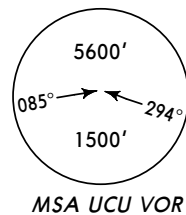


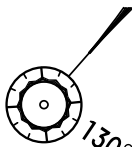
Apt Elev
249'

Alt Set: hPa
Trans level: By ATC Trans alt: 5500'

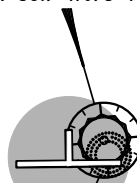


MANZANILLO 3 ARRIVAL (RWY 10)

MANZANILLO
D 116.0 UMZ
N20 18.2 W077 06.0



SANTIAGO DE CUBA
D 113.3 UCU
N19 58.7 W075 49.4



KUBOS
N19 50.4 W076 19.6

SANTIAGO DE CUBA
339 UCU
N19 58.4 W075 49.3

EXPECT clearance
to Runway 10



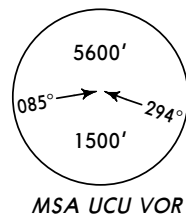
NOT TO SCALE

ROUTING

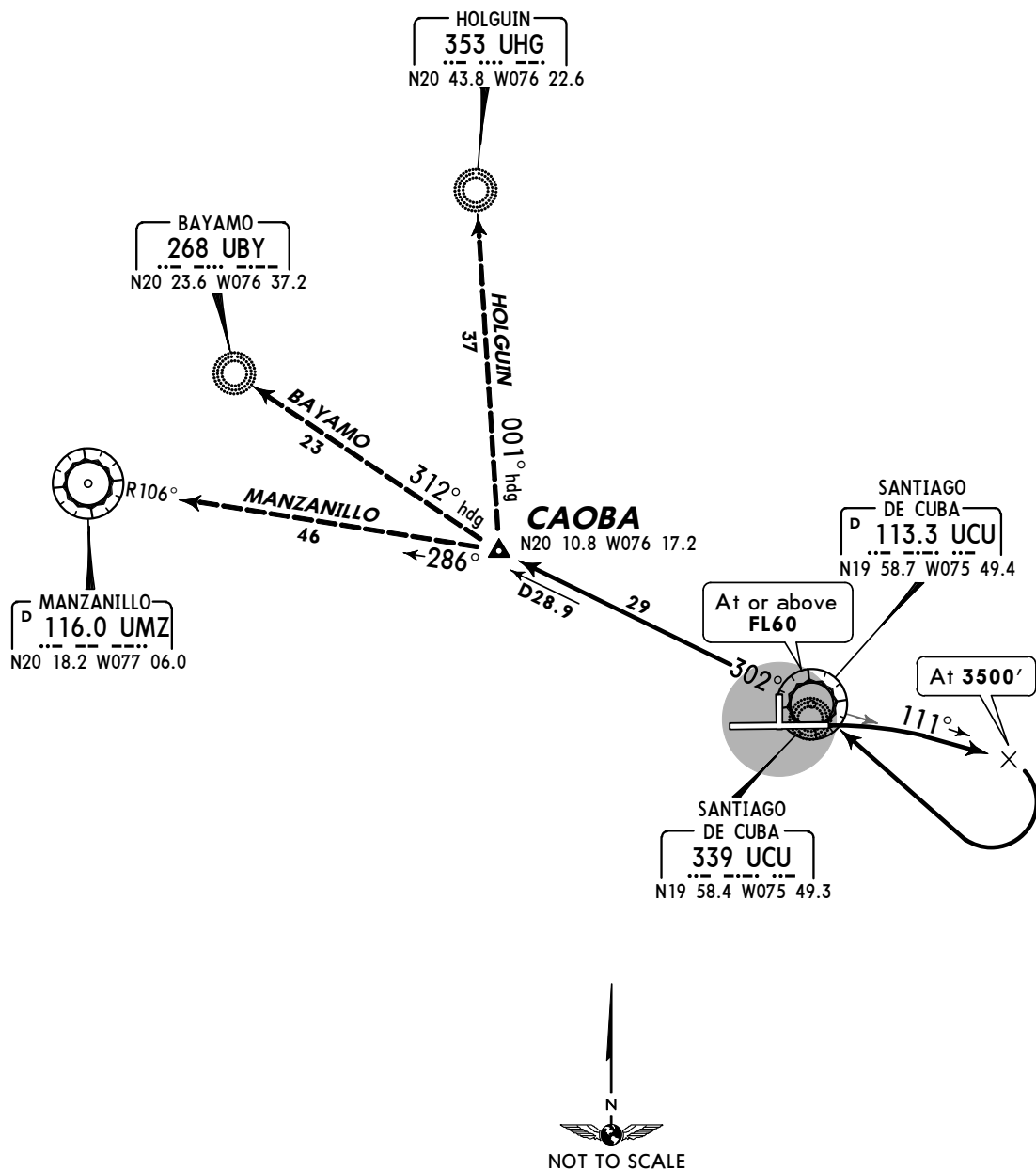
From UMZ descend to ATC assigned **FL** via UMZ R-130 direct to KUBOS. Then intercept UCU VOR R-265 descending and **EXPECT** clearance to Runway 10.

Apt Elev
249'

Trans level: By ATC Trans alt: 5500'



CAOBA 3 DEPARTURE
(RWY 10)



INITIAL CLIMB

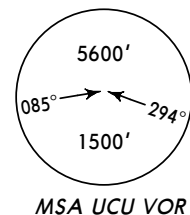
Climbing RIGHT turn to intercept UCU VOR R-111 until reaching **3500'**, turn RIGHT climbing to UCU VOR. Continue on UCU VOR R-302 until CAOBA and proceed by assigned transition.

