

U.S. Department
of Transportation

800 Independence Ave., S.W.
Washington, D.C. 20591

**Federal Aviation
Administration**

Transmittal Letter 16-25

October 21, 2016

**PREPARED BY THE AERONAUTICAL INFORMATION GROUP, AJV-53
(AVAILABLE ON THE WEB AT [HTTP://NFDC.FAA.GOV](http://NFDC.FAA.GOV))**

**The enclosed Standard Instrument Approach Procedures, Departure
Procedures/Takeoff Minimums and Fix Actions are effective as indicated.**

[4910-13]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 97

[Docket No. [31103](#); Amdt. No. [3719](#)]

**Standard Instrument Approach Procedures, and Takeoff Minimums
and Obstacle Departure Procedures; Miscellaneous Amendments**

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This rule establishes, amends, suspends, or removes Standard Instrument Approach Procedures (SIAPs) and associated Takeoff Minimums and Obstacle Departure Procedures (ODPs) for operations at certain airports. These regulatory actions are needed because of the adoption of new or revised criteria, or because of changes occurring in the National Airspace System, such as the commissioning of new navigational facilities, adding new obstacles, or changing air traffic requirements. These changes are designed to provide safe and efficient use of the navigable airspace and to promote safe flight operations under instrument flight rules at the affected airports.

DATES: This rule is effective [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]. The compliance date for each SIAP, associated Takeoff Minimums, and ODP is specified in the amendatory provisions.

The incorporation by reference of certain publications

listed in the regulations is approved by the Director of the Federal Register as of [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: Availability of matters incorporated by reference in the amendment is as follows:

For Examination

1. U.S. Department of Transportation, Docket Ops-M30, 1200 New Jersey Avenue SE, West Bldg., Ground Floor, Washington, D.C., 20590-0001.

2. The FAA Air Traffic Organization Service Area in which the affected airport is located;

3. The office of Aeronautical Navigation Products, 6500 South MacArthur Blvd., Oklahoma City, OK 73169 or,

4. The National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:
http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Availability

All SIAPs and Takeoff Minimums and ODPs are available online free of charge. Visit the National Flight Data Center at nfdc.faa.gov to register. Additionally, individual SIAP and Takeoff Minimums and ODP copies may be obtained from the FAA Air Traffic Organization Service Area in which the affected airport is located.

FOR FURTHER INFORMATION CONTACT: Thomas J. Nichols, Flight Procedure Standards Branch (AFS-420), Flight Technologies and Programs Divisions, Flight Standards Service, Federal Aviation Administration, Mike Monroney Aeronautical Center, 6500 South MacArthur Blvd. Oklahoma City, OK. 73169 (Mail Address: P.O. Box 25082, Oklahoma City, OK 73125) Telephone: (405) 954-4164.

SUPPLEMENTARY INFORMATION:

This rule amends Title 14 of the Code of Federal Regulations, Part 97 (14 CFR part 97), by establishing, amending, suspending, or removes SIAPS, Takeoff Minimums and/or ODPS. The complete regulatory description of each SIAP and its associated Takeoff Minimums or ODP for an identified airport is listed on FAA form documents which are incorporated by reference in this amendment under 5 U.S.C. 552(a), 1 CFR part 51, and 14 CFR part §97.20. The applicable FAA forms are FAA Forms 8260-3, 8260-4, 8260-5, 8260-15A, and 8260-15B when required by an entry on 8260-15A.

The large number of SIAPs, Takeoff Minimums and ODPs, their complex nature, and the need for a special format make publication in the **Federal Register** expensive and impractical. Further, airmen do not use the regulatory text of the SIAPs, Takeoff Minimums or ODPs, but instead refer to their graphic depiction on charts printed by publishers of aeronautical materials. Thus, the advantages of incorporation by reference are realized and publication of the complete description of each

SIAP, Takeoff Minimums and ODP listed on FAA form documents is unnecessary. This amendment provides the affected CFR sections and specifies the types of SIAPs, Takeoff Minimums and ODPs with their applicable effective dates. This amendment also identifies the airport and its location, the procedure, and the amendment number.

Availability and Summary of Material Incorporated by Reference

The material incorporated by reference is publicly available as listed in the ADDRESSES section.

The material incorporated by reference describes SIAPS, Takeoff Minimums and/or ODPS as identified in the amendatory language for part 97 of this final rule.

The Rule

This amendment to 14 CFR part 97 is effective upon publication of each separate SIAP, Takeoff Minimums and ODP as Amended in the transmittal. Some SIAP and Takeoff Minimums and textual ODP amendments may have been issued previously by the FAA in a Flight Data Center (FDC) Notice to Airmen (NOTAM) as an emergency action of immediate flight safety relating directly to published aeronautical charts.

The circumstances that created the need for some SIAP and Takeoff Minimums and ODP amendments may require making them effective in less than 30 days. For the remaining SIAPs and Takeoff Minimums and ODPs, an effective date at least 30 days after publication is provided.

Further, the SIAPs and Takeoff Minimums and ODPs contained in this amendment are based on the criteria contained in the U.S. Standard for Terminal Instrument Procedures (TERPS). In developing these SIAPs and Takeoff Minimums and ODPs, the TERPS criteria were applied to the conditions existing or anticipated at the affected airports. Because of the close and immediate relationship between these SIAPs, Takeoff Minimums and ODPs, and safety in air commerce, I find that notice and public procedure under 5 U.S.C. 553(b) are impracticable and contrary to the public interest and, where applicable, under 5 U.S.C 553(d), good cause exists for making some SIAPs effective in less than 30 days.

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. It, therefore--(1) is not a "significant regulatory action" under Executive Order 12866;(2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26,1979) ; and (3)does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. For the same reason, the FAA certifies that this amendment will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR part 97:

Air Traffic Control, Airports, Incorporation by reference,
Navigation (Air).

Issued in Washington, DC on [OCTOBER 21, 2016](#)

A handwritten signature in black ink, appearing to read "John S. Duncan", with a stylized, flowing script.

John S. Duncan
Director, Flight Standards Service

ADOPTION OF THE AMENDMENT

Accordingly, pursuant to the authority delegated to me, Title 14, Code of Federal Regulations, Part 97 (14 CFR part 97) is amended by establishing, amending, suspending, or removing Standard Instrument Approach Procedures and/or Takeoff Minimums and Obstacle Departure Procedures effective at 0901 UTC on the dates specified, as follows:

Part 97—Standard Instrument Approach Procedures

1. The authority citation for part 97 continues to read as follows:

AUTHORITY: 49 U.S.C. 106(f), 106(g), 40103, 40106, 40113, 40114, 40120, 44502, 44514, 44701, 44719, 44721-44722.

2. Part 97 is amended to read as follows:

Effective 8 December 2016

Hastings, NE, Hastings Muni, RNAV (GPS) RWY 14, Orig-B
 Las Cruces, NM, Las Cruces Intl, ILS OR LOC RWY 30, Amdt 3A
 Shirley, NY, Brookhaven, RNAV (GPS)-A, Orig
 Shirley, NY, Brookhaven, RNAV (GPS) Y RWY 24, Amdt 1A, CANCELED
 Shirley, NY, Brookhaven, RNAV (GPS) Z RWY 24, Orig-A, CANCELED
 Houston, TX, George Bush Intercontinental/Houston, RNAV (RNP) Y RWY 26R, Orig-C

Effective 5 January 2017

Redding, CA, Redding Muni, Takeoff Minimums and Obstacle DP, Amdt 5B
 Redding, CA, Redding Muni, VOR RWY 34, Amdt 10F
 Atlanta, GA, Dekalb-Peachtree, VOR/DME RWY 21L, Amdt 2C, CANCELED
 Eastman, GA, Heart of Georgia Rgnl, NDB RWY 2, Amdt 3, CANCELED
 Dwight, IL, Dwight, RNAV (GPS) RWY 27, Orig, CANCELED
 Dwight, IL, Dwight, Takeoff Minimums and Obstacle DP, Orig, CANCELED
 Garden City, KS, Garden City Regional, NDB RWY 35, Orig-A, CANCELED
 Garden City, KS, Garden City Regional, VOR RWY 35, Amdt 7A, CANCELED
 Flint, MI, Bishop Intl, VOR RWY 9, Orig, CANCELED
 Flint, MI, Bishop Intl, VOR RWY 27, Orig-A, CANCELED
 Saginaw, MI, MBS Intl, VOR RWY 5, Amdt 14A, CANCELED
 Saginaw, MI, MBS Intl, VOR RWY 23, Amdt 14A, CANCELED
 Saginaw, MI, MBS Intl, VOR RWY 32, Amdt 9B, CANCELED
 Lewistown, MT, Lewistown Muni, RNAV (GPS) RWY 8, Amdt 2
 Lewistown, MT, Lewistown Muni, RNAV (GPS) RWY 26, Amdt 1
 Lewistown, MT, Lewistown Muni, Takeoff Minimums and Obstacle DP, Amdt 4
 Lewistown, MT, Lewistown Muni, VOR RWY 8, Amdt 16
 Casselton, ND, Casselton Robert Miller Rgnl, VOR/DME RWY 31, Amdt 1A
 Hastings, NE, Hastings Muni, VOR RWY 4, Amdt 6A, CANCELED
 Kearney, NE, Kearney Rgnl, VOR RWY 13, Amdt 2B, CANCELED
 Kearney, NE, Kearney Rgnl, VOR RWY 36, Amdt 10, CANCELED
 Rochester, NH, Skyhaven, Takeoff Minimums and Obstacle DP, Amdt 6A
 Alamogordo, NM, Alamogordo-White Sands Rgnl, CORONA TWO GRAPHIC DP
 Alamogordo, NM, Alamogordo-White Sands Rgnl, RNAV (GPS) RWY 4, Amdt 1
 Alamogordo, NM, Alamogordo-White Sands Rgnl, Takeoff Minimums and Obstacle DP, Amdt 1A
 Alamogordo, NM, Alamogordo-White Sands Rgnl, VOR RWY 4, Amdt 3
 Santa Fe, NM, Santa Fe Muni, ILS OR LOC RWY 2, Amdt 7
 Santa Fe, NM, Santa Fe Muni, RNAV (GPS) RWY 2, Amdt 1
 Santa Fe, NM, Santa Fe Muni, RNAV (GPS) RWY 15, Amdt 1

Santa Fe, NM, Santa Fe Muni, RNAV (GPS) RWY 20, Amdt 1
Santa Fe, NM, Santa Fe Muni, RNAV (GPS) RWY 28, Amdt 1
Santa Fe, NM, Santa Fe Muni, RNAV (GPS) RWY 33, Amdt 1
Perryton, TX, Perryton Ochiltree County, Takeoff Minimums and Obstacle DP, Amdt 1
Everett, WA, Snohomish County (Paine Fld), RNAV (GPS) RWY 34L, Amdt 2
Manitowoc, WI, Manitowoc County, VOR RWY 17, Amdt 15, CANCELED
Marshfield, WI, Marshfield Muni, NDB RWY 5, Amdt 14B, CANCELED

RNAV - STANDARD US DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION						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		LPV: DA LNAV/VNAV: DA LNAV: RW14 CLIMB TO 4000 DIRECT FEPOB AND HOLD. ADDITIONAL FLIGHT DATA: HOLD SE, RT, 323.39 INBOUND. CHART FAS OBST: 2016 TREE 403708N/0982624W CHART FAS OBST: 2119 TREE 404007N/0982751W CHART 2016 TREE 403708N/0982624W. DISTANCE TO THLD FROM 259 HAT: 0.67 NM. WAAS CHANNEL # 65612 REFERENCE PATH ID: W14A DISTANCE TO THLD FROM 259 HAT 0.67NM LTP HAE: 572.5 M											
EAR VOR				CIRLU (FB)				081.68 / 16.31				4000													
GRI VOR/DME				EBIKE (FB)				194.06 / 8.90				4000													
CIRLU (IAF)				IDROC (NOPT) (FB)				053.16 / 5.00				4000													
EBIKE (IAF)				IDROC (NOPT) (FB)				233.33 / 8.79				4000													
IDROC (IF/IAF)				OWNEW (FB)				143.22 / 6.01				3600													
OWNEW (FAF)				CISOT/1.40 NM TO RW14 (FB)				143.26 / 3.53																	
(SEE FORM 8260-10)																									
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF) 2. HOLD NW IDROC, RT, 143.22 INBOUND, 4000 FT. IN LIEU OF PT (IAF) 3. FAC: 143.26 FAF: OWNEW DIST FAF TO MAP: 4.93 THLD: 4.93 4. MIN. ALT: IDROC 4000, OWNEW 3600, CISOT/1.40 NM TO RW14 2440 5. DIST TO THLD FROM OM: _____ MM: _____ IM: _____ 150 HAT: _____ 100 HAT: _____ GS ANT: _____ 6. MIN GS INCPT: 3600 GS ALT AT: OWNEW OM: _____ MM: _____ IM: _____ 7. GS ANGLE: 3.00 TCH: 45.0 8. MSA FROM: RW14 4500																MAG VAR: 7E EPOCH YEAR: 1995									
MINIMUMS																									
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT								ALTERNATE: N A		STANDARD @															
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	2220	1	259	2220	1	259	2220	1	259	2220	1	259													
LNAV/VNAV DA	2280	1	319	2280	1	319	2280	1	319	2280	1	319													
LNAV MDA	2280	1	319	2280	1	319	2280	1	319	2280	1	319													
CIRCLING	2380	1	419	2420	1	459	2540	1 1/2	579	2540	2	579													
NOTES: CHART NOTE: BARO-VNAV NA WHEN USING GRAND ISLAND ALTIMETER SETTING. CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -18C (0F) OR ABOVE 31C (87F). CHART NOTE: DME/DME RNP-0.3 NA. CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT. (CONTINUED ON PAGE 2)																@ NA WHEN LOCAL WEATHER NOT AVAILABLE.									
CITY AND STATE HASTINGS, NE				ELEVATION: 1961 TDZE: 1961 AIRPORT NAME: HASTINGS MUNI				FACILITY IDENTIFIER: RNAV				PROCEDURE NO./AMDT NO./EFFECTIVE DATE: RNAV (GPS) RWY 14, ORIG-B 8 DECEMBER 2016				SUP:									
																AMDT: ORIG-A									
																DATED 03/08/2012									

QUALITY
 24
 CHECKED

US 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, (CONT.):

FROM	TO	COURSE AND DISTANCE	ALTITUDE
CISOT/1.40 NM TO RW14	RW14 (MAP) (FO)	143.26 / 1.40	
RW14 (MAP)	FEPOB (FO)		4000

NOTES, (CONT.):

WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE GRAND ISLAND ALTIMETER SETTING AND INCREASE ALL DA/MDA 80 FEET; INCREASE LPV ALL CATS VISIBILITY 1/8 MILE, LNAV/VNAV ALL CATS VISIBILITY 3/8 MILE, LNAV CATS C/D VISIBILITY 1/8 MILE AND CIRCLING CAT C VISIBILITY 1/4 MILE.

QUALITY
24
CHECKED

CITY AND STATE

HASTINGS, NE

ELEVATION: 1961

TDZE: 1961

AIRPORT NAME:

HASTINGS MUNI

FACILITY
IDENTIFIER:
RNAV

PROCEDURE NO./AMDT NO./EFFECTIVE DATE:

RNAV (GPS) RWY 14, ORIG-B

8 DECEMBER 2016

SUP:

AMDT: **ORIG-A**

DATED: **03/08/2012**

**RNAV STANDARD INSTRUMENT APPROACH PROCEDURE
FLIGHT STANDARDS SERVICE - FAR 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.

FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KHSI
RUNWAY	RW14
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W14A
LTP/FTP LATITUDE	403651.7610N
LTP/FTP LONGITUDE	0982601.1490W
LTP/FTP ELLIPSOIDAL HEIGHT	+05725
FPAP LATITUDE	403534.3100N
FPAP LONGITUDE	0982503.2000W
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	0784
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
 <u>CRC REMAINDER</u>	 F8E78B59

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+05978
FPAP ORTHOMETRIC HEIGHT	+05978

QUALITY
24
CHECKED

CITY AND STATE HASTINGS, NE	ELEVATION: 1961 AIRPORT NAME: HASTINGS MUNI	TDZE: 1961 RNAV	PROCEDURE NO./AMDT NO./EFFECTIVE DATE: RNAV (GPS) RWY 14, ORIG-B 8 DECEMBER 2016	SUP:
				AMDT: ORIG-A
				DATED: 03/08/2012

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE FLIGHT STANDARDS SERVICES - 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.
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ARINC SUMMARY - KHSI

ROUTES

TRANSITION	WPT SEQ	WPT NAME	LEG TYPE	FB/FO	RNP	MAG CRS	REC NAV	ANGLE	TURN DIR	CENTER FIX	TURN RADIUS	ALTITUDE DESCRIPTION & VALUE	SPEED LIMIT DESCRIPTION & VALUE	WPT DESCRIPTION CODE
EAR	010	EAR	IF	FB										V
EAR	020	CIRLU	TF	FB	2.0	081.7						AA 04000		E A
EAR	030	IDROC	TF	FB	1.0	053.2						AA 04000		EE B
GRI	010	GRI	IF	FB										V
GRI	020	EBIKE	TF	FB	2.0	194.1						AA 04000		E A
GRI	030	IDROC	TF	FB	1.0	233.3						AA 04000		EE B
IDROC	010	IDROC	HF	FO		143.2			R			AA 04000		EE A
	010	IDROC	IF	FB								AA 04000		E I
	020	OWNEW	TF	FB	1.0	143.2				RW14		AA 03600		E F
	021	CISOT	TF	FB	0.3	143.3		3.00				AA 02440 GS 02454		E S
	030	RW14	TF	FO	0.3	143.3		3.00				AT 02006		GY M
	040	FEPOB	DF	FO								AA 04000		EYM
	050	FEPOB	HM	FO		323.4			R			AA 04000		EE

POINTS

POINT NAME	LATITUDE	LONGITUDE
EAR	N404332.17	W0990018.45
GRI	N405902.50	W0981853.20
CIRLU	N404352.84	W0983851.72
CISOT	N403804.77	W0982655.82
EBIKE	N405043.75	W0982306.05
FEPOB	N402630.59	W0981817.66
IDROC	N404622.08	W0983309.21
OWNEW	N404108.99	W0982913.93

