

# AIP SUPPLEMENT MALAYSIA

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MALAYSIA

10/2015

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**KUALA LUMPUR FLIGHT INFORMATION REGION  
PENANG INTERNATIONAL AIRPORT  
IMPLEMENTATION OF REQUIRED NAVIGATION PERFORMANCE AUTHORISATION  
REQUIRED (RNP AR APCH) PROCEDURES  
RUNWAY 04 AND RUNWAY 22 AT PENANG INTERNATIONAL AIRPORT**

## **1 INTRODUCTION**

- 1.1 To correspond with Malaysia Performance Based Navigation (PBN) Plan 2nd Edition 2012, with the objective of enhancing safety and efficiency, RNP AR APCH procedures will be implemented for both runway RWY 04 and RWY 22 at Penang International Airport.

## **2 RNP AR APCH PROCEDURES CHARTS**

- 2.1 Instrument Approach Charts and the associated FMS Coding information of the corresponding RNP AR APCH procedures are as follows:

### **2.1.1 RWY 04:**

RNAV (RNP) Z RWY 04. See Appendix A-1

### **2.1.2 RWY 22:**

RNAV (RNP) Z RWY 22. See Appendix A-2

## **3 ATC CLEARANCE FOR RNP AR APCH**

- 3.1 RNP AR APCH is designated as supplementary approach procedures.
- 3.2 Pilots who are qualified and wish to fly the new RNP AR APCH procedures shall inform ATC Unit of their intention on initial radio contact. The execution of the requested RNP AR APCH procedure is subject to ATC concurrence, taking into account the prevailing traffic situation.

## **4 OPERATIONAL APPROVAL**

- 4.1 Special authorisation from DCA Malaysia is required to conduct RNP AR APCH.
- 4.2 Operators who intend to conduct RNP AR APCH shall refer to AIC Malaysia 2/2013 for detail application procedures.

#### 4.3 Contact Address:

Department Civil Aviation Malaysia  
Flight Operations Sector  
No. 27, Persiaran Perdana  
Level 2 Block Podium B,  
Precinct 4  
62618 Putrajaya

#### **5 GNSS RAIM**

- 5.1 RNP AR APCH operations are authorised based on GNSS as the primary infrastructure. It is mandatory for operators who wish to conduct RNP AR APCH to get GNSS RAIM prediction associated with GNSS availability. At this stage, DCA Malaysia will not provide such service and operators who wish to conduct RNP AR APCH procedures are assumed to have their own source for the necessary GNSS information.