TRANSITIONS

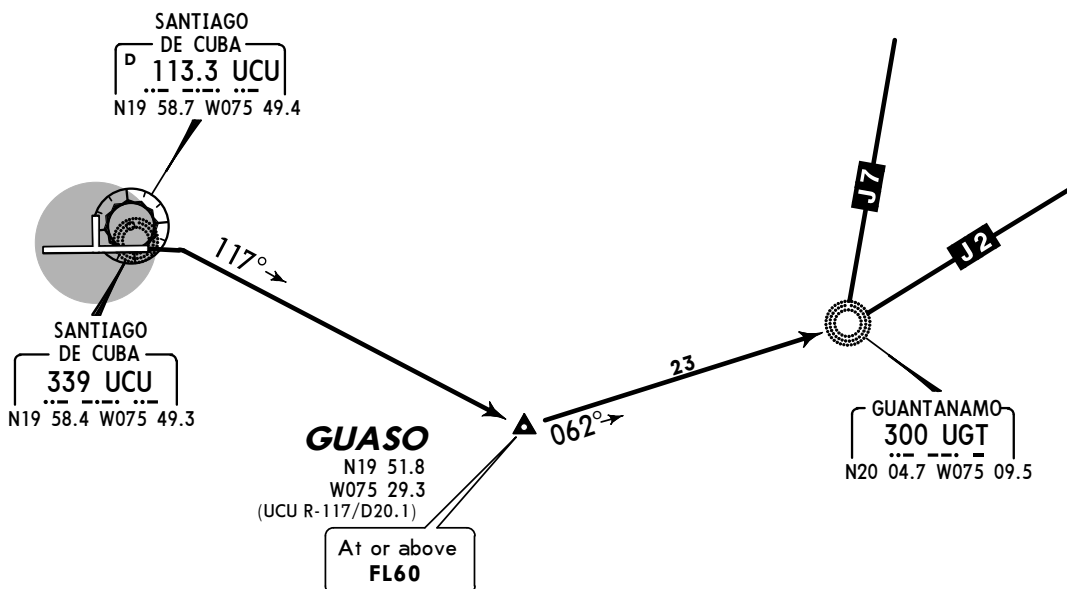
BAYAMO	From CAOBA via 312° heading direct UBY.
HOLGUIN	From CAOBA via 001° heading direct UHG.
MANZANILLO	From CAOBA via UMZ R-106 direct UMZ.

Apt Elev
249'

Trans level: By ATC Trans alt: 5500'



GUASO 2 DEPARTURE (RWY 10)

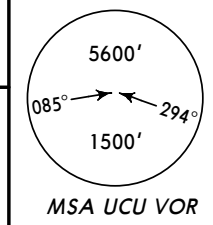


INITIAL CLIMB

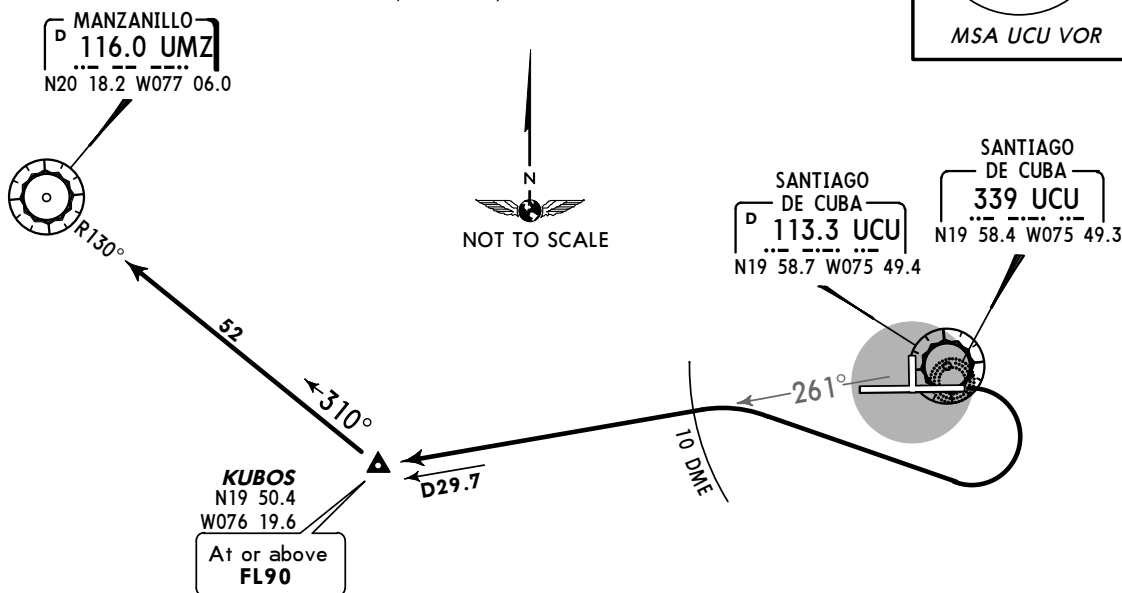
After take-off, climb on UCU VOR R-117 to GUASO, turn LEFT direct to UGT and proceed via assigned route.