RUNWAYS

RUNWAY	THRESHOLD LATITUDE	THRESHOLD LONGITUDE	THRESHOLD ELEVATION	PROCEDURE TCH
RW14	N403651.76	W0982601.15	01961	45

CITY AND STATE HASTINGS, NE	ELEVATION: 1961 TDZE: 1961 AIRPORT NAME: HASTINGS MUNI	FACILITY IDENTIFIER: RNAV	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE: RNAV (GPS) RWY 14, ORIG-B 8 DECEMBER 2016	SUP: 4 AMDT: ORIG-A DATED: 03/08/2012
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US DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION		ILS - STANDARD INSTRUMENT APPROACH PROCEDURE TITLE 14 CFR PART 97.29		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		ILS: DA LOC: I-LRU 1.40 DME FIX						
DMN VORTAC		JOSPO/I-LRU 7.42 DME		083.17 / 39.68				7700		CLIMB TO 5100 THEN CLIMBING LEFT TURN TO 9000 ON HEADING 139 AND ON DMN VORTAC R-094 TO MOLLY INT/DMN 46.65 DME AND HOLD, CONTINUE CLIMB-IN-HOLD TO 9000. ALTERNATE MA (DO NOT CHART): CLIMB TO 5100 THEN (SEE FORM 8260-10) ADDITIONAL FLIGHT DATA: HOLD E, LT, 273.57 INBOUND. CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD E MOLLY INT/EWM 24.00 DME, LT, 274.28 INBOUND. CHART FAS OBST: 4449 RD (N) 321659N/1065448W CHART PLANVIEW NOTE: DME REQUIRED CHART R-5107A/5107K. CHART VDP AT 2.15 DME* DISTANCE VDP TO THLD 0.74 NM. *LOC ONLY. CHART (CFBKM) AT INTERSECTION OF MOLLY DR LEG AND INTERMEDIATE COURSE. CHART CIRCLING ICON. CHART IN PLANVIEW: DMN 39.68 DME AT JOSPO.						
MOLLY INT/EWM 24.00 DME (IAF)		MENDZ/I-LRU 12.32 DME (NOPT)		352.00 / 3.62 (HDG) & 307.01 / 2.68 (I-LRU)				7800								
MENDZ/I-LRU 12.32 DME (IF)		JOSPO/I-LRU 7.42 DME		307.01 / 4.90 (I-LRU)				6400								
1. PT <u>R</u> SIDE OF COURSE <u>127.01</u> OUTBOUND <u>6400</u> FT WITHIN <u>10</u> MILES OF <u>JOSPO</u> (IAF)										MAG VAR: 8E EPOCH YEAR: 2020						
2. _____																
3. FAC: <u>307.01</u> FAF: <u>JOSPO/I-LRU 7.42 DME</u> DIST FAF TO MAP: _____ THLD: <u>6.02</u>																
4. MIN. ALT: <u>JOSPO 6400</u>																
5. DIST TO THLD FROM OM: _____ MM: _____ IM: _____ 150 HAT: _____ 100 HAT: _____ GS ANT: <u>979</u>																
6. MIN GS INCPT: <u>6400</u> GS ALT AT: <u>JOSPO 6400</u> OM: _____ MM: _____ IM: _____																
7. GS ANGLE: <u>3.00</u> TCH: <u>46.5</u>																
8. MSA FROM: <u>KLRU 10200</u>																
MINIMUMS																
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT								ALTERNATE: N A X								
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
S-ILS 30		4644	1/2	200	4644	1/2	200	4644	1/2	200	4644	1/2	200			
S-LOC 30		4720	1/2	276	4720	1/2	276	4720	1/2	276	4720	1/2	276			
CIRCLING		4900	1	443	5040	1	583	5320	2 1/2	863	5320	2 3/4	863			
NOTES: CHART NOTE: DME REQUIRED. CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT MOLLY ON V611 SOUTHEAST BOUND. CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE DEMING ALTIMETER SETTING: INCREASE DA TO 4758 FEET AND ALL VISIBILITIES 1/8 MILE; INCREASE ALL MDA 120 FEET AND VISIBILITY CAT C AND D (CONTINUED ON PAGE 2)																
CITY AND STATE LAS CRUCES, NM		ELEVATION: 4457 TDZE: 4444 AIRPORT NAME: LAS CRUCES INTL		FACILITY IDENTIFIER: I-LRU		PROCEDURE NO./AMDT NO./EFFECTIVE DATE: ILS OR LOC RWY 30, AMDT 3A 8 DECEMBER 2016						SUP: AMDT: 3 DATED 08/18/2016				



US DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION ILS - STANDARD INSTRUMENT APPROACH PROCEDURE - TITLE 14 CFR PART 97.29			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.	
MISSED APPROACH INSTRUCTIONS, (CONT.): CLIMBING LEFT TURN TO 9000 ON HEADING 139 AND ON EWM VORTAC R-274 TO MOLLY INT/EWM 24.00 DME AND HOLD.				
NOTES, (CONT.): 1/2 MILE. CHART NOTE: VDP NA WHEN USING DEMING ALTIMETER SETTING.				
QUALITY 11 CHECKED				
CITY AND STATE LAS CRUCES, NM	ELEVATION: 4457 AIRPORT NAME: LAS CRUCES INTL	TDZE: 4444 FACILITY IDENTIFIER: I-LRU	PROCEDURE NO./AMDT NO./EFFECTIVE DATE: ILS OR LOC RWY 30, AMDT 3A 8 DECEMBER 2016	SUP: AMDT: 3 DATED: 08/18/2016

US 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		KOYEN					
BDR VOR/DME		OCTAV (FB)		132.03 / 15.09				2000		CLIMB TO 2000 DIRECT PIRCE AND HOLD.					
HTO VORTAC		FRANQ (FB)		265.98 / 12.73				2000							
FRANQ (IAF)		ARDIS (NOPT) (FB)		329.18 / 8.00				2000							
OCTAV (IAF)		ARDIS (NOPT) (FB)		149.02 / 8.00				2000							
ARDIS (IF)		WEENG (FB)		239.10 / 5.13				1700							
WEENG (FAF)		KOYEN (MAP) (FO)		239.05 / 4.37						ADDITIONAL FLIGHT DATA: HOLD SW, RT, 058.89 INBOUND. CHART FAS OBST: 213 TREE 405041N/0724937W CHART CIRCLING ICON. WEENG TO RWY 24: 3.04/45					
KOYEN (MAP)		481 MSL		239.05											
481 MSL		PIRCE (FO)						2000							
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF)															
2. PROFILE STARTS AT ARDIS															
3. FAC: 239.05 FAF: WEENG DIST FAF TO MAP: 4.37 THLD: _____															
4. MIN. ALT: ARDIS 2000, WEENG 1700															
5. DIST TO THLD FROM OM: _____ MM: _____ IM: _____ 150 HAT: _____ 100 HAT: _____ GS ANT: _____															
6. MIN GS INCPT: _____ GS ALT AT: _____ OM: _____ MM: _____ IM: _____															
7. GS ANGLE: _____ TCH: 34:1 IS NOT CLEAR															
8. MSA FROM: KOYEN 1900															
MAG VAR: 14W EPOCH YEAR: 2000															
MINIMUMS															
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT										ALTERNATE: N A		STANDARD @			
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
CIRCLING	560	1	479	560	1	479		NA			NA				
NOTES: CHART NOTE: DME/DME RNP-0.3 NA. @ NA WHEN LOCAL WEATHER NOT AVAILABLE. CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE LONG ISLAND MACARTHUR ALTIMETER SETTING AND INCREASE ALL MDAS 40 FEET. CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS ON BDR VOR/DME AIRWAY RADIALS 054 CW 212. (CONTINUED ON PAGE 2)															
CITY AND STATE SHIRLEY, NY		ELEVATION: 81 TDZE: AIRPORT NAME: BROOKHAVEN		FACILITY IDENTIFIER: RNAV		PROCEDURE NO./AMDT NO./EFFECTIVE DATE: RNAV (GPS)-A, ORIG 8 DECEMBER 2016				SUP: AMDT: NONE DATED		QUALITY 22 CHECKED			

US 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.

NOTES, (CONT.):

CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS ON HTO VORTAC AIRWAY RADIALS 236 CW 285.

CHART NOTE: RWY 24, HELICOPTER VISIBILITY BELOW 3/4 SM NOT AUTHORIZED.

CITY AND STATE
SHIRLEY, NY

ELEVATION: 81 TDZE:
AIRPORT NAME:
BROOKHAVEN

FACILITY
IDENTIFIER:
RNAV

PROCEDURE NO./AMDT NO./EFFECTIVE DATE:
RNAV (GPS)-A, ORIG
8 DECEMBER 2016

SUP: 22
AMDT: NONE
DATED:

QUALITY
22
CHECKED

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE FLIGHT STANDARDS SERVICES - 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.		
ARINC SUMMARY - KHWV ROUTES														
TRANSITION	WPT SEQ	WPT NAME	LEG TYPE	FB/FO	RNP	MAG CRS	REC NAV	ANGLE	TURN DIR	CENTER FIX	TURN RADIUS	ALTITUDE DESCRIPTION & VALUE	SPEED LIMIT DESCRIPTION & VALUE	WPT DESCRIPTION CODE
BDR	010	BDR	IF	FB										V
BDR	020	OCTAV	TF	FB	2.0	132.0						AA 02000		E A
BDR	030	ARDIS	TF	FB	1.0	149.0						AA 02000		EE B
HTO	010	HTO	IF	FB										V
HTO	020	FRANQ	TF	FB	2.0	266.0						AA 02000		E A
HTO	030	ARDIS	TF	FB	1.0	329.2						AA 02000		EE B
	010	ARDIS	IF	FB								AA 02000		E I
	020	WEENG	TF	FB	1.0	239.1				KOYEN		AA 01700		E F
	030	KOYEN	TF	FO	0.3	239.1		3.04				AT 00287		EY M
	040		CA	FB		239.1						AA 00481		M
	050	PIRCE	DF	FO								AA 02000		EY
	060	PIRCE	HM	FO		058.9			R			AA 02000		EE
POINTS														
POINT NAME			LATITUDE			LONGITUDE								
BDR			N410938.50			W0730728.19								
HTO			N405508.38			W0721900.14								
ARDIS			N405651.27			W0724223.97								
FRANQ			N405110.81			W0723457.48								
KOYEN			N405008.35			W0725115.92								
OCTAV			N410231.24			W0724951.74								
PIRCE			N404130.25			W0730235.92								
WEENG			N405313.87			W0724711.33								
RUNWAYS														
RUNWAY		THRESHOLD LATITUDE				THRESHOLD LONGITUDE				THRESHOLD ELEVATION			PROCEDURE TCH	
RW24		N404947.12				W0725143.88				00081			45	

CITY AND STATE SHIRLEY, NY	ELEVATION: 81 AIRPORT NAME: BROOKHAVEN	TDZE: RNAV	FACILITY IDENTIFIER: RNAV	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE: RNAV (GPS)-A, ORIG 8 DECEMBER 2016	SUP: AMDT: NONE DATED:

US 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		ADDITIONAL FLIGHT DATA:							
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF)										MAG VAR: _____ EPOCH YEAR: _____							
2. _____																	
3. FAC: _____ FAF: _____ DIST FAF TO MAP: _____ THLD: _____																	
4. MIN. ALT: _____																	
5. DIST TO THLD FROM OM: _____ MM: _____ IM: _____ 150 HAT: _____ 100 HAT: _____ GS ANT: _____																	
6. MIN GS INCPT: _____ GS ALT AT: _____ OM: _____ MM: _____ IM: _____																	
7. GS ANGLE: _____ TCH: _____																	
8. MSA FROM: _____																	
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT										ALTERNATE: N A							
CATEGORY =====>																	
	DH/MDA	VIS		DH/MDA	VIS		DH/MDA	VIS		DH/MDA	VIS		DH/MDA	VIS			
NOTES:																	
PROCEDURE CANCELED EFFECTIVE 8 DECEMBER 2016																	
CITY AND STATE SHIRLEY, NY		ELEVATION: 81 TDZE: 81 AIRPORT NAME: BROOKHAVEN		FACILITY IDENTIFIER: RNAV		PROCEDURE NO./AMDT NO./EFFECTIVE DATE: RNAV (GPS) Y RWY 24, AMDT 1A, 10/16/2014				SUP: AMDT: 1 DATED 05/10/2007							

US 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		ADDITIONAL FLIGHT DATA:					
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF)															
2. _____															
3. FAC: _____ FAF: _____ DIST FAF TO MAP: _____ THLD: _____															
4. MIN. ALT: _____															
5. DIST TO THLD FROM OM: _____ MM: _____ IM: _____ 150 HAT: _____ 100 HAT: _____ GS ANT: _____															
6. MIN GS INCPT: _____ GS ALT AT: _____ OM: _____ MM: _____ IM: _____															
7. GS ANGLE: _____ TCH: _____															
8. MSA FROM: _____										MAG VAR: _____			EPOCH YEAR: _____		
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT															
ALTERNATE: N A															
CATEGORY =====>															
		DH/MDA VIS		DH/MDA VIS				DH/MDA VIS				DH/MDA VIS			
NOTES:															
PROCEDURE CANCELED EFFECTIVE 8 DECEMBER 2016															
CITY AND STATE SHIRLEY, NY		ELEVATION: 81 TDZE: 81 AIRPORT NAME: BROOKHAVEN		FACILITY IDENTIFIER: RNAV		PROCEDURE NO./AMDT NO./EFFECTIVE DATE: RNAV (GPS) Z RWY 24, ORIG-A, 07/29/2010				SUP: AMDT: ORIG DATED 05/10/2007		QUALITY 22 CHECKED			

US DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION						RNAV (RNP) - 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			RNP: DA CLIMB TO 600 THEN CLIMBING RIGHT TURN TO 3000 DIRECT PEPBI AND HOLD. ADDITIONAL FLIGHT DATA: HOLD N, RT, 165.47 INBOUND. DISTANCE TO THLD FROM 333 HAT: 0.86 NM. ROUTE TYPE: A, H ROUTE TYPE QUALIFIER 1: F ROUTE TYPE QUALIFIER 2: S CHART MANDATORY 6000 AT SKLER CHART MANDATORY 6000 AT HOOTI CHART MANDATORY 5000 AT NEWLY #TCH 154.3 (DO NOT CHART)									
HOOTI (IAF)			GRIZL (TF) (FB) (RNP 1.00)			200.42 / 5.17			6000												
GRIZL			ZAPPO (TF) (FB) (RNP 1.00)			235.44 / 3.04			5000												
ZAPPO (IAF)			NEWLY (TF) (FB) (RNP 1.00)			267.22 / 5.04			5000												
NEWLY			RAIDS (TF) (FB) (RNP 1.00)			267.17 / 4.22			4000												
RAIDS (IF)			CHUBS (TF) (FB) (RNP 1.00)			267.13 / 7.22			3000												
(SEE FORM 8260-10)																					
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF) 2. PROFILE STARTS AT SOOPR _____ 3. FAC: <u>267.02</u> FAF: _____ DIST FAF TO MAP: _____ THLD: _____ 4. MIN. ALT: SOOPR 2600, OWELL 2000 5. DIST TO THLD FROM OM: _____ MM: _____ IM: _____ 150 HAT: _____ 100 HAT: _____ GS ANT: _____ 6. MIN GS INCPT: <u>2000</u> GS ALT AT: OWELL 2000 OM: _____ MM: _____ IM: _____ 7. GS ANGLE: <u>3.00</u> TCH: <u>59.4</u> # <u>34:1</u> IS NOT CLEAR 8. MSA FROM: RW26R 3100																		MAG VAR: 3E		EPOCH YEAR: 2015	
MINIMUMS																					
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT										ALTERNATE: N A		STANDARD									
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						
AUTHORIZATION REQUIRED																					
RNP 0.11 DA	429	4000	333	429	4000	333	429	4000	333	429	4000	333									
RNP 0.15 DA	496	4500	400	496	4500	400	496	4500	400	496	4500	400									
RNP 0.30 DA	554	5000	458	554	5000	458	554	5000	458	554	5000	458									
NOTES: CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -3C (27F) OR ABOVE 54C (130F). CHART NOTE: GPS REQUIRED. CHART SPEED ICON IN PLANVIEW AT HOOTI : MAX 210 KIAS. CHART SPEED ICON IN PLANVIEW AT SKLER : MAX 210 KIAS. (CONTINUED ON PAGE 2)																					
CITY AND STATE HOUSTON, TX				ELEVATION: 96 TDZE: 96 AIRPORT NAME: GEORGE BUSH INTERCONTINENTAL/HOUSTON				FACILITY IDENTIFIER: RNAV		PROCEDURE NO./AMDT NO./EFFECTIVE DATE: RNAV (RNP) Y RWY 26R, ORIG-C 8 DECEMBER 2016				SUP: 4 AMDT: ORIG-B DATED 06/23/2016							

US DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION				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.	
RNAV (RNP) - STANDARD, INSTRUMENT APPROACH PROCEDURE, - TITLE 14 CFR PART 97.33					
TERMINAL ROUTES, (CONT.):					
FROM		TO	COURSE AND DISTANCE	ALTITUDE	
CHUBS		SOOPR (TF) (FB) (RNP 1.00)	266.82 / 1.76	2600	
SKLER (IF)		DRKAR (TF) (FB) (RNP 1.00)	086.73 / 3.00	5100	
DRKAR		SOOPR (RF) (FB) (RNP 1.00)	(2.57 NM RADIUS CW (CFBST))/8.09	2600	
SOOPR		OWELL (TF) (FB) (RNP 1.00)	267.20 / 2.60	2000	
OWELL (FAF)		RW26R (MAP) (TF) (FO)	267.02 / 5.80		
RW26R (MAP)		MSL (CA)	267.02	600	
600 MSL		PEPBI (DF) (FO)		3000	
NOTES, (CONT.):					
CHART PLANVIEW NOTE: RADAR REQUIRED.					
CHART PLANVIEW NOTE ADJACENT TO SKLER: RF REQUIRED.					
CHART PROFILE NOTE: SEE PLANVIEW FOR MULTIPLE IF LOCATIONS.					
CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED.					
CHART NOTE: FOR INOPERATIVE ALS, INCREASE RNP 0.11 ALL CATS VISIBILITY TO RVR 5000 AND INCREASE RNP 0.15 ALL CATS VISIBILITY TO 1 1/4 SM.					
CITY AND STATE		ELEVATION: 96	TDZE: 96	FACILITY IDENTIFIER:	PROCEDURE NO./ AMDT NO./EFFECTIVE DATE:
HOUSTON, TX		AIRPORT NAME:		RNAV	RNAV (RNP) Y RWY 26R, ORIG-C
		GEORGE BUSH INTERCONTINENTAL/HOUSTON			8 DECEMBER 2016
					SUP: 4
					AMDT: ORIG-B
					DATED: 06/23/2016

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
RNAV (RNP) STANDARD INSTRUMENT APPROACH PROCEDURE
FLIGHT STANDARDS SERVICES - 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.

ARINC SUMMARY - KIAH

ROUTES

TRANSITION	WPT SEQ	WPT NAME	LEG TYPE	FB/FO	RNP	MAG CRS	REC NAV	ANGLE	TURN DIR	CENTER FIX	TURN RADIUS	ALTITUDE DESCRIPTION & VALUE	SPEED LIMIT DESCRIPTION & VALUE	WPT DESCRIPTION CODE
HOOTI	010	HOOTI	IF	FB								AT 06000	AB 210	E A
HOOTI	020	GRIZL	TF	FB	1.0							AA 06000		E
HOOTI	030	ZAPPO	TF	FB	1.0							AA 05000		E
HOOTI	040	NEWLY	TF	FB	1.0							AT 05000		E
HOOTI	050	RAIDS	TF	FB	1.0							AA 04000		E B
HOOTI	060	CHUBS	TF	FB	1.0							AA 03000		E
HOOTI	070	SOOPR	TF	FB	1.0							AA 02600		EE
SKLER	010	SKLER	IF	FB								AT 06000	AB 210	E B
SKLER	020	DRKAR	TF	FB	1.0							AA 05100		E
SKLER	030	SOOPR	RF	FB	1.0				R	CFBST	02.57	AA 02600		EE
ZAPPO	010	ZAPPO	IF	FB										E A
ZAPPO	020	NEWLY	TF	FB	1.0							AT 05000		E
ZAPPO	030	RAIDS	TF	FB	1.0							AA 04000		E B
ZAPPO	040	CHUBS	TF	FB	1.0							AA 03000		E
ZAPPO	050	SOOPR	TF	FB	1.0							AA 02600		EE
	010	SOOPR	IF	FB								AA 02600		E I
	020	OWELL	TF	FB	1.0					RW26R		AA 02000		E F
	030	RW26R	TF	FO	0.3			3.00				AT 00154		GY M
	040		CA	FB		267.0						AA 00600		M
	050	PEPBI	DF	FO								AA 03000		EY
	060	PEPBI	HM	FO		165.5			R			AA 03000		EE

POINTS

POINT NAME	LATITUDE	LONGITUDE
PEPBI	N301706.28	W0952505.01
CFBST	N300259.91	W0951008.70
CHUBS	N300025.77	W0950807.38
DRKAR	N300534.38	W0951009.46
GRIZL	N300159.07	W0944609.44
HOOTI	N300644.50	W0944347.35
NEWLY	N300024.42	W0945456.63
OWELL	N300025.93	W0951308.77
RAIDS	N300025.07	W0945948.35
SKLER	N300533.56	W0951337.25
SOOPR	N300025.43	W0951009.31
ZAPPO	N300023.40	W0944908.34

CITY AND STATE HOUSTON, TX	ELEVATION: 96 TDZE: 96	FACILITY IDENTIFIER: RNAV	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE: RNAV (RNP) Y RWY 26R, ORIG-C 8 DECEMBER 2016	SUP: 12
	AIRPORT NAME: GEORGE BUSH			AMDT: ORIG-B
	INTERCONTINENTAL/HOUSTON			DATED: 06/23/2016

QUALITY
12
CHECKED

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION <u>RNAV (RNP) STANDARD INSTRUMENT APPROACH PROCEDURE</u> FLIGHT STANDARDS SERVICES - 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.
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U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION <u>RNAV (RNP) STANDARD INSTRUMENT APPROACH PROCEDURE</u> FLIGHT STANDARDS SERVICES - 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.
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RUNWAYS					
RUNWAY	THRESHOLD LATITUDE	THRESHOLD LONGITUDE	THRESHOLD ELEVATION	PROCEDURE TCH	
RW26R	N300025.86	W0951949.29	00095	59.4	

RUNWAYS					
RUNWAY	THRESHOLD LATITUDE	THRESHOLD LONGITUDE	THRESHOLD ELEVATION	PROCEDURE TCH	
RW26R	N300025.86	W0951949.29	00095	59.4	

CITY AND STATE
HOUSTON, TX

ELEVATION: 96	TDZE: 96
AIRPORT NAME:	
GEORGE BUSH	
INTERCONTINENTAL/HOUSTON	

FACILITY
IDENTIFIER:

RNAV

PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:
RNAV (RNP) Y RWY 26R, ORIG-C
 8 DECEMBER 2016

SUP:	
AMDT:	ORIG-B
DATED:	06/23/2016

QUALITY
12
CHECKED

**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)
TITLE 14 CFR PART 97.37**

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statute miles or feet RVR unless otherwise indicated.

