VTPP AD 2.1 AERODROME LOCATION INDICATOR AND NAME

VTPP - PHITSANULOK / PHITSANULOK AIRPORT

VTPP AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	ARP coordinates and site at AD	164658.56N 1001644.85E
2	Direction and distance from (city)	3 KM SE, from city
3	Elevation/Reference temperature	145 FT/40°C
4	Geoid Undulation at AD ELEV PSN	NIL
5	MAG VAR/Annual change	0.74°W (2016)/0.00°E
6	AD Administration, address, telephone, telefax, telex, AFS	Director of Phitsanulok Airport Phitsanulok Airport Phitsanulok Province Thailand Tel: +665 530 1010-13 Fax: +665 530 1009 AFS: VTPPYDYX
7	Types of traffic permitted (IFR/VFR)	IFR/VFR
8	Remarks	Operator: Department of Airports

VTPP AD 2.3 OPERATIONAL HOURS

1	Aerodrome Operator	2300-1500
2	Customs and immigration	On request
3	Health and sanitation	On request
4	AIS Briefing Office	2300-1430
5	ATS Reporting Office (ARO)	NIL
6	MET Briefing Office	NIL
7	ATS	H24
8	Fuelling	0100-1430
9	Handling	NIL
10	Security	NIL
11	De-icing	NIL
12	Remarks	NIL

VTPP AD 2.4 HANDLING SERVICES AND FACILITIES

1	Cargo-handling facilities	NIL
2	Fuel/oil types	JET A-1, AVGAS
3	Fuelling facilities/capacity	2 JET A-1 Refueller @ 12,000 L 1 AVGAS Refueller @ 3,000 L
4	De-icing facilities	NIL
5	Hangar space for visiting aircraft	NIL
6	Repair facilities for visiting aircraft	NIL
7	Remarks	NIL

VTPP AD 2.5 PASSENGER FACILITIES

1	Hotels	In the city
2	Restaurants	In the city
3	Transportation	Limousine and car hire from the airport
4	Medical facilities	NIL
5	Bank and Post Office	Bank: NIL Post Office: Open from 0130-0930
6	Tourist Office	NIL
7	Remarks	NIL

VTPP AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	AD category for fire fighting	Category 6
2	Rescue equipment	Yes
3	Capability for removal of disabled aircraft	NIL
4	Remarks	NIL

VTPP AD 2.7 SEASONAL AVAILABILITY - CLEARING

1	Types of clearing equipment	NIL
2	Clearance priorities	NIL
3	Remarks	The aerodrome is available all seasons.

VTPP AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	Apron surface and strength	Width x Length: 137.5 M Surface: Concrete Strength: PCN 57/R/C/X/T
2	Taxiway width, surface and strength	TWY A, B, C, D and E Width: 19 M Surface: Concrete and asphalt Strength: PCN 45/F/C/X/T TWY F and I Width: 23 M Surface: Concrete and asphalt Strength: PCN 61/F/C/X/T
3	Altimeter checkpoint location and elevation	NIL
4	VOR checkpoints	NIL
5	INS checkpoints	NIL
6	Remarks	NIL

VTPP AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	Marked
2	RWY and TWY markings and LGT	RWY AND TWY: Marked and lighted.
3	Stop bars	Marked
4	Remarks	NIL

VTPP AD 2.10 AERODROME OBSTACLES

In approach/TKOF areas			In circling areas and at AD		Remarks
1			2		3
RWY/Area affected	Obstacle type Elevation Markings/LGT	Coordinates	Obstacle type Elevation Markings/LGT	Coordinates	
a	b	c	a	b	
	Radio mast HGT 66 M painted red/white LGTD on top	164731N 1001658E	NIL	NIL	Microwave mast distance 1200 M from ARP, R-235 from PSL DVOR,
	Microwave mast HGT 45 M painted red/white LGTD on top	164650N 1001615E	NIL	NIL	
	TACAN HGT 15 M painted red/white LGTD on top	164630.63N 1001712.46E	NIL	NIL	

VTPP AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	Associated MET Office	Aeronautical Meteorological Station-Phitsanulok, Northern Meteorological Center, Thai Meteorological Department (TMD)
2	Hours of service MET Office outside hours	2300-1300 NIL
3	Office responsible for TAF preparation Periods of validity	Supply TAF from Northern Meteorological Center 24 HR
4	Type of landing forecast Interval of issuance	TREND 1 HR
5	Briefing/consultation provided	Personal Consultation Tel: +665 530 1422 ext. 7078
6	Flight documentation Language(s) used	NIL
7	Charts and other information available for briefing or consultation	S, U85, Daily Weather Forecast, satellite and radar images
8	Supplementary equipment available for providing information	Automated Weather Observation System (AWOS), Weather Radar
9	ATS units provided with information	Phitsanulok TWR
10	Additional information (limitation of service, etc.)	NIL

VTPP AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY NR	TRUE BRG	Dimensions of RWY(M)	Strength (PCN) and surface of RWY and SWY	THR coordinates RWY end coordinates THR geoid undulation	THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
14	143.69°	3000x45	PCN 61/F/C/X/T Concrete and asphalt	164738.00N 1001614.99E	THR 145 FT TDZ 145 FT
32	323.69°	3000x45	PCN 61/F/C/X/T Concrete and asphalt	164619.16N 1001714.69E	THR 145 FT TDZ 145 FT

Slope of RWY-SWY	SWY dimensions (M)	CWY dimensions (M)	Strip dimensions (M)	OFZ	Remarks
7	8	9	10	11	12
0%	NIL	NIL	3240x300	NIL	NIL
0%	60x60	NIL	3240x300	NIL	NIL

VTPP AD 2.13 DECLARED DISTANCES

RWY Designator	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks
1	2	3	4	5	6
14	3000	3000	3000	3000	NIL
32	3000	3000	3060	3000	NIL

VTPP AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH LGT type LEN INTST	THR LGT colour WBAR	VASIS (MEHT) PAPI	TDZ, LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST	RWY edge LGT LEN, spacing, colour INTST	RWY End LGT colour WBAR	SWY LGT LEN (M) colour	Remarks
1	2	3	4	5	6	7	8	9	10
14	NIL	Green	PAPI Left 3°	NIL	NIL	3000 M 60 M White, LIM	Red	NIL	NIL
32	CAT1 900 M	Green	PAPI Left 3° (15.72 M)	NIL	NIL	3000 M 60 M White, LIM	Red	NIL	NIL

VTPP AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	ABN/IBN location, characteristics and hours of operation	ABN: At Tower Building, FLG W G EV 6 SEC..
2	LDI location and LGT Anemometer location and LGT	NIL
3	TWY edge and centre line lighting	EDGE: ALL TWY
4	Secondary power supply/switch-over time	Secondary power supply to all lighting at the airport Switch-over time: 15 SEC
5	Remarks	Flares 2 HR PN

VTPP AD 2.16 HELICOPTER LANDING AREA

1	Coordinates TLOF or THR of FATO Geoid undulation	NIL
2	TLOF and/or FATO elevation M/FT	NIL
3	TLOF and FATO area dimensions, surface, strength, marking	NIL
4	True and MAG BRG of FATO	NIL
5	Declared distance available	NIL
6	APP and FATO lighting	NIL
7	Remarks	NIL

VTPP AD 2.17 ATS AIRSPACE

1	Designation and lateral limits	A circle of 5 NM radius centred on PSL DVOR/DME (164613.34N 1001728.70E)
2	Vertical limits	2000 FT/AGL
3	Airspace classification	C
4	ATS unit call sign Language(s)	Phitsanulok Tower English, Thai
5	Transition altitude	11000 FT
6	Remarks	NIL

VTPP AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequency	Hours of operation	Remarks
1	2	3	4	5
APP	Phitsanulok Approach	120.7 MHZ 284.0 MHZ	H24	* Emergency Freq.
TWR	Phitsanulok Tower	*121.5 MHZ 118.9 MHZ 236.6 MHZ	H24	
GND	Phitsanulok Ground	121.9 MHZ	H24	
ATIS	Phitsanulok Airport	263 KHZ	H24	

VTPP AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aid, MAG VAR CAT of ILS/MLS (For VOR/ILS/MLS, give declination)	ID	Frequency	Hours of operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
NDB	PL	263 KHZ	H24	164745.44N 1001632.62E		-Excessive ADF oscillation between 100° to 120° clock wise. -Airway radial 076 usable to 5 NM only. Distance 1270 M from South end of RWY 32
DVOR/DME	PSL	114.1 MHZ CH88X	H24	164613.34N 1001728.70E		DVOR/DME restriction, due to mountainous terrain surround DVOR/ DME station coverage check does not provide adequate signal to 40 NM at the required altitude in various areas as follows: -RDL 001°-130° ALT should not below 5,500 FT -RDL 131°-260° ALT should not below 3,000 FT -RDL 261°-360° ALT should not below 5,000 FT
ILS CAT I LOC RWY32	IPSL	110.1 MHZ	H24	164746.19N 1001608.82E		Designated operational coverage 18 NM ±10º and 10 NM ±35º of localizer course, no back course and voice feature, the antenna array is located on extended runway centre line at distance 310 M. from THR of runway 14.

Type of aid, MAG VAR CAT of ILS/MLS (For VOR/ILS/MLS, give declination)	ID	Frequency	Hours of operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
GP/DME		334.4 MHZ CH38X	H24	164629.87N 1001711.63E		Glide Path 3° Unusable beyond 7.0º right side of localizer course line. DME co-located with Glide Slope power output 100 watts Uni-directional
TACAN		CH99		1647.6N 10016.7E		Military Facility, operation on request 30 MIN PN to ATC.

VTPP AD 2.20 LOCAL AERODROME REGULATIONS

1. VFR REPORTING POINTS AND LOCAL PROCEDURES

1.1 Reporting points for VFR flight

In order to expedite and maintain an orderly flow of air traffic into Phitsanulok Airport, the procedures of the inbound traffic of VFR flights, conventional and prop-jet aircraft is set up as follow:

1.1.1 Aircraft entering to land from north of Phitsanulok Airport, shall report over Watt Boot District, designated as WHISKY BRAVO (1659.5N 10019.0E) which is approximately 13.5 NM on R-007 of PSL VOR/DME. When reaching WB the aircraft will be instructed to join aerodrome traffic circuit accordingly.

1.1.2 Aircraft entering to land from east of Phitsanulok Airport, shall report over Wang Thong District, designated as WHISKY TANGO (1649.0N 10026.0E) which is approximately 9 NM on R-069 of PSL VOR/DME. When reaching WT the aircraft will be instructed to join aerodrome traffic circuit accordingly.

1.1.3 Aircraft entering to land from south of Phitsanulok Airport, shall report over Sam Ngam District, designated as SIERRA NOVEMBER (1630.5N 10012.5E) which is approximately 17 NM on R-191 of PSL VOR/DME. When reaching SN the aircraft will be instructed to join aerodrome traffic circuit accordingly.

1.1.4 Aircraft entering to land from west of Phitsanulok Airport, shall report over Bang Rakam District, designated as BRAVO ROMEO (1645.5N 10007.5E) which is approximately 10 NM on R-263 of PSL VOR/DME. When reaching BR the aircraft will be instructed to join aerodrome traffic circuit accordingly.

1.1.5 Aircraft entering from northwest of Phitsanulok Airport, shall report over Kong Krairat District, designated as KILO KILO (1656.0N 9958.0E) which is approximately 21 NM on R-292 of PSL VOR/DME. When reaching KK the aircraft will be instructed to join aerodrome traffic circuit accordingly.

1.2 Aerodrome traffic circuit

Using both sides of traffic circuit.

1.3 Overhead approach pattern.

a) Using runway 14 by right turn pattern.
b) Using runway 32 by left turn pattern.

2. 180 DEGREE TURN ON THE RUNWAY

To prevent runway pavement damage, all aircraft Maximum Takeoff Weight (MTOW) more than 5700 KG are not allowed to make 180 degree turn on the runway. The turn shall be made on the runway turn pad at the end of runway 14 and 32 only. Any breach done by the aircraft operator shall be recorded and reported to The Civil Aviation Authority of Thailand / The Headquarter of that operator shall be liable for the compensation caused by such violation.

