TEL:.....+47 67 03 00 00
E-mail:.....aim@avinor.no

AVINOR
NORWAY

AERONAUTICAL INFORMATION MANAGEMENT
P.O. BOX 150
NO-2061 GARDERMOEN

AIP AIRAC SUP
02/2025
EFF 23 JAN 2025

Publication date: 18 DEC 2024

ENTC - Nye RNP AR-prosedyrer for Tromsø lufthavn, Langnes

Erstatter AIP AIRAC SUP 24/2024

Vedlagt denne AIP AIRAC SUP finnes RNP AR-prosedyrer til RWY 18 og RWY 36 ved Tromsø lufthavn, Langnes.

De vedlagte prosedyrene publiseres kun for kontrollflygings- og godkjenningsøyemed og vil i utgangspunktet ikke være tilgjengelig for vanlige operasjoner. Frem til prosedyrene er godkjente av Luftfartstilsynet er prosedyrene suspenderte.

Operatører bes om å ikke anmode lufttrafikktjenesten om å fly RNP AR-prosedyrene.

Vedlagt er følgende prosedyrer komplett med kart, anbefalt koding og liste med signifikante punkter:

1. RNP E RWY 18 (AR)
2. RNP S RWY 18 (AR)
3. RNP W RWY 18 (AR)
4. RNP E RWY 36 (AR)
5. RNP O RWY 36 (AR)
6. RNP S RWY 36 (AR)
7. RNP W RWY 36 (AR)

- Vedlegg -

ENTC - New RNP AR procedures for Tromsø airport, Langnes

Replaces AIP AIRAC SUP 24/2024

Attached to this AIP AIRAC SUP are RNP AR procedures for RWY 18 and RWY 36 at Tromsø airport, Langnes.

The attached procedures are intended solely for flight validation purposes. The procedures have not yet been approved by the Norwegian Civil Aviation Authority and are suspended from normal operational use.

Operators are asked not to request these procedures from Air Traffic Services.

Attached are the following procedures complete with chart, recommended coding and significant points pages:

1. RNP E RWY 18 (AR)
2. RNP S RWY 18 (AR)
3. RNP W RWY 18 (AR)
4. RNP E RWY 36 (AR)
5. RNP O RWY 36 (AR)
6. RNP S RWY 36 (AR)
7. RNP W RWY 36 (AR)

- Attachment -

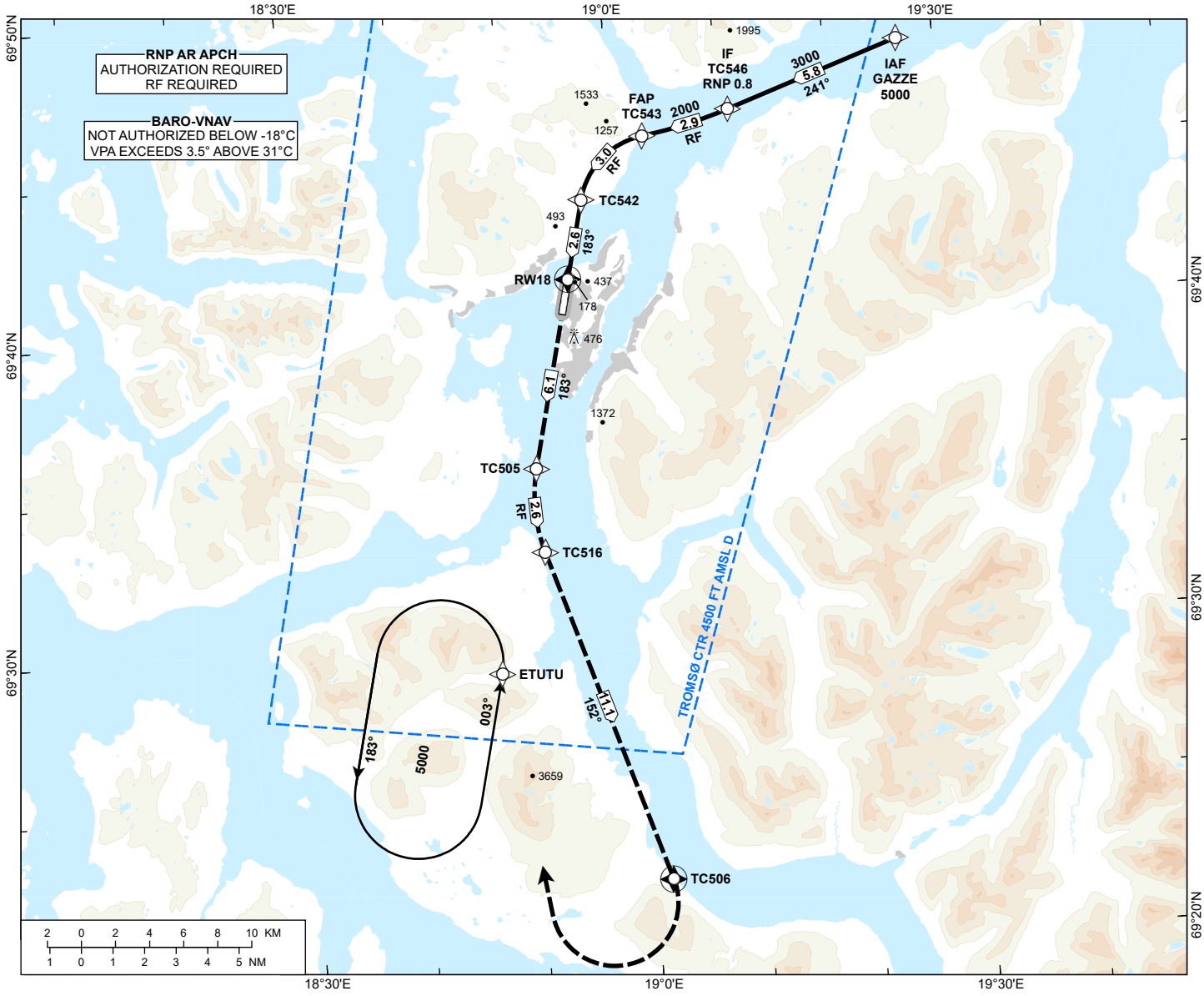
INSTRUMENT APPROACH CHART - ICAO

7_1 MSA 25 NM ARP	ATIS: 128.650	AD ELEV: 32
	APP: 119.350 129.325	THR ELEV: 14
	TWR: 118.100	HGT RELATED TO THR 18
		CIRCLING HGT RELATED TO AD ELEV
		DIST IN NM. ELEV, ALT AND HGT IN FT
	SCALE 1:370 000	VAR 10° E (2020)

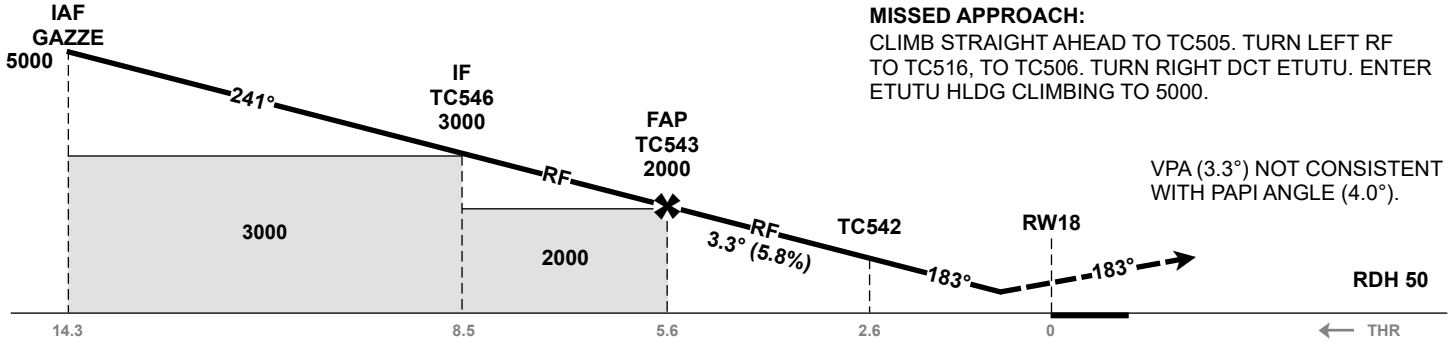
TROMSØ
LANGNES

RNP E RWY 18 (AR)

TRANSITION ALTITUDE
7000



DIST TO RW18	9	8	7	6	5	4	3	2
ALT (HGT)	-	-	-	-	-	-	-	-



MISSED APPROACH:
CLIMB STRAIGHT AHEAD TO TC505. TURN LEFT RF TO TC516, TO TC506. TURN RIGHT DCT ETUTU. ENTER ETUTU HLDG CLIMBING TO 5000.

VPA (3.3°) NOT CONSISTENT WITH PAPI ANGLE (4.0°).

