

EAATS Bagram CH-47 SFTS Tactical Scenario

1. SITUATION

Insurgent Targets have taken control of electrical switching station in vicinity of N3451.375 E06938.626. Transport assault team and from pinnacle (N35 09.509 E069 33.165) to conduct a hasty attack on target. The worst weather during the operation is forecast to be ceiling 6000 SCT and visibility 5 statute miles.

- a. Enemy Forces: Enemy forces occupy a building in the center of the switching station, 200M west of LZ coordinates: N3451.375 E06938.626
- b. Enemy is expected to have small arms and RPG weapons. Radar threat between and Bagram and Kabul coordinated: N34 46.50 E069 10.10
- c. Friendly Forces: Are located in vicinity Bagram Airbase N34.56.76 E069.15.93.
- d. Weather forecast VMC 8 miles sky clear.
Bagram: PA 4200, Temp 30, Wind 16010G15, ALT 29.90.
- e. Pinnacle PZ: N35 09.509 E069 33.165 (PA13,000 Temp+11C)
- f. Primary LZ: N3451.375 E06938.626 (PA 4300 Temp +28C).

2. MISSION

Transport 6 personnel and 2000 lb. internal cargo from pinnacle (N35 09.509 E069 33.165) to LZ (N3451.375 E06938.626), after assault return troops to Hamid Karzai Airport, Kabul. Return to Bagram.

3. EXECUTION

- a. Commander's Intent: Air movement will avoid enemy contact during route. Insert team into LZ to conduct assault on objective, pickup team drop off at Kabul and return to Bagram. EOM.
- b. Ground Tactical Plan: Insertion team will continue to engage enemy positions and apprehend or destroy enemy combatants. Aircraft will land heading 170 degrees, this will place the target house at the 3 o'clock-right side of the aircraft at 100 meters.
- c. Concept of Operation: Ranger element will engage target. This is a suspected insurgent leader ship strong hold and is a target of opportunity. Ranger element will engage insurgents and secure the area.
- d. Tasks to maneuver Units: NA
- e. Coordinating Instructions:
Risk reduction and control measures: The air mission commander will include flight routes in air mission FRAGO to provide horizontal separation between CH-47 flight routes. The risk management process will be accomplished at individual unit level and appropriate controls implemented. Hazards assessed as high risk will be elevated to the Commander 1st Brigade for risk decision. If weather falls below 3000-3, the air portion of the operation will be postponed until weather improves and is forecast to remain at or above 3000-3 for the duration of the air operation

4. SERVICE AND SUPPORT

Class I – V at Bagram only.

5. COMMAND AND SIGNAL

- a. Command—Overall commander is Commander 1st Brigade __th Infantry Division (Mechanized).
 - 1) Ground force commander is Commander 1st Bn 1028th IN.
 - 2) Air Mission Commander is commander C/4-1028th AVN.
- b. Signal per 1st Brigade SOI.

Instructor Operator Set up Instructions

Load IC Scenario:

Open Afghanistan folder, load Bagram initial condition set.

Training Objectives:

Dust Takeoff and Landing:

Practice dust take off. Aviator maintains attitude and heading while applying appropriate power to climb out of dust. The use of TRC and P-hold should be encouraged. Neutralize the cyclic prior to raising thrust so TRC is able to stabilize P-hold.

Practice dust landings to surface using HSDH cues, TRC and p-hold. Turn on HSDH, TRC and P-hold during before landing check. Maintain airspeed above ETL on approach (use 30 KIAS) to stay ahead of dust. Establish angle of approach with thrust to the appropriate hover altitude (approx. 25 feet AGL). At hover altitude activate ALT-INT or release thrust brake if already activated. Decelerate using HSDH velocity vector to activate TRC and P-hold (smooth cyclic application is crucial so TRC can take over stabilization). Lower thrust so aircraft contacts the ground. Perform after landing (move cyclic to 1 ½ inches aft to stabilize aft gear).