VTPP AD 2.21 NOISE ABATEMENT PROCEDURES

NIL

VTPP AD 2.22 FLIGHT PROCEDURES

1. PROCEDURES FOR STANDARD ARRIVAL RNAV (VOR/DME) INITIAL APPROACH

1.1 Basic Design for Arrival

1.1.1 The RNAV (DVOR/DME) initial approach procedures provide lateral and vertical profiles, which will allow the aircraft to fly to and intercept the final approach course without receiving radar vectors of altitude assignments.

1.1.2 The RNAV (DVOR/DME) initial approach procedures start as the aircraft enters IAF.

1.1.3 The arrival ends as the aircraft completes the final approach course fix (FAF or FAP).

1.1.4 Lateral and vertical guidance from the final approach course fix inbound will be conventional ground base navigation.

1.1.5 The procedures designed are predicated on DVOR/DME only.

1.1.6 The RNAV (DVOR/DME) initial approach procedures shall not be created by the pilot who entered waypoints. They must be retrieved from the aircraft database and once retrieved, pilots must check and verify the continuity of the waypoints that join the arrival to the final approach course.

1.1.7 Operators intending to use the above mentioned RNAV (DVOR/DME) initial approach procedure need a proper certification and operational approval from their state of registration.

1.1.8 For flight planning, the operator of the aircraft fitted with RNAV having a navigation accuracy meeting RNP5 or better shall insert the designator “R” in item 10 and file flight plan routes via VOR/DME defined ATS routes in item 15 of the flight plan RNAV(DVOR/DME) initial approach procedures shall not be used for flight planning.

1.2 Clearance

1.2.1 All transitions to RNAV (DVOR/DME) initial approach procedures must be instructed by ATC, otherwise proceed to the PSL DVOR/ DME.

1.2.2 Upon receiving the RNAV (DVOR/DME) initial approach procedures, no further clearance needed to be issued to fly the lateral portion of the arrival when entering the TMA.

1.2.3 Pilot must receive clearance from ATC to start descent from the enroute cruising level.

1.3 Phraseology and Associated Pilot Action

1.3.1 When descent clearance is obtained follow the lateral and vertical plane route respecting all charted speed and altitude.

1.3.2 No speeds, heading or altitude will be issued by ATC unless a conflict involving the flight path is foreseen.

1.3.3 Pilot who do not intend to fly with RNAV (DVOR/DME) initial approach procedures should advise the controller.

1.3.4 An approach clearance should be issued and acknowledged by the time the base turn is reached. If an approach clearance is not issued prior to turning final, it may be expected to hold for separation.

1.3.5 Do not descend below the minimum holding altitude or as amended by ATC except the aircraft is cleared on profile descent.

1.3.6 As soon as an approach clearance has been received, continue to fly the localizer inbound or descend on final approach gradient and contact tower for further instructions. If a missed approach is required, follow the missed approach procedure.

1.3.7 ATC may assign speeds and altitude without cancelling the RNAV (DVOR/DME) initial approach procedures. Assignment of radar vectors will automatically interrupt the RNAV (DVOR/DME) initial approach procedures and take the aircraft away form the depicted lateral tracks. However, once the traffic situation has been resolved, ATC may give an instruction for the aircraft to precede via the RNAV (DVOR/ DME) initial approach procedures.

1.3.8 RNAV (DVOR/DME) initial approach procedures clearance phraseologies

1.3.8.1 “Cleared (STAR designator) arrival “means authorization to fly RNAV (DVOR/DME) initial approach procedures, altitude and speed will be assigned by ATC.

Example 1: ATC- THA142 Cleared via MONAI ONE ALPHA arrival descend to FL 130

Example 2: ATC- TAA142 Cleared direct MONAI then MOMAI ONE ALPHA arrival descend to FL 130 (incase of off route inbound)

1.3.8.2 “Cleared (star designator) arrival and profile” means authorization to fly RNAV (DVOR/DME) initial approach procedures- rout as published, including the vertical constraints depicted on the procedure

Example 1: ATC-TH212 Cleared MONAI ONE ALPHA arrival and profile

1.3.8.3 “Cleared….(type)….Approach” means authorization to execute the instrument approach via the particular RNAM (DVOR/DME) initial approach procedures

Example 1: ATC- tha212 Cleared ILS/DME RWY 32 Approach report established

1.3.8.4 When radiotelephony is used for the name of waypoints, the abbreviation are transmitted using the individual letters in non-phonetic form.

Example 1: ATC- THA406 Cleared to PP101 (PEE..PEE ONE..ZERO..ONE)

1.4 Communication Failure Procedure

1.4.1 In case a tow-way radio communication failure occurs during the transition to the final approach without receiving an approach clearance. Pilots have to squawk A7600 and maintain the last assigned altitude. The aircraft has to proceed in accordance with the latest ATC route clearance acknowledged and make on complete holding at LAKSI OR AORDY as published. The pilot can commence for approach

1.4.2 In case an approach clearance has been received and acknowledged, The pilot shall fly continually by means of an instrument approach procedure. If landing can not be made, follow the appropriate missed approach procedures and hold.

1.4.3 In all cased where the aircraft return to hold fix the procedure to be adopted is the basic Radio Failure Procedure detailed in Part 15 ATM.

1.5 System failures

In case even of an RNAV systems failure or the failure of a sole navigation infrastructure, the pilot should revert to conventional navigation and may be provide with radar vectoring, where this is available.

2. PROCEDURES FOR STANDARD ARRIVAL RNAV INITIAL APPROACH

2.1 Basic Design for Arrival

2.1.1 The RNAV initial approach procedures provide lateral and vertical profiles, which will allow the aircraft to fly to and intercept the final approach course without receiving radar vectors or altitude assignments.

2.1.2 The RNAVE initial approach procedures start as the aircraft enters IAF.

2.1.3 The arrival ends as the aircraft completes the final approach course fix (FAP or FAP).

2.1.4 Lateral and vertical guidance from the final approach course fix inbound will be conventional ground base navigation.

2.1.5 The RNAV initial approach procedures shall not be created by the pilot who entered waypoints. They must be retrieved from the aircraft database and once retrieved, pilots must check and verify the continuity of the waypoints that join the arrival to the final approach course. It is noted that the conventional aircraft must follow ATC instruction.

2.1.6 Operators intending to use the above mentioned RNAV initial approach procedure need a proper certification and operational approval from their state of registration.

2.1.7 For flight planning, the operator of the aircraft fitted with RNAV having a navigation accuracy meeting RNP5 or better shall insert the designator “R” in item 10 and file flight plan routes via VOR/DEM defined ATS routes in item 15 of the flight plan RNAV initial approach procedures shall not be used for flight planning.

2.2 Clearance

2.2.1 All transitions to RNAV initial approach procedures must be instructed by ATC, otherwise proceed to the PSL DVOR/DME

2.2.2 Upon receiving the ARNAV initial approach procedures, no further clearance needed to be issued to fly the lateral portion of the arrival when entering the TMA.

2.2.3 Pilot must receive from ATC to start descent from the enroute cruising level.

2.3 Phraseology and Associated Pilot Actions

2.3.1 When descent clearance is obtained follow the lateral and vertical plane route respecting all charted speed and altitude.

2.3.2 No speeds, headings or altitude will be issued by ATC unless a conflict involving the flight path is foreseen.

2.3.3 Pilot who do not intend to fly with RNAV initial approach procedures should advise the controller.

2.3.4 An approach clearance should be issued and acknowledged by the time the base turn is reached. If an approach clearance is not

issued prior to turning final, it may be expected to hold for separation.

2.3.5 Do not descend below the minimum holding altitude or as amended by ATC except the aircraft is cleared on profile descent

2.3.6 As soon as an approach clearance has been received, continue to fly the localizer inbound or descend on final approach gradient and contact tower for further instructions. If missed approach is required, follow the missed approach procedure.

2.3.7 ATC may assign speeds and altitude without cancelling the RNAV initial approach procedures. Assignment of radar vectors will automatically interrupt the RNAV initial approach procedures and take the aircraft away from the depicted lateral tracks. However, once the traffic situation has been resolved, ATC may give an instruction for the aircraft to proceed via the RNAV initial approach procedures.

2.3.8 RNAV initial approach procedures clearance phraseologies

2.3.8.1 “Cleared (STAR designator) arrival “means authorization to fly RNAV (DVOR/DME) initial approach procedures, altitude and speed will be assigned by ATC.

Example 1: ATC- THA142 Cleared via MONAI ONE ALPHA arrival descend to FL 130

Example 2: ATC- TAA142 Cleared direct MONAI then MOMAI ONE ALPHA arrival descend to FL130 (incase of off route inbound)

2.3.8.2 “Cleared (star designator) arrival and profile” means authorization to fly RNAV (DVOR/DME) initial approach procedures- rout as published, including the vertical constraints depicted on the procedure.

Example 1: ATC- TH212 Cleared MONAI ONE ALPHA arrival and profile

2.3.8.3 “Cleared….(type)….Approach” means authorization to execute the instrument approach via the particular RNAM (DVOR/DME) initial approach procedures

Example 1: ATC- tha212 Cleared ILS/DME RWY 32 Approach report established

2.3.8.4 When radiotelephony is used for the name of waypoints, the abbreviation are transmitted using the individual letters in non-phonetic form.

Example 1: ATC- THA406 Cleared to PP101(PEE..PEE ONE..ZERO..ONE)

2.4 Communication Failure Procedure

2.4.1 In case a two-way radio communication failure occurs during the transition to the final approach without receiving an approach clearance. Pilots have to squawk A7600 and maintain the last assigned altitude. The aircraft has to proceed in accordance with the latest ATC route clearance acknowledged and make on complete holding at LEKSI or AORDY as published. The pilot can commence for approach.

2.4.2 In case an approach clearance has been received and acknowledged, The pilot shall fly continually by means of on instrument approach procedure. If landing can not be made, follow the appropriate missed approach procedures and hold.

2.4.3 In all cased where the aircraft return to holding fix the procedure to be adopted is the basic Radio Failure Procedure detailed in Part 15 ATM.

2.5 System failures

In case even of an RNAV systems failure or the failure of a sole navigation infrastructure, the pilot should revert to conventional navigation and may be provide with radar vectoring. Where this is available.

3. IMPLEMENTATION OF THE CONTINUOUS DESCENT OPERATIONS (CDO) FOR ARRIVALS INTO PHITSANULOK AIRPORT

3.1 INTRODUCTION

3.1.1 As part of AEROTHAI.s ongoing efforts to improve operational efficiency and air traffic management, Continuous Descent Operations (CDO) will commence from 1700 UTC on 12 October 2017 with trial period from 1700 UTC on 11 September 2017 until 1659 UTC on 12 October 2017. CDO is an operation, enabled by airspace design, procedure design and ATC facilitation, in which an aircraft continuously descends, to the greatest possible extent, by employing minimum engine thrust, ideally in a low drag configuration, prior to Final Approach Fix / Final Approach Point.

3.1.2 Vertical profile of CDO aims to improve flight stability (minimal level-off), increase terrain safety, ensure environmental friendly procedures by reducing aircraft noise, fuel consumption and emissions, enhanced flight punctuality and predictability, as well as other economic benefits for flights into Phitsanulok Airport.

3.2 CONDITION OF USE

3.2.1 Conditions for Conducting a CDO

3.2.1.1 CDO application can be either under surveillance or procedural environment.

3.2.1.2 CDO can be requested by pilot or initiated by ATC. Pilot should request CDO at least 5 minutes prior to reaching Top of Descent

(TOD) for any type of approach.

Note: *1: There is limited benefit if CDO clearance is received at altitude lower than 10,000 FT*

Note: *2: In case of CDO procedure being impractical due to an emergency, weather condition, traffic situation or any other reasons, an alternate instruction will be issued by ATC, or requested by pilot.*

3.2.2 Application of Other ATC Procedures

3.2.2.1 When conducting CDO, standard ATC procedures continue to apply. ATC may issue clearance to an intermediate approach level while facilitating a CDO profile.

3.2.2.2 In doing so, ATC shall endeavour to issue further descent clearance prior to the CDO flight reaching the last assigned altitude so as to prevent aircraft from levelling off.

3.2.3 Change of Runway-In-Use

3.2.3.1 In case of change on Runway-in-Use prior to aircraft reaching Final Approach Fix / Final Approach point, i.e. from RWY 32 to RWY14 CDO procedure shall be cancelled.

3.2.3.2 Pilot should then re-plan arrival route to the revised landing runway and inform ATC if the flight would still be able to meet all required speed/altitude restrictions.

