

UUWW/VKO
VNUKOVO
 **JEPPESSEN**
27 MAR 09 10-1P Eff 9 Apr

MOSCOW, RUSSIA
AIRPORT BRIEFING

1. GENERAL

1.1. ATIS

ATIS 125.87

1.2. NOISE ABATEMENT PROCEDURES

1.2.1. GENERAL

Noise abatement procedures shall be executed by all ACFT.

'AIR GROUND' communication shall be reduced to a minimum during the approach phase, the initial take-off and the climbing phase.

The flight crews must maintain the assigned SID and STAR routes, and in case of deviation from them - immediately join the assigned flight track.

1.2.2. REVERSE THRUST

Reverse thrust power with the exception reverse idle thrust is used for safety reasons only.

1.3. TAXI PROCEDURES

Taxiing on Vnukovo I apron under engines power of not more than 0.42 of the rating.

Taxiing to/from Vnukovo III apron with Follow-me car only.

Taxiing on TWYs 5, 13, 14, 15 and M1 at reduced speed, strictly along centerline.

Taxiing on TWY 14 between TWYs 13 and 15 DAY only when VIS exceeds 2000m, otherwise only towing is allowed.

TWY B3 available only for towing.

For Taxi Routings refer to 10-9 charts.

1.4. PARKING INFORMATION

Use of Vnukovo I stands 4 and 5 by towing.

When Vnukovo I stands 29A and 29B occupied, use of stands 30 and 31 by towing.

Use of Vnukovo III stands 33 and 34 by towing.

Enter Vnukovo I stands 32 thru 36 and 41 thru 43 by towing.

Vnukovo III stands 21 and 22 to be entered via vacant stands 23 thru 25 and vice versa.

Enter Vnukovo III stand 27 under engines power, when stand 18 vacant.

Enter Vnukovo III stands 1 thru 17 and 28 by towing.

Leave Vnukovo I stands 25 and 26 under engines power of not more than 0.42 of the rating.

Leave Vnukovo I stand 28 under engines power, when stand 29 vacant.

Leave Vnukovo I stand 92 by towing.

Leave Vnukovo I stand 96 under engines power, when stand 74 vacant.

Use of Vnukovo III stands 35A thru 72 by towing.

Leave Vnukovo III stands under engines power as follows:

- Stand 6, when stand 31 vacant
- Stands 7 and 8, when stand 23 vacant
- Stands 9 and 10, when stand 22 vacant
- Stand 17, when stand 28 vacant
- Stands 18 and 28, when stand 27 vacant
- Stand 27, when stand 18 vacant

Leave Vnukovo III stands 29 thru 32 by towing.

Leave Vnukovo III stands 21 thru 26 by towing, followed by taxiing with engines power 0.4 of the nominal.

Leave Vnukovo III stands by towing as follows:

- Stand 6, when stand 31 occupied
- Stands 7 and 8, when stand 23 occupied
- Stands 9 and 10, when stand 22 occupied
- Stand 17, when stand 28 occupied
- Stand 18, when stand 27 occupied
- Stand 27, when stand 18 occupied.

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AIRPORT BRIEFING

1. GENERAL

1.5. OTHER INFORMATION

Birds in vicinity of APT.

2. ARRIVAL

2.1. NOISE ABATEMENT PROCEDURES**2.1.1. APPROACH PHASE****Restrictions**

Noise abatement procedures shall not apply under the following conditions:

- if RWY is covered with snow, ice, slush, water, mud, rubber, oil or other substances and the friction coefficient at this is 0.4 or less;
- when ceiling is less than 150m or horizontal visibility is less than 1800m;
- when a crosswind component on RWY (including gusts) exceeds 7 m/sec;
- when a tailwind component on RWY exceeds 2.5 m/sec;
- when wind shear is forecasted or reported or a thunderstorm situation is expected.

Great rates of descent, when leaving the holding patterns or the occupied altitude, should be avoided (if possible) directly before the final approach.

The change of flight configuration and speed of ACFT, connected with noise abatement procedures, shall be carried out according to the requirements of the Airplane Flight Manual.

During instrument as well as visual approach, it is prohibited to fly below the ILS GS angle.

No noise abatement procedures shall envisage the increasing of indicated air speed of descent.

A displacement of THR shall not be used as a noise abatement measure.

Landing of ACFT with tailwind component of up to 5 m/sec is allowed under the following conditions:

- RWY is dry or damp;
- friction coefficient is 0.5 or more;
- crosswind component is not more than 5 m/sec.

RWY 24 special approach procedures

ILS approach shall be carried out in automatic mode when meteorological conditions at the APT are close to CAT I landing minima. The length of intermediate approach is less than standard and is 1.6NM.

During ILS approach in director mode it is not permitted to initiate the final turn at an altitude less than 2330 '(1650'). The length of intermediate approach is less than standard and is 1.1NM.

2.2. CAT II OPERATIONS

RWY 24 approved for CAT II operations, special aircrew and ACFT certification required.

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VNUKOVO

12 SEP 08

JEPPESEN

10-1P2

Eff 25 Sep

MOSCOW, RUSSIA
AIRPORT BRIEFING**3. DEPARTURE****3.1. START-UP & TAXI PROCEDURES****3.1.1. START-UP**

A period of 10 min established additionally to departure time during reconstruction work for towing and engine start-up from Vnukovo I apron.

3.1.2. TAXIING

Up to 15 min are established for taxiing and provision of air traffic safety during departure.

3.2. NOISE ABATEMENT PROCEDURES**TAKE-OFF AND CLIMBING PHASE**

Noise abatement procedures shall not be executed at the expense of reduction of flight safety, in case of engine failure during take-off and climbing phase.

Restrictions

Take-off with tailwind component up to 5 m/sec is allowed under the following conditions:

- RWY is dry or damp;
- friction coefficient is 0.5 or more;
- crosswind component is not more than 5 m/sec.

A displacement of THR shall not be used as a noise abatement measure.

A change of flight course direction after take-off is permitted only after reaching 1080' (394').

Turns initiated between 1080' (394') and 1670' (984') shall be executed with a bank not exceeding 15°.

Turns initiated between 1670' (984') and 3640' (2954') shall be executed with a bank not exceeding 20°.

Turns initiated at or above 3640' (2954') shall be executed with 25° bank or with angular speed of turn of 3°/sec.

The minimum indicated air speed during established climb shall not be less than $V_2 + 10$ KT or less than prescribed in the Airplane Flight Manual if it has greater value.

Maintaining the minimum indicated air speed of climb is not required if it brings to exceeding the minimum permissible angle of attack.

The reduction of engine power shall not be applied until:

- the ACFT reaches 1480' (794');
- the established standard power mode enables with MTOW to maintain the established climb gradient of not less than 4% at the above specified speed;
- take-off flight path provides overflying of all obstacles located under the flight path with sufficient clearance both when all engines are operating normally and also taking into account possible engine failure and time period necessary for the rest engines to develop full power.

Noise abatement procedures, which envisage take-off with reduced engine power, shall not apply under the following conditions:

- if RWY is covered with snow, slush, water, mud, rubber, oil or other substances and the friction coefficient at this is 0.4 or less;
- when horizontal visibility is less than 1800m;
- when a crosswind component on RWY (including gusts) exceeds 7 m/sec;
- when a tailwind component on RWY exceeds 2.5 m/sec;
- when wind shear is forecasted or reported or a thunderstorm situation is expected.

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Eff 25 Sep

MOSCOW, RUSSIA
AIRPORT BRIEFING

3. DEPARTURE

Special take-off and climbing procedures

During take-off from RWY 02 on take-off heading and climbing to not below 1290' (657') with a maximum possible climb gradient proceed to 2.2NM from RWY extremity with further right turn, maintaining speed and banking which provide a flight with radius 2.4NM. Passing WM shall be carried out at or above FL49 during departure to BITSA.

During take-off from RWY 06 on take-off heading and climbing to not below 1300' (663') with a maximum possible climb gradient proceed to 2.2NM from RWY extremity with further right turn, maintaining speed and banking which provide a flight with radius 2.4NM.

During take-off from RWYs 20 and 24 on take-off heading and climbing to 1350' (664') with a maximum possible climb gradient proceed to 2.2NM from RWY extremity with further left turn, maintaining speed and banking which provide a flight with radius 2.4NM. Passing BITSA shall be carried out at or above FL49.

Climbing phase

The flight crews shall apply two noise abatement procedures during climbing phase: NADP1 or NADP2 (ICAO Doc 8168, Volume 1, Part V, Chapter 3).

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30 JAN 09

JEPPESEN

10-2

Eff 12 Feb

MOSCOW, RUSSIA

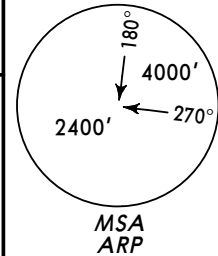
STAR

ATIS
125.87

Apt Elev
686'

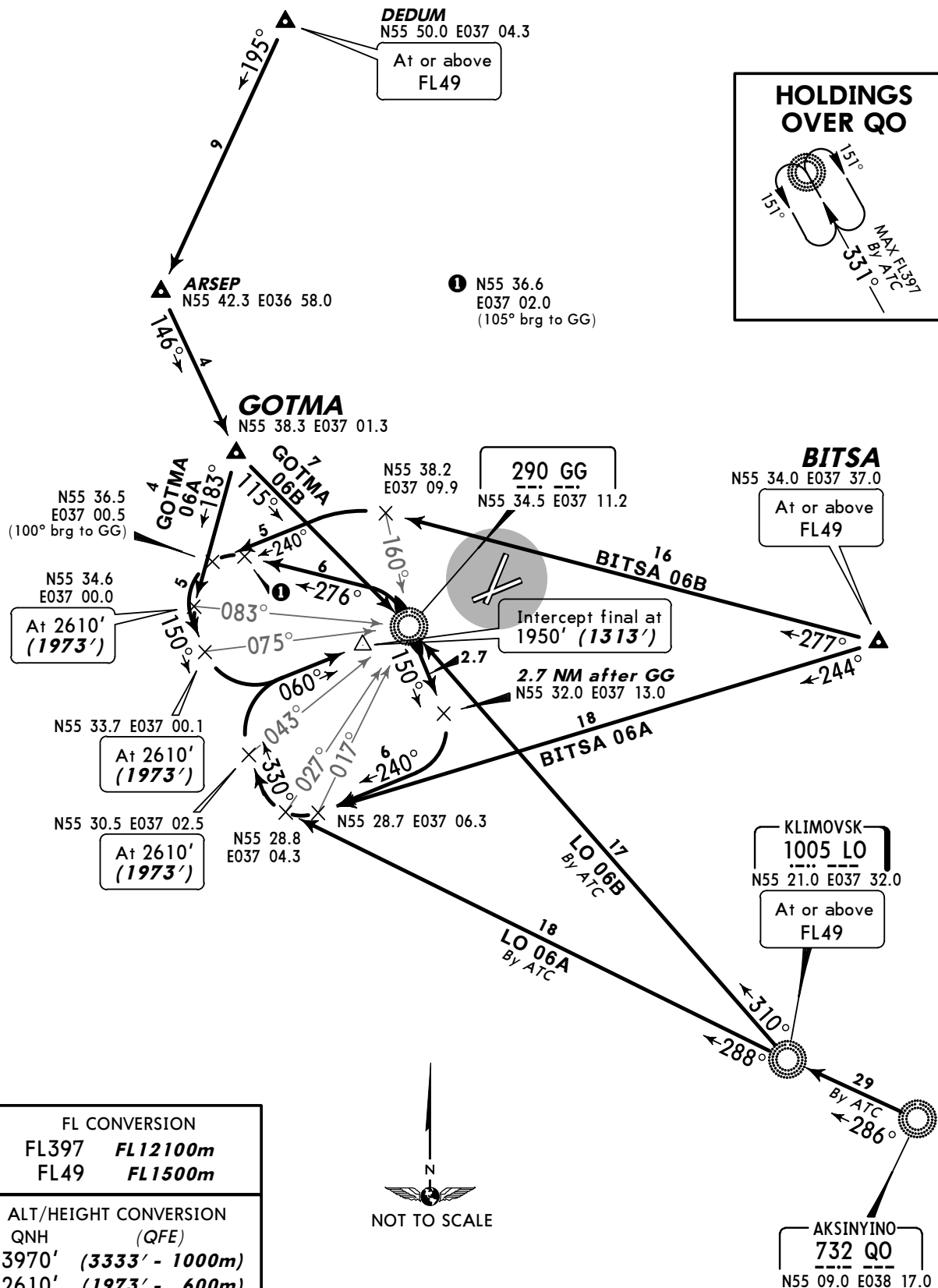
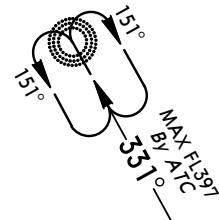
Alt Set: MM (hPa on request) QNH on request
Trans level: By ATC Trans alt: 3970' **(3333')**

(QFE)



BITSA 06A [BITØ6A], BITSA 06B [BITØ6B]
GOTMA 06A[GOTØ6A], GOTMA 06B[GOTØ6B]
KLIMOVSK 06A (LO 06A), KLIMOVSK 06B (LO 06B)
RWY 06 ARRIVALS

HOLDINGS OVER QO



FL CONVERSION
FL397 ***FL12100m***
FL49 ***FL1500m***

ALT/HEIGHT CONVERSION
QNH (QFE)
3970' (3333' - 1000m)
2610' (1973' - 600m)
1950' (1313' - 400m)

UUWW/VKO
VNUKOVO

JEPPESEN
30 JAN 09 (10-2A) Eff 12 Feb

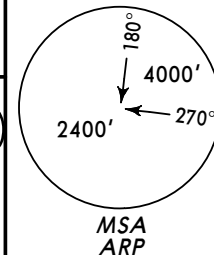
MOSCOW, RUSSIA

STAR

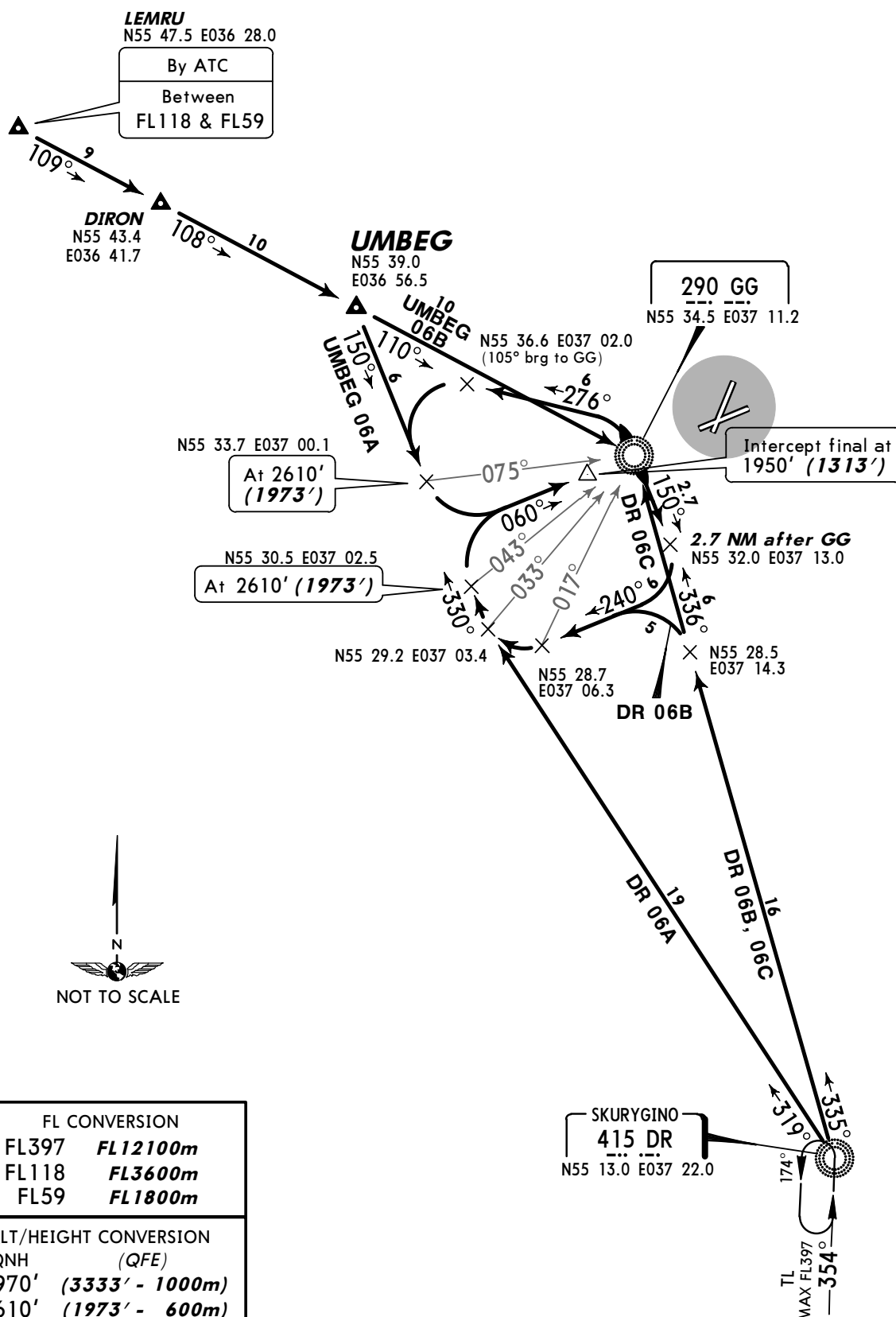
ATIS
125.87

Apt Elev
686'