CAT OF ACFT		A	B	C	D
OCA (H) STRAIGHT- IN	RNP 0.3 (2.5%*)	724 (710)	746 (732)	766 (752)	785 (771)
	RNP 0.3 (3.0%*)	622 (608)	644 (630)	667 (653)	686 (672)
	RNP 0.1 (3.0%*)	349 (335)	371 (357)	381 (367)	391 (377)
CIRCLING		1040 (1008)		2660 (2628)	2960 (2928)

NOTE: CIRCLING E OF AD ONLY. *MNM MISSED APCH CLIMB GRADIENT.

CHANGES: APCH UNTIL RW18, OBST, OCA(H), RDH.

ATS AIRSPACE CLASSIFICATION: REF ENR 1.4

ENTC RNP E RWY 18 (AR) - RECOMMENDED CODING

SN	PD	WI	Fly-over	°M (°T)	MAG VAR	DIST (NM)	REC NAVAID	TD	ALT (FT)	Speed (KT)	VPA (°)/ TCH (FT)	ARC CENTRE RADIUS (NM)	RNP (NM)
010	IF	GAZZE	-	-	-10.0	-	-	-	A5000+	-	-	-	1.0
020	TF	TC546	-	-	-10.0	5.8	-	-	A3000+	-	-	-	1.0
030	RF	TC543	-	-	-10.0	2.9	-	R	A2000+	-	-	TC014 15.0	0.8
040	RF	TC542	-	-	-10.0	3.0	-	L	-	-	-3.3	TC012 2.48	0.3
050	TF	RW18	Y	-	-10.0	2.6	-	-	-	-	-3.3/50	-	0.3
060	TF	TC505	-	-	-10.0	6.1	-	-	-	-	-	-	1.0
070	RF	TC516	-	-	-10.0	2.6	-	L	-	-	-	TC003 5.0	1.0
080	TF	TC506	Y	-	-10.0	11.1	-	-	-	-	-	-	1.0
090	DF	ETUTU	-	-	-10.0	-	-	R	-	-	-	-	1.0
100	HM	ETUTU	-	003 (012.9)	-10.0	1 MIN	-	L	A5000	-	-	-	1.0

Note: Recommended coding is based on ARINC 424 and is provided solely to indicate which procedure design protection areas were used in the Instrument Flight Procedure Design process.

Note: Published OCA(H) values are obstacle clearance values. Decision heights (DH) below 250 FT shall not be used due to approach operation Type A limitations.

ENTC RNP E RWY 18 (AR) - SIGNIFICANT POINTS

Name	Latitude	Longitude
ETUTU	692907.41N	0184717.53E
GAZZE	694819.90N	0192641.79E
TC003	693423.19N	0190523.43E
TC012	694320.54N	0190400.94E
TC014	700034.08N	0185639.68E
TC505	693531.13N	0185129.96E
TC506	692219.60N	0190127.88E
TC516	693251.93N	0185149.31E
TC542	694354.19N	0185704.69E
TC543	694547.20N	0190259.06E
TC546	694627.58N	0191057.18E

CHANGES: GAZZE, TC542, TC543, TC546, TC012, TC014

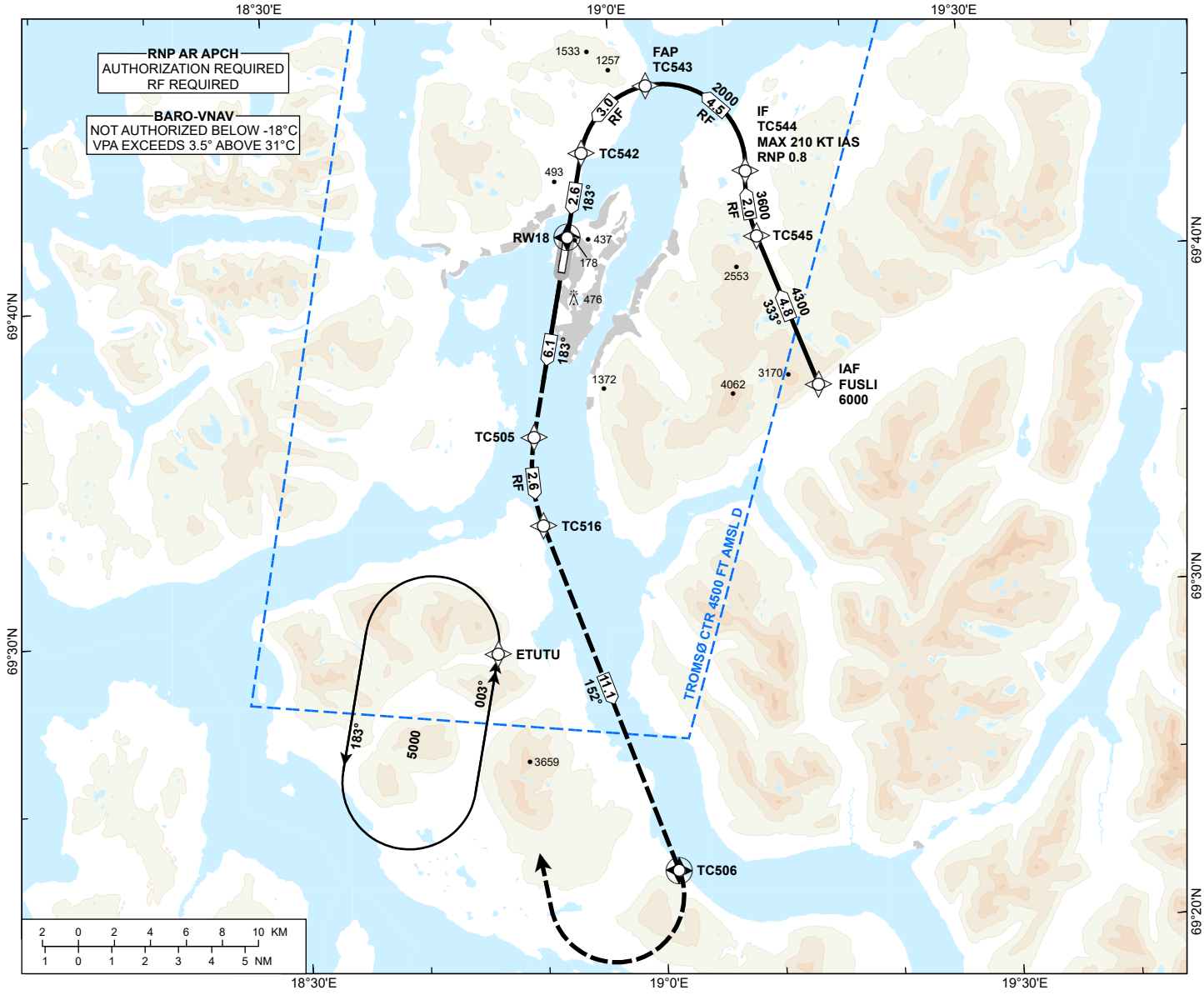
INSTRUMENT APPROACH CHART - ICAO

7_1 MSA 25 NM ARP	ATIS: 128.650	AD ELEV: 32
	APP: 119.350 129.325	THR ELEV: 14
	TWR: 118.100	HGT RELATED TO THR 18
		CIRCLING HGT RELATED TO AD ELEV
		DIST IN NM. ELEV, ALT AND HGT IN FT
		SCALE 1:350 000 VAR 10° E (2020)

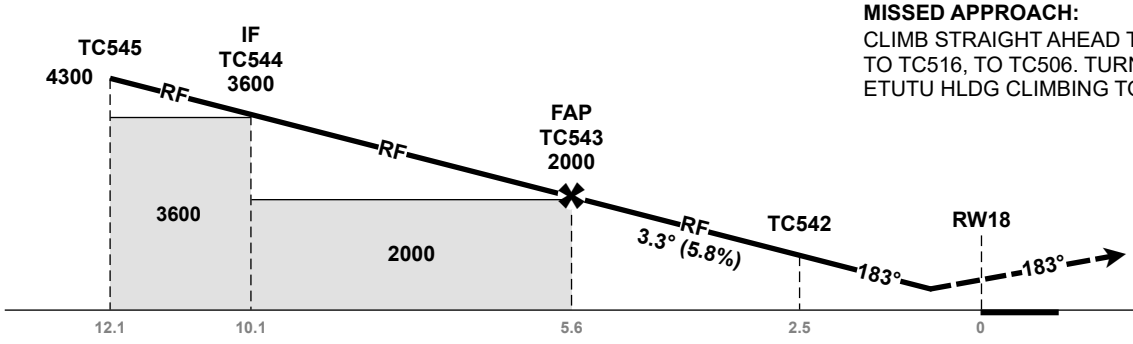
TROMSØ
LANGNES

RNP S RWY 18 (AR)

TRANSITION ALTITUDE
7000



DIST TO RW18	9	8	7	6	5	4	3	2
ALT (HGT)	-	-	-	-	-	-	-	-



MISSED APPROACH:
CLIMB STRAIGHT AHEAD TO TC505. TURN LEFT RF TO TC516, TO TC506. TURN RIGHT DCT ETUTU. ENTER ETUTU HLDG CLIMBING TO 5000.