Inadvertent IMC:

The weather has a ragged broken/scattered layer that varies from 2000 to 12000 feet. Visibility is good from 4 to 5 miles. Use visibility reduction over time achieve IMC condition. (Recommend ½ mile visibility over 5 minutes). Spatial disorientation may occur over the desert with ½ mile visibility due to the lack of horizon and lack of ground texture.

Power Management:

Use hover override and PPC to determine max weight allowable at pinnacle PA 13,000 and 11C. While Climbing to Pinnacle not CGI and PTIT limit power application and speed. Hovering OGE at PA13000 should put engines in time limited operation.

Enemy Contact:

Threat can be loaded on the threat map as desired or IO acting as flight engineer can make appropriate calls.

CLEARANCE		TAKE-OFF, CLIMB, CRUISE DATA CH-47F (T55-GA-714A) Climb: 500M Cruise: 102 Wind: 260/010 Temp: +14C						
FREQUENCIES		FOB: N/C		ROUTE AVG WIND: 2HW				
DEP FIELD DATA		TOT DIST	TOT ETE	TOT FUEL				
INS ChkPt = CHARLESTON		81.6	00+47+57	6888				
FP# DTD# KIND	FIX/PT ID DESCRIPTION (ADD PT ID) (DESCRIPTION) ALT	NAV CHAN FREQ	LAT LON VAR ELEV	MH MC (MH) (TH)	DIST LEG TOT	CAS GS TAS IMN	ETE ETA (DVT FF)	FUEL: LEG USED TOT REMG CONT.FUEL (FF)
FP 1 DTD			N 34 57.10 E069 16.08	027 027	0.0 0.0		00+00+00 00:00:00	0 6888
TURN 5000M	CHS/R 034/639		3.2E unk					1512 ()
FP 2 DTD	.PINNACLE		N 35 09.51 E069 33.17	042 045	18.7 18.7	101 110 102 .15	00+10+12 00:10:12	346 6542
TURN 500M	CHS/R 033/639		3.2E unk					1166 (2032)
FP 3 DTD	.TURN POINT		N 34 57.02 E069 35.80	170 167	12.7 31.4	93 100 108 .16	00+07+35 00:17:47	232 6310
TURN 7000M	CHS/R 033/640		3.2E unk					934 (1836)
FP 4 DTD	.RELEASE POI		N 34 53.86 E069 37.83	154 149	3.6 34.9	87 100 97 .14	00+02+09 00:19:56	66 6244
TURN 5000M	CHS/R 033/640		3.2E unk					868 (1842)
FP 5 DTD	.LANDING		N 34 51.38 E069 38.63	168 162	2.6 37.5	89 100 100 .15	00+01+32 00:21:28	47 6197
TURN 5000M	CHS/R 033/640		3.1E 4750					821 (1848)
FP 6 DTD			N 34 38.18 E069 42.87	168 162	13.6 51.1	89 100 100 .15	00+08+11 00:29:39	251 5946
TURN 5000M	CHS/R 033/642		3.1E unk					570 (1843)

TP# DTD# KIND	FIX/PT ID DESCRIPTION (ADD PT ID) (DESCRIPTION) ALT	NAV CHAN FREQ	LAT LON VAR ELEV	MH MC (MH) (TH)	DIST LEG TOT	CAS GS TAS IMN	ETE ETA (DVT FF)	FUEL: LEG USED TOT REMG CONT.FUEL (FF)
TP 7 DTD			N 34 31.38 E069 40.16	200 195	7.1 58.3	94 100 105 .15	00+04+17 00:33:56	133 5813
TURN 5000M	CHS/R 033/642		3.0E unk					437 (1865)
TP 8 DTD	.TURN POINT		N 34 30.30 E069 26.06	261 262	11.7 70.0	98 100 110 .16	00+07+01 00:40:57	221 5592
TURN 5000M	CHS/R 034/642		3.1E unk					216 (1891)
TP 9 DTD			N 34 34.06 E069 13.04	284 286	11.4 81.4	101 100 109 .17	00+06+50 00:47:47	211 5381
TURN 5000M	CHS/R 034/641		3.1E unk					5 (1855)
TP 10 DTD	OAKB/A HAMID KARZAI		N 34 33.95 E069 12.74	244 243	0.3 81.6	101 100 110 .17	00+00+10 00:47:57	5 5376
TURN 5877M	CHS/R 034/641		3.0E 5877					0 (1825)

CH-47 PERFORMANCE PLANNING CARD

For use of this form, see TC 3-04.34; the proponent agency is TRADOC.

