Low Visibility Operations

NapuleVola.it - Andrea NPV1208

Attenzione

Le informazioni contenute in questa presentazione sono semplificate e per uso esclusivo nell’ambito della simulazione di volo.

NOT FOR OPERATIONAL USE

Quando si parla di Low Visibility?

- In decollo sotto i 400 m di visibilità
- In atterraggio sotto le minime di CAT I

Posso operare in Low Visibility?

- Limitazioni Compagnia / Pilota
- Limitazioni Aeroplano
- Limitazioni Aeroporto
- NOTAMs attivi

Limitazioni Aeroplano

Automatic Landing

When landing weather minima are predicated on autoland operations the following limits apply:

Maximum Allowable Wind Speeds	
# Headwind	25 knots
# Tailwind	15 knots
# Crosswind	25 knots

The maximum glideslope angle is 3.25 degrees.

The minimum glideslope angle is 2.5 degrees.

Automatic landings can be made using flaps 20 or 30, with both engines operative or one engine inoperative. The autopilot flight director system (AFDS) autoland status annunciation must display LAND 2 or LAND 3.

Non solo nebbia

Limitazioni Aeroporto

- Segnaletica aeroportuale
- Luci aeroportuali
- ILS di precisione

Standard — TAKE-OFF

	Low Visibility Take-off					
	[1] HIRL, CL & relevant RVR	RL, CL & relevant RVR	RL & CL	Day: RL & RCLM Night: RL or CL	Day: RL or RCLM Night: RL or CL	Adequate vis ref (Day only)
A, B, C, D	TDZ, MID, RO RVR 125m	TDZ, MID, RO RVR 150m	RVR 200m	RVR 300m	400m	500m

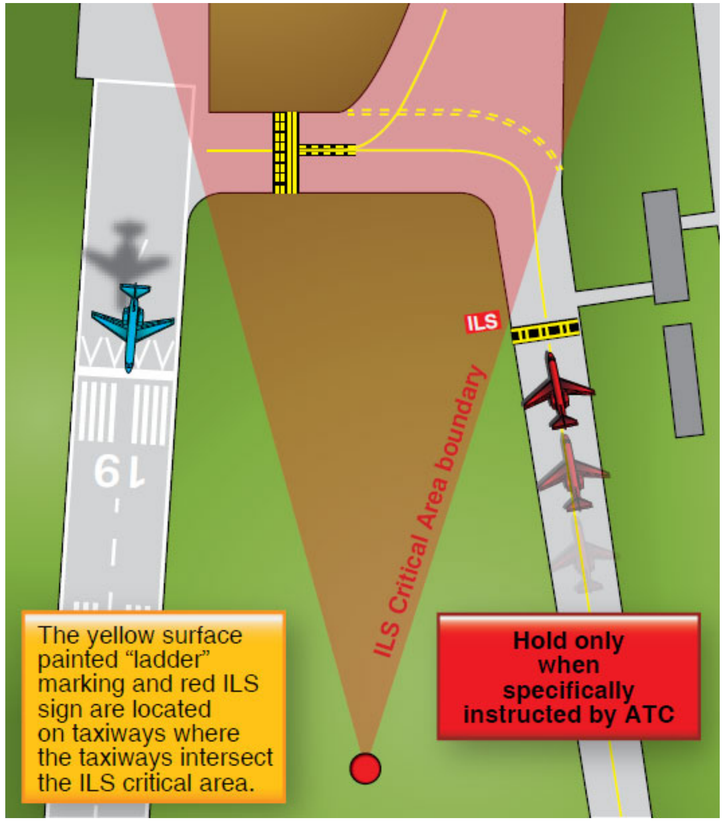
[1] RWY 16L, 16R, 34L, 34R: RVR 75m with approved guidance system or HUD/HUDLS.

Standard — STRAIGHT-IN LANDING RWY 34R

CAT IIIB ILS	CAT IIIA ILS	CAT II ILS		
	DH 50′	A: RA 100′ DA(H) 113′(100′) B: RA 113′ DA(H) 124′(111′)	C RA 132′ DA(H) 137′(124′)	D RA 151′ DA(H) 156′(143′)
RVR 75m	RVR 200m	RVR 300m	RVR 400m	RVR 450m