3.2.4 Aircraft Type

CDO procedure is applicable for FMS capable aircraft.

3.2.5 Arrival Routes

CDO procedure is in place for all aircraft on W9 inbound to Phitsanulok Airport.

3.2.6 Operations Time

CDO is available 24 hours.

3.2.7 Available Runway

CDO procedure is available for RWY 32.

3.2.8 Types of Approach

3.2.8.1 ILS OR LOC RWY 32

3.2.8.2 RNAV (GNSS) RWY 32

3.2.9 Speed

When traffic permits, aircraft will operate at an optimum speed calculated by FMS, depending on aircraft type. The following speed guidance should be applicable in case of high traffic volume.

Flight Status	Speed Range
Above 10 000 FT	250 – 320 IAS
Below 10 000 FT	220 – 250 IAS
Final Segment (up to 4 NM)	160 – 180 IAS

3.2.10 Minimum Flight Altitude

3.2.10.1 Outside Phitsanulok TMA, aircraft shall comply with altitude constraints of the CDO procedure.

3.2.10.2 Inside Phitsanulok TMA, during CDO, minimum safety altitudes are identical to those within Instrument Approach Procedures required or minimum radar vector altitude.

3.3 CDO PROCEDURE

3.3.1 Before aircraft reaching TOD (approximately 150 NM from the airport), either pilot or ATC can initiate CDO using phraseologies

described in paragraph 3.4.

3.3.2 When all requirements for CDO are met and situation permits, CDO will commence.

3.3.3 Pilot shall operate aircraft FMS to plan optimal descent profile and report CDO execution commencing descent.

3.3.4 Aircraft should descend continuously on normal arrival route to Phitsanulok TMA.

3.3.5 Longitudinal separation required will be at least 4 minutes or 8 NM on final approach segment between CDO traffic.

3.3.6 Operations without Vectoring

3.3.6.1 ILS OR LOC RWY 32 Procedure

Aircraft Arriving on W9

- After passing, 30 NM from PSL DVOR, altitude not lower than 8,000 FT., then proceed to GITAR altitude not lower than 5,000 FT. and follow the ILS or LOC RWY 32 procedure as published in AIP Thailand.
- The pilot may request permission to fly directly to Intermediate Fix (IF); however, this would be an ATC's jurisdiction whether the request can be approved, depending on traffic conditions. In this case, the pilot shall fly directly to (IF), and cross 30 NM from PSL DVOR, altitude not lower than 8,000 FT., following the ILS or LOC RWY 32 procedure as published in AIP Thailand.

3.3.6.2 RNAV (GNSS) RWY 32 Procedure

Aircraft Arriving on W9

- After passing, PERIN 30 NM from PSL DVOR, altitude not lower than 8,000 FT., then proceed to KANPU altitude not lower than 3,200 FT. and follow the RNAV (GNSS) RWY 32 procedure as published in AIP Thailand.
- The pilot may request permission to fly directly to (IF); however, this would be an ATC's jurisdiction whether the request can be approved, depending on traffic conditions. In this case, the pilot shall fly directly to (IF) and cross 30 NM from PSL DVOR, altitude not lower than 8,000 FT., following the RNAV (GNSS) procedure as published in AIP Thailand.

3.3.7 Operations under Vectoring

3.3.7.1 Pilot should receive CDO clearance at altitude not lower than 10,000 FT.

3.3.7.2 ATC shall provide vectoring guidance and track mile estimate to pilot.

3.3.8 Radio Communications Failure

3.3.8.1 In the event of radio communication failure, CDO flight will be terminated immediately.

3.3.8.2 Pilot is to apply radio failure procedures stated in AIP Thailand ENR 1.6-6 paragraph 6.

3.4 PHRASEOLOGY

3.4.1 The following phraseology does not phrases and regular radiotelephony procedure words contain in Doc 4444 and Doc 9432, but it enables clear and concise communications between pilot and controller to maintain safety of CDO arrivals.

3.4.2 ATC-initiated CDO

"(aircraft call sign), (ATC unit), CDO AVAILABLE, DO YOU ACCEPT?"

3.4.3 Pilots response to ATC-initiated CDO

3.4.3.1 "(aircraft call sign), ACCEPT CDO"

3.4.3.2 "(aircraft call sign), NEGATIVE CDO"

3.4.4 Pilot-requested CDO

"(ATC Unit), (aircraft call sign), REQUEST CDO (type of approach) APPROACH"

3.4.5 Approval CDO by Bangkok Area Control Centre

3.4.5.1 "(aircraft call sign), CDO (type of approach) APPROVED DESCEND TO (level or altitude), QNH (number)"

3.4.5.2 "(aircraft call sign), CLEARED DIRECT TO (point), CDO DESCEND (level or altitude), QNH (number)"

3.4.6 Denial CDO by Bangkok Area Control Centre

3.4.6.1 “(aircraft call sign), UNABLE TO APPROVED, DUE TO (reason)”

3.4.6.2 “(aircraft call sign), EXPECT CDO FROM PHITSANULOK APPROACH”

3.4.7 CDO Cleared or Approved by Phitsanulok Approach Control Unit

3.4.7.1 “(aircraft call sign), DIRECT TO (point), DESCEND (level or altitude), QNH (number), CLEARED CDO (type of approach) APPROACH RWY 32, REPORT ESTABLISHED”

3.4.7.2 “(aircraft call sign), DESCEND TO (level), QNH (number), CDO (type of approach) APPROVED”

3.4.8 When vectoring for CDO

“(aircraft call sign), FLY HEADING (three digits); TURN LEFT (or RIGHT) HEADING (three digits) VECTORING FOR CDO, POSITION (number) MILES FROM TOUCHDOWN”

3.4.9 CDO Cancellation

3.4.9.1 “(aircraft call sign), CANCEL CDO DUE TO (reason), STOP DESCEND (level or altitude), QNH (number)”

3.4.9.2 “(aircraft call sign), CDO TERMINATED DUE TO (reason)”

3.4.10 Resuming CDO

“(aircraft call sign), RESUME CDO DIRECT (point), DESCEND TO (level or altitude), QNH (number), CLEAR (type of approach) APPROACH RWY 32”

3.4.11 Pilot report leaving assigned level

“(aircraft call sign), CDO LEAVING (level)”

3.4.12 Warning of aircraft below CDO Profile

“(aircraft call sign), BELOW CDO PROFILE, ALTITUDE SHOULD BE (altitude) OR ABOVE”

3.5 INFORMATION/TRAINING

3.5.1 Each airline must ensure that, for each type of aircraft, pilots are aware of CDO performance requirements.

3.5.2 Airlines are expected to define strategy to be adopted to drag-generating parts extension to stabilize aircraft in landing configuration at an altitude in compliance with flight safety, taking into account glide path at 3° in Final Approach.

VTPP AD 2.23 ADDITIONAL INFORMATION

NIL

VTPP AD 2.24 CHARTS RELATED TO AN AERODROME

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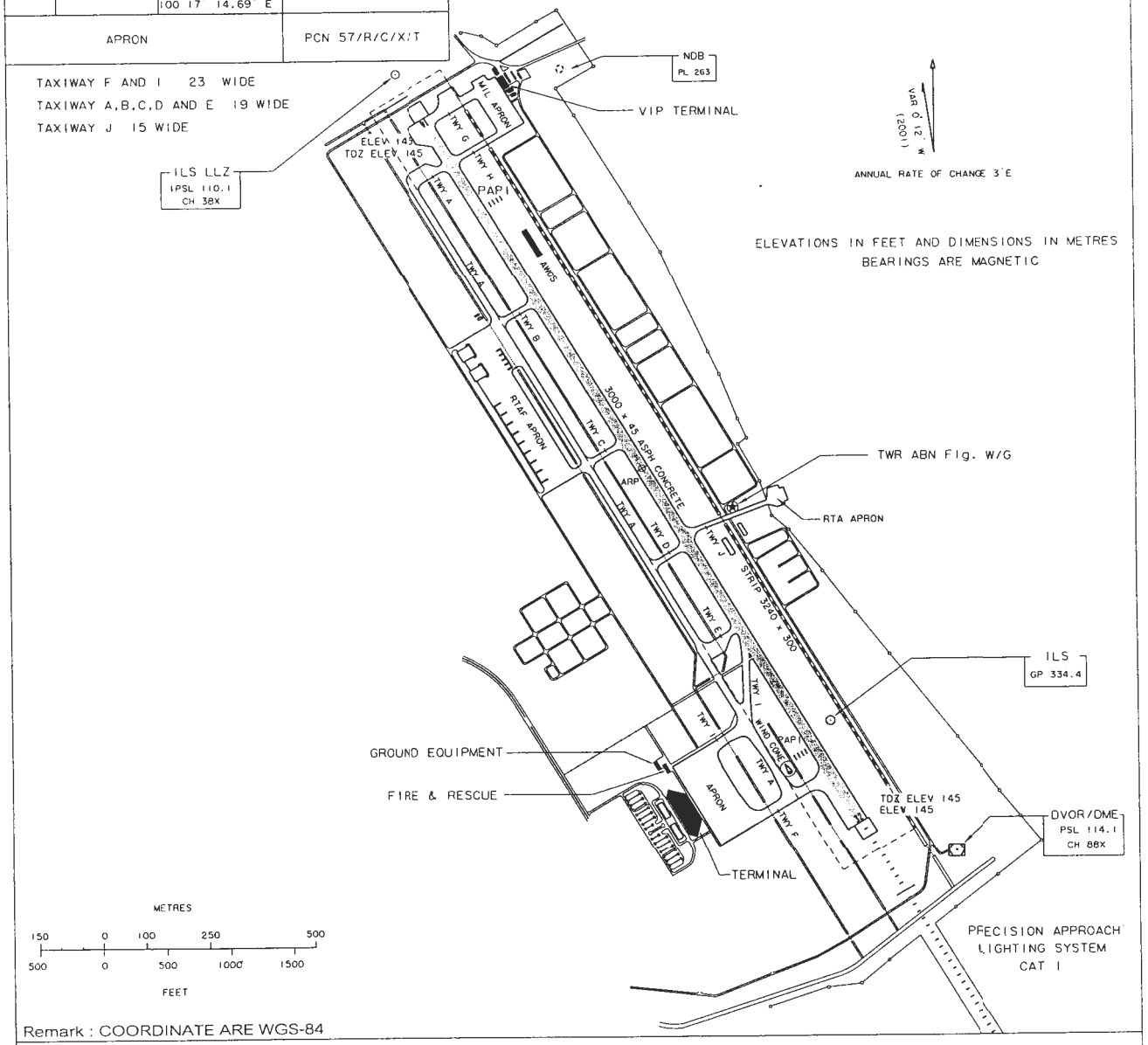
AERODROME CHART-ICAO 16° 46' 59" N 100° 16' 45" E ELEV 145 ft 44 m

TWR 118.9 236.6

PHITSANULOK/Phitsanulok

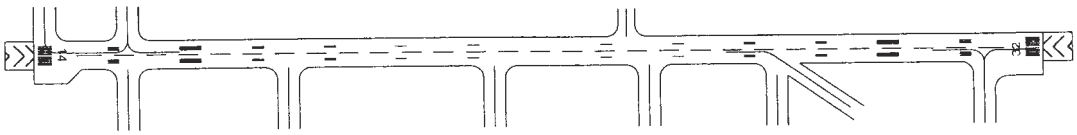
RWY	DIRECTION	THR	BEARING STRENGTH
14	144°	16° 47' 38.00" N 100° 16' 14.99" E	PCN 61/F/C/X/T runway and taxiway F,I
32	324°	16° 46' 19.16" N 100° 17' 14.69" E	
APRON			PCN 57/R/C/X/T