POINT NAME: Departure		DEPARTURE DATA				DTD ID:						
OPERATING WT:	25800	T/O FUEL WT:	6300	LOAD:	8000							
PRESSURE ALT:	4200	FAT:	30	TAKEOFF GWT:	32100 / 40100							
FUEL MANAGEMENT												
TIME:	QTY:	PPH:	BURNOUT:		RSV:							
		DUAL ENGINE				SINGLE ENGINE						
		NO LOAD		WITH LOAD		NO LOAD		WITH LOAD				
MAX TQ AVAIL - 10 MIN. / S/E		98				104						
MAX TORQUE AVAIL - 30 MIN.		89										
CONTINUOUS TORQUE AVAIL		80				80						
MAX GWT TO HVR 10 MIN. / SE IGE/OG		48794	48794	48794	48794	34280	*31166	*34280	*31166			
MAX GWT TO HVR 30 MIN. IGE/OG		48794	46143	48794	46143							
MAX GWT TO HVR CONT IGE/OG		47173	42888	47173	42888							
PREDICTED HVR TQ - IGE/OG		48	54	64	73	96	*108*	*128*	*146*			
GO / NO GO TQ		86		86								
MAX MSN PROFILE GWT / VALIDATION		35787	55	35787	55							
POINT NAME: Cruise		CRUISE DATA				DTD ID:						
AIRSPED LIMIT:	123 / 95	LCT RET Vne:	62 / 43		DRAG FACTOR: 0 / 0							
PRESSURE ALT:	10000	FAT:	16									
		DUAL ENGINE				SINGLE ENGINE						
		NO LOAD		WITH LOAD		NO LOAD		WITH LOAD				
MAX TQ AVAIL - 10 MIN. / S/E		80				85						
CONTINUOUS TORQUE AVAIL		68				69						
MAX GWT CONT PWR		39948	39948									
MAX R/C AND ENDURANCE IAS		68	72									
MAX RANGE IAS		119	95									
CRUISE SPEED - IAS		100	*100*		70	70						
CRUISE TQ (+ DRAG FACTOR)		42	54		*71*	*94*						
CRUISE FUEL FLOW		1941	2301		1431	N/C						
MINIMUM SINGLE ENGINE IAS						36	N/C					
MAXIMUM SINGLE ENGINE IAS						100	N/C					
MAX GWT S/E / SESC				*35726*		12910	7490					
POINT NAME: Arrival		ARRIVAL DATA				DTD ID:						
LANDING GWT:	32100 / 35600		DUAL ENGINE				SINGLE ENGINE					
PRESSURE ALT:	13000	FAT:	11		NO LOAD		WITH LOAD		NO LOAD		WITH LOAD	
MAX TQ AVAIL - 10 MIN. / S/E		75				78						
MAX TQ AVAIL - 30 MIN.		70										
CONTINUOUS TORQUE AVAIL		65				65						
MAX GWT TO HVR 10 MIN. / SE IGE/OG		35787	35787	35787	35787	*25353	N/C	N/C	N/C			
MAX GWT TO HVR 30 MIN. IGE/OG		35787	35787	35787	35787							
MAX GWT TO HVR CONT IGE/OG		35787	33856	*33856	*33856							
PREDICTED HVR TQ - IGE/OG		53	60	70	70	*106*	*121*	*139*	*139*			

REMARKS: Asterisks (*) indicate calculations that exceed AWR limits or aircraft capabilities.

