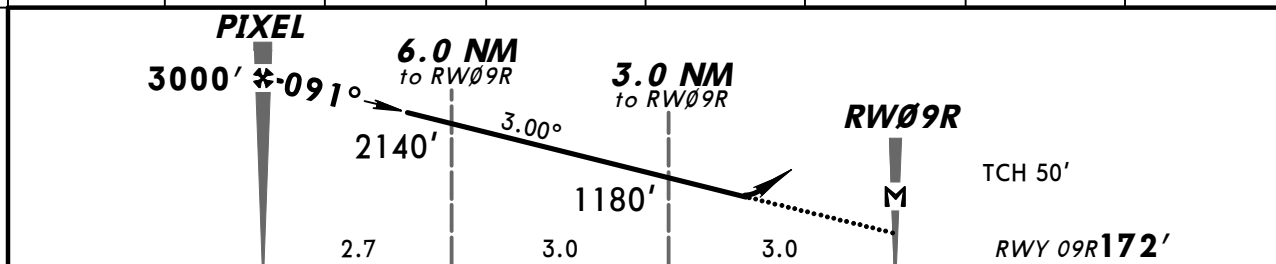
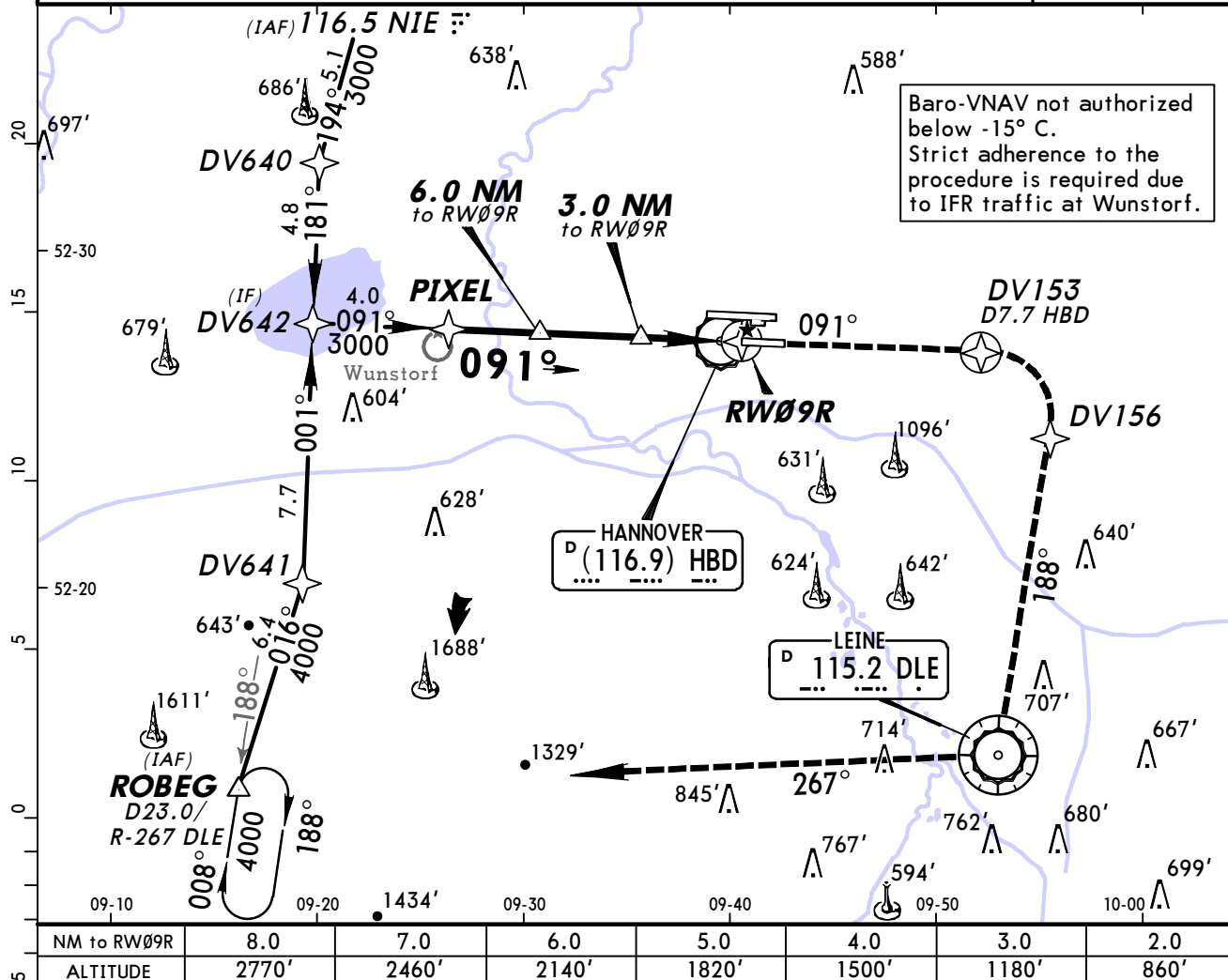
12-2

JEPPesen

HANNOVER, GERMANY  
RNAV (GPS) Rwy 09R

BRIEFING STRIP

|                                                                                                                                                   |                                            |                                       |                                            |                                |                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|---------------------------------------|--------------------------------------------|--------------------------------|-------------------------------------|
| *D-ATIS<br>136.57                                                                                                                                 | BREMEN Radar (APP)<br>131.32 118.05 118.15 |                                       | HANNOVER Director (APP)<br>119.6           | HANNOVER Tower<br>120.17 120.4 | Ground<br>121.95                    |
| RNAV                                                                                                                                              | Final<br>Apch Crs<br>091°                  | Minimum Alt<br>PIXEL<br>3000' (2828') | LNAV/VNAV<br>DA(H)<br>Refer to<br>Minimums | Apt Elev 183'<br>RWY 172'      | <div>2800'</div> <div>MSA ARP</div> |
| MISSED APCH: Climb onto 091° to DV153/D7.7 HBD, then turn RIGHT via DV156 on 188° to DLE VOR, then turn RIGHT on 267° to ROBEG climbing to 4000'. |                                            |                                       |                                            |                                |                                     |
| Alt Set: hPa (IN on req)      Rwy Elev: 6 hPa      Trans level: By ATC      Trans alt: 5000'                                                      |                                            |                                       |                                            |                                |                                     |



|               |       |     |     |     |     |     |                                               |
|---------------|-------|-----|-----|-----|-----|-----|-----------------------------------------------|
| Gnd speed-Kts | 70    | 90  | 100 | 120 | 140 | 160 | HIALS<br>REIL PAPI<br>DV153 188°<br>DLE 115.2 |
| Descent Angle | 3.00° | 372 | 478 | 531 | 637 | 743 |                                               |
| MAP at RWY09R |       |     |     |     |     |     |                                               |