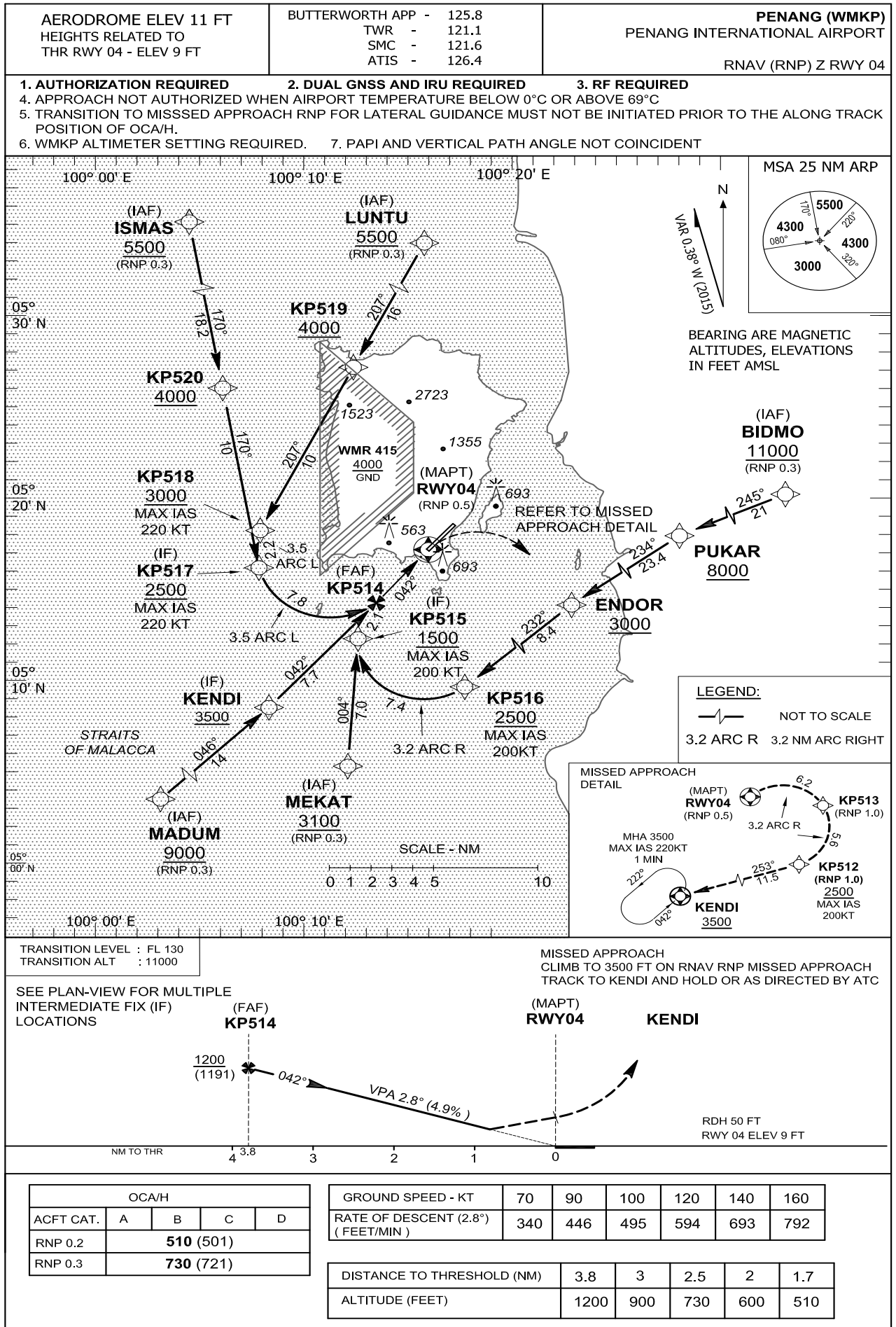
#### **6 IMPLEMENTATION DATE**

- 6.1 This AIP Supplement and the relevant charts will become effective at 0001UTC on 28 May 2015. A trigger NOTAM will be issued to alert users on the implementation of the RNP AR APCH procedures.

#### **7 CANCELLATION**

- 7.1 This AIP Supplement will remain current until the information is published in AIP Malaysia.

**DATO' AZHARUDDIN ABDUL RAHMAN**  
Director General  
Department of Civil Aviation  
Malaysia



**PENANG (WMKP) / PENANG INTERNATIONAL AIRPORT**  
RNAV (RNP) Z RWY 04

Aeronautical Data Tabulation

<b>Fix / Point</b>	<b>COORDINATES</b>	
VPG	05°16'46.70"N	100°15'37.40"E
KP512	05°11'55.32"N	100°19'18.53"E
KP513	05°16'26.81"N	100°21'14.78"E
KP514	05°14'18.19"N	100°13'25.05"E
KP515	05°12'22.66"N	100°12'35.56"E
KP516	05°09'35.84"N	100°17'45.22"E
KP517	05°16'04.67"N	100°07'21.73"E
KP518	05°18'14.63"N	100°07'41.04"E
KP519	05°27'13.96"N	100°12'09.92"E
KP520	05°25'59.01"N	100°05'40.71"E
BIDMO	05°37'35.00"N	101°02'21.00"E
ENDOR	05°14'45.00"N	100°24'24.00"E
ISMAS	05°43'59.00"N	100°02'37.00"E
KENDI	05°08'34.00"N	100°08'14.00"E
LUNTU	05°41'36.00"N	100°19'20.00"E
MADUM	04°58'43.00"N	099°58'13.00"E
MEKAT	05°05'20.00"N	100°12'04.00"E
PUKAR	05°28'43.00"N	100°43'14.00"E
RWY04	05°17'09.42"N	100°16'00.14"E
<b>RF Arc Centre Identifier</b>	<b>COORDINATES</b>	
KP966	05°16'40.09"N	100°10'49.25"E
KP967	05°12'08.44"N	100°15'47.48"E
KP968	05°15'00.02"N	100°18'22.89"E