PERFORMANCE CONFIGURATION												
EAPS:	Installed	IRSS:	Not Installed	Skis:	Not Installed	Max Structural GWT:	50000					
ADDITIONAL INPUTS												
INPUT NAME	DEPARTURE	CRUISE			ARRIVAL		ARRIVAL 2					
SESC Lapse Rate / 1000 ft	N/A	Lapse Temperature (-2			N/A		N/A					
Engine High Temp Limit	Limit Temperature	Limit Temperature			Limit Temperature		Limit Temperature					
Hover Height (No Load)	10	N/A			10		10					
Hover Height (With Load)	10	N/A			80		40					
Heater	N/A	Off			N/A		N/A					
Transmission Limit	Limit Torque	Limit Torque			Limit Torque		Limit Torque					
Int/Aux/Main Fuel Weight	6300	6300			6300		6300					
Sling Load Weight	0	0			0		0					
Int/Add Load Weight	8000	7000			3500		3500					
Sling Load Flat Plate Drag	N/A	0.00			N/A		N/A					
Fixed/Add Flat Plate Drag	N/A	8.30			N/A		N/A					
Torque Available Factor	1.00	1.00			1.00		1.00					
Torque Available Decrease	0	0			0		0					
Torque Required Factor	1.00	1.00			1.00		1.00					
Torque Required Increase	0	0			0		0					
Fuel Flow Factor	N/A	1.00			N/A		N/A					
Fuel Flow Increase	N/A	0			N/A		N/A					
Sling Airspeed Limit	N/A	200			N/A		N/A					
ADDITIONAL OUTPUTS												
OUTPUT NAME		NO LOAD				WITH LOAD						
Validation Point		Arrival				Arrival						
Cruise GWT		32100				39100						
SESC Best Endurance IAS		67				74						
SESC Max GWT Ref IAS		71				71						
NOTES:												
POINT NAME: Arrival 2		ARRIVAL 2 DATA				DTD ID:						
LANDING GWT:	32100 / 35600		DUAL ENGINE				SINGLE ENGINE					
PRESSURE ALT:	0	FAT:	15		NO LOAD		WITH LOAD		NO LOAD		WITH LOAD	
MAX TQ AVAIL - 10 MIN. / S/E		100				123						
MAX TQ AVAIL - 30 MIN.		100										
CONTINUOUS TORQUE AVAIL		100				107						
MAX GWT TO HVR 10 MIN. / SE IGE/OG		50000	50000	50000	50000	41227	37482	38360	37482			
MAX GWT TO HVR 30 MIN. IGE/OG		50000	50000	50000	50000							
MAX GWT TO HVR CONT IGE/OG		50000	50000	50000	50000							
PREDICTED HVR TQ - IGE/OG		45	51	56	58	90	101	112	115			