TAXIWAY F AND I 23 WIDE
TAXIWAY A,B,C,D AND E 19 WIDE
TAXIWAY J 15 WIDE

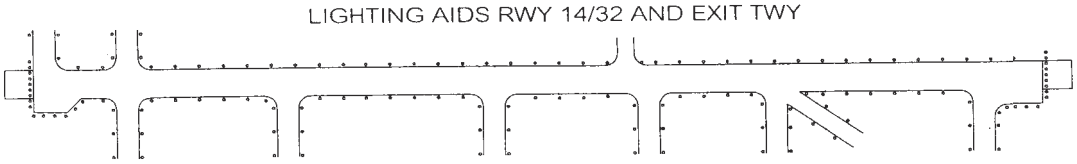


Remark : COORDINATE ARE WGS-84

MARKING AIDS RWY 14/32 AND EXIT TWY



LIGHTING AIDS RWY 14/32 AND EXIT TWY



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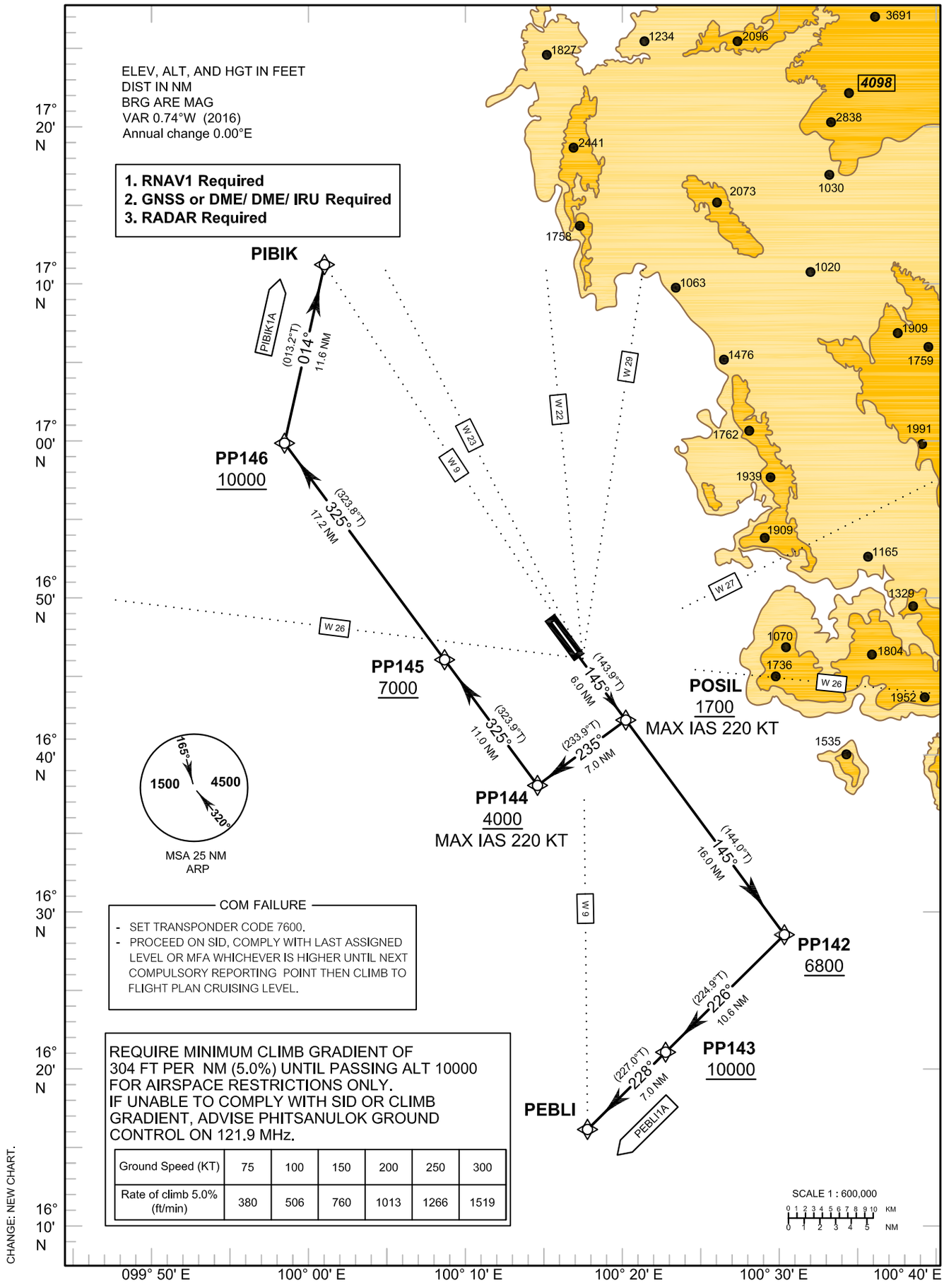
STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

TRANSITION ALTITUDE
11000

APP : 120.7, 284.0
TWR : 118.9, 236.6
GND : 121.9

PHITSANULOK/Phitsanulok (VTPP)
RNAV RWY14

PEBLI1A PIBIK1A



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STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

PHITSANULOK/Phitsanulok (VTPP)
RNAV RWY14

PEBLI1A PIBIK1A

TABULAR DESCRIPTION

RNAV RWY14

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course ° M (° T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KT)	VPA/ TCH	Navigation Specification
010	-	DER RWY 14	-	-	+0.74	-	-	-	-	-	RNAV 1
020	CF	POSIL	-	145°(143.9°)	+0.74	6.0	-	+1700	- 220	-	RNAV 1
030	TF	PP142	-	145°(144.0°)	+0.74	16.0	R	+6800	-	-	RNAV 1
040	TF	PP143	-	226°(224.9°)	+0.74	10.6	R	+10000	-	-	RNAV 1
050	TF	PEBLI	-	228°(227.0°)	+0.74	7.0	-	-	-	-	RNAV 1
010	-	DER RWY 14	-	-	+0.74	-	-	-	-	-	RNAV 1
020	CF	POSIL	-	145°(143.9°)	+0.74	6.0	R	+1700	- 220	-	RNAV 1
030	TF	PP144	-	235°(233.9°)	+0.74	7.0	R	+4000	- 220	-	RNAV 1
040	TF	PP145	-	325°(323.9°)	+0.74	11.0	-	+7000	-	-	RNAV 1
050	TF	PP146	-	325°(323.8°)	+0.74	17.2	R	+10000	-	-	RNAV 1
060	TF	PIBIK	-	014°(013.2°)	+0.74	11.6	-	-	-	-	RNAV 1

WAYPOINT LIST

RNAV RWY14

Waypoint Identifier	Coordinates	
DER RWY 14	16° 46' 19.16" N	100° 17' 14.69" E
POSIL	16° 41' 27.08" N	100° 20' 55.71" E
PP144	16° 37' 18.47" N	100° 15' 02.36" E
PP145	16° 46' 13.74" N	100° 08' 16.95" E
PP146	17° 00' 10.25" N	099° 57' 41.76" E
PIBIK	17° 11' 30.33" N	100° 00' 27.77" E
PP142	16° 28' 27.95" N	100° 30' 44.27" E
PP143	16° 20' 55.49" N	100° 22' 57.33" E
PEBLI	16° 16' 05.94" N	100° 17' 36.21" E

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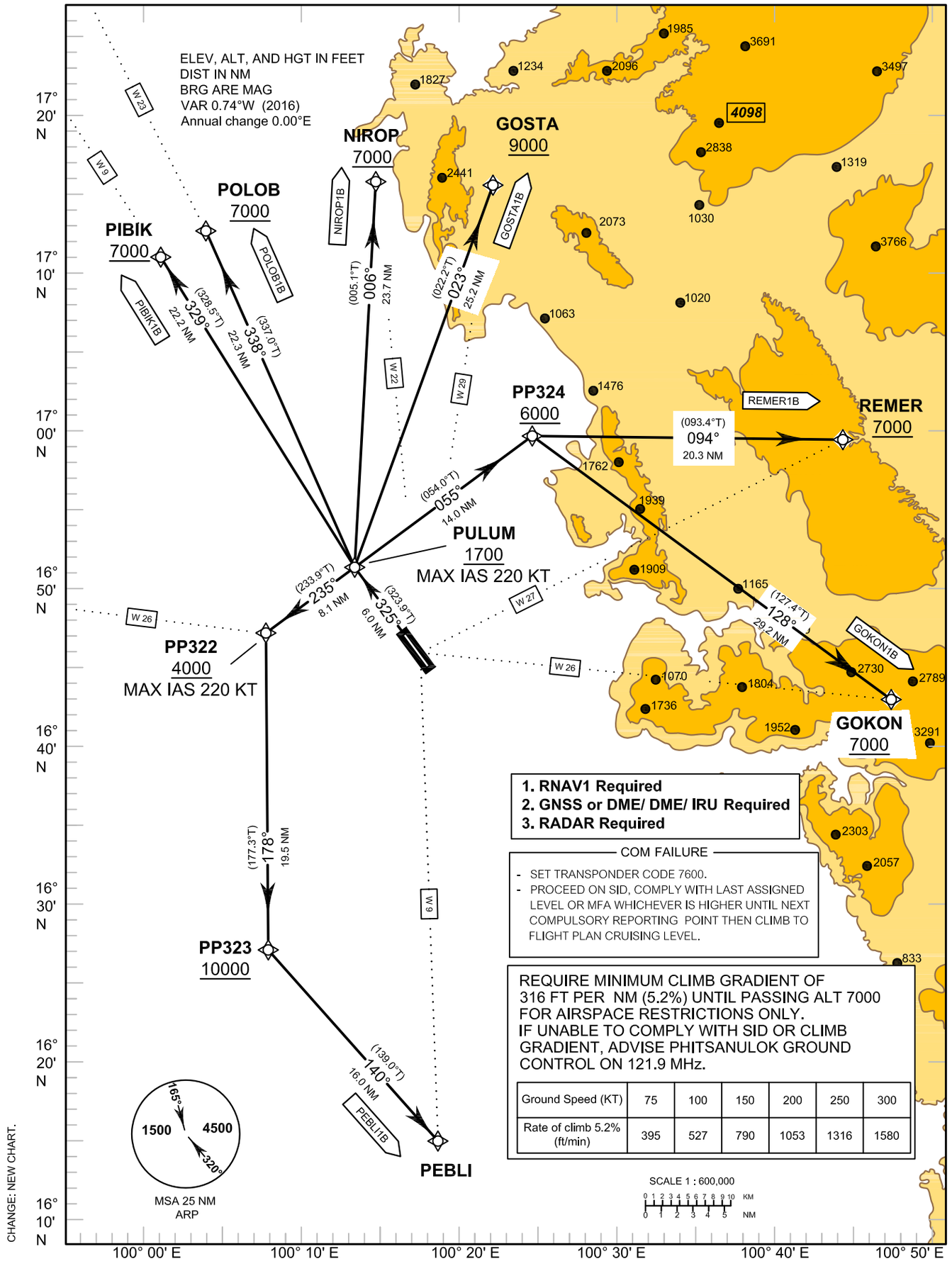
STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

TRANSITION ALTITUDE
11000

APP : 120.7, 284.0
TWR : 118.9, 236.6
GND : 121.9

PHITSANULOK/Phitsanulok (VTPP)
RNAV RWY32

GOKON1B GOSTA1B NIROP1B
PEBLI1B PIBIK1B POLOB1B REMER1B



CHANGE: NEW CHART.