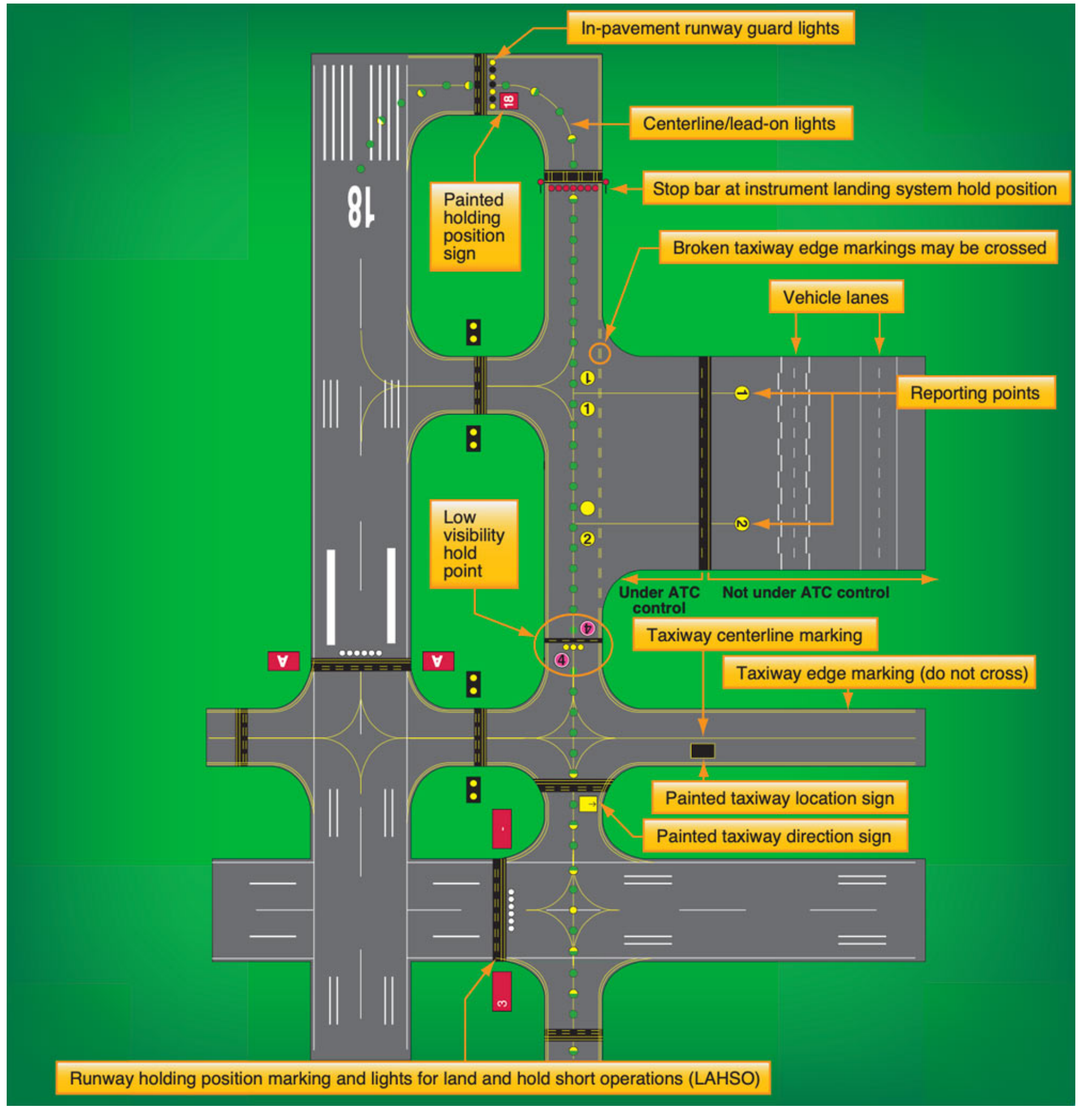
Taxi-out

- Conoscenza segnaletica aeroportuale



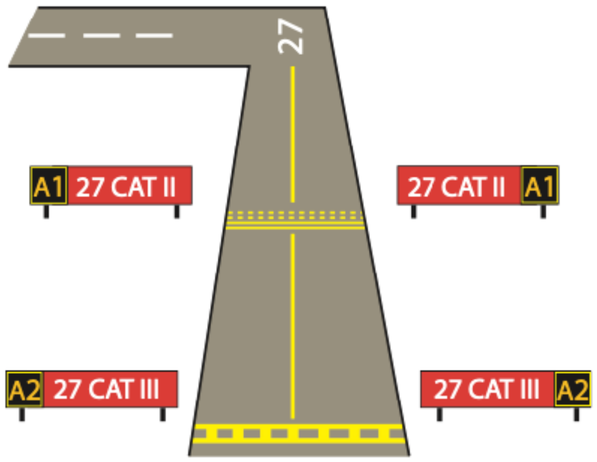
Taxi-out

- Conoscenza luci aeroportuali



Taxi-out

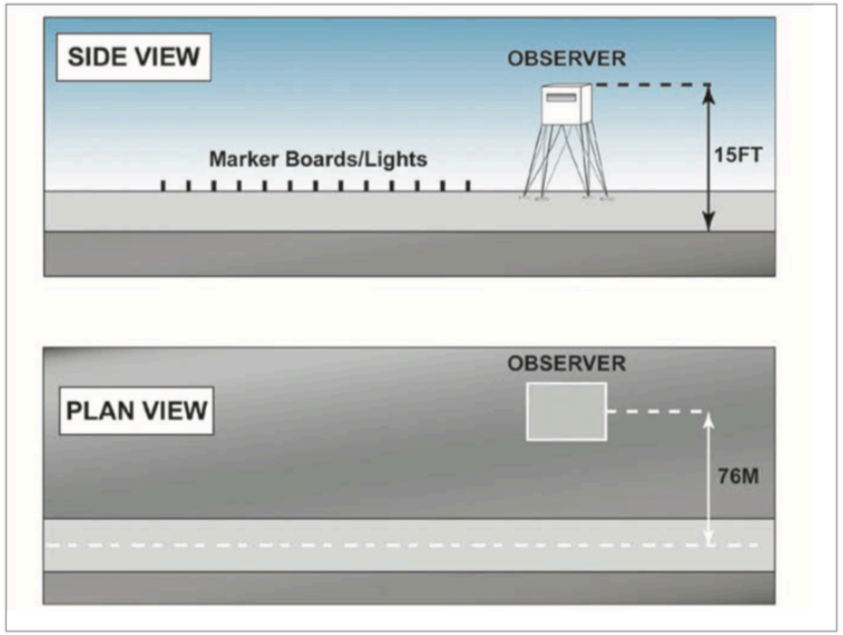
- Rally-style
- Massimo 10 kt
- Checklist solo da fermi
- Conoscenza segnaletica punti attesa e luci



(h)