BAGRAM, AFGHANISTAN

16063

TACAN Y or VOR/DME Y RWY 03R

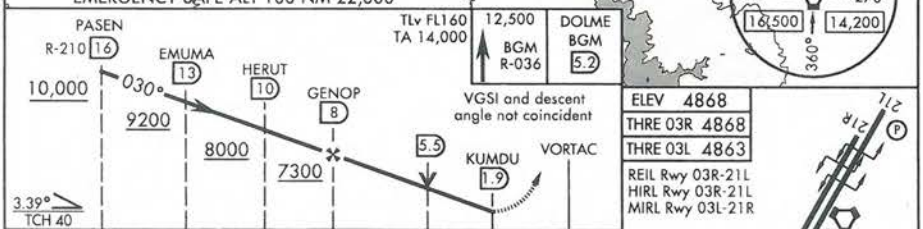
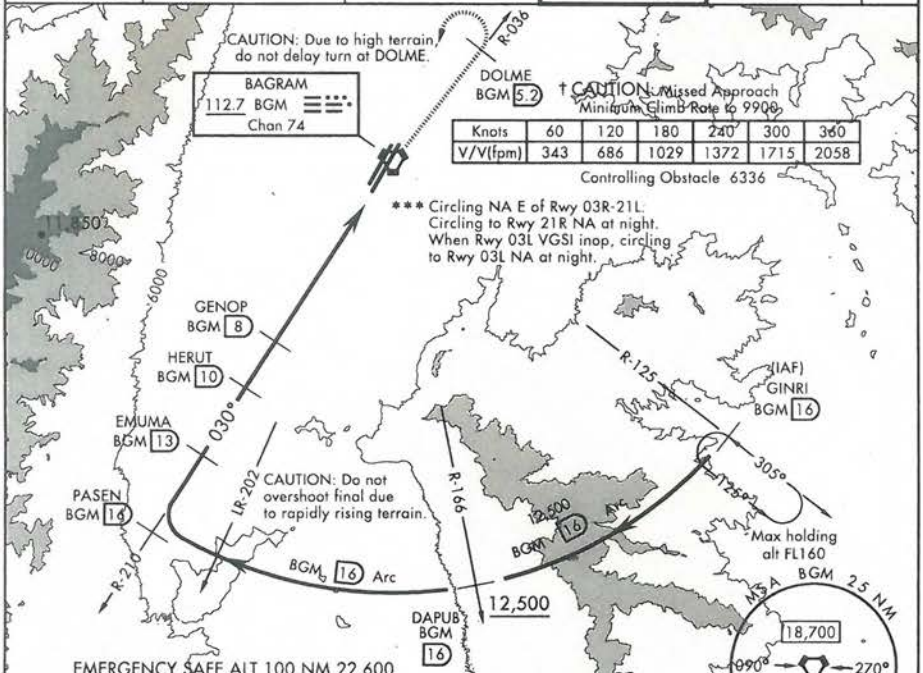
VORTAC BGM 112.7 Chan 74	APCH CRS 030°	Rwy ldg THRE 9687 Arpt Elev 4868	03L 11,819 4868	03R 11,819 4868
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AL-3093 [USAF]

BAGRAM (OAIX)

▲ When ALS inop, increase CAT A vis to 2000m, CAT B vis to 2400m.
 ** When Rwy 03L VGSI inop, side-step to 03L NA at night.
 † MISSED APPROACH: Climb to 12,500 via BGM VORTAC R-036 to DOLME then left hand climbing turn direct BGM. Then proceed outbound BGM R-125 to GINRI and hold.

ATIS 134.25 369.4	KABUL APP CON 131.6 360.6	BAGRAM APP CON 124.8 379.3	BAGRAM TOWER 120.1 325.75	GND CON 125.9 380.8	PAR
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CATEGORY	A	B	C	D	E
S-03R*	6260-1200m 1392 (1400-1200m)	6260-1600m 1392 (1400-1600m)	6260-5000m	1392 (1400-5000m)	
** SIDESTEP 03L	6260-2000m 1397 (1400-2000m)	6260-2400m 1397 (1400-2400m)	6260-5000m	1397 (1400-5000m)	
*** CIRCLING	6660-2000m 1792 (1800-2000m)	6660-2400m 1792 (1800-2400m)	6660-5000m	1792 (1800-5000m)	

BAGRAM, AFGHANISTAN 34°57'N-69°16'E BAGRAM (OAIX)