<u>CITY, STATE</u>	<u>AIRPORT</u>	<u>EFFECTIVE DATE</u>	<u>AMDT NO</u>
REDDING, CA	REDDING MUNI	5 JANUARY 2017	5B

TAKEOFF MINIMUMS:

RWY 12, 16, 30, 34: STANDARD.

TEXTUAL DEPARTURE PROCEDURES:

RWY 12: CLIMB ON HEADING 122.0 AND RBL R-344 TO RBL VORTAC TO 3000 BEFORE PROCEEDING ON COURSE.

RWY 16: CLIMBING LEFT TURN HEADING 110.00 AND RBL R-344 TO RBL VORTAC TO 3000 BEFORE PROCEEDING ON COURSE.

RWY 30, 34: CLIMBING RIGHT TURN HEADING 110.00 AND RBL R-344 TO RBL VORTAC TO 3000 BEFORE PROCEEDING ON COURSE.

VISUAL CLIMB OVER AIRPORT:

TAKEOFF OBSTACLE NOTES:

NOTE: RWY 12, BUSH 86 FT FROM DER, 388 FT LEFT OF CENTERLINE, 500 FT MSL. FENCE 281 FT FROM DER, 330 FT LEFT OF CENTERLINE, 19 FT AGL/500 FT MSL. TREES BEGINNING 462 FT FROM DER, 327 FT LEFT OF CENTERLINE, UP TO 541 FT MSL. TREES 1112 FT FROM DER, 209 FT LEFT OF CENTERLINE, UP TO 568 FT MSL. TRANSMISSION LINE TOWERS, 1732 FT FROM DER, 677 FT LEFT OF CENTERLINE, UP TO 60 FT AGL/543 FT MSL. TREES BEGINNING 1929 FT FROM DER, 285 FT LEFT OF CENTERLINE, UP TO 570 FT MSL.

NOTE: RWY 30, POLE AND BLDG, BEGINNING 289 FT FROM DER, 385 FT LEFT OF CENTERLINE, UP TO 30 FT AGL/529 FT MSL. POLE 474 FT FROM DER, 442 FT LEFT OF CENTERLINE, 34 FT AGL/534 FT MSL. POLE 850 FT FROM DER, 524 FT RIGHT OF CENTERLINE, 35 FT AGL/536 FT MSL. BLDG 1126 FT FROM DER, 528 FT LEFT OF CENTERLINE, 34 FT AGL/537 FT MSL. TREES BEGINNING 1686 FT FROM DER, 326 FT RIGHT OF CENTERLINE, 577 FT MSL. TREES BEGINNING 1936 FT FROM DER, 210 FT LEFT OF CENTERLINE, UP TO 594 FT MSL.

NOTE: RWY 34, SIGN 98 FT FROM DER, 356 FT LEFT OF CENTERLINE, 5 FT AGL/510 FT MSL. TREE 588 FT FROM DER, 483 FT LEFT OF CENTERLINE, 521 FT MSL. TOWER 3311 FT FROM DER, 1033 FT LEFT OF CENTERLINE, 108 FT AGL/622 FT MSL.

CONTROLLING OBSTACLES:

OBSTACLE MANDATING ODP ROUTE DEVELOPMENT: **RWY 12, 16, 30, 34:** 6440 FT MSL AAO 403604.70N-1223901.80W

REMARKS:

QUALITY
3
CHECKED

**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)
TITLE 14 CFR PART 97.37**

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statute miles or feet RVR unless otherwise indicated.

<u>CITY, STATE</u>	<u>AIRPORT</u>	<u>EFFECTIVE DATE</u>	<u>AMDT NO</u>
REDDING, CA	REDDING MUNI	5 JANUARY 2017	5B

FLIGHT INSPECTED BY:

GARY J VEER

*Digitally signed by
JACOB POWERS
Oct 04, 2016*

OFFICE SYMBOL:

FIOG

DATE:

9/20/2016

DEVELOPED BY:

ALAN WILL (IVAN BLANCO)

*Digitally signed by
JACOB POWERS
Oct 04, 2016*

OFFICE SYMBOL:

AJV-5432

DATE:

APPROVED BY:

LONNIE EVERHART

*Digitally signed by
JACOB POWERS
Oct 04, 2016*

OFFICE SYMBOL:

AJV-5430

DATE:

REQUIRED EFFECTIVE DATE:

ROUTINE

COORDINATED WITH:

A4A

ALPA

AOPA

APA

HAI

NBAA



OTHER:

CHANGES - REASONS:

1. UPDATED LOW-CLOSE-IN OBSTACLES - DATABASE MODIFICATION.



U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION VOR STANDARD INSTRUMENT APPROACH PROCEDURE FLIGHT STANDARDS SERVICE - TITLE 14 CFR PART 97.23							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		MAP: RDD VOR/DME					
BEIRA INT		RDD VOR/DME			075.92 / 5.32			3000		CLIMBING RIGHT TURN TO 5300 ON HEADING 090 AND ON RDD VOR/DME R-044 TO ITMOR INT AND HOLD, CONTINUE CLIMB-IN-HOLD TO 5300, OR AS DIRECTED BY ATC. ALTERNATE MA: CLIMBING RIGHT TURN TO 3000 IN REDDING VOR/DME HOLDING PATTERN, CONTINUE CLIMB-IN-HOLD TO 3000, HOLD S, LT, 355.00 INBOUND. ADDITIONAL FLIGHT DATA: HOLD S, LT, 357.00 INBOUND. CHART FAS OBST: 593 TREE 402954N/1221640W CHART IN PLANVIEW: REDDING VOR/DME. FAC CROSSES RWY C/L EXTENDED 2500 FT FROM THLD.					
ITMOR INT		RDD VOR/DME			224.15 / 11.95			3700							
RBL VORTAC		RDD VOR/DME			336.05 / 24.45			3000							
1. PT <u>R</u> SIDE OF COURSE <u>175.00</u> OUTBOUND <u>2000</u> FT WITHIN <u>10</u> MILES OF <u>RDD VOR/DME</u> (IAF)										MAG VAR: 18E EPOCH YEAR:1980					
2. _____															
3. FAC <u>355.00</u> FAF _____ DIST FAF TO MAP _____ THLD _____															
4. MIN. ALT <u>RDD 2.60 DME 1260</u>															
8. MSA FROM: <u>RDD VOR/DME 290-020 6700, 020-110 8100, 110-200 4600, 200-290 8200</u>															
MINIMUMS															
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT							ALTERNATE: N A		STANDARD @						
CATEGORY =====>	A			B			C			D			E		
	MDA	VIS	HAT/HAA	MDA	VIS	HAT/HAA	MDA	VIS	HAT/HAA	MDA	VIS	HAT/HAA	MDA	VIS	HAT/HAA
S-34	1260	1/2	761	1260	3/4	761	1260	1 3/4	761	1260	2	761			
CIRCLING	1260	1	755	1260	1 1/4	755	1260	2 1/4	755	1260	2 1/2	755			
DME MINIMUMS															
S-34	860	1/2	361	860	1/2	361	860	1/2	361	860	1	361			
CIRCLING	940	1	435	960	1	455	960	1 1/2	455	1060	2	555			
NOTES:															
CHART NOTE: FOR INOPERATIVE MALSR INCREASE CAT D S-34 DME MINIMUMS VISIBILITY 1/4 MILE @ CAT C 800-2 1/4, CAT D 800-2 1/2															
CITY AND STATE REDDING, CA		ELEVATION: 505 TDZE: 499 AIRPORT NAME: REDDING MUNI		FACILITY IDENTIFIER: RDD		PROCEDURE NO./AMDT NO./EFFECTIVE DATE: VOR RWY 34, AMDT 10F 5 JANUARY 2017					SUP AMDT 10E DATE 06/27/2013				

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION VOR/DME STANDARD INSTRUMENT APPROACH PROCEDURE FLIGHT STANDARDS SERVICE - TITLE 14 CFR PART 97.23										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											
										ADDITIONAL FLIGHT DATA:									
1. PT ____ SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)																			
2. _____																			
3. FAC ____ FAF _____ DIST FAF TO MAP ____ THLD _____																			
4. MIN. ALT _____																			
8. MSA FROM: _____										MAG VAR: _____ EPOCH YEAR: _____									
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT										ALTERNATE: N A									
CATEGORY =====>																			
		MDA	VIS			MDA	VIS			MDA	VIS			MDA	VIS			MDA	VIS
NOTES:																			
PROCEDURE CANCELED EFFECTIVE 5 JANUARY 2017																			
CITY AND STATE ATLANTA, GA				ELEVATION: 998 TDZE: 991 AIRPORT NAME: DEKALB-PEACHTREE				FACILITY IDENTIFIER: PDK				PROCEDURE NO./AMDT NO./EFFECTIVE DATE: VOR/DME RWY 21L, AMDT 2C, 10/15/2015				SUP AMDT DATE			
																2B			
																04/30/2015			



U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION NDB STANDARD INSTRUMENT APPROACH PROCEDURE FLIGHT STANDARDS SERVICE - TITLE 14 CFR PART 97.27										Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HATh, 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											
										ADDITIONAL FLIGHT DATA:									
1. PT ____ SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)																			
2. _____																			
3. FAC ____ FAF _____ DIST FAF TO MAP ____ THLD ____																			
4. MIN. ALT _____																			
8. MSA FROM: _____										MAG VAR: _____ EPOCH YEAR: _____									
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT										ALTERNATE: N A									
CATEGORY =====>																			
		MDA	VIS			MDA	VIS			MDA	VIS			MDA	VIS				
NOTES:																			
PROCEDURE CANCELED EFFECTIVE 5 JANUARY 2017																			
CITY AND STATE EASTMAN, GA		ELEVATION: 303 AIRPORT NAME: HEART OF GEORGIA RGNL		THRE: 295		FACILITY IDENTIFIER: EZM		PROCEDURE NO./AMDТ NO./EFFECTIVE DATE: NDB RWY 2, AMDТ 3, 05/29/2014				SUP AMDТ DATE		12 2 12/20/2007					

US 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		ADDITIONAL FLIGHT DATA:							
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF)																	
2. _____																	
3. FAC: _____ FAF: _____ DIST FAF TO MAP: _____ THLD: _____																	
4. MIN. ALT: _____																	
5. DIST TO THLD FROM OM: _____ MM: _____ IM: _____ 150 HAT: _____ 100 HAT: _____ GS ANT: _____																	
6. MIN GS INCPT: _____ GS ALT AT: _____ OM: _____ MM: _____ IM: _____																	
7. GS ANGLE: _____ TCH: _____																	
8. MSA FROM: _____										MAG VAR: _____			EPOCH YEAR: _____				
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT																	
ALTERNATE: N A																	
CATEGORY =====>		DH/MDA		VIS		DH/MDA		VIS		DH/MDA		VIS		DH/MDA		VIS	
NOTES:																	
PROCEDURE CANCELED EFFECTIVE 5 JANUARY 2017																	
CITY AND STATE DWIGHT, IL		ELEVATION: 632 TDZE: 629 AIRPORT NAME: DWIGHT				FACILITY IDENTIFIER: RNAV		PROCEDURE NO./AMD'T NO./EFFECTIVE DATE: RNAV (GPS) RWY 27, ORIG 10/27/05						SUP: AMD'T: NONE DATED			

**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)
TITLE 14 CFR PART 97.37**

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statute miles or feet RVR unless otherwise indicated.

<u>CITY, STATE</u>	<u>AIRPORT</u>	<u>EFFECTIVE DATE</u>	<u>AMDT NO</u>
DWIGHT, IL	DWIGHT	22 SEP 2011	ORIG

TAKEOFF MINIMUMS:

Procedure Canceled Effective 5 JANUARY 2017

TEXTUAL DEPARTURE PROCEDURES:

VISUAL CLIMB OVER AIRPORT:

TAKEOFF OBSTACLE NOTES:

CONTROLLING OBSTACLES:

REMARKS:

FLIGHT INSPECTED BY:

OFFICE SYMBOL:

DATE:

DEVELOPED BY:

PABLO ORTIZ

pablo.ortiz-jr@faa.gov

Digitally signed by pablo.ortiz-jr@faa.gov
DN: cn=pablo.ortiz-jr@faa.gov
Date: 2016.08.08 09:50:55 -05'00'

OFFICE SYMBOL:

AJV-5423

DATE:

08/08/2016

APPROVED BY:

TONY LAWSON

Digitally signed by
THOMAS L KIRKPATRICK
Aug 12, 2016

OFFICE SYMBOL:

AJV-5420

DATE:

REQUIRED EFFECTIVE DATE:

COORDINATED WITH:

<u>A4A</u>	<u>ALPA</u>	<u>AOPA</u>	<u>APA</u>	<u>HAI</u>	<u>NBAA</u>
☐	☒	☒	☐	☐	☒

OTHER:

ZAU, AMGR

CHANGES - REASONS:

QUALITY
12
CHECKED

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION NDB STANDARD INSTRUMENT APPROACH PROCEDURE FLIGHT STANDARDS SERVICE - TITLE 14 CFR PART 97.27										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											
										ADDITIONAL FLIGHT DATA:									
1. PT ____ SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)																			
2. _____																			
3. FAC ____ FAF _____ DIST FAF TO MAP ____ THLD ____																			
4. MIN. ALT _____																			
8. MSA FROM: _____										MAG VAR: _____ EPOCH YEAR: _____									
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT										ALTERNATE: N A									
CATEGORY =====>																			
		MDA	VIS			MDA	VIS			MDA	VIS			MDA	VIS				
NOTES:																			
PROCEDURE CANCELED EFFECTIVE 5 JANUARY 2017																			
CITY AND STATE GARDEN CITY, KS				ELEVATION: 2891 TDZE: 2885 AIRPORT NAME: GARDEN CITY REGIONAL				FACILITY IDENTIFIER: GC		PROCEDURE NO./AMDT NO./EFFECTIVE DATE: NDB RWY 35, ORIG-A, 06/15/2000						SUP AMDT DATE 11/14/1991			

QUALITY
12
CHECKED

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION VOR STANDARD INSTRUMENT APPROACH PROCEDURE FLIGHT STANDARDS SERVICE - TITLE 14 CFR PART 97.23										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											
										ADDITIONAL FLIGHT DATA:									
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF)																			
2. _____																			
3. FAC _____ FAF _____ DIST FAF TO MAP _____ THLD _____																			
4. MIN. ALT _____																			
8. MSA FROM: _____										MAG VAR: _____ EPOCH YEAR: _____									
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT										ALTERNATE: N A									
CATEGORY =====>																			
		MDA		VIS				MDA		VIS				MDA		VIS			
NOTES:																			
PROCEDURE CANCELED EFFECTIVE 5 JANUARY 2017																			
CITY AND STATE GARDEN CITY, KS				ELEVATION: 2890 TDZE: 2885 AIRPORT NAME: GARDEN CITY REGIONAL				FACILITY IDENTIFIER: GCK				PROCEDURE NO./AMD'T NO./EFFECTIVE DATE: VOR RWY 35, AMDT 7A, 06/10/1992				SUP AMD'T DATE 05/30/90			

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION VOR STANDARD INSTRUMENT APPROACH PROCEDURE FLIGHT STANDARDS SERVICE - TITLE 14 CFR PART 97.23										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									
										ADDITIONAL FLIGHT DATA:									
1. PT ____ SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)																			
2. ____																			
3. FAC ____ FAF ____ DIST FAF TO MAP ____ THLD ____																			
4. MIN. ALT ____																			
8. MSA FROM:										MAG VAR: EPOCH YEAR:									
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT										ALTERNATE: N A									
CATEGORY =====>		MDA		VIS		MDA		VIS		MDA		VIS		MDA		VIS			
NOTES:																			
PROCEDURE CANCELED EFFECTIVE 5 JANUARY 2017																			
CITY AND STATE FLINT, MI				ELEVATION: 782 AIRPORT NAME: BISHOP INTL				TDZE: 771		FACILITY IDENTIFIER: FNT		PROCEDURE NO./AMD'T NO./EFFECTIVE DATE: VOR RWY 9, ORIG, 02/21/2002				SUP AMD'T DATE			
																12 CHECKED			

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION VOR STANDARD INSTRUMENT APPROACH PROCEDURE FLIGHT STANDARDS SERVICE - TITLE 14 CFR PART 97.23										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											
										ADDITIONAL FLIGHT DATA:									
1. PT ____ SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)																			
2. _____																			
3. FAC ____ FAF _____ DIST FAF TO MAP ____ THLD _____																			
4. MIN. ALT _____																			
8. MSA FROM: _____										MAG VAR: _____ EPOCH YEAR: _____									
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT										ALTERNATE: N A									
CATEGORY =====>																			
		MDA	VIS			MDA	VIS			MDA	VIS			MDA	VIS				
NOTES:																			
PROCEDURE CANCELED EFFECTIVE 5 JANUARY 2017																			
CITY AND STATE FLINT, MI				ELEVATION: 782 TDZE: 770 AIRPORT NAME: BISHOP INTL				FACILITY IDENTIFIER: FNT		PROCEDURE NO./AMDT NO./EFFECTIVE DATE: VOR RWY 27, ORIG-A, 02/07/2013						SUP AMDT DATE		ORIG 02/21/2002	