Apt Elev
249'

Trans level: By ATC Trans alt: 5500'



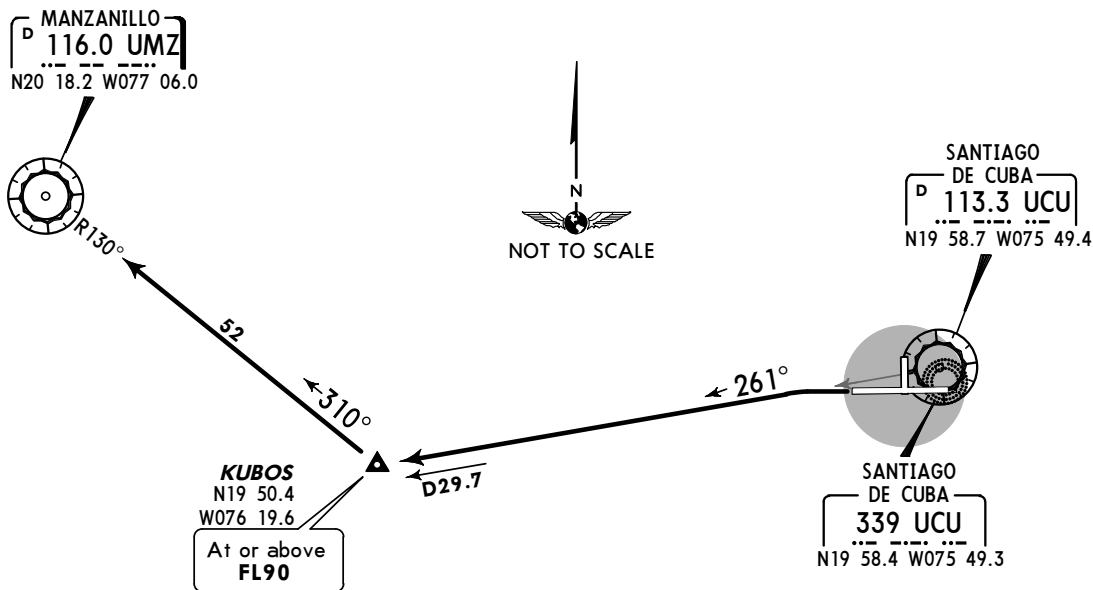
MANZANILLO 3 DEPARTURE
(RWY 10)



INITIAL CLIMB

After take-off turn RIGHT to intercept UCU VOR R-261 within UCU 10 DME climbing to KUBOS. Continue climb on UMZ R-130 to UMZ and proceed via assigned route.

MANZANILLO 3 DEPARTURE
(RWY 28)

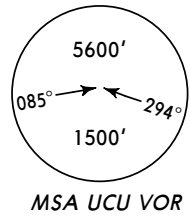


INITIAL CLIMB

After take-off turn LEFT to intercept UCU VOR R-261 climbing to KUBOS. Continue climb on UMZ R-130 to UMZ and proceed via assigned route.

Apt Elev
249'

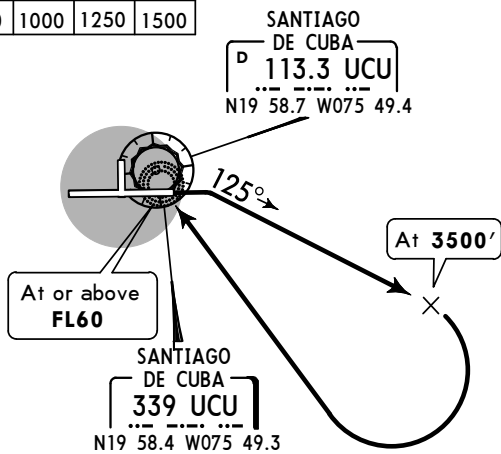
Trans level: By ATC Trans alt: 5500'



SANTIAGO 4 DEPARTURE
(RWY 10)

This SID requires a minimum climb gradient of 300' per NM to MEA.

Gnd speed-KT	75	100	150	200	250	300
300' per NM	375	500	750	1000	1250	1500



NOT TO SCALE

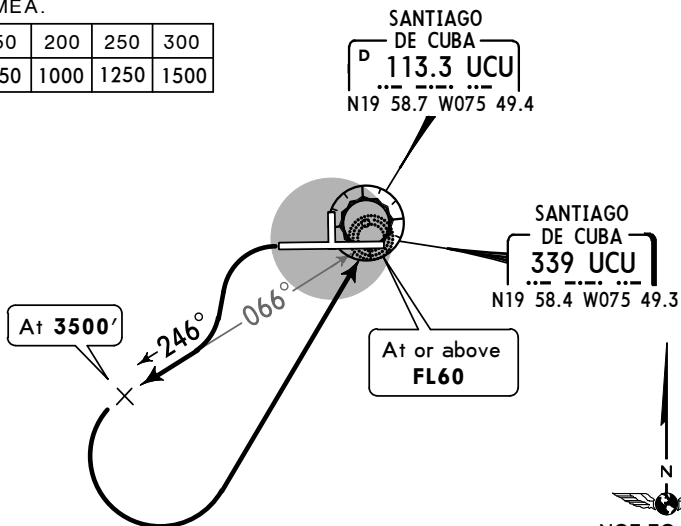
INITIAL CLIMB

After take-off turn **RIGHT** to intercept 125° magnetic route until reaching **3500'**. Turn **RIGHT** to UCU NDB, then via assigned route.

SANTIAGO 3 DEPARTURE
(RWY 28)

This SID requires a minimum climb gradient of 300' per NM to MEA.