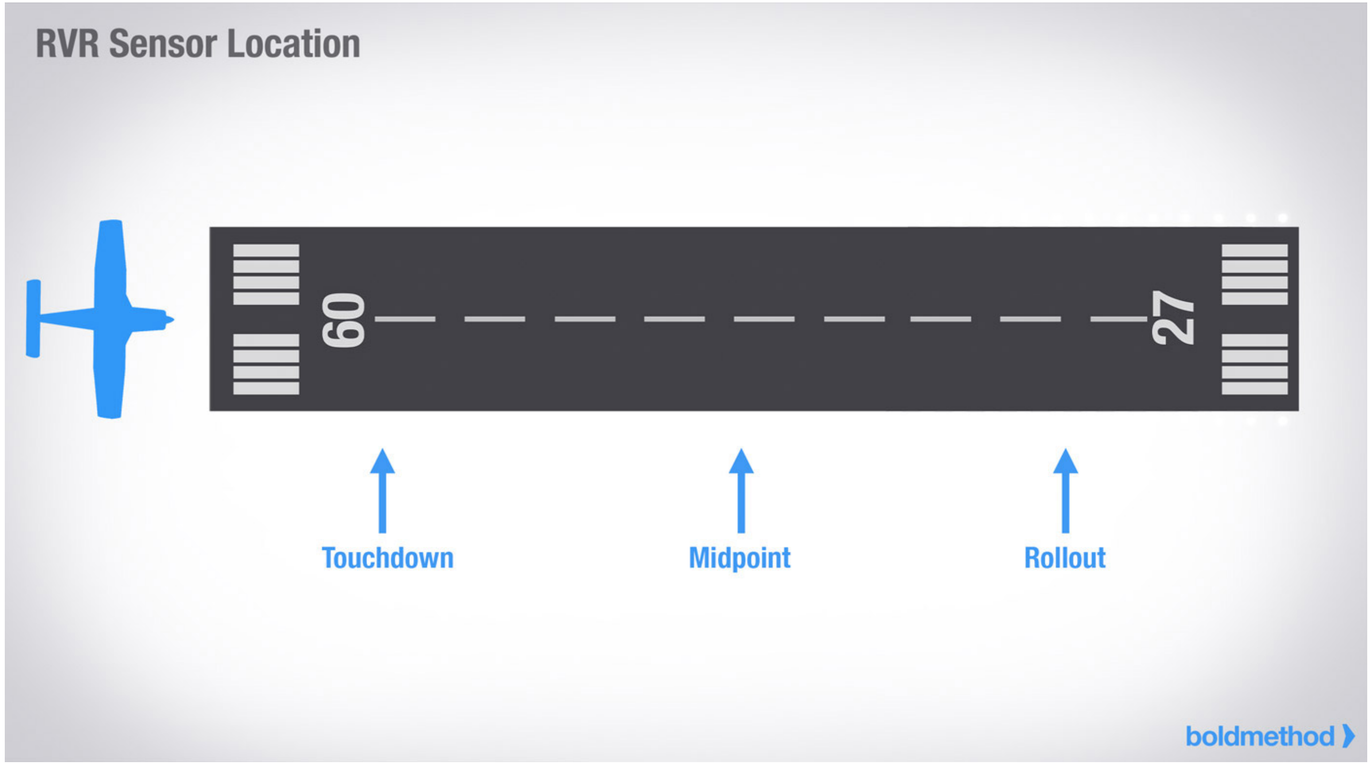
RVR

RVR


SIDE VIEW
OBSERVER
Marker Boards/Lights
15FT
PLAN VIEW
OBSERVER
76M


New Generation RVR Sensor

RVR


RVR Sensor Location
60
27
Touchdown
Midpoint
Rollout
boldmethod

RVR

OTHH 1700Z 34002KT 100 R34R/125N R34L/100D BCFG VV/// 03/03 Q1020 NOSIG=

RVR

RVR riportato sotto i 1500m

P1500 = RVR superiore ai 1500 m

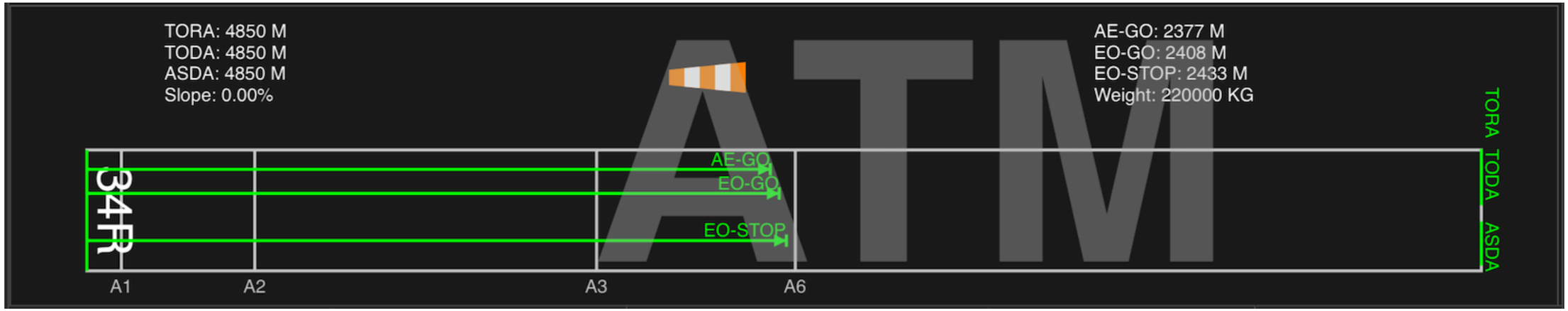
1300 N = Tendenza neutra

1300 D = Tendenza RVR in diminuzione

1300 U = Tendenza RVR in aumento

PERFORMACE

FLAP **20**	ACCEL HT **1000 ft AGL**		V1 **139 KT** VR **140 KT** V2 **145 KT**
RWY / INTX **34R**			
TOGW **220000 KG**	D-TO 2 **80.4**	SEL TEMP **58 C**	Vref30 **140 KT**