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION VOR STANDARD INSTRUMENT APPROACH PROCEDURE FLIGHT STANDARDS SERVICE - TITLE 14 CFR PART 97.23										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											
										ADDITIONAL FLIGHT DATA:									
1. PT ____ SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)																			
2. _____																			
3. FAC ____ FAF _____ DIST FAF TO MAP ____ THLD _____																			
4. MIN. ALT _____																			
8. MSA FROM: _____										MAG VAR: _____ EPOCH YEAR: _____									
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT										ALTERNATE: N A									
CATEGORY =====>																			
		MDA	VIS			MDA	VIS			MDA	VIS			MDA	VIS				
NOTES:																			
PROCEDURE CANCELED EFFECTIVE 5 JANUARY 2017																			
CITY AND STATE SAGINAW, MI		ELEVATION: 668 AIRPORT NAME: MBS INTL		TDZE: 666		FACILITY IDENTIFIER: MBS		PROCEDURE NO./AMD'T NO./EFFECTIVE DATE: VOR RWY 5, AMDT 14A, 07/12/2001						SUP AMD'T DATE		12 14 08/01/1985			

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION VOR STANDARD INSTRUMENT APPROACH PROCEDURE FLIGHT STANDARDS SERVICE - TITLE 14 CFR PART 97.23										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		ADDITIONAL FLIGHT DATA:											
1. PT ____ SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)										MAG VAR: EPOCH YEAR:											
2. _____																					
3. FAC ____ FAF ____ DIST FAF TO MAP ____ THLD ____																					
4. MIN. ALT ____																					
8. MSA FROM: _____																					
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT										ALTERNATE: N A											
CATEGORY =====>																					
		MDA	VIS			MDA	VIS			MDA	VIS			MDA	VIS						
NOTES:																					
PROCEDURE CANCELED EFFECTIVE 5 JANUARY 2017																					
CITY AND STATE SAGINAW, MI		ELEVATION: 668 AIRPORT NAME: MBS INTL		TDZE: 665		FACILITY IDENTIFIER: MBS		PROCEDURE NO./AMDT NO./EFFECTIVE DATE: VOR RWY 32, AMDT 9B, 07/12/2001				SUP AMDT DATE		9A 06/19/2000							



RNAV - STANDARD US DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION				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		LPV: DA LNAV/VNAV: DA LNAV: RW08 CLIMB TO 4600, THEN CLIMBING RIGHT TURN TO 7700 DIRECT CIWXU AND HOLD, CONTINUE CLIMB-IN-HOLD TO 7700. ADDITIONAL FLIGHT DATA: HOLD E, RT, 272.61 INBOUND. CHART FAS OBST: 4201 TREE 470244N/1092958W 4429 AAO 470233N/1093552W DISTANCE TO THLD FROM 250 HAT: 0.63 NM. CHART VDP AT 0.88 NM TO RW08* *LNAV ONLY. WAAS CHANNEL # 86700 REFERENCE PATH ID: W08A CHART ARRIVAL HOLDING AT LWT VOR/DME: HOLD E, RT, 272.61 INBOUND, 7200. CHART CIRCLING ICON. LTP HAE: 1245.5 M						
LWT VOR/DME		EVBUJ (FO)		258.89 / 5.44			6800								
UFEXIT (IAF)		EVBUJ (NOPT) (FB)		117.11 / 5.15			6800								
AXABE (IAF)		EVBUJ (NOPT) (FB)		056.16 / 9.83			6800								
EVBUJ (IF/IAF)		OKVUJ (FB)		078.81 / 5.95			5800								
OKVUJ (FAF)		RW08 (MAP) (FO)		078.92 / 5.09			4600								
RW08 (MAP)		4600 MSL		78.92			4600								
4600 MSL		CIWXU (FO)					7700								
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF) 2. HOLD W EVBUJ, RT, 078.81 INBOUND, 6800 FT. IN LIEU OF PT (IAF) 3. FAC: 078.92 FAF: OKVUJ DIST FAF TO MAP: 5.09 THLD: 5.09 4. MIN. ALT: EVBUJ 6800, OKVUJ 5800 5. DIST TO THLD FROM OM: _____ MM: _____ IM: _____ 150 HAT: _____ 100 HAT: _____ GS ANT: _____ 6. MIN GS INCPT: 5800 GS ALT AT: OKVUJ 5800 OM: _____ MM: _____ IM: _____ 7. GS ANGLE: 3.00 TCH: 51.0 34:1 IS CLEAR 8. MSA FROM: RW08 10000										MAG VAR: 11E		EPOCH YEAR: 2020			
MINIMUMS															
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT								ALTERNATE: N A		STANDARD @					
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	4379	3/4	250	4379	3/4	250	4379	3/4	250	4379	3/4	250			
LNAV/VNAV DA	4419	7/8	290	4419	7/8	290	4419	7/8	290	4419	7/8	290			
LNAV MDA	4460	1	331	4460	1	331	4460	1	331	4460	1	331			
CIRCLING	4680	1	510	4820	1	650	4980	2 1/4	810	5240	3	1070			
NOTES: CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -26C (-14F) OR ABOVE 50C (123F). @ CAT C 900-2 1/4, CAT D 1100-3 CHART NOTE: DME/DME RNP-0.3 NA. CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT LWT VOR/DME ON V611 SOUTHEAST BOUND.															
CITY AND STATE LEWISTOWN, MT		ELEVATION: 4170 TDZE: 4129 AIRPORT NAME: LEWISTOWN MUNI		FACILITY IDENTIFIER: RNAV		PROCEDURE NO./AMDT NO./EFFECTIVE DATE: RNAV (GPS) RWY 8, AMDT 2 5 JANUARY 2017				SUP:					
										AMDT: 1B					
										DATED 06/26/2014					



US 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.



CITY AND STATE
LEWISTOWN, MT

ELEVATION: 4170 TDZE: 4129
AIRPORT NAME:
LEWISTOWN MUNI

FACILITY
IDENTIFIER:
RNAV

PROCEDURE NO./AMDT NO./EFFECTIVE DATE:
RNAV (GPS) RWY 8, AMDT 2
5 JANUARY 2017

SUP:
AMDT: 1B
DATED: 06/26/2014

**RNAV STANDARD INSTRUMENT APPROACH PROCEDURE
FLIGHT STANDARDS SERVICE - FAR 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.

FAS DATA BLOCK INFORMATION**DATA FIELD****DATA**

OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KLWT
RUNWAY	RW08
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W08A
LTP/FTP LATITUDE	470310.8090N
LTP/FTP LONGITUDE	1092810.4030W
LTP/FTP ELLIPSOIDAL HEIGHT	+12455
FPAP LATITUDE	470310.7730N
FPAP LONGITUDE	1092600.0970W
THRESHOLD CROSSING HEIGHT (TCH)	00051.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0896
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	35.0

CRC REMAINDER

4A6FEB0

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K1
LTP ORTHOMETRIC HEIGHT	+12581
FPAP ORTHOMETRIC HEIGHT	+12581

QUALITY
16
CHECKED

CITY AND STATE

LEWISTOWN, MT

ELEVATION: 4170

TDZE: 4129

AIRPORT NAME:

LEWISTOWN MUNI

FACILITY
IDENTIFIER:

RNAV

PROCEDURE NO./AMDT NO./EFFECTIVE DATE:

RNAV (GPS) RWY 8, AMDT 2

5 JANUARY 2017

SUP:

AMDT: 1B

DATED: 06/26/2014

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE
FLIGHT STANDARDS SERVICES - 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.

ARINC SUMMARY - KLWT

ROUTES

TRANSITION	WPT SEQ	WPT NAME	LEG TYPE	FB/FO	RNP	MAG CRS	REC NAV	ANGLE	TURN DIR	CENTER FIX	TURN RADIUS	ALTITUDE DESCRIPTION & VALUE	SPEED LIMIT DESCRIPTION & VALUE	WPT DESCRIPTION CODE
AXABE	010	AXABE	IF	FB										E A
AXABE	020	EVBUJ	TF	FB	1.0	056.2						AA 06800		EE B
LWT	010	LWT	IF	FB										V
LWT	020	EVBUJ	TF	FO	2.0	258.9						AA 06800		EY
LWT	030	EVBUJ	HF	FO		078.8			R			AA 06800		EE A
UFXIT	010	UFXIT	IF	FB										E A
UFXIT	020	EVBUJ	TF	FB	1.0	117.1						AA 06800		EE B
	010	EVBUJ	IF	FB								AA 06800		E I
	020	OKVUJ	TF	FB	1.0	078.8				RW08		AA 05800		E F
	030	RW08	TF	FO	0.3	078.9		3.00				AT 04179		GY M
	040		CA	FB		078.9						AA 04600		M
	050	CIWXU	DF	FO	1.0				R			AA 07700		EY
	060	CIWXU	HM	FO		272.6			R			AA 07700		EE

POINTS

POINT NAME	LATITUDE	LONGITUDE
LWT	N470310.69	W1093622.21
AXABE	N465921.66	W1095734.27
CIWXU	N465937.01	W1091504.29
OKVUJ	N470310.62	W1093537.06
UFXIT	N470620.62	W1095014.86
EVBUJ	N470309.79	W1094419.14

RUNWAYS

RUNWAY	THRESHOLD LATITUDE	THRESHOLD LONGITUDE	THRESHOLD ELEVATION	PROCEDURE TCH
RW08	N470310.81	W1092810.40	04128	51

QUALITY
16
CHECKED

CITY AND STATE LEWISTOWN, MT	ELEVATION: 4170 TDZE: 4129	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
	AIRPORT NAME: LEWISTOWN MUNI	RNAV	RNAV (GPS) RWY 8, AMDT 2 5 JANUARY 2017	AMDT: 1B
				DATED: 06/26/2014

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		LPV: DA LNAV/VNAV: DA LNAV: RW26 CLIMB TO 4600, THEN CLIMBING RIGHT TURN TO 8400 DIRECT UFXIT AND HOLD, CONTINUE CLIMB-IN-HOLD TO 8400. ADDITIONAL FLIGHT DATA: HOLD W, RT, 096.23 INBOUND. CHART FAS OBST: 4218 TREE 470248N/1092416W CHART: 4376 ROAD 470300N/1092234W DISTANCE TO THLD FROM 200 HAT: 0.51 NM. CHART VDP AT 1.00 NM TO RW26* *LNAV ONLY. WAAS CHANNEL # 50230 REFERENCE PATH ID: W26A CHART CIRCLING ICON. LTP HAE: 1240.7 M					
LWT VOR/DME		ITEVE (FO)		081.95 / 17.82				7200							
ESTRO (IAF)		ITEVE (NOPT) (FB)		296.30 / 8.36				7200							
ITEVE (IF/IAF)		ZUTOG (FB)		269.11 / 5.50				6000							
ZUTOG (FAF)		GAJMA/2.70 NM TO RW26 (FB)		259.13 / 3.07											
GAJMA/2.70 NM TO RW26		RW26 (MAP) (FO)		259.13 / 2.70											
RW26 (MAP)		4600 MSL		259.13				4600							
4600 MSL		UFXIT (FO)						8400							
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF) 2. HOLD E ITEVE, LT, 269.11 INBOUND, 7200 FT. IN LIEU OF PT (IAF) 3. FAC: 259.13 FAF: ZUTOG DIST FAF TO MAP: 5.77 THLD: 5.77 4. MIN. ALT: ITEVE 7200, ZUTOG 6000, GAJMA/2.70 NM TO RW26 5020* 5. DIST TO THLD FROM OM: _____ MM: _____ IM: _____ 150 HAT: _____ 100 HAT: _____ GS ANT: _____ 6. MIN GS INCPT: 6000 GS ALT AT: ZUTOG 6000 OM: _____ MM: _____ IM: _____ 7. GS ANGLE: 3.00 TCH: 50.0 34:1 IS CLEAR 8. MSA FROM: RW26 10000										MAG VAR: 11E		EPOCH YEAR: 2020			
MINIMUMS															
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT							ALTERNATE: N A		STANDARD @						
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	4324	3/4	200	4324	3/4	200	4324	3/4	200	4324	3/4	200			
LNAV/VNAV DA	4389	7/8	265	4389	7/8	265	4389	7/8	265	4389	7/8	265			
LNAV MDA	4480	1	356	4480	1	356	4480	1	356	4480	1	356			
CIRCLING	4680	1	510	4820	1	650	4980	2 1/4	810	5240	3	1070			
NOTES: CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -26C (-14F) OR ABOVE 50C (123F). @ CAT C 900-2 1/4, CAT D 1100-3 CHART NOTE: DME/DME RNP-0.3 NA.															
CITY AND STATE		ELEVATION: 4170 TDZE: 4124		FACILITY IDENTIFIER: RNAV		PROCEDURE NO./AMDT NO./EFFECTIVE DATE:				SUP:					
LEWISTOWN, MT		AIRPORT NAME: LEWISTOWN MUNI				RNAV (GPS) RWY 26, AMDT 1				AMDT: ORIG-A					
						5 JANUARY 2017				DATED 06/26/2014					



US DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
RNAV - STANDARD
INSTRUMENT APPROACH PROCEDURE - TITLE 14 CFR PART 97.33

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CITY AND STATE LEWISTOWN, MT	ELEVATION: 4170 AIRPORT NAME: LEWISTOWN MUNI	TDZE: 4124	FACILITY IDENTIFIER: RNAV	PROCEDURE NO./AMDT NO./EFFECTIVE DATE: RNAV (GPS) RWY 26, AMDT 1 5 JANUARY 2017	SUP:
					AMDT: ORIG-A
					DATED: 06/26/2014

**RNAV STANDARD INSTRUMENT APPROACH PROCEDURE
FLIGHT STANDARDS SERVICE - FAR 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.

FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KLWT
RUNWAY	RW26
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W26A
LTP/FTP LATITUDE	470310.7905N
LTP/FTP LONGITUDE	1092642.3275W
LTP/FTP ELLIPSOIDAL HEIGHT	+12407
FPAP LATITUDE	470310.8160N
FPAP LONGITUDE	1092852.6335W
THRESHOLD CROSSING HEIGHT (TCH)	00050.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0896
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	35.0

<u>CRC REMAINDER</u>	49E804AD
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ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K1
LTP ORTHOMETRIC HEIGHT	+12533
FPAP ORTHOMETRIC HEIGHT	+12533

QUALITY
16
CHECKED

CITY AND STATE LEWISTOWN, MT	ELEVATION: 4170 AIRPORT NAME: LEWISTOWN MUNI	TDZE: 4124 LEWISTOWN MUNI	FACILITY IDENTIFIER: RNAV	PROCEDURE NO./AMDT NO./EFFECTIVE DATE: RNAV (GPS) RWY 26, AMDT 1 5 JANUARY 2017	SUP:
					AMDT: ORIG-A
					DATED: 06/26/2014

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE
FLIGHT STANDARDS SERVICES - 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.

ARINC SUMMARY - KLWT

ROUTES

TRANSITION	WPT SEQ	WPT NAME	LEG TYPE	FB/FO	RNP	MAG CRS	REC NAV	ANGLE	TURN DIR	CENTER FIX	TURN RADIUS	ALTITUDE DESCRIPTION & VALUE	SPEED LIMIT DESCRIPTION & VALUE	WPT DESCRIPTION CODE
ESTRO	010	ESTRO	IF	FB										E A
ESTRO	020	ITEVE	TF	FB	1.0	296.3						AA 07200		EE B
LWT	010	LWT	IF	FB										V
LWT	020	ITEVE	TF	FO	2.0	082.0						AA 07200		EY
LWT	030	ITEVE	HF	FO		269.1			L			AA 07200		EE A
	010	ITEVE	IF	FB								AA 07200		E I
	020	ZUTOG	TF	FB	1.0	269.1				RW26		AA 06000		E F
	021	GAJMA	TF	FB	0.3	259.1		3.00				AA 05020 GS 05022		E S
	030	RW26	TF	FO	0.3	259.1		3.00				AT 04162		GY M
	040		CA	FB		259.1						AA 04600		M
	050	UFXIT	DF	FO	1.0				R			AA 08400		EY
	060	UFXIT	HM	FO		096.2			R			AA 08400		EE

POINTS

POINT NAME	LATITUDE	LONGITUDE
LWT	N470310.69	W1093622.21
ESTRO	N465709.42	W1090037.65
UFXIT	N470620.62	W1095014.86
GAJMA	N470310.64	W1092245.41
ITEVE	N470212.69	W1091020.79
ZUTOG	N470310.30	W1091815.92

RUNWAYS

RUNWAY	THRESHOLD LATITUDE	THRESHOLD LONGITUDE	THRESHOLD ELEVATION	PROCEDURE TCH
RW26	N470310.79	W1092642.33	04112	50

QUALITY
16
CHECKED

CITY AND STATE LEWISTOWN, MT	ELEVATION: 4170 TDZE: 4124	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
	AIRPORT NAME: LEWISTOWN MUNI	RNAV	RNAV (GPS) RWY 26, AMDT 1	AMDT: ORIG-A
			5 JANUARY 2017	DATED: 06/26/2014

**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)
TITLE 14 CFR PART 97.37**

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statute miles or feet RVR unless otherwise indicated.

CITY, STATE	AIRPORT	EFFECTIVE DATE	AMDT NO
LEWISTOWN, MT	LEWISTOWN MUNI	5 JANUARY 2017	4

TAKEOFF MINIMUMS:
RWY 21, 26, 31: STANDARD.

RWY 3: STANDARD WITH MINIMUM CLIMB OF 315 FT PER NM TO 6700.

RWY 8, 13: STANDARD WITH MINIMUM CLIMB OF 255 FT PER NM TO 5400, OR 1400-3 FOR VCOA.

TEXTUAL DEPARTURE PROCEDURES:
RWYS 3, 31: LEFT TURN.

RWYS 8, 13, 21: RIGHT TURN.

RWY 26: CLIMB HEADING 259.03.

ALL AIRCRAFT CLIMB DIRECT LWT VOR/DME. CONTINUE CLIMB IN HOLDING PATTERN (WEST, RIGHT TURNS, 094 INBOUND) TO MEA FOR ROUTE OF FLIGHT.

VISUAL CLIMB OVER AIRPORT:

RWY 8, 13: OBTAIN ATC APPROVAL FOR VCOA WHEN REQUESTING IFR CLEARANCE. CLIMB IN VISUAL CONDITIONS TO CROSS LEWISTOWN MUNI AIRPORT DIRECT LWT VOR/DME AT OR ABOVE 5400.

TAKEOFF OBSTACLE NOTES:

NOTE: RWY 3, AIRCRAFT TAIL ON TWY 636 FT FROM DER, 350 FT LEFT OF CENTERLINE, 11 FT AGL/4151 FT MSL.

NOTE: RWY 13, VEHICLE ON ROAD CROSSING RIGHT TO LEFT 483 FT FROM DER, 15 FT AGL/4175 FT MSL.

NOTE: RWY 21, GRAIN BIN 1530 FT FROM DER, 294 LEFT OF CENTERLINE, 22FT AGL/4210 FT MSL. ELEVATOR 1664 FT FROM DER, 330 LEFT OF CENTERLINE, 26 FT AGL/4214 FT MSL.

NOTE: RWY 26, TERRAIN BEGINNING 105 FT FROM DER, 404 FT LEFT OF CENTERLINE, 4133 FT MSL.

NOTE: RWY 31, TREE 457 FT FROM DER, 381 FT LEFT OF CENTERLINE, 35 FT AGL/4156 FT MSL. TREE 467 FT FROM DER, 340 FT LEFT OF CENTERLINE, 29 FT AGL/4150 FT MSL. MOVIE SCREEN LTD 1114 FT FROM DER, 593 FT RIGHT OF CENTERLINE, 48 FT AGL/4161 FT MSL.

CONTROLLING OBSTACLES:

RWY 8, 13: 5079 FT MSL AAO 465758N/1092614W.

RWY 3: 6040 FT MSL AAO 471045N/1093201W.

OBSTACLES MANDATING ODP ROUTE DEVELOPMENT: 8920 FT MSL AAO 464515N/1091827W, 5079 FT MSL AAO 465758N/1092614W (VCOA).