TACAN Y or VOR/DME Y RWY 03R

Orig 03MAR16

BAGRAM, AFGHANISTAN

16007

RNAV (GPS) Z RWY 03R

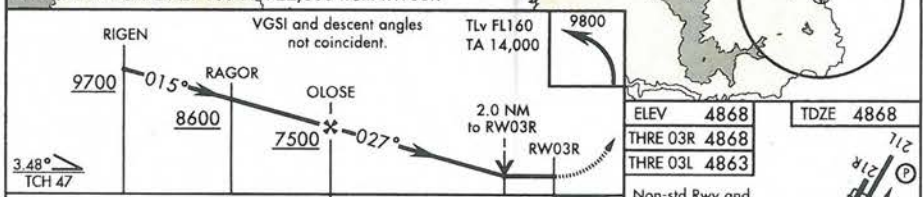
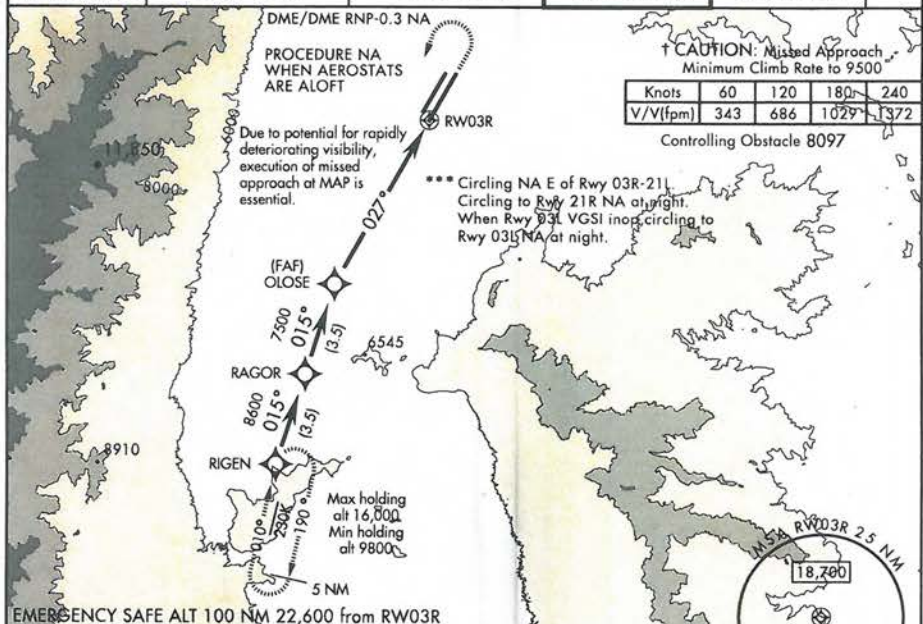
APCH CRS 027°	Rwy ldg THRE 9687 Arpt Elev 4868	03L 11,819 4868	03R 11,819 4868
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AL-3093 [USAF]

BAGRAM (OAIX)

▲ When ALS inop, increase CAT AB vis to 1600m, CAT CD vis to 3200m.
 ** When Rwy 03L VGSI inop, side-step to Rwy 03L NA at night.

ATIS 134.25 369.4	KABUL APP CON 131.6 360.6	BAGRAM APP CON 124.8 379.3	BAGRAM TOWER 120.1 325.75	GND CON 125.9 380.8	PAR
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CATEGORY	A	B	C	D
LNAV MDA	7120-2000m 2252(2300-2000m)	7120-2400m 2252(2300-2400m)	7120-5000m 2252 (2300-5000m)	
SIDESTEP 03L	7120-2000m 2257(2300-2000m)	7120-2400m 2257(2300-2400m)	7120-5000m 2257 (2300-5000m)	
*** CIRCLING	7120-2000m 2252(2300-2000m)	7120-2400m 2252(2300-2400m)	7120-5000m 2252 (2300-5000m)	
†BELOW MINIMA REQUIRES MISSED APPROACH CLIMB GRADIENT OF 343' PER NM				
LNAV MDA*	5560-750m 692 (700-750m)	5560-800m 692 (700-800m)	5560-2500m 692 (700-2500m)	
** SIDESTEP 03L	5600-1600m 737 (800-1600m)		5600-3400m 737 (800-3400m)	
*** CIRCLING	5560-1600m 692 (700-1600m)		5680-4000m 812 (900-4000m)	5680-4400m 812 (900-4400m)

BAGRAM, AFGHANISTAN 34°57'N-69°16'E BAGRAM (OAIX)

