

U.S. Department of Transportation
Federal Aviation Administration

RNAV - STANDARD
INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.33

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES				MISSED APPROACH											
FROM	TO	COURSE AND DISTANCE	ALTITUDE												
ZESHO (IAF) (40E) (43A)	IZBUF (NoPT) (TF) (FB) (40E) (41E)	149.32/5.00	3000	LPV: DA LNAV/VNAV: DA LNAV: RW06 CLIMB TO 3000 DIRECT EDAGE AND HOLD.											
DOVWE (IAF) (40E) (43A)	IZBUF (NoPT) (TF) (FB) (40E) (41E)	329.40/5.00	3000												
IZBUF (IF/IAF) (40E) (43I)	LETCA (TF) (FB) (40E) (43F)	059.36/6.01	2300	ADDITIONAL FLIGHT DATA: HOLD NE, RT, 239.65 INBOUND. CHART FAS OBST: 851 TOWER 412019N/0911239, 849 TOWER 412024N/0911031W DISTANCE TO THLD FROM 529 HAT: 1.53 NM. CHART VDP AT 1.70 MILES TO RW06.* *LNAV ONLY ROUTE TYPE: A, R ROUTE TYPE QUALIFIER 1: J ROUTE TYPE QUALIFIER 2: S WAAS CHANNEL # 53701 REFERENCE PATH ID: W06A											
LETCA (FAF) (40E) (43F)	RW06 (TF) (FO) (40G) (41Y) (43M)	059.44/5.29													
RW06 (MAP) (40G) (41Y) (43M)	947 MSL (CA) (42M)	059.44													
947 MSL	EDAGE (DF) (FO) (40E) (41E) (43H)		3000												
1. PT <u> </u> SIDE OF COURSE <u> </u> OUTBOUND <u> </u> FT WITHIN <u> </u> MILES OF <u> </u> (IAF)				MAG VAR: 1W EPOCH YEAR: 00											
2. <u>HOLD SW IZBUF, RT, 059.36 INBOUND, 3000 FT. IN LIEU OF PT (IAF) (HF) (40E) (43C).</u>															
3. FAC: <u>059.44</u> FAF: <u>LETCA</u> DIST FAF TO MAP: <u>5.29</u> THLD: <u>5.29</u>															
4. MIN. ALT: <u>IZBUF 3000, LETCA 2300</u>															
5. DIST TO THLD FROM OM: <u> </u> MM: <u> </u> IM: <u> </u> 150 HAT: <u> </u> 100 HAT: <u> </u> GS ANT: <u> </u>															
6. MIN GS INCPT: <u>2300</u> GS ALT AT: <u> </u> OM: <u> </u> MM: <u> </u> IM: <u> </u>															
7. GS ANGLE: <u>3.00</u> TCH: <u>45.0</u> 34:1 IS NOT CLEAR															
8. MSA FROM: <u> </u>															
MINIMUMS															
TAKEOFF:	STANDARD	X	SEE FAA FORM 8260-15A	FOR THIS AIRPORT	ALTERNATE: N A	@ #									
CATEGORY ==>	A			B			C			D			E		
	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA
LPV DA	1076	2	529	1076	2	529	1076	2	529	1076	2	529			
LNAV/VNAV DA	1232	2	685	1232	2	685	1232	2	685	1232	2 1/4	685			
LNAV MDA	1120	1	573	1120	1	573	1120	1 1/2	573	1120	1 3/4	573			
CIRCLING	1120	2 1/2	573	1160	2 1/2	613	1200	2 1/2	653	1200	2 1/2	653			
NOTES: CHART NOTES: DME/DME RNP-0.3 NA. FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -16C (4F) OR ABOVE 48C (118F) . IF LOCAL ALTIMETER SETTING NOT RECEIVED, USE IOWA CITY MUNI ALTIMETER SETTING AND INCREASE ALL DAs/MDAs 80 FEET. BARO-VNAV AND VDP NA WHEN USING IOWA CITY MUNI ALTIMETER SETTING. VISIBILITY REDUCTIONS BY HELICOPTERS NA. CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT. CHART PLANVIEW AND PROFILE NOTE: LNAV/VNAV FLY VISUAL TO AIRPORT, 059 - 2.0 MILES															
CITY AND STATE		ELEVATION: 547 TDZE: 547		FACILITY IDENTIFIER: RNAV		PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE: SEP 28 2006 RNAV (GPS) RWY 6, ORIG				SUP: AMDT: NONE		DATE			
MUSCATINE, IA		MUSCATINE MUNI													



Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TAA:

FROM	TO	ALTITUDE
1. 329/30 CW 149/30	IZBUF (IF/IAF) (NoPT)	3000
2. 149/30 CW 239/30	ZESHO (IAF)	3300
3. 239/30 CW 329/30	DOVWE (IAF)	3000

CITY AND STATE

MUSCATINE, IA

ELEVATION:

547 TDZE:

547

AIRPORT NAME:

MUSCATINE MUNI

FACILITY
IDENTIFIER:

RNAV

PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:

SEP 28 2006
RNAV (GPS) RWY 6, ORIG

SUP:

AMDT: NONE

DATED:

FAS DATA BLOCK INFORMATIONDATA FIELDDATA

OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KMUT
RUNWAY	RW06
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W06A
LTP/FTP LATITUDE	412144.2700N
LTP/FTP LONGITUDE	0910915.9815W
LTP/FTP ELLIPSOIDAL HEIGHT	+01331
FPAP LATITUDE	412230.8400N
FPAP LONGITUDE	0910735.0700W
THRESHOLD CROSSING HEIGHT (TCH)	00045.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1072
HORIZON (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0

CRC REMAINDER

51C7C810

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+01661
FPAP ORTHOMETRIC HEIGHT	+01661

CITY AND STATE MUSCATINE, IA	ELEVATION: 547 TDZE: 547 AIRPORT NAME: MUSCATINE MUNI	FACILITY IDENTIFIER: RNAV	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE: RNAV (GPS) RWY 6, ORIG	SUP:
				AMDT: NONE
				DATED:

**RNAV - STANDARD
INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.33**

TERMINAL ROUTES							MISSED APPROACH										
FROM		TO		COURSE AND DISTANCE		ALTITUDE											
ZESHO (IAF) (40E) (43A)		IZBUF (NoPT) (TF) (FB) (40E) (41E)		149.32/5.00		3000		LPV: DA LNAV/VNAV: DA LNAV: RW06 CLIMB TO 3000 DIRECT EDAGE AND HOLD.									
DOVWE (IAF) (40E) (43A)		IZBUF (NoPT) (TF) (FB) (40E) (41E)		329.40/5.00		3000											
IZBUF (IF/IAF) (40E) (43I)		LETCA (TF) (FB) (40E) (43F)		059.36/6.01		2300		ADDITIONAL FLIGHT DATA: HOLD NE, RT, 239.65 INBOUND. CHART FAS OBST: 851 TOWER 412019N/0911239, 849 TOWER 412024N/0911031W DISTANCE TO THLD FROM 529 HAT: 1.53 NM. CHART VDP AT 1.70 MILES TO RW06.* *LNAV ONLY ROUTE TYPE: A, R ROUTE TYPE QUALIFIER 1: J ROUTE TYPE QUALIFIER 2: S WAAS CHANNEL # 53701 REFERENCE PATH ID: W06A									
LETCA (FAF) (40E) (43F)		RW06 (TF) (FO) (40G) (41Y) (43M)		059.44/5.29													
RW06 (MAP) (40G) (41Y) (43M)		947 MSL (CA) (42M)		059.44													
947 MSL		EDAGE (DF) (FO) (40E) (41E) (43H)				3000											
1. PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF) 2. HOLD SW IZBUF, RT, 059.36 INBOUND, 3000 FT. IN LIEU OF PT (IAF) (HF) (40E) (43C). 3. FAC: 059.44 FAF: LETCA DIST FAF TO MAP: 5.29 THLD: 5.29 4. MIN. ALT: IZBUF 3000, LETCA 2300 5. DIST TO THLD FROM OM: MM: IM: 150 HAT: 100 HAT: GS ANT: 6. MIN GS INCPT: 2300 GS ALT AT: OM: MM: IM: 7. GS ANGLE: 3.00 TCH: 45.0 34:1 IS NOT CLEAR 8. MSA FROM:														MAG VAR: 1W		EPOCH YEAR: 00	
MINIMUMS																	
TAKEOFF:		STANDARD		X		SEE FAA FORM 8260-15A FOR THIS AIRPORT		ALTERNATE: N A		@ #							
CATEGORY =====>		A			B			C			D			E			
		DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	DH/ MDA	VIS	HAT/HAA	
LPV DA		1076	2	529	1076	2	529	1076	2	529	1076	2	529				
LNAV/VNAV DA		1232	2	685	1232	2	685	1232	2	685	1232	2 1/4	685				
IV MDA		1120	1	573	1120	1	573	1120	1 1/2	573	1120	1 3/4	573				
CIRCLING		1120	2 1/2	573	1160	2 1/2	613	1200	2 1/2	653	1200	2 1/2	653				
NOTES: CHART NOTES: DME/DME RNP-0.3 NA. FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -16C (4F) OR ABOVE 48C (118F) . IF LOCAL ALTIMETER SETTING NOT RECEIVED, USE IOWA CITY MUNI ALTIMETER SETTING AND INCREASE ALL DAs/MDAs 80 FEET. BARO-VNAV AND VDP NA WHEN USING IOWA CITY MUNI ALTIMETER SETTING. VISIBILITY REDUCTIONS BY HELICOPTERS NA. CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT. CHART PLANVIEW AND PROFILE NOTE: LNAV/VNAV FLY VISUAL TO AIRPORT, 059 - 2.0 MILES														@ NA WHEN LOCAL WEATHER NOT AVAILABLE # CAT A,B,C,D 800-2 1/2			
CITY AND STATE		ELEVATION: 547 TDZE: 547		FACILITY IDENTIFIER: RNAV		PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:		SUP:									
MUSCATINE, IA		AIRPORT NAME: MUSCATINE MUNI				RNAV (GPS) RWY 6, ORIG		AMDT: NONE									
								DATE									