Gnd speed-KT	75	100	150	200	250	300
300' per NM	375	500	750	1000	1250	1500



NOT TO SCALE

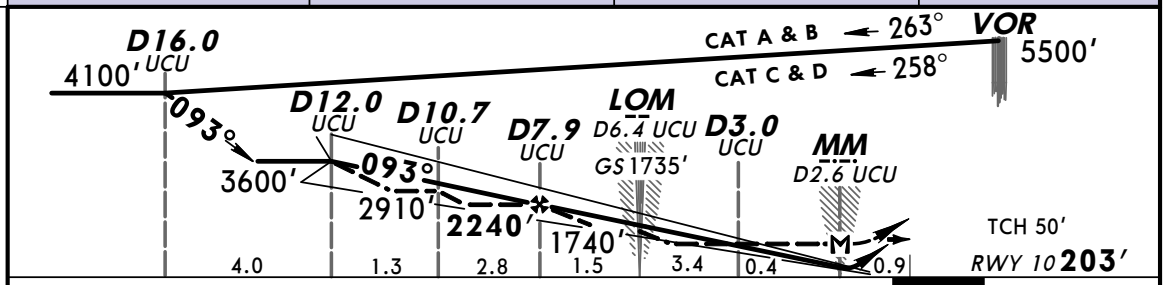
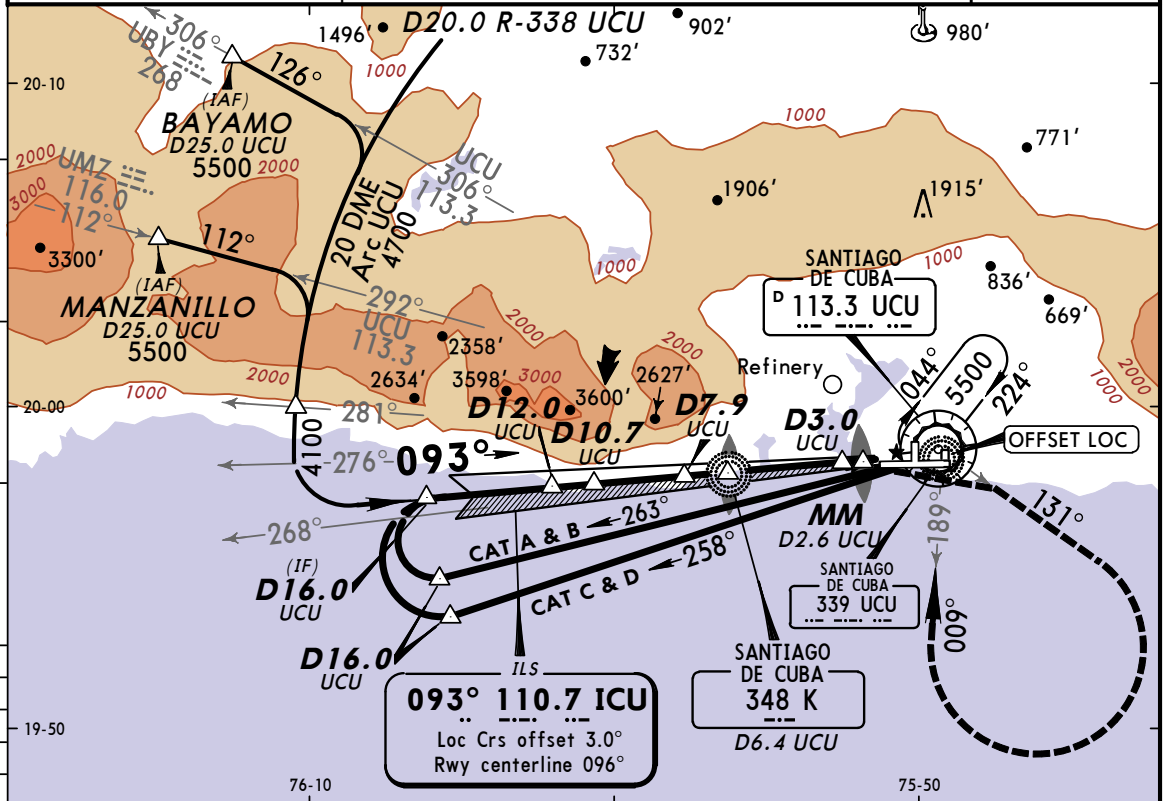
INITIAL CLIMB

After take-off turn **LEFT** to intercept 246° magnetic route until reaching **3500'**. Turn **LEFT** to UCU NDB, then via assigned route.