RNAV (GPS) Z RWY 03R

Orig 07JAN16

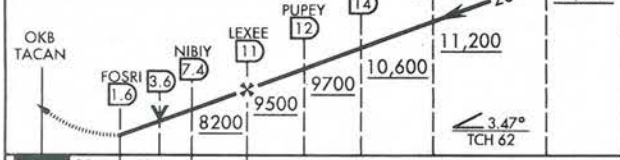
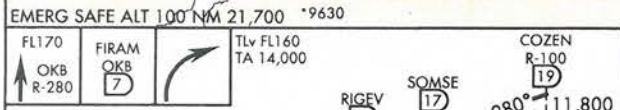
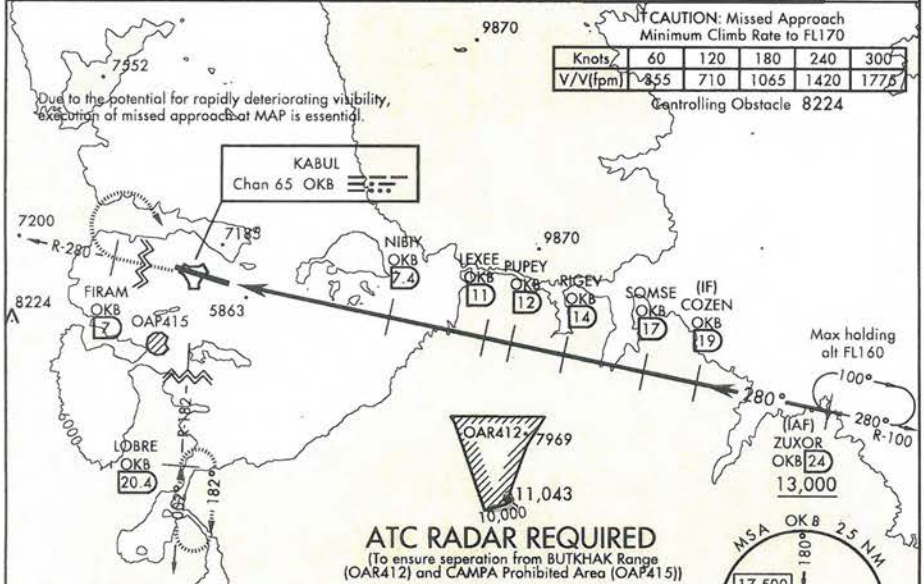
TACAN RWY 29

TACAN OKB Chan 65	APCH CRS 280°	Rwy ldg 11,520 THRE 5873 Arpt Elev 5877	AL-1190 [USAF]	HAMID KARZAI INTL (OAKB)
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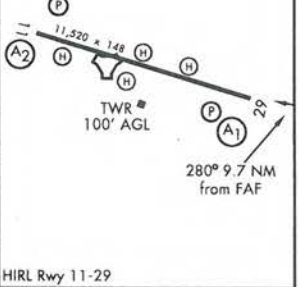
* When ALS inop, increase CAT B vis to 2400m.
 ** When ALS inop, increase CAT AB vis to 2000m, CAT CDE vis to 4300m.

ALSF-1 MISSED APPROACH: Climb to FL170 via OKB TACAN R-280 to FIRAM, then turn right direct OKB and proceed outbound on OKB R-182 to LOBRE and hold.

ATIS 130.15	KABUL APP CON 131.6 360.6	BAGRAM APP CON 127.925 379.3	KABUL ARR 132.5 301.95	KABUL TOWER 120.6 284.275	GND CON 125.4
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CATEGORY	A	B	C	D	E
S-29*	NA	7340-1600m 1467 (1500-1600m)	7340-5000m 1467 (1500-5000m)		
CIRCLING	7340-2000m (1500-2000m)	7540-2400m 1663 (1700-2400m)	7540-5000m 1663 (1700-5000m)	7780-5000m 1903 (2000-5000m)	
BELOW MINIMA REQUIRES MISSED APPROACH CLIMB GRADIENT OF 355 ft/NM					
S-29**	6820-1200m 947 (1000-1200m)	6820-3600m	947 (1000-3600m)		
CIRCLING**	7160-2000m 1283 (1300-2000m)	7540-2400m 1663 (1700-2400m)	7540-4800m 1663 (1700-4800m)	7780-4800m 1903 (2000-4800m)	