REMARKS:

FLIGHT INSPECTED BY:

CARL OESTERLE
Digitally signed by
DONALD H LANIER
Oct 13, 2016

OFFICE SYMBOL:

FICO

DATE:

10/06/2016

DEVELOPED BY:

SYLVAN DRAKES
Digitally signed by
SYLVAN DRAKES
Aug 31, 2016

OFFICE SYMBOL:

AJV-5432

DATE:

06/20/2016

APPROVED BY:

LONNIE EVERHART
Digitally signed by
DONALD H LANIER
Oct 13, 2016

OFFICE SYMBOL:

AJV-5430

DATE:

REQUIRED EFFECTIVE DATE:

ROUTINE

COORDINATED WITH:

A4A	ALPA	AOPA	APA	HAI	NBAA
☐	☐	☒	☐	☐	☒

OTHER:

ZLC, GTF FSS, AMGR, MT AERO,



**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)
TITLE 14 CFR PART 97.37**

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statute miles or feet RVR unless otherwise indicated.

CITY, STATE	AIRPORT	EFFECTIVE DATE	AMDT NO
LEWISTOWN, MT	LEWISTOWN MUNI	5 JANUARY 2017	4

CHANGES - REASONS:

1. CHANGED RWY 2, 7, 12, 20, 25 AND 30 TO RWY 3, 8, 13, 21, 26 AND 31 - MAGVAR UPDATE.
2. CHANGED RWY 7, 12 CEILING/VISIBILITY OF 900-2 OR STANDARD CLIMB OF 220 FT PER NM TO 6200 TO STANDARD WITH MINIMUM CLIMB OF 255 FT PER NM TO 5400, OR 1400-3 FOR VCOA. APPLICATION OF 200 FT AAO AND NEWLY SURVEYED OBSTACLES MANDATED A HIGHER CLIMB GRADIENT TO CLEAR A 5079 FT MSL AAO.
3. DELETED RWY 2 CEILING/VISIBILITY OF 1800-2 OR STANDARD CLIMB OF 280 FT PER NM TO 6900 AND ADDED STANDARD WITH MINIMUM CLIMB OF 255 FT PER NM TO 6700. SURVEYED SPOT ELEVATION MANDATED A HIGHER CLIMB GRADIENT AND LOWER CLIMB TO ALTITUDE.
4. CHANGED LWT VORTAC TO LWT VOR/DME - FACILITY UPDATED TO VOR/DME.
5. PERMANENT NOTAMS FDC 5/0890 (TAKEOFF OBSTACLE NOTES) AND FDC 0/1707 (RWYS RENUMBERED DUE TO MAGVAR) CANCELLED DUE TO THIS AMENDMENT.
6. ADDED A VCOA FOR RWYS 8/13 DUE TO OBSTACLE MORE THAN 3 MILES REQUIRING A CG.
7. ADDED CONTROLLING OBSTACLES FOR RWY 8, 13 CAUSING A CG/CTA, OBSTACLES MANDATING A ROUTE AND VCOA.

10/17/2016: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 10/13/2016.
REMOVED EFFECTIVE DATE 11/10/2016 FROM PAGE 2.



**VOR STANDARD INSTRUMENT APPROACH PROCEDURE
FLIGHT STANDARDS SERVICE - - TITLE 14 CFR PART 97.23**

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.

QUALITY
16
CHECKED

CITY AND STATE

LEWISTOWN, MT

ELEVATION: 4170

TDZE: 4129

AIRPORT NAME:

LEWISTOWN MUNI

FACILITY
IDENTIFIER:

LWT

PROCEDURE NO./AMDT NO./EFFECTIVE DATE:

VOR RWY 8, AMDT 16

5 JANUARY 2017

SUP:

AMDT: 15A

DATED: 12/16/2010

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION VOR/DME STANDARD INSTRUMENT APPROACH PROCEDURE FLIGHT STANDARDS SERVICE - TITLE 14 CFR PART 97.23										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		MAP: FAR 15.62 DME FIX							
FAR VOR/DME (IF/IAF)			TRONA/10.00 DME			283.00 / 10.00				2800		CLIMBING LEFT TURN TO 2800 DIRECT FAR VOR/DME AND HOLD.							
										ADDITIONAL FLIGHT DATA: CHART FAS OBST: 1034 TREE 465148N/0971042W CHART FARGO ASOS, 124.500 TRONA TO RW31: 3.07/40									
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF)																			
2. HOLD E FAR VOR/DME, LT, 283.00 INBOUND, 2800 FT. IN LIEU OF PT (IAF)																			
3. FAC 283.00 FAF TRONA/10.00 DME _____ DIST FAF TO MAP _____ THLD 5.62																			
4. MIN. ALT FAR VOR/DME 2800, TRONA 2800																			
8. MSA FROM: FAR VOR/DME 270-180 3600, 180-270 2800										MAG VAR: 9E EPOCH YEAR:1965									
MINIMUMS																			
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT										ALTERNATE: N A		X							
CATEGORY =====>		A			B			C			D			E					
	MDA	VIS	HAT/HAA	MDA	VIS	HAT/HAA	MDA	VIS	HAT/HAA	MDA	VIS	HAT/HAA	MDA	VIS	HAT/HAA				
S-31	1360	1	427	1360	1	427	1360	1 1/4	427		NA								
CIRCLING	1400	1	467	1400	1	467	1400	1 1/2	467		NA								
NOTES:																			
CHART PROFILE NOTE: VGSI AND DESCENT ANGLES NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).																			
CHART NOTE: USE FARGO ALTIMETER SETTING; IF NOT RECEIVED, USE MOREHEAD ALTIMETER SETTING.																			
CITY AND STATE		ELEVATION: 933		TDZE: 933		FACILITY IDENTIFIER:		PROCEDURE NO./AMDT NO./EFFECTIVE DATE:				SUP							
CASSELTON, ND		AIRPORT NAME:		CASSELTON ROBERT MILLER RGNL		FAR		VOR/DME RWY 31, AMDT 1A 5 JANUARY 2017				AMDT 1							
												DATE 12/20/2007							



U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION VOR STANDARD INSTRUMENT APPROACH PROCEDURE FLIGHT STANDARDS SERVICE - TITLE 14 CFR PART 97.23										Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HATh, 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									
										ADDITIONAL FLIGHT DATA:									
1. PT ____ SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)																			
2. ____																			
3. FAC ____ FAF ____ DIST FAF TO MAP ____ THLD ____																			
4. MIN. ALT ____																			
8. MSA FROM: ____										MAG VAR: ____ EPOCH YEAR: ____									
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT										ALTERNATE: N A									
CATEGORY =====>																			
		MDA	VIS			MDA	VIS			MDA	VIS			MDA	VIS				
NOTES:																			
PROCEDURE CANCELED EFFECTIVE 5 JANUARY 2017																			
CITY AND STATE HASTINGS, NE				ELEVATION: 1961 TDZE: 1944 AIRPORT NAME: HASTINGS MUNI				FACILITY IDENTIFIER: HSI		PROCEDURE NO./AMDT NO./EFFECTIVE DATE: VOR RWY 4, AMDT 6A, 02/05/2015				SUP AMDT DATE		12 6 03/08/2012			

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION VOR STANDARD INSTRUMENT APPROACH PROCEDURE FLIGHT STANDARDS SERVICE - TITLE 14 CFR PART 97.23										Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HATh, 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											
										ADDITIONAL FLIGHT DATA:									
1. PT ____ SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)																			
2. ____																			
3. FAC ____ FAF ____ DIST FAF TO MAP ____ THLD ____																			
4. MIN. ALT ____																			
8. MSA FROM: ____										MAG VAR: ____ EPOCH YEAR: ____									
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT										ALTERNATE: N A									
CATEGORY =====>																			
		MDA	VIS			MDA	VIS			MDA	VIS			MDA	VIS				
NOTES:																			
PROCEDURE CANCELED EFFECTIVE 5 JANUARY 2017																			
CITY AND STATE KEARNEY, NE		ELEVATION: 2131 AIRPORT NAME: KEARNEY RGNL		TDZE: 2130		FACILITY IDENTIFIER: EAR		PROCEDURE NO./AMD'T NO./EFFECTIVE DATE: VOR RWY 13, AMDT 2B, 02/05/2015				SUP AMD'T DATE		12 2A 09/20/2012					

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION VOR STANDARD INSTRUMENT APPROACH PROCEDURE FLIGHT STANDARDS SERVICE - TITLE 14 CFR PART 97.23										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													
										ADDITIONAL FLIGHT DATA:											
1. PT ____ SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)																					
2. _____																					
3. FAC ____ FAF _____ DIST FAF TO MAP ____ THLD _____																					
4. MIN. ALT _____																					
8. MSA FROM: _____										MAG VAR: _____ EPOCH YEAR: _____											
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT										ALTERNATE: N A											
CATEGORY =====>																					
		MDA	VIS			MDA	VIS			MDA	VIS			MDA	VIS						
NOTES:																					
PROCEDURE CANCELED EFFECTIVE 5 JANUARY 2017																					
CITY AND STATE KEARNEY, NE				ELEVATION: 2131 TDZE: 2131 AIRPORT NAME: KEARNEY RGNL				FACILITY IDENTIFIER: EAR				PROCEDURE NO./AMD'T NO./EFFECTIVE DATE: VOR RWY 36, AMDT 10, 01/23/2003						SUP AMD'T DATE		12 9C 04/23/1998	

**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)
TITLE 14 CFR PART 97.37**

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.
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<u>CITY, STATE</u>	<u>AIRPORT</u>	<u>EFFECTIVE DATE</u>	<u>AMDT NO</u>
ROCHESTER, NH	SKYHAVEN	5 JANUARY 2017	6A

TAKEOFF MINIMUMS:
RWY 15, 33, STANDARD

TEXTUAL DEPARTURE PROCEDURES:
RWY 33: CLIMB HEADING 327.01 TO 800, THEN CLIMBING LEFT TURN HEADING 250 TO INTERCEPT CON VOR/DME R-095 TO 3000 BEFORE PROCEEDING ON COURSE.

VISUAL CLIMB OVER AIRPORT:

TAKEOFF OBSTACLE NOTES:
NOTE: RWY 15, TREES BEGINNING 450 FT FROM DER, 295 FT LEFT OF CENTERLINE, UP TO 110 FT AGL/400 FT MSL. TREES AND POLES BEGINNING 111 FT FROM DER, 389 FT RIGHT OF CENTERLINE, UP TO 57 FT AGL/367 FT MSL.
NOTE: RWY 33, TREES BEGINNING 200 FT FROM DER, 154 FT RIGHT OF CENTERLINE, UP TO 120 FT AGL/443 FT MSL. TREES BEGINNING 106 FT FROM DER, 160 FT LEFT OF CENTERLINE, UP TO 103 FT AGL/406 FT MSL.

CONTROLLING OBSTACLES:
RWY 33: 1600 FT MSL TOWER 432116.00N/0710419.00W

REMARKS:
ROCHESTER AMENDMENT 6A DOES NOT SATISFY PERIODIC REVIEW REQUIREMENTS.

<u>FLIGHT INSPECTED BY:</u> FLIGHT INSPECTION NOT REQUIRED: MANAGER ROBERT STUCKERT	<i>Digitally signed by</i> BEV L BORDY Sep 30, 2016	<u>OFFICE SYMBOL:</u> AJW-331	<u>DATE:</u> 12/17/2009
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<u>DEVELOPED BY:</u> JOHNNIE BAKER (CHRISTINE BAYSE)	<i>Digitally signed by</i> BEV L BORDY Sep 30, 2016	<u>OFFICE SYMBOL:</u> AJV-5431	<u>DATE:</u> 06/29/2016
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<u>APPROVED BY:</u> MARLON ROBINSON	<i>Digitally signed by</i> BEV L BORDY Sep 30, 2016	<u>OFFICE SYMBOL:</u> AJV-5410	<u>DATE:</u>
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REQUIRED EFFECTIVE DATE:
ROUTINE

COORDINATED WITH:

A4A	ALPA	AOPA	APA	HAI	NBAA
☐	☒	☒	☐	☐	☒

OTHER:
ZBW, BOS APP CON, BGR FSS, AMGR

CHANGES - REASONS:
CHANGED ALL REFERENCES OF CON VORTAC TO CON VOR/DME- TACAN ANTENNA REPLACED WITH DME.
ADDED REMARK "ROCHESTER AMENDMENT 6A DOES NOT SATISFY PERIODIC REVIEW REQUIREMENTS"- A MINOR AMENDMENT DOES NOT QUALIFY AS A PERIODIC REVIEW.



**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
GRAPHIC DEPARTURE PROCEDURES (DP)**

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.
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<u>DP NAME</u>	<u>NUMBER</u>	<u>DP COMPUTER CODE</u>	<u>SUPERSEDED NUMBER</u>	<u>DATED</u>	<u>EFFECTIVE DATE</u>
CORONA	TWO	CRONA2.CNX	ONE	11/28/2002	01/05/2017

<u>TYPE:</u>	<u>OBSTACLE</u>	<u>COPTER</u>	<u>SID</u>	<u>SPECIAL</u>	<u>RNAV</u>
	☒	☐	☐	☐	☐

DP ROUTE DESCRIPTION:

TAKEOFF RWY 4: CLIMBING LEFT TURN HEADING 310.00 TO INTERCEPT BWS VOR/DME R-354 NORTHBOUND. CROSS CORAS AT 14000, THEN RIGHT TURN ON CNX VORTAC R-187 TO CNX VORTAC.

TRANSITION ROUTES (GRAPHIC DEPICTION ONLY):

<u>TRANSITION NAME</u>	<u>TRANSITION COMPUTER CODE</u>	<u>FROM FIX/NAVAID</u>	<u>TO FIX/NAVAID</u>	<u>COURSE</u>	<u>DISTANCE</u>	<u>MEA</u>	<u>MOCA</u>	<u>CROSSING ALTITUDE/FIXES</u>
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PROCEDURAL DATA NOTES:

TAKEOFF MINIMUMS:

RWY 17, 35: NA - ENVIRONMENTAL

RWY 22: NA - AIRSPACE.

RWY 4: STANDARD WITH MINIMUM CLIMB OF 240 FT/NM TO 4600.

TAKEOFF OBSTACLES NOTES:

NOTE: RWY 4: TREE 150 FT FROM DER, 440 FT RIGHT OF CENTERLINE, 4207 FT MSL. TREES BEGINNING 175 FT FROM DER, 475 FT LEFT OF CENTERLINE, UP TO 4208 FT MSL. TREE 326 FT FROM DER, 585 FT LEFT OF CENTERLINE, 4209 FT MSL. POLE 1018 FT FROM DER, 694 FT LEFT OF CENTERLINE, 51 FT AGL/4258 FT MSL. POLE 1343 FT FROM DER, 659 FT LEFT OF CENTERLINE, 51 FT AGL/4260 FT MSL.

CONTROLLING OBSTACLES:

RWY 4: 5560 FT MSL AAO 325611.53N/1055533.57W.

OBSTACLE MANDATING ODP ROUTE DEVELOPMENT: RWY 4: 9813 FT MSL AAO 324806.00N/1054827.00W.

LOST COMMUNICATIONS PROCEDURES:

ADDITIONAL FLIGHT DATA:

CHART: R-5103B AND C, R-5107D, R-5107C AND H, BEAK A MOA, HOLLOMAN AFB.

REFERENCE MAG VAR: KALM, BWS VOR/DME 8E EPOCH YEAR 2020.

AIRPORTS SERVED:

<u>AIRPORT NAME</u>	<u>CITY</u>	<u>STATE</u>
ALAMOGORDO-WHITE SANDS RGNL	ALAMOGORDO	NM

COMMUNICATIONS:

ZAB, HMN DEP CON, UNICOM, AWOS-3

FIXES AND/OR NAVAIDS:

TCS VORTAC



**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
GRAPHIC DEPARTURE PROCEDURES (DP)**

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statute miles or feet RVR unless otherwise indicated.

<u>DP NAME</u>	<u>NUMBER</u>	<u>DP COMPUTER CODE</u>	<u>SUPERSEDED NUMBER</u>	<u>DATED</u>	<u>EFFECTIVE DATE</u>
CORONA	TWO	CRONA2.CNX	ONE	11/28/2002	01/05/2017

REMARKS:

FLIGHT INSPECTED BY:

PENDING

OFFICE SYMBOL:

DATE:

DEVELOPED BY:

Digitally signed by

JEFFREY ROBINSON ***JEFFREY ROBINSON***

Oct 03, 2016

OFFICE SYMBOL:

DATE:

AJV-5421

09/08/2016

APPROVED BY:

Digitally signed by

TONY LAWSON ***PETER GETZ***

Oct 14, 2016

OFFICE SYMBOL:

DATE:

AJV-5420

REQUIRED EFFECTIVE DATE:

HARD DATE

COORDINATED WITH:

<u>A4A</u>	<u>ALPA</u>	<u>AOPA</u>	<u>APA</u>	<u>HAI</u>	<u>NBAA</u>
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☐	☒	☒	☐	☐	☒
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OTHER:

ZAB, HMN APP CON, ALM APT MGR

CHANGES - REASONS:

1. CHANGED ALL RWY DESIGNATIONS FROM 3, 16, 21, 34 TO 4, 17, 22, 35, RESPECTIVELY, DUE TO MAG VAR UPDATE.
2. UPDATED DP ROUTE DESCRIPTION WORDING AND CHANGED BWS RADIAL FROM 351 TO 354 DUE TO MAG VAR ROTATION.
3. CHANGED RWY 4 TAKEOFF MINIMUMS FROM STANDARD TO STANDARD WITH MINIMUM CLIMB OF 240 FT/NM TO 4600 TO MITIGATE RISING TERRAIN/AAO.
4. ADDED RWY 4 TAKEOFF OBSTACLE NOTES PER CURRENT SURVEY DATA AND OBSTACLE GROUPING TOOL.
5. UPDATED CONTROLLING OBSTACLES PER CURRENT SURVEY DATA AND TERRAIN STUDY.
6. ADDED REF MAG VAR PER 8260.19G.

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		LPV: DA LNAV/VNAV: DA LNAV: RW04 CLIMB TO 4600 THEN CLIMBING LEFT TURN TO 6000 DIRECT TORRI AND HOLD. ADDITIONAL FLIGHT DATA: HOLD N, RT, 160.00 INBOUND. FAS OBST: 4250 AAO 324702N/1060350W CHART HMN AFB, R-5103B AND C, R-5107D. DISTANCE TO THLD FROM 250 HAT: 0.69 NM. CHART VDP AT 1.00 NM TO RW04* *LNAV ONLY. WAAS CHANNEL # 69240 REFERENCE PATH ID: W04A CHART CIRCLING ICON. CHART PLANVIEW NOTE: RADAR REQUIRED. LTP HAE: 1235.4 M					
HONER (IF)		PAYNE (TF) (FB) (RNP 1.00)			037.47 / 6.00				5800							
PAYNE (FAF)		RW04 (MAP) (TF) (FO) (RNP 0.30)			037.52 / 5.08											
RW04 (MAP)		4600 MSL			037.52				4600							
4600 MSL		TORRI (DF) (FO) (RNP 1.00)							6000							
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF) 2. PROFILE STARTS AT HONER 3. FAC: 037.52 FAF: PAYNE DIST FAF TO MAP: 5.08 THLD: 5.08 4. MIN. ALT: HONER 6000, PAYNE 5800 5. DIST TO THLD FROM OM: _____ MM: _____ IM: _____ 150 HAT: _____ 100 HAT: _____ GS ANT: _____ 6. MIN GS INCPT: 5800 GS ALT AT: PAYNE 5800 OM: _____ MM: _____ IM: _____ 7. GS ANGLE: 3.00 TCH: 55.0 34:1 IS CLEAR 8. MSA FROM: RW04 11000											MAG VAR: 8E EPOCH YEAR: 2020					
MINIMUMS																
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT							ALTERNATE: N A		STANDARD @							
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	4401	7/8	250	4401	7/8	250	4401	7/8	250	4401	7/8	250				
LNAV/VNAV DA	4444	1	293	4444	1	293	4444	1	293	4444	1	293				
LNAV MDA	4500	1	349	4500	1	349	4500	1	349	4500	1	349				
CIRCLING	4680	1	481	4720	1	521	4860	1 3/4	661	5300	3	1101				
NOTES: CHART NOTE: CIRCLING NA TO RWYS 17 AND 35. CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -23C (-9F) OR ABOVE 49C (121F). CHART NOTE: CIRCLING NA SOUTHEAST OF RWY 4-22. (CONTINUED ON PAGE 2)																
CITY AND STATE		ELEVATION: 4199 TDZE: 4151			FACILITY IDENTIFIER: RNAV		PROCEDURE NO./AMDT NO./EFFECTIVE DATE:					SUP: RNAV (GPS) RWY 3				
ALAMOGORDO, NM		AIRPORT NAME: ALAMOGORDO-WHITE SANDS RGNL					RNAV (GPS) RWY 4, AMDT 1, 01/05/2017					AMDT: ORIG-B				
												DATED 06/25/2015				



US DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
RNAV - STANDARD
INSTRUMENT APPROACH PROCEDURE - TITLE 14 CFR PART 97.33

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NOTES, (CONT.):

CHART NOTE: DME/DME RNP-0.3 NA.