MUCU/SCU JEPPESEN SANTIAGO DE CUBA, CUBA

ANTONIO MACEO INTL 5 OCT 07 (11-1) ILS Rwy 10

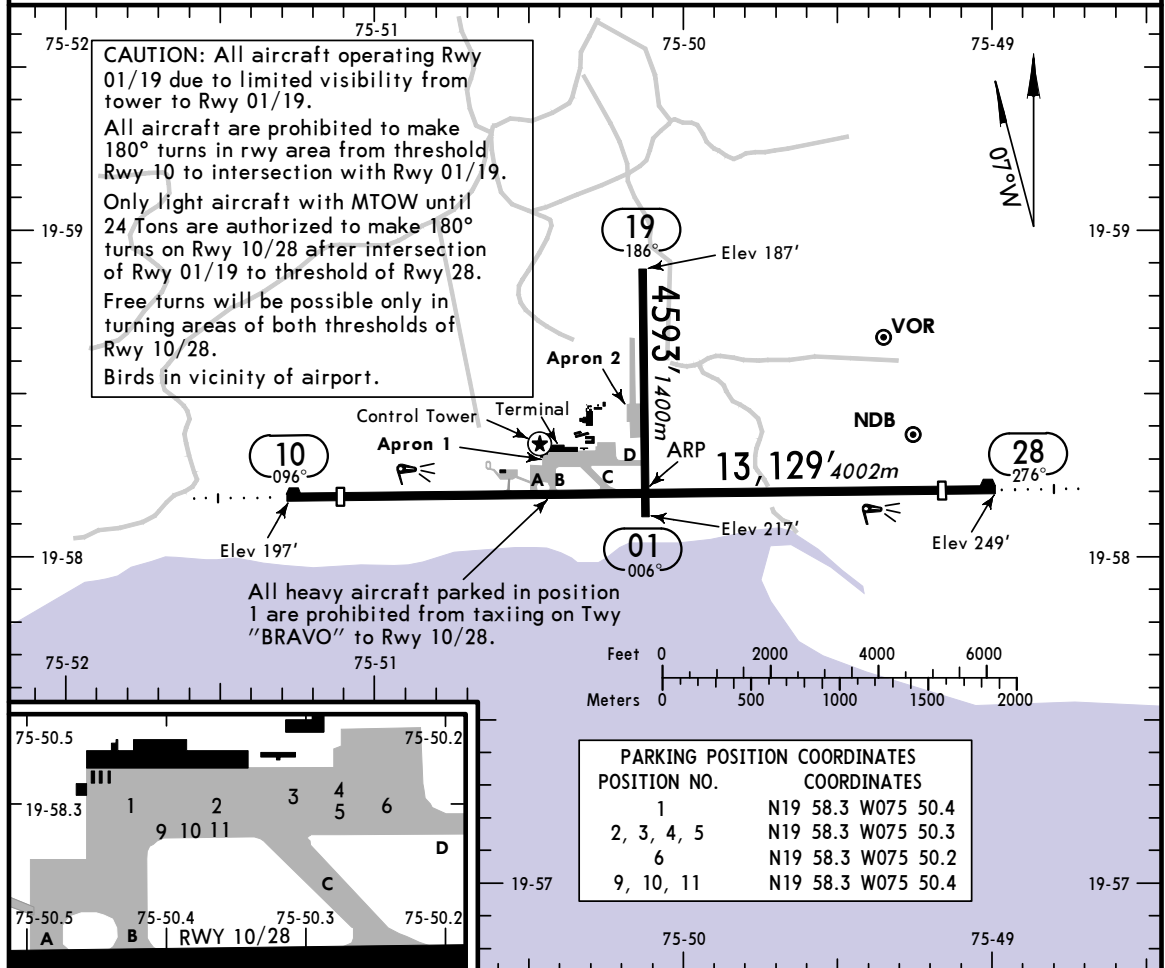
SANTIAGO Approach 119.4			MACEO Tower 118.1		
LOC ICU 110.7	Final Apch Crs 093°	Minimum Alt D7.9 UCU 2240' (2037')	ILS DA(H) 515' (312')	Apt Elev 249'	Rwy 10 203'
MISSED APCH: Immediate RIGHT climbing turn to intercept outbound UCU VOR R-131, upon reaching 2000', continue climbing to 5500' on inbound UCU VOR R-189 to UCU VOR holding pattern and expect ATC instructions.					
Alt Set: hPa Rwy Elev: 7 hPa Trans level: By ATC Trans alt: 5500' 1. CAUTION: Avoid flying over the petroleum refinery zone. 2. VOR/DME receivers are required. 3. If ICU localizer not received before UCU VOR R-268, turn RIGHT to outbound UDU VOR R-131 and request ATC clearance. 4. Visual procedures shall always be made to the south of the airport.					
					MSA UCU VOR



Gnd speed-Kts	70	90	100	120	140	160	SALS	PAPI	RT	UCU 113.3 R-131	2000'
GS	3.00°	377	484	538	646	753					
MAP at MM or FAF to MAP	5.3	4:33	3:32	3:11	2:39	2:16	1:59				

STRAIGHT-IN LANDING RWY 10				CIRCLE-TO-LAND			
ILS DA(H) 515' (312')		LOC (GS out) MDA(H) 650' (447')		Not Authorized North of Rwy 10/28			
ALS out		ALS out		Max Kts			
A		B		100			
1.6 km		2.4 km		860' (611') - 3.7 km			
C		D		135			
				180			
				1050' (801') - 4.6 km			
				205			

MACEO Tower 118.1



ADDITIONAL RUNWAY INFORMATION

RWY	USABLE LENGTHS	LANDING BEYOND	TAKE-OFF	WIDTH
01 19				148' 45m
10 28	RL (60m) SALS PAPI-L (angle 3.0°)	11,949' 3642m 11,654' 3552m		148' 45m

① Tower will only offer AFIS to aircraft operating on Rws 01/19.