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

PHITSANULOK/Phitsanulok (VTPP)
RNAV RWY32

GOKON1B GOSTA1B NIROP1B
PEBLI1B PIBIK1B POLOB1B REMER1B

TABULAR DESCRIPTION

RNAV RWY32

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course ° M (° T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KT)	VPA/ TCH	Navigation Specification
010	-	DER RWY 32	-	-	+0.74	-	-	-	-	-	RNAV 1
020	CF	PULUM	-	325°(323.9°)	+0.74	6.0	R	+1700	-220	-	RNAV 1
030	TF	PP324	-	055°(054.0°)	+0.74	14.0	R	+6000	-	-	RNAV 1
040	TF	GOKON	-	128°(127.4°)	+0.74	29.2	-	+7000	-	-	RNAV 1
010	-	DER RWY 32	-	-	+0.74	-	-	-	-	-	RNAV 1
020	CF	PULUM	-	325°(323.9°)	+0.74	6.0	R	+1700	-220	-	RNAV 1
030	TF	GOSTA	-	023°(022.2°)	+0.74	25.2	-	+9000	-	-	RNAV 1
010	-	DER RWY 32	-	-	+0.74	-	-	-	-	-	RNAV 1
020	CF	PULUM	-	325°(323.9°)	+0.74	6.0	R	+1700	-220	-	RNAV 1
030	TF	NIROP	-	006°(005.1°)	+0.74	23.7	-	+7000	-	-	RNAV 1
010	-	DER RWY 32	-	-	+0.74	-	-	-	-	-	RNAV 1
020	CF	PULUM	-	325°(323.9°)	+0.74	6.0	L	+1700	-220	-	RNAV 1
030	TF	PP322	-	235°(233.9°)	+0.74	8.1	L	+4000	-220	-	RNAV 1
040	TF	PP323	-	178°(177.3°)	+0.74	19.5	L	+10000	-	-	RNAV 1
050	TF	PEBLI	-	140°(139.0°)	+0.74	16.0	-	-	-	-	RNAV 1
010	-	DER RWY 32	-	-	+0.74	-	-	-	-	-	RNAV 1
020	CF	PULUM	-	325°(323.9°)	+0.74	6.0	R	+1700	-220	-	RNAV 1
030	TF	PIBIK	-	329°(328.5°)	+0.74	22.2	-	+7000	-	-	RNAV 1
010	-	DER RWY 32	-	-	+0.74	-	-	-	-	-	RNAV 1
020	CF	PULUM	-	325°(323.9°)	+0.74	6.0	R	+1700	-220	-	RNAV 1
030	TF	POLOB	-	338°(337.0°)	+0.74	22.3	-	+7000	-	-	RNAV 1
010	-	DER RWY 32	-	-	+0.74	-	-	-	-	-	RNAV 1
020	CF	PULUM	-	325°(323.9°)	+0.74	6.0	R	+1700	-220	-	RNAV 1
030	TF	PP324	-	055°(054.0°)	+0.74	14.0	R	+6000	-	-	RNAV 1
040	TF	REMER	-	094°(093.4°)	+0.74	20.3	-	+7000	-	-	RNAV 1

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

PHITSANULOK/Phitsanulok (VTPP)
RNAV RWY32

GOKON1B GOSTA1B NIROP1B
PEBLI1B PIBIK1B POLOB1B REMER1B

WAYPOINT LIST

RNAV RWY32		
Waypoint Identifier	**Coordinates**	
DER RWY 32	16° 47' 38.00" N	100° 16' 14.99" E
PULUM	16° 52' 29.99" N	100° 12' 33.73" E
PP322	16° 47' 42.31" N	100° 05' 44.78" E
PP323	16° 28' 10.46" N	100° 06' 42.36" E
PEBLI	16° 16' 05.94" N	100° 17' 36.21" E
PIBIK	17° 11' 30.33" N	100° 00' 27.77" E
POLOB	17° 13' 09.43" N	100° 03' 27.80" E
NIROP	17° 16' 13.74" N	100° 14' 44.33" E
GOSTA	17° 15' 57.30" N	100° 22' 29.83" E
PP324	17° 00' 46.69" N	100° 24' 22.00" E
REMER	16° 59' 34.56" N	100° 45' 31.34" E
GOKON	16° 43' 00.76" N	100° 48' 33.82" E

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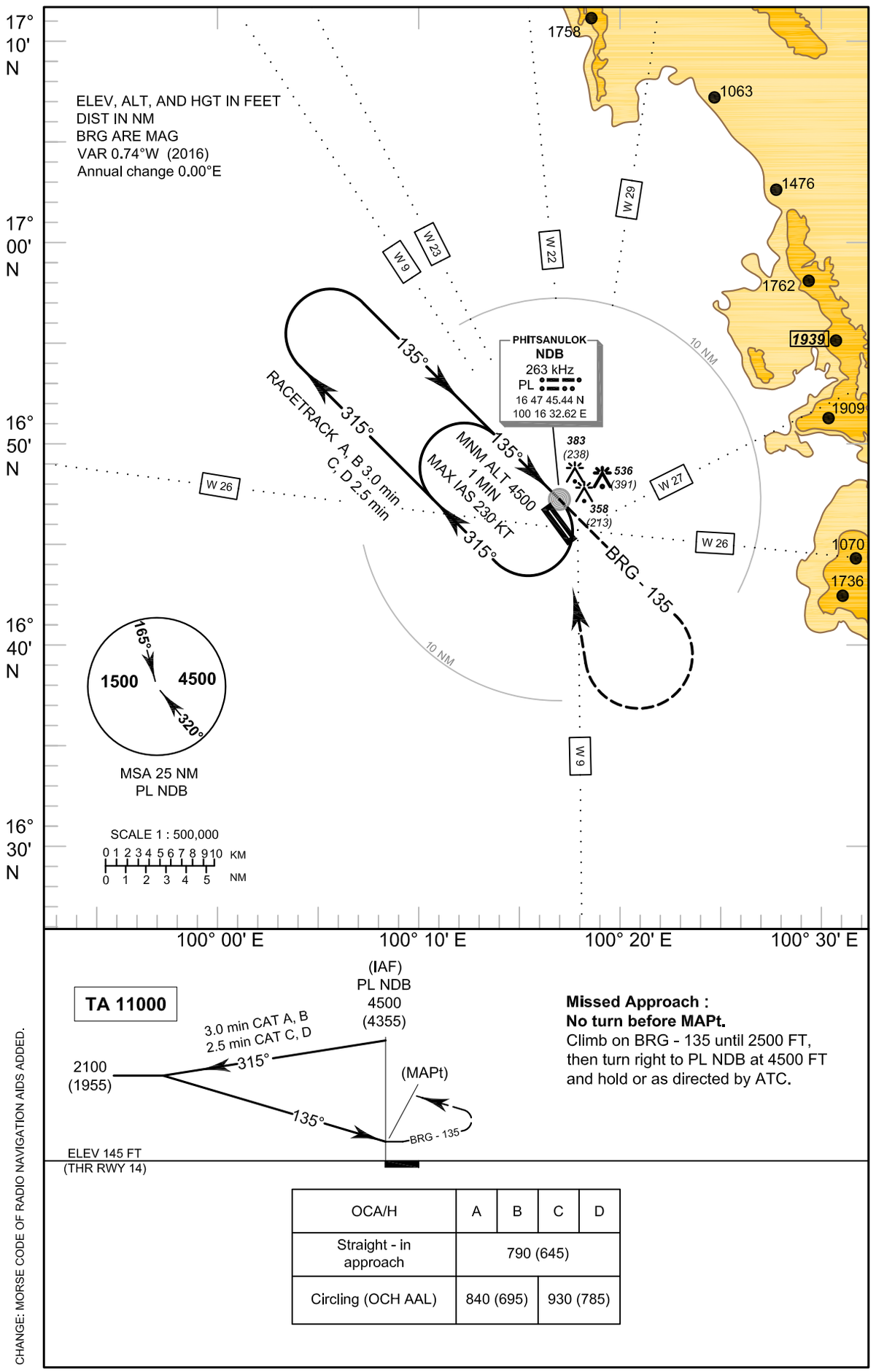
INSTRUMENT APPROACH CHART - ICAO
AERODROME ELEV 145 FT
HEIGHTS RELATED TO AERODROME ELEV

APP : 120.7, 284.0
TWR : 118.9, 236.6
GND : 121.9

PHITSANULOK/Phitsanulok (VTPP)
NDB RWY14



TA 11000

Missed Approach :
No turn before MAPt.
Climb on BRG - 135 until 2500 FT, then turn right to PL NDB at 4500 FT and hold or as directed by ATC.

OCA/H	A	B	C	D
Straight - in approach	790 (645)			
Circling (OCH AAL)	840 (695)		930 (785)	

CHANGE: MORSE CODE OF RADIO NAVIGATION AIDS ADDED.

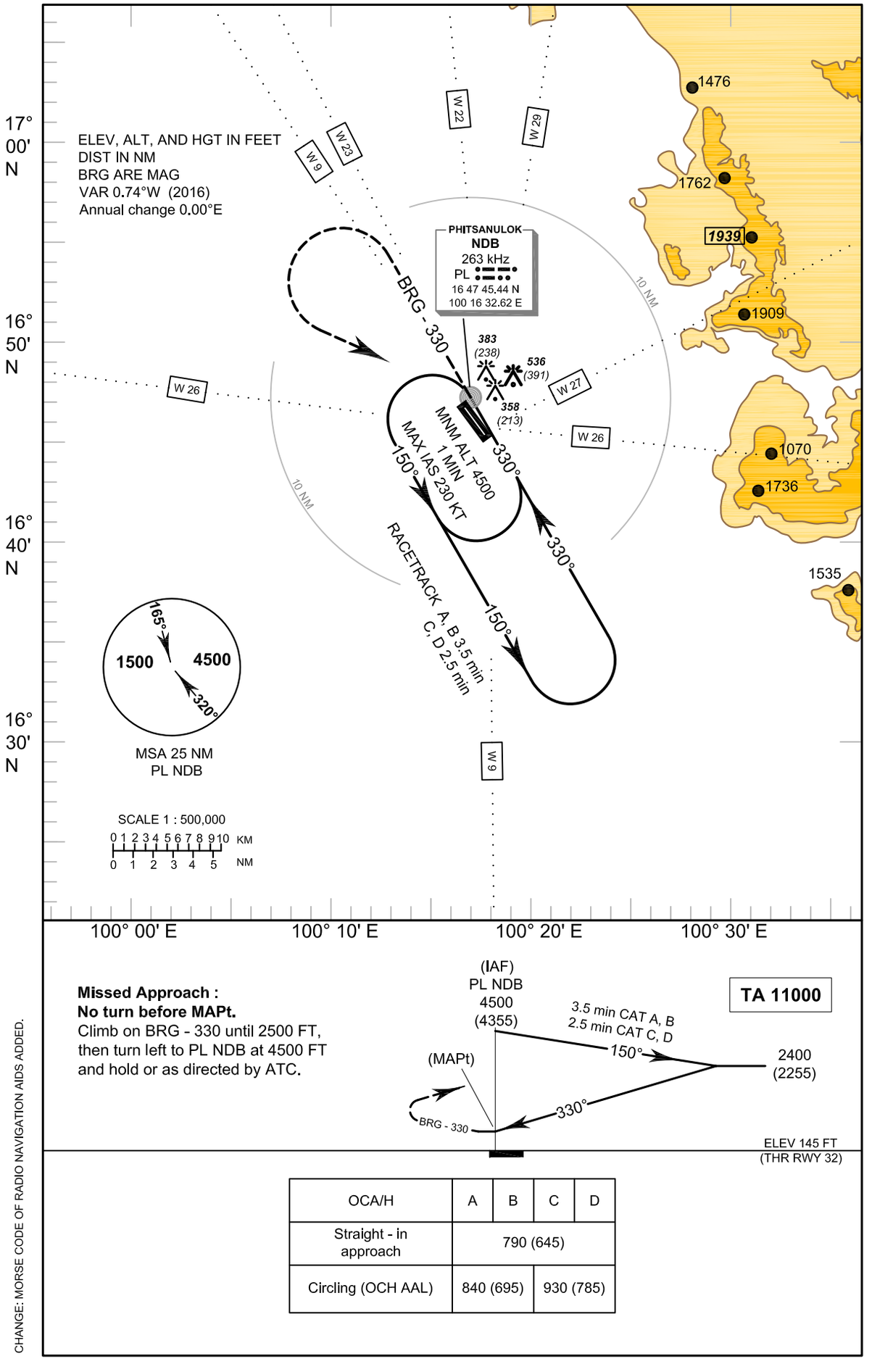
INTENTIONALLY BLANK

INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 145 FT
HEIGHTS RELATED TO AERODROME ELEV

APP : 120.7, 284.0
TWR : 118.9, 236.6
GND : 121.9

PHITSANULOK/Phitsanulok (VTPP)
NDB RWY32



Missed Approach :
No turn before MAPt.
Climb on BRG - 330 until 2500 FT, then turn left to PL NDB at 4500 FT and hold or as directed by ATC.

TA 11000

ELEV 145 FT
(THR RWY 32)

OCA/H	A	B	C	D
Straight - in approach	790 (645)			
Circling (OCH AAL)	840 (695)		930 (785)	

CHANGE: MORSE CODE OF RADIO NAVIGATION AIDS ADDED.