CHART NOTE: CIVIL AIRCRAFT REQUIRE ATC CLEARANCE PRIOR TO ENTERING RESTRICTED AREA 5107D.

CHART NOTE: PROCEDURE NA WHEN HOLLOMAN APPROACH CONTROL CLOSED.



CITY AND STATE

ALAMOGORDO, NM

ELEVATION: 4199

TDZE: 4151

AIRPORT NAME:

ALAMOGORDO-WHITE SANDS RGNL

FACILITY
IDENTIFIER:

RNAV

PROCEDURE NO./AMDT NO./EFFECTIVE DATE:
RNAV (GPS) RWY 4, AMDT 1, 01/05/2017

SUP: **RNAV (GPS) RWY 3**

AMDT: **ORIG-B**

DATED: **06/25/2015**

**RNAV STANDARD INSTRUMENT APPROACH PROCEDURE
FLIGHT STANDARDS SERVICE - FAR 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.

FAS DATA BLOCK INFORMATION**DATA FIELD****DATA**

OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KALM
RUNWAY	RW04
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W04A
LTP/FTP LATITUDE	324944.2790N
LTP/FTP LONGITUDE	1060013.8500W
LTP/FTP ELLIPSOIDAL HEIGHT	+12354
FPAP LATITUDE	325048.0600N
FPAP LONGITUDE	1055856.8055W
THRESHOLD CROSSING HEIGHT (TCH)	00055.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0000
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0

CRC REMAINDER

30A1A094

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K2
LTP ORTHOMETRIC HEIGHT	+12578
FPAP ORTHOMETRIC HEIGHT	+12578

QUALITY
18
CHECKED

CITY AND STATE ALAMOGORDO, NM	ELEVATION: 4199 TDZE: 4151 AIRPORT NAME: ALAMOGORDO-WHITE SANDS RGNL	FACILITY IDENTIFIER: RNAV	PROCEDURE NO./AMDT NO./EFFECTIVE DATE: RNAV (GPS) RWY 4, AMDT 1, 01/05/2017	SUP: RNAV (GPS) RWY 3
				AMDT: ORIG-B
				DATED: 06/25/2015

**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)
TITLE 14 CFR PART 97.37**

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<u>CITY, STATE</u>	<u>AIRPORT</u>	<u>EFFECTIVE DATE</u>	<u>AMDT NO</u>
ALAMOGORDO, NM	ALAMOGORDO-WHITE SANDS RGNL	01/05/2017	1A

TAKEOFF MINIMUMS:

RWY 17, 35: NA - ENVIRONMENTAL

RWY 22: NA - AIRSPACE

TEXTUAL DEPARTURE PROCEDURES:

RWY 4: USE CORONA DEPARTURE.

VISUAL CLIMB OVER AIRPORT:

TAKEOFF OBSTACLE NOTES:

CONTROLLING OBSTACLES:

REMARKS:

FLIGHT INSPECTED BY:

Pending

OFFICE SYMBOL:

DATE:

DEVELOPED BY:

Digitally signed by

JEFFREY ROBINSON

JEFFREY ROBINSON

Sep 12, 2016

OFFICE SYMBOL:

AJV-5421

DATE:

09/08/2016

APPROVED BY:

Digitally signed by

TONY LAWSON

PETER GETZ

Oct 14, 2016

OFFICE SYMBOL:

AJV-5420

DATE:

REQUIRED EFFECTIVE DATE:

HARD DATE

COORDINATED WITH:

A4A

ALPA

AOPA

APA

HAI

NBAA



OTHER:

ZAB, HMN APP CON, ALM APT MGR

CHANGES - REASONS:

CHANGED RWY DESIGNATIONS FROM 3, 16, 21, 34 TO 4, 17, 22, 35, RESPECTIVELY, DUE TO MAG VAR CHANGE AFFECTING RWY NUMBERS.



U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION VOR STANDARD INSTRUMENT APPROACH PROCEDURE FLIGHT STANDARDS SERVICE - TITLE 14 CFR PART 97.23										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		MAP: BWS VOR/DME							
HONER/10.42 DME/RADAR (IF)			PAYNE/4.42 DME/RADAR			037.55 / 6.00 (BWS R-218)				5800		CLIMB TO 4600 THEN CLIMBING LEFT TURN TO 6000 ON BWS VOR/DME R-340 TO TORRI/BWS 10.00 DME AND HOLD.							
										ADDITIONAL FLIGHT DATA: HOLD N, RT, 160.00 INBOUND. FAS OBST: 4250 AAO 324702N/1060350W CHART HMN AFB, R-5103B AND C, R-5107D. CHART CIRCLING ICON. PAYNE TO RW04: 3.00/55. CHART PLANVIEW NOTE: RADAR REQUIRED.									
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF)																			
2. PROFILE STARTS AT HONER/10.42 DME/RADAR																			
3. FAC 037.55 FAF PAYNE/4.42 DME/RADAR										DIST FAF TO MAP				THLD 5.08					
4. MIN. ALT HONER 6000, PAYNE 5800																			
8. MSA FROM: BWS VOR/DME 160-340 9500, 340-160 11000										MAG VAR: 8E				EPOCH YEAR: 2020					
MINIMUMS																			
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT										ALTERNATE: N A		STANDARD @							
CATEGORY =====>		A			B			C			D			E					
		MDA	VIS	HAT/HAA	MDA	VIS	HAT/HAA	MDA	VIS	HAT/HAA	MDA	VIS	HAT/HAA	MDA	VIS	HAT/HAA			
S-04		4500	1	349	4500	1	349	4500	1	349	4500	1	349						
CIRCLING		4680	1	481	4720	1	521	4860	1 3/4	661	5300	3	1101						
NOTES:																			
CHART NOTE: CIRCLING NA TO RWYS 17 AND 35.										@ CAT D 1200-3									
CHART NOTE: CIRCLING NA SOUTHEAST OF RWY 4-22.																			
CHART NOTE: DME REQUIRED.																			
CHART NOTE: CIVIL AIRCRAFT REQUIRE ATC CLEARANCE PRIOR TO ENTERING RESTRICTED AREA 5107D.																			
CHART NOTE: PROCEDURE NA WHEN HOLLOMAN APPROACH CONTROL CLOSED.																			
CITY AND STATE		ELEVATION: 4199			TDZE: 4151			FACILITY IDENTIFIER:		PROCEDURE NO./AMDT NO./EFFECTIVE DATE:				SUP VOR RWY 3					
ALAMOGORDO, NM		AIRPORT NAME:			ALAMOGORDO-WHITE SANDS RGNL			BWS		VOR RWY 4, AMDT 3, 01/05/2017				AMDT 2B					
														DATE 06/25/2015					



**VOR STANDARD INSTRUMENT APPROACH PROCEDURE
FLIGHT STANDARDS SERVICE - - TITLE 14 CFR PART 97.23**

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.



CITY AND STATE

ALAMOGORDO, NM

ELEVATION: 4199

TDZE: 4151

AIRPORT NAME:

ALAMOGORDO-WHITE SANDS RGNL

FACILITY
IDENTIFIER:

BWS

PROCEDURE NO./AMDT NO./EFFECTIVE DATE:

VOR RWY 4, AMDT 3, 01/05/2017

SUP: VOR RWY 3

AMDT: 2B

DATED: 06/25/2015

US DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION							ILS - STANDARD INSTRUMENT APPROACH PROCEDURE TITLE 14 CFR PART 97.29									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			ILS: DA LOC: I-SGB 1.59 DME									
ECISA/SAF 12.00 DME CW (IAF)			FAKER INT/I-SGB 15.48 DME			12.00 DME ARC (SAF LR-209)			10400			CLIMB TO 7300 THEN CLIMBING LEFT TURN TO 11000 ON SAF VORTAC R-354 TO ZEDAN/SAF 30.00 DME AND HOLD.									
HEGMI/SAF 12.00 DME CCW (IAF)			FAKER INT/I-SGB 15.48 DME			12.00 DME ARC (SAF LR-230)			10400												
LIYIR/SAF 17.00 DME (IAF)			FAKER INT/I-SGB 15.48 DME			112.00 / 4.90 (HDG) & 027.12 / 2.85 (I-SGB)			10400												
FAKER INT/I-SGB 15.48 DME (IF)			CIBVU INT/I-SGB 10.27 DME			027.12 / 5.21 (I-SGB)			8800			ADDITIONAL FLIGHT DATA: HOLD N, RT, 173.83 INBOUND. FAS OBST: 6484 TREE 353414N/1060816W CHART VDP AT 2.83 DME* DISTANCE VDP TO THLD 1.24 NM. *LOC ONLY. CHART (CFGG) AT INTERSECTION OF LIYIR DR LEG AND INTERMEDIATE COURSE. CHART SAF R-104 AT ECISA. CHART SAF R-255 AT HEGMI. CHART CIRCLING ICON.									
CIBVU INT/I-SGB 10.27 DME			DOUMA INT/I-SGB 6.21 DME			027.12 / 4.06 (I-SGB)			7800												
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF)												MAG VAR: 8E EPOCH YEAR: 2020									
2. PROFILE STARTS AT FAKER INT/I-SGB 15.48 DME																					
3. FAC: 027.12 FAF: DOUMA INT/I-SGB 6.21 DME DIST FAF TO MAP: _____ THLD: 4.63																					
4. MIN. ALT: FAKER 10400, CIBVU 8800, DOUMA 7800																					
5. DIST TO THLD FROM OM: _____ MM: _____ IM: _____ 150 HAT: _____ 100 HAT: _____ GS ANT: 787																					
6. MIN GS INCPT: 7800 GS ALT AT: DOUMA 7800 OM: _____ MM: _____ IM: _____																					
7. GS ANGLE: 3.00 TCH: 53.3																					
8. MSA FROM: SAF VORTAC 090-270 11900, 270-090 13800																					
MINIMUMS																					
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT							ALTERNATE: N A		ILS: STANDARD #		LOC: STANDARD @										
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						
S-ILS 02	6503	3/4	200	6503	3/4	200	6503	3/4	200	6503	3/4	200									
S-LOC 02	6740	1	437	6740	1	437	6740	1 1/4	437	6740	1 1/4	437									
CIRCLING	6800	1	451	6920	1	571	7340	3	991	7660	3	1311									
NOTES: CHART NOTE: DME REQUIRED. CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT LIYIR ON V611 SOUTHWEST BOUND. CHART PLANVIEW NOTE: DME REQUIRED. CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).																					
CITY AND STATE SANTA FE, NM				ELEVATION: 6349 TDZE: 6303 AIRPORT NAME: SANTA FE MUNI				FACILITY IDENTIFIER: I-SGB		PROCEDURE NO./AMDT NO./EFFECTIVE DATE: ILS OR LOC RWY 2, AMDT 7 5 JANUARY 2017				SUP: AMDT: 6 DATED 10/27/2005							

QUALITY
25
CHECKED

US DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
ILS - STANDARD
INSTRUMENT APPROACH PROCEDURE - TITLE 14 CFR PART 97.29

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QUALITY
25
CHECKED

CITY AND STATE SANTA FE, NM	ELEVATION: 6349	TDZE: 6303	FACILITY IDENTIFIER: I-SGB	PROCEDURE NO./AMDT NO./EFFECTIVE DATE: ILS OR LOC RWY 2, AMDT 7 5 JANUARY 2017	SUP:
	AIRPORT NAME:				AMDT: 6
	SANTA FE MUNI				DATED: 10/27/2005

US DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
ILS - STANDARD
INSTRUMENT APPROACH PROCEDURE - TITLE 14 CFR PART 97.29

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QUALITY
25
CHECKED

CITY AND STATE
SANTA FE, NM

ELEVATION: 6349 TDZE: 6303
AIRPORT NAME:
SANTA FE MUNI

FACILITY
IDENTIFIER:
I-SGB

PROCEDURE NO./AMDT NO./EFFECTIVE DATE:
ILS OR LOC RWY 2, AMDT 7
5 JANUARY 2017

SUP:
AMDT: 6
DATED: 10/27/2005

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		LPV: DA LNAV/VNAV: DA LNAV: RW02 CLIMB TO 7300 THEN CLIMBING LEFT TURN TO 11000 DIRECT ZEDAN AND HOLD. ADDITIONAL FLIGHT DATA: HOLD N, RT, 178.83 INBOUND. FAS OBST: 6484 TREE 353414N/1060816W DISTANCE TO THLD FROM 200 HAT: 0.55 NM. CHART VDP AT 1.24 NM TO RW02* *LNAV ONLY. WAAS CHANNEL # 63039 REFERENCE PATH ID: W02A CHART CIRCLING ICON. LTP HAE: 1892.7 M					
DULKE (IAF)		WODES (FB)		353.42 / 11.59				10000							
NELGE (IAF)		WODES (FB)		062.18 / 13.67				10000							
ZIASE (IAF)		WODES (FB)		099.20 / 17.48				10000							
WODES (IF)		DOUMA (FB)		034.85 / 8.86				7800							
DOUMA (FAF)		RW02 (MAP) (FO)		027.09 / 4.63				7300							
RW02 (MAP)		7300 MSL		027.09				7300							
7300 MSL		ZEDAN (FO)						11000							
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF) 2. PROFILE STARTS AT WODES 3. FAC: 027.09 FAF: DOUMA DIST FAF TO MAP: 4.63 THLD: 4.63 4. MIN. ALT: WODES 10000, DOUMA 7800 5. DIST TO THLD FROM OM: _____ MM: _____ IM: _____ 150 HAT: _____ 100 HAT: _____ GS ANT: _____ 6. MIN GS INCPT: 7800 GS ALT AT: DOUMA 7800 OM: _____ MM: _____ IM: _____ 7. GS ANGLE: 3.00 TCH: 53.3 34:1 IS CLEAR 8. MSA FROM: RW02 13800															
										MAG VAR: 8E			EPOCH YEAR: 2020		
MINIMUMS															
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT								ALTERNATE: N A		STANDARD @					
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	6503	3/4	200	6503	3/4	200	6503	3/4	200	6503	3/4	200			
LNAV/VNAV DA	6553	7/8	250	6553	7/8	250	6553	7/8	250	6553	7/8	250			
LNAV MDA	6740	1	437	6740	1	437	6740	1 1/4	437	6740	1 1/4	437			
CIRCLING	6800	1	451	6920	1	571	7340	3	991	7660	3	1311			
NOTES: CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -18C (0F) OR ABOVE 45C (113F). @ CAT C 1000-3, CAT D 1400-3 CHART NOTE: DME/DME RNP-0.3 NA. CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT DULKE ON V190 SOUTHWEST BOUND. CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT NELGE ON V611 SOUTHWEST BOUND. (CONTINUED ON PAGE 2)															
CITY AND STATE		ELEVATION: 6349 TDZE: 6303				FACILITY IDENTIFIER: RNAV		PROCEDURE NO./AMDT NO./EFFECTIVE DATE:				SUP:			
SANTA FE, NM		AIRPORT NAME:				RNAV		RNAV (GPS) RWY 2, AMDT 1				AMDT: ORIG			
		SANTA FE MUNI						5 JANUARY 2017				DATED 12/25/2003			

US DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

RNAV - STANDARD

INSTRUMENT APPROACH PROCEDURE - TITLE 14 CFR PART 97.33

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NOTES, (CONT.):

CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT ZIASE ON V62-263 WESTBOUND.

CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).

QUALITY
25
CHECKED

CITY AND STATE SANTA FE, NM	ELEVATION: 6349	TDZE: 6303	FACILITY IDENTIFIER: RNAV	PROCEDURE NO./AMDT NO./EFFECTIVE DATE: RNAV (GPS) RWY 2, AMDT 1 5 JANUARY 2017	SUP:
	AIRPORT NAME:				AMDT: ORIG
	SANTA FE MUNI				DATED: 12/25/2003

**RNAV STANDARD INSTRUMENT APPROACH PROCEDURE
FLIGHT STANDARDS SERVICE - FAR PART 97.33**

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FAS DATA BLOCK INFORMATION**DATA FIELD****DATA**

OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KSAF
RUNWAY	RW02
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W02A
LTP/FTP LATITUDE	353630.0540N
LTP/FTP LONGITUDE	1060546.2270W
LTP/FTP ELLIPSOIDAL HEIGHT	+18927
FPAP LATITUDE	353743.0390N
FPAP LONGITUDE	1060443.3490W
THRESHOLD CROSSING HEIGHT (TCH)	00053.3
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0200
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	35.0

CRC REMAINDER

769157AF

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K2
LTP ORTHOMETRIC HEIGHT	+19121
FPAP ORTHOMETRIC HEIGHT	+19121

QUALITY
25
CHECKED

CITY AND STATE

SANTA FE, NM

ELEVATION: 6349

TDZE: 6303

AIRPORT NAME:

SANTA FE MUNI

FACILITY
IDENTIFIER:

RNAV

PROCEDURE NO./AMDT NO./EFFECTIVE DATE:

RNAV (GPS) RWY 2, AMDT 1

5 JANUARY 2017

SUP:

AMDT:

ORIG

DATED:

12/25/2003

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE
FLIGHT STANDARDS SERVICES - TITLE 14 CFR PART 97.33

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ARINC SUMMARY - KSAF

ROUTES

TRANSITION	WPT SEQ	WPT NAME	LEG TYPE	FB/FO	RNP	MAG CRS	REC NAV	ANGLE	TURN DIR	CENTER FIX	TURN RADIUS	ALTITUDE DESCRIPTION & VALUE	SPEED LIMIT DESCRIPTION & VALUE	WPT DESCRIPTION CODE
DULKE	010	DULKE	IF	FB										E A
DULKE	020	WODES	TF	FB	1.0	353.4						AA 10000		EE B
NELGE	010	NELGE	IF	FB										E A
NELGE	020	WODES	TF	FB	1.0	062.2						AA 10000		EE B
ZIASE	010	ZIASE	IF	FB										E A
ZIASE	020	WODES	TF	FB	1.0	099.2						AA 10000		EE B
	010	WODES	IF	FB								AA 10000		E I
	020	DOUMA	TF	FB	1.0	034.9				RW02		AA 07800		E F
	030	RW02	TF	FO	0.3	027.1		3.00				AT 06327		GY M
	040		CA	FB		027.1						AA 07300		M
	050	ZEDAN	DF	FO					L			AA 11000		EY
	060	ZEDAN	HM	FO		178.8			R			AA 11000		EE