PERFORMACE

FLAP
20

ACCEL HT
1000 ft AGL

RWY / INTX
34R

TOGW
220000 KG

TO 2
89.8

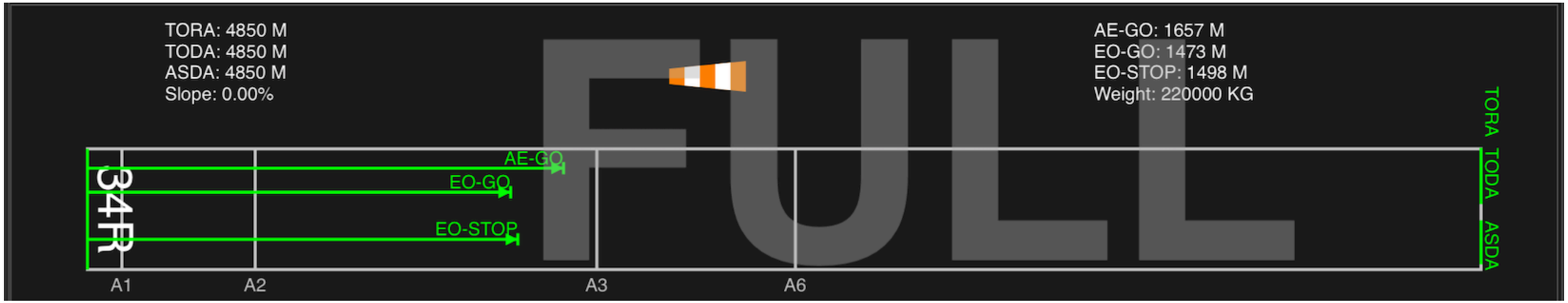
V1 **137 KT**

VR **144 KT**

V2 **152 KT**

Vref30 **140 KT**

FULL



FULL

PERFORMACE

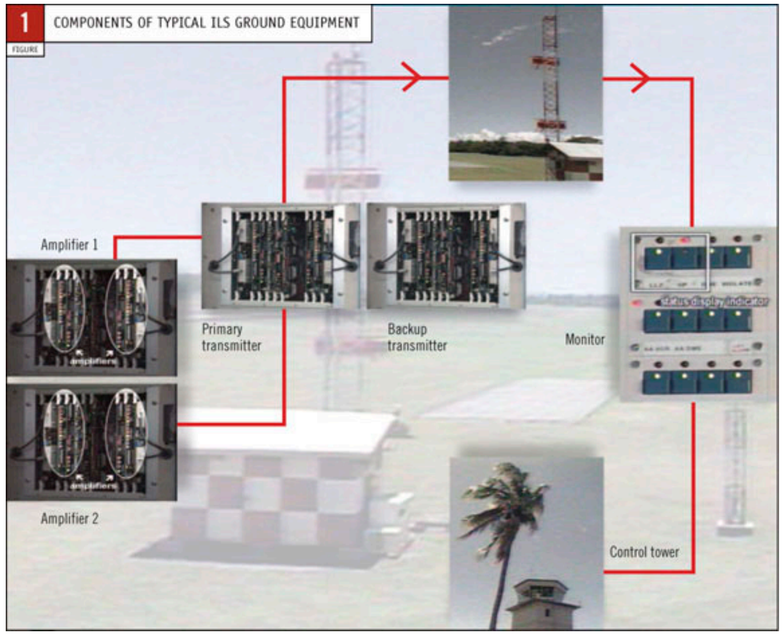
- Consiglio: Aumentare i flap per il decollo (es. flap 15 o 20)

Posso atterrare in Low Visibility?

- Limitazioni Compagnia / Pilota
- Limitazioni Aeroplano
- Limitazioni Aeroporto
- NOTAMs attivi