TAKE-OFF

	Rwy 10	Rwy 28
A	450'-2.4 km	410'-2.4 km
B		
C		
D		

MUCU/SCU JEPPESEN SANTIAGO DE CUBA, CUBA

ANTONIO MACEO INTL 24 AUG 07 **13-1** Eff 30 Aug VOR DME Rwy 10

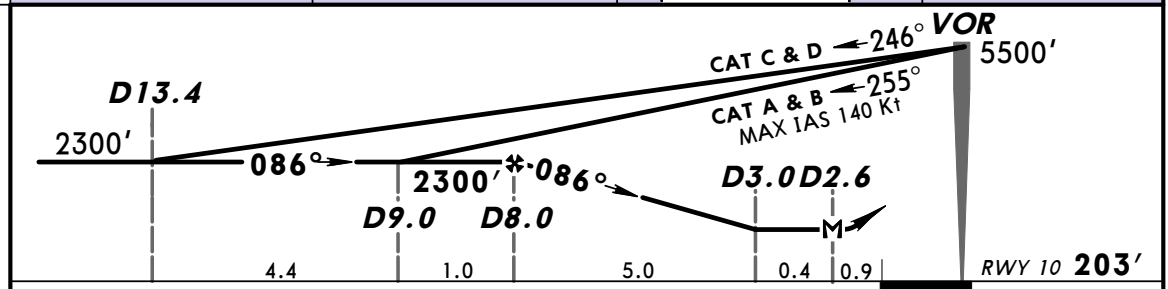
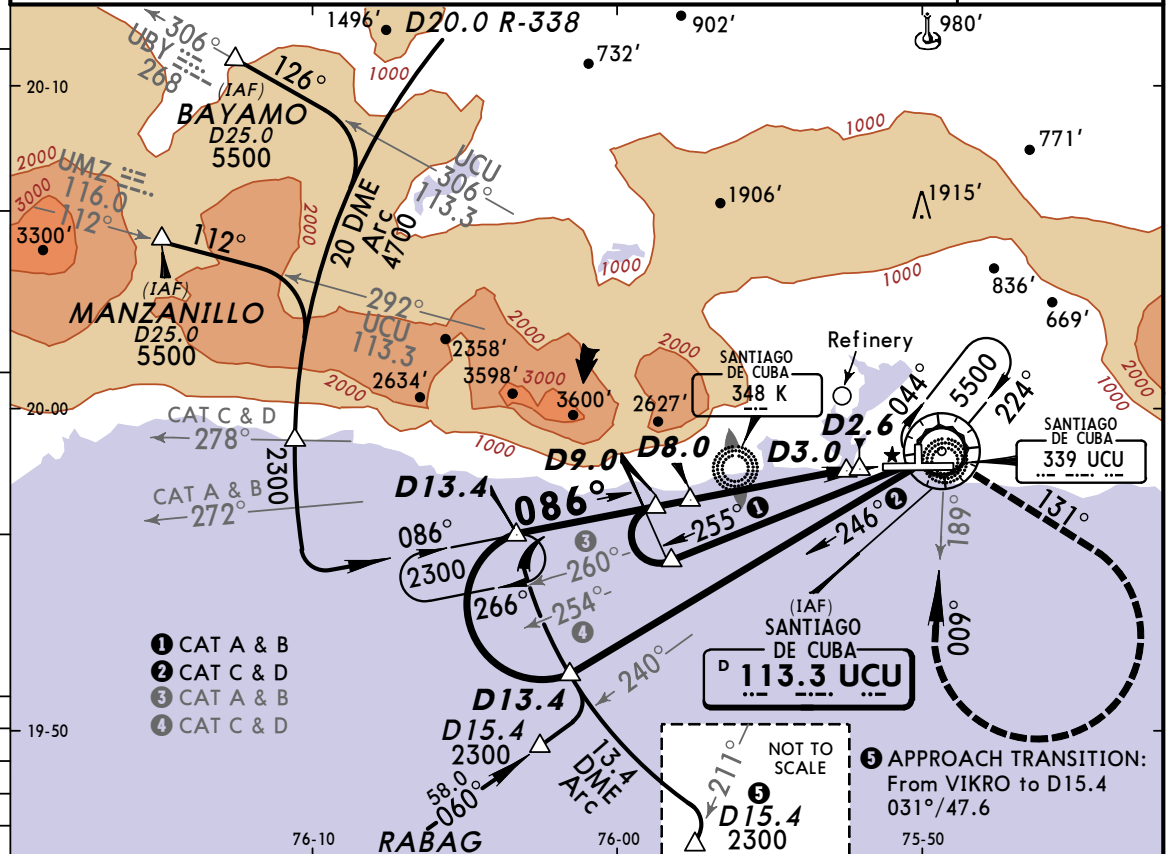
SANTIAGO Approach 119.4			MACEO Tower 118.1		
VOR UCU 113.3	Final Apch Crs 086°	Minimum Alt D8.0 2300' (2097')	MDA(H) 650' (447')	Apt Elev 249'	Rwy 10 203'

MISSED APCH: Climb inbound on UCU VOR R-266 to UCU VOR, immediate **RIGHT** turn to intercept outbound UCU VOR R-131 upon reaching 2000', continue climbing to 5500' on inbound UCU VOR R-189 to UCU VOR holding pattern and expect ATC instructions.

Alt Set: hPa Rwy Elev: 7 hPa Trans level: By ATC Trans alt: 5500'

1. CAUTION: Avoid flying over the petroleum refinery zone.
2. Visual procedures shall always be made to the south of the airport.

MSA UCU VOR



Gnd speed-Kts	70	90	100	120	140	160	SALS PAPI UCU on 113.3 R-266 UCU 113.3
Descent Gradient	5.2%	369	474	527	632	737	
MAP at D2.6 or							
FAF to MAP	5.4	4:38	3:36	3:14	2:42	2:19	

STRAIGHT-IN LANDING RWY 10		Max Kts.	CIRCLE-TO-LAND
MDA(H) 650' (447')			Not Authorized North of Rwy 10/28
ALS out		100	860' (611') - 3.7 km
2.4 km		135	1050' (801') - 4.6 km
		180	
		205	