ALL AFFECTED PROCEDURES REVIEWED? ☐ YES ☒ NO		COORDINATES OF FACILITIES		REQUIRED EFFECTIVE DATE ROUTINE	
COORDINATED WITH:					
ATA ☐	AAT ☐	ALPA ☒	APA ☐	AOPA ☒	NBAA ☒
					OTHER (specify) ☒ <u>QUAD CITY ATCT, AMGR, ZAU</u>
FLIGHT CHECKED BY					
NAME: <u>Jeffrey W. Randall</u>				FIFO AVN	DATE: 7/12/06
DEVELOPED BY					
NAME: <u>GEORGE E. DAVIS (KIRKPATRICK)</u>				FIFO AVN-120	DATE: 03/14/2006
APPROVED BY					
NAME: <u>JOHN BICKERSTAFF</u>				FIFO AVN-120	DATE: JUL 18 2006
CHANGES:					
1. THIS REPLACES GPS RWY 6. 2. REMOVED FEEDER ROUTES. 3. IZBUF (IF/IAF) TO LETCA COURSE AND DISTANCE CHANGED FROM 057.36/5.00 TO 59.36/6.01. 4. ADDED BACKUP ALTIMETER MINIMUMS AS A NOTE. 5. FAS OBST CHANGED FROM 849 TOWER TO 851 TOWER. 6. MISSED APPROACH CHANGED TO "CLIMB TO 3000 DIRECT EDAGE AND HOLD." 7. ADDED HOLD-IN-LIEU-OF-PT. 8. AIRPORT ELEVATION LOWERED FROM 548 TO 547. 9. DIST FAF TO MAP/THLD CHANGED FROM 5.00 TO 5.29 10. ADDED ALTERNATE MINIMUMS & NOTE. 11. INCREASED LNAV AND CIRCLING MDA.					
REASONS:					
1. FPO REQUEST. 2. ADDED TAA. 3/4/10. CRITERIA CHANGE. 5. NEW CONTROLLING OBSTACLE. 6. MISSED APPROACH GOES STRAIGHT OUT. 7. PROCEDURE QUALIFIES. 8. NEW SURVEY DATA. 9. PFAF LOCATION. 11. NEW OBSTACLE AND ADDITION OF LNAV/VNAV MINIMA.					
THIS CANCELS FDC 5/9244					



STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

PART - A OBSTRUCTION DATA

1. APP SEGMENT	FROM	TO	OBSTRUCTION	COORDINATES	ELEV. MSL	ROC	ALT. ADJUSTMENTS	MIN. ALT.			
STRAIGHT-IN AREA	329/30 CW 149/30	IZBUF	1. TOWER (16-1087)	411139.00N / 0915716.00W	1950 (5D)	1000		3000			
			2. TERRAIN	413645.00N / 0914257.00W	860 (900)		AS1500	2400			
LEFT BASE AREA	149/30 CW 239/30	ZESHO	3. TOWER (16-0318)	414315.00N / 0912030.00W	2249 (5D)	1000		3300			
			4. TERRAIN	414621.00N / 0913015.00W	922 (900)		AS1500	2400			
RIGHT BASE AREA	239/30 CW 329/30	DOVWE	5. TOWER (16-2823)	410459.01N / 0911018.58W	1193 (4D) *	1000	AT	3000			
			6. TERRAIN	411851.00N / 0904021.00W	854 (900)		AS1500	2400			
TIAL	ZESHO	IZBUF	7. TOWER (16-2400)	411634.00N / 0912329.00W	1002 (4D) *	1000	AT	3000			
			8. TERRAIN	411806.00N / 0912909.00W	771 (800)		AS1500	2300			
INITIAL	DOVWE	IZBUF	7.		1002 (4D) *	1000	AT	3000			
			9. TERRAIN	411542.00N / 0912130.00W	768 (800)		AS1500	2300			
INTERMEDIATE	IZBUF (IF/IAF)	EDAGE	7.		1002 (4D) *	500		1600			
			9.		768 (800)		AS1500	2300			
FINAL: LPV	LETCA	RW06	10. TREE (KMUTC017)	412051.04N / 0911054.12W	789 (1A)	27:1		1076/529			
FINAL: LNAV/VNAV	LETCA	RW06	11. TOWER (16-0678)	412024.00N / 0911031.00W	849 (5D)	23.4:1	AC50	1232/685			
FINAL: LNAV	LETCA	RW06	12. TOWER (KMUTC028)	412019.12N / 0911238.54W	851 (1A)	250		1120			
HOLD-IN-LIEU-OF-PT	IZBUF	P-5	13. TOWER (16-0158)	411132.00N / 0912810.00W	1043 (4D)	1000	AT	3000			
2. PROCEDURE TURN			14. TERRAIN	411533.00N / 0912839.00W	791 (800)		AS1500	2300			
3. MISSED APPROACH	MAP:	DA/DA/RW06	EDAGE			ASC		3000			
	ELEV:	789/900/870		15. TOWER (16-0381)	412734.00N / 0910027.00W	1116 (4D)	1000	2200			
			16. TERRAIN	412436.00N / 0905521.00W	821 (800)		AS1500	2300			
4. CIRCLING	DISTANCE	H.T. A B V. A R P T.									
CATEGORY A	1.3 NM	REQUIRED	350	ACTUAL	573	17. TOWER (16-0499)	412113.00N / 0910748.00W	692 (2B)	300	SI	1120
CATEGORY B	1.5 NM		450		613	18. 100' TREE	412248.00N / 0911115.00W	859 (2C)	300		1160
CATEGORY C	1.7 NM		450		653	19. TOWER (16-0614)	412251.00N / 0911135.00W	885 (2B)	300		1200
CATEGORY D	2.3 NM		550		653	19.		885 (2B)	300		1200
CATEGORY E	4.5 NM		550								
5. MINIMUM SAFE ALTITUDES											
PRIMARY NAVAID: NA TAA USED											
SECTOR	OBSTRUCTION	BRG / DIST	ELEVATION (MSL)	M S A	SECTOR	OBSTRUCTION	BRG / DIST	ELEVATION (MSL)	M S A		
CITY AND STATE		AIRPORT & ELEVATION		547	FACILITY		PROCEDURE AND AMENDMENT NO:		REGION		
MUSCATINE, IA		MUSCATINE MUNI			RNAV		RNAV (GPS) RWY 6, ORIG		ACE		



NOTES / EXPLANATIONS FROM OPPOSITE SIDE OF FORM:
5. SEE ATTACHED AIRSPACE LETTER.