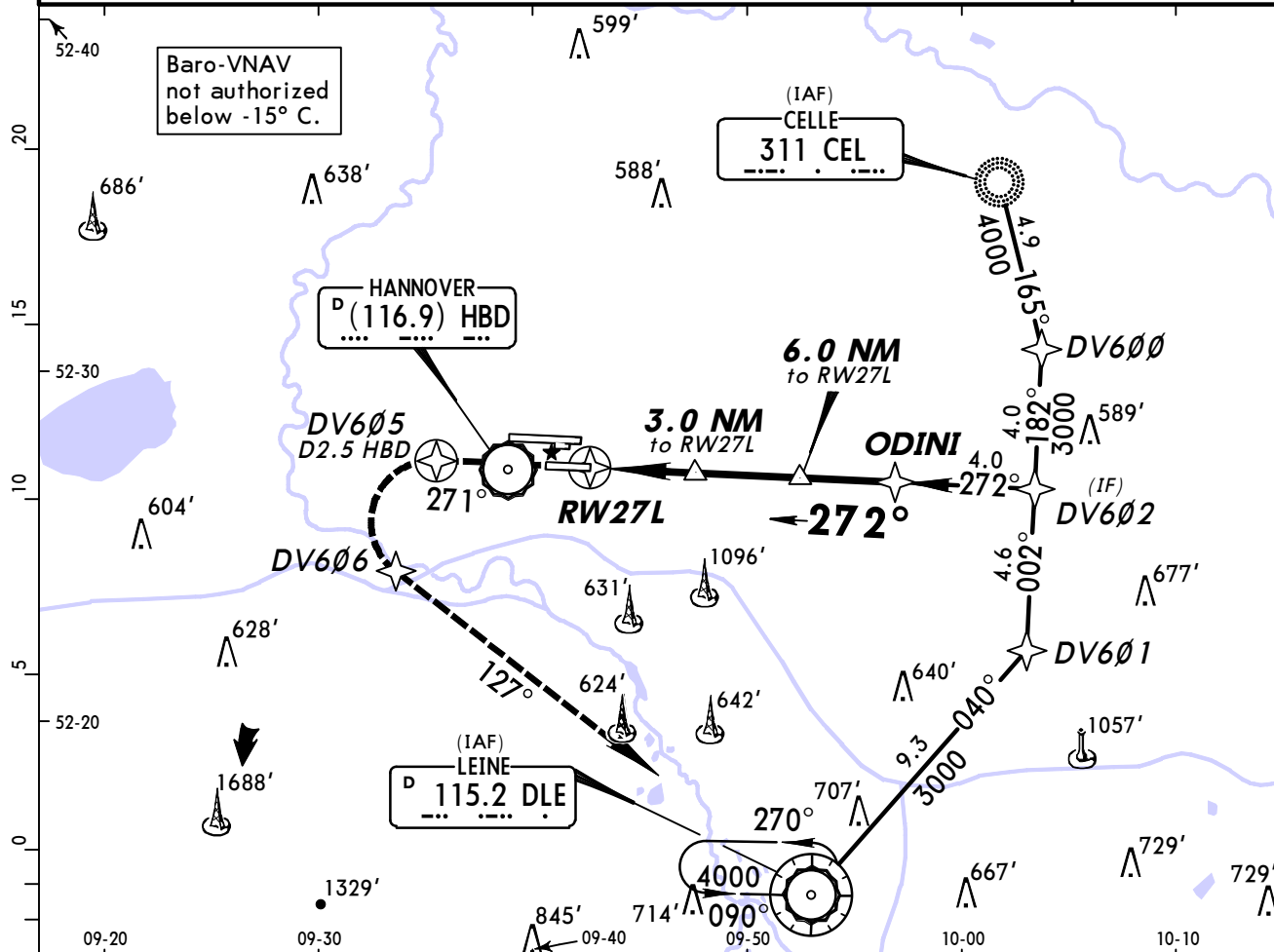
| Standard       |           |                |  | STRAIGHT-IN LANDING RWY 09R |  |             |  |
|----------------|-----------|----------------|--|-----------------------------|--|-------------|--|
| LNAV/VNAV      |           | LNAV           |  | LNAV                        |  | LNAV        |  |
| DA(H)          |           | DA(H)          |  | DA(H)                       |  | DA(H)       |  |
| A: 500' (328') |           | C: 530' (358') |  | 670' (498')                 |  | 670' (498') |  |
| B: 520' (348') |           | D: 550' (378') |  |                             |  |             |  |
| ALS out        |           | ALS out        |  |                             |  |             |  |
| A              | RVR 800m  | RVR 1500m      |  | RVR 1500m                   |  |             |  |
| B              | RVR 900m  | RVR 1500m      |  |                             |  |             |  |
| C              | RVR 1000m | RVR 1600m      |  | RVR 1500m                   |  | CMV 2300m   |  |
| D              | RVR 1000m | RVR 1700m      |  |                             |  |             |  |

CHANGES: Minimums.