VPA (3.3°) NOT CONSISTENT WITH PAPI ANGLE (4.0°).

RDH 50

CAT OF ACFT		A	B	C	D
OCA (H) STRAIGHT- IN	RNP 0.3 (2.5%*)	724 (710)	746 (732)	766 (752)	785 (771)
	RNP 0.3 (3.0%*)	622 (608)	644 (630)	667 (653)	686 (672)
	RNP 0.1 (3.0%*)	349 (335)	371 (357)	381 (367)	391 (377)
CIRCLING		1040 (1008)		2660 (2628)	2960 (2928)

NOTE: CIRCLING E OF AD ONLY. *MNM MISSED APCH CLIMB GRADIENT.

CHANGES: APCH UNTIL RW18, OBST, OCA(H), RDH.

ATS AIRSPACE CLASSIFICATION: REF ENR 1.4

ENTC RNP S RWY 18 (AR) - RECOMMENDED CODING

SN	PD	WI	Fly-over	°M (°T)	MAG VAR	DIST (NM)	REC NAVAID	TD	ALT (FT)	Speed (KT)	VPA (°)/ TCH (FT)	ARC CENTRE RADIUS (NM)	RNP (NM)
010	IF	FUSLI	-	-	-10.0	-	-	-	A6000+	-	-	-	1.0
020	TF	TC545	-	-	-10.0	4.8	-	-	A4300+	-	-	-	1.0
030	RF	TC544	-	-	-10.0	2.0	-	R	A3600+	K210-	-	TC013 4.5	1.0
040	RF	TC543	-	-	-10.0	4.5	-	L	A2000+	-	-	TC012 2.48	0.8
050	RF	TC542	-	-	-10.0	3.0	-	L	-	-	-3.3	TC012 2.48	0.3
060	TF	RW18	Y	-	-10.0	2.6	-	-	-	-	-3.3/50	-	0.3
070	TF	TC505	-	-	-10.0	6.1	-	-	-	-	-	-	1.0
080	RF	TC516	-	-	-10.0	2.6	-	L	-	-	-	TC003 5.0	1.0
090	TF	TC506	Y	-	-10.0	11.1	-	-	-	-	-	-	1.0
100	DF	ETUTU	-	-	-10.0	-	-	R	-	-	-	-	1.0
110	HM	ETUTU	-	003 (012.9)	-10.0	1 MIN	-	L	A5000	-	-	-	1.0

Note: Recommended coding is based on ARINC 424 and is provided solely to indicate which procedure design protection areas were used in the Instrument Flight Procedure Design process.

Note: Published OCA(H) values are obstacle clearance values. Decision heights (DH) below 250 FT shall not be used due to approach operation Type A limitations.

ENTC RNP S RWY 18 (AR) - SIGNIFICANT POINTS

Name	Latitude	Longitude
ETUTU	692907.41N	0184717.53E
FUSLI	693632.50N	0191607.23E
TC003	693423.19N	0190523.43E
TC012	694320.54N	0190400.94E
TC013	694231.60N	0192354.99E
TC505	693531.13N	0185129.96E
TC506	692219.60N	0190127.88E
TC516	693251.93N	0185149.31E
TC542	694354.19N	0185704.69E
TC543	694547.20N	0190259.06E
TC544	694303.41N	0191105.37E
TC545	694105.52N	0191141.29E

CHANGES: FUSLI, TC542, TC543, TC544, TC545, TC012, TC013

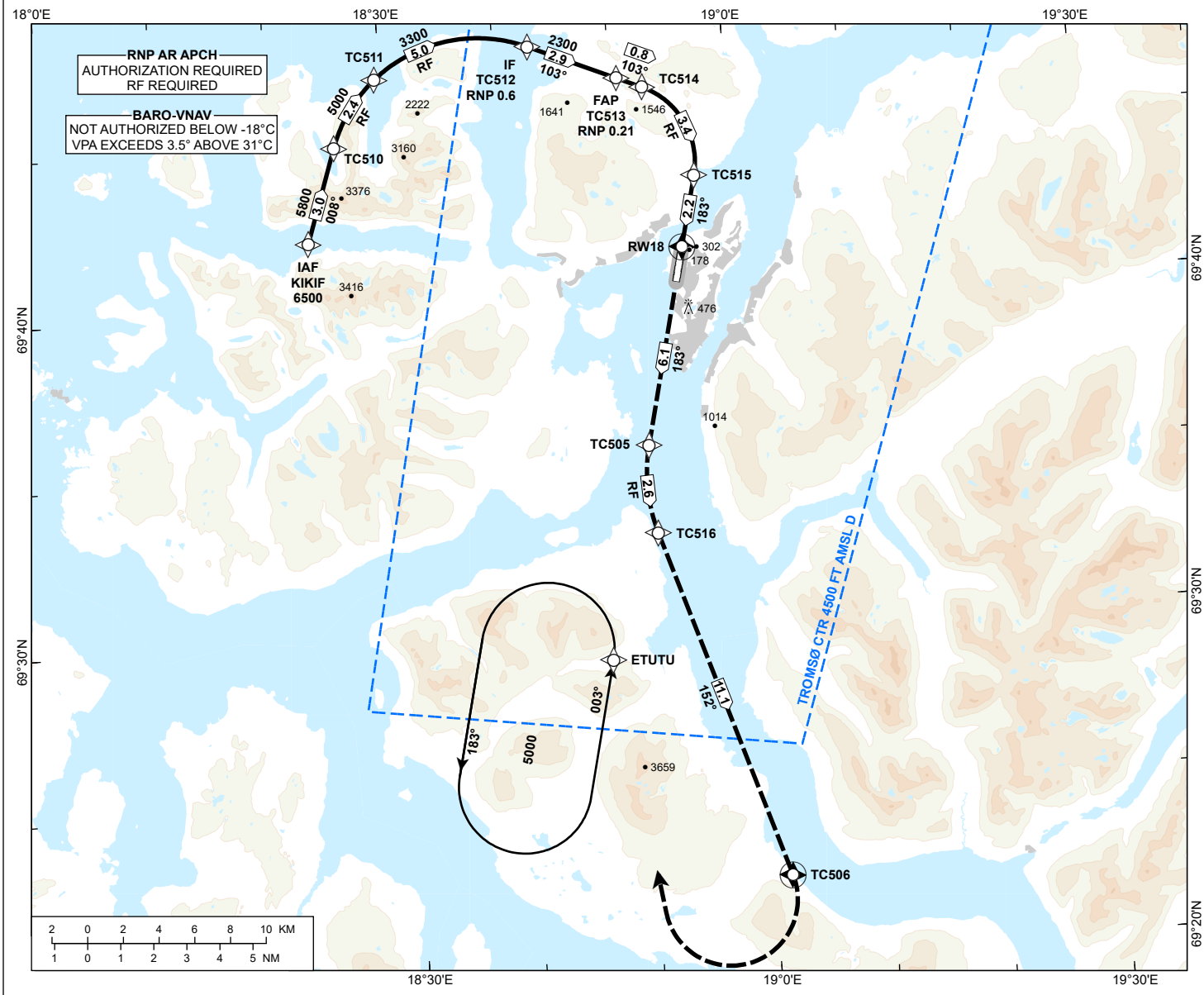
INSTRUMENT APPROACH CHART - ICAO

7_1 MSA 25 NM ARP	ATIS: 128.650	AD ELEV: 32
	APP: 119.350 129.325	THR ELEV: 14
	TWR: 118.100	HGT RELATED TO THR 18
		CIRCLING HGT RELATED TO AD ELEV
		DIST IN NM. ELEV, ALT AND HGT IN FT
		SCALE 1:350 000 VAR 10° E (2020)

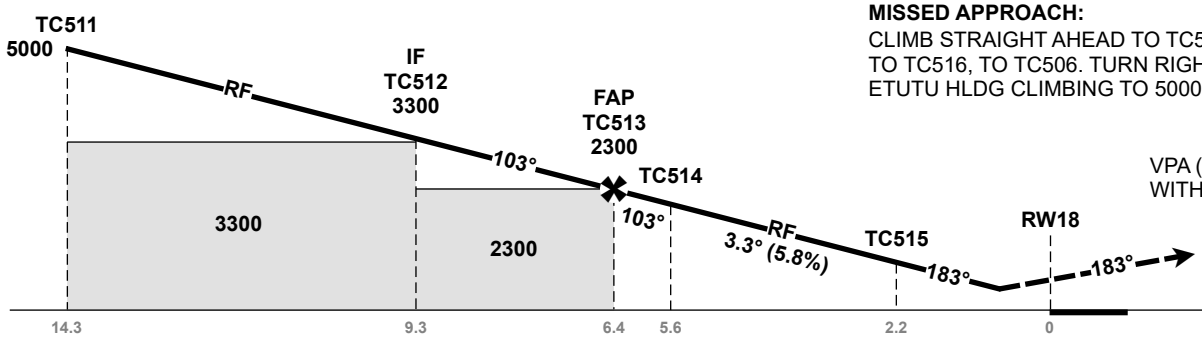
TROMSØ
LANGNES

RNP W RWY 18 (AR)

TRANSITION ALTITUDE
7000



DIST TO RW18	9	8	7	6	5	4	3	2
ALT (HGT)	-	-	-	-	-	-	-	-



MISSED APPROACH:
CLIMB STRAIGHT AHEAD TO TC505. TURN LEFT RF TO TC516, TO TC506. TURN RIGHT DCT ETUTU. ENTER ETUTU HLDG CLIMBING TO 5000.