Alt Set: MM (hPa on request) QNH on request (QFE)
Trans level: By ATC Trans alt: 3970' (3333')



SKURYGINO 06A (DR 06A), SKURYGINO 06B (DR 06B)
SKURYGINO 06C (DR 06C)
UMBEG 06A [UMBØ6A], UMBEG 06B [UMBØ6B]
RWY 06 ARRIVALS



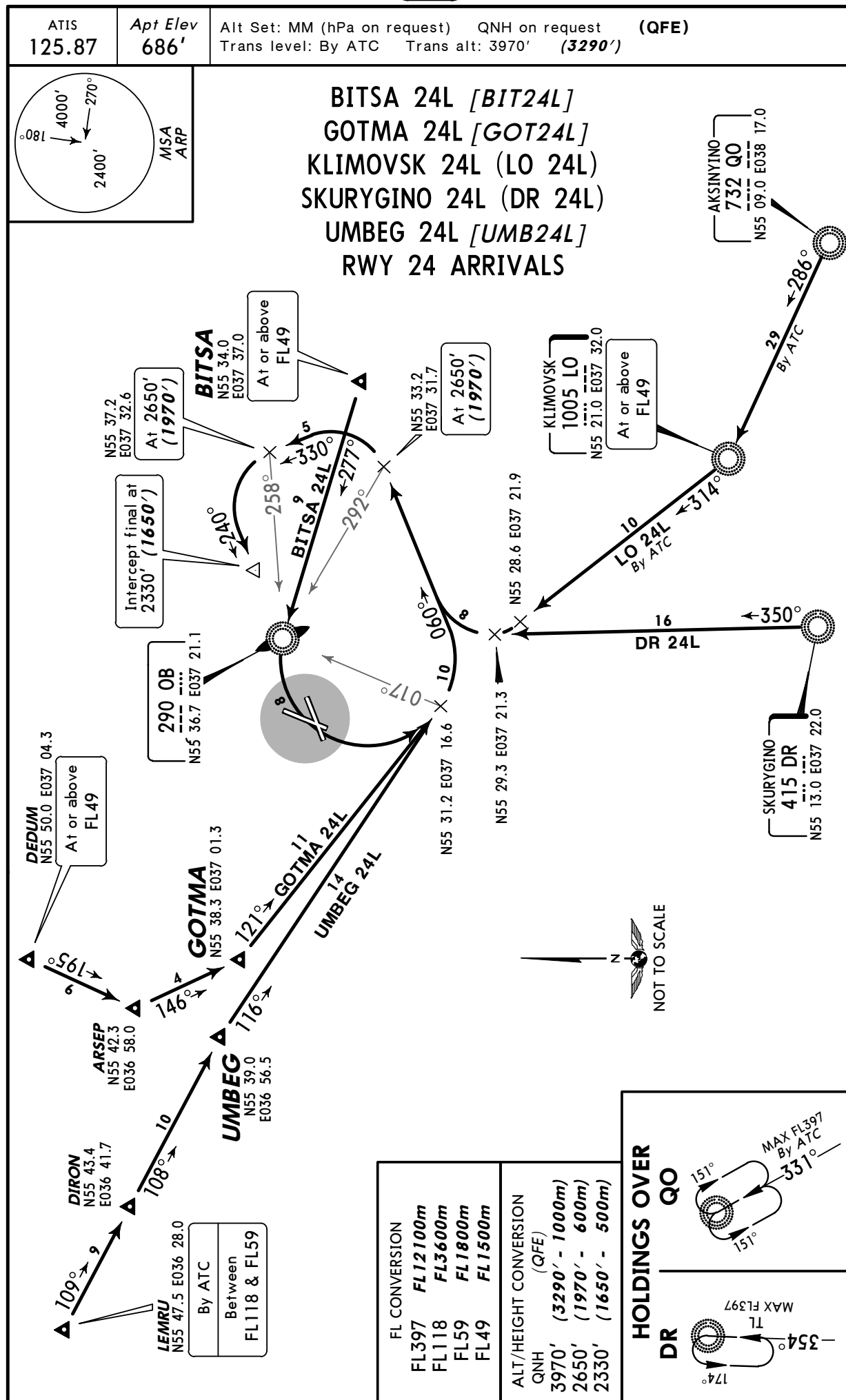
FL CONVERSION
FL397 FL12100m
FL118 FL3600m
FL59 FL1800m

ALT/HEIGHT CONVERSION
QNH (QFE)
3970' (3333' - 1000m)
2610' (1973' - 600m)
1950' (1313' - 400m)

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JEPPESEN
12 DEC 08 (10-2B) Eff 18 Dec

MOSCOW, RUSSIA
STAR



UUWW/VKO
VNUKOVO

JEPPESEN
12 DEC 08 **(10-2C)** **Eff 18 Dec**

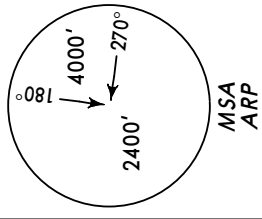
MOSCOW, RUSSIA

STAR

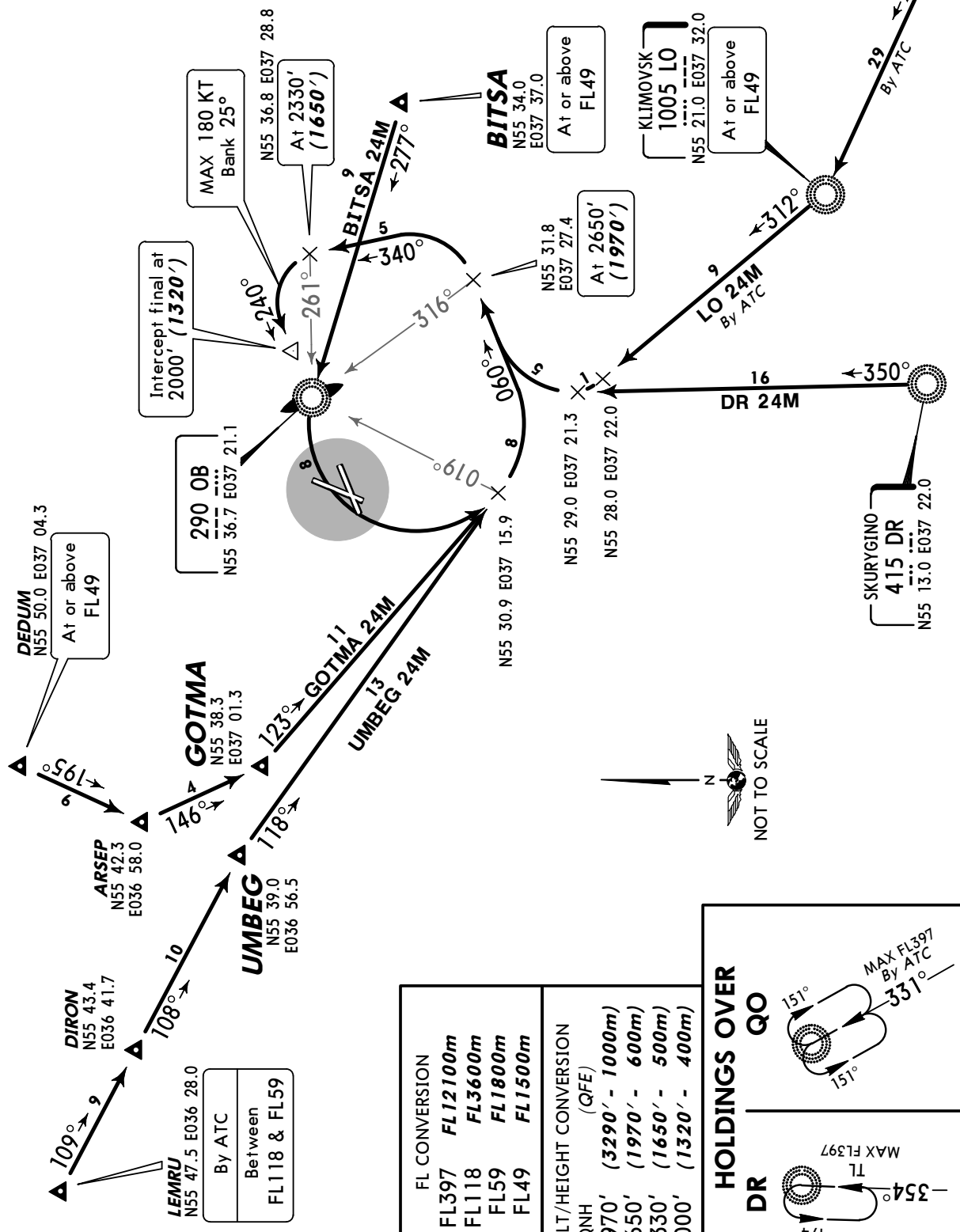
ATIS
125.87

Apt Elev
686'

Alt Set: MM (hPa on request) QNH on request **(QFE)**
Trans level: By ATC Trans alt: 3970' **(3290')**



BITSA 24M [*BIT24M*]
GOTMA 24M [*GOT24M*]
KLIMOVSK 24M (LO 24M)
SKURYGINO 24M (DR 24M)
UMBEG 24M [*UMB24M*]
RWY 24 ARRIVALS



UUWW/VKO
VNUKOVO

12 DEC 08

10-3

Eff 18 Dec

MOSCOW, RUSSIA

SID

VNUKOVO
Radar
126.0

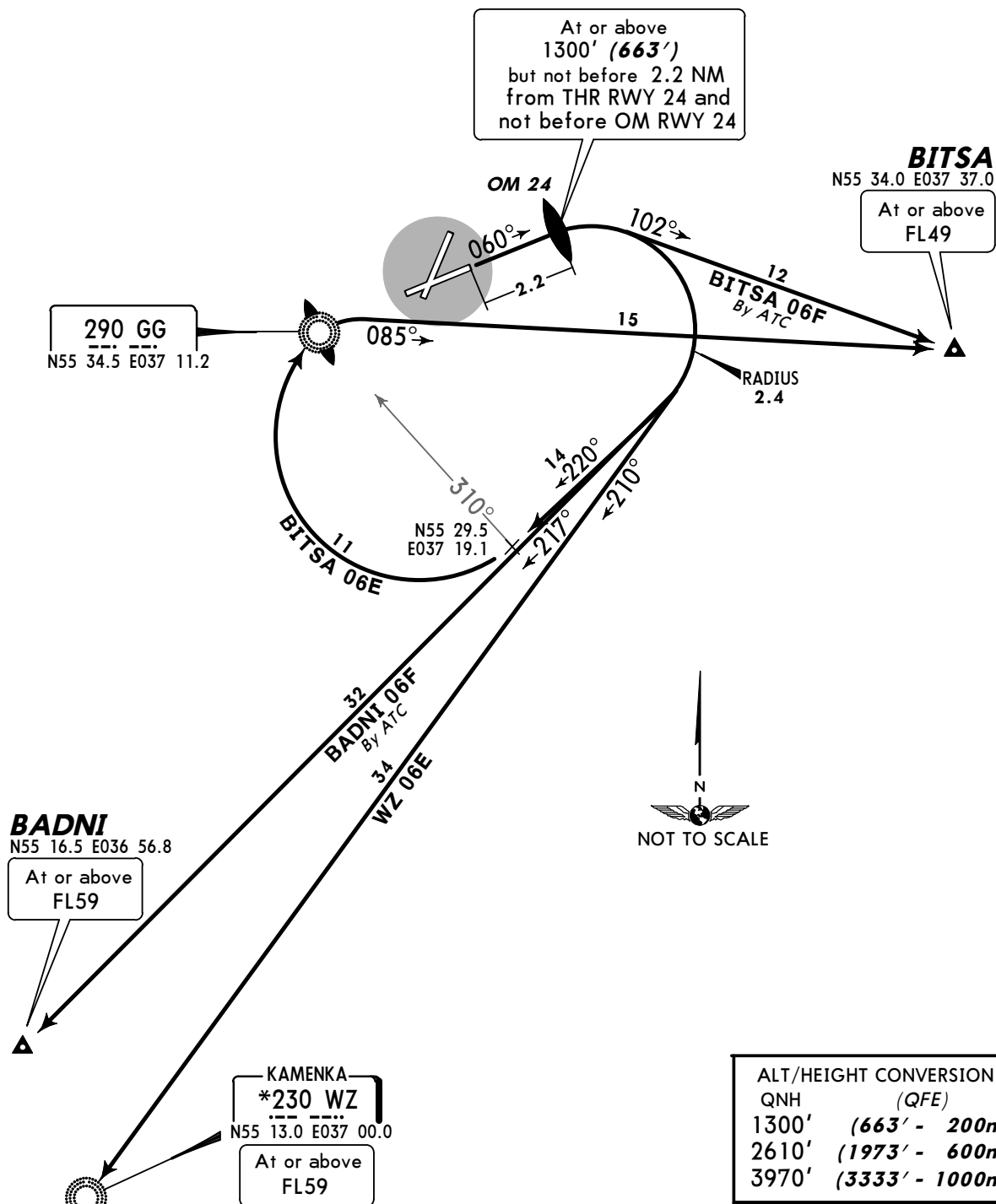
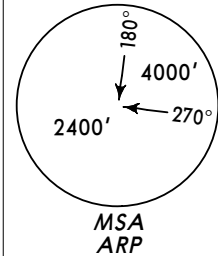
Apt Elev
686'

QNH on request (QFE)

Trans level: By ATC Trans alt: 3970' (3333')

1. Contact VNUKOVO Radar immediately after crossing 1300' (663').
2. Initial climb clearance 2610' (1973').
3. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168.
4. Aircraft with MAX 160 KT as directed by ATC.

BADNI 06F [BADØ6F]
BITSA 06E [BITØ6E], BITSA 06F [BITØ6F]
KAMENKA 06E (WZ 06E)
RWY 06 DEPARTURES
FOR SIDs TO GOTMA & LO REFER TO CHART 10-3A



ALT/HEIGHT CONVERSION	
QNH	(QFE)
1300'	(663' - 200m)
2610'	(1973' - 600m)
3970'	(3333' - 1000m)

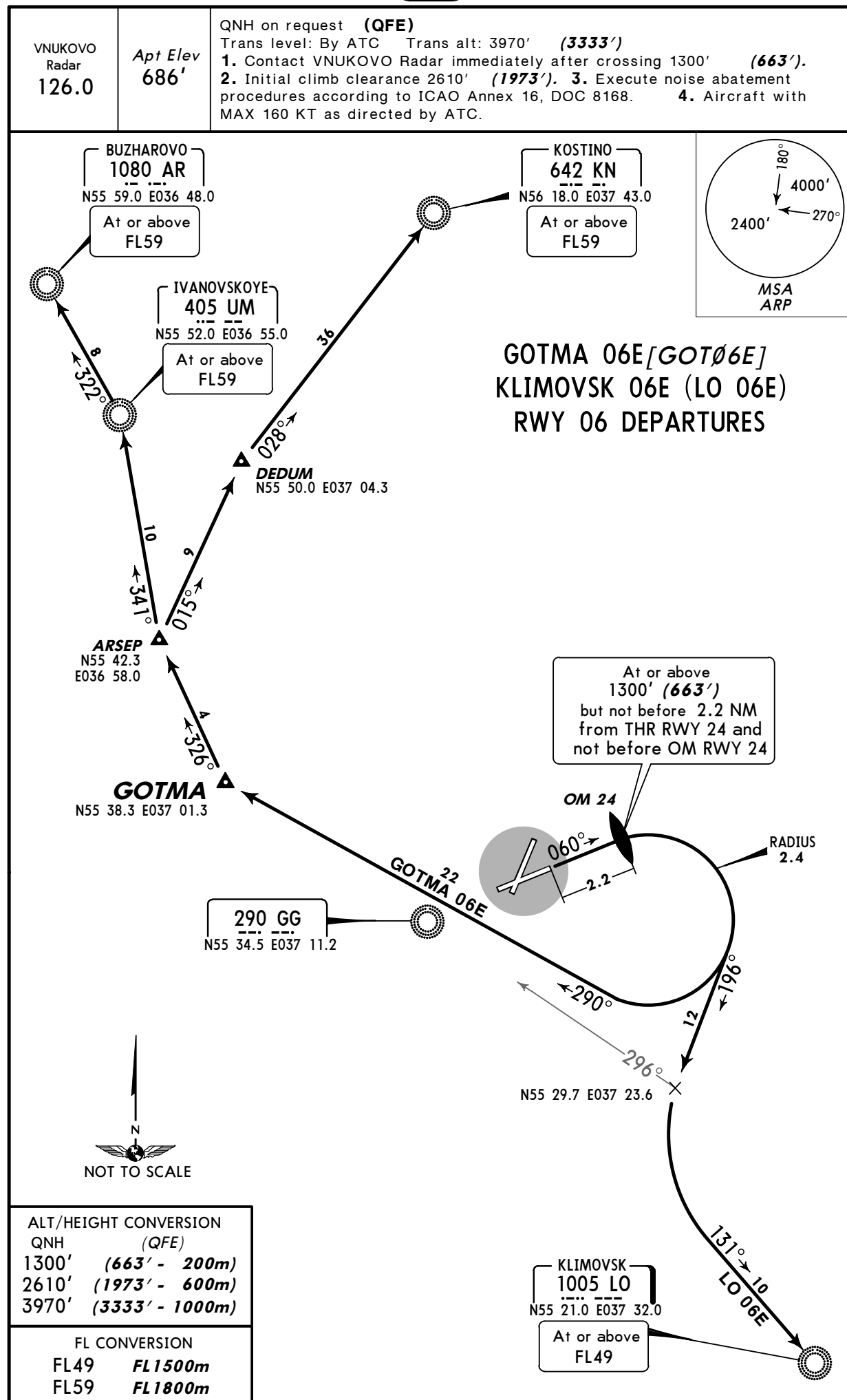
FL CONVERSION	
FL49	FL1500m
FL59	FL1800m