**PENANG (WMKP) / PENANG INTERNATIONAL AIRPORT**  
**RNAV (RNP) Z RWY 04**

Route Description

Path Terminator	Waypoint Identifier	Fly Over	Course/Track °M	Distance (NM)	Turn Direction	Altitude (FT)	Speed Limit (KTS)	VPA/TCH	Navigation Specification
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From ISMAS to Final

IF	ISMAS					<u>5500</u>			RNP 0.3
TF	KP520		170.33	18.17		<u>4000</u>			RNP 0.3
TF	KP517		170.33	10.00		<u>2500</u>	220		RNP 0.3
RF CENTER KP966 r= 3.50 NM	KP514			7.82	L	<u>1200</u>			RNP 0.3

From LUNTU to Final

IF	LUNTU					<u>5500</u>			RNP 0.3
TF	KP519		206.56	15.98		<u>4000</u>			RNP 0.3
TF	KP518		206.56	10.00		<u>3000</u>	220		RNP 0.3
RF CENTER KP966 r= 3.50 NM	KP517			2.22	L	<u>2500</u>	220		RNP 0.3
RF CENTER KP966 r= 3.50 NM	KP514			7.82	L	<u>1200</u>			RNP 0.3

From BIDMO to Final

IF	BIDMO					<u>11000</u>			RNP 0.3
TF	PUKAR		245.18	21.01		<u>8000</u>			RNP 0.3
TF	ENDOR		233.52	23.37		<u>3000</u>			RNP 0.3
TF	KP516		232.29	8.38		<u>2500</u>	200		RNP 0.3
RF CENTER KP967 r= 3.20 NM	KP515			7.37	R	<u>1500</u>	200		RNP 0.3
RF CENTER KP967 r= 3.20 NM	KP514			2.12	R	<u>1200</u>			RNP 0.3