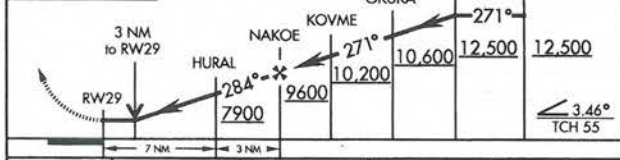
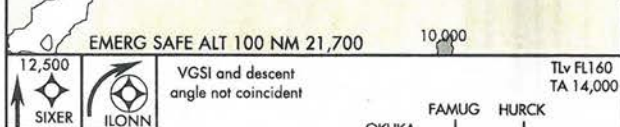
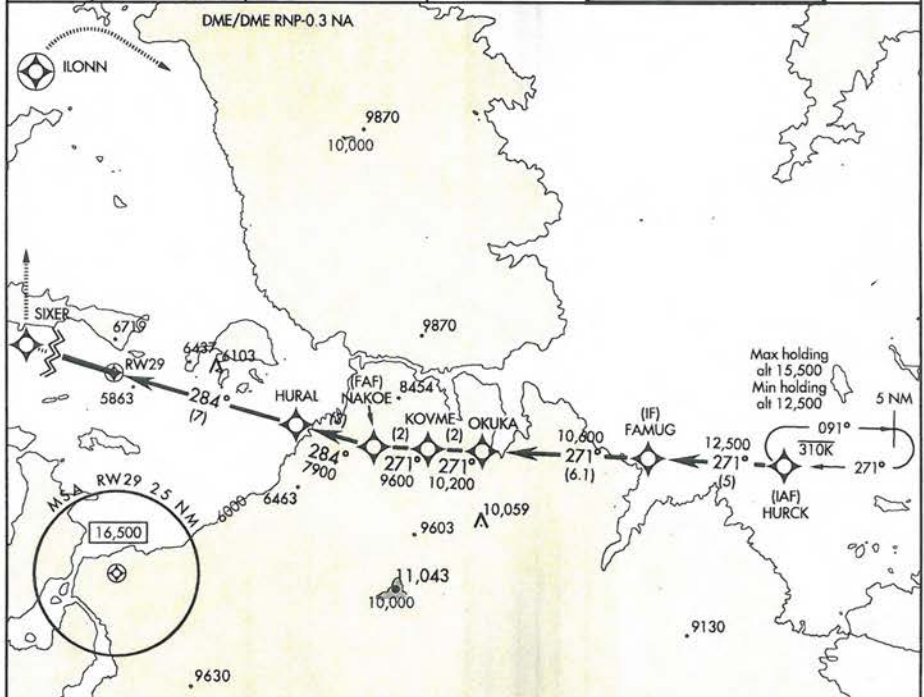
RNAV (GPS) RWY 29

APCH CRS 284°	Rwy ldg 11,520 THRE 5873 Arpt Elev 5877	AL-1190 [USAF]	HAMID KARZAI INTL (OAKB)
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* When ALS inop, increase CAT A vis to 2000m, CAT B vis to 2400m, CAT CDE vis to 5000m.
 ** Circling not authorized south of Rwy 11-29. Night operations are not authorized for Rwy 11.

ALSF-1 MISSED APPROACH: Climb to 12,500 direct SIXER, then turn right, track to ILONN. After ILONN, turn right direct HURCK maintain ATC assigned altitude and hold.

ATIS 130.15	KABUL APP CON 131.6 360.6	BAGRAM APP CON 127.925 379.3	KABUL ARR 132.5 301.95	KABUL TOWER 120.6 284.275	GND CON 125.4
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CATEGORY	A	B	C	D
LNAV MDA*	7040-1200m 1167 (1200-1200m)	7040-1600m 1167 (1200-1600m)	7040-4600m 1167 (1200-4600m)	
CIRCLING**	7200-2000m 1323 (1400-2000m)	7540-2400m 1663 (1700-2400m)	7540-5000m 1663 (1700-5000m)	