VPA (3.3°) NOT CONSISTENT WITH PAPI ANGLE (4.0°).

CAT OF ACFT		A	B	C	D
OCA (H) STRAIGHT- IN	RNP 0.21 (2.5%*)	514 (500)	535 (521)	556 (542)	575 (561)
	RNP 0.21 (3.0%*)	460 (446)	483 (469)	505 (491)	516 (502)
	RNP 0.1 (3.0%*)	349 (335)	371 (357)	381 (367)	391 (377)
CIRCLING		1040 (1008)		2660 (2628)	2960 (2928)

NOTE: CIRCLING E OF AD ONLY. *MNM MISSED APCH CLIMB GRADIENT.

CHANGES: RDH.

ATS AIRSPACE CLASSIFICATION: REF ENR 1.4

ENTC RNP W RWY 18 (AR) - RECOMMENDED CODING

SN	PD	WI	Fly-over	°M (°T)	MAG VAR	DIST (NM)	REC NAVAID	TD	ALT (FT)	Speed (KT)	VPA (°)/ TCH (FT)	ARC CENTRE RADIUS (NM)	RNP (NM)
010	IF	KIKIF	-	-	-10.0	-	-	-	A6500+	-	-	-	1.0
020	TF	TC510	-	-	-10.0	3.0	-	-	A5800+	-	-	-	1.0
030	RF	TC511	-	-	-10.0	2.4	-	R	A5000+	-	-	TC001 4.5	1.0
040	RF	TC512	-	-	-10.0	5.0	-	R	A3300+	-	-	TC001 4.5	1.0
050	TF	TC513	-	-	-10.0	2.9	-	-	A2300+	-	-	-	0.6
060	TF	TC514	-	-	-10.0	0.8	-	-	-	-	-3.3	-	0.21
070	RF	TC515	-	-	-10.0	3.4	-	R	-	-	-3.3	TC002 2.4	0.21
080	TF	RW18	Y	-	-10.0	2.2	-	-	-	-	-3.3/50	-	0.21
090	TF	TC505	-	-	-10.0	6.1	-	-	-	-	-	-	1.0
100	RF	TC516	-	-	-10.0	2.6	-	L	-	-	-	TC003 5.0	1.0
110	TF	TC506	Y	-	-10.0	11.1	-	-	-	-	-	-	1.0
120	DF	ETUTU	-	-	-10.0	-	-	R	-	-	-	-	1.0
130	HM	ETUTU	-	003 (012.9)	-10.0	1 MIN	-	L	A5000	-	-	-	1.0

Note: Recommended coding is based on ARINC 424 and is provided solely to indicate which procedure design protection areas were used in the Instrument Flight Procedure Design process.

Note: Published OCA(H) values are obstacle clearance values. Decision heights (DH) below 250 FT shall not be used due to approach operation Type A limitations.

ENTC RNP W RWY 18 (AR) - SIGNIFICANT POINTS

Name	Latitude	Longitude
ETUTU	692907.41N	0184717.53E
KIKIF	694209.35N	0182303.52E
TC001	694335.98N	0183800.99E
TC002	694405.87N	0185007.82E
TC003	693423.19N	0190523.43E
TC505	693531.13N	0185129.96E
TC506	692219.60N	0190127.88E
TC510	694459.82N	0182543.70E
TC511	694659.55N	0182933.49E
TC512	694743.64N	0184303.81E
TC513	694637.19N	0185038.13E
TC514	694617.94N	0185249.38E
TC515	694333.53N	0185650.85E
TC516	693251.93N	0185149.31E

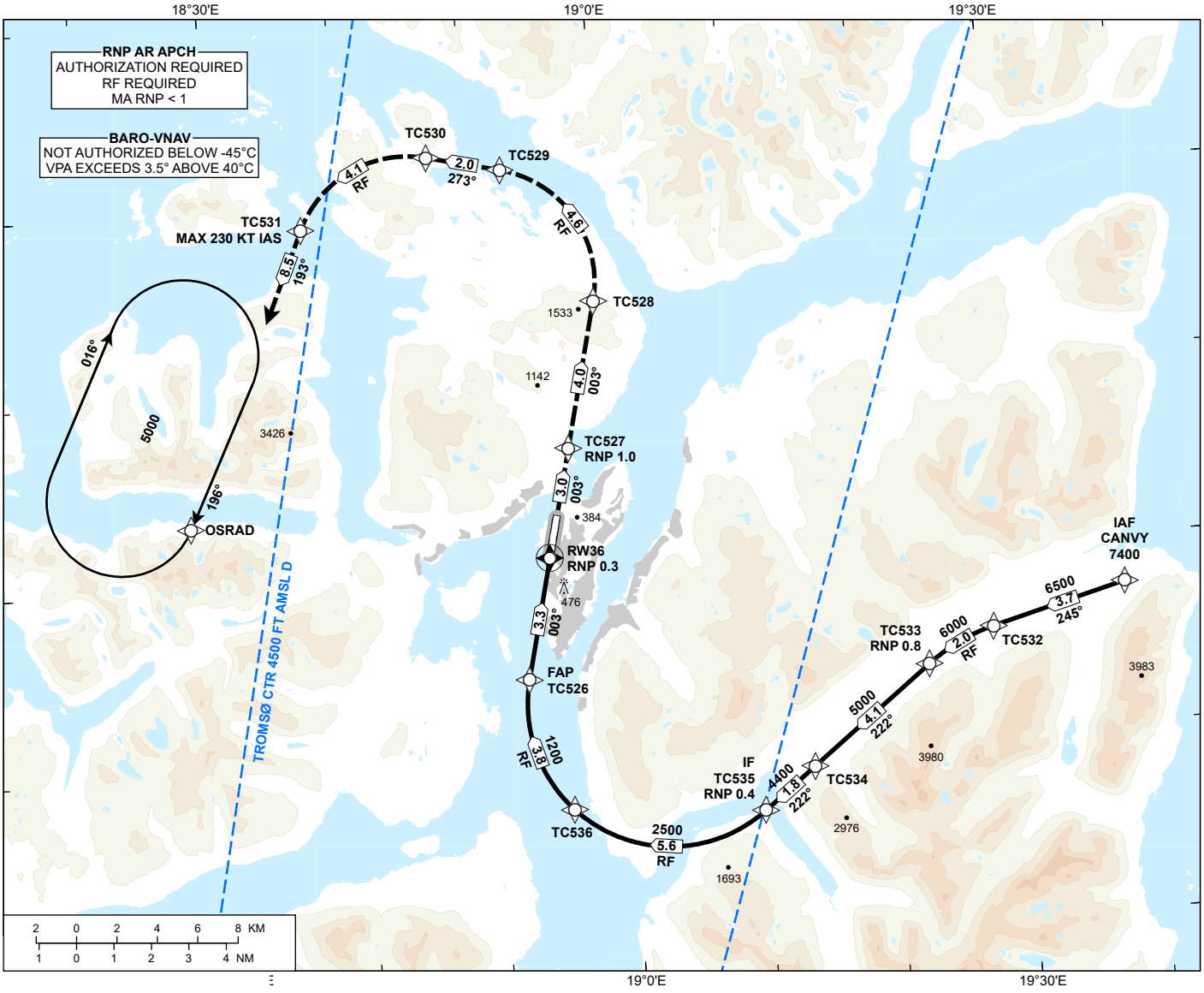
INSTRUMENT APPROACH CHART - ICAO

7_1	ATIS: 128.650	AD ELEV: 32
	APP: 119.350 129.325	THR ELEV: 27
	TWR: 118.100	HGT RELATED TO THR 36
		CIRCLING HGT RELATED TO AD ELEV
		DIST IN NM. ELEV, ALT AND HGT IN FT
MSA 25 NM ARP		SCALE 1:320 000 VAR 10° E (2020)

TROMSØ
LANGNES

RNP E RWY 36 (AR)