From MEKAT to final

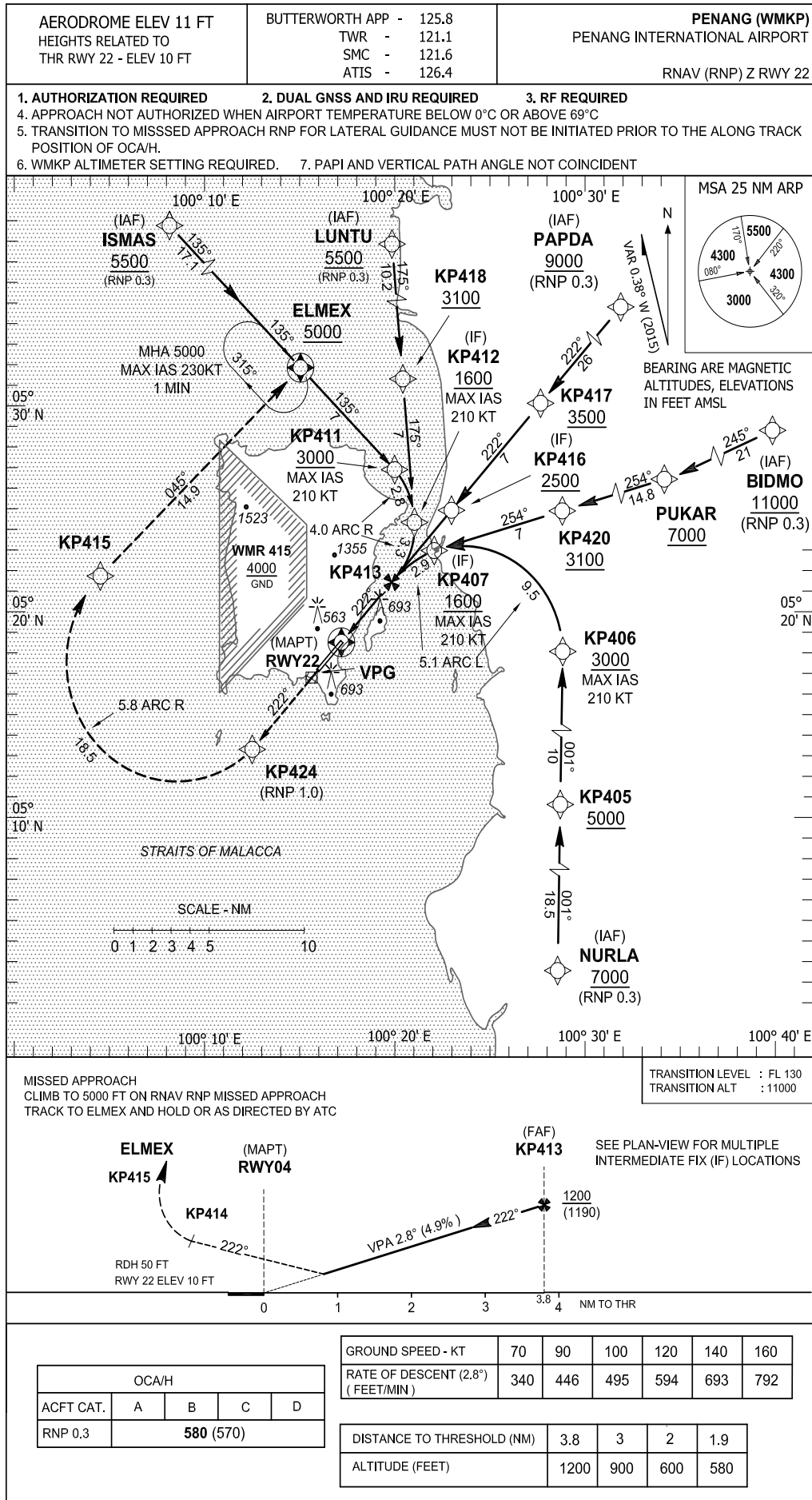
IF	MEKAT					<u>3100</u>			RNP 0.3
TF	KP515		4.28	7.03		<u>1500</u>			RNP 0.3
RF CENTER KP967 r= 3.20 NM	KP514			2.12	R	<u>1200</u>	200		RNP 0.3

From MADUM to Final

IF	MADUM					<u>9000</u>			RNP 0.3
TF	KENDI		45.57	14.00		<u>3500</u>			RNP 0.3
TF	KP514		42.18	7.70		<u>1200</u>			RNP 0.3

FINAL and Missed Approach

IF	KP514					<u>1200</u>			RNP 0.3
TF	RWY04	Y	42.26	3.83		60		-2.80/50	RNP 0.3
RF CENTER KP968 r= 3.20 NM	KP513			6.21	R				RNP 0.5
RF CENTER KP968 r= 3.20 NM	KP512			5.58	R		200		RNP 1.0
TF	KENDI	Y	253.18	11.54		<u>3500</u>			RNP 1.0
HM	KENDI		42.17	1 MIN	L		220		RNP 1.0



**PENANG (WMKP) / PENANG INTERNATIONAL AIRPORT**  
RNAV (RNP) Z RWY 22

Aeronautical Data Tabulation

<b>Fix / Point</b>	<b>COORDINATES</b>	
VPG	05°16'46.70"N	100°15'37.40"E
BIDMO	05°37'35.00"N	101°02'21.00"E
ISMAS	05°43'59.00"N	100°02'37.00"E
LUNTU	05°41'36.00"N	100°19'20.00"E
NURLA	04°49'08.00"N	100°28'03.00"E
PAPDA	05°49'29.00"N	100°45'13.00"E
PUKAR	05°28'43.00"N	100°43'14.00"E
KP405	05°07'44.59"N	100°28'28.40"E
KP406	05°17'47.35"N	100°28'42.13"E
KP407	05°22'50.79"N	100°22'13.02"E
KP411	05°26'53.97"N	100°19'40.33"E
KP412	05°24'24.41"N	100°20'49.91"E
KP413	05°21'21.32"N	100°19'48.35"E
KP424	05°13'17.78"N	100°12'30.36"E
KP415	05°21'21.25"N	100°04'06.56"E
KP416	05°24'52.40"N	100°22'59.31"E
KP417	05°30'05.41"N	100°27'41.80"E
KP418	05°31'24.84"N	100°20'13.28"E
ELMEX	05°31'52.41"N	100°14'52.54"E
KP420	05°24'44.18"N	100°28'58.64"E
RWY22	05°18'30.25"N	100°17'13.36"E
<b>RF Arc Centre Identifier</b>	<b>COORDINATES</b>	
KP964	05°24'03.42"N	100°16'50.19"E
KP965	05°17'54.62"N	100°23'35.46"E
KP969	05°17'12.80"N	100°08'12.06"E

**PENANG (WMKP) / PENANG INTERNATIONAL AIRPORT**  
RNAV (RNP) Z RWY 22

## Route Description

Path Terminator	Waypoint Identifier	Fly Over	Course/Track °M	Distance (NM)	Turn Direction	Altitude (FT)	Speed Limit (KTS)	VPA/TCH	Navigation Specification
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## From ISMAS to Final

IF	ISMAS					<u>5500</u>			RNP 0.3
TF	ELMEX		134.98	17.05		<u>5000</u>			RNP 0.3
TF	KP411		135.00	7.00		<u>3000</u>	210		RNP 0.3
RF CENTER KP964 r= 4.00 NM	KP412			2.79	R	<u>1600</u>	210		RNP 0.3
RF CENTER KP964 r= 4.00 NM	KP413			3.30	R	<u>1200</u>			RNP 0.3

## From LUNTU to Final

IF	LUNTU					<u>5500</u>			RNP 0.3
TF	KP418		175.01	10.18		<u>3100</u>			RNP 0.3
TF	KP412		175.01	7.00		<u>1600</u>	210		RNP 0.3
RF CENTER KP964 r= 4.00 NM	KP413			3.30	R	<u>1200</u>			RNP 0.3

## From BIDMO to Final

IF	BIDMO					<u>11000</u>			RNP 0.3
TF	PUKAR		245.14	21.01		<u>7000</u>			RNP 0.3
TF	KP420		254.42	14.76		<u>3100</u>			RNP 0.3
TF	KP407		254.41	7.00		<u>1600</u>	210		RNP 0.3
RF CENTER KP965 r= 5.10 NM	KP413			2.86	L	<u>1500</u>	200		RNP 0.3

## From PAPDA to Final

IF	PAPDA					<u>9000</u>			RNP 0.3
TF	KP417		222.16	26.03		<u>3500</u>			RNP 0.3
TF	KP416		222.13	7.00		<u>2500</u>			RNP 0.3
TF	KP413		222.20	4.73		<u>1200</u>			RNP 0.3

## From NURLA to Final

IF	NURLA					<u>7000</u>			RNP 0.3
TF	KP405		1.31	18.52		<u>5000</u>			RNP 0.3
TF	KP406		1.31	10.00		<u>3000</u>	210		RNP 0.3
RF CENTER KP965 r= 5.10 NM	KP407			9.52	L	<u>1600</u>	210		RNP 0.3
RF CENTER KP965 r= 5.10 NM	KP413			2.86	L	<u>1200</u>			RNP 0.3

## FINAL and Missed Approach

IF	KP413					<u>1200</u>			RNP 0.3
TF	RWY22	Y	222.24	3.83		61		-2.80/50	RNP 0.3
TF	KP424		222.24	7.00					RNP 0.5
RF CENTER KP969 r= 5.80 NM	KP415			18.53	R		200		RNP 1.0
TF	ELMEX	Y	45.27	14.88		<u>5000</u>			RNP 1.0
HM	ELMEX		135.00	1 MIN	R		230		RNP 1.0