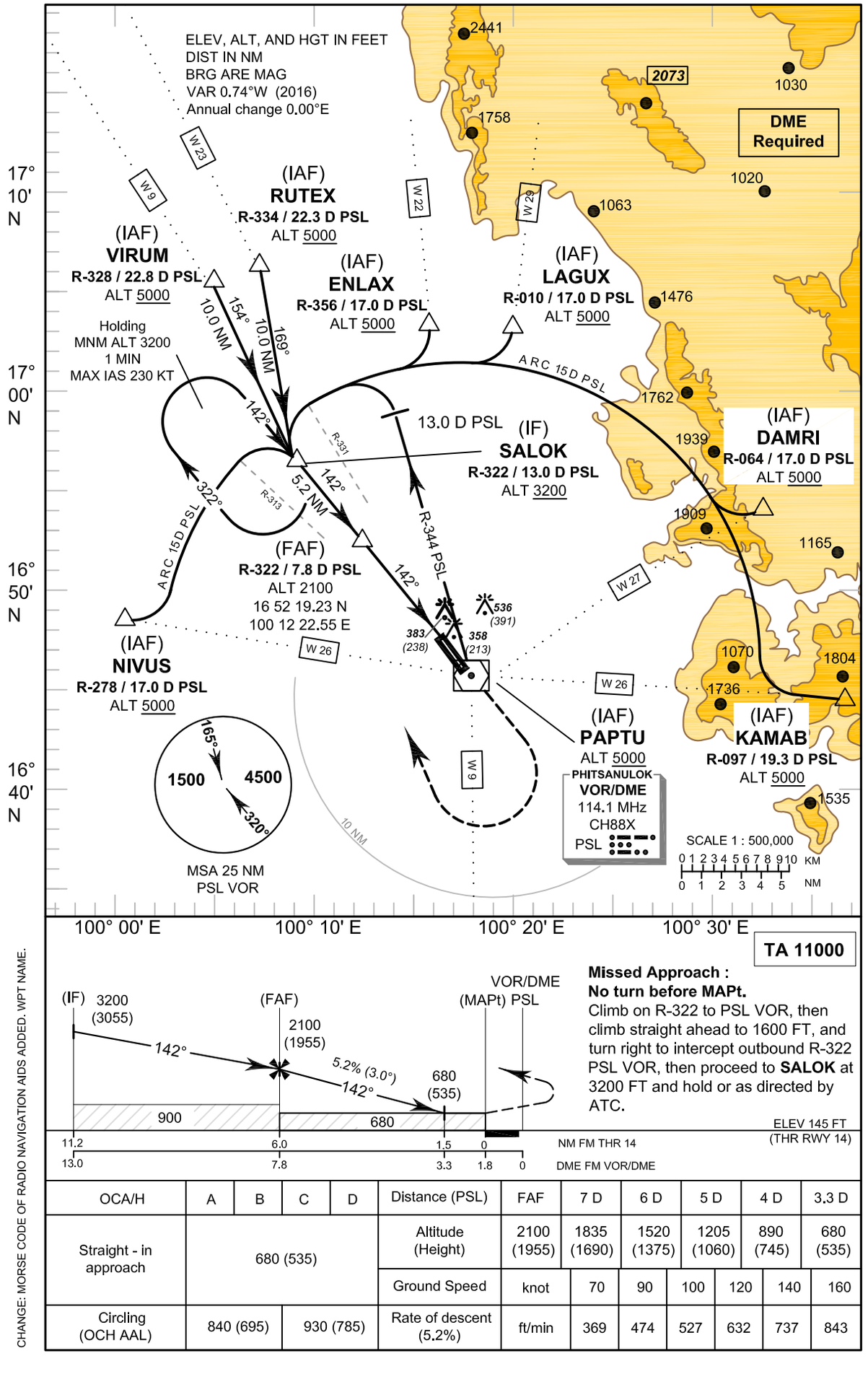
INTENTIONALLY BLANK

INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 145 FT
HEIGHTS RELATED TO AERODROME ELEV

APP : 120.7, 284.0
TWR : 118.9, 236.6
GND : 121.9

PHITSANULOK/Phitsanulok (VTPP)
VOR RWY14



TA 11000

Missed Approach :
No turn before MAPt.
Climb on R-322 to PSL VOR, then climb straight ahead to 1600 FT, and turn right to intercept outbound R-322 PSL VOR, then proceed to **SALOK** at 3200 FT and hold or as directed by ATC.

ELEV 145 FT
(THR RWY 14)

OCA/H	A	B	C	D	Distance (PSL)	FAF	7 D	6 D	5 D	4 D	3.3 D
Straight - in approach	680 (535)				Altitude (Height)	2100 (1955)	1835 (1690)	1520 (1375)	1205 (1060)	890 (745)	680 (535)
					Ground Speed	knot	70	90	100	120	140	160
Circling (OCH AAL)	840 (695)		930 (785)		Rate of descent (5.2%)	ft/min	369	474	527	632	737	843

CHANGE: MORSE CODE OF RADIO NAVIGATION AIDS ADDED. WPT NAME.

INSTRUMENT APPROACH CHART-ICAO **AERODROME ELEV 145 FT** HEIGHTS RELATED TO AERODROME ELEV

PHITSANULOK/Phitsanulok (VTPP)
VOR RWY14

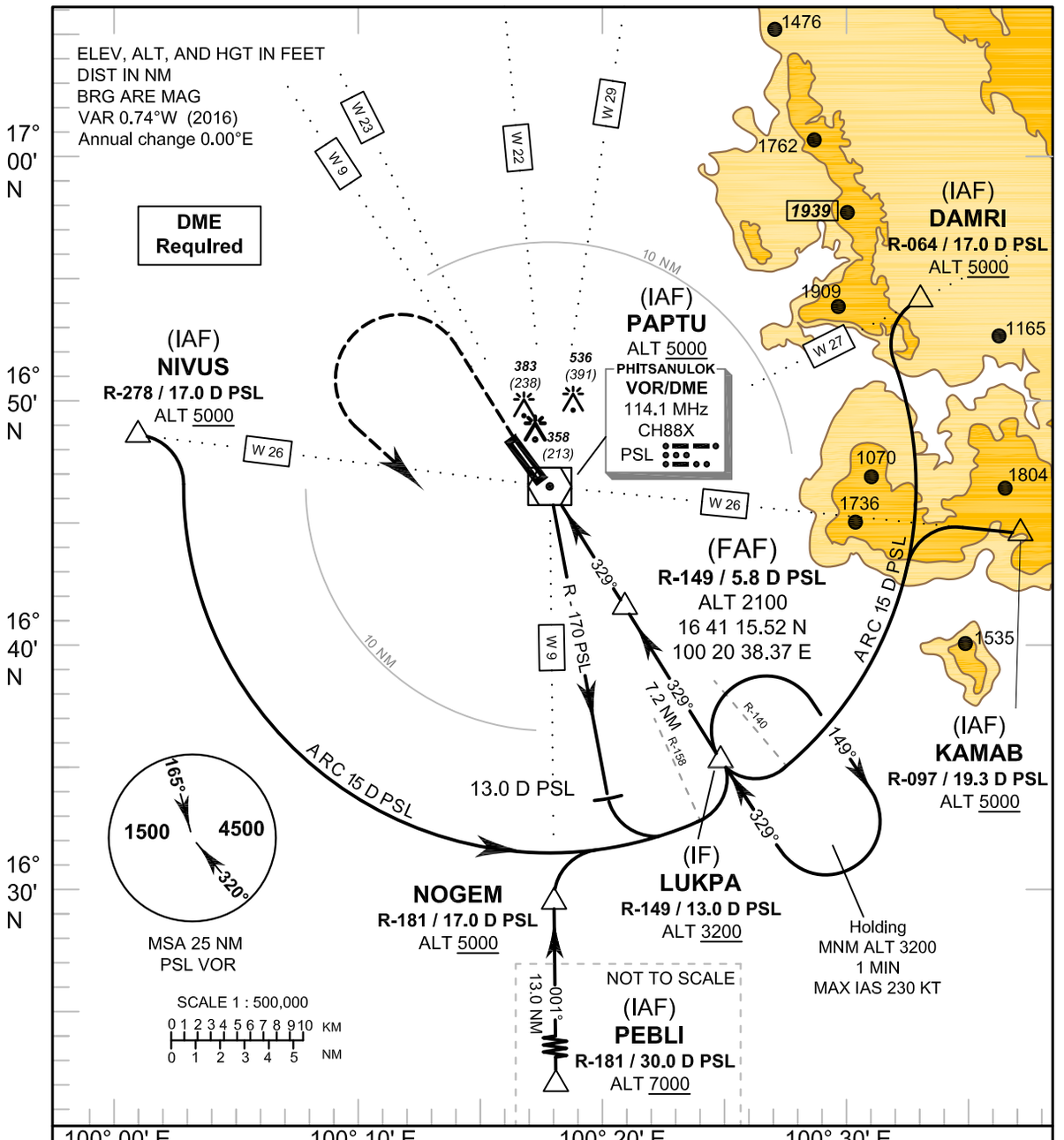
Fix / Point		Coordinates	
PAPTU (IAF)	PSL	16° 46' 13.34" N	100° 17' 28.70" E
NIVUS (IAF)	R - 278 / 17.0 D PSL	16° 48' 26.33" N	099° 59' 54.50" E
RUTEX (IAF)	R - 334 / 22.3 D PSL	17° 06' 15.35" N	100° 07' 03.69" E
VIRUM (IAF)	R - 328 / 22.8 D PSL	17° 05' 28.31" N	100° 04' 31.92" E
ENLAX (IAF)	R - 356 / 17.0 D PSL	17° 03' 13.58" N	100° 15' 55.67" E
LAGUX (IAF)	R - 010 / 17.0 D PSL	17° 03' 04.27" N	100° 20' 19.14" E
DAMRI (IAF)	R - 064 / 17.0 D PSL	16° 53' 47.82" N	100° 33' 21.71" E
KAMAB (IAF)	R - 097 / 19.3 D PSL	16° 44' 09.72" N	100° 37' 31.28" E
SALOK (IF)	R - 322 / 13.0 D PSL	16° 56' 23.08" N	100° 08' 58.26" E
(FAF)	R - 322 / 7.8 D PSL	16° 52' 19.23" N	100° 12' 22.55" E
MAPt	R - 322 / 1.8 D PSL	16° 47' 39.33" N	100° 16' 16.79" E
VOR (IAF)	PSL	16° 46' 13.34" N	100° 17' 28.70" E

INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 145 FT
HEIGHTS RELATED TO AERODROME ELEV

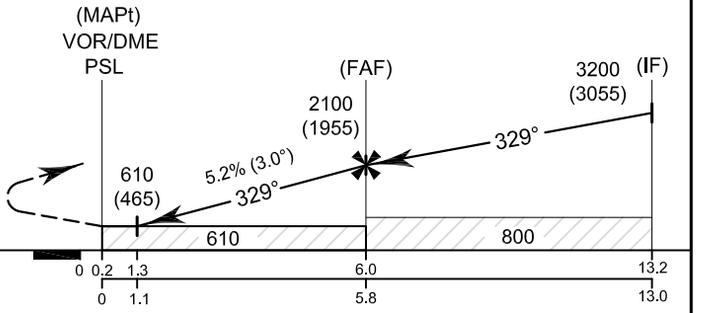
APP : 120.7, 284.0
TWR : 118.9, 236.6
GND : 121.9

PHITSANULOK/Phitsanulok (VTPP)
VOR RWY32



TA 11000

Missed Approach :
No turn before MAPt.
Climb straight ahead to 1600 FT, then turn left to intercept outbound R-149 PSL VOR, then proceed to **LUKPA** at 3200 FT and hold or as directed by ATC.



OCA/H	A	B	C	D	Distance (PSL)	1.1 D	2 D	3 D	4 D	5 D	FAF
Straight - in approach	610 (465)				Altitude (Height)	610 (465)	890 (745)	1205 (1060)	1520 (1375)	1840 (1695)	2100 (1955)
					Ground Speed	knot	70	90	100	120	140	160
Circling (OCH AAL)	840 (695)		930 (785)		Rate of descent (5.2%)	ft/min	369	474	527	632	737	843

CHANGE: MORSE CODE OF RADIO NAVIGATION AIDS ADDED.
WPT NAME, PEBLI ALT.