TRANSITION ALTITUDE
7000

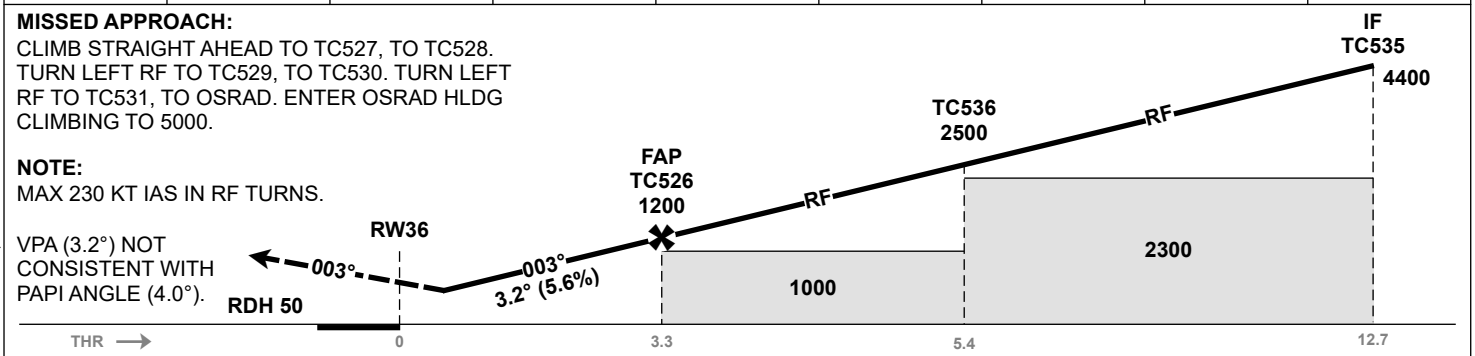


DIST TO RW36	9	8	7	6	5	4	3	2
ALT (HGT)	-	-	-	-	-	-	-	-

MISSED APPROACH:
CLIMB STRAIGHT AHEAD TO TC527, TO TC528. TURN LEFT RF TO TC529, TO TC530. TURN LEFT RF TO TC531, TO OSRAD. ENTER OSRAD HLDG CLIMBING TO 5000.

NOTE:
MAX 230 KT IAS IN RF TURNS.

VPA (3.2°) NOT CONSISTENT WITH PAPI ANGLE (4.0°).



CAT OF ACFT		A	B	C	D
OCA (H) STRAIGHT- IN	RNP 0.3 (2.5%*)	618 (591)	638 (611)	659 (632)	677 (650)
	RNP 0.3 (3.0%*)	608 (581)	617 (590)	627 (600)	637 (610)
	RNP 0.1 (3.0%*)	452 (425)	473 (446)	495 (468)	514 (487)
	RNP 0.1 (5.0%*)	275 (248)	301 (274)	327 (300)	349 (322)
CIRCLING		1040 (1008)		2660 (2628)	2960 (2928)

NOTE: CIRCLING E OF AD ONLY. *MNM MISSED APCH CLIMB GRADIENT.

CHANGES: MISSED APCH SPEED, RDH.

ATS AIRSPACE CLASSIFICATION: REF ENR 1.4

ENTC RNP E RWY 36 (AR) - RECOMMENDED CODING

SN	PD	WI	Fly-over	°M (°T)	MAG VAR	DIST (NM)	REC NAVAID	TD	ALT (FT)	Speed (KT)	VPA (°)/ TCH (FT)	ARC CENTRE RADIUS (NM)	RNP (NM)
010	IF	CANVY	-	-	-10.0	-	-	-	A7400+	-	-	-	1,0
020	TF	TC532	-	-	-10.0	3.7	-	-	A6500+	-	-	-	1.0
030	RF	TC533	-	-	-10.0	2.0	-	L	A6000+	-	-	TC009 5.0	1.0
040	TF	TC534	-	-	-10.0	4.1	-	-	A5000+	-	-	-	0.8
050	TF	TC535	-	-	-10.0	1.8	-	-	A4400+	-	-	-	0.8
060	RF	TC536	-	-	-10.0	5.6	-	R	A2500+	-	-	TC008 3.82	0.4
070	RF	TC526	-	-	-10.0	3.8	-	R	A1200+	-	-	TC008 3.82	0.4
080	TF	RW36	Y	-	-10.0	3.3	-	-	-	-	-3.2/50	-	0.3
090	TF	TC527	-	-	-10.0	3.0	-	-	-	-	-	-	0.3
100	TF	TC528	-	-	-10.0	4.0	-	-	-	-	-	-	1.0
110	RF	TC529	-	-	-10.0	4.6	-	L	-	-	-	TC006 3.03	1.0
120	TF	TC530	-	-	-10.0	2.0	-	-	-	-	-	-	1.0
130	RF	TC531	-	-	-10.0	4.1	-	L	-	K230-	-	TC007 3.03	1.0
140	TF	OSRAD	-	-	-10.0	8.5	-	-	-	-	-	-	1.0
150	HM	OSRAD	-	196 (206.0)	-10.0	1 MIN	-	R	A5000	-	-	-	1.0

Note: Recommended coding is based on ARINC 424 and is provided solely to indicate which procedure design protection areas were used in the Instrument Flight Procedure Design process.

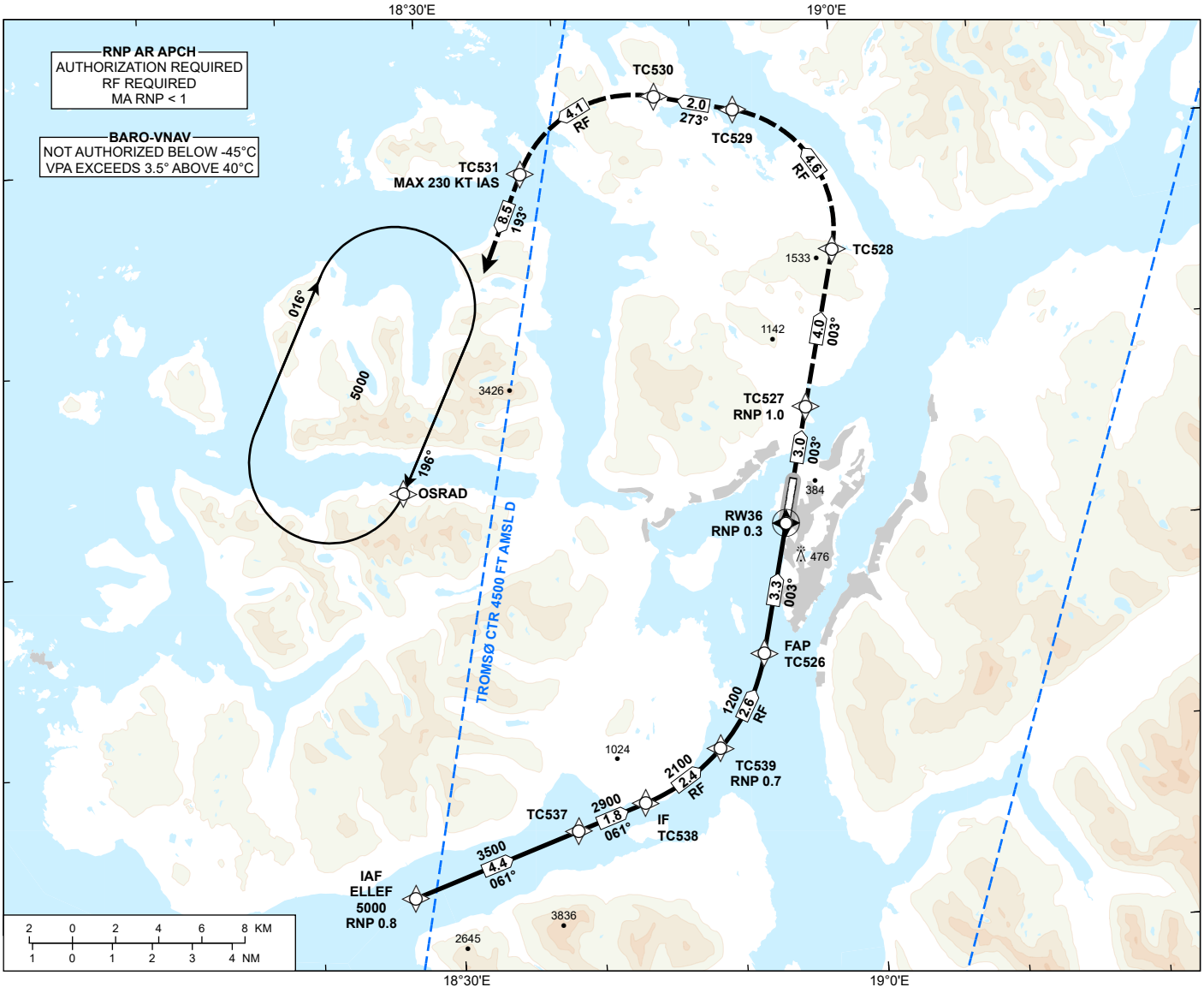
Note: Published OCA(H) values are obstacle clearance values. Decision heights (DH) below 250 FT shall not be used due to approach operation Type A limitations.