UUWW/VKO
VNUKOVO

JEPPesen
12 DEC 08 (10-3A) Eff 18 Dec

MOSCOW, RUSSIA

SID



UUWW/VKO
VNUKOVO

12 DEC 08

JEPPESEN

(10-3B)

Eff 18 Dec

MOSCOW, RUSSIA

SID

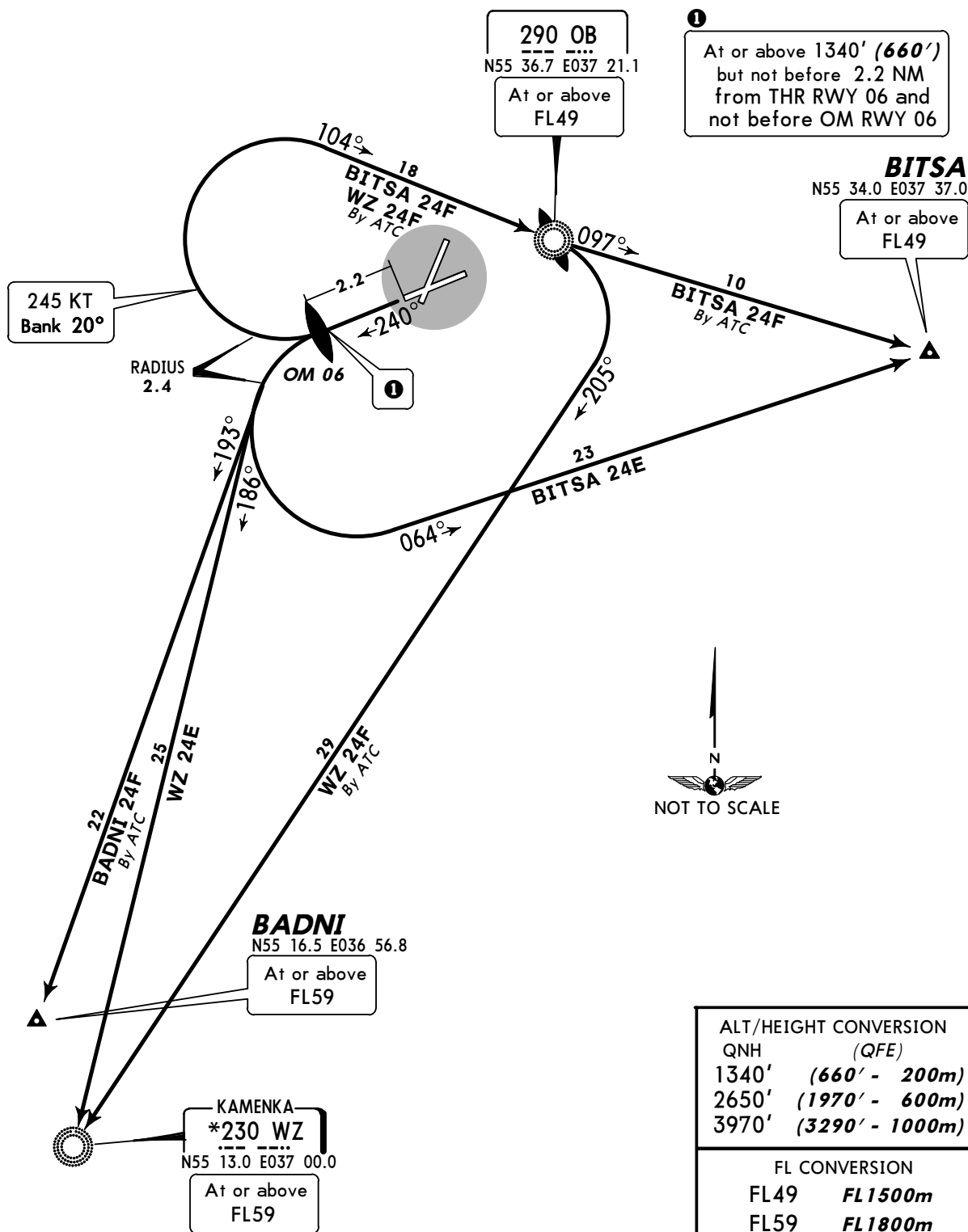
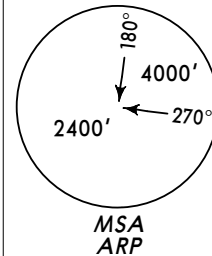
VNUKOVO
Radar
126.0Apt Elev
686'

QNH on request (QFE)

Trans level: By ATC Trans alt: 3970' (3290')

1. Contact VNUKOVO Radar immediately after crossing 1340' (660').
 2. Initial climb clearance 2650' (1970'). 3. Execute noise abatement procedures according to ICAO Annex 16, DOC 8168. 4. Aircraft with MAX 160 KT as directed by ATC.

BADNI 24F [BAD24F]
BITSA 24E [BIT24E], BITSA 24F [BIT24F]
KAMENKA 24E (WZ 24E), KAMENKA 24F (WZ 24F)
RWY 24 DEPARTURES
 FOR SID_s TO GOTMA & LO REFER TO CHART 10-3C

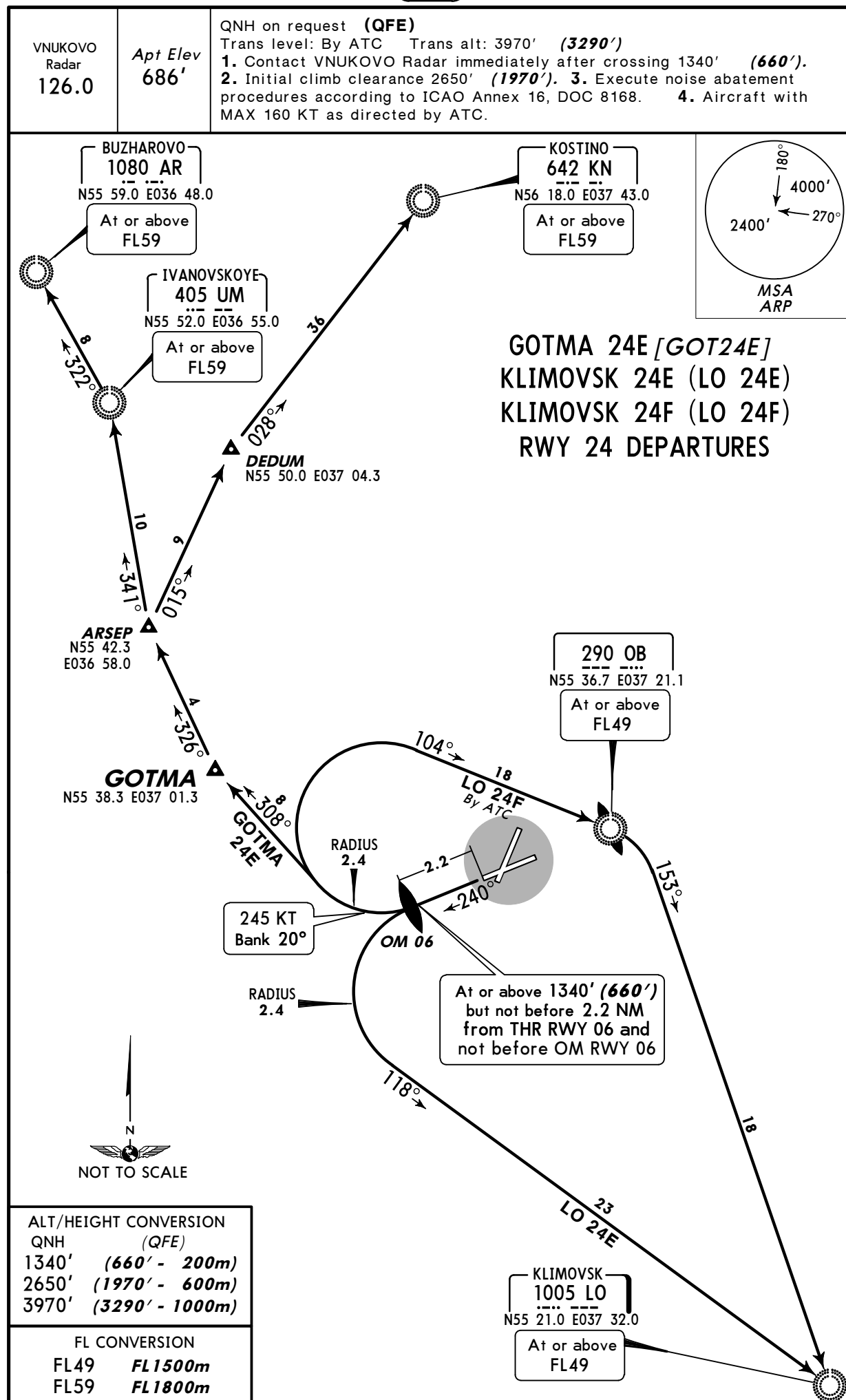


UUWW/VKO
VNUKOVO

JEPPESEN
12 DEC 08 10-3C Eff 18 Dec

MOSCOW, RUSSIA

SID



UUWW/VKO

Apt Elev 686'
N55 36.0 E037 16.4

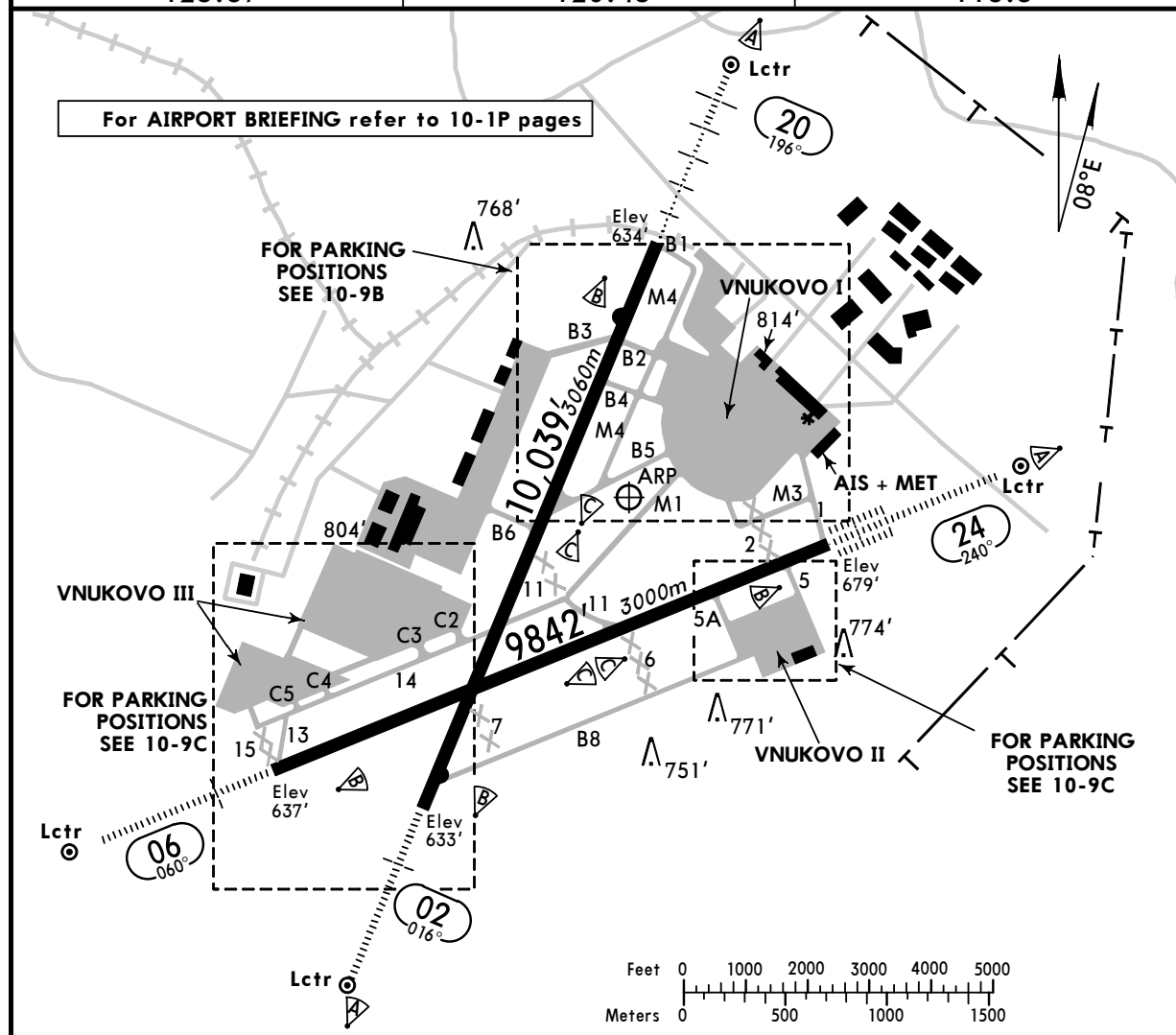


27 MAR 09 (10-9) Eff 9 Apr

MOSCOW, RUSSIA

VNUKOVO

ATIS	VNUKOVO Taxiing (GND)	Start (TWR)
125.87	120.45	118.3



ADDITIONAL RUNWAY INFORMATION

		ADDITIONAL RUNWAY INFORMATION	USABLE LENGTHS			WIDTH
			— LANDING BEYOND —			
RWY			Threshold	Glide Slope	TAKE-OFF	
02				9547' 2910m	9711' 2960m ①	197' 60m
20	HIRL (60m) HIALS RVR			8825' 2690m		
06				9186' 2800m	9514' 2900m ①	197' 60m
24	HIRL (60m) CL (15m) HIALS PAPI-L (2.67°) RVR					

① First 328' / 100m unusable for take-off.

TAKE-OFF

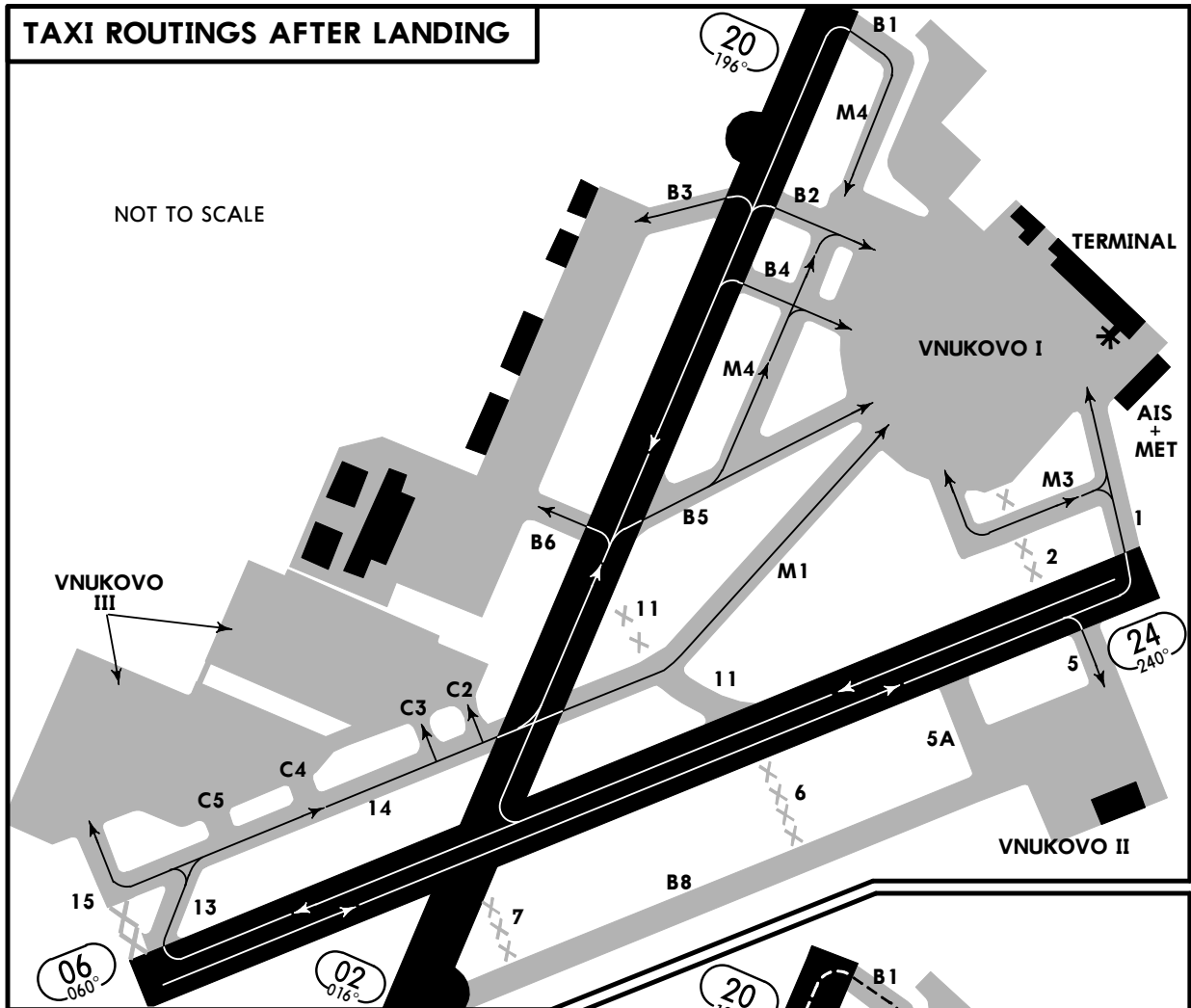
	AIR CARRIER			AIR CARRIER (FAR 121)			
	Rwy 06/24 LVP must be in force	All Rwys LVP must be in force		Rwy 06/24	Rwy 02/20		
	RL & CL	RCLM (DAY only) or RL	RCLM (DAY only) or RL	CL & RCLM any RVR out, other two req.	Adequate Vis Ref	Adequate Vis Ref	
A	200m (150m)	250m	400m	2 Eng	TDZ RVR 200m Mid RVR 200m Roll out RVR 150m	RVR 500m VIS 400m	RVR 500m VIS 400m
B				3 & 4 Eng			
C							
D	250m (200m)	300m					