Autoland in CAT I

Avarie equipaggiamenti di terra



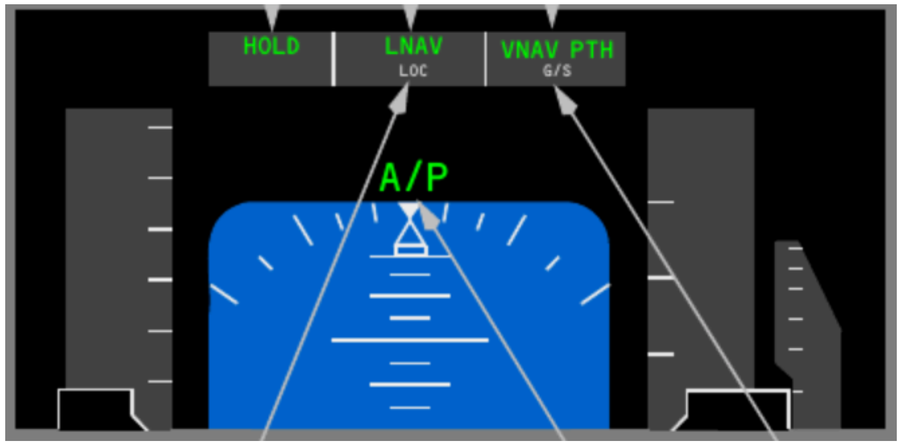
NOTAM

ILS 34R STANDBY TRANSMITTER INOP =

Avarie equipaggiamenti di terra

FAILED OR DOWNGRADED EQUIPMENT	EFFECT ON LANDING MINIMA			
	CAT III B (NO DH)	CAT III B	CAT III A	CAT II
ILS / MLS stand-by transmitter	Not allowed	RVR 200 m	No effect	
Outer marker	No effect if replaced by height check at 1,000 feet			
Middle marker	No effect			
RVR assessment systems	At least one RVR value to be available on the aerodrome	On runways equipped with two or more RVR assessment units, one may be inoperative		
Approach lights	No effect	Not allowed for operations with DH > 50 feet		Not allowed
Approach lights except the last 210 m	No effect			Not allowed
Approach lights except the last 420 m	No effect			
Standby power for approach lights	No effect			
Edge lights, threshold lights and runway end lights	No effect		Day: no effect	Day: no effect
			Night: RVR 550 m	Night: not allowed
Centre line lights	Day: RVR 200 m	Not allowed	Day: RVR 300 m	Day: RVR 350 m
	Night: not allowed		Night: RVR 400 m	Night: RVR 550 m (400 m with auto-land)
Centre line lights spacing increased to 30 m	RVR 150 m		No effect	
Touchdown zone lights	No effect	Day: RVR 200 m	Day: RVR 300 m	
		Night: RVR 300 m	Night: RVR 550 m, (350 m with auto-land)	
Taxiway light system	No effect			

Avarie equipaggiamenti di bordo



LAND 3 = Autoland ok fino a CAT IIIB

LAND 2 = Autoland ok fino a CAT IIIA

NO AUTOLAND = Atterraggio manuale CAT I o II

RVR

OTHH 1700Z 34002KT 100 R34R/200D R34L/100N BCFG VV/// 03/03 Q1020 NOSIG=

Cosa dobbiamo vedere alla minima?

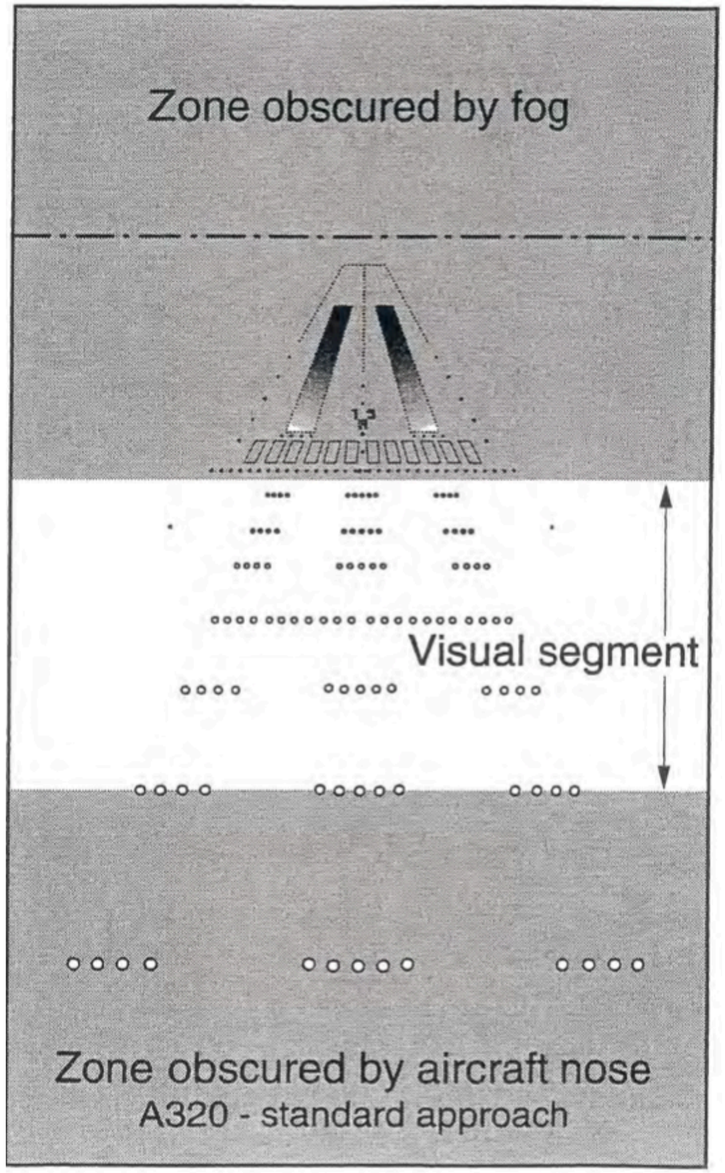
REQUIRED RVR READING						
Approach Category	**DH**	**TDZ**	**MID with Auto Rollout**	**MID without Auto Rollout**	**RO**	**Visual Reference Required**
CAT II	100 ft Note1	300 m	75 m	125 m	75 m	3 consecutive Centerline Lights of the APCH LTS or TDZ LTS or RWY CL or RWY edge LTS or a combination of these. The visual reference must include a lateral element of the ground pattern.
CAT IIIA	50 ft	200 m	75 m	125 m	75 m	3 consecutive Centerline Lights of the APCH LTS or TDZ LTS or RWY CL or RWY edge LTS or a combination of these.
CAT IIIB	Below 50 ft	75 m	75 m	N/A	75 m	1 Centerline Light
CAT IIIB	NO DH	75 m Note 2	75 m Note 2	N/A	75 m Note 2	Not Required

Note 1: *100 DH AGL. Radio Altimeter (RA) altitude may be less or higher depending on the terrain profile during approach.*