MUCU/SCU

JEPPESEN SANTIAGO DE CUBA, CUBA

ANTONIO MACEO INTL

24 AUG 07

13-2

Eff 30 Aug

VOR DME Rwy 28

SANTIAGO Approach

MACEO Tower

119.4

118.1

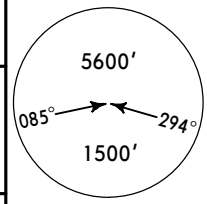
VOR
UCU
113.3

Final
Apch Crs
291°

Minimum Alt
(CONDITIONAL)
Refer to
Profile

MDA(H)
650' (404')

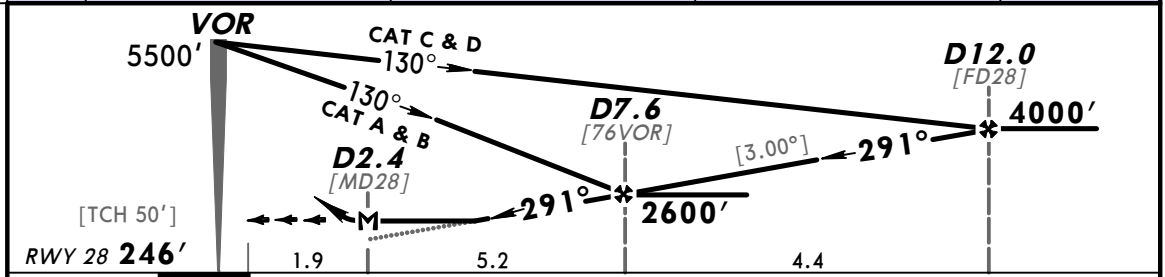
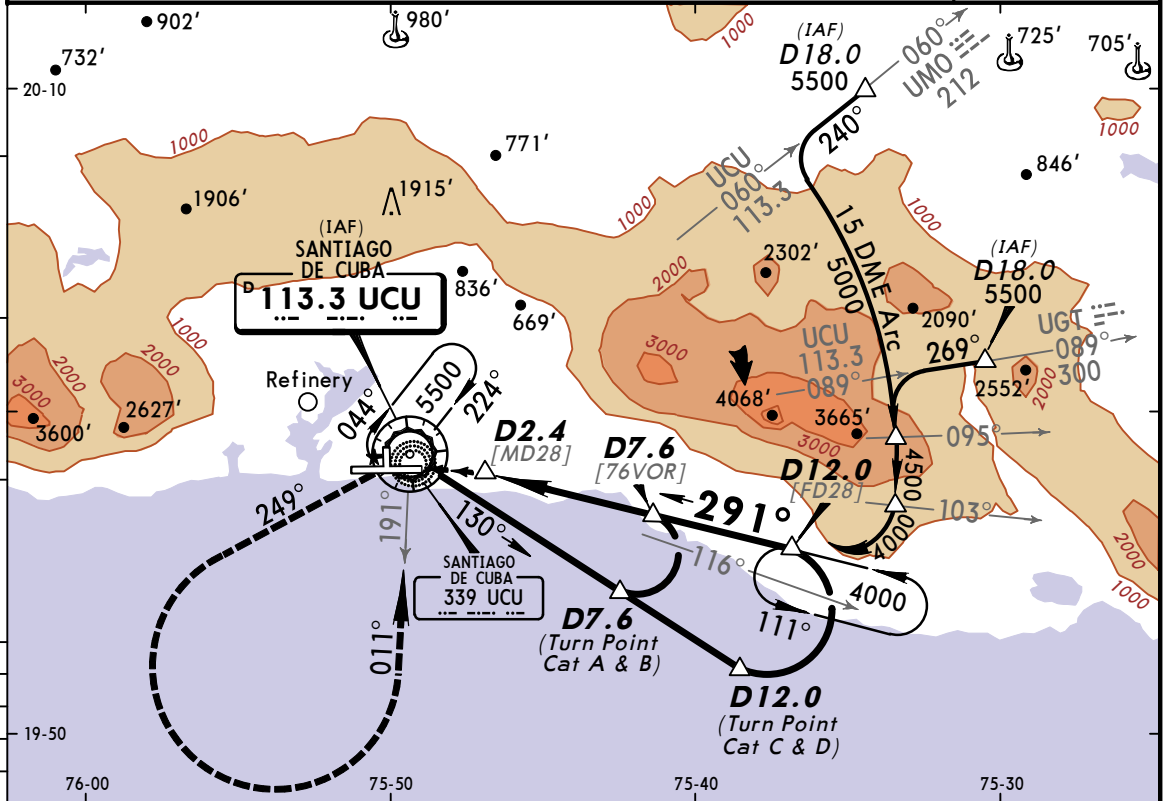
Apt Elev **249'**
Rwy 28 **246'**



MSA UCU VOR

MISSED APCH: Climb inbound on UCU VOR R-111 to UCU VOR, immediate LEFT turn to outbound UCU VOR R-249, upon reaching 2000', return climbing to 5500' on inbound UCU VOR R-191 to UCU VOR holding pattern.

- Alt Set: hPa Rwy Elev: 9 hPa Trans level: By ATC Trans alt: 5500'
- CAUTION: Avoid flying over the petroleum refinery zone.
 - Visual procedures shall always be made to the south of the airport.