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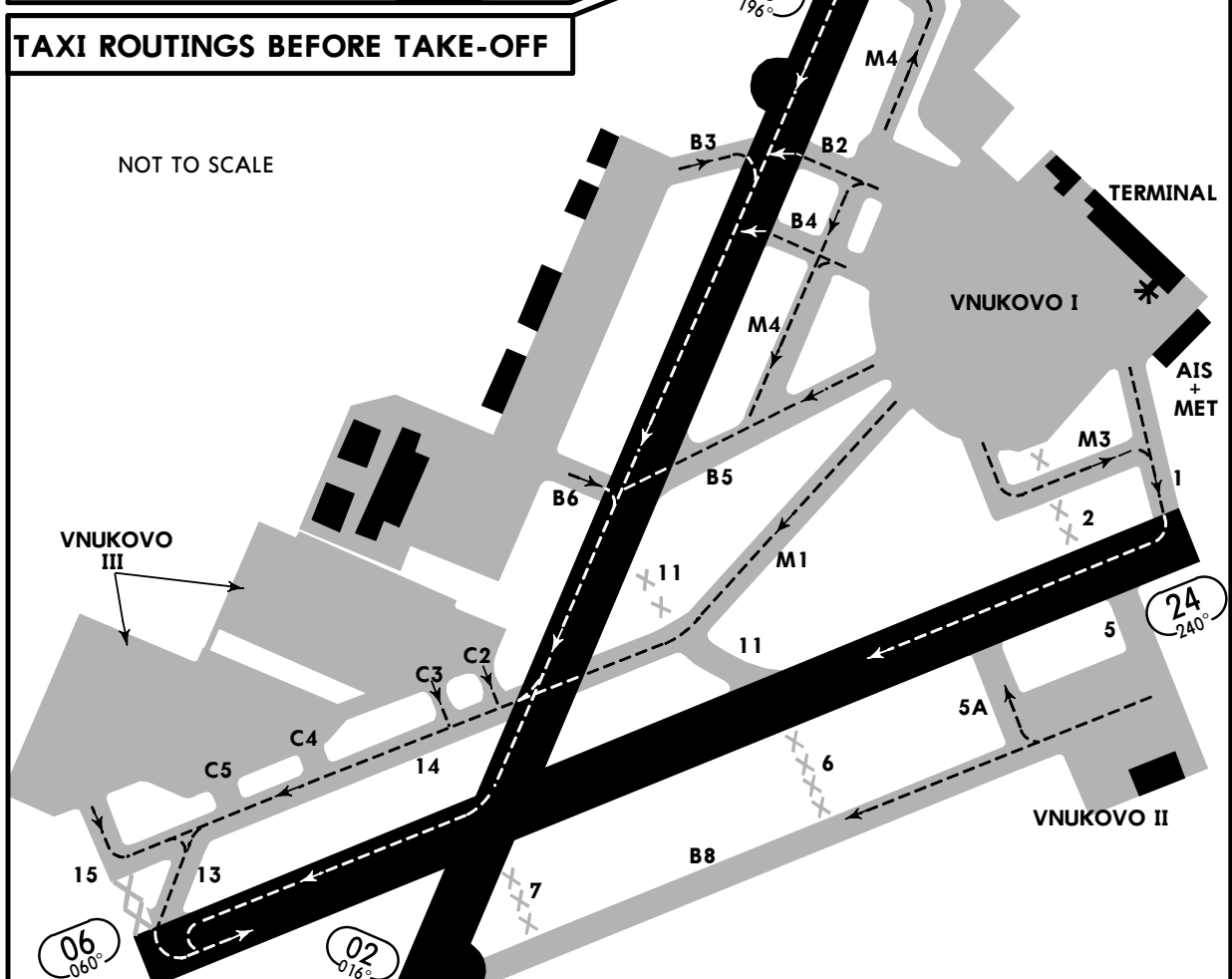
JEPPESEN
27 MAR 09 10-9A Eff 9 Apr

MOSCOW, RUSSIA
VNUKOVO

TAXI ROUTINGS AFTER LANDING



TAXI ROUTINGS BEFORE TAKE-OFF



CHANGES: Apron. Taxiways. Taxi routings.

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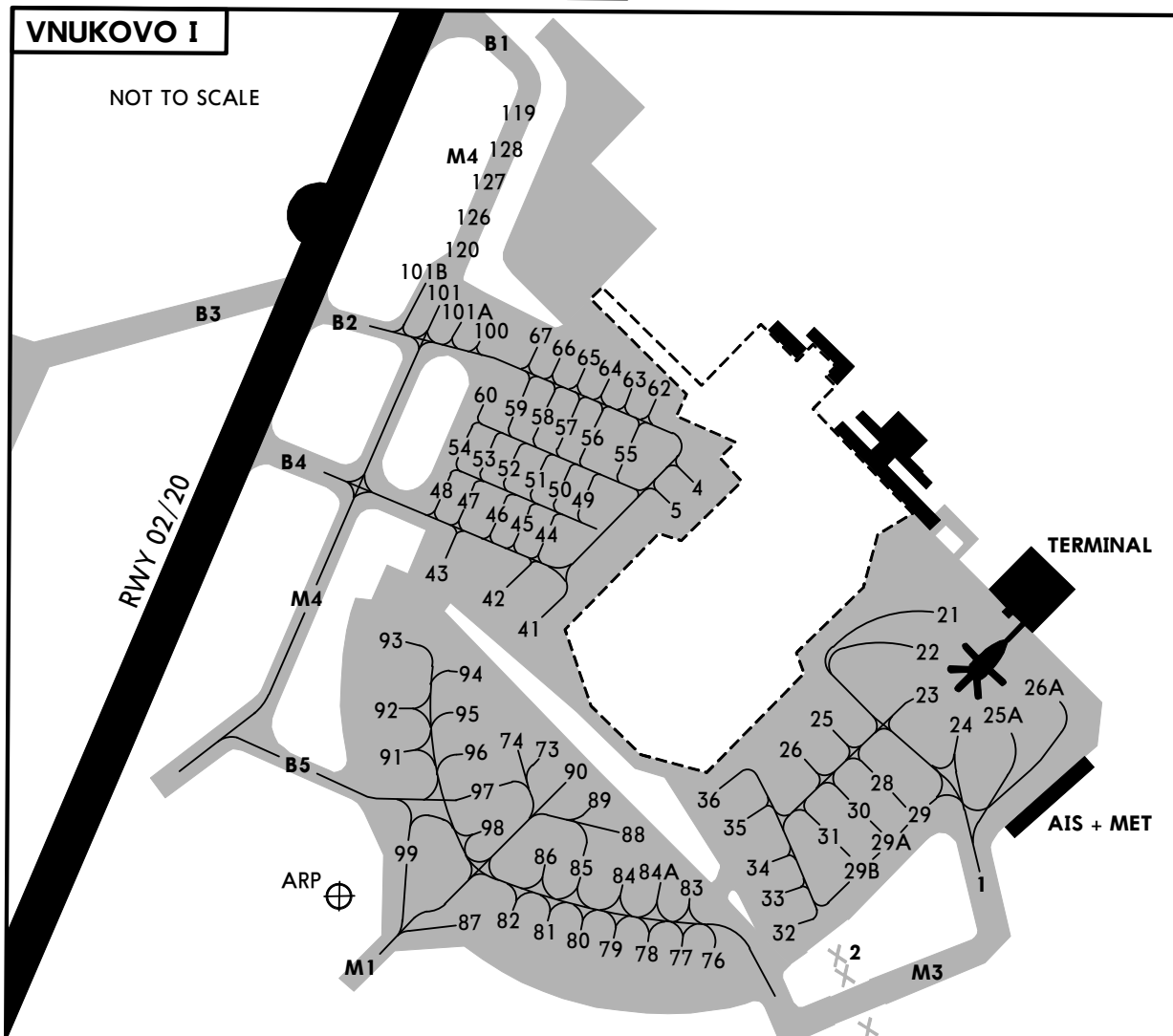
27 MAR 09

10-9B

Eff 9 Apr

MOSCOW, RUSSIA

VNUKOVO



INS COORDINATES

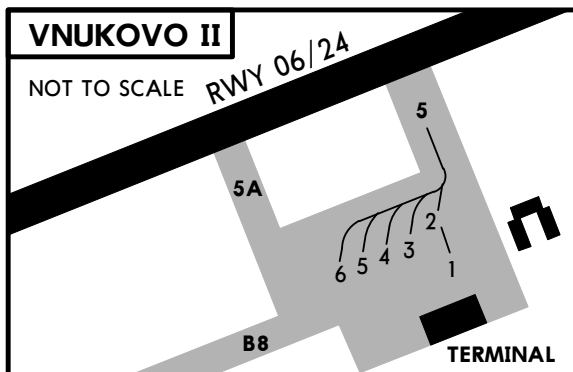
STAND No.	COORDINATES	STAND No.	COORDINATES
4	N55 36.3 E037 17.0	62 thru 64	N55 36.4 E037 16.9
5	N55 36.3 E037 16.9	65 thru 67	N55 36.4 E037 16.8
21 thru 24A	N55 36.2 E037 17.3	73	N55 36.1 E037 16.8
25	N55 36.1 E037 17.2	74	N55 36.1 E037 16.7
25A	N55 36.2 E037 17.4	76	N55 36.0 E037 17.0
26	N55 36.1 E037 17.1	77, 78	N55 35.9 E037 16.9
26A	N55 36.2 E037 17.4	79	N55 35.9 E037 16.8
28	N55 36.1 E037 17.2	80, 81	N55 36.0 E037 16.8
29	N55 36.1 E037 17.3	82	N55 36.0 E037 16.7
29A, 29B	N55 36.0 E037 17.2	83 thru 84A	N55 36.0 E037 16.9
30	N55 36.1 E037 17.2	85, 86	N55 36.0 E037 16.8
31 thru 33	N55 36.0 E037 17.1	87	N55 36.0 E037 16.7
34, 35	N55 36.0 E037 17.0	88	N55 36.1 E037 16.9
36	N55 36.1 E037 17.0	89, 90	N55 36.1 E037 16.8
41	N55 36.2 E037 16.8	91	N55 36.1 E037 16.5
42	N55 36.2 E037 16.7	92, 93	N55 36.2 E037 16.5
43	N55 36.2 E037 16.6	94	N55 36.2 E037 16.7
44	N55 36.2 E037 16.8	95	N55 36.2 E037 16.6
45, 46	N55 36.3 E037 16.7	96 thru 98	N55 36.1 E037 16.7
47, 48	N55 36.3 E037 16.6	99	N55 36.0 E037 16.6
49 thru 51	N55 36.3 E037 16.8	100	N55 36.4 E037 16.7
52 thru 54	N55 36.3 E037 16.7	101, 101A	N55 36.5 E037 16.7
55	N55 36.3 E037 16.9	101B	N55 36.5 E037 16.6
56 thru 58	N55 36.4 E037 16.8		
59, 60	N55 36.4 E037 16.7		

CHANGES: Coordinates.

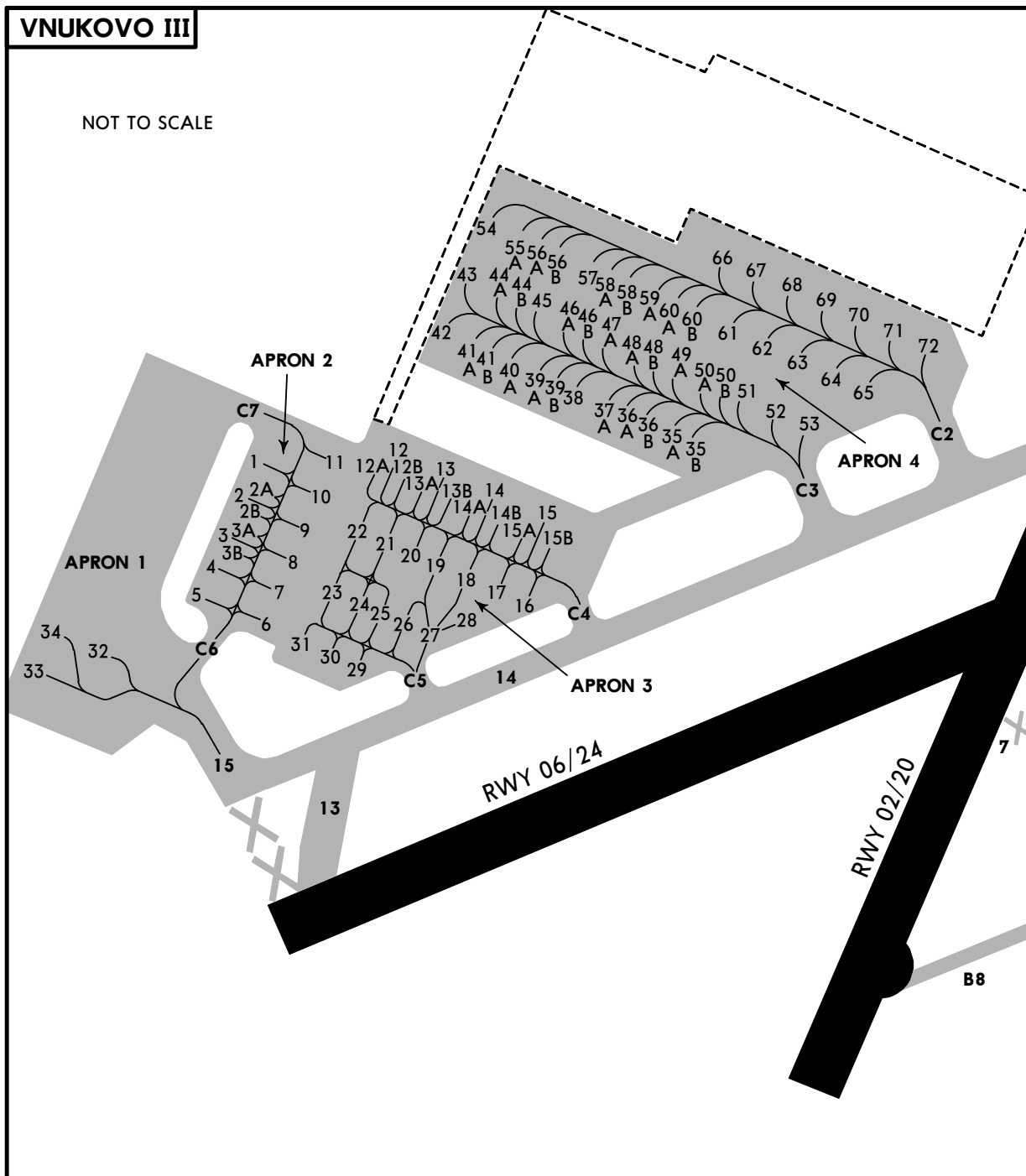
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27 MAR 09 **10-9C** Eff 9 Apr

MOSCOW, RUSSIA
VNUKOVO



INS COORDINATES	
STAND No.	COORDINATES
1, 2	N55 35.6 E037 17.3



INS COORDINATES	
STAND No.	COORDINATES
1 thru 9	N55 35.5 E037 14.7
10, 11	N55 35.6 E037 14.7
12	N55 35.6 E037 14.8
13 thru 15	N55 35.5 E037 14.9
16 thru 31	N55 35.5 E037 14.8

UUWW/VKO

JEPPESEN

10 FEB 06

10-9X

Eff 16 Feb

JAA MINIMUMS

MOSCOW, RUSSIA
VNUKOVO

STRAIGHT-IN RWY		A	B	C	D
02	ILS	833' (200')	833' (200')	833' (200')	833' (200')
		R550m	R550m	R550m	R550m
	<i>ALS out</i>	R1000m	R1000m	R1000m	R1000m
	LOC	NOT APPLICABLE			
	PAR	840' (207')	850' (217')	860' (227')	869' (236')
		R600m	R600m	R600m	R600m
	<i>ALS out</i>	R1000m	R1000m	R1000m	R1000m
	NDB	1000' (367')	1000' (367')	1000' (367')	1000' (367')
		R900m	R1000m	R1000m	R1400m
	<i>ALS out</i>	R1500m	R1500m	R1800m	R2000m
06	ILS	836' (200')	836' (200')	836' (200')	836' (200')
		R550m	R550m	R550m	R550m
	<i>ALS out</i>	R1000m	R1000m	R1000m	R1000m
	LOC	NOT APPLICABLE			
	PAR	837' (200')	844' (207')	854' (217')	863' (226')
		R550m	R600m	R600m	R600m
	<i>ALS out</i>	R1000m	R1000m	R1000m	R1000m
	NDB	1000' (363')	1000' (363')	1000' (363')	1000' (363')
		R900m	R1000m	R1000m	R1400m
	<i>ALS out</i>	R1500m	R1500m	R1800m	R2000m
20	ILS	833' (200')	833' (200')	833' (200')	833' (200')
		R550m	R550m	R550m	R550m
	<i>ALS out</i>	R1000m	R1000m	R1000m	R1000m
	LOC	NOT APPLICABLE			
	PAR	850' (217')	860' (227')	869' (236')	879' (246')
		R600m	R600m	R600m	R600m
	<i>ALS out</i>	R1000m	R1000m	R1000m	R1000m
	NDB	1280' (647')	1280' (647')	1280' (647')	1280' (647')
		R1000m	R1200m	R1200m	R1600m
	<i>ALS out</i>	R1500m	R1500m	R2000m	R2000m
24	CAT II ILS	779' (100')	779' (100')	779' (100')	779' (100')
		RA111' R350m	RA111' R350m	RA111' R350m	RA111' R350m
	ILS	879' (200')	879' (200')	879' (200')	879' (200')
		R550m	R550m	R550m	R550m
	<i>ALS out</i>	R1000m	R1000m	R1000m	R1000m
	LOC	NOT APPLICABLE			
	PAR	883' (203')	893' (213')	903' (223')	913' (233')
		R600m	R600m	R600m	R600m
	<i>ALS out</i>	R1000m	R1000m	R1000m	R1000m
	NDB	1050' (370')	1050' (370')	1050' (370')	1050' (370')
		R900m	R1000m	R1000m	R1400m
	<i>ALS out</i>	R1500m	R1500m	R1800m	R2000m

UUWW/VKO

10 FEB 06 **JEPPESEN** **10-9X1** **Eff 16 Feb**

JAA MINIMUMS
MOSCOW, RUSSIA
VNUKOVO

TAKE-OFF RWY 06, 24

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

TAKE-OFF RWY 02, 20

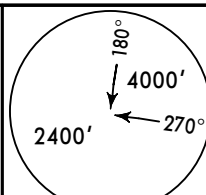
LVP must be in Force		RCLM (DAY only) or RL	NIL (DAY only)
RCLM (DAY only) or RL	RCLM (DAY only) or RL		
A	250m	400m	500m
B			
C			
D	300m		

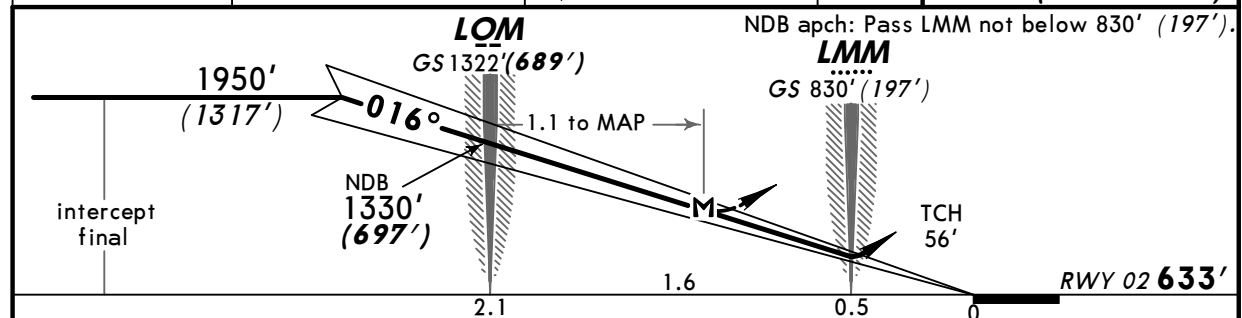
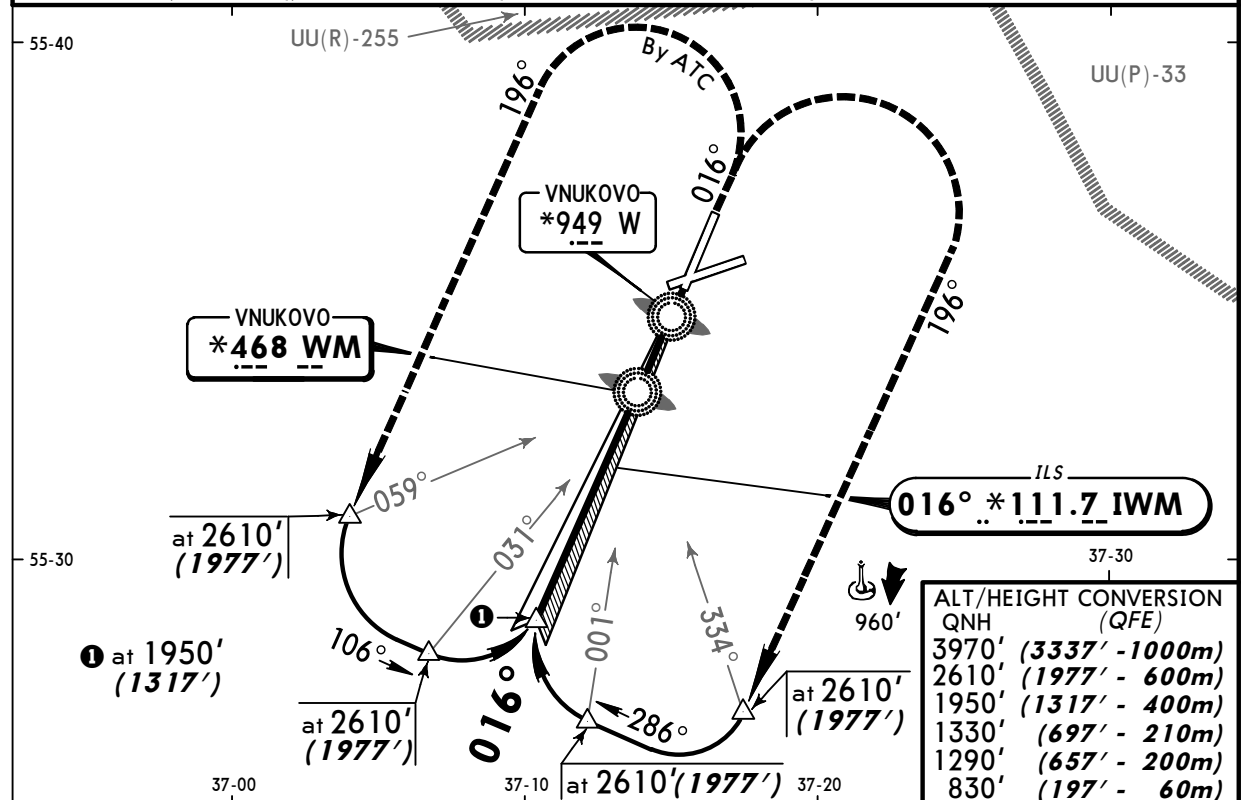
UUWW/VKO
VNUKOVO

JEPPESEN
10 FEB 06 **(11-1)** Eff 16 Feb

MOSCOW, RUSSIA
or 2 NDB Rwy 02

UNIKOVO STRIP

ATIS 125.87		MOSCOW Approach 3 128.0		MOSCOW Approach 4 123.4		VNUKOVO Approach 122.3			
VNUKOVO Krug (SRE) 126.0		VNUKOVO Tower (PAR) 118.3		VNUKOVO Start(TWR) 118.3		Ground 120.45			
LOC IWM *111.7	Final Apch Crs 016°	GS LOM 1322' (689')	ILS DA(H) 833' (200')	Apt Elev 686' RWY 633'					
NDB WM *468		Minimum Alt LOM 1330' (697')	NDB MDA(H) 1000' (367')						
MISSD APCH: Climb on 016° to 1290' (657'), then turn RIGHT onto 196° climbing to 2610' (1977'), then as directed. At 1290' (657'), immediately contact Krug.								MSA Airport	
Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: By ATC Trans alt: 3970' (3337')									



<i>Gnd speed-Kts</i>	70	90	100	120	140	160	HIALS <
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STRAIGHT-IN LANDING RWY 02						
ILS <i>DA(H)</i> 833'(200')		LOC (GS out)		NDB <i>MDA(H)</i> 1000'(367')		
FULL		ALS out			ALS out	
A	RVR 720m VIS 800m	1200m	NOT AUTH	1200m	RVR 1500m VIS 1600m	
B						
C						
D				RVR 1500m VIS 1600m	RVR 1800m VIS 2000m	

CHANGES: Comm. Missed apch. Altitudes. Note.

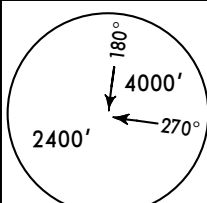
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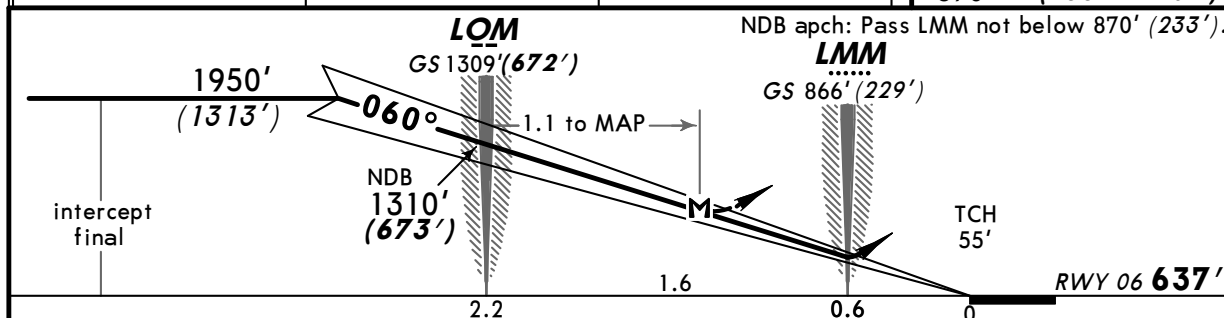
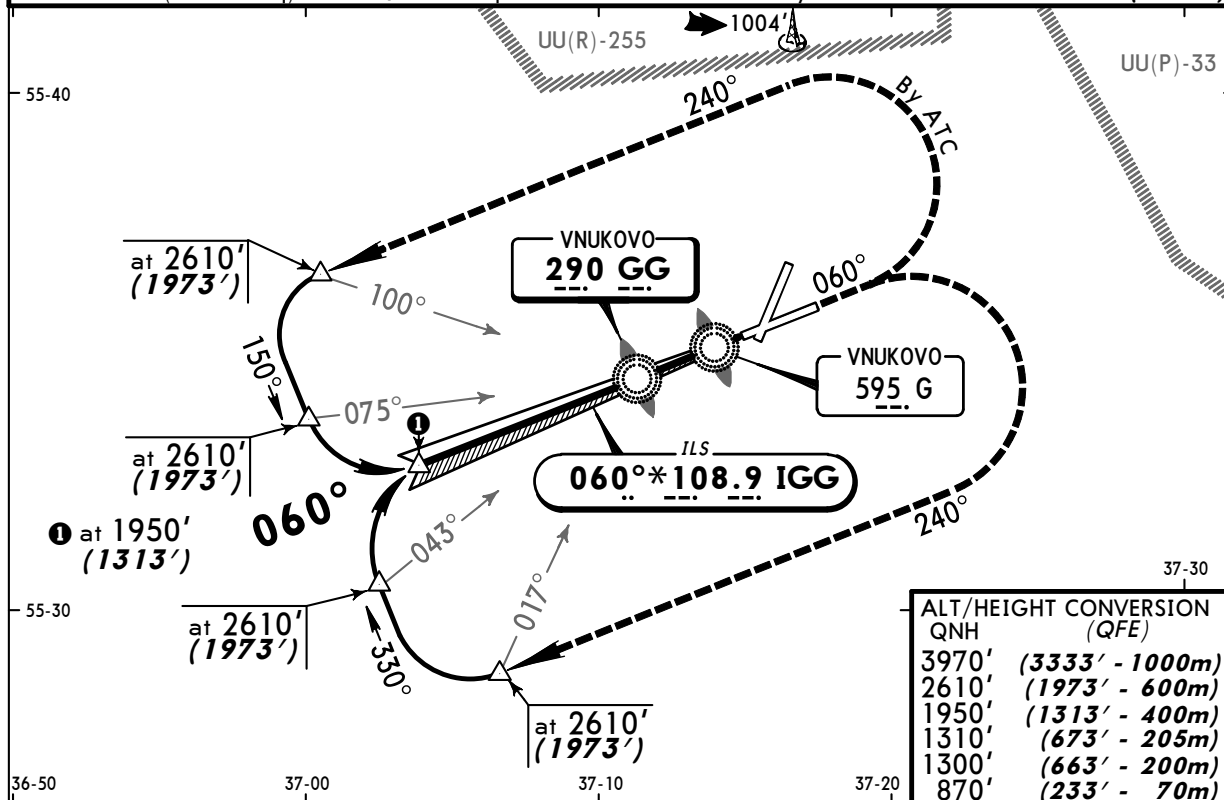
UUWW/VKO
VNUKOVO

JEPPESEN
10 FEB 06 (11-2) Eff 16 Feb

MOSCOW, RUSSIA
ILS or 2 NDB Rwy 06

BRIEFING STRIP

ATIS 125.87		MOSCOW Approach 3 128.0		MOSCOW Approach 4 123.4		VNUKOVO Approach 122.3	
VNUKOVO Krug (SRE) 126.0		VNUKOVO Tower (PAR) 118.3		VNUKOVO Start(TWR) 118.3		Ground 120.45	
LOC IGG *108.9		Final Apch Crs 060°	GS LOM 1309' (672')		ILS DA(H) 837' (200')		Apt Elev 686' RWY 637'
NDB GG 290			Minimum Alt LOM 1310' (673')		NDB MDA(H) 1000' (363')		
MISSED APCH: Climb on 060° to 1300' (663'), then turn RIGHT onto 240° climbing to 2610' (1973'), then as directed. At 1300' (663'), immediately contact Krug.							 MSA Airport
Alt Set: MM (hPa on req)		QNH on req (QFE)		Trans level: By ATC		Trans alt: 3970' (3333')	



Gnd speed-Kts	70	90	100	120	140	160	HIALS	1300' (663') on 060°	240°	2610' (1973')
ILS GS 2.67° or NDB Desc Grad 4.7%	336	433	481	577	673	769	PAPI			
LOM to MAP	1.1	0:57	0:44	0:40	0:33	0:28	0:25			

STRAIGHT-IN LANDING RWY 06					
ILS		LOC		NDB	
DA(H) 837' (200')		(GS out)		MDA(H) 1000' (363')	
FULL	ALS out				ALS out
A					
B					
C	RVR 720m VIS 800m	1200m	NOT AUTH	1200m	RVR 1800m VIS 2000m
D				RVR 1500m VIS 1600m	

PANS OPS

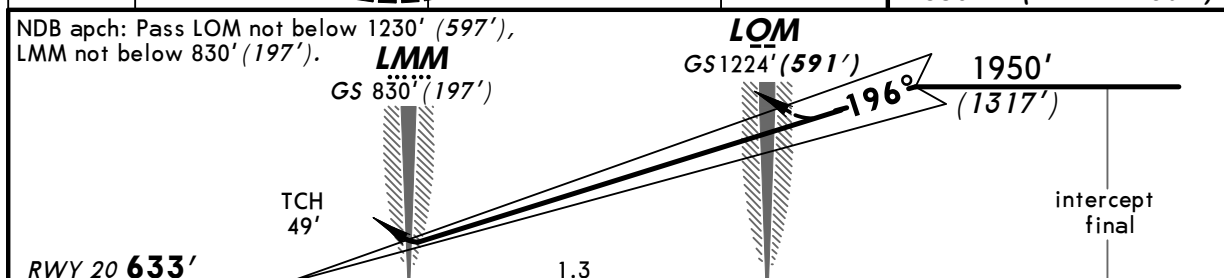
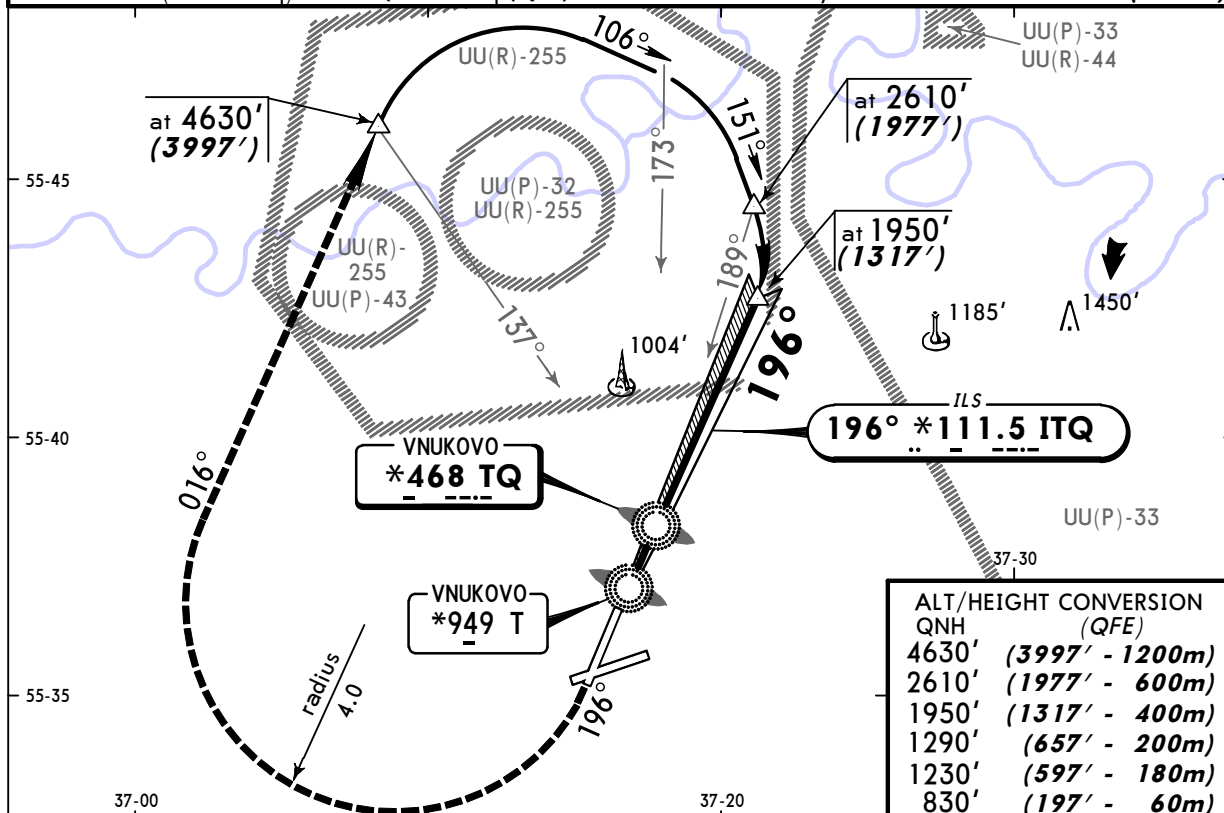
UUWW/VKO
VNUKOVO

JEPPESEN
10 FEB 06 (11-3) Eff 16 Feb

MOSCOW, RUSSIA
ILS or 2 NDB Rwy 20

BRIEFING STRIP

ATIS 125.87	MOSCOW Approach 3 128.0	MOSCOW Approach 4 123.4	VNUKOVO Approach 122.3
VNUKOVO Krug (SRE) 126.0	VNUKOVO Tower (PAR) 118.3	VNUKOVO Start (TWR) 118.3	Ground 120.45
LOC ITQ *111.5	Final Apch Crs 196°	GS LOM 1224' (591')	ILS DA(H) 833' (200')
NDB TQ *468	Minimum Alt No FAF	NDB MDA(H) 1280' (647')	Apt Elev 686' RWY 633'
MISSED APCH: Climb on 196° to 1290' (657'), then turn RIGHT onto 016° climbing to 4630' (3997'), then as directed. At 1290' (657'), immediately contact Krug.			
Alt Set: MM (hPa on req)		QNH on req (QFE)	
Trans level: By ATC		Trans alt: 4630' (3997')	



Gnd speed-Kts	70	90	100	120	140	160	HIALS	1290' (657') on 196°	016°	4630' (3997')
ILS GS	2.83°	356	458	509	611	712	814			

STRAIGHT-IN LANDING RWY 20			
ILS DA(H) 833' (200')	LOC (GS out)	NDB MDA(H) 1280' (647')	
FULL	ALS out	ALS out	
A			
B			
C	RVR 720m VIS 800m	1200m	NOT AUTH
D			3200m

PANS OPS

UUWW/VKO
VNUKOVO

JEPPESEN
10 FEB 06
Eff 16 Feb (11-4)

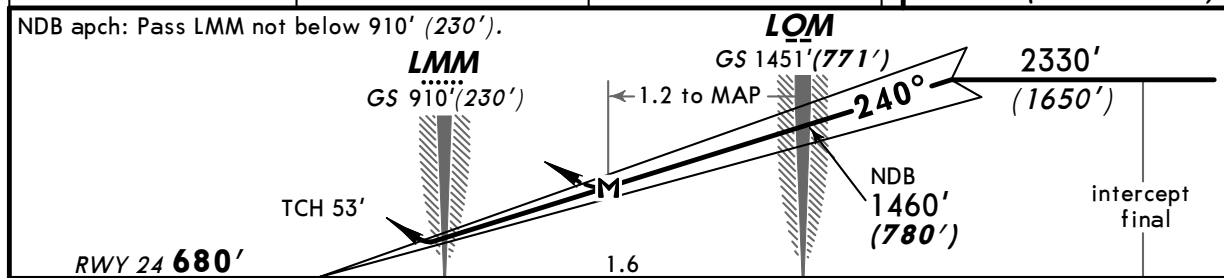
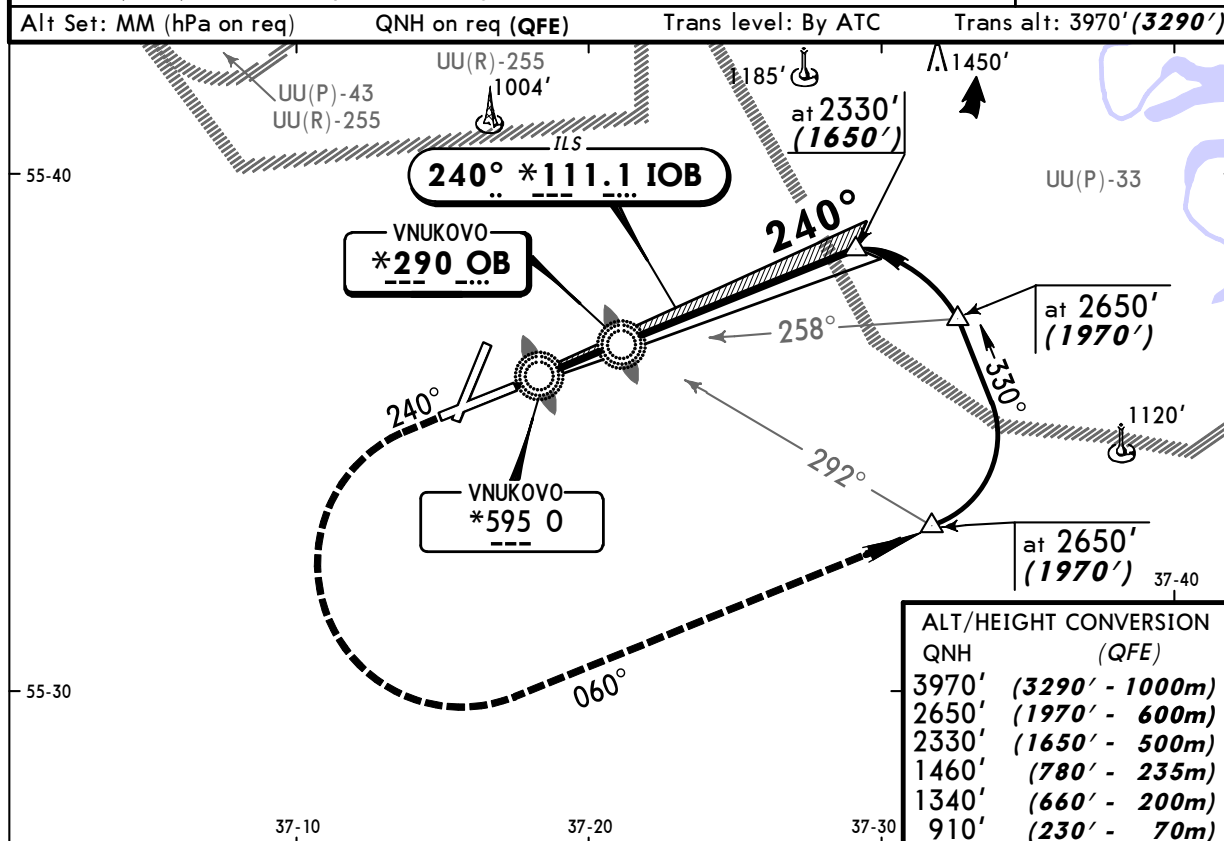
MOSCOW, RUSSIA
ILS-Lima or 2 NDB Rwy 24

BRIEFING STRIP

ATIS 125.87		MOSCOW Approach 3 128.0		MOSCOW Approach 4 123.4		VNUKOVO Approach 122.3	
VNUKOVO Krug (SRE) 126.0		VNUKOVO Tower (PAR) 118.3		VNUKOVO Start(TWR) 118.3		Ground 120.45	
LOC IOB *111.1		Final Apch Crs 240°	GS LOM 1451' (771')		ILS DA(H) 880' (200')		Apt Elev 686' RWY 680'
NDB OB *290			Minimum Alt LOM 1460' (780')		NDB MDA(H) 1050' (370')		
MISSED APCH: Climb on 240° to 1340' (660'), then turn LEFT onto 060° climbing to 2650' (1970'), then as directed. At 1340' (660'), immediately contact Krug.							

180°
4000'
270°
2400'

MSA
Airport



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II	1340' (660') on 240°	060°	2650' (1970')
ILS GS 3.00° or NDB Desc Grad 5.2%	377	484	538	646	753	861	PAPI		LT	
LOM to MAP	1.2	1:02	0:48	0:43	0:36	0:31	0:27			

STRAIGHT-IN LANDING RWY 24							
ILS			LOC (GS out)		NDB		
DA(H) 880' (200')					MDA(H) 1050' (370')		
FULL	TDZ or CL out	ALS out				ALS out	
A							
B					1200m	RVR 1500m VIS 1600m	
C	RVR 550m VIS 800m	RVR 720m VIS 800m	1200m	NOT AUTH			
D					RVR 1500m VIS 1600m	RVR 1800m VIS 2000m	

PANS OPS

UUWW/VKO
VNUKOVO

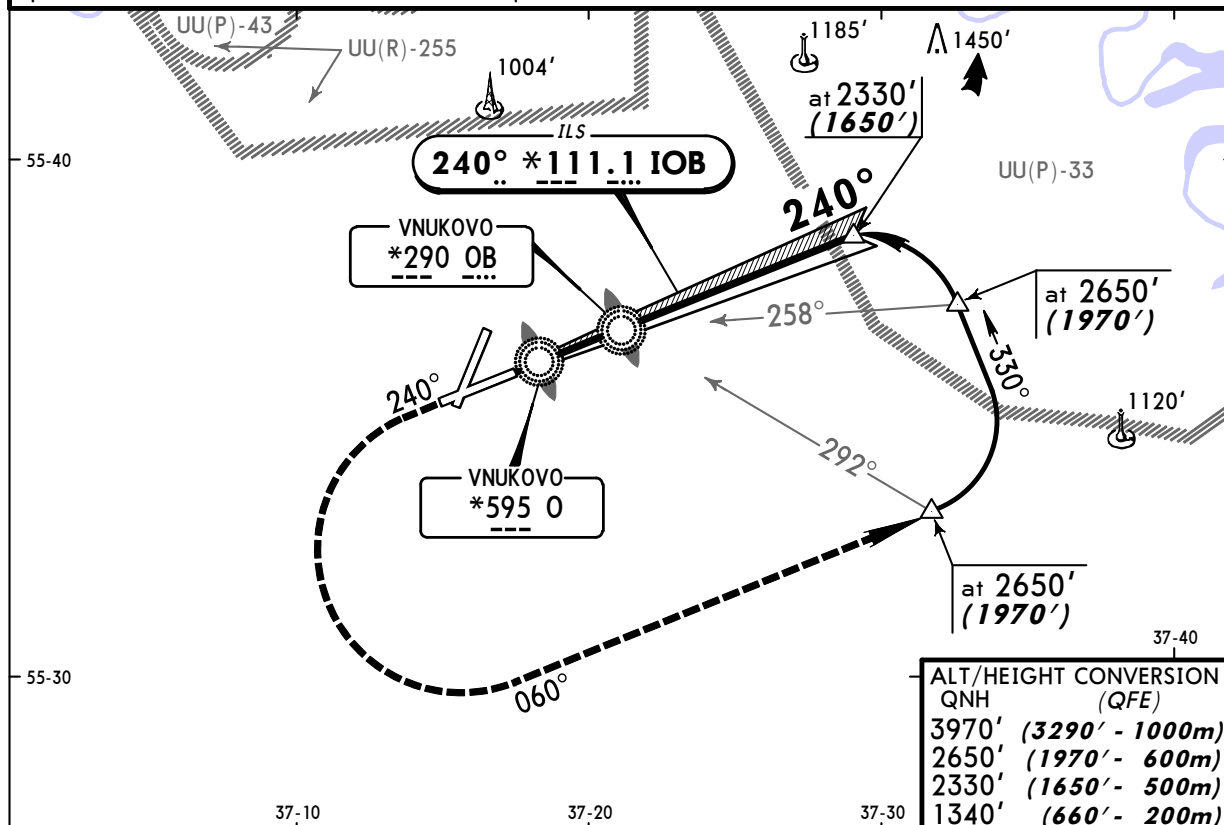
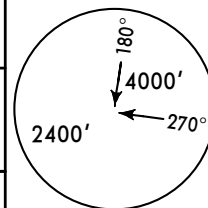
10 FEB 06
Eff 16 Feb

11-4A

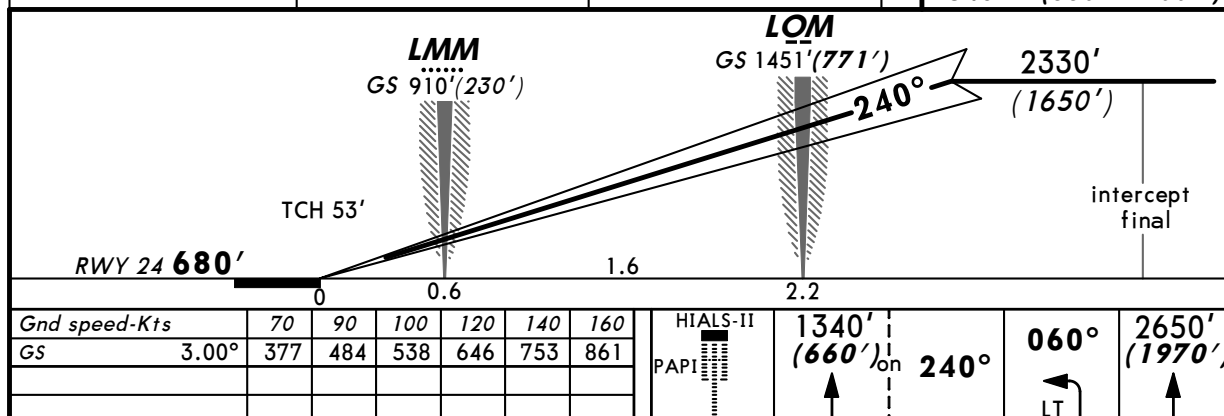
MOSCOW, RUSSIA
CAT II ILS-Lima Rwy 24

BRIEFING STRIP

ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach
125.87	128.0	123.4	122.3
VNUKOVO Krug (SRE)	VNUKOVO Tower (PAR)	VNUKOVO Start (TWR)	Ground
126.0	118.3	118.3	120.45
LOC IOB *111.1	Final Apch Crs 240°	GS LOM 1451' (771')	CAT II ILS RA 111' DA(H) 780' (100')
			Apt Elev 686' RWY 680'
MISSED APCH: Climb on 240° to 1340' (660'), then turn LEFT onto 060° climbing to 2650' (1970'), then as directed. At 1340' (660'), immediately contact Krug.			
Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: By ATC Trans alt: 3970' (3290')			
Special Aircrew & Aircraft Certification Required.			



ALT/HEIGHT CONVERSION
QNH (QFE)
3970' (3290' - 1000m)
2650' (1970' - 600m)
2330' (1650' - 500m)
1340' (660' - 200m)



STRAIGHT-IN LANDING RWY 24									
CAT II ILS ABCD									
RA 111'									
DA(H) 780' (100')									

RVR 350m									
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PANS OPS

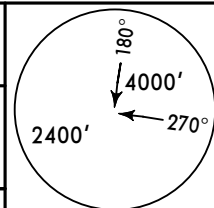
UUWW/VKO
VNUKOVO

JEPPESEN
10 FEB 06 (11-5) Eff 16 Feb

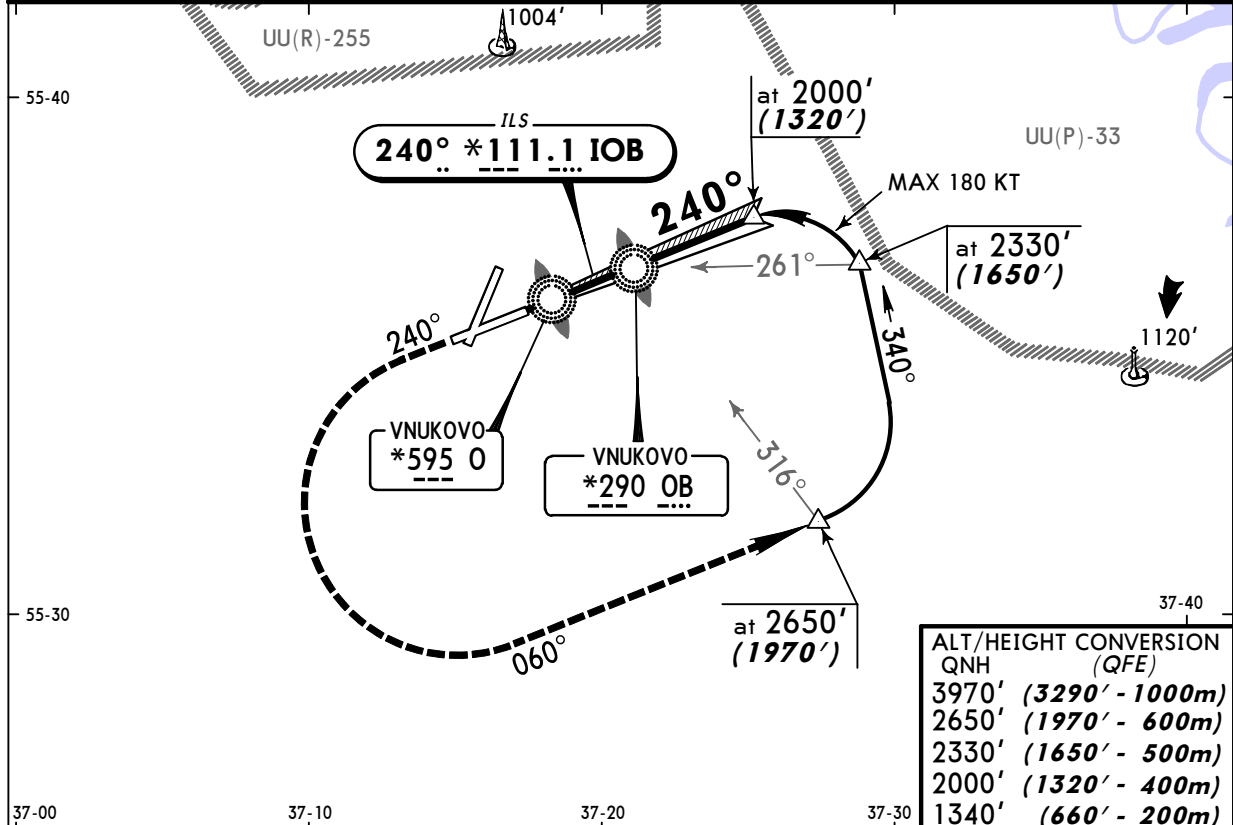
MOSCOW, RUSSIA
ILS-Mike Rwy 24

BRIEFING STRIP

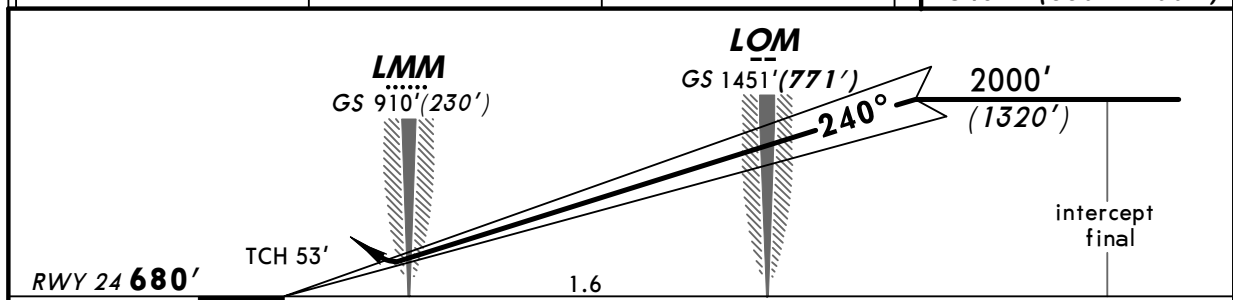
ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach
125.87	128.0	123.4	122.3
VNUKOVO Krug (SRE)	VNUKOVO Tower (PAR)	VNUKOVO Start (TWR)	Ground
126.0	118.3	118.3	120.45
LOC IOB *111.1	Final Apch Crs 240°	GS LOM 1451' (771')	ILS DA(H) 880' (200')
			Apt Elev 686' RWY 680'
MISSED APCH: Climb on 240° to 1340' (660'), then turn LEFT onto 060° climbing to 2650' (1970'), then as directed. At 1340' (660'), immediately contact Krug.			
Alt Set: MM (hPa on req)	QNH on req (QFE)	Trans level: By ATC	Trans alt: 3970' (3290')



MSA
Airport



ALT/HEIGHT CONVERSION	QNH	(QFE)
3970'	(3290' - 1000m)	
2650'	(1970' - 600m)	
2330'	(1650' - 500m)	
2000'	(1320' - 400m)	
1340'	(660' - 200m)	



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II	1340' (660') on 240°	060°	2650' (1970')
ILS GS	3.00°	377	484	538	646	753	861			

STRAIGHT-IN LANDING RWY 24				LOC (GS out)	
ILS					
DA(H) 880' (200')					
FULL	TDZ or CL out	ALS out			
A					
B					
C	RVR 550m VIS 800m	RVR 720m VIS 800m	1200m	NOT AUTH	
D					

PANS OPS

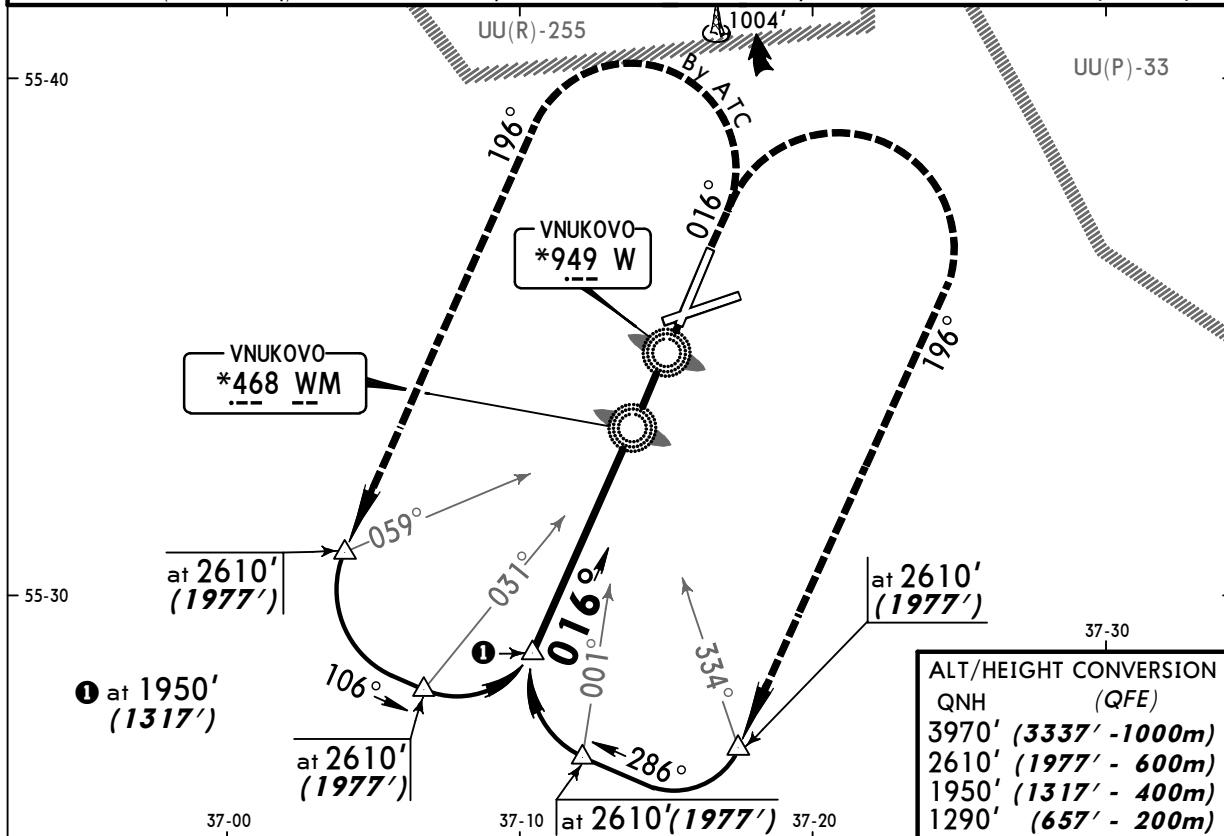
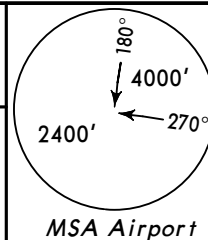
UUWW/VKO
VNUKOVO

JEPPESEN
10 FEB 06 (18-1) Eff 16 Feb

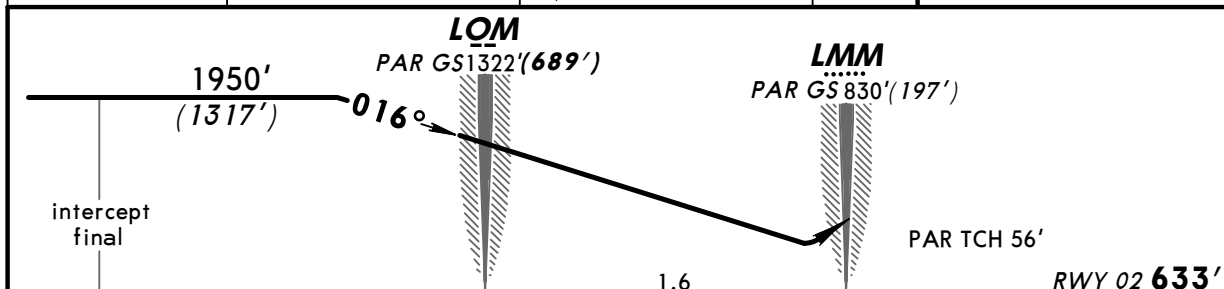
MOSCOW, RUSSIA
PAR Rwy 02

BRIEFING STRIP

ATIS 125.87	MOSCOW Approach 3 128.0	MOSCOW Approach 4 123.4	VNUKOVO Approach 122.3
VNUKOVO Krug (SRE) 126.0	VNUKOVO Tower (PAR) 118.3	VNUKOVO Start (TWR) 118.3	Ground 120.45
RADAR	Final Apch Crs 016°	PAR GS LOM 1322' (689')	PAR DA(H) Refer to Minimums
		Apt Elev 686'	RWY 633'
MISSED APCH: Climb on 016° to 1290' (657'), then turn RIGHT onto 196° climbing to 2610' (1977'), then as directed. At 1290' (657'), immediately contact Krug.			
Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: By ATC Trans alt: 3970' (3337')			



ALT/HEIGHT CONVERSION	QNH	(QFE)
3970'	(3337' - 1000m)	
2610'	(1977' - 600m)	
1950'	(1317' - 400m)	
1290'	(657' - 200m)	



Gnd speed-Kts	70	90	100	120	140	160	HIALS	1290' (657') on 016°	196° RT	2610' (1977')
PAR GS	2.83°	356	458	509	611	712	814			

STRAIGHT-IN LANDING RWY 02		ALS out	
A: 840' (207') C: 860' (227')			
B: 850' (217') D: 869' (236')			
A			
B			
C	RVR 720m VIS 800m	1200m	
D			

PANS OPS

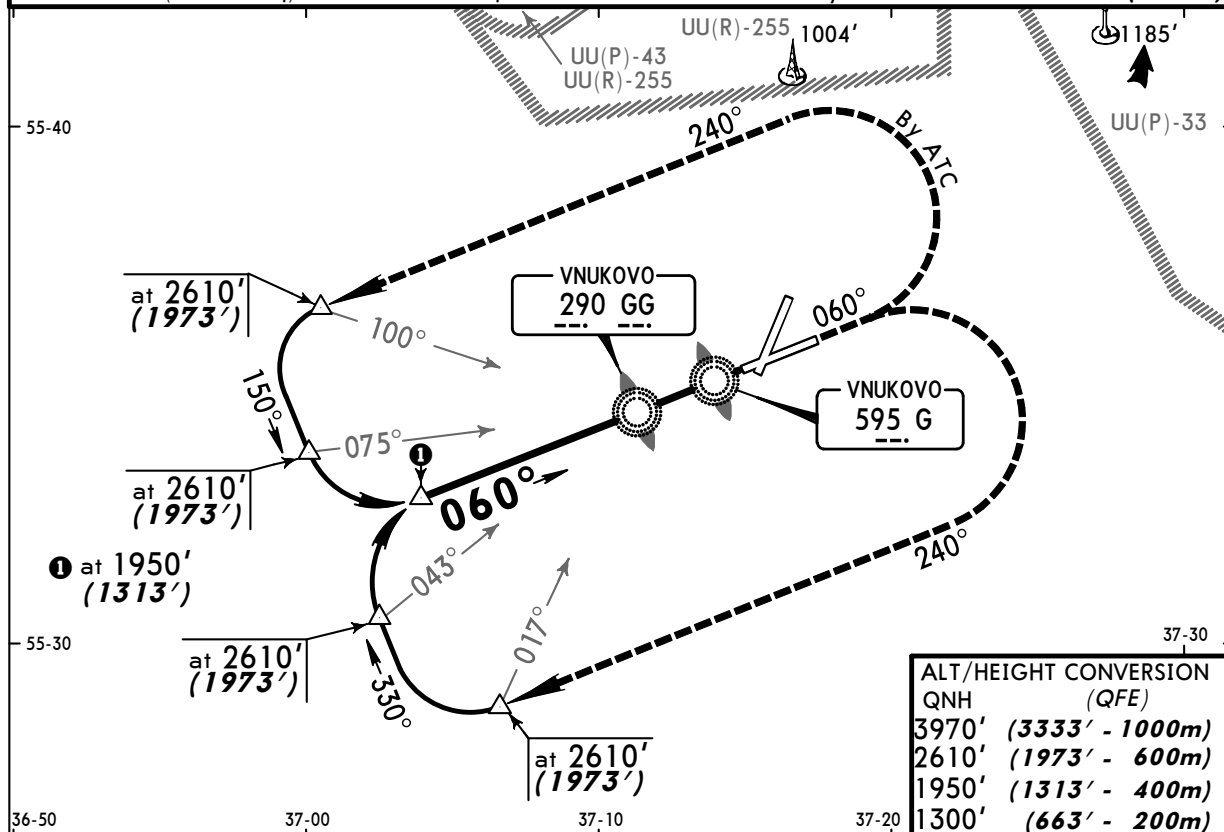
UUWW/VKO
VNUKOVO

JEPPESEN
10 FEB 06 (18-2) Eff 16 Feb

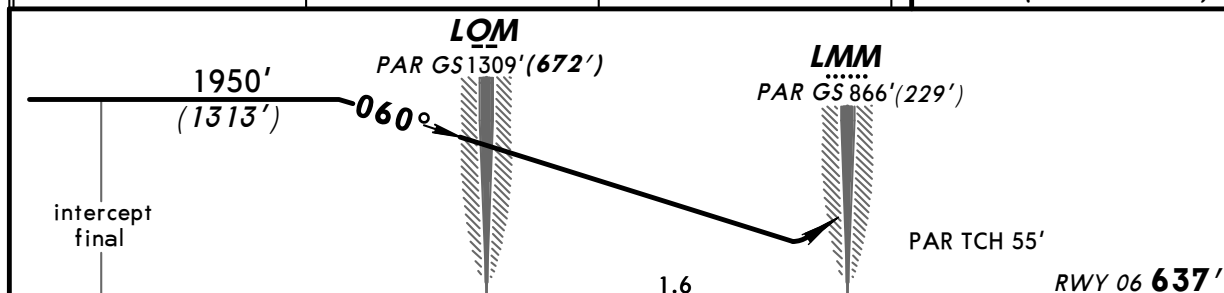
MOSCOW, RUSSIA
PAR Rwy 06

BRIEFING STRIP

ATIS 125.87	MOSCOW Approach 3 128.0	MOSCOW Approach 4 123.4	VNUKOVO Approach 122.3
VNUKOVO Krug (SRE) 126.0	VNUKOVO Tower (PAR) 118.3	VNUKOVO Start (TWR) 118.3	Ground 120.45
RADAR	Final Apch Crs 060°	PAR GS LOM 1309' (672')	PAR DA(H) Refer to Minimums
Apt Elev 686' RWY 637'			MSA Airport
MISSED APCH: Climb on 060° to 1300' (663'), then turn RIGHT onto 240° climbing to 2610' (1973'), then as directed. At 1300' (663'), immediately contact Krug.			
Alt Set: MM (hPa on req)	QNH on req (QFE)	Trans level: By ATC	Trans alt: 3970' (3333')



ALT/HEIGHT CONVERSION	
QNH	(QFE)
3970'	(3333' - 1000m)
2610'	(1973' - 600m)
1950'	(1313' - 400m)
1300'	(663' - 200m)



2.2							0.6		0		
Gnd speed-Kts	70	90	100	120	140	160	HIALS		1300'	240°	2610'
PAR GS	2.67°	336	433	481	577	673	769	PAPI	(663') _{on}	060°	(1973'
									↑	PT	↑

STRAIGHT-IN LANDING RWY 06		ALS out	
A: 837' (200') C: 853' (216')			
B: 843' (206') D: 863' (226')			
A			
B			
C	RVR 720m VIS 800m	1200m	
D			

PANS OPS

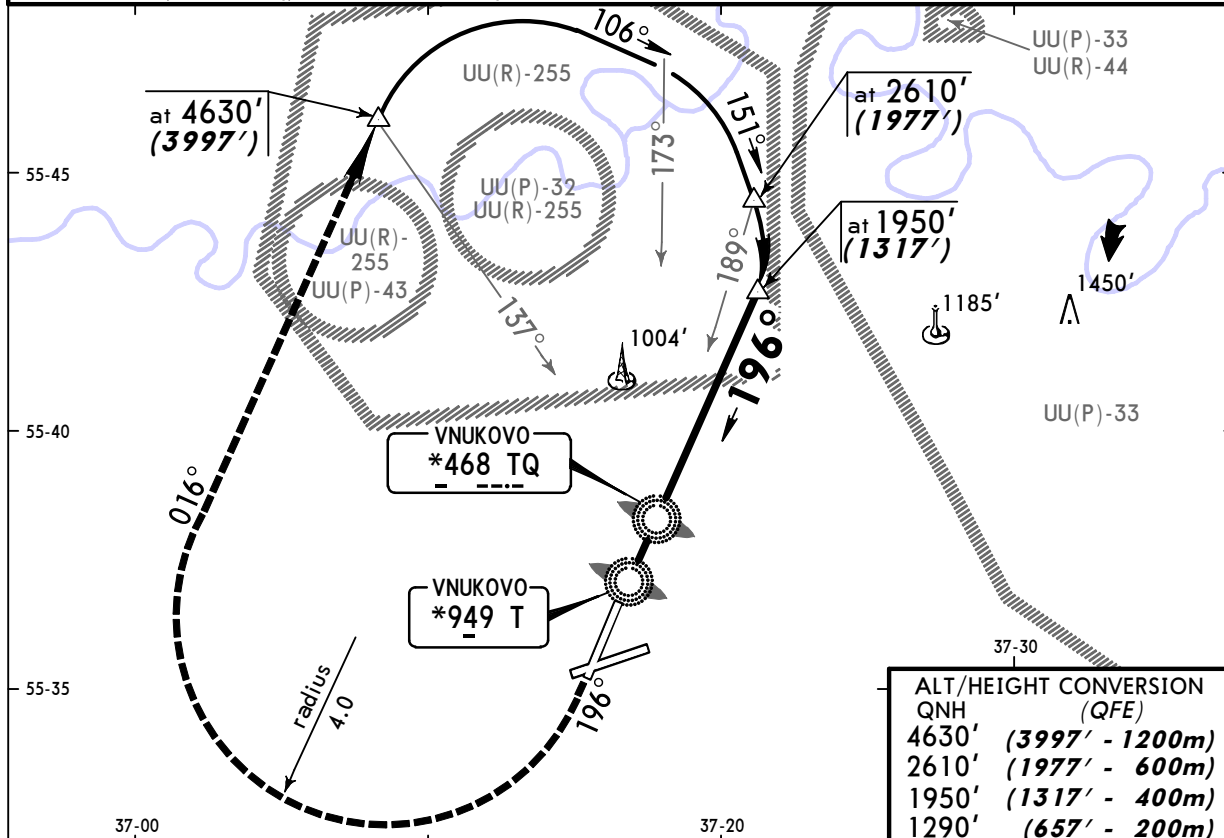
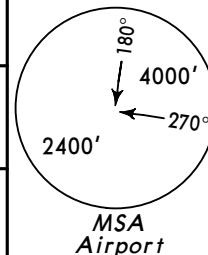
UUWW/VKO
VNUKOVO

JEPPESEN
10 FEB 06 (18-3) Eff 16 Feb

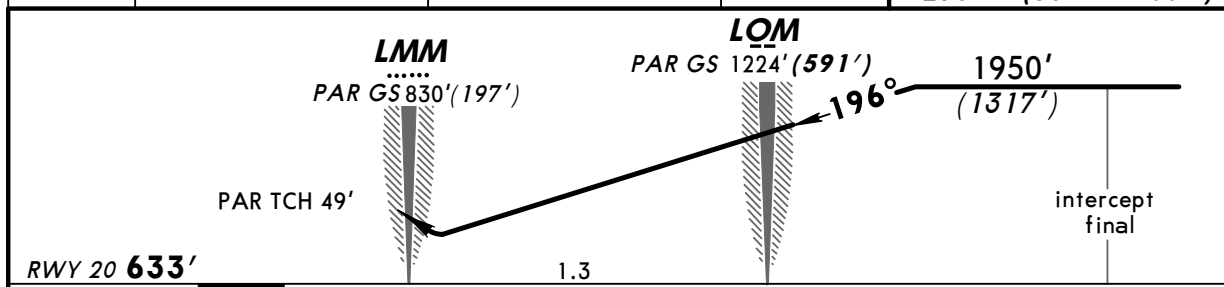
MOSCOW, RUSSIA
PAR Rwy 20

BRIEFING STRIP

ATIS	MOSCOW Approach 3	MOSCOW Approach 4	VNUKOVO Approach
125.87	128.0	123.4	122.3
VNUKOVO Krug (SRE)	VNUKOVO Tower (PAR)	VNUKOVO Start (TWR)	Ground
126.0	118.3	118.3	120.45
RADAR	Final Apch Crs 196°	PAR GS LOM 1224' (591')	PAR DA(H) Refer to Minimums Apt Elev 686' RWY 633'
MISSED APCH: Climb on 196° to 1290' (657'), then turn RIGHT onto 016° climbing to 4630' (3997'), then as directed. At 1290' (657'), immediately contact Krug.			
Alt Set: MM (hPa on req)	QNH on req (QFE)	Trans level: By ATC	Trans alt: 4630' (3997')



ALT/HEIGHT CONVERSION
QNH (QFE)
4630' (3997' - 1200m)
2610' (1977' - 600m)
1950' (1317' - 400m)
1290' (657' - 200m)



Gnd speed-Kts	70	90	100	120	140	160	HIALS	1290' (657') on 196°	016° RT	4630' (3997')
PAR GS 2.83°	356	458	509	611	712	814				

STRAIGHT-IN LANDING RWY 20		ALS out	
DA(H)	A: 850' (217') C: 869' (236')		
	B: 860' (227') D: 879' (246')		
A			
B			
C	RVR 720m VIS 800m	1200m	
D			

PANS OPS

UUWW/VKO
VNUKOVO

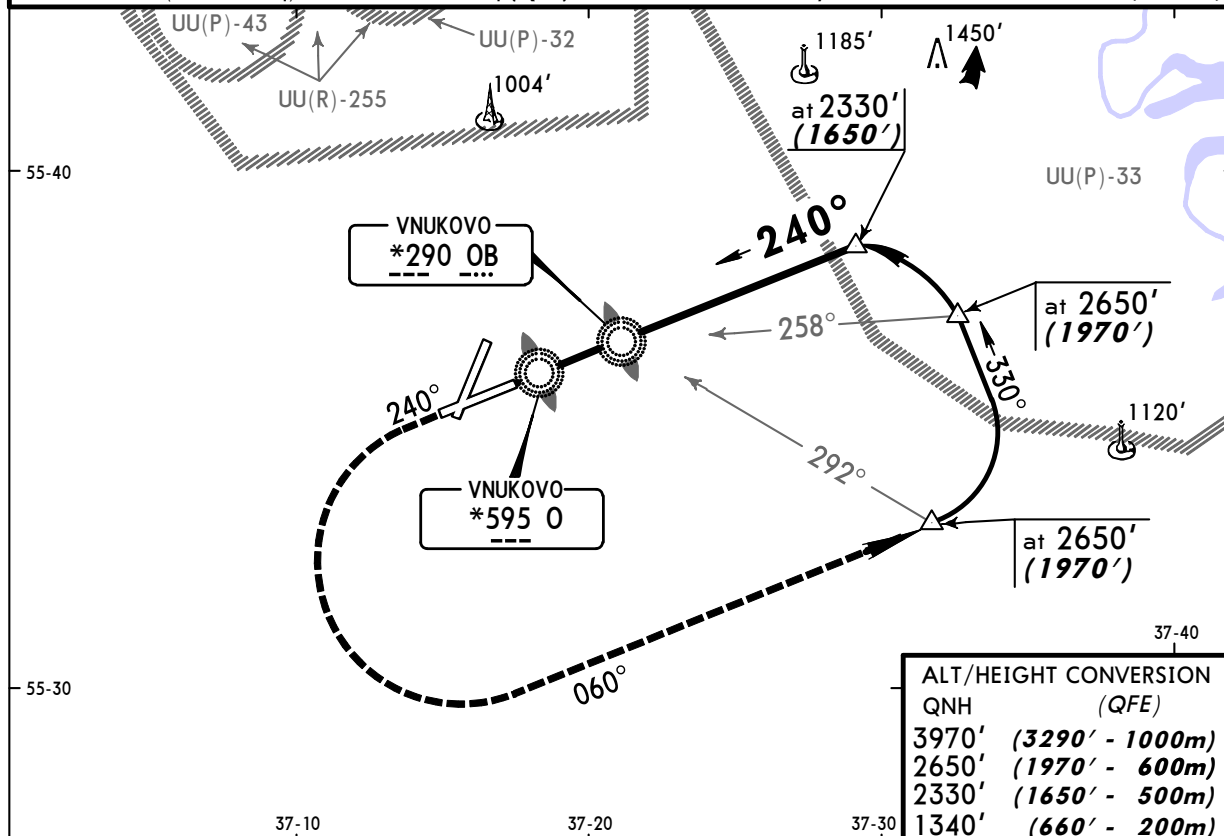
JEPPESEN
10 FEB 06 (18-4) Eff 16 Feb

MOSCOW, RUSSIA
PAR-Lima Rwy 24

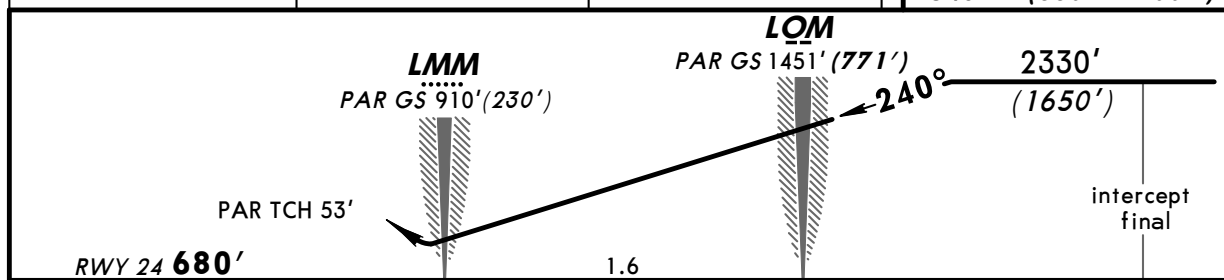
BRIEFING STRIP

ATIS 125.87	MOSCOW Approach 3 128.0	MOSCOW Approach 4 123.4	VNUKOVO Approach 122.3
VNUKOVO Krug (SRE) 126.0	VNUKOVO Tower (PAR) 118.3	VNUKOVO Start (TWR) 118.3	Ground 120.45
RADAR	Final Apch Crs 240°	PAR GS LOM 1451' (771')	PAR DA(H) Refer to Minimums
		Apt Elev 686'	RWY 680'
MISSED APCH: Climb on 240° to 1340' (660'), then turn LEFT onto 060° climbing to 2650' (1970'), then as directed. At 1340' (660'), immediately contact Krug.			
MSA Airport			

Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: By ATC Trans alt: 3970' (3290')



ALT/HEIGHT CONVERSION	
QNH	(QFE)
3970'	(3290' - 1000m)
2650'	(1970' - 600m)
2330'	(1650' - 500m)
1340'	(660' - 200m)



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II	1340' (660') on 240°	060° LT	2650' (1970')
PAR GS 3.00°	377	484	538	646	753	861	PAPI			

STRAIGHT-IN LANDING RWY 24					
A: 883' (203') C: 902' (222')					
B: 892' (212') D: 912' (232')					
FULL	TDZ or CL out	ALS out			
A					
B					
C	RVR 550m VIS 800m	RVR 720m VIS 800m	1200m		
D					

PANS OPS

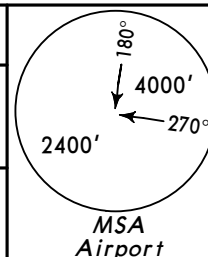
UUWW/VKO
VNUKOVO

JEPPESEN
10 FEB 06 (18-5) Eff 16 Feb

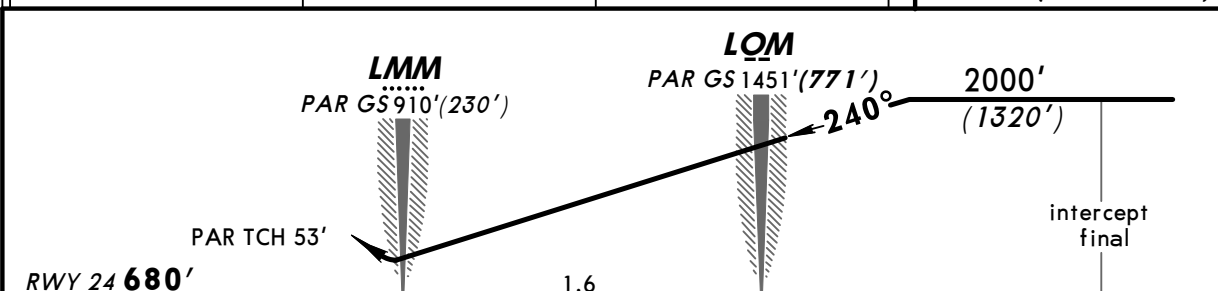
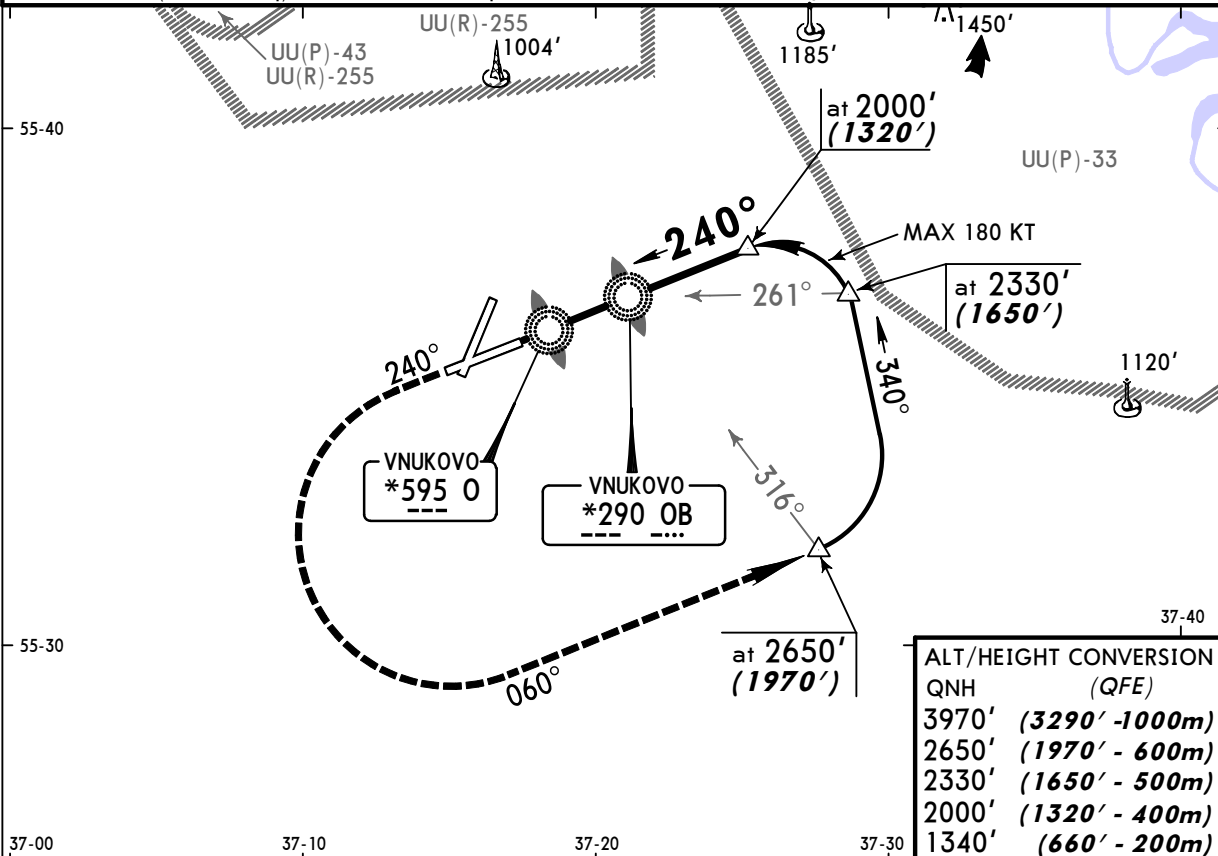
MOSCOW, RUSSIA
PAR-Mike Rwy 24

BRIEFING STRIP

ATIS 125.87	MOSCOW Approach 3 128.0	MOSCOW Approach 4 123.4	VNUKOVO Approach 122.3
VNUKOVO Krug (SRE) 126.0	VNUKOVO Tower (PAR) 118.3	VNUKOVO Start (TWR) 118.3	Ground 120.45
RADAR	Final Apch Crs 240°	PAR GS LOM 1451' (771')	PAR DA(H) Refer to Minimums Apt Elev 686' RWY 680'
MISSED APCH: Climb on 240° to 1340' (660'), then turn LEFT onto 060° climbing to 2650' (1970'), then as directed. At 1340' (660'), immediately contact Krug.			



Alt Set: MM (hPa on req) QNH on req (QFE) Trans level: By ATC Trans alt: 3970' (**3290'**)



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II	1340' (660') on 240°	060° LT	2650' (1970')
PAR GS	2.67°	336	433	481	577	673	769			

STRAIGHT-IN LANDING RWY 24					
DA(H)		A: 883'(203') C: 902'(222')			
		B: 892'(212') D: 912'(232')			
FULL		TDZ or CL out	ALS out		
A	RVR 550m VIS 800m	RVR 720m VIS 800m	1200m		
B					
C					
D					

PANS OPS