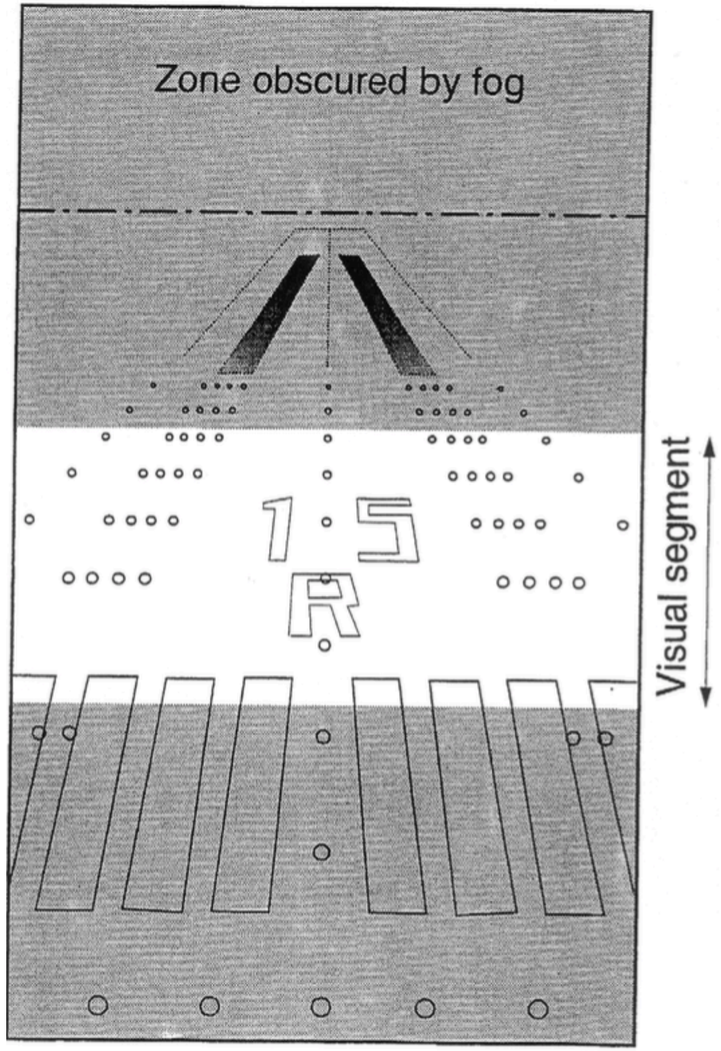
Note 2: *Only one transmissometer RVR is required (i.e. TDZ, MID or RO).*

Note 3: *The touchdown zone RVR is always controlling. If reported and relevant, the mid point and stop end RVR are also controlling. The minimum RVR value for the mid-point is 125 m or the RVR required for the touchdown zone if less, and 75 m for the stop-end. For aircraft equipped with a rollout guidance or control system, the minimum RVR value for the mid point is 75 m.*
"Relevant", in this context, means that part of the runway used during the high-speed phase of the landing down to a speed of approximately 60 knots.

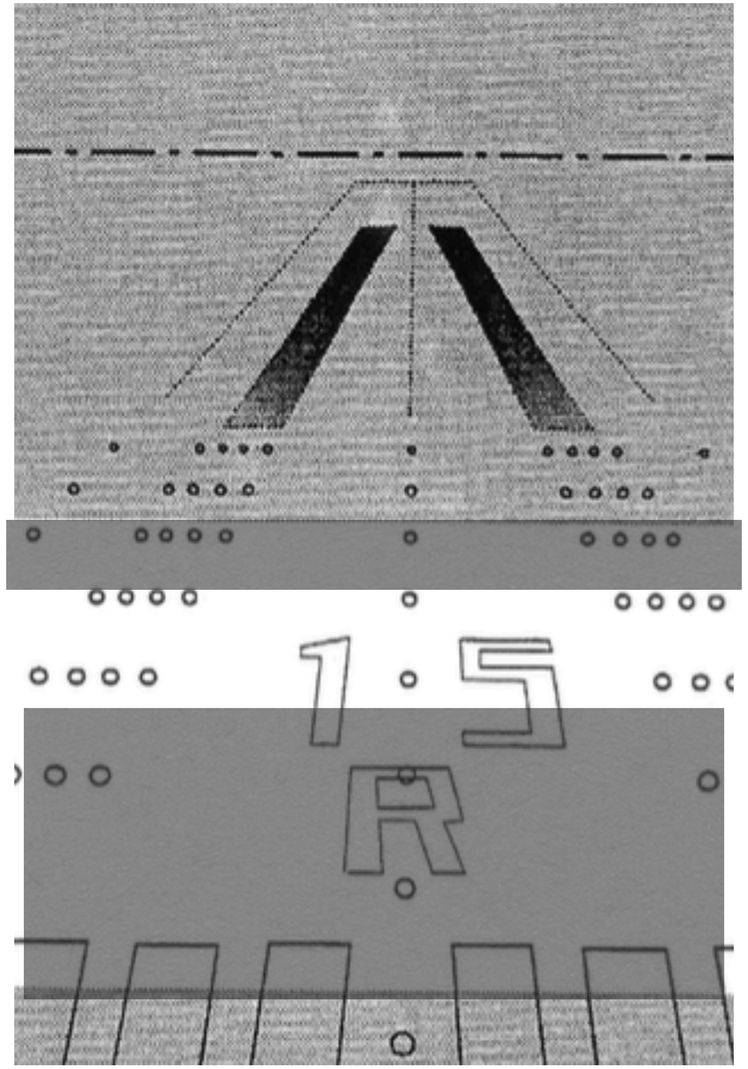
CAT II alla minima di 100ft - 300 m RVR



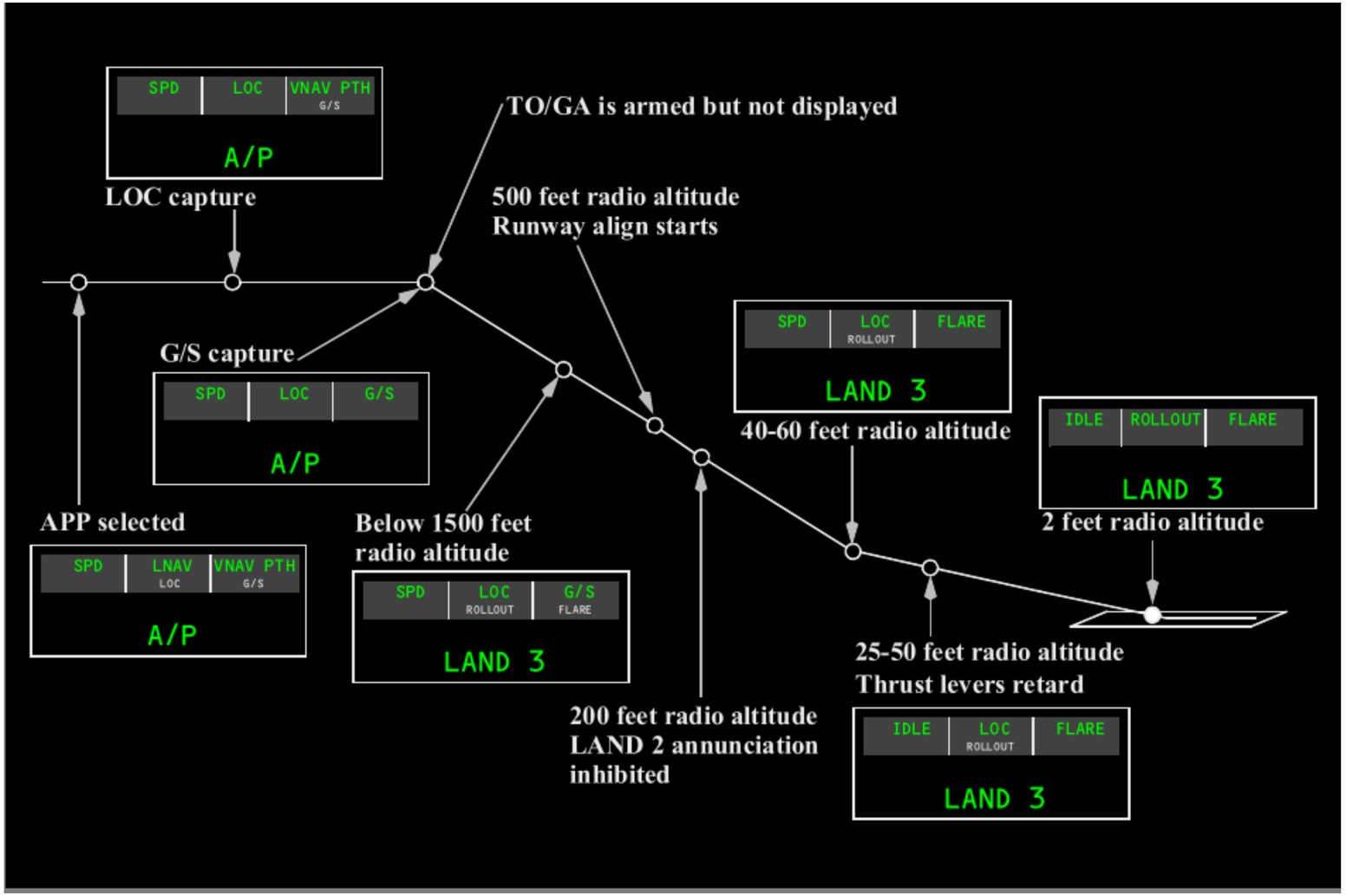
CAT III alla minima di 50ft - 200m RVR



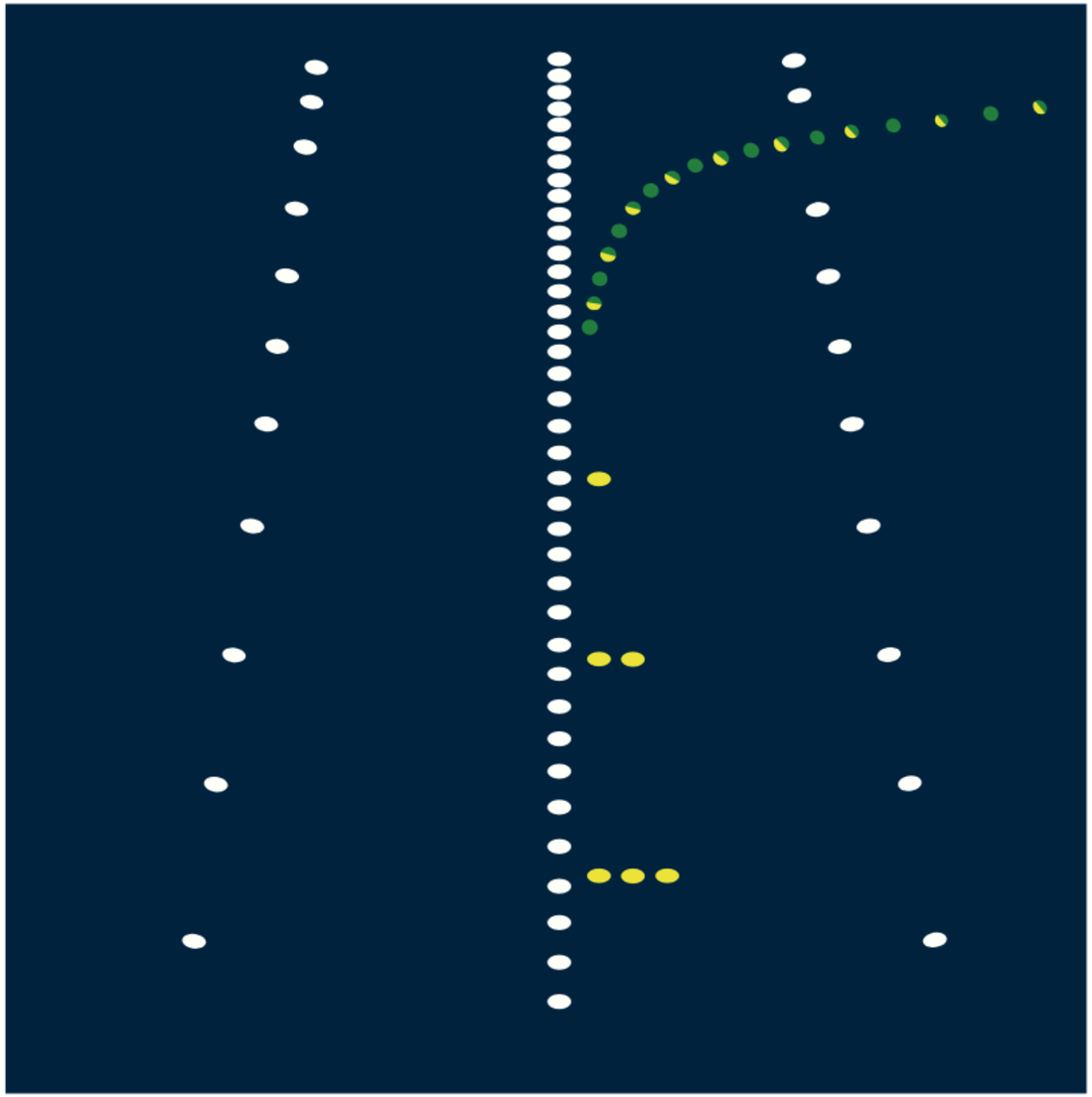
CAT III NO DH - 75m RVR



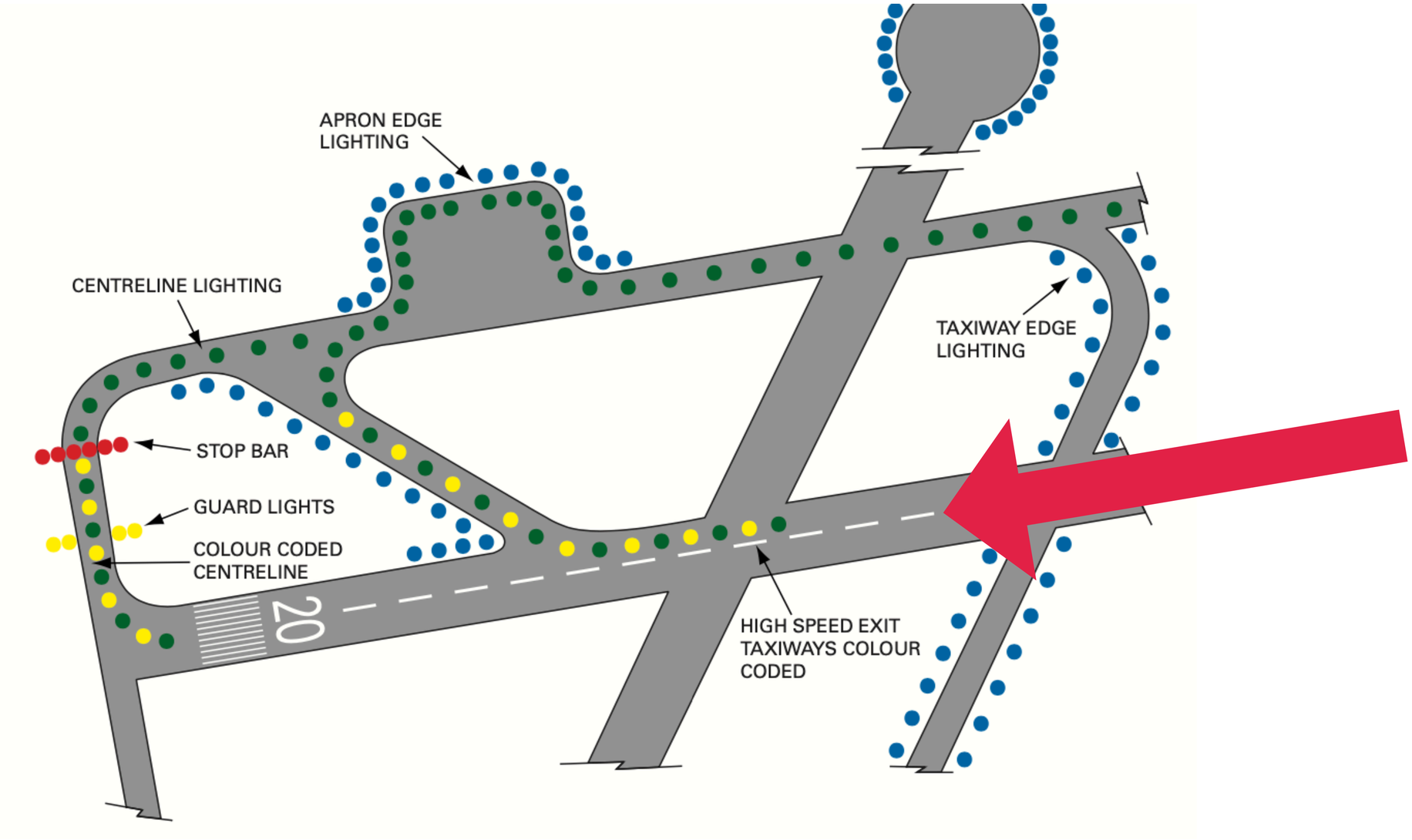
FMA durante avvicinamento



Rollout



Rollout


APRON EDGE
LIGHTING
CENTRELINE LIGHTING
TAXIWAY EDGE
LIGHTING
STOP BAR
GUARD LIGHTS
COLOUR CODED
CENTRELINE
20
HIGH SPEED EXIT
TAXIWAYS COLOUR
CODED