ENTC RNP E RWY 36 (AR) - SIGNIFICANT POINTS

Name	Latitude	Longitude
CANVY	693843.08N	0193826.86E
OSRAD	694140.13N	0182725.65E
TC006	694748.32N	0185047.17E
TC007	694815.14N	0184509.28E
TC008	693617.89N	0190312.56E
TC009	693257.52N	0193153.24E
TC526	693709.80N	0185234.91E
TC527	694314.79N	0185639.19E
TC528	694707.07N	0185917.19E
TC529	695044.76N	0185245.15E
TC530	695111.58N	0184707.30E
TC531	694927.34N	0183708.40E
TC532	693746.26N	0192812.68E
TC533	693653.36N	0192307.65E
TC534	693422.89N	0191353.47E
TC535	693318.00N	0190955.16E
TC536	693338.63N	0185524.03E

INSTRUMENT APPROACH CHART - ICAO

7_1 MSA 25 NM ARP	ATIS: 128.650	AD ELEV: 32	TROMSØ LANGNES
	APP: 119.350 129.325	THR ELEV: 27	
	TWR: 118.100	HGT RELATED TO THR 36	RNP O RWY 36 (AR)
		CIRCLING HGT RELATED TO AD ELEV	
		DIST IN NM. ELEV, ALT AND HGT IN FT	TRANSITION ALTITUDE 7000
		SCALE 1:300 000 VAR 10° E (2020)	

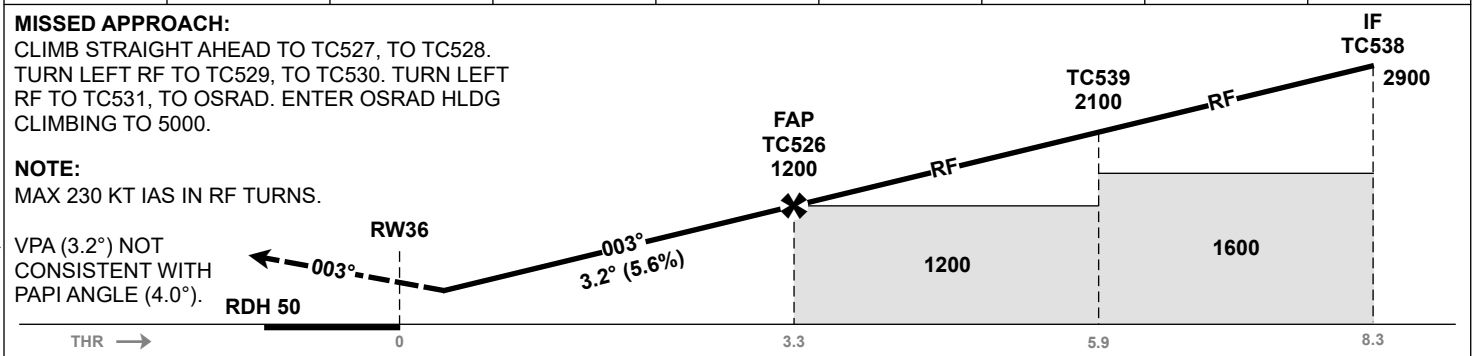


DIST TO RW36	9	8	7	6	5	4	3	2
ALT (HGT)	-	-	-	-	-	-	-	-

MISSED APPROACH:
CLIMB STRAIGHT AHEAD TO TC527, TO TC528. TURN LEFT RF TO TC529, TO TC530. TURN LEFT RF TO TC531, TO OSRAD. ENTER OSRAD HLDG CLIMBING TO 5000.

NOTE:
MAX 230 KT IAS IN RF TURNS.

VPA (3.2°) NOT CONSISTENT WITH PAPI ANGLE (4.0°).



CAT OF ACFT		A	B	C	D
OCA (H) STRAIGHT- IN	RNP 0.3 (2.5%*)	618 (591)	638 (611)	659 (632)	677 (650)
	RNP 0.3 (3.0%*)	608 (581)	617 (590)	627 (600)	637 (610)
	RNP 0.1 (3.0%*)	452 (425)	473 (446)	495 (468)	514 (487)
	RNP 0.1 (5.0%*)	275 (248)	301 (274)	327 (300)	349 (322)
CIRCLING		1040 (1008)		2660 (2628)	2960 (2928)

NOTE: CIRCLING E OF AD ONLY. *MNM MISSED APCH CLIMB GRADIENT.

CHANGES: MISSED APCH SPEED, RDH.

ATS AIRSPACE CLASSIFICATION: REF ENR 1.4

ENTC RNP O RWY 36 (AR) - RECOMMENDED CODING

SN	PD	WI	Fly-over	°M (°T)	MAG VAR	DIST (NM)	REC NAVAID	TD	ALT (FT)	Speed (KT)	VPA (°)/ TCH (FT)	ARC CENTRE RADIUS (NM)	RNP (NM)
010	IF	ELLEF	-	-	-10.0	-	-	-	A5000+	-	-	-	0.8
020	TF	TC537	-	-	-10.0	4.4	-	-	A3500+	-	-	-	0.8
030	TF	TC538	-	-	-10.0	1.8	-	-	A2900+	-	-	-	0.8
040	RF	TC539	-	-	-10.0	2.4	-	L	A2100+	-	-	TC010 4.94	0.8
050	RF	TC526	-	-	-10.0	2.6	-	L	A1200+	-	-	TC010 4.94	0.7
060	TF	RW36	Y	-	-10.0	3.3	-	-	-	-	-3.2/50	-	0.3
070	TF	TC527	-	-	-10.0	3.0	-	-	-	-	-	-	0.3
080	TF	TC528	-	-	-10.0	4.0	-	-	-	-	-	-	1.0
090	RF	TC529	-	-	-10.0	4.6	-	L	-	-	-	TC006 3.03	1.0
100	TF	TC530	-	-	-10.0	2.0	-	-	-	-	-	-	1.0
110	RF	TC531	-	-	-10.0	4.1	-	L	-	K230-	-	TC007 3.03	1.0
120	TF	OSRAD	-	-	-10.0	8.5	-	-	-	-	-	-	1.0
130	HM	OSRAD	-	196 (206.0)	-10.0	1 MIN	-	R	A5000	-	-	-	1.0

Note: Recommended coding is based on ARINC 424 and is provided solely to indicate which procedure design protection areas were used in the Instrument Flight Procedure Design process.

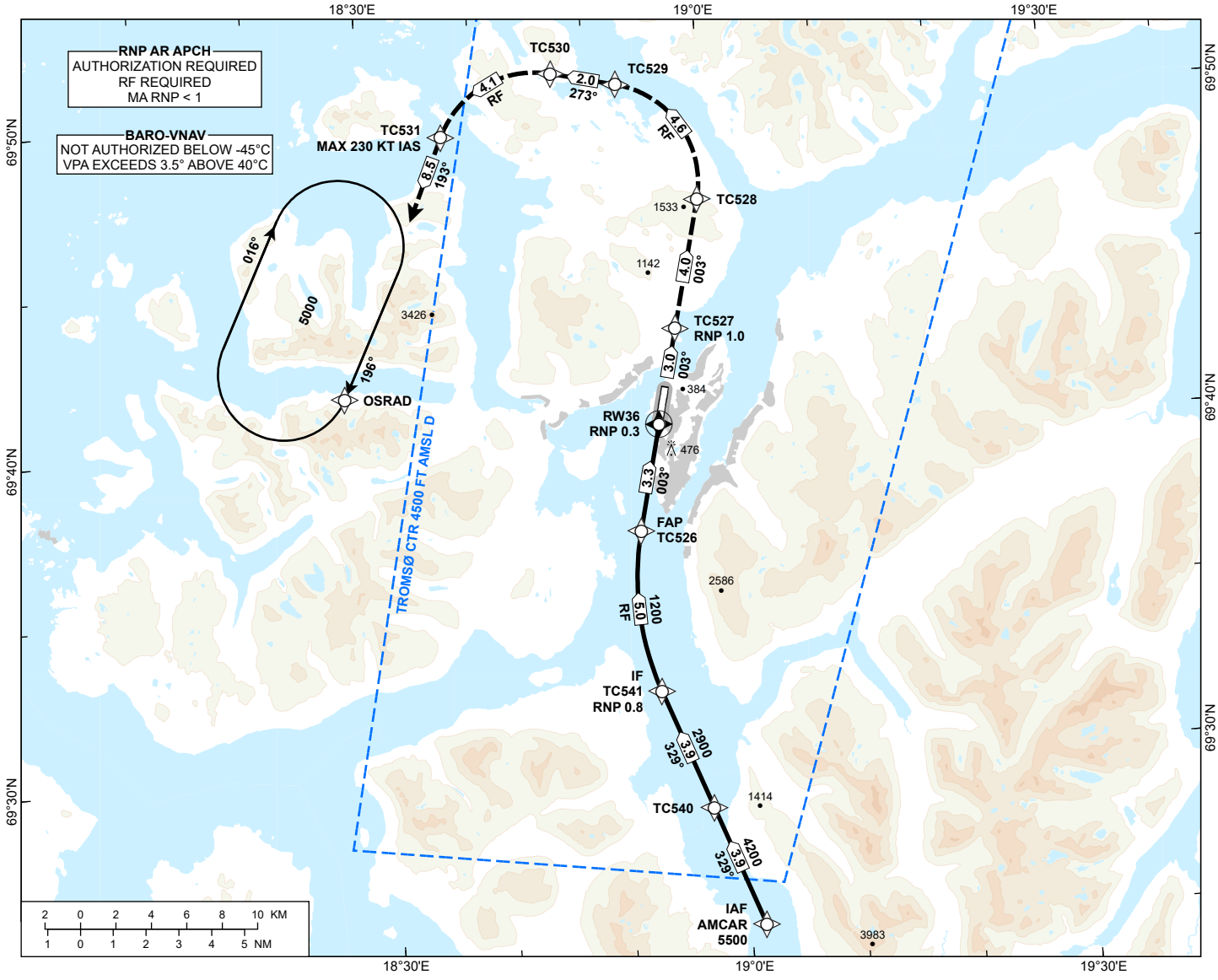
Note: Published OCA(H) values are obstacle clearance values. Decision heights (DH) below 250 FT shall not be used due to approach operation Type A limitations.

ENTC RNP O RWY 36 (AR) - SIGNIFICANT POINTS

Name	Latitude	Longitude
ELLEF	693134.62N	0182642.06E
OSRAD	694140.13N	0182725.65E
TC006	694748.32N	0185047.17E
TC007	694815.14N	0184509.28E
TC010	693815.97N	0183849.04E
TC526	693709.80N	0185234.91E
TC527	694314.79N	0185639.19E
TC528	694707.07N	0185917.19E
TC529	695044.76N	0185245.15E
TC530	695111.58N	0184707.30E
TC531	694927.34N	0183708.40E
TC537	693301.55N	0183834.43E
TC538	693337.11N	0184326.96E
TC539	693452.36N	0184902.15E

INSTRUMENT APPROACH CHART - ICAO

7_1 MSA 25 NM ARP	ATIS: 128.650	AD ELEV: 32	TROMSØ **LANGNES**
	APP: 119.350 129.325	THR ELEV: 27	
	TWR: 118.100	HGT RELATED TO THR 36	**RNP S RWY 36 (AR)**
		CIRCLING HGT RELATED TO AD ELEV	
		DIST IN NM. ELEV, ALT AND HGT IN FT	TRANSITION ALTITUDE 7000
		SCALE 1:360 000 VAR 10° E (2020)	

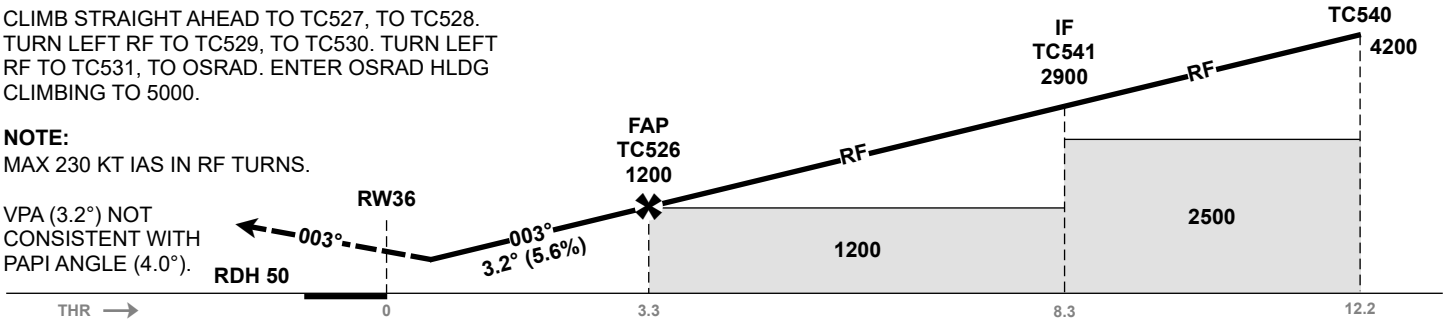


DIST TO RW36	9	8	7	6	5	4	3	2
ALT (HGT)	-	-	-	-	-	-	-	-

MISSED APPROACH:
CLIMB STRAIGHT AHEAD TO TC527, TO TC528. TURN LEFT RF TO TC529, TO TC530. TURN LEFT RF TO TC531, TO OSRAD. ENTER OSRAD HLDG CLIMBING TO 5000.

NOTE:
MAX 230 KT IAS IN RF TURNS.

VPA (3.2°) NOT CONSISTENT WITH PAPI ANGLE (4.0°).



CAT OF ACFT		A	B	C	D
OCA (H) STRAIGHT- IN	RNP 0.3 (2.5%*)	618 (591)	638 (611)	659 (632)	677 (650)
	RNP 0.3 (3.0%*)	608 (581)	617 (590)	627 (600)	637 (610)
	RNP 0.1 (3.0%*)	452 (425)	473 (446)	495 (468)	514 (487)
	RNP 0.1 (5.0%*)	275 (248)	301 (274)	327 (300)	349 (322)
CIRCLING		1040 (1008)		2660 (2628)	2960 (2928)

NOTE: CIRCLING E OF AD ONLY. *MNM MISSED APCH CLIMB GRADIENT.

CHANGES: MISSED APCH SPEED, RDH.

ATS AIRSPACE CLASSIFICATION: REF ENR 1.4

ENTC RNP S RWY 36 (AR) - RECOMMENDED CODING

SN	PD	WI	Fly-over	°M (°T)	MAG VAR	DIST (NM)	REC NAVAID	TD	ALT (FT)	Speed (KT)	VPA (°)/ TCH (FT)	ARC CENTRE RADIUS (NM)	RNP (NM)
010	IF	AMCAR	-	-	-10.0	-	-	-	A5500+	-	-	-	1.0
020	TF	TC540	-	-	-10.0	3.9	-	-	A4200+	-	-	-	1.0
030	TF	TC541	-	-	-10.0	3.9	-	-	A2900+	-	-	-	1.0
040	RF	TC526	-	-	-10.0	5.0	-	R	A1200+	-	-	TC011 8.5	0.8
050	TF	RW36	Y	-	-10.0	3.3	-	-	-	-	-3.2/50	-	0.3
060	TF	TC527	-	-	-10.0	3.0	-	-	-	-	-	-	0.3
070	TF	TC528	-	-	-10.0	4.0	-	-	-	-	-	-	1.0
080	RF	TC529	-	-	-10.0	4.6	-	L	-	-	-	TC006 3.03	1.0
090	TF	TC530	-	-	-10.0	2.0	-	-	-	-	-	-	1.0
100	RF	TC531	-	-	-10.0	4.1	-	L	-	K230-	-	TC007 3.03	1.0
110	TF	OSRAD	-	-	-10.0	8.5	-	-	-	-	-	-	1.0
120	HM	OSRAD	-	196 (206.0)	-10.0	1 MIN	-	R	A5000	-	-	-	1.0

Note: Recommended coding is based on ARINC 424 and is provided solely to indicate which procedure design protection areas were used in the Instrument Flight Procedure Design process.

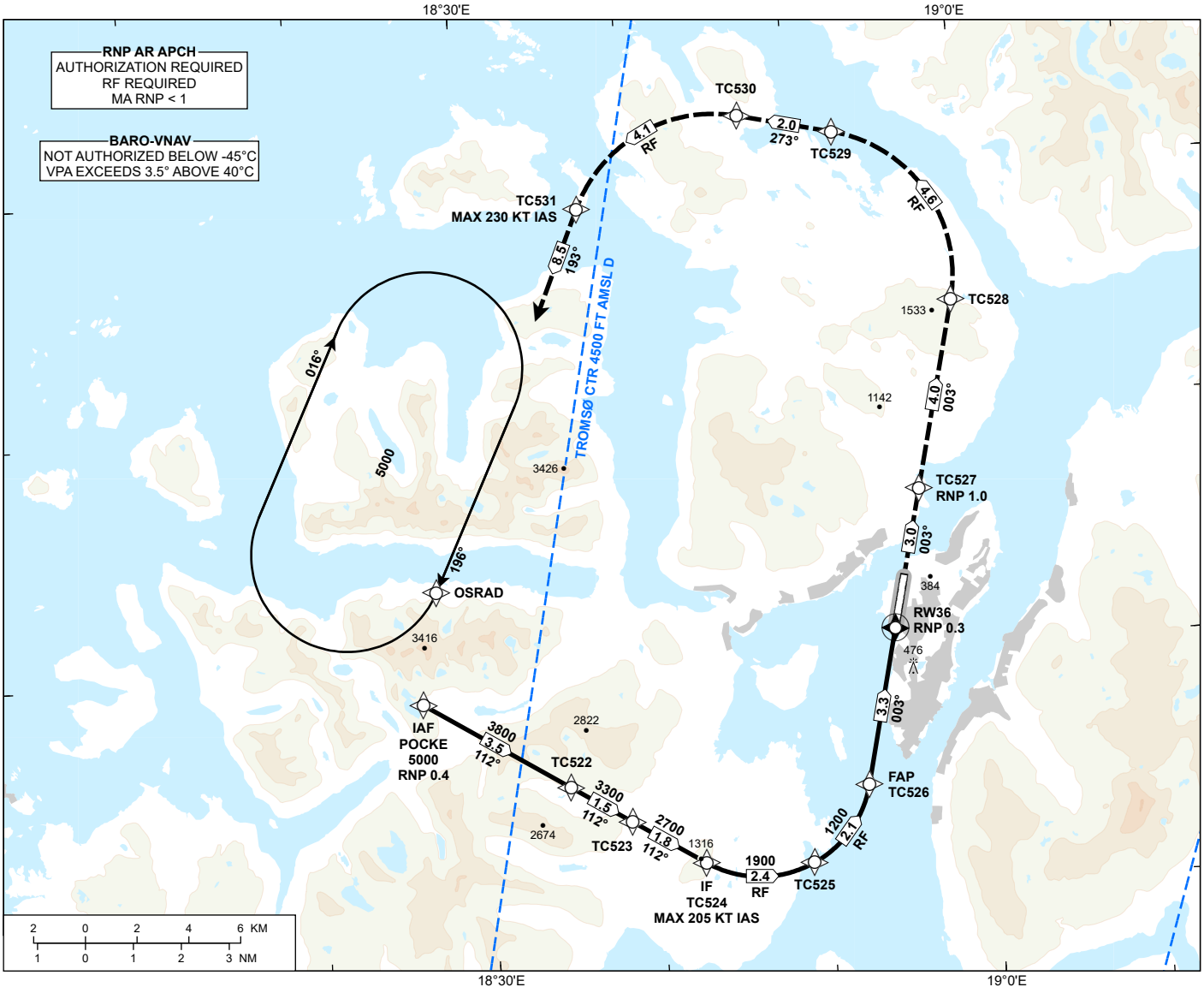
Note: Published OCA(H) values are obstacle clearance values. Decision heights (DH) below 250 FT shall not be used due to approach operation Type A limitations.