POINTS

POINT NAME	LATITUDE	LONGITUDE
DULKE	N351436.39	W1061645.83
NELGE	N352135.12	W1063208.92
ZEDAN	N360215.74	W1055929.87
ZIASE	N353124.96	W1063650.97
DOUMA	N353242.66	W1060901.88
WODES	N352612.60	W1061624.78

RUNWAYS

RUNWAY	THRESHOLD LATITUDE	THRESHOLD LONGITUDE	THRESHOLD ELEVATION	PROCEDURE TCH
RW02	N353630.05	W1060546.23	06273	53

QUALITY
25
CHECKED

CITY AND STATE SANTA FE, NM	ELEVATION: 6349 TDZE: 6303	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
	AIRPORT NAME: SANTA FE MUNI	RNAV	RNAV (GPS) RWY 2, AMDT 1	AMDT: ORIG
			5 JANUARY 2017	DATED: 12/25/2003

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		LPV: DA LNAV/VNAV: DA LNAV: RW15 CLIMB TO 10300 DIRECT LACRO AND HOLD, CONTINUE CLIMB-IN -HOLD TO 10300. ADDITIONAL FLIGHT DATA: HOLD S, RT, 338.52 INBOUND. FAS OBST: 6489 TREE 353951N/1060655W 7419 AAO 354456N/1060856W 6739 AAO 354055N/1060714W DISTANCE TO THLD FROM 250 HAT: 0.64 NM. CHART VDP AT 1.18 NM TO RW15* *LNAV ONLY. WAAS CHANNEL # 87039 REFERENCE PATH ID: W15A CHART CIRCLING ICON. LTP HAE: 1906.6 M						
SAF VORTAC		KARSE (FO)			343.12 / 21.05			10000								
ZEDAN (IAF)		KARSE (NOPT) (FB)			209.23 / 11.28			10000								
KARSE (IF/IAF)		FINAK (FB)			171.61 / 7.72			9000								
FINAK (FAF)		SECRO/3.40 NM TO RW15 (FB)			158.68 / 4.87											
SECRO/3.40 NM TO RW15		RW15 (MAP) (FO)			158.68 / 3.40											
RW15 (MAP)		6569 MSL			158.68											
6569 MSL		LACRO (FO)						10300								
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF) 2. HOLD N KARSE, LT, 171.61 INBOUND, 10000 FT. IN LIEU OF PT (IAF) 3. FAC: <u>158.68</u> FAF: <u>FINAK</u> DIST FAF TO MAP: <u>8.27</u> THLD: <u>8.27</u> 4. MIN. ALT: <u>KARSE 10000, FINAK 9000, SECRO/3.40 NM TO RW15 7440*</u> 5. DIST TO THLD FROM OM: _____ MM: _____ IM: _____ 150 HAT: _____ 100 HAT: _____ GS ANT: _____ 6. MIN GS INCPT: <u>9000</u> GS ALT AT: <u>FINAK 9000</u> OM: _____ MM: _____ IM: _____ 7. GS ANGLE: <u>3.00</u> TCH: <u>45.0</u> 34:1 IS CLEAR 8. MSA FROM: <u>RW15 13800</u>																
										MAG VAR: 8E EPOCH YEAR: 2020						
MINIMUMS																
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT							ALTERNATE: N A		STANDARD @							
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	6569	3/4	250	6569	3/4	250	6569	3/4	250	6569	3/4	250				
LNAV/VNAV DA	6569	3/4	250	6569	3/4	250	6569	3/4	250	6569	3/4	250				
LNAV MDA	6740	1	421	6740	1	421	6740	1 1/4	421	6740	1 1/4	421				
CIRCLING	6800	1	451	6920	1	571	7340	3	991	7660	3	1311				
NOTES: CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -18C (0F) OR ABOVE 47C (117F). @ CAT C 1000-3, CAT D 1400-3 CHART NOTE: DME/DME RNP-0.3 NA. CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT SAF VORTAC ON V62-263 EASTBOUND.																
CITY AND STATE		ELEVATION: 6349 TDZE: 6319			FACILITY IDENTIFIER: RNAV		PROCEDURE NO./AMDT NO./EFFECTIVE DATE:					SUP:				
SANTA FE, NM		AIRPORT NAME: SANTA FE MUNI					RNAV (GPS) RWY 15, AMDT 1					AMDT: ORIG				
							5 JANUARY 2017					DATED 12/25/2003				



US DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
RNAV - STANDARD
INSTRUMENT APPROACH PROCEDURE - TITLE 14 CFR PART 97.33

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QUALITY
25
CHECKED

CITY AND STATE SANTA FE, NM	ELEVATION: 6349	TDZE: 6319	FACILITY IDENTIFIER: RNAV	PROCEDURE NO./AMDT NO./EFFECTIVE DATE: RNAV (GPS) RWY 15, AMDT 1 5 JANUARY 2017	SUP:
	AIRPORT NAME:				AMDT: ORIG
	SANTA FE MUNI				DATED: 12/25/2003

**RNAV STANDARD INSTRUMENT APPROACH PROCEDURE
FLIGHT STANDARDS SERVICE - FAR 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.

FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KSAF
RUNWAY	RW15
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W15A
LTP/FTP LATITUDE	353727.9550N
LTP/FTP LONGITUDE	1060529.6160W
LTP/FTP ELLIPSOIDAL HEIGHT	+19066
FPAP LATITUDE	353601.1130N
FPAP LONGITUDE	1060504.4810W
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	0824
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
 <u>CRC REMAINDER</u>	 273D4A5F

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K2
LTP ORTHOMETRIC HEIGHT	+19261
FPAP ORTHOMETRIC HEIGHT	+19261

QUALITY
25
CHECKED

CITY AND STATE SANTA FE, NM	ELEVATION: 6349 TDZE: 6319 AIRPORT NAME: SANTA FE MUNI	FACILITY IDENTIFIER: RNAV	PROCEDURE NO./AMDT NO./EFFECTIVE DATE: RNAV (GPS) RWY 15, AMDT 1 5 JANUARY 2017	SUP:
				AMDT: ORIG
				DATED: 12/25/2003

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE
FLIGHT STANDARDS SERVICES - TITLE 14 CFR PART 97.33

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ARINC SUMMARY - KSAF

ROUTES

TRANSITION	WPT SEQ	WPT NAME	LEG TYPE	FB/FO	RNP	MAG CRS	REC NAV	ANGLE	TURN DIR	CENTER FIX	TURN RADIUS	ALTITUDE DESCRIPTION & VALUE	SPEED LIMIT DESCRIPTION & VALUE	WPT DESCRIPTION CODE
SAF	010	SAF	IF	FB										V
SAF	020	KARSE	TF	FO	2.0	343.1						AA 10000		EY
SAF	030	KARSE	HF	FO		171.6			L			AA 10000		EE A
ZEDAN	010	ZEDAN	IF	FB										E A
ZEDAN	020	KARSE	TF	FB	1.0	209.2						AA 10000		EE B
	010	KARSE	IF	FB								AA 10000		E I
	020	FINAK	TF	FB	1.0	171.6				RW15		AA 09000		E F
	021	SECRO	TF	FB	0.3	158.7		3.00				AA 07440 GS 07447		E S
	030	RW15	TF	FO	0.3	158.7		3.00				AT 06364		GY M
	040		CA	FB		158.7						AA 06569		M
	050	LACRO	DF	FO								AA 10300		EY
	060	LACRO	HM	FO		338.5			R			AA 10300		EE

POINTS

POINT NAME	LATITUDE	LONGITUDE
SAF	N353225.95	W1060353.77
LACRO	N352338.38	W1060128.03
ZEDAN	N360215.74	W1055929.87
FINAK	N354531.82	W1060749.95
KARSE	N355315.82	W1060753.86
SECRO	N354046.78	W1060627.22

RUNWAYS

RUNWAY	THRESHOLD LATITUDE	THRESHOLD LONGITUDE	THRESHOLD ELEVATION	PROCEDURE TCH
RW15	N353727.96	W1060529.62	06319	45

QUALITY
25
CHECKED

CITY AND STATE SANTA FE, NM	ELEVATION: 6349 TDZE: 6319	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
	AIRPORT NAME: SANTA FE MUNI	RNAV	RNAV (GPS) RWY 15, AMDT 1	AMDT: ORIG
			5 JANUARY 2017	DATED: 12/25/2003

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		LNAV: ROYSO CLIMBING RIGHT TURN TO 9000 DIRECT HEGMI AND HOLD. ADDITIONAL FLIGHT DATA: HOLD W, RT, 080.00 INBOUND. CHART FAS OBST: 6483 WNDMIL 353829N/1060405W 7119 AAO 354335N/1060038W 6589 TREE 354023N/1060311W CHART VDP AT 0.76 NM TO ROYSO. JETEK TO RW20: 3.00/54. CHART CIRCLING ICON. FAC CROSSES RWY C/L EXTENDED 3000 FT FROM THLD. CHART PLANVIEW NOTE: FINAL APPROACH COURSE OFFSET 15.00 DEGREES.							
SAF VORTAC		POAKE (FO)		358.83 / 22.00			11000									
POAKE (IF/IAF)		JETEK (FB)		177.27 / 10.56			8500									
JETEK (FAF)		SACBO/2.30 NM TO ROYSO (FB)		192.15 / 3.81												
SACBO/2.30 NM TO ROYSO		ROYSO (MAP) (FO)		192.15 / 2.30												
ROYSO (MAP)		6749 MSL		192.15												
6749 MSL		HEGMI (FO)					9000									
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF) 2. HOLD N POAKE, RT, 177.27 INBOUND, 11000 FT. IN LIEU OF PT (IAF) 3. FAC: <u>192.15</u> FAF: <u>JETEK</u> DIST FAF TO MAP: <u>6.11</u> THLD: <u>6.59</u> 4. MIN. ALT: POAKE 11000, JETEK 8500, SACBO/2.30 NM TO ROYSO 7280 5. DIST TO THLD FROM OM: _____ MM: _____ IM: _____ 150 HAT: _____ 100 HAT: _____ GS ANT: _____ 6. MIN GS INCPT: _____ GS ALT AT: _____ OM: _____ MM: _____ IM: _____ 7. GS ANGLE: _____ TCH: 34:1 IS CLEAR 8. MSA FROM: ROYSO 14300											MAG VAR: 8E		EPOCH YEAR: 2020			
MINIMUMS																
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT							ALTERNATE: N A		STANDARD @							
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	
LNAV MDA	6800	1	451	6800	1	451	6800	1 3/8	451	6800	1 3/8	451				
CIRCLING	6800	1	451	6920	1	571	7340	3	991	7660	3	1311				
NOTES: CHART NOTE: DME/DME RNP-0.3 NA. @ CAT C 1000-3, CAT D 1400-3 CHART PLANVIEW NOTE: NOPT FOR ARRIVAL AT POAKE ON V83 SOUTHBOUND. CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT SAF VORTAC ON V263-611 WESTBOUND.																
CITY AND STATE		ELEVATION: 6349 TDZE: 6349		FACILITY IDENTIFIER: RNAV		PROCEDURE NO./AMDT NO./EFFECTIVE DATE:				SUP:						
SANTA FE, NM		AIRPORT NAME:		SANTA FE MUNI		RNAV (GPS) RWY 20, AMDT 1				AMDT: ORIG-A						
						5 JANUARY 2017				DATED 01/20/2005						



US 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.

QUALITY
25
CHECKED

CITY AND STATE
SANTA FE, NM

ELEVATION: 6349 TDZE: 6349
AIRPORT NAME:
SANTA FE MUNI

FACILITY
IDENTIFIER:
RNAV

PROCEDURE NO./AMDT NO./EFFECTIVE DATE:
RNAV (GPS) RWY 20, AMDT 1
5 JANUARY 2017

SUP:
AMDT: ORIG-A
DATED: 01/20/2005

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE
FLIGHT STANDARDS SERVICES - 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.

ARINC SUMMARY - KSAF

ROUTES

TRANSITION	WPT SEQ	WPT NAME	LEG TYPE	FB/FO	RNP	MAG CRS	REC NAV	ANGLE	TURN DIR	CENTER FIX	TURN RADIUS	ALTITUDE DESCRIPTION & VALUE	SPEED LIMIT DESCRIPTION & VALUE	WPT DESCRIPTION CODE
SAF	010	SAF	IF	FB										V
SAF	020	POAKE	TF	FO	2.0	358.8						AA 11000		EY
SAF	030	POAKE	HF	FO		177.3			R			AA 11000		EE A
	010	POAKE	IF	FB								AA 11000		E I
	020	JETEK	TF	FB	1.0	177.3				ROYSO		AA 08500		E F
	021	SACBO	TF	FB	0.3	192.2		3.00				AA 07280 GS 07287		E S
	030	ROYSO	TF	FO	0.3	192.2		3.00				AT 06559		EY M
	040		CA	FB		192.2						AA 06749		M
	050	HEGMI	DF	FO					R			AA 09000		EY
	060	HEGMI	HM	FO		080.0			R			AA 09000		EE

POINTS

POINT NAME	LATITUDE	LONGITUDE
SAF	N353225.95	W1060353.77
HEGMI	N353159.88	W1061835.45
POAKE	N355418.46	W1060040.65
JETEK	N354346.64	W1060152.16
ROYSO	N353801.97	W1060427.05
SACBO	N354011.74	W1060328.78

RUNWAYS

RUNWAY	THRESHOLD LATITUDE	THRESHOLD LONGITUDE	THRESHOLD ELEVATION	PROCEDURE TCH
RW20	N353737.71	W1060447.95	06348	54

QUALITY
25
CHECKED

CITY AND STATE SANTA FE, NM	ELEVATION: 6349 TDZE: 6349	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
	AIRPORT NAME: SANTA FE MUNI	RNAV	RNAV (GPS) RWY 20, AMDT 1 5 JANUARY 2017	AMDT: ORIG-A
			DATED: 01/20/2005	

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	LNAV: RW28 CLIMBING LEFT TURN TO 9200 DIRECT LACRO AND HOLD. ADDITIONAL FLIGHT DATA: HOLD S, RT, 338.52 INBOUND. FAS OBST: 6699 AAO 353555N/1060101W 6739 AAO 353548N/1060043W 7419 AAO 353330N/1055359W CHART VDP AT 1.93 NM TO RW28. ZEBIT TO RW28: 3.00/45. CHART CIRCLING ICON. CHART PLANVIEW NOTE: FINAL APPROACH COURSE OFFSET 5.00 DEGREES.											
SAF VORTAC	RENCO (FO)	108.75 / 15.41	10000												
CAYAL	RENCO (FO)	057.97 / 12.12	10000												
OTO VOR (IAF)	RENCO (NOPT) (FB)	011.42 / 22.38	10000												
RENCO (IF/IAF)	ZEBIT (FB)	310.24 / 9.83	9200												
ZEBIT (FAF)	COTAC/3.60 NM TO RW28 (FB)	288.80 / 5.37													
COTAC/3.60 NM TO RW28	RW28 (MAP) (FO)	288.80 / 3.60													
(SEE FORM 8260-10)															
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF) 2. HOLD SE RENCO, LT, 310.24 INBOUND, 10000 FT. IN LIEU OF PT (IAF) 3. FAC: 288.80 FAF: ZEBIT DIST FAF TO MAP: 8.97 THLD: 8.97 4. MIN. ALT: RENCO 10000, ZEBIT 9200, COTAC/3.60 NM TO RW28 7480 5. DIST TO THLD FROM OM: _____ MM: _____ IM: _____ 150 HAT: _____ 100 HAT: _____ GS ANT: _____ 6. MIN GS INCPT: _____ GS ALT AT: _____ OM: _____ MM: _____ IM: _____ 7. GS ANGLE: _____ TCH: 34:1 IS CLEAR 8. MSA FROM: RW28 13800															
				MAG VAR: 8E EPOCH YEAR: 2020											
MINIMUMS															
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT				ALTERNATE: N A		STANDARD @									
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
LNAV MDA	6960	1	653	6960	1	653	6960	1 7/8	653	6960	1 7/8	653			
CIRCLING	6960	1	611	6960	1	611	7340	3	991	7660	3	1311			
NOTES: CHART NOTE: DME/DME RNP-0.3 NA. CHART PLANVIEW NOTE: NOPT FOR ARRIVAL AT RENCO ON V62 NORTHWEST BOUND AND V190 SOUTHWEST BOUND. CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT SAF VORTAC ON V263-611 WESTBOUND. CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON OTO VOR AIRWAY RADIALS 035 CW 074.															
CITY AND STATE SANTA FE, NM				ELEVATION: 6349 TDZE: 6307 AIRPORT NAME: SANTA FE MUNI		FACILITY IDENTIFIER: RNAV		PROCEDURE NO./AMDT NO./EFFECTIVE DATE: RNAV (GPS) RWY 28, AMDT 1 5 JANUARY 2017				SUP:			
												AMDT: ORIG-A			
												DATED 01/20/2005			



US 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, (CONT.):

FROM	TO	COURSE AND DISTANCE	ALTITUDE
RW28 (MAP)	6749 MSL	288.80	
6749 MSL	LACRO (FO)		9200

QUALITY
25
CHECKED

CITY AND STATE
SANTA FE, NM

ELEVATION: 6349 TDZE: 6307
AIRPORT NAME:
SANTA FE MUNI

FACILITY
IDENTIFIER:
RNAV

PROCEDURE NO./AMDT NO./EFFECTIVE DATE:
RNAV (GPS) RWY 28, AMDT 1
5 JANUARY 2017

SUP:
AMDT: ORIG-A
DATED: 01/20/2005

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE FLIGHT STANDARDS SERVICES - 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.
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ARINC SUMMARY - KSAF

ROUTES

TRANSITION	WPT SEQ	WPT NAME	LEG TYPE	FB/FO	RNP	MAG CRS	REC NAV	ANGLE	TURN DIR	CENTER FIX	TURN RADIUS	ALTITUDE DESCRIPTION & VALUE	SPEED LIMIT DESCRIPTION & VALUE	WPT DESCRIPTION CODE
CAYAL	010	CAYAL	IF	FB										E
CAYAL	020	RENCO	TF	FO	2.0	058.0						AA 10000		EY
CAYAL	030	RENCO	HF	FO		310.2			L			AA 10000		EE A
OTO	010	OTO	IF	FB										V A
OTO	020	RENCO	TF	FB	1.0	011.4						AA 10000		EE B
SAF	010	SAF	IF	FB										V
SAF	020	RENCO	TF	FO	2.0	108.8						AA 10000		EY
SAF	030	RENCO	HF	FO		310.2			L			AA 10000		EE A
	010	RENCO	IF	FB								AA 10000		E I
	020	ZEBIT	TF	FB	1.0	310.2				RW28		AA 09200		E F
	021	COTAC	TF	FB	0.3	288.8		3.00				AA 07480 GS 07490		E S
	030	RW28	TF	FO	0.3	288.8		3.00				AT 06343		GY M
	040		CA	FB		288.8						AA 06749		M
	050	LACRO	DF	FO					L			AA 09200		EY
	060	LACRO	HM	FO		338.5			R			AA 09200		EE

POINTS

POINT NAME	LATITUDE	LONGITUDE
OTO	N350420.17	W1055609.89
SAF	N353225.95	W1060353.77
CAYAL	N352032.15	W1060036.67
LACRO	N352338.38	W1060128.03
RENCO	N352528.14	W1054703.73
COTAC	N353513.73	W1060057.48
ZEBIT	N353248.46	W1055504.98