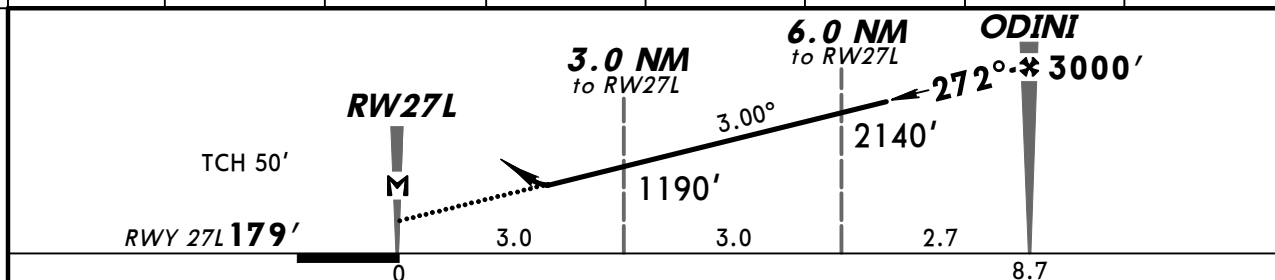
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BRIEFING STRIP

|                                                                                                                 |                                            |                                       |                                   |                           |                                     |  |                  |
|-----------------------------------------------------------------------------------------------------------------|--------------------------------------------|---------------------------------------|-----------------------------------|---------------------------|-------------------------------------|--|------------------|
| *D-ATIS<br>136.57                                                                                               | BREMEN Radar (APP)<br>131.32 118.05 118.15 |                                       | HANNOVER Director (APP)<br>119.6  |                           | HANNOVER Tower<br>120.17 120.4      |  | Ground<br>121.95 |
| RNAV                                                                                                            | Final<br>Apch Crs<br>272°                  | Minimum Alt<br>ODINI<br>3000' (2821') | LNAV/VNAV<br>DA(H)<br>640' (461') | Apt Elev 183'<br>RWY 179' | <div>2800'</div> <div>MSA ARP</div> |  |                  |
| MISSED APCH: Climb on track 271° to DV605/D2.5 HBD, turn LEFT via DV606 on track 127° to VOR climbing to 4000'. |                                            |                                       |                                   |                           |                                     |  |                  |
| Alt Set: hPa (IN on req)                                                                                        |                                            | Rwy Elev: 6 hPa                       | Trans level: By ATC               |                           |                                     |  |                  |



|             |      |       |       |       |       |       |       |
|-------------|------|-------|-------|-------|-------|-------|-------|
| NM to RW27L | 2.0  | 3.0   | 4.0   | 5.0   | 6.0   | 7.0   | 8.0   |
| ALTITUDE    | 870' | 1190' | 1510' | 1830' | 2140' | 2460' | 2780' |



|               |       |     |     |     |     |     |                    |             |           |
|---------------|-------|-----|-----|-----|-----|-----|--------------------|-------------|-----------|
| Gnd speed-Kts | 70    | 90  | 100 | 120 | 140 | 160 | HIALS<br>REIL PAPI | DV605 4000' | DLE 115.2 |
| Descent Angle | 3.00° | 372 | 478 | 531 | 637 | 743 |                    |             |           |
| MAP at RW27L  |       |     |     |     |     |     |                    |             |           |

| Standard |           | STRAIGHT-IN LANDING RWY 27L |           |                                                     |  |
|----------|-----------|-----------------------------|-----------|-----------------------------------------------------|--|
|          |           | LNAV/VNAV                   |           | LNAV                                                |  |
|          |           | DA(H) <b>640'</b> (461')    |           | DA(H) AB: <b>650'</b> (471') CD: <b>670'</b> (491') |  |
|          |           | ALS out                     |           | ALS out                                             |  |
| A        | RVR 1500m |                             |           | RVR 1500m                                           |  |
| B        |           |                             |           |                                                     |  |
| C        | RVR 1500m | CMV 2200m                   | RVR 1500m | CMV 2300m                                           |  |
| D        |           |                             |           |                                                     |  |

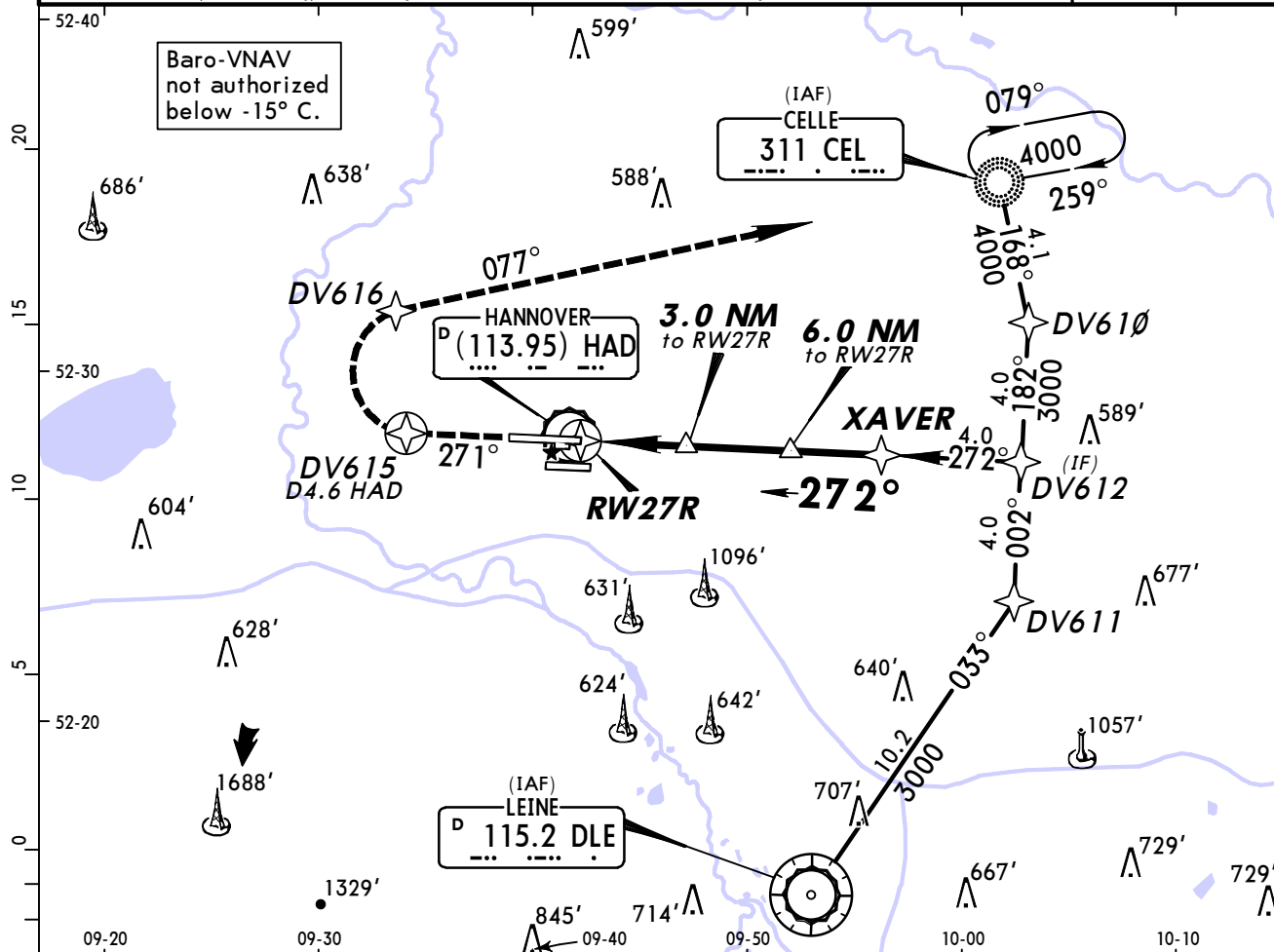
EDDV/HAJ  
HANNOVER

JEPPESEN  
13 APR 12 12-4

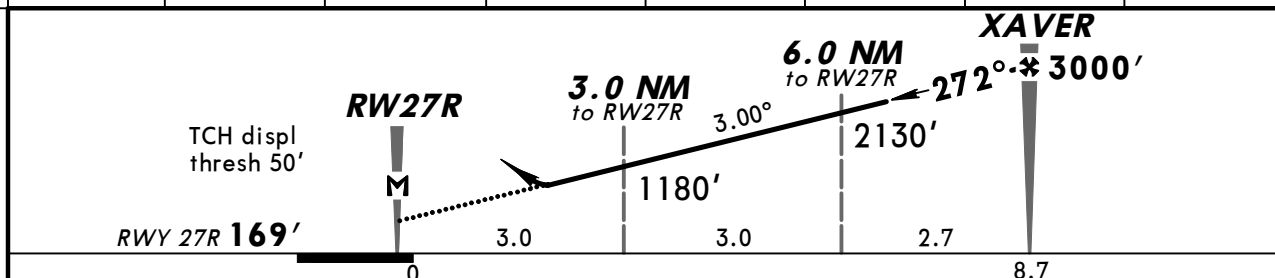
HANNOVER, GERMANY  
RNAV (GPS) Rwy 27R

BRIEFING STRIP

|                                                                                                                  |                                            |                                       |                                   |  |                                |  |                                     |
|------------------------------------------------------------------------------------------------------------------|--------------------------------------------|---------------------------------------|-----------------------------------|--|--------------------------------|--|-------------------------------------|
| *D-ATIS<br>136.57                                                                                                | BREMEN Radar (APP)<br>131.32 118.05 118.15 |                                       | HANNOVER Director (APP)<br>119.6  |  | HANNOVER Tower<br>120.17 120.4 |  | Ground<br>121.95                    |
| RNAV                                                                                                             | Final<br>Apch Crs<br>272°                  | Minimum Alt<br>XAVER<br>3000' (2831') | LNAV/VNAV<br>DA(H)<br>570' (401') |  | Apt Elev 183'<br>RWY 169'      |  | <div>2800'</div> <div>MSA ARP</div> |
| MISSED APCH: Climb on track 271° to DV615/D4.6 HAD, turn RIGHT via DV616 on track 077° to NDB climbing to 4000'. |                                            |                                       |                                   |  |                                |  |                                     |
| Alt Set: hPa (IN on req)                                                                                         |                                            | Rwy Elev: 6 hPa                       | Trans level: By ATC               |  | Trans alt: 5000'               |  |                                     |



|             |      |       |       |       |       |       |       |
|-------------|------|-------|-------|-------|-------|-------|-------|
| NM to RW27R | 2.0  | 3.0   | 4.0   | 5.0   | 6.0   | 7.0   | 8.0   |
| ALTITUDE    | 860' | 1180' | 1500' | 1820' | 2130' | 2450' | 2770' |



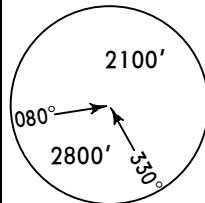
|               |       |     |     |     |     |     |                          |             |         |
|---------------|-------|-----|-----|-----|-----|-----|--------------------------|-------------|---------|
| Gnd speed-Kts | 70    | 90  | 100 | 120 | 140 | 160 | ALSIF-II<br>REIL<br>PAPI | DV615 4000' | CEL 311 |
| Descent Angle | 3.00° | 372 | 478 | 531 | 637 | 743 |                          |             |         |
| MAP at RW27R  |       |     |     |     |     |     |                          |             |         |

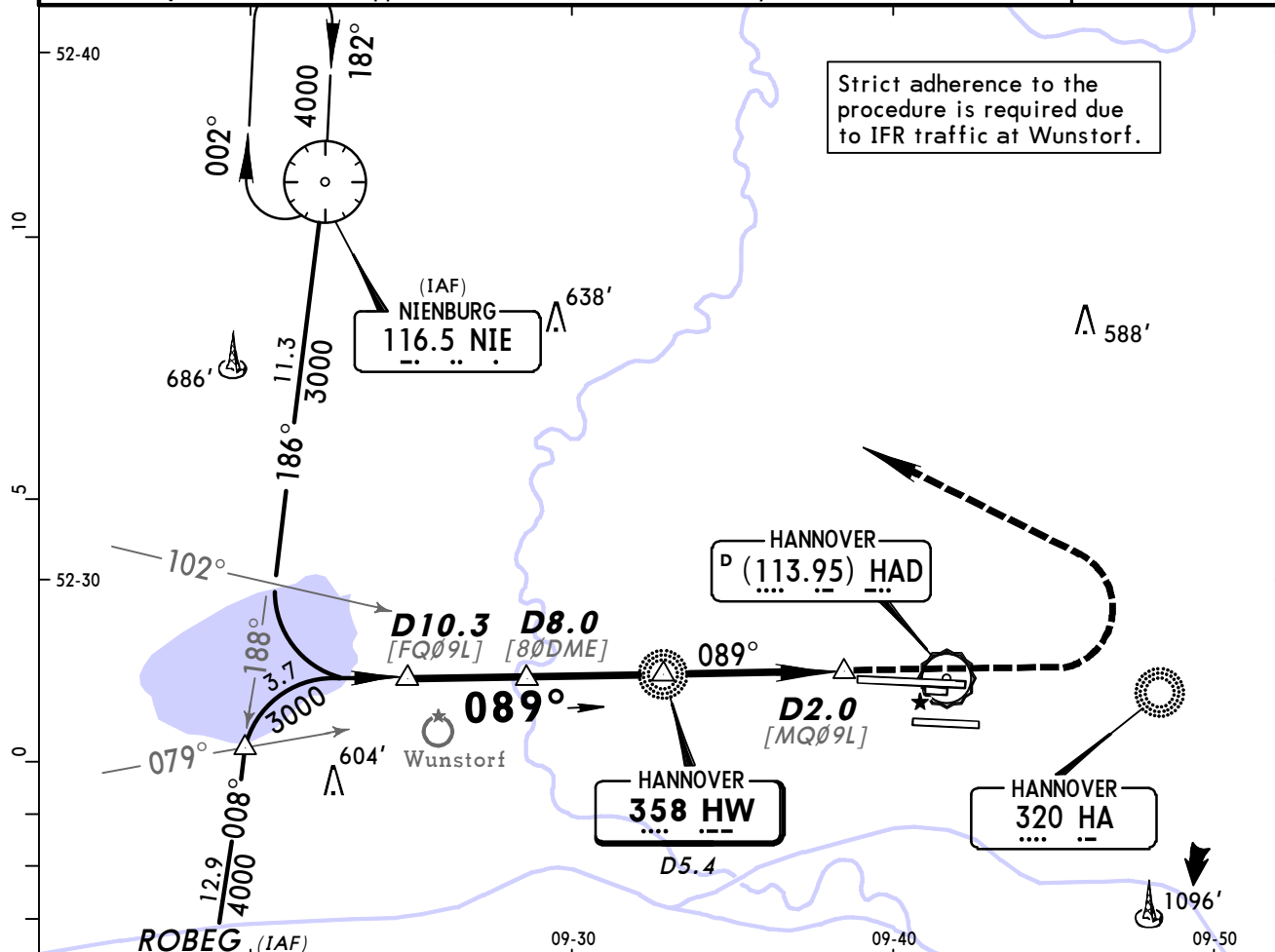
|                          |   |                             |  |           |  |
|--------------------------|---|-----------------------------|--|-----------|--|
| Standard                 |   | STRAIGHT-IN LANDING RWY 27R |  |           |  |
| LNAV/VNAV                |   | LNAV                        |  |           |  |
| DA(H) <b>570'</b> (401') |   | DA(H) <b>670'</b> (501')    |  |           |  |
| ALS out                  |   | ALS out                     |  |           |  |
| PANS OPS 4               | A | RVR 1500m                   |  | RVR 1500m |  |
|                          | B |                             |  |           |  |
|                          | C | RVR 1200m                   |  |           |  |
|                          | D | RVR 1900m                   |  | RVR 1600m |  |
|                          |   |                             |  | CMV 2400m |  |

CHANGES: Minimums.

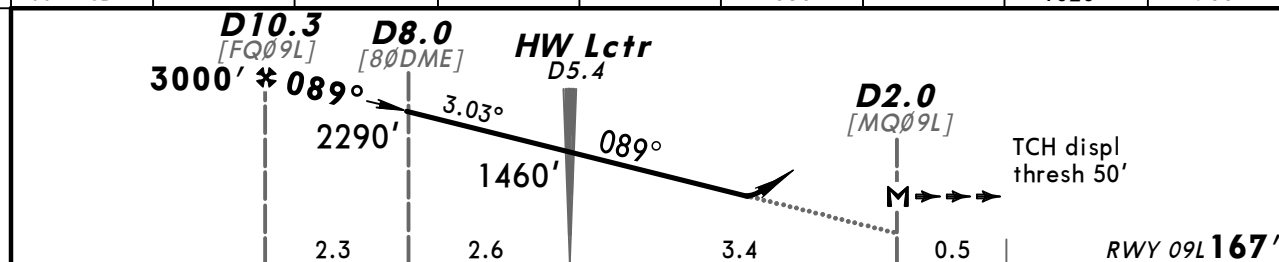
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BRIEFING STRIP

|                                                                                                                                                                        |                           |                                            |                                       |                                  |  |                                |  |                                                                                                |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|--------------------------------------------|---------------------------------------|----------------------------------|--|--------------------------------|--|------------------------------------------------------------------------------------------------|--|
| *D-ATIS<br>136.57                                                                                                                                                      |                           | BREMEN Radar (APP)<br>131.32 118.05 118.15 |                                       | HANNOVER Director (APP)<br>119.6 |  | HANNOVER Tower<br>120.17 120.4 |  | Ground<br>121.95                                                                               |  |
| Lctr<br>HW<br>358                                                                                                                                                      | Final<br>Apch Crs<br>089° |                                            | Minimum Alt<br>D10.3<br>3000' (2833') | DA(H)<br>750' (583')             |  | Apt Elev 183'<br>RWY 167'      |  | <div></div> |  |
| MISSED APCH: Turn LEFT as soon as practicable to VOR climbing to 4000'.                                                                                                |                           |                                            |                                       |                                  |  |                                |  |                                                                                                |  |
| Alt Set: hPa (IN on req)    Rwy Elev: 6 hPa    Trans level: By ATC    Trans alt: 5000'<br>1. DME required.    2. Final approach track offset 2.5° from rwy centerline. |                           |                                            |                                       |                                  |  |                                |  |                                                                                                |  |
| MSA HA Lctr                                                                                                                                                            |                           |                                            |                                       |                                  |  |                                |  |                                                                                                |  |



|          |       |       |       |       |       |       |       |      |
|----------|-------|-------|-------|-------|-------|-------|-------|------|
| HAD DME  | 10.0  | 9.0   | 8.0   | 7.0   | 6.0   | 5.0   | 4.0   | 3.0  |
| ALTITUDE | 2930' | 2610' | 2290' | 1970' | 1650' | 1340' | 1020' | 700' |

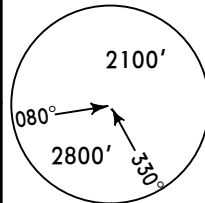


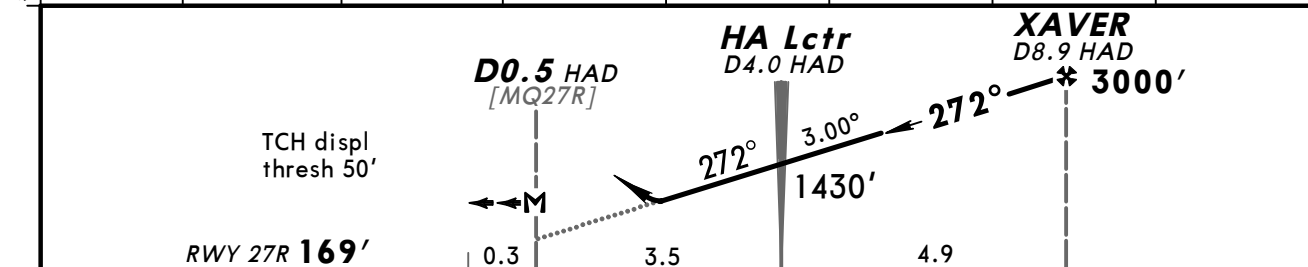
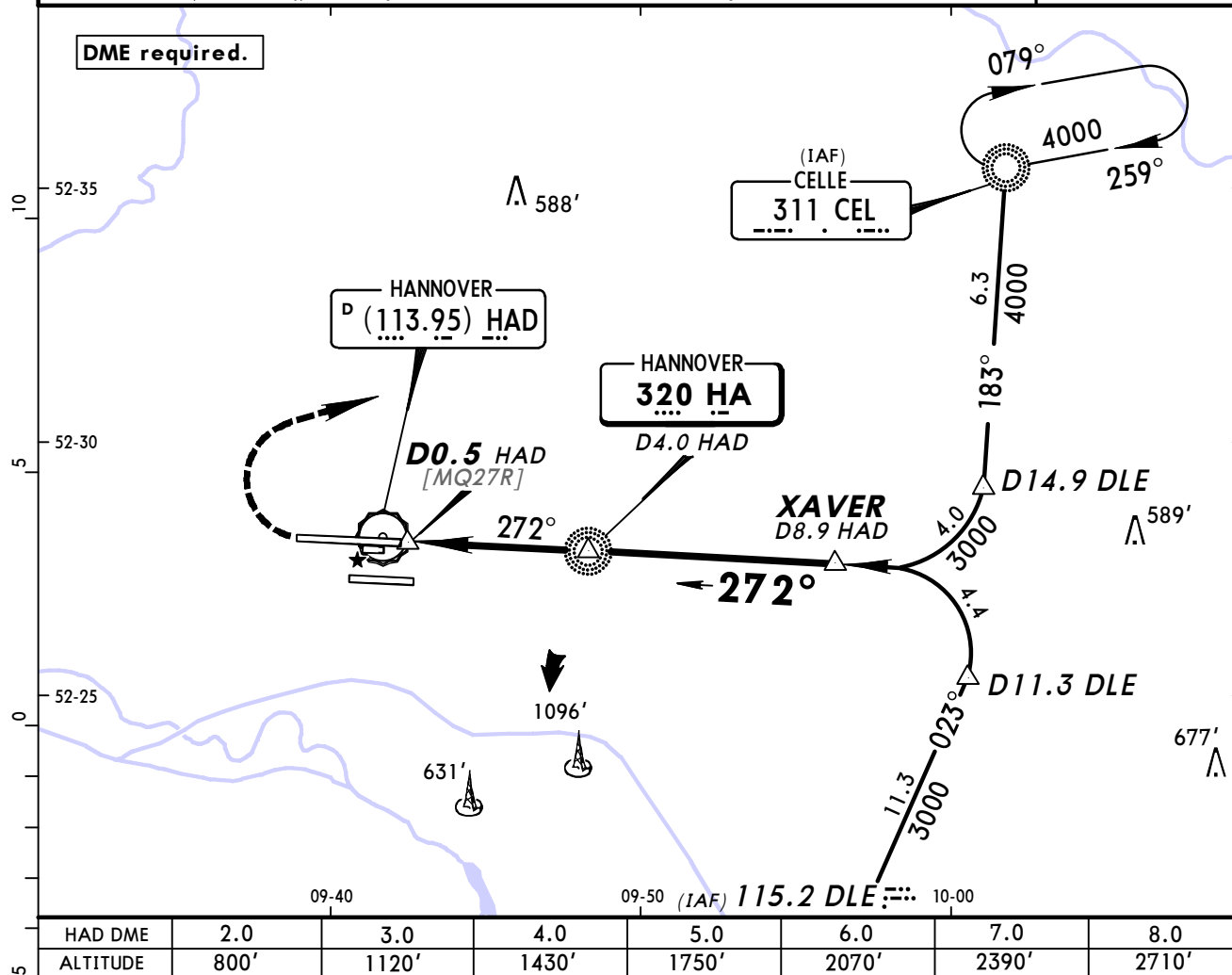
|               |       |     |     |     |     |     |                                                  |
|---------------|-------|-----|-----|-----|-----|-----|--------------------------------------------------|
| Gnd speed-Kts | 70    | 90  | 100 | 120 | 140 | 160 | ALSF-II<br>REIL PAPI<br>4000'<br>LT<br>NIE 116.5 |
| Descent Angle | 3.03° | 375 | 482 | 536 | 643 | 750 |                                                  |
| MAP at D2.0   |       |     |     |     |     |     |                                                  |

|                 |  |                             |  |
|-----------------|--|-----------------------------|--|
| <b>Standard</b> |  | STRAIGHT-IN LANDING RWY 09L |  |
|                 |  | DA(H) <b>750'</b> (583')    |  |
|                 |  | ALS out                     |  |

|            |   |           |           |
|------------|---|-----------|-----------|
| PANS OPS 4 | A | RVR 1500m |           |
|            | B |           |           |
|            | C |           |           |
|            | D | RVR 2000m | CMV 2400m |

BRIEFING STRIP™

|                                                                              |                                            |                                       |                                  |                                |                                                                                     |                  |
|------------------------------------------------------------------------------|--------------------------------------------|---------------------------------------|----------------------------------|--------------------------------|-------------------------------------------------------------------------------------|------------------|
| *D-ATIS<br>136.57                                                            | BREMEN Radar (APP)<br>131.32 118.05 118.15 |                                       | HANNOVER Director (APP)<br>119.6 | HANNOVER Tower<br>120.17 120.4 |                                                                                     | Ground<br>121.95 |
| Lctr<br>HA<br>320                                                            | Final<br>Apch Crs<br>272°                  | Minimum Alt<br>XAVER<br>3000' (2831') | DA(H)<br>700' (531')             | Apt Elev 183'<br>RWY 169'      |  |                  |
| MISSED APCH: Turn RIGHT as soon as practicable to CEL NDB climbing to 4000'. |                                            |                                       |                                  |                                |                                                                                     |                  |
| Alt Set: hPa (IN on req)                                                     |                                            | Rwy Elev: 6 hPa                       | Trans level: By ATC              | Trans alt: 5000'               |                                                                                     | MSA HA Lctr      |



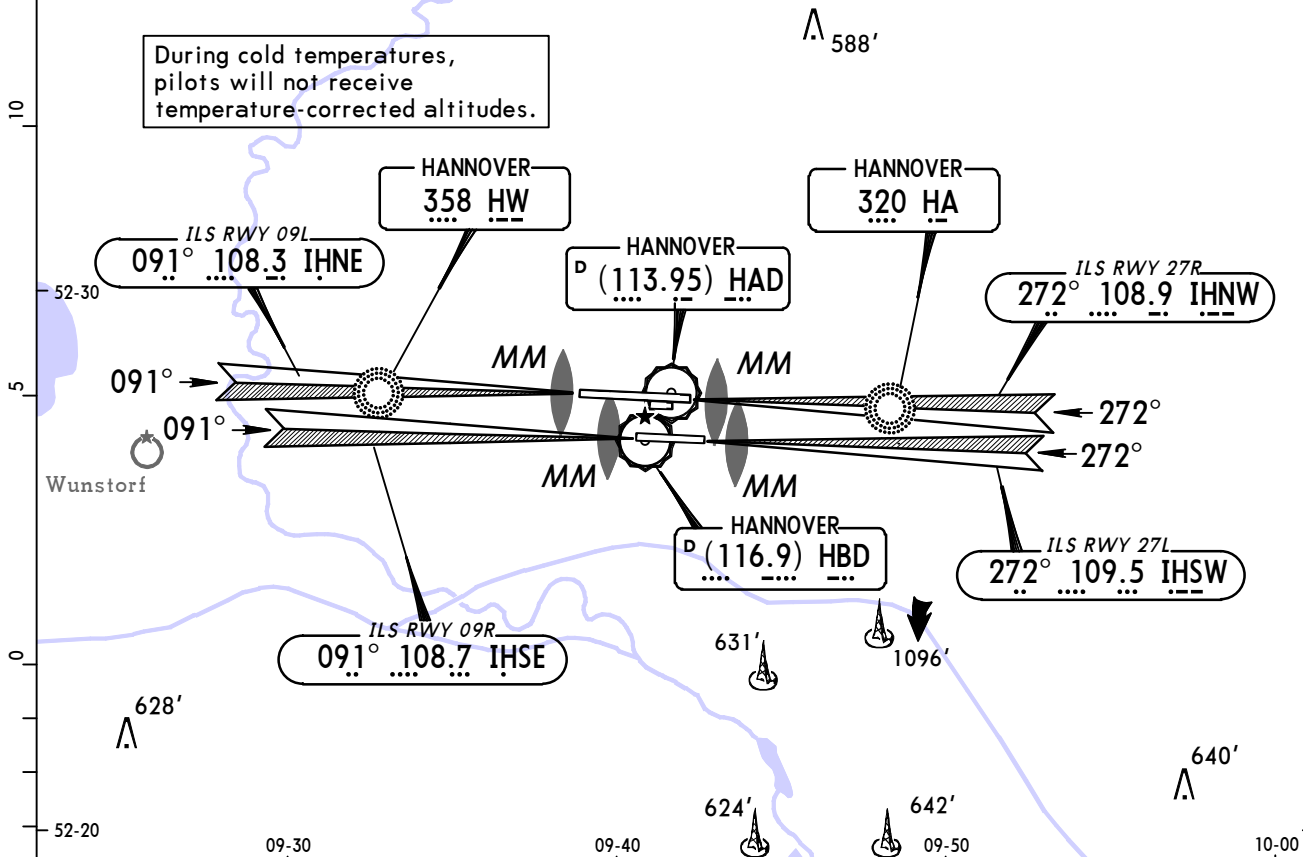
|                 |       |     |     |     |     |     |                                                                                       |                    |                |
|-----------------|-------|-----|-----|-----|-----|-----|---------------------------------------------------------------------------------------|--------------------|----------------|
| Gnd speed-Kts   | 70    | 90  | 100 | 120 | 140 | 160 |  | <b>4000'</b><br>RT | <b>CEL 311</b> |
| Descent angle   | 3.00° | 372 | 478 | 531 | 637 | 743 |                                                                                       |                    |                |
| MAP at D0.5 HAD |       |     |     |     |     |     |                                                                                       |                    |                |

|                          |                             |         |
|--------------------------|-----------------------------|---------|
| <b>Standard</b>          | STRAIGHT-IN LANDING RWY 27R |         |
| DA(H) <b>700'</b> (531') |                             | ALS out |

|   |           |           |
|---|-----------|-----------|
| A | RVR 1500m |           |
| B |           |           |
| C | RVR 1700m | CMV 2400m |
| D |           |           |

BRIEFING STRIP

|                                                                                              |                              |                                   |                                     |                                 |                                 |
|----------------------------------------------------------------------------------------------|------------------------------|-----------------------------------|-------------------------------------|---------------------------------|---------------------------------|
| *D-ATIS<br>136.57                                                                            | BREMEN Radar (APP)<br>131.32 |                                   | HANNOVER<br>Director (APP)<br>119.6 | HANNOVER Tower<br>120.17 120.4  | Ground<br>121.95                |
| RADAR                                                                                        | Final<br>Apch Crs<br>By ATC  | Minimum Alt<br>See<br>table below | MDA(H)<br>Refer to<br>Minimums      | Apt Elev 183'<br>RWY -See below | <div>No MSA<br/>published</div> |
| MISSED APCH: Climb STRAIGHT AHEAD to 4000'.                                                  |                              |                                   |                                     |                                 |                                 |
| Alt Set: hPa (IN on req)      Apt Elev: 7 hPa      Trans level: By ATC      Trans alt: 5000' |                              |                                   |                                     |                                 |                                 |



|                         |          |       |       |       |       |       |       |       |
|-------------------------|----------|-------|-------|-------|-------|-------|-------|-------|
| RADAR FIX               | 10.0     | 9.0   | 8.0   | 7.0   | 6.0   | 5.0   | 4.0   | 3.0   |
| ALTITUDE                | 3300'    | 3000' | 2700' | 2400' | 2100' | 1800' | 1500' | 1200' |
| <b>Minimum Alt/NM</b>   | 10.0 FAF | 5.0   | 4.0   |       |       |       |       |       |
| <b>SRE 09L, SRE 09R</b> | 3300'    | —     | 1400' |       |       |       |       |       |
| <b>SRE 27L, SRE 27R</b> | 3300'    | 1400' | —     |       |       |       |       |       |
| <b>RWY</b>              | 09L      | 09R   | 27L   | 27R   |       |       |       |       |
| <b>ELEV</b>             | 167'     | 172'  | 179'  | 169'  |       |       |       |       |

|                            |     |     |     |     |     |     |
|----------------------------|-----|-----|-----|-----|-----|-----|
| <b>Gnd speed-Kts</b>       | 70  | 90  | 100 | 120 | 140 | 160 |
| <b>Descent Angle</b> 2.83° | 350 | 451 | 501 | 601 | 701 | 801 |
| <b>MAP at THR</b>          |     |     |     |     |     |     |

Lighting-  
Refer to  
Airport  
Chart

**4000'**



**Standard**

**STRAIGHT-IN LANDING**

| <b>SRE 09L</b><br>MDA(H) <b>750' (583')</b> |           | <b>SRE 09R</b><br>MDA(H) <b>750' (578')</b> |           | <b>SRE 27L</b><br>MDA(H) <b>750' (571')</b> |           | <b>SRE 27R</b><br>MDA(H) <b>750' (581')</b> |           |
|---------------------------------------------|-----------|---------------------------------------------|-----------|---------------------------------------------|-----------|---------------------------------------------|-----------|
| ALS out                                     |           | ALS out                                     |           | ALS out                                     |           | ALS out                                     |           |
| A                                           | CMV 2200m | CMV 2900m                                   | CMV 2100m | CMV 2800m                                   | CMV 2100m | CMV 2800m                                   | CMV 2200m |
| B                                           | CMV 2400m | CMV 3100m                                   | CMV 2300m | CMV 3000m                                   | CMV 2300m | CMV 3000m                                   | CMV 2400m |
| C                                           | CMV 2400m | CMV 3100m                                   | CMV 2300m | CMV 3000m                                   | CMV 2300m | CMV 3000m                                   | CMV 2400m |
| D                                           | CMV 2400m | CMV 3100m                                   | CMV 2300m | CMV 3000m                                   | CMV 2300m | CMV 3000m                                   | CMV 2400m |

PANS OPS 4

**HANNOVER, (HANNOVER - EDDV)**

## TERMINAL CHART CHANGE NOTICES

### Chart Change Notices for Airport EDDV

**Type:** Terminal

**Effectivity:** Temporary

**Begin Date:** Immediately

**End Date:** Until Further Notice

(11-4/11-4A) OM rwy 27R perm withdrawn.

**Type:** Terminal

**Effectivity:** Temporary

**Begin Date:** Immediately

**End Date:** Until Further Notice

MSA based on HA NDB replaced by MSA based on 358Khz HW NDB: 2800' in all sectors, applicable to 15NM out only.