INSTRUMENT APPROACH CHART-ICAO **AERODROME ELEV 145 FT**
HEIGHTS RELATED TO AERODROME ELEV

PHITSANULOK/Phitsanulok (VTPP)
VOR RWY32

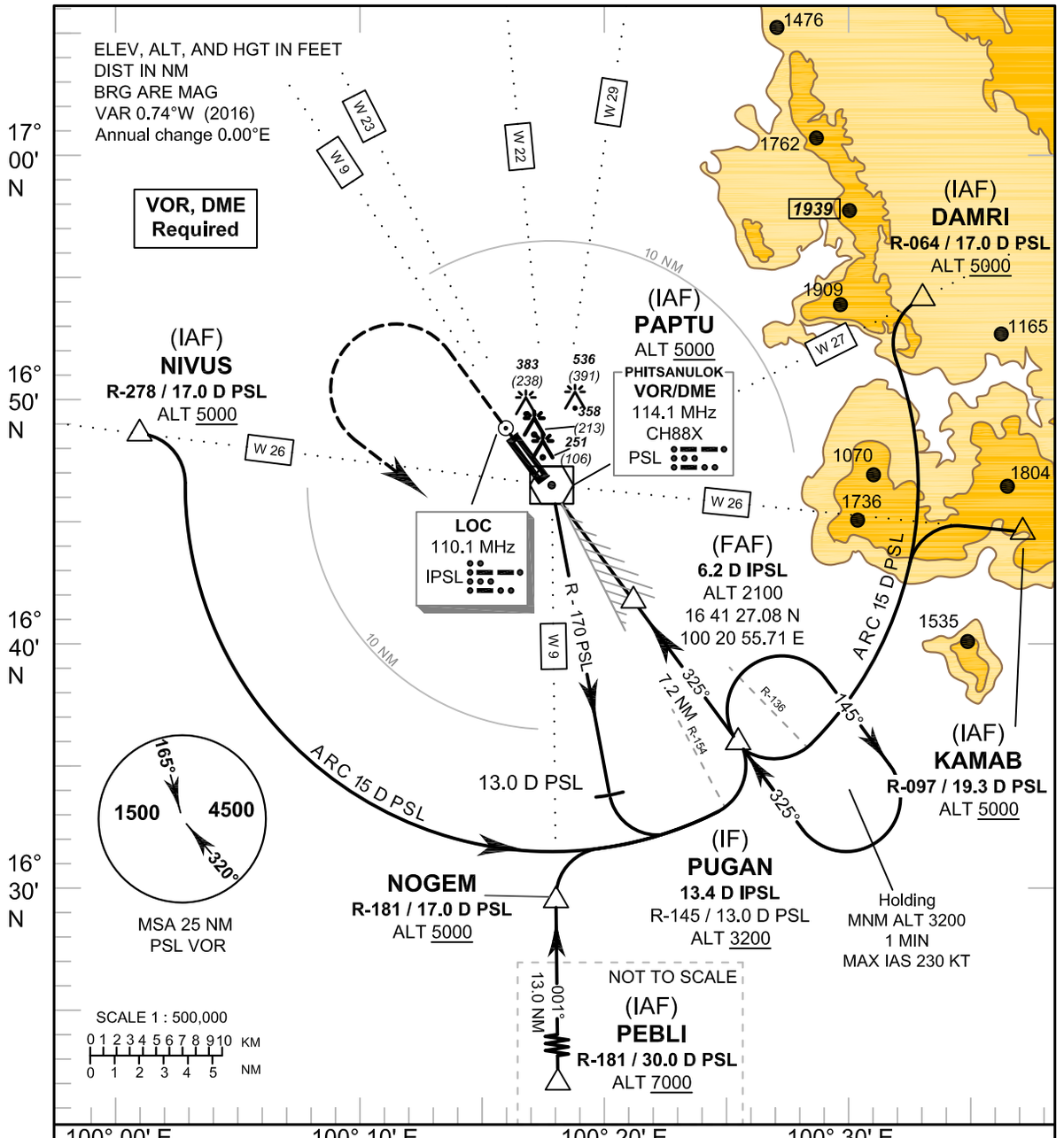
Fix / Point		Coordinates	
PAPTU (IAF)	PSL	16° 46' 13.34" N	100° 17' 28.70" E
NIVUS (IAF)	R - 278 / 17.0 D PSL	16° 48' 26.33" N	099° 59' 54.50" E
PEBLI (IAF)	R - 181 / 30.0 D PSL	16° 16' 05.94" N	100° 17' 36.21" E
NOGEM	R - 181 / 17.0 D PSL	16° 29' 09.16" N	100° 17' 32.96" E
DAMRI (IAF)	R - 064 / 17.0 D PSL	16° 53' 47.82" N	100° 33' 21.71" E
KAMAB (IAF)	R - 097 / 19.3 D PSL	16° 44' 09.72" N	100° 37' 31.28" E
LUKPA (IF)	R - 149 / 13.0 D PSL	16° 35' 05.75" N	100° 24' 33.60" E
(FAF)	R - 149 / 5.8 D PSL	16° 41' 15.52" N	100° 20' 38.37" E
VOR (MAPt)	PSL	16° 46' 13.34" N	100° 17' 28.70" E

INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 145 FT
HEIGHTS RELATED TO
THR RWY32 - ELEV 145 FT

APP : 120.7, 284.0
TWR : 118.9, 236.6
GND : 121.9

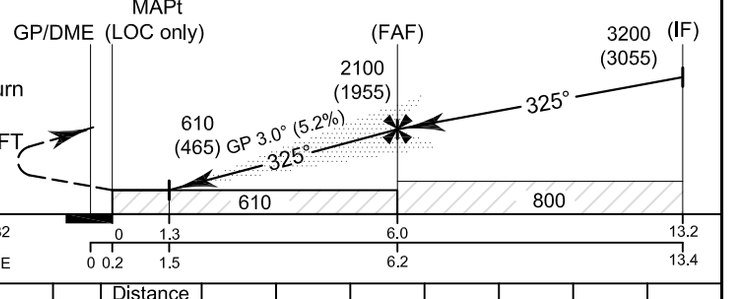
PHITSANULOK/Phitsanulok (VTPP)
ILS or LOC RWY32



TA 11000

RDH 56 FT

Missed Approach :
No turn before MAPt (for LOC only).
Climb straight ahead to 1600 FT, then turn left to intercept outbound R-145 PSL VOR, then proceed to **PUGAN** at 3200 FT and hold or as directed by ATC.



OCA/H	A	B	C	D	GS OUT	Distance (IPSL)	1.5 D	2 D	3 D	4 D	5 D	6 D	FAF
Straight-in approach CAT I	370 (225)					Altitude (Height)	610 (465)	765 (620)	1080 (935)	1395 (1250)	1710 (1565)	2025 (1880)	2100 (1955)
LOC only	610 (465)					Ground Speed	knot	70	90	100	120	140	160
Circling (OCH AAL)	840 (695)		930 (785)			Rate of descent (3.0°)	ft/min	372	478	531	637	743	849

CHANGE: MORSE CODE OF RADIO NAVIGATION AIDS ADDED.
WPT NAME. PEBLI ALT.

INSTRUMENT APPROACH CHART-ICAO **AERODROME ELEV 145 FT**
HEIGHTS RELATED TO
THR RWY32 - ELEV 145 FT

PHITSANULOK/Phitsanulok (VTPP)
ILS or LOC RWY32

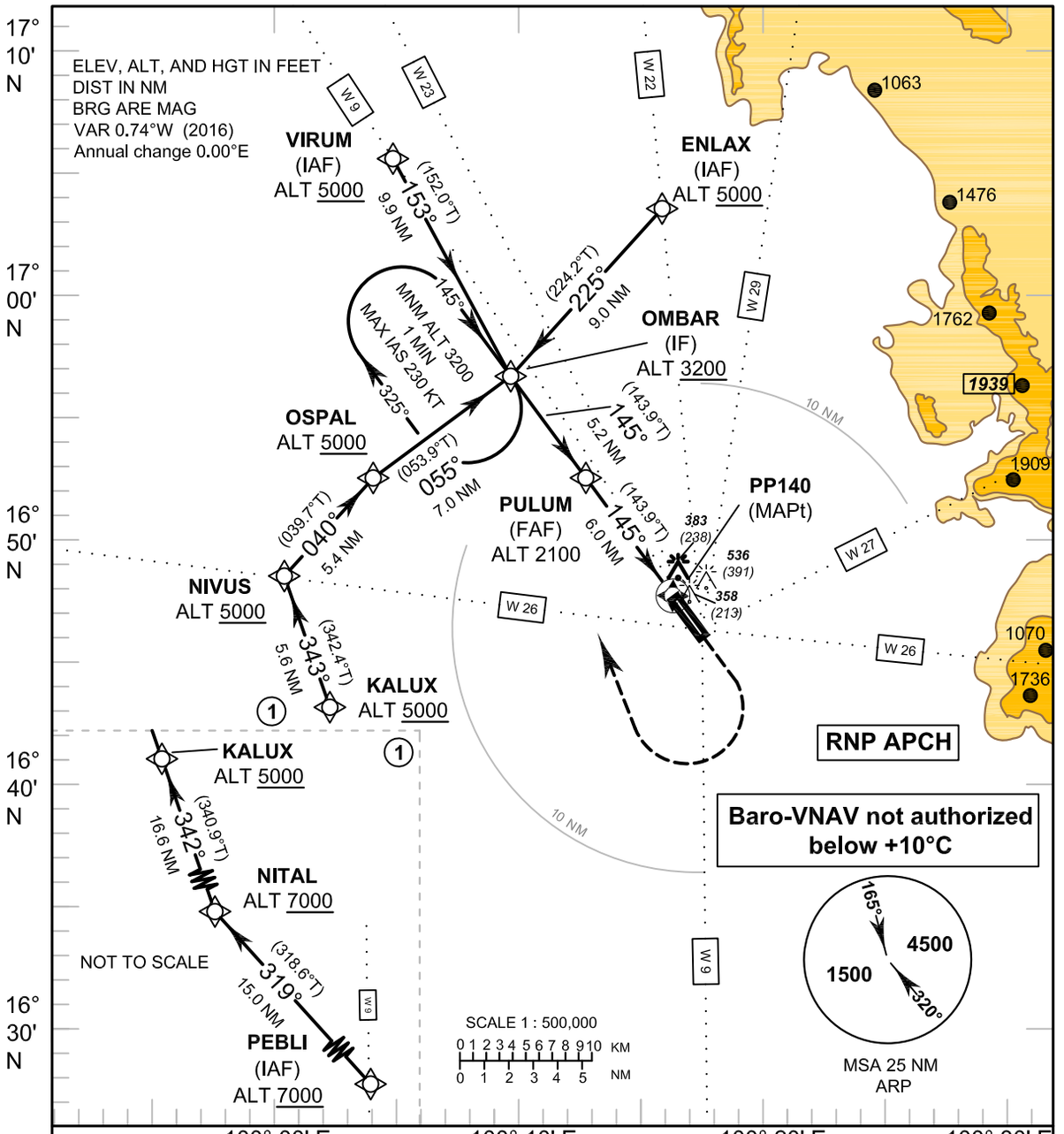
Fix / Point		Coordinates	
PAPTU (IAF)	PSL	16° 46' 13.34" N	100° 17' 28.70" E
NIVUS (IAF)	R - 278 / 17.0 D PSL	16° 48' 26.33" N	099° 59' 54.50" E
PEBLI (IAF)	R - 181 / 30.0 D PSL	16° 16' 05.94" N	100° 17' 36.21" E
NOGEM	R - 181 / 17.0 D PSL	16° 29' 09.16" N	100° 17' 32.96" E
DAMRI (IAF)	R - 064 / 17.0 D PSL	16° 53' 47.82" N	100° 33' 21.71" E
KAMAB (IAF)	R - 097 / 19.3 D PSL	16° 44' 09.72" N	100° 37' 31.28" E
PUGAN (IF)	13.4 D IPSL	16° 35' 36.50" N	100° 25' 20.68" E
(FAF)	6.2 D IPSL	16° 41' 27.08" N	100° 20' 55.71" E
MAPt (LOC only) @ THR RWY32	0.2 D IPSL	16° 46' 19.16" N	100° 17' 14.69" E
LOC	IPSL	16° 47' 46.19" N	100° 16' 08.82" E
GP/DME	IPSL	16° 46' 29.87" N	100° 17' 11.63" E
VOR (IAF)	PSL	16° 46' 13.34" N	100° 17' 28.70" E

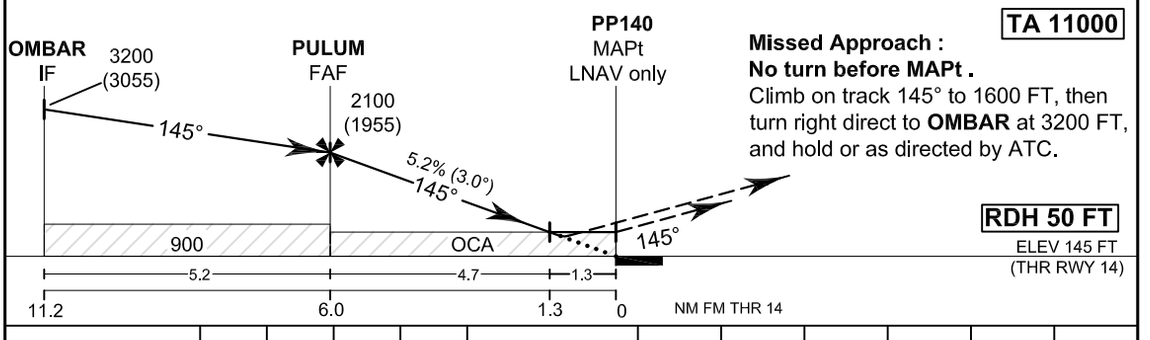
INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 145 FT
HEIGHTS RELATED TO AERODROME ELEV

APP : 120.7, 284.0
TWR : 118.9, 236.6
GND : 121.9

PHITSANULOK/Phitsanulok (VTPP)
RNAV (GNSS) RWY14





TA 11000

Missed Approach :
No turn before MAPt .
Climb on track 145° to 1600 FT, then turn right direct to **OMBAR** at 3200 FT, and hold or as directed by ATC.