RUNWAYS

RUNWAY	THRESHOLD LATITUDE	THRESHOLD LONGITUDE	THRESHOLD ELEVATION	PROCEDURE TCH
RW28	N353650.99	W1060454.07	06298	45



CITY AND STATE SANTA FE, NM	ELEVATION: 6349 TDZE: 6307 AIRPORT NAME: SANTA FE MUNI	FACILITY IDENTIFIER: RNAV	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE: RNAV (GPS) RWY 28, AMDT 1 5 JANUARY 2017	SUP: AMDT: ORIG-A DATED: 01/20/2005
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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		LPV: DA LNAV/VNAV: DA LNAV: RW33 CLIMB TO 6800 THEN CLIMBING RIGHT TURN TO 11000 DIRECT ZEDAN AND HOLD. ADDITIONAL FLIGHT DATA: HOLD N, RT, 178.83 INBOUND. CHART FAS OBST: 6356 TOWER 353641N/1060524W 6519 AAO 353111N/1060217W DISTANCE TO THLD FROM 250 HAT: 0.70 NM. CHART VDP AT 0.82 NM TO RW33* *LNAV ONLY. WAAS CHANNEL # 69539 REFERENCE PATH ID: W33A CHART CIRCLING ICON. LTP HAE: 1892.6 M						
NELGE		LACRO (FO)		077.18 / 25.17				11000								
ZIASE		LACRO (FO)		096.86 / 29.93				11000								
SAF VORTAC		LACRO (FO)		159.25 / 9.00				10000								
RENCO (IAF)		LACRO (NOPT) (FB)		253.25 / 11.92				10000								
LACRO (IF/IAF)		TISKE (FB)		338.52 / 7.29				8200								
TISKE (FAF)		WAMOK/1.60 NM TO RW33 (FB)		338.72 / 4.26												
(SEE FORM 8260-10)																
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF) 2. HOLD S LACRO, RT, 338.52 INBOUND, 10000 FT. IN LIEU OF PT (IAF) 3. FAC: 338.72 FAF: TISKE DIST FAF TO MAP: 5.86 THLD: 5.86 4. MIN. ALT: LACRO 10000, TISKE 8200, WAMOK/1.60 NM TO RW33 6840* 5. DIST TO THLD FROM OM: _____ MM: _____ IM: _____ 150 HAT: _____ 100 HAT: _____ GS ANT: _____ 6. MIN GS INCPT: 8200 GS ALT AT: TISKE 8200 OM: _____ MM: _____ IM: _____ 7. GS ANGLE: 3.00 TCH: 60.0 34:1 IS CLEAR 8. MSA FROM: RW33 13800																
										MAG VAR: 8E			EPOCH YEAR: 2020			
MINIMUMS																
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT								ALTERNATE: N A		STANDARD @						
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	6555	7/8	250	6555	7/8	250	6555	7/8	250	6555	7/8	250				
LNAV/VNAV DA	6555	7/8	250	6555	7/8	250	6555	7/8	250	6555	7/8	250				
LNAV MDA	6620	1	315	6620	1	315	6620	7/8	315	6620	7/8	315				
CIRCLING	6800	1	451	6920	1	571	7340	3	991	7660	3	1311				
NOTES: CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -18C (0F) OR ABOVE 43C (110F). @ CAT C 1000-3, CAT D 1400-3 CHART NOTE: DME/DME RNP-0.3 NA. CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT SAF VORTAC ON V263-611 WESTBOUND. CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT RENC0 ON V190 NORTHEAST BOUND. CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).																
CITY AND STATE		ELEVATION: 6349 TDZE: 6305				FACILITY IDENTIFIER: RNAV		PROCEDURE NO./AMDT NO./EFFECTIVE DATE:				SUP:				
SANTA FE, NM		AIRPORT NAME:				SANTA FE MUNI		RNAV (GPS) RWY 33, AMDT 1				AMDT: ORIG				
								5 JANUARY 2017				DATED 12/25/2003				



US DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
RNAV - STANDARD
INSTRUMENT APPROACH PROCEDURE - TITLE 14 CFR PART 97.33

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TERMINAL ROUTES, (CONT.):

<u>FROM</u>	<u>TO</u>	<u>COURSE AND DISTANCE</u>	<u>ALTITUDE</u>
WAMOK/1.60 NM TO RW33	RW33 (MAP) (FO)	338.72 / 1.60	
RW33 (MAP)	6800 MSL	338.72	6800
6800 MSL	ZEDAN (FO)		11000

QUALITY
25
CHECKED

CITY AND STATE SANTA FE, NM	ELEVATION: 6349	TDZE: 6305	FACILITY IDENTIFIER: RNAV	PROCEDURE NO./AMDT NO./EFFECTIVE DATE: RNAV (GPS) RWY 33, AMDT 1 5 JANUARY 2017	SUP:	
	AIRPORT NAME:				AMDT:	ORIG
	SANTA FE MUNI				DATED:	12/25/2003

**RNAV STANDARD INSTRUMENT APPROACH PROCEDURE
FLIGHT STANDARDS SERVICE - FAR 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.

FAS DATA BLOCK INFORMATION**DATA FIELD****DATA**

OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KSAF
RUNWAY	RW33
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W33A
LTP/FTP LATITUDE	353627.1830N
LTP/FTP LONGITUDE	1060512.0230W
LTP/FTP ELLIPSOIDAL HEIGHT	+18926
FPAP LATITUDE	353754.0235N
FPAP LONGITUDE	1060537.1680W
THRESHOLD CROSSING HEIGHT (TCH)	00060.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0824
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0

CRC REMAINDER

974C0BD4

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K2
LTP ORTHOMETRIC HEIGHT	+19120
FPAP ORTHOMETRIC HEIGHT	+19120

QUALITY
25
CHECKED

CITY AND STATE

SANTA FE, NM

ELEVATION: 6349

TDZE: 6305

AIRPORT NAME:

SANTA FE MUNI

FACILITY
IDENTIFIER:

RNAV

PROCEDURE NO./AMDT NO./EFFECTIVE DATE:

RNAV (GPS) RWY 33, AMDT 1

5 JANUARY 2017

SUP:

AMDT:

ORIG

DATED:

12/25/2003

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE FLIGHT STANDARDS SERVICES - 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.		
ARINC SUMMARY - KSAF														
ROUTES														
TRANSITION	WPT SEQ	WPT NAME	LEG TYPE	FB/FO	RNP	MAG CRS	REC NAV	ANGLE	TURN DIR	CENTER FIX	TURN RADIUS	ALTITUDE DESCRIPTION & VALUE	SPEED LIMIT DESCRIPTION & VALUE	WPT DESCRIPTION CODE
NELGE	010	NELGE	IF	FB										E
NELGE	020	LACRO	TF	FO	2.0	077.2						AA 11000		EY
NELGE	030	LACRO	HF	FO		338.5			R			AA 10000		EE A
RENCO	010	RENCO	IF	FB										E A
RENCO	020	LACRO	TF	FB	1.0	253.3						AA 10000		EE B
SAF	010	SAF	IF	FB										V
SAF	020	LACRO	TF	FO	2.0	159.3						AA 10000		EY
SAF	030	LACRO	HF	FO		338.5			R			AA 10000		EE A
ZIASE	010	ZIASE	IF	FB										E
ZIASE	020	LACRO	TF	FO	2.0	096.9						AA 11000		EY
ZIASE	030	LACRO	HF	FO		338.5			R			AA 10000		EE A
	010	LACRO	IF	FB								AA 10000		E I
	020	TISKE	TF	FB	1.0	338.5				RW33		AA 08200		E F
	021	WAMOK	TF	FB	0.3	338.7		3.00				AA 06840 GS 06843		E S
	030	RW33	TF	FO	0.3	338.7		3.00				AT 06333		GY M
	040		CA	FB		338.7						AA 06800		M
	050	ZEDAN	DF	FO					R			AA 11000		EY
	060	ZEDAN	HM	FO		178.8			R			AA 11000		EE
POINTS														
POINT NAME	LATITUDE		LONGITUDE											
SAF	N353225.95		W1060353.77											
LACRO	N352338.38		W1060128.03											
NELGE	N352135.12		W1063208.92											
RENCO	N352528.14		W1054703.73											
ZEDAN	N360215.74		W1055929.87											
ZIASE	N353124.96		W1063650.97											
TISKE	N353044.40		W1060332.92											
WAMOK	N353453.62		W1060444.95											
RUNWAYS														
RUNWAY	THRESHOLD LATITUDE		THRESHOLD LONGITUDE		THRESHOLD ELEVATION		PROCEDURE TCH							
RW33	N353627.18		W1060512.02		06273		60							

QUALITY
25
CHECKED

CITY AND STATE SANTA FE, NM	ELEVATION: 6349	TDZE: 6305	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
	AIRPORT NAME: SANTA FE MUNI		RNAV	RNAV (GPS) RWY 33, AMDT 1	AMDT: ORIG
				5 JANUARY 2017	DATED: 12/25/2003

**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)
TITLE 14 CFR PART 97.37**

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.
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<u>CITY, STATE</u>	<u>AIRPORT</u>	<u>EFFECTIVE DATE</u>	<u>AMDT NO</u>
PERRYTON, TX	PERRYTON OCHILTREE COUNTY	5 JANUARY 2017	1

TAKEOFF MINIMUMS:

RWY 04, 22: NA - ENVIRONMENTAL

RWY 17, 35: STANDARD

TEXTUAL DEPARTURE PROCEDURES:

RWY 17: CLIMB HEADING 172.88 TO 3500 BEFORE TURNING RIGHT.

VISUAL CLIMB OVER AIRPORT:

TAKEOFF OBSTACLE NOTES:

NOTE: RWY 17: VEHICLES ON ROAD 525 FT FROM DER, CROSSING EXTENDED RUNWAY CENTERLINE, 2929 FT MSL. POLES AND POWERLINE BEGINNING 554 FT FROM DER, 391 FT LEFT OF CENTERLINE, 26 FT AGL/2941 FT MSL. POLES AND POWERLINE BEGINNING 559 FT FROM DER, 389 FT RIGHT OF CENTERLINE, 24 FT AGL/2940 FT MSL.

NOTE: RWY 35: POLE 14 FT FROM DER, 185 FT LEFT OF CENTERLINE, 13 FT AGL/2928 FT MSL. POLES AND POWERLINE BEGINNING 715 FT FROM DER, 359 FT LEFT OF CENTERLINE, UP TO 33 FT AGL/2946 FT MSL.

CONTROLLING OBSTACLES:

OBSTACLE MANDATING ODP ROUTE DEVELOPMENT: RWY 17: 3379 FT MSL TOWER 362245.00N/1005029.00W.



**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)
TITLE 14 CFR PART 97.37**

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CITY, STATE
PERRYTON, TX

AIRPORT
PERRYTON OCHILTREE COUNTY

EFFECTIVE DATE
5 JANUARY 2017

AMDT NO
1

REMARKS:

FLIGHT INSPECTED BY:
CARL OESTERLE

Digitally signed by
STEVEN A VARGAS
Oct 11, 2016

OFFICE SYMBOL:
FICO

DATE:
10/04/2016

DEVELOPED BY:
JEFFREY ROBINSON

jeffrey.robinson@faa.gov

Digitally signed by jeffrey.robinson@faa.gov
DN: cn=jeffrey.robinson@faa.gov
Date: 2016.07.13 14:55:04 -05'00'

OFFICE SYMBOL:
AJV-5421

DATE:
07/12/2016

APPROVED BY:
TONY LAWSON

Digitally signed by
STEVEN A VARGAS
Oct 11, 2016

OFFICE SYMBOL:
AJV-5420

DATE:

REQUIRED EFFECTIVE DATE:

COORDINATED WITH:

A4A	ALPA	AOPA	APA	HAI	NBAA
☐	☒	☒	☐	☐	☒

OTHER:
ZKC, ZAB, APT MGR

CHANGES - REASONS:

1. CHANGED RWY 17 CTA FROM 3400 TO 3500 - RECALCULATED BASED ON NEW OBSTACLE ELEVATION.
2. UPDATED TAKEOFF OBSTACLE NOTES PER CURRENT SURVEY DATA AND GROUPING METHODOLOGY.

US 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		LNAV: RW34L							
PAE VOR/DME		RARYO (FO)		163.94 / 10.36			3000		CLIMB TO 3000 DIRECT EYWOK AND HOLD.							
SEA VORTAC (IAF)		RARYO (NOPT) (FB)		346.42 / 18.76			3000									
RARYO (IF/IAF)		USDAW (FB)		342.14 / 4.66			2000									
USDAW (FAF)		ZEREN/1.70 NM TO RW34L (FB)		342.14 / 2.61												
ZEREN/1.70 NM TO RW34L		RW34L (MAP) (FO)		342.14 / 1.70					ADDITIONAL FLIGHT DATA: HOLD N, RT, 162.14 INBOUND. CHART FAS OBST: 749 TREE 475222N/1221647W CHART 764 TREE 475158N/1221708W CHART VDP AT 1.09 NM TO RW34L. CHART CIRCLING ICON. USDAW TO RW34L: 3.00/51 CHART MANDATORY 3000 AT RORYO							
RW34L (MAP)		1000 MSL		342.14			1000									
1000 MSL		EYWOK (FO)					3000									
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF)										MAG VAR: 17E EPOCH YEAR: 2010						
2. HOLD S RARYO, RT, 342.14 INBOUND, 3000 FT. IN LIEU OF PT (IAF)																
3. FAC: 342.14 FAF: USDAW DIST FAF TO MAP: 4.31 THLD: 4.31																
4. MIN. ALT: RARYO 3000, USDAW 2000, ZEREN/1.70 NM TO RW34L 1160																
5. DIST TO THLD FROM OM: _____ MM: _____ IM: _____ 150 HAT: _____ 100 HAT: _____ GS ANT: _____																
6. MIN GS INCPT: _____ GS ALT AT: _____ OM: _____ MM: _____ IM: _____																
7. GS ANGLE: _____ TCH: 34:1 IS NOT CLEAR																
8. MSA FROM: RW34L 7600																
MINIMUMS																
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT				ALTERNATE: N A		STANDARD @										
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
LNAV MDA		1000	3/4	416	1000	3/4	416	1000	1	416	1000	1	416			
CIRCLING		1100	1	492	1100	1	492	1120	1 1/2	512	1160	2	552			
NOTES: CHART NOTE: DME/DME RNP-0.3 NA. CHART PROFILE NOTE: VGSI AND DESCENT ANGLES NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}). CHART NOTE: CIRCLING RWY 34R NA AT NIGHT. CHART NOTE: RWY 34L HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED. (CONTINUED ON PAGE 2)																
CITY AND STATE EVERETT, WA		ELEVATION: 608 TDZE: 584 AIRPORT NAME: SNOHOMISH COUNTY (PAINE FLD)		FACILITY IDENTIFIER: RNAV		PROCEDURE NO./AMDT NO./EFFECTIVE DATE: RNAV (GPS) RWY 34L, AMDT 2 5 JANUARY 2017						SUP: AMDT: 1A DATED 07/24/2014				

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

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NOTES, (CONT.):

CHART NOTE: RWY 34R HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED.

CHART NOTE: VDP NA WHEN USING SEATTLE-TACOMA INTL ALTIMETER SETTING.

CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL AT PAE VOR/DME ON V287 NORTHEAST BOUND.

CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON SEA VORTAC AIRWAY RADIALS 310 CW 072.

CHART NOTE: WHEN LOCAL ALTIMETER NOT RECEIVED, USE SEATTLE-TACOMA INTL ALTIMETER SETTING AND INCREASE ALL MDAS 100 FEET AND INCREASE LNAV CATS C AND D VISIBILITY TO 1 1/4 SM AND CIRCLING CAT C TO 1 3/4 SM.

CHART NOTE: FOR INOPERATIVE ALS, INCREASE CATS C AND D VISIBILITY TO 1 1/8 SM.

CHART NOTE: FOR INOPERATIVE ALS WHEN USING SEATTLE-TACOMA INTL ALTIMETER SETTING, INCREASE CATS C AND D VISIBILITY TO 1 3/8 SM.

QUALITY
16
CHECKED

CITY AND STATE

EVERETT, WA

ELEVATION: 608

TDZE: 584

AIRPORT NAME:

SNOHOMISH COUNTY (PAINE FLD)

FACILITY
IDENTIFIER:

RNAV

PROCEDURE NO./AMDT NO./EFFECTIVE DATE:

RNAV (GPS) RWY 34L, AMDT 2

5 JANUARY 2017

SUP:

AMDT: 1A

DATED: 07/24/2014

US DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
RNAV - STANDARD
INSTRUMENT APPROACH PROCEDURE - TITLE 14 CFR PART 97.33

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CITY AND STATE EVERETT, WA	ELEVATION: 608 TDZE: 584 AIRPORT NAME: SNOHOMISH COUNTY (PAINE FLD)	FACILITY IDENTIFIER: RNAV	PROCEDURE NO./AMDT NO./EFFECTIVE DATE: RNAV (GPS) RWY 34L, AMDT 2 5 JANUARY 2017	SUP:
				AMDT: 1A
				DATED: 07/24/2014

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION												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.		
RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE														
FLIGHT STANDARDS SERVICES - TITLE 14 CFR PART 97.33														
ARINC SUMMARY - KPAE														
ROUTES														
TRANSITION	WPT SEQ	WPT NAME	LEG TYPE	FB/FO	RNP	MAG CRS	REC NAV	ANGLE	TURN DIR	CENTER FIX	TURN RADIUS	ALTITUDE DESCRIPTION & VALUE	SPEED LIMIT DESCRIPTION & VALUE	WPT DESCRIPTION CODE
PAE	010	PAE	IF	FB										V
PAE	020	RARYO	TF	FO	2.0	163.9						AT 03000		EY
PAE	030	RARYO	HF	FO		342.1			R			AT 03000		EE A
SEA	010	SEA	IF	FB										V A
SEA	020	RARYO	TF	FB	1.0	346.4						AT 03000		EE B
	010	RARYO	IF	FB								AT 03000		E I
	020	USDAW	TF	FB	1.0	342.1				RW34L		AA 02000		E F
	021	ZEREN	TF	FB	0.3	342.1		3.00				AA 01160 GS 01170		E S
	030	RW34L	TF	FO	0.3	342.1		3.00				AT 00629		GY M
	040		CA	FB		342.1						AA 01000		M
	050	EYWOK	DF	FO	1.0							AA 03000		EY
	060	EYWOK	HM	FO		162.1			R			AA 03000		EE
POINTS														
POINT NAME			LATITUDE			LONGITUDE								
PAE			N475511.40			W1221640.08								
SEA			N472607.34			W1221834.62								
EYWOK			N480621.38			W1221723.95								
RARYO			N474450.35			W1221655.13								
USDAW			N474929.72			W1221701.34								
ZEREN			N475205.97			W1221704.82								
RUNWAYS														
RUNWAY		THRESHOLD LATITUDE		THRESHOLD LONGITUDE		THRESHOLD ELEVATION		PROCEDURE TCH						
RW34L		N475347.90		W1221707.09		00578		51						



CITY AND STATE EVERETT, WA	ELEVATION: 608	TDZE: 584	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
	AIRPORT NAME: SNOHOMISH COUNTY (PAINE FLD)		RNAV	RNAV (GPS) RWY 34L, AMDT 2 5 JANUARY 2017	AMDT: 1A
					DATED: 07/24/2014

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION VOR STANDARD INSTRUMENT APPROACH PROCEDURE FLIGHT STANDARDS SERVICE - TITLE 14 CFR PART 97.23										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											
										ADDITIONAL FLIGHT DATA:									
1. PT ____ SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)																			
2. ____																			
3. FAC ____ FAF ____ DIST FAF TO MAP ____ THLD ____																			
4. MIN. ALT ____																			
8. MSA FROM: ____										MAG VAR: ____ EPOCH YEAR: ____									
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT										ALTERNATE: N A									
CATEGORY =====>																			
		MDA	VIS			MDA	VIS			MDA	VIS			MDA	VIS				
NOTES:																			
PROCEDURE CANCELED EFFECTIVE 5 JANUARY 2017																			
CITY AND STATE MANITOWOC, WI		ELEVATION: 651 AIRPORT NAME: