

ENR-3.2.2 “M” ROUTES

1. NAVIGATION SPECIFICATION

RNAV routes in Republic of Kazakhstan require RNAV 5 capability. Supported sensors are VOR/DME, INS/IRS, GNSS or their combination.

Route designator		[Route Usage Notes]				
Significant Point Name		Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
M34 (RNAV 5)						
▲ BALGO (FIR BDRY)		430234N 0733602E TAR 079.0° 102.7 NM (2200 FT)				Before, see AIP Russia and CIS
	004° 184°	39.7 NM	FL 510 FL 120	Odd	Even	SHYMKENT ACC 132.7 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Approach” on frequencies 4744 kHz. - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
▲ TOMGO		434146N 0734454E TAR 060.0° 118.9 NM (2200 FT)				
	009° 189°	39.5 NM	FL 510 FL 120	Odd	Even	SHYMKENT ACC 132.7 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Approach” on frequencies 4744 kHz. - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
▲ ALAKO		441958N 0735903E ATA 289.1° 146.4 NM (2200 FT)				

Route designator	[Route Usage Notes]					
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
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	009° 189°	10.3 NM	FL 510 FL 120	Odd	Even	SHYMKENT ACC 132.7 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Approach” on frequencies 4744 kHz. - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
▲ ABEBA (FIR BDRY)	442957N 0740248E ATA 293.0° 148 NM (2200 FT)					
	009° 189°	31.0 NM	FL 510 FL 120	Odd	Even	ALMATY ACC 125.5 MHZ {C}
△ TENRO	445953N 0741408E BLH 188.0° 117.4 NM (1400 FT)					
	009° 189°	58.5 NM	FL 510 FL 120	Odd	Even	ALMATY ACC 125.5 MHZ {C}
△ ABMIK	455616N 0743604E BLH 189.0° 58.9 NM (1400 FT)					
	009° 189°	58.9 NM	FL 510 FL 120	Odd	Even	ALMATY ACC 125.5 MHZ BALKHASH TOWER 128.0 MHZ {C}
▲ BALKHASH DVOR/DME (BLH)	465259N 0745902E					
	008° 188°	37.6 NM	FL 510 FL 120	Odd	Even	ALMATY ACC 125.5 MHZ BALKHASH TOWER 128.0 MHZ {C}
△ OBARU	472917N 0751312E BLH 008.0° 37.6 NM (1400 FT)					
	008° 188°	72.8 NM	FL 510 FL 120	Odd	Even	ALMATY ACC 125.5 MHZ {C}

Route designator		[Route Usage Notes]					
Significant Point Name		Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks	
				↓	↑		
▲ AGPIN (FIR BDRY)		483931N 0754146E KRG 116.0° 110.3 NM (1800 FT)					
	008° 188°	20.9 NM	<div>FL 510 FL 120</div>	Odd	Even	ASTANA ACC 124.1 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Karaganda Tower” on frequencies 4728 kHz in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}	
△ LALAS		485941N 0755014E KRG 105.0° 105.2 NM (1800 FT)					
	008° 188°	8.1 NM	<div>FL 510 FL 120</div>	Odd	Even	ASTANA ACC 124.1 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Karaganda Tower” on frequencies 4728 kHz in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}	
△ ULKAP		490729N 0755332E KRG 101.0° 104.3 NM (1800 FT)					

Route designator	[Route Usage Notes]					
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
	008° 188°	42.1 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 124.1 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Karaganda Tower” on frequencies 4728 kHz in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
▲ AGINU (FIR BDRY)	494800N 0761100E KRG 077.0° 109.5 NM (1800 FT)					
	005° 185°	69.2 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 132.8 MHZ {C}
△ GOBSO	505523N 0763521E PVL 184.0° 79.6 NM (500 FT)					
	005° 184°	48.4 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 132.8 MHZ PAVLODAR TOWER 119.8 MHZ {C}
△ EKTUS	514225N 0765305E PVL 185.0° 31.2 NM (500 FT)					
	005° 186°	31.2 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 132.8 MHZ PAVLODAR TOWER 119.8 MHZ {C}
▲ PAVLODAR DVOR/DME (PVL)	521235N 0770542E					

Route designator		[Route Usage Notes]				
Significant Point Name		Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
M56 (RNAV 5)						
▲ GERLI		495334N 0535254E URL 120.0° 117.1 NM (200 FT)				
	310° 128°	76.7 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 131.4 MHZ {C}
△ VEVIK		505201N 0523529E URL 102.0° 43.1 NM (200 FT)				
	321° 140°	55.2 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 131.4 MHZ URALSK TOWER 119.7 MHZ {C}
▲ BEKAS (FIR BDRY)		514029N 0515327E URL 011.0° 34.2 NM (200 FT)				

Route designator	[Route Usage Notes]					
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation					Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
M75 (RNAV 5)						
▲ UBAGU (FIR BDRY)	430228N 0625120E KZO 221.0° 153.8 NM (500 FT)					Before, see AIP Uzbekistan

Route designator		[Route Usage Notes]				
Significant Point Name		Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation			Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
	042° 223°	26.4 NM	FL 510 FL 120	Odd	Even	SHYMKENT ACC 127.3 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Kyzylorda Tower” on frequencies 5335 kHz and 6672 kHz (as a backup), in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
△ RIMDO	431940N 0631837E KZO 222.0° 127.5 NM (500 FT)					
	043° 223°	16.7 NM	FL 510 FL 120	Odd	Even	SHYMKENT ACC 127.3 MHZ {C}
△ NITNA	433032N 0633601E KZO 222.0° 110.8 NM (500 FT)					
	043° 223°	11.8 NM	FL 510 FL 120	Odd	Even	SHYMKENT ACC 127.3 MHZ {C}
▲ MIMRI	433808N 0634822E KZO 222.0° 99.0 NM (500 FT)					
	026° 206°	56.8 NM	FL 510 FL 120	Odd	Even	SHYMKENT ACC 127.3 MHZ {C}
△ ADREM	442548N 0643118E KZO 243.0° 47.5 NM (500 FT)					
	026° 206°	28.2 NM	FL 510 FL 150	Odd	Even	SHYMKENT ACC 127.3 MHZ {C}
△ GIGUR	444920N 0645300E KZO 277.0° 30.1 NM (500 FT)					
	026° 206°	6.9 NM	FL 510 FL 150	Odd	Even	SHYMKENT ACC 127.3 MHZ {C}

Route designator		[Route Usage Notes]				
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
△ BUDET	445507N 0645824E KZO 290.0° 28.5 NM (500 FT)					
	026° 207°	80.3 NM	FL 510 FL 150	Odd	Even	SHYMKENT ACC 127.3 MHZ {C}
△ ANIGO	460143N 0660207E KZO 007.0° 82.4 NM (500 FT)					
	027° 207°	35.2 NM	FL 510 FL 120	Odd	Even	SHYMKENT ACC 127.3 MHZ {C}
▲ BAMET (FIR BDRY)	463042N 0663051E DZG 206.0° 88.8 NM (1300 FT)					
	027° 207°	32.1 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 132.5 MHZ {C}
△ GISIR	465704N 0665732E DZG 206.0° 56.7 NM (1300 FT)					
	027° 207°	13.3 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 132.5 MHZ {C}
△ REMTI	470757N 0670843E DZG 206.0° 43.4 NM (1300 FT)					
	027° 207°	43.4 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 132.5 MHZ ZHEZKAZGAN TOWER 127.1 MHZ {C}
▲ ZHEZKAZGAN DVOR/DME (DZG)	474317N 0674542E					
	027° 207°	43.1 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 132.5 MHZ ZHEZKAZGAN TOWER 127.1 MHZ {C}
△ DOPAR	481831N 0682229E DZG 027.0° 43.0 NM (1300 FT)					
	025° 205°	16.7 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 132.5 MHZ {C}

Route designator	[Route Usage Notes]					
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation					Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
△ MAKUT	483217N 0683632E DZG 026.0° 59.7 NM (1300 FT)					
	027° 207°	54.9 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 132.5 MHZ {C}
▲ AMIGU	491645N 0692517E ARK 114.0° 112.2 NM (1300 FT)					
	027° 207°	57.0 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 124.1 MHZ {C}
△ RELGO	500234N 0701730E AST 207.0° 72.3 NM (1200 FT)					
	027° 208°	9.3 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 124.1 MHZ {C}
△ KOKON	500958N 0702609E AST 207.0° 63.0 NM (1200 FT)					
	027° 208°	14.8 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 124.1 MHZ ASTANA APPROACH 124.6 MHZ {C}
▲ BASPA	502144N 0704001E AST 208.0° 48.3 NM (1200 FT)					
	028° 208°	30.1 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 132.8 MHZ ASTANA APPROACH 124.6 MHZ {C}
△ LIGMO	504539N 0710837E AST 207.0° 18.2 NM (1200 FT)					
	027° 208°	18.2 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 132.8 MHZ ASTANA APPROACH 124.6 MHZ {C}
▲ ASTANA DVOR/ DME (AST)	510006N 0712600E					
	360° 180°	66.2 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 132.8 MHZ ASTANA APPROACH 124.6 MHZ {C}

Route designator		[Route Usage Notes]					
Significant Point Name		Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks	
				↓	↑		
△ OLGAS	520510N 0714507E AST 001.0° 66.2 NM (1200 FT)						
	001° 181°	34.4 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 132.8 MHZ {C}	
△ AMOLA	523853N 0715604E KTU 106.0° 94.0 NM (900 FT)						
	359° 179°	22.0 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 132.8 MHZ {C}	
△ ULSET	530027N 0720230E KTU 093.0° 89.9 NM (900 FT)						
	359° 179°	38.2 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 132.8 MHZ {C}	
▲ POBUR	533800N 0721400E KTU 069.0° 95.3 NM (900 FT)						
	360° 179°	32.1 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 132.8 MHZ {C}	
▲ DAKIN (FIR BDRY)	540930N 0722418E KTU 053.0° 110.5 NM (900 FT)					For continuation, see AIP Russia	

Route designator	[Route Usage Notes]					
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
M149 (RNAV 5)						
▲ AGUNA	435906N 0754739E ATA 298.4° 67.1 NM (2200 FT)					

Route designator	[Route Usage Notes]					
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation					Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
	336° 156°	53.8 NM	FL 510 FL 120	Even	Odd	ALMATY ACC 133.1 MHZ {C}
△ ADIRO	445011N 0752356E ATA 315.7° 114 NM (2200 FT)					
	335° 155°	29.6 NM	FL 510 FL 120	Even	Odd	ALMATY ACC 133.1 MHZ {C}
▲ MALOD	451812N 0751037E BLH 168.0° 95.2 NM (1400 FT)					
	349° 168°	48.5 NM	FL 510 FL 120	Even	Odd	ALMATY ACC 125.5 MHZ {C}
△ KONEK	460631N 0750443E BLH 168.0° 46.7 NM (1400 FT)					
	349° 168°	46.7 NM	FL 510 FL 120	Even	Odd	ALMATY ACC 125.5 MHZ BALKHASH TOWER 128.0 MHZ {C}
▲ BALKHASH DVOR/DME (BLH)	465259N 0745902E					
	021° 201°	39.9 NM	FL 510 FL 120	Odd	Even	ALMATY ACC 125.5 MHZ BALKHASH TOWER 128.0 MHZ {C}
△ BIKRI	472814N 0752625E BLH 021.0° 39.9 NM (1400 FT)					
	021° 201°	75.6 NM	FL 510 FL 120	Odd	Even	ALMATY ACC 125.5 MHZ {C}
▲ ROSID	483440N 0762005E BLH 022.0° 115.5 NM (1400 FT)					

Route designator	[Route Usage Notes]					
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
	021° 201°	25.1 NM	FL 510 FL 120	Odd	Even	ALMATY ACC 132.1 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Semey Tower” on frequencies 6645 kHz in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
△ TAGAL	485638N 0763825E KRG 102.0° 135.8 NM (1800 FT)					
	021° 202°	15.8 NM	FL 510 FL 120	Odd	Even	ALMATY ACC 132.1 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Semey Tower” on frequencies 6645 kHz in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
△ ESUMA	491025N 0765006E KRG 095.0° 139.0 NM (1800 FT)					

Route designator		[Route Usage Notes]				
Significant Point Name		Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation			Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
	021° 202°	57.3 NM	FL 510 FL 120	Odd	Even	ALMATY ACC 132.1 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Semey Tower” on frequencies 6645 kHz in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
△ ADETA	500015N 0773321E SEM 250.0° 105.7 NM (700 FT)					
	022° 202°	47.6 NM	FL 510 FL 220	Odd	Even	ALMATY ACC 132.1 MHZ {C}
▲ BAMAT (FIR BDRY)	504125N 0781025E SEM 276.0° 81.9 NM (700 FT)					
	022° 202°	40.3 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 132.8 MHZ {C}
△ MIKSA	511608N 0784241E SEM 306.0° 80.3 NM (700 FT)					
	022° 203°	39.4 NM	FL 510 FL 120	Odd	Even	ASTANA ACC 132.8 MHZ {C}
▲ LAGMO (FIR BDRY)	514954N 0791500E PVL 098.0° 83.0 NM (500 FT)					For continuation, see AIP Russia

Route designator	[Route Usage Notes]					
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation					Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
M158 (RNAV 5)						
▲ BODSI	445034N 0541914E BNU 220.0° 45.3 NM (0 FT)					
	316° 135°	38.5 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 119.8 MHZ {C}
▲ ANIGA	452130N 0534647E BNU 262.0° 56.8 NM (0 FT)					
	315° 135°	13.0 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 130.9 MHZ {C}
△ GOLGI	453153N 0533543E BNU 271.0° 65.5 NM (0 FT)					
	315° 134°	40.7 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 130.9 MHZ {C}
△ OTMAS	460419N 0530034E ATR 134.0° 81.5 NM (0 FT)					
	314° 134°	38.2 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 130.9 MHZ {C}
△ RENPI	463437N 0522656E ATR 133.0° 43.2 NM (0 FT)					
	314° 133°	43.2 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 130.9 MHZ ATYRAU TOWER 118.1 MHZ {C}
▲ ATYRAU DVOR/ DME (ATR)	470838N 0514805E					
	349° 168°	43.2 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 130.9 MHZ ATYRAU TOWER 118.1 MHZ {C}
△ OLAPU	475146N 0514531E ATR 349.0° 43.2 NM (0 FT)					

Route designator		[Route Usage Notes]				
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(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
	348° 168°	69.9 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 130.9 MHZ {C}
▲ BAGIR	490131N 0514106E ATR 348.0° 113.1 NM (0 FT)					
	348° 167°	84.3 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 131.4 MHZ {C}
△ DOKUS	502539N 0513528E URL 166.0° 43.4 NM (200 FT)					
	347° 167°	43.4 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 131.4 MHZ URALSK TOWER 119.7 MHZ {C}
▲ URALSK DVOR/ DME (URL)	510855N 0513238E					
	046° 226°	34.8 NM	FL 510 FL 120	Odd	Even	AKTOBE ACC 131.4 MHZ URALSK TOWER 119.7 MHZ {C}
△ INRIS	512800N 0521856E URL 046.0° 34.8 NM (200 FT)					
	046° 226°	8.6 NM	FL 510 FL 120	Odd	Even	AKTOBE ACC 131.4 MHZ URALSK TOWER 119.7 MHZ {C}
▲ EKTEN (FIR BDRY)	513242N 0523030E URL 046.0° 43.4 NM (200 FT)					For continuation, see AIP Russia

Route designator		[Route Usage Notes]				
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(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
M161 (RNAV 5)	<small>(1) Before, see AIP Uzbekistan (2) For continuation, see AIP Russia</small>					
▲ ODIVA (FIR BDRY)	423530N 0640848E KZO 198.0° 140.5 NM (500 FT)					Before, see AIP Uzbekistan

Route designator		[Route Usage Notes]				
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(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
	314° 133°	57.5 NM	FL 510 FL 120	Even	Odd	SHYMKENT ACC 127.3 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Kyzylorda Tower” on frequencies 5335 kHz and 6672 kHz (as a backup), in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
△ RIMDO	431940N 0631837E KZO 222.0° 127.5 NM (500 FT)					
	313° 132°	23.0 NM	FL 510 FL 120	Even	Odd	SHYMKENT ACC 127.3 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Kyzylorda Tower” on frequencies 5335 kHz and 6672 kHz (as a backup), in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
▲ BOLNA	433712N 0625812E KZO 232.0° 129.3 NM (500 FT)					

Route designator		[Route Usage Notes]				
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				↓	↑	
	312° 132°	9.3 NM	FL 510 FL 120	Even	Odd	SHYMKENT ACC 127.3 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Kyzylorda Tower” on frequencies 5335 kHz and 6672 kHz (as a backup), in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
△ ADAKA	434416N 0624955E KZO 236.0° 131.1 NM (500 FT)					
	312° 132°	35.1 NM	FL 510 FL 120	Even	Odd	SHYMKENT ACC 127.3 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Kyzylorda Tower” on frequencies 5335 kHz and 6672 kHz (as a backup), in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
△ TOZLI	441054N 0621817E KZO 251.0° 143.4 NM (500 FT)					

Route designator		[Route Usage Notes]				
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(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
	312° 131°	56.9 NM	FL 510 FL 120	Even	Odd	SHYMKENT ACC 127.3 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Kyzylorda Tower” on frequencies 5335 kHz and 6672 kHz (as a backup), in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
△ LATNU	445345N 0612553E ARL 175.0° 116.1 NM (300 FT)					
	311° 130°	42.3 NM	FL 510 FL 120	Even	Odd	SHYMKENT ACC 127.3 MHZ {C}
▲ MILSO (FIR BDRY)	452519N 0604609E ARL 194.0° 91.4 NM (300 FT)					
	310° 129°	65.3 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 119 MHZ {C}
▲ ABDUN	461337N 0594316E ARL 236.0° 86.4 NM (300 FT)					
	307° 125°	91.5 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 119 MHZ {C}
▲ ARKER	471757N 0580839E ARL 271.0° 145.3 NM (300 FT)					
	305° 125°	28.9 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 129.6 MHZ {C}
△ UDATO	473801N 0573755E AKB 163.0° 158.9 NM (700 FT)					
	305° 124°	62.7 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 129.6 MHZ {C}
△ EKDAD	482100N 0562959E AKB 183.0° 117.7 NM (700 FT)					

Route designator	[Route Usage Notes]					
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
	304° 123°	16.3 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 129.6 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Aktobe Tower” on frequencies 4656 kHz in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
△ LOGTO	483204N 0561202E AKB 189.0° 110.7 NM (700 FT)					
	303° 123°	13.8 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 129.6 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Aktobe Tower” on frequencies 4656 kHz in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
△ UGLUK	484125N 0555642E AKB 196.0° 106.1 NM (700 FT)					
	303° 123°	14.2 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 129.6 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Aktobe Tower” on frequencies 4656 kHz in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}

Route designator	[Route Usage Notes]					
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
△ KURUL	485059N 0554051E AKB 203.0° 103.2 NM (700 FT)					
	303° 122°	28.0 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 129.6 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Aktobe Tower” on frequencies 4656 kHz in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
△ AGMAN	490942N 0550920E AKB 218.0° 103.0 NM (700 FT)					
	302° 121°	66.4 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 129.6 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Aktobe Tower” on frequencies 4656 kHz in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
▲ GERLI	495334N 0535254E URL 120.0° 117.1 NM (200 FT)					
	301° 119°	73.8 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 131.4 MHZ {C}
△ EDAKO	504120N 0522510E URL 119.0° 43.2 NM (200 FT)					
	299° 119°	43.2 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 131.4 MHZ URALSK TOWER 119.7 MHZ {C}
▲ URALSK DVOR/ DME (URL)	510855N 0513238E					

Route designator		[Route Usage Notes]					
Significant Point Name		Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks	
				↓	↑		
	316° 135°	21.5 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 131.4 MHZ URALSK TOWER 119.7 MHZ {C}	
△ OGAPI	512648N 0511336E URL 315.0° 21.5 NM (200 FT)						
	316° 135°	16.3 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 131.4 MHZ URALSK TOWER 119.7 MHZ {C}	
▲ GUTAN (FIR BDRY)	514024N 0505912E URL 316.0° 37.8 NM (200 FT)					For continuation, see AIP Russia	

Route designator		[Route Usage Notes]				
Significant Point Name		Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
M166 (RNAV 5)		(1) Before, see AIP China (2) For continuation, see AIP Russia				
▲ SARIN (FIR BDRY)		465156N 0825317E AGZ 118.0° 118.2 NM (2200 FT)				Before, see AIP China
	298° 117°	40.5 NM	FL 510 FL 150	Even	Odd	ALMATY ACC 132.1 MHZ {C}
▲ AGUSA		471400N 0820338E AGZ 117.0° 77.7 NM (2200 FT)				
	297° 116°	37.8 NM	FL 510 FL 150	Even	Odd	ALMATY ACC 132.1 MHZ {C}
▲ TOLKI		473415N 0811640E AGZ 117.0° 39.9 NM (2200 FT)				
	297° 117°	22.5 NM	FL 510 FL 120	Even	Odd	ALMATY ACC 132.1 MHZ {C}
△ BANUM		474633N 0804834E AGZ 296.3° 17.3 NM (2200 FT)				
	296° 116°	17.3 NM	FL 510 FL 120	Even	Odd	ALMATY ACC 132.1 MHZ {C}
▲ AYAGUZ VOR/ DME (AGZ)		475552N 0802659E				

Route designator		[Route Usage Notes]				
Significant Point Name		Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
	287° 105°	67.2 NM	FL 510 FL 120	Even	Odd	ALMATY ACC 132.1 MHZ {C}
△ OSNER	482119N 0785409E AGZ 286.0° 67.2 NM (2200 FT)					
	286° 104°	55.9 NM	FL 510 FL 120	Even	Odd	ALMATY ACC 132.1 MHZ {C}
△ DODEM	484212N 0773614E AGZ 285.0° 123.0 NM (2200 FT)					
	284° 103°	40.9 NM	FL 510 FL 120	Even	Odd	ALMATY ACC 132.1 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Semey Tower” on frequencies 6645 kHz in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
△ TAGAL	485638N 0763825E KRG 102.0° 135.8 NM (1800 FT)					
	283° 102°	19.2 NM	FL 510 FL 120	Even	Odd	ALMATY ACC 132.1 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Semey Tower” on frequencies 6645 kHz in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
▲ GORBO (FIR BDRY)	490316N 0761100E KRG 099.0° 116.9 NM (1800 FT)					

Route designator		[Route Usage Notes]				
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
	283° 102°	12.2 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 124.1 MHZ In case of possible VHF radio communication failure at FL 120–FL 190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Karaganda Tower” on frequencies 4728 kHz in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
△ ULKAP	490729N 0755332E KRG 101.0° 104.3 NM (1800 FT)					
	282° 100°	60.5 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 124.1 MHZ {C}
△ ARLIH	492724N 0742621E KRG 100.0° 43.9 NM (1800 FT)					
	280° 100°	43.9 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 124.1 MHZ KARAGANDA TOWER 122.0 MHZ {C}
▲ KARAGANDA DVOR/DME (KRG)	494114N 0732226E					
	273° 091°	46.3 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 124.1 MHZ KARAGANDA TOWER 122.0 MHZ {C}
△ SEHAL	494940N 0721215E KRG 271.0° 46.3 NM (1800 FT)					
	271° 090°	39.2 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 124.1 MHZ {C}
▲ GURPI	495618N 0711236E AST 178.0° 64.4 NM (1200 FT)					
	271° 090°	36.1 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 124.1 MHZ {C}
△ RELGO	500234N 0701730E AST 207.0° 72.3 NM (1200 FT)					

Route designator		[Route Usage Notes]				
Significant Point Name		Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
	269° 088°	37.1 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 124.1 MHZ {C}
△ INRIK	500744N 0692030E ARK 088.0° 90.1 NM (1300 FT)					
	269° 088°	41.4 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 124.1 MHZ {C}
▲ VAMRI	501330N 0681645E ARK 087.0° 48.7 NM (1300 FT)					
	267° 086°	48.7 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 133.1 MHZ {C}
▲ ARKALYK DVOR/DME (ARK)	501904N 0670118E					
	263° 082°	45.0 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 133.1 MHZ {C}
▲ KUSOT	502128N 0655110E ARK 262.0° 45.0 NM (1300 FT)					
	262° 081°	59.4 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 133.1 MHZ {C}
△ ADEKU	502301N 0641824E ARK 261.0° 104.4 NM (1300 FT)					
	261° 080°	50.3 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 133.1 MHZ In case of possible VHF radio communication failure at FL120– FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Kostanay Sector” on frequencies 4680 kHz and 4815 kHz (as a backup), in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
△ EMBEK	502333N 0625947E ARK 263.0° 154.8 NM (1300 FT)					
	260° 079°	22.3 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 133.1 MHZ {C}

Route designator	[Route Usage Notes]					
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series ↓ ↑		Controlling unit {Airspace class} Remarks
▲ ABIRA (FIR BDRY)	502331N 062245E KST 181.0° 173.3 NM (600 FT)					
	259° 078°	50.6 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 129.6 MHZ {C}
△ BESOL	502254N 0610548E AKB 078.0° 150.7 NM (700 FT)					
	258° 076°	104.0 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 129.6 MHZ {C}
△ LITBA	501849N 0582332E AKB 076.0° 46.7 NM (700 FT)					
	256° 075°	46.7 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 129.6 MHZ AKTOBE TOWER 128.0 MHZ {C}
▲ AKTOBE DVOR/ DME (AKB)	501548N 0571055E					
	262° 081°	43.1 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 129.6 MHZ AKTOBE TOWER 128.0 MHZ {C}
△ LARPI	501721N 0560345E AKB 261.0° 43.1 NM (700 FT)					
	261° 080°	57.7 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 129.6 MHZ {C}
▲ SIVKO	501827N 0543349E AKB 260.0° 100.8 NM (700 FT)					
	284° 102°	82.6 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 131.4 MHZ {C}
△ VEVIK	505201N 0523529E URL 102.0° 43.1 NM (200 FT)					
	283° 102°	43.2 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 131.4 MHZ URALSK TOWER 119.7 MHZ {C}
▲ URALSK DVOR/ DME (URL)	510855N 0513238E					
	288° 107°	42.7 NM	FL 510 FL 120	Even	Odd	AKTOBE ACC 131.4 MHZ URALSK TOWER 119.7 MHZ {C}

Route designator	[Route Usage Notes]				
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series ↓ ↑	Controlling unit {Airspace class} Remarks
▲ ARISA (FIR BDRY)	512924N 0503254E URL 288.0° 42.7 NM (200 FT)				For continuation, see AIP Russia

Route designator	[Route Usage Notes]				
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series ↓ ↑	Controlling unit {Airspace class} Remarks
M168 (RNAV 5)					
▲ NETAT	403653N 0682413E SMK 198.0° 115.3 NM (1400 FT)				Before, see AIP Uzbekistan
	041° 221°	11.1 NM	FL 510 3000 FT ALT	Odd Even	TASHKENT ACC {C}
▲ IPRAR	404431N 0683447E SMK 195.0° 105.2 NM (1400 FT)				For continuation, see AIP Uzbekistan

Route designator	[Route Usage Notes]				
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series ↓ ↑	Controlling unit {Airspace class} Remarks
M168 (RNAV 5)					
▲ ABGEN	405742N 0684248E SMK 195.0° 90.7 NM (1400 FT)				Before, see AIP Uzbekistan
	003° 183°	9.5 NM	FL 510 6000 FT ALT	Odd Even	TASHKENT ACC {C}
▲ ABEKA	410705N 0684442E SMK 196.0° 81.5 NM (1400 FT)				

Route designator	[Route Usage Notes]					
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
	003° 183°	16.1 NM	FL 510 7000 FT ALT	Odd	Even	TASHKENT ACC {C}
▲ DODUR (FIR BDRY)	412300N 0684800E SMK 200.0° 65.9 NM (1400 FT)					
	320° 139°	47.4 NM	FL 510 7000 FT ALT	Even	Odd	SHYMKENT ACC 132.7 MHZ {C}
▲ MIKNO	420200N 0681200E SMK 243.0° 59.0 NM (1400 FT)					
	360° 180°	22.5 NM	FL 510 FL 120	Odd	Even	SHYMKENT ACC 132.7 MHZ {C}
▲ LUZMI	422426N 0681456E SMK 266.0° 53.1 NM (1400 FT)					
	360° 179°	25.1 NM	FL 510 FL 120	Odd	Even	SHYMKENT ACC 132.7 MHZ TURKISTAN TOWER 131.3 MHZ {C}
△ RELRU	424925N 0681812E TRK 195.0° 32.5 NM (1000 FT)					
	359° 179°	28.7 NM	FL 510 FL 120	Even	Odd	SHYMKENT ACC 132.7 MHZ TURKISTAN TOWER 131.3 MHZ {C}
▲ GENDI	431800N 0682200E TRK 254.0° 9.4 NM (1000 FT)					
	348° 168°	20.3 NM	FL 510 FL 120	Even	Odd	SHYMKENT ACC 127.3 MHZ TURKISTAN TOWER 131.3 MHZ {C}
▲ GOBOR	433811N 0681918E TRK 323.0° 21.8 NM (1000 FT)					
	348° 168°	30.5 NM	FL 510 9000 FT ALT	Even	Odd	SHYMKENT ACC 127.3 MHZ TURKISTAN TOWER 131.3 MHZ {C}

Route designator		[Route Usage Notes]					
Significant Point Name		Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks	
				↓	↑		
△ TIMKA	440832N 0681511E TRK 337.0° 51.0 NM (1000 FT)						
	348° 168°	18.6 NM	FL 510 FL 120	Even	Odd	SHYMKENT ACC 127.3 MHZ {C}	
△ REMOL	442704N 0681238E TRK 340.0° 69.4 NM (1000 FT)						
	348° 167°	91.4 NM	FL 510 FL 120	Even	Odd	SHYMKENT ACC 127.3 MHZ {C}	
▲ BETPU (FIR BDRY)	455758N 0675945E DZG 166.0° 105.8 NM (1300 FT)						
	347° 166°	34.8 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 132.5 MHZ {C}	
△ ELSEB	463234N 0675439E DZG 166.0° 71.0 NM (1300 FT)						
	348° 168°	27.7 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 132.5 MHZ {C}	
△ BURIK	470012N 0675152E DZG 166.0° 43.3 NM (1300 FT)						
	346° 166°	43.3 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 132.5 MHZ ZHEZKAZGAN TOWER 127.1 MHZ {C}	
▲ ZHEZKAZGAN DVOR/DME (DZG)	474317N 0674542E						
	340° 160°	43.1 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 132.5 MHZ ZHEZKAZGAN TOWER 127.1 MHZ {C}	
△ BEDOR	482529N 0673251E DZG 340.0° 43.1 NM (1300 FT)						
	339° 158°	24.2 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 132.5 MHZ {C}	

Route designator		[Route Usage Notes]				
Significant Point Name		Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
△ GORIM		484905N 0672456E				
		DZG 339.0° 67.3 NM (1300 FT)				
	342° 161°	70.0 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 132.5 MHZ {C}
▲ EDETO		495808N 0670732E				
		ARK 159.0° 21.3 NM (1300 FT)				
	339° 159°	21.3 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 133.1 MHZ {C}
▲ ARKALYK DVOR/ DME (ARK)		501904N 0670118E				
	329° 145°	157.9 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 133.1 MHZ {C}
△ GITNA		524459N 0652518E				
		KST 100.0° 72.4 NM (600 FT)				
	325° 143°	103.4 NM	FL 510 FL 210	Even	Odd	ASTANA ACC 133.1 MHZ {C}
▲ NELTI (FIR BDRY)		541942N 0641630E				For continuation, see AIP Russia
		KST 008.0° 73.1 NM (600 FT)				

Route designator		[Route Usage Notes]				
Significant Point Name		Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
M199 (RNAV 5)						
▲ MULTA (FIR BDRY)		510442N 0565042E				Before, see AIP Russia
		AKB 335.0° 50.6 NM (700 FT)				
	154° 335°	50.6 NM	FL 510 FL 120	Odd	Even	AKTOBE ACC 129.6 MHZ AKTOBE TOWER 128.0 MHZ {C}
▲ AKTOBE DVOR/ DME (AKB)		501548N 0571055E				

Route designator	[Route Usage Notes]				
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series ↓ ↑	
	131° 312°	42.0 NM	FL 510 FL 120	Odd	Even
△ ODILA	494259N 0575122E AKB 131.0° 41.9 NM (700 FT)				AKTOBE ACC 129.6 MHZ AKTOBE TOWER 128.0 MHZ {C}
	132° 312°	27.0 NM	FL 510 FL 120	Odd	Even
△ KEKUN	492143N 0581653E AKB 131.0° 69.0 NM (700 FT)				AKTOBE ACC 129.6 MHZ {C}
	132° 313°	37.6 NM	FL 510 FL 120	Odd	Even
△ RILBA	485158N 0585148E AKB 132.0° 106.6 NM (700 FT)				AKTOBE ACC 129.6 MHZ {C}
	133° 314°	69.7 NM	FL 510 FL 120	Odd	Even
▲ RESDO	475618N 0595446E ARL 304.0° 96.4 NM (300 FT)				AKTOBE ACC 129.6 MHZ {C}
	134° 314°	14.6 NM	FL 510 FL 120	Odd	Even
△ ARSAN	474436N 0600738E ARL 303.0° 82.1 NM (300 FT)				AKTOBE ACC 129.6 MHZ {C}
	134° 317°	114.0 NM	FL 510 FL 120	Odd	Even
▲ AVLAK (FIR BDRY)	461214N 0614508E ARL 163.0° 37.7 NM (300 FT)				AKTOBE ACC 119 MHZ {C}
	137° 317°	27.3 NM	FL 510 FL 120	Odd	Even
▲ INKUM	454952N 0620739E ARL 151.0° 63.3 NM (300 FT)				SHYMKENT ACC 127.3 MHZ {C}

Route designator	[Route Usage Notes]					
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation					Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
M610 (RNAV 5)						
▲ AZABI (FIR BDRY)	444424N 0493000E AKT 301.0° 85.2 NM (100 FT)					Before, see AIP Russia
	069° 251°	123.4 NM	FL 510 FL 120	Odd	Even	AKTOBE ACC 134.3 MHZ {C}
▲ LAROS	451010N 0521956E AKT 027.0° 95.0 NM (100 FT)					
	071° 252°	62.4 NM	FL 510 FL 120	Odd	Even	AKTOBE ACC 119.8 MHZ {C}
▲ ANIGA	452130N 0534647E BNU 262.0° 56.8 NM (0 FT)					
	073° 255°	165.5 NM	FL 510 FL 120	Odd	Even	AKTOBE ACC 119.8 MHZ {C}
▲ DIVNO	454418N 0574000E BNU 070.0° 109.9 NM (0 FT)					
	089° 271°	132.1 NM	FL 510 FL 120	Odd	Even	AKTOBE ACC 119 MHZ In case of possible VHF radio communication failure at FL 120–FL 190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Aktobe Tower” on frequencies 4656 kHz in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
▲ MILSO (FIR BDRY)	452519N 0604609E ARL 194.0° 91.4 NM (300 FT)					
	092° 273°	47.0 NM	FL 510 FL 120	Odd	Even	SHYMKENT ACC 127.3 MHZ {C}
△ OLINA	451645N 0615140E ARL 165.0° 93.4 NM (300 FT)					
	093° 274°	29.9 NM	FL 510 FL 120	Odd	Even	SHYMKENT ACC 127.3 MHZ {C}

Route designator	[Route Usage Notes]					
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation					Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
▲ TUKNA	451058N 0623308E ARL 150.0° 106.1 NM (300 FT)					
	094° 275°	41.0 NM	FL 510 FL 120	Odd	Even	SHYMKENT ACC 127.3 MHZ {C}
▲ UNITO	450238N 0632952E KZO 275.0° 90.6 NM (500 FT)					
	095° 275°	48.7 NM	FL 510 FL 120	Odd	Even	SHYMKENT ACC 127.3 MHZ {C}
△ NATUS	445208N 0643650E KZO 277.0° 41.9 NM (500 FT)					
	096° 276°	11.8 NM	FL 510 FL 120	Odd	Even	SHYMKENT ACC 127.3 MHZ KYZYLORDA TOWER 120.9 {C}
△ GIGUR	444920N 0645300E KZO 277.0° 30.1 NM (500 FT)					
	097° 278°	30.1 NM	FL 510 FL 120	Odd	Even	SHYMKENT ACC 127.3 MHZ KYZYLORDA TOWER 120.9 {C}
▲ KYZYLORDA DVOR/DME (KZO)	444145N 0653349E					
	097° 278°	44.5 NM	FL 510 FL 120	Odd	Even	SHYMKENT ACC 127.3 MHZ KYZYLORDA TOWER 120.9 {C}
△ RINET	443026N 0663402E KZO 098.0° 44.5 NM (500 FT)					
	099° 280°	43.1 NM	FL 510 FL 120	Odd	Even	SHYMKENT ACC 127.3 MHZ {C}
△ BIMDO	441809N 0673135E TRK 315.0° 74.3 NM (1000 FT)					
	100° 281°	32.8 NM	FL 510 FL 120	Odd	Even	SHYMKENT ACC 127.3 MHZ {C}
△ TIMKA	440832N 0681511E TRK 337.0° 51.0 NM (1000 FT)					
	101° 281°	22.8 NM	FL 510 FL 120	Odd	Even	SHYMKENT ACC 127.3 MHZ {C}

Route designator	[Route Usage Notes]					
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series ↓ ↑		Controlling unit {Airspace class} Remarks
▲ LIMTO	440138N 0684518E TRK 004.0° 42.8 NM (1000 FT)					
	101° 283°	96.5 NM	FL 510 FL 120	Odd	Even	SHYMKENT ACC 132.7 MHZ {C}
▲ ARBOL	433055N 0705137E TAR 329.0° 42.9 NM (2200 FT)					
	078° 260°	126.4 NM	FL 510 FL 120	Odd	Even	SHYMKENT ACC 132.7 MHZ {C}
▲ TOMGO	434146N 0734454E TAR 060.0° 118.9 NM (2200 FT)					
	086° 267°	19.6 NM	FL 510 FL 120	Odd	Even	SHYMKENT ACC 132.7 MHZ In case of possible VHF radio communication failure at FL 120–FL 190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Approach” on frequencies 4744 kHz. - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
▲ BERV (FIR BDRY)	434059N 0741156E ATA 274.2° 127.3 NM (2200 FT)					
	087° 268°	58.1 NM	FL 510 FL 120	Odd	Even	ALMATY ACC 131.4 MHZ {C}
△ TIPSA	433809N 0753149E ATA 278.4° 69.7 NM (2200 FT)					
	088° 268°	34.8 NM	FL 510 FL 120	Odd	Even	ALMATY ACC 131.4 MHZ ALMATY APPROACH 124.8 MHZ {C}
▲ USUGA	433600N 0761934E ATA 287.3° 35.8 NM (2200 FT)					
	085° 265°	21.0 NM	FL 510 FL 120	Odd	Even	ALMATY ACC 131.4 MHZ ALMATY APPROACH 124.8 MHZ {C}

Route designator	[Route Usage Notes]				
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series ↓ ↑	Controlling unit {Airspace class} Remarks
△ UNADA	433551N 0764831E ATA 312.8° 18.0 NM (2200 FT)				
	085° 266°	6.6 NM	FL 510 FL 120	Odd Even	ALMATY ACC 131.4 MHZ ALMATY APPROACH 124.8 MHZ {C}
△ BEDUR	433546N 0765739E ATA 332.7° 14.3 NM (2200 FT)				
	085° 266°	8.6 NM	FL 510 FL 120	Odd Even	ALMATY ACC 131.4 MHZ ALMATY APPROACH 124.8 MHZ {C}
△ PEKIR	433539N 0770931E ATA 008.5° 13.5 NM (2200 FT)				
	087° 268°	15.3 NM	FL 510 FL 120	Odd Even	ALMATY ACC 131.4 MHZ ALMATY APPROACH 124.8 MHZ {C}
△ TIRBA	433456N 0773031E ATA 050.8° 22.3 NM (2200 FT)				
	086° 266°	24.3 NM	FL 510 FL 120	Odd Even	ALMATY ACC 131.4 MHZ ALMATY APPROACH 124.8 MHZ {C}
△ PIGAL	433428N 0780356E ATA 068.9° 44.5 NM (2200 FT)				
	086° 267°	51.7 NM	FL 510 FL 120	Odd Even	ALMATY ACC 131.4 MHZ {C}
▲ BASPI	433257N 0791501E JRK 212.0° 51.0 NM (2600 FT)				
	087° 268°	24.3 NM	FL 510 FL 120	Odd Even	ALMATY ACC 131.4 MHZ {C}
▲ BERTO	433159N 0794824E JRK 184.0° 42.2 NM (2600 FT)				
	088° 269°	40.5 NM	FL 510 FL 140	Odd Even	ALMATY ACC 131.4 MHZ {C}
▲ RULAD (FIR BDRY)	433001N 0804359E JRK 138.0° 55.2 NM (2600 FT)				For continuation, see AIP China

Route designator		[Route Usage Notes]					
Significant Point Name		Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks	
				↓	↑		
M618 (RNAV 5)		For Continuation, see AIP Russia					
▲ UML0D		432218N 0750715E ATA 265.4° 85.9 NM (2200 FT)					
	033° 213°	47.0 NM	FL 510 FL 120	Odd	Even	ALMATY ACC 131.4 MHZ {C}	
▲ AGUNA		435906N 0754739E ATA 298.4° 67.1 NM (2200 FT)					
	035° 216°	185.0 NM	FL 510 FL 210	Odd	Even	ALMATY ACC 133.1 MHZ {C}	
▲ LIPSI		461808N 0784001E TDK 002.0° 72.5 NM (2000 FT)					
	038° 219°	70.3 NM	FL 510 FL 210	Odd	Even	ALMATY ACC 132.1 MHZ {C}	
△ GOMAL		470809N 0795150E AGZ 200.0° 53.4 NM (2200 FT)					
	039° 220°	54.3 NM	FL 510 FL 120	Odd	Even	ALMATY ACC 132.1 MHZ {C}	
△ BANUM		474633N 0804834E AGZ 296.3° 17.3 NM (2200 FT)					
	039° 221°	132.6 NM	FL 510 FL 120	Odd	Even	ALMATY ACC 132.1 MHZ {C}	
▲ NEMEG		491804N 0831242E UKM 332.4° 51.4 NM (1000 FT)					
	042° 223°	78.3 NM	FL 510 FL 120	Odd	Even	ALMATY ACC 132.1 MHZ {C}	
▲ GOMIR (FIR BDRY)		501042N 0844206E UKM 079.0° 85.2 NM (1000 FT)				For Continuation, see AIP Russia	

Route designator		[Route Usage Notes]					
Significant Point Name		Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks	
				↓	↑		
M741 (RNAV 5)		(2) Before, see AIP Uzbekistan (3) For continuation, see AIP Route					
▲ ASLOK		410548N 0671954E SMK 224.0° 121.8 NM (1400 FT)				Before, see AIP Uzbekistan	
	345° 165°	36.2 NM	FL 510 7000 FT ALT	Even	Odd	SHYMKENT ACC 132.7 MHZ {C}	
▲ RITAL (FIR BDRY)		414130N 0671206E SMK 241.0° 108.2 NM (1400 FT)					
	341° 160°	24.5 NM	FL 510 FL 120	Even	Odd	SHYMKENT ACC 132.7 MHZ {C}	
△ ESKIZ		420521N 0670429E TRK 216.0° 99.6 NM (1000 FT)					
	340° 160°	55.9 NM	FL 510 FL 120	Even	Odd	SHYMKENT ACC 132.7 MHZ {C}	
▲ PAVEL		425947N 0664642E TRK 249.0° 81.5 NM (1000 FT)					
	343° 163°	16.2 NM	FL 510 FL 120	Even	Odd	SHYMKENT ACC 132.7 MHZ {C}	
▲ GEKSO		431544N 0664228E TRK 260.0° 82.1 NM (1000 FT)					
	343° 162°	63.3 NM	FL 510 FL 150	Even	Odd	SHYMKENT ACC 127.3 MHZ {C}	
△ GITIM		441752N 0662540E KZO 116.0° 44.1 NM (500 FT)					
	344° 163°	105.2 NM	FL 510 FL 150	Even	Odd	SHYMKENT ACC 127.3 MHZ {C}	
△ ANIGO		460143N 0660207E KZO 007.0° 82.4 NM (500 FT)					
	343° 162°	43.3 NM	FL 510 FL 150	Even	Odd	SHYMKENT ACC 127.3 MHZ {C}	
▲ LUGER (FIR BDRY)		464426N 0655200E DZG 223.0° 97.3 NM (1300 FT)					

Route designator		[Route Usage Notes]				
Significant Point Name		Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
	339° 158°	84.3 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 132.5 MHZ {C}
△ INKOL	480633N 0652413E DZG 276.0° 97.8 NM (1300 FT)					
	338° 157°	19.5 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 132.5 MHZ {C}
△ EKLOP	482530N 0651734E DZG 285.0° 107.9 NM (1300 FT)					
	337° 157°	31.9 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 132.5 MHZ {C}
△ REGPI	485632N 0650629E ARK 213.0° 111.5 NM (1300 FT)					
	337° 157°	24.9 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 132.5 MHZ {C}
△ ARBIM	492045N 0645739E ARK 223.0° 99.1 NM (1300 FT)					
	338° 157°	34.3 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 132.5 MHZ {C}
△ IPKOD	495415N 0644617E ARK 245.0° 90.4 NM (1300 FT)					
	337° 157°	13.0 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 132.5 MHZ {C}
△ LAMGI	500657N 0644154E ARK 251.0° 90.3 NM (1300 FT)					
	337° 156°	42.0 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 133.1 MHZ {C}
△ ERNEN	504754N 0642731E ARK 277.0° 102.2 NM (1300 FT)					
	336° 156°	45.3 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 133.1 MHZ {C}
△ NARUR	513200N 0641130E KST 155.0° 102.0 NM (600 FT)					

Route designator		[Route Usage Notes]				
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation					Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
	336° 155°	43.4 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 133.1 MHZ {C}
△ BALOK	521416N 0635540E KST 155.0° 58.6 NM (600 FT)					
	335° 155°	58.6 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 133.1 MHZ KOSTANAY TOWER 129.3 MHZ {C}
▲ KOSTANAY DVOR/DME (KST)	531113N 0633346E					
	318° 137°	63.0 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 133.1 MHZ KOSTANAY TOWER 129.3 MHZ {C}
▲ LANOR (FIR BDRY)	540536N 0624042E KST 318.0° 63.0 NM (600 FT)					For continuation, see AIP Russia

Route designator	[Route Usage Notes]					
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation					Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
M875 (RNAV 5)						
▲ TIGTA (FIR BDRY)	432728N 0620446E KZO 235.0° 168.0 NM (500 FT)					
	328° 147°	46.2 NM	FL 510 FL 120	Even	Odd	SHYMKENT ACC 127.3 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Kyzylorda Tower” on frequencies 5335 kHz and 6672 kHz (as a backup), in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}

Route designator	[Route Usage Notes]				
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series ↓ ↑	Controlling unit {Airspace class} Remarks
△ FAZUL	440916N 0613731E ARL 171.0° 160.3 NM (300 FT)				
	327° 146°	84.4 NM	FL 510 FL 120	Even Odd	SHYMKENT ACC 127.3 MHZ {C}
▲ MILSO (FIR BDRY)	452519N 0604609E ARL 194.0° 91.4 NM (300 FT)				
	327° 145°	152.0 NM	FL 510 FL 120	Even Odd	AKTOBE ACC 119 MHZ {C}
▲ RUGUS	474250N 0591219E ARL 289.0° 112.1 NM (300 FT)				
	327° 145°	131.6 NM	FL 510 FL 120	Even Odd	AKTOBE ACC 129.6 MHZ {C}
△ ODILA	494259N 0575122E AKB 131.0° 41.9 NM (700 FT)				
	325° 143°	90.5 NM	FL 510 FL 120	Even Odd	AKTOBE ACC 129.6 MHZ AKTOBE TOWER 128.0 MHZ {C}
▲ MULTA (FIR BDRY)	510442N 0565042E AKB 335.0° 50.6 NM (700 FT)				

Route designator	[Route Usage Notes]				
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series ↓ ↑	Controlling unit {Airspace class} Remarks
M993 (RNAV 5)	<small>(1) Before, see AIP Russia</small>				
▲ GOMIR (FIR BDRY)	501042N 0844206E UKM 079.0° 85.2 NM (1000 FT)				Before, see AIP Russia
	259° 078°	42.5 NM	FL 510 FL 130	Even Odd	ALMATY ACC 132.1 MHZ {C}
△ DEVNA	500647N 0833619E UKM 078.0° 42.7 NM (1000 FT)				

Route designator		[Route Usage Notes]				
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit	FL series		Controlling unit {Airspace class} Remarks
			Lower limit	↓	↑	
	258° 077°	42.7 NM	FL 510 FL 120	Even	Odd	ALMATY ACC 132.1 MHZ UST-KAMENOGORSK TOWER 130.1 MHZ {C}
▲ UST-KAMENOGORSK DVOR/DME (UKM)	500158N 0823031E					
	253° 071°	51.9 NM	FL 510 FL 120	Even	Odd	ALMATY ACC 132.1 MHZ UST-KAMENOGORSK TOWER 130.1 MHZ {C}
▲ NOKNA	495154N 0811139E SEM 122.0° 46.9 NM (700 FT)					
	251° 070°	36.1 NM	FL 510 FL 120	Even	Odd	ALMATY ACC 132.1 MHZ SEMEY TOWER 128.0 MHZ {C}
△ ROKOD	494408N 0801719E SEM 170.0° 36.9 NM (700 FT)					
	250° 070°	21.3 NM	FL 510 FL 120	Even	Odd	ALMATY ACC 132.1 MHZ SEMEY TOWER 128.0 MHZ {C}
△ UVTOK	493924N 0794524E SEM 197.0° 45.7 NM (700 FT)					
	250° 069°	35.5 NM	FL 510 FL 120	Even	Odd	ALMATY ACC 132.1 MHZ {C}
△ NONRI	493111N 0785223E SEM 219.0° 72.9 NM (700 FT)					
	249° 068°	52.2 NM	FL 510 FL 120	Even	Odd	ALMATY ACC 132.1 MHZ {C}
△ AKASA	491819N 0773455E SEM 231.0° 120.9 NM (700 FT)					

Route designator	[Route Usage Notes]					
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
	248° 067°	30.4 NM	FL 510 FL 120	Even	Odd	ALMATY ACC 132.1 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Semey Tower” on frequencies 6645 kHz in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
△ ESUMA	491025N 0765006E KRG 095.0° 139.0 NM (1800 FT)					
	247° 066°	26.7 NM	FL 510 FL 120	Even	Odd	ALMATY ACC 132.1 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Semey Tower” on frequencies 6645 kHz in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
▲ GORBO (FIR BDRY)	490316N 0761100E KRG 099.0° 116.9 NM (1800 FT)					
	248° 067°	14.1 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 124.1 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Karaganda Tower” on frequencies 4728 kHz in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}

Route designator	[Route Usage Notes]					
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series ↓ ↑		Controlling unit {Airspace class} Remarks
△ LALAS	485941N 0755014E KRG 105.0° 105.2 NM (1800 FT)					
	249° 068°	31.0 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 124.1 MHZ {C}
△ IRGIT	485220N 0750436E KRG 118.0° 82.9 NM (1800 FT)					
	246° 065°	45.2 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 124.1 MHZ {C}
△ GONEL	483912N 0735912E KRG 150.0° 66.6 NM (1800 FT)					
	246° 066°	37.5 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 124.1 MHZ {C}
△ LUTEK	482853N 0730459E KRG 180.0° 73.3 NM (1800 FT)					
	245° 063°	64.7 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 124.1 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Karaganda Tower” on frequencies 4728 kHz in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
▲ ALEGA	480900N 0713249E KRG 209.0° 117.2 NM (1800 FT)					

Route designator	[Route Usage Notes]					
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks	
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series		Controlling unit {Airspace class} Remarks
				↓	↑	
	244° 063°	31.7 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 132.5 MHZ In case of possible VHF radio communication failure at FL 120–FL 190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Zhezkazgan Tower” on frequencies 4850 kHz in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
▲ KUROL	475900N 0704800E DZG 075.0° 123.8 NM (1300 FT)					
	256° 074°	80.7 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 132.5 MHZ {C}
△ AMASO	474914N 0684857E DZG 074.0° 43.1 NM (1300 FT)					
	254° 073°	43.1 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 132.5 MHZ ZHEZKAZGAN TOWER 127.1 MHZ {C}
▲ ZHEZKAZGAN DVOR/DME (DZG)	474317N 0674542E					
	286° 104°	43.2 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 132.5 MHZ ZHEZKAZGAN TOWER 127.1 MHZ {C}
△ DINBO	480029N 0664647E DZG 284.0° 43.2 NM (1300 FT)					
	285° 103°	64.7 NM	FL 510 FL 120	Even	Odd	ASTANA ACC 132.5 MHZ {C}
△ EKLOP	482530N 0651734E DZG 285.0° 107.9 NM (1300 FT)					

Route designator	[Route Usage Notes]				
Significant Point Name	Significant point coordinates Reference VOR/DME ID Bearing and distance DME Elevation				Remarks
(RNAV / RNP Type)	Track MAG	Dist	Upper limit Lower limit	FL series ↓ ↑	
	283° 101°	74.8 NM	FL 510 FL 120	Even	Odd
					ASTANA ACC 132.5 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Zhezkazgan Tower” on frequencies 4850 kHz in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
△ GOSPA	485256N 0633233E ARL 024.0° 145.9 NM (300 FT)				
	281° 100°	39.3 NM	FL 510 FL 120	Even	Odd
					ASTANA ACC 132.5 MHZ In case of possible VHF radio communication failure at FL120–FL190, the aircraft crew is recommended to: - establish communication via other aircraft; - use HF radio to relay messages through “Kostanay Sector” on frequencies 4680 kHz and 4815 kHz (as a backup), in accordance with ATC unit operational procedures; - if HF radio equipment is not available on board, plan the flight using alternative routes. {C}
▲ BEDRU (FIR BDRY)	490642N 0623638E ARL 008.0° 143.0 NM (300 FT)				
	280° 096°	179.2 NM	FL 510 FL 120	Even	Odd
					AKTOBE ACC 129.6 MHZ {C}
△ ADRAT	500334N 0581528E AKB 096.0° 43.3 NM (700 FT)				
	276° 096°	43.3 NM	FL 510 FL 120	Even	Odd
					AKTOBE ACC 129.6 MHZ AKTOBE TOWER 128.0 MHZ {C}
▲ AKTOBE DVOR/ DME (AKB)	501548N 0571055E				

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