Gnd speed-Kts	70	90	100	120	140	160
Descent Gradient 5.2% or Descent angle [3.00°]	372	478	531	637	743	849
MAP at D2.4 or						
Cat A & B D7.6 to MAP	5.2	4:27	3:28	3:07	2:36	2:14
Cat C & D D12.0 to MAP	9.6	8:14	6:24	5:46	4:48	4:07

SALS
PAPI

UCU
on **113.3 R-111** UCU
113.3

STRAIGHT-IN LANDING RWY 28
MDA(H) **650' (404')**

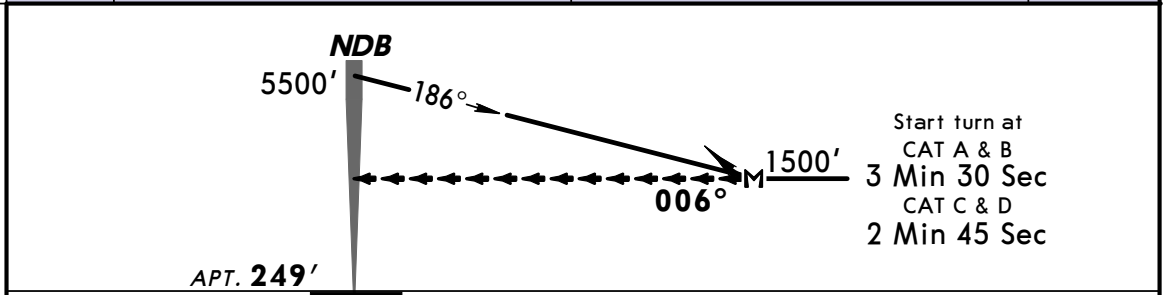
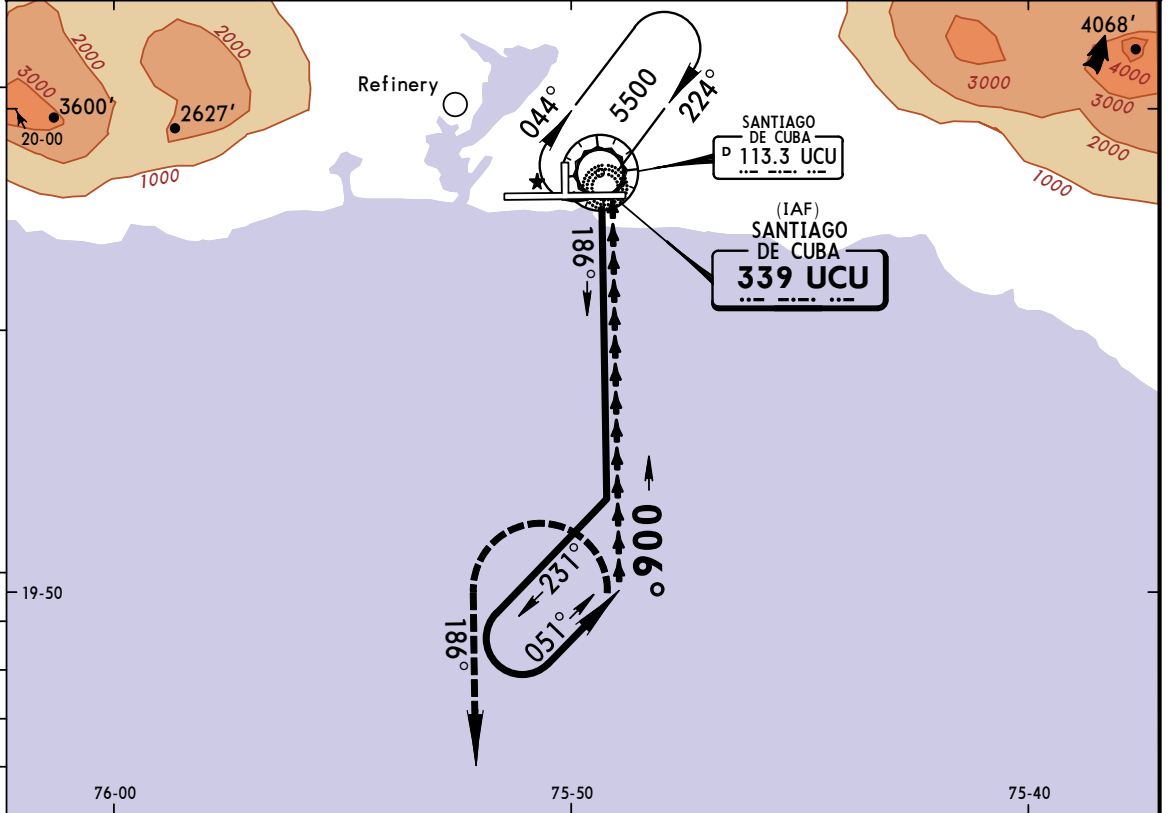
Max Kts	
100	860'(611') - 3.7 km
135	
180	1050'(801') - 4.6 km
205	

ALS out	
A	
B	
C	2.4 km
D	

CHANGES: Rwy number, MSA, minimums.

© JEPPESEN SANDERSON, INC., 1999, 2007. ALL RIGHTS RESERVED.

SANTIAGO Approach			MACEO Tower		
119.4			118.1		
NDB UCU 339	Final Apch Crs 006°	No FAF	MDA(H) Refer to Minimums	Apt Elev 249'	
MISSED APCH: If no visual ground reference is established immediately after procedure turn, keep turning LEFT to 186° until reaching 5500' and return to UCU NDB holding pattern.					
Alt Set: hPa Apt Elev: 9 hPa Trans level: By ATC Trans alt: 5500' 1. CAUTION: Avoid flying over the petroleum refinery zone. 2. Visual procedures shall always be made to the south of the airport.					MSA UCU NDB



								Lighting - Refer to Airport Chart	5500'	186°
								LT		

		CIRCLE-TO-LAND	
	Max Kts.	MDA(H)	
A	100	860' (611') - 3.7 km	
B	135		
C	180	1050' (801') - 4.6 km	
D	205		