ENTC RNP S RWY 36 (AR) - SIGNIFICANT POINTS

Name	Latitude	Longitude
AMCAR	692500.80N	0190116.01E
OSRAD	694140.13N	0182725.65E
TC006	694748.32N	0185047.17E
TC007	694815.14N	0184509.28E
TC011	693513.41N	0191612.58E
TC526	693709.80N	0185234.91E
TC527	694314.79N	0185639.19E
TC528	694707.07N	0185917.19E
TC529	695044.76N	0185245.15E
TC530	695111.58N	0184707.30E
TC531	694927.34N	0183708.40E
TC540	692838.46N	0185723.51E
TC541	693216.12N	0185330.35E

INSTRUMENT APPROACH CHART - ICAO

7_1	ATIS: 128.650	AD ELEV: 32	TROMSØ
	APP: 119.350 129.325	THR ELEV: 27	**LANGNES**
	TWR: 118.100	HGT RELATED TO THR 36	
		CIRCLING HGT RELATED TO AD ELEV	**RNP W RWY 36 (AR)**
		DIST IN NM. ELEV, ALT AND HGT IN FT	TRANSITION ALTITUDE 7000
MSA 25 NM ARP		SCALE 1:250 000 VAR 10° E (2020)	

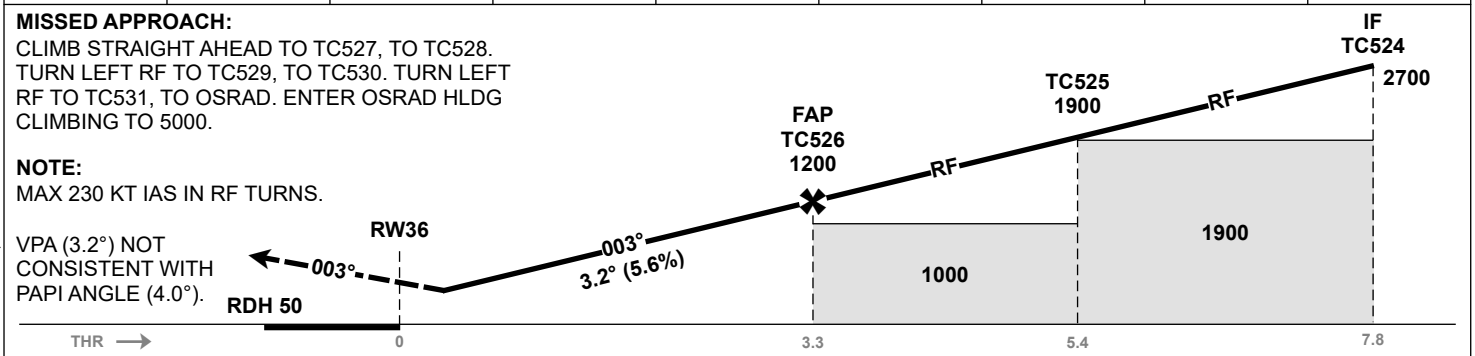


DIST TO RW36	9	8	7	6	5	4	3	2
ALT (HGT)	-	-	-	-	-	-	-	-

MISSED APPROACH:
CLIMB STRAIGHT AHEAD TO TC527, TO TC528. TURN LEFT RF TO TC529, TO TC530. TURN LEFT RF TO TC531, TO OSRAD. ENTER OSRAD HLDG CLIMBING TO 5000.

NOTE:
MAX 230 KT IAS IN RF TURNS.

VPA (3.2°) NOT CONSISTENT WITH PAPI ANGLE (4.0°).



CAT OF ACFT		A	B	C	D
OCA (H) STRAIGHT- IN	RNP 0.3 (2.5%*)	618 (591)	638 (611)	659 (632)	677 (650)
	RNP 0.3 (3.0%*)	608 (581)	617 (590)	627 (600)	637 (610)
	RNP 0.1 (3.0%*)	452 (425)	473 (446)	495 (468)	514 (487)
	RNP 0.1 (5.0%*)	275 (248)	301 (274)	327 (300)	349 (322)
CIRCLING		1040 (1008)		2660 (2628)	2960 (2928)

NOTE: CIRCLING E OF AD ONLY. *MNM MISSED APCH CLIMB GRADIENT.

CHANGES: MISSED APCH SPEED, RDH.

ATS AIRSPACE CLASSIFICATION: REF ENR 1.4

ENTC RNP W RWY 36 (AR) - RECOMMENDED CODING

SN	PD	WI	Fly-over	°M (°T)	MAG VAR	DIST (NM)	REC NAVAID	TD	ALT (FT)	Speed (KT)	VPA (°)/ TCH (FT)	ARC CENTRE RADIUS (NM)	RNP (NM)
010	IF	POCKE	-	-	-10.0	-	-	-	A5000+	-	-	-	0.4
020	TF	TC522	-	-	-10.0	3.5	-	-	A3800+	-	-	-	0.4
030	TF	TC523	-	-	-10.0	1.5	-	-	A3300+	-	-	-	0.4
040	TF	TC524	-	-	-10.0	1.8	-	-	A2700+	-	-	-	0.4
050	RF	TC525	-	-	-10.0	2.4	-	L	A1900+	K205-	-	TC005 2.31	0.4
060	RF	TC526	-	-	-10.0	2.1	-	L	A1200+	-	-	TC005 2.31	0.4
070	TF	RW36	Y	-	-10.0	3.3	-	-	-	-	-3.2/50	-	0.3
080	TF	TC527	-	-	-10.0	3.0	-	-	-	-	-	-	0.3
090	TF	TC528	-	-	-10.0	4.0	-	-	-	-	-	-	1.0
100	RF	TC529	-	-	-10.0	4.6	-	L	-	-	-	TC006 3.03	1.0
110	TF	TC530	-	-	-10.0	2.0	-	-	-	-	-	-	1.0
120	RF	TC531	-	-	-10.0	4.1	-	L	-	K230-	-	TC007 3.03	1.0
130	TF	OSRAD	-	-	-10.0	8.5	-	-	-	-	-	-	1.0
140	HM	OSRAD	-	196 (206.0)	-10.0	1 MIN	-	R	A5000	-	-	-	1.0

Note: Recommended coding is based on ARINC 424 and is provided solely to indicate which procedure design protection areas were used in the Instrument Flight Procedure Design process.

Note: Published OCA(H) values are obstacle clearance values. Decision heights (DH) below 250 FT shall not be used due to approach operation Type A limitations.

ENTC RNP W RWY 36 (AR) - SIGNIFICANT POINTS

Name	Latitude	Longitude
OSRAD	694140.13N	0182725.65E
POCKE	693920.69N	0182617.24E
TC005	693740.88N	0184608.90E
TC006	694748.32N	0185047.17E
TC007	694815.14N	0184509.28E
TC522	693727.88N	0183448.56E
TC523	693640.82N	0183821.30E
TC524	693544.37N	0184236.42E
TC525	693536.69N	0184901.90E
TC526	693709.80N	0185234.91E
TC527	694314.79N	0185639.19E
TC528	694707.07N	0185917.19E
TC529	695044.76N	0185245.15E
TC530	695111.58N	0184707.30E
TC531	694927.34N	0183708.40E