RDH 50 FT
ELEV 145 FT
(THR RWY 14)

OCA/H	A	B	C	D	NM to NEXT WPT	FAF	5 NM	4 NM	3 NM	2 NM	1.3 NM
LNAV/VNAV	550 (405)				Altitude (Height)	2100 (1955)	1775 (1630)	1460 (1315)	1140 (995)	825 (680)	610 (465)
LNAV	610 (465)				Ground Speed	knot	70	90	100	120	140	160
Circling (OCH AAL)	840 (695)		930 (785)		Rate of descent FAF-MAPt (5.2%)	ft/min	369	474	527	632	737	843

CHANGE: WPT NAME.

INSTRUMENT APPROACH CHART - ICAO AERODROME ELEV 145 FT HEIGHTS RELATED TO AERODROME ELEV

PHITSANULOK/Phitsanulok (VTPP)
RNAV (GNSS) RWY14

TABULAR DESCRIPTION

RNAV (GNSS) RWY14

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course ° M (° T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KT)	VPA/ TCH	Navigation Specification
010	IF	PEBLI (IAF)	-	-	+0.74	-	-	+7000	-	-	RNP APCH
020	TF	NITAL	-	319°(318.6°)	+0.74	15.0	R	+7000	-	-	RNP APCH
030	TF	KALUX	-	342°(340.9°)	+0.74	16.6	R	+5000	-	-	RNP APCH
040	TF	NIVUS	-	343°(342.4°)	+0.74	5.6	R	+5000	-	-	RNP APCH
050	TF	OSPAL	-	040°(039.7°)	+0.74	5.4	R	+5000	-	-	RNP APCH
060	TF	OMBAR (IF)	-	055°(053.9°)	+0.74	7.0	-	+3200	-	-	RNP APCH
010	IF	VIRUM (IAF)	-	-	+0.74	-	-	+5000	-	-	RNP APCH
020	TF	OMBAR (IF)	-	153°(152.0°)	+0.74	9.9	-	+3200	-	-	RNP APCH
010	IF	ENLAX (IAF)	-	-	+0.74	-	-	+5000	-	-	RNP APCH
020	TF	OMBAR (IF)	-	225°(224.2°)	+0.74	9.0	-	+3200	-	-	RNP APCH
010	IF	OMBAR (IF)	-	-	+0.74	-	-	+3200		-	RNP APCH
020	TF	PULUM (FAF)	-	145°(143.9°)	+0.74	5.2	-	@2100	-	-	RNP APCH
030	TF	PP140 (MAPt)	Y	145°(143.9°)	+0.74	6.0	-	@195	-	- 3.0/50	RNP APCH
040	CA	-	-	145°(143.9°)	+0.74	-	-	+1600	-	-	RNP APCH
050	DF	OMBAR (IF)	-	-	+0.74	-	R	+3200	-	-	RNP APCH
060	HM	OMBAR (IF)	Y	145°(143.9°)	+0.74	1 minute	R	+3200	- 230	-	RNP APCH

WAYPOINT LIST

RNAV (GNSS) RWY14

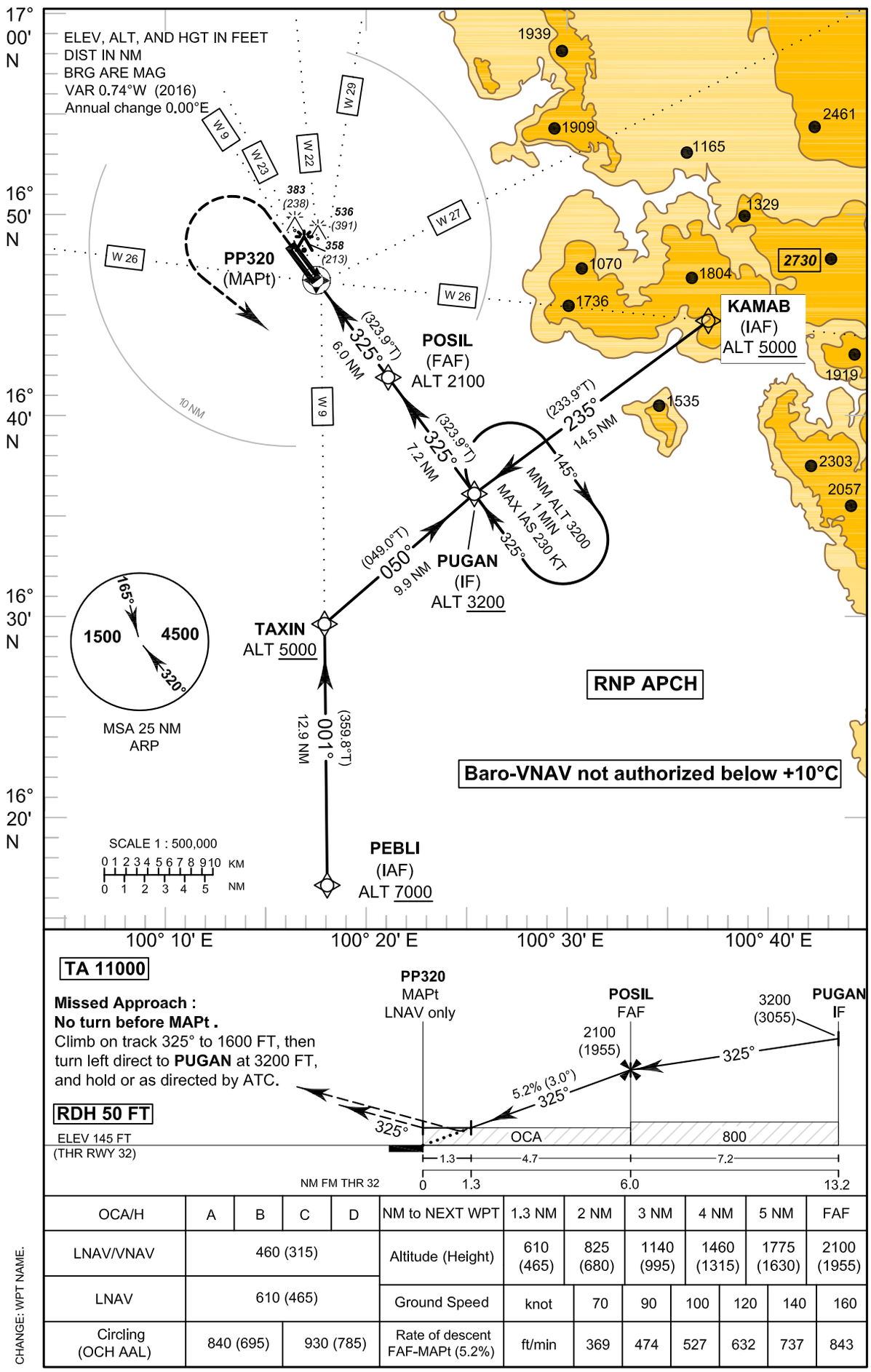
Waypoint Identifier	Coordinates	
PEBLI	16° 16' 05.94" N	100° 17' 36.21" E
NITAL	16° 27' 22.66" N	100° 07' 18.28" E
KALUX	16° 43' 07.80" N	100° 01' 39.21" E
NIVUS	16° 48' 26.33" N	099° 59' 54.50" E
OSPAL	16° 52' 34.17" N	100° 03' 28.13" E
VIRUM	17° 05' 28.31" N	100° 04' 31.92" E
ENLAX	17° 03' 13.58" N	100° 15' 55.67" E
OMBAR	16° 56' 42.99" N	100° 09' 21.83" E
PULUM	16° 52' 29.99" N	100° 12' 33.73" E
PP140 (THR14)	16° 47' 38.00" N	100° 16' 14.99" E

INSTRUMENT APPROACH CHART - ICAO

AERODROME ELEV 145 FT
HEIGHTS RELATED TO AERODROME ELEV

APP : 120.7, 284.0
TWR : 118.9, 236.6
GND : 121.9

PHITSANULOK/Phitsanulok (VTPP)
RNAV (GNSS) RWY32



TA 11000

Missed Approach :
No turn before MAPt .
Climb on track 325° to 1600 FT, then turn left direct to **PUGAN** at 3200 FT, and hold or as directed by ATC.

RDH 50 FT

OCA/H	A	B	C	D	NM to NEXT WPT	1.3 NM	2 NM	3 NM	4 NM	5 NM	FAF
LNAV/VNAV	460 (315)				Altitude (Height)	610 (465)	825 (680)	1140 (995)	1460 (1315)	1775 (1630)	2100 (1955)
LNAV	610 (465)				Ground Speed	knot	70	90	100	120	140	160
Circling (OCH AAL)	840 (695)		930 (785)		Rate of descent FAF-MAPt (5.2%)	ft/min	369	474	527	632	737	843

CHANGE: WPT NAME.

INSTRUMENT APPROACH CHART - ICAO AERODROME ELEV 145 FT
HEIGHTS RELATED TO
AERODROME ELEV

PHITSANULOK/Phitsanulok (VTPP)
RNAV (GNSS) RWY32

TABULAR DESCRIPTION

RNAV (GNSS) RWY32

Serial Number	Path Descriptor	Waypoint Identifier	Flyover	Course ° M (° T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KT)	VPA/ TCH	Navigation Specification
010	IF	PEBLI (IAF)	-	-	+0.74	-	-	+7000	-	-	RNP APCH
020	TF	TAXIN	-	001°(359.8°)	+0.74	12.9	R	+5000	-	-	RNP APCH
030	TF	PUGAN (IF)	-	050°(049.0°)	+0.74	9.9	-	+3200	-	-	RNP APCH
010	IF	KAMAB (IAF)	-	-	+0.74	-	-	+5000	-	-	RNP APCH
020	TF	PUGAN (IF)	-	235°(233.9°)	+0.74	14.5	-	+3200	-	-	RNP APCH
001	IF	PUGAN (IF)	-	-	+0.74	-	-	+3200	-	-	RNP APCH
002	TF	POSIL (FAF)	-	325°(323.9°)	+0.74	7.2	-	@2100	-	-	RNP APCH
003	TF	PP320 (MAPt)	Y	325°(323.9°)	+0.74	6.0	-	@195	-	-3.0/50	RNP APCH
004	CA	-	-	325°(323.9°)	+0.74	-	-	+1600	-	-	RNP APCH
005	DF	PUGAN (IF)	-	-	+0.74	-	L	+3200	-	-	RNP APCH
006	HM	PUGAN (IF)	Y	325°(323.9°)	+0.74	1 minute	R	+3200	-230	-	RNP APCH

WAYPOINT LIST

RNAV (GNSS) RWY32

Waypoint Identifier	Coordinates	
PEBLI	16° 16' 05.94" N	100° 17' 36.21" E
TAXIN	16° 29' 04.24" N	100° 17' 32.98" E
KAMAB	16° 44' 09.72" N	100° 37' 31.28" E
PUGAN	16° 35' 36.50" N	100° 25' 20.68" E
POSIL	16° 41' 27.08" N	100° 20' 55.71" E
PP320 (THR32)	16° 46' 19.16" N	100° 17' 14.69" E