RASS (PRESSURE PATTERNS ARE THE SAME)
KMUT - 547 MSL
KIOW - 668 MSL

ZESHO: 4120.077N-09125.524W
DOVWE: 4111.559N-09118.568W
IZBUF: 4115.819N-09122.042W
LETCA: 4118.971N-09115.250W
R06: 4121.738N-09109.266W
EDAGE 4128.105N-09055.424W

PARA 251 34:1 PENETRATIONS:

OBS ID	LAT/LON	MSL	34:1
KMUTC014	412126.48N-0910940.99W	616.00	1.61
KMUTC013	412136.49N-0910939.64W	599.00	2.76

FPO NOTIFIED OF PENETRATIONS.

LPV:

INNER SURFACE: 27.03:1
OUTER SURFACE: 34:1
LNAV/VNAV:
INNER SURFACE: 23.4:1
OUTER SURFACE: 34:1

* REQUEST FC VERIFICATION TO 4D ACCURACY CODE

OBST #11 - HORIZONTAL & VERTICAL EVALUATION AT 899' MSL

PART B - SUPPLEMENTAL DATA

1. COMMUNICATIONS WITH :		2. WEATHER SERVICE		3. ALTIMETER SETTING	
ZAU QUAD CITY APP CON FOD FSS		N W S	OTHER:	SOURCE: KMUT/KIOW	
		F A A	AWOS-3		
		A / C		DISTANCE: 24.23	
SATISFACTORY ON:		LOCATION: ON AIRPORT		HOURS REMOTE OPERATION:	
☒ VHF ☒ UHF ☐ HF		HRS OPTN: 24		24 HOUR BACK-UP	
4. MONITOR STATUS	PRIMARY			SECONDARY	
	NAVAID:			NAVAID:	
	MONITOR POINT:			MONITOR POINT:	
	HRS OPTN:	CAT 1 CAT 3		HRS OPTN:	CAT 1 CAT 3
5. AIRSPACE		FLOOR OF CONTROLLED AIRSPACE UNDER FAC		CONTROL AREA	
		CONTROL ZONE:		HOURS OPTN	
6. APPROACH & RUNWAY LIGHTING	ALS		☒ REIL 6, 12, 24, 30 (PCL)		
	(S) SALS		TDZ		
	☒ MALSR 24 (PCL)		C/LINE		
	HIRL				
☒ MIRL 6, 12, 24, 30 (PCL)		☒		OTHER (Specify) PAPI-4L 6, 12, 24, 30 (PCL)	
7. RUNWAY MARKINGS				8. RUNWAY VISUAL RANGE	
ALL WEATHER PIR-G 24				APPROACH	
INSTRUMENT NPI-G 6, 12, 30				ROLL OUT	
9. GLIDE SLOPE		G S ANGLE: 3.00		ELEV RWY THRESHOLD: 544.8	
		DISTANCE FROM RWY:		ELEV GS ANTENNA:	
				THRESHOLD CROSSING HEIGHT: 45.0	
10. FINAL APPROACH COURSE AIMING		☒	RUNWAY THRESHOLD		F T. FROM THRESHOLD
		☒	ON CENTERLINE		F T. FROM CENTERLINE
11. WAIVERS OF STANDARDS			NUMBER OF WAIVERS ON FILE		DATES OF APPROVAL
			NONE		

PART C - REMARKS:

KMUT AWOS-3 AND KIOW ASOS ON SERVICE A.

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

VGSI DATA: 3.00/34

PART D - PREPARED BY:
GEORGE E. DAVIS (KIRKPATRICK)

DATE:
03/14/2006

TITLE:
AERONAUTICAL INFORMATION SPECIALIST

OFFICE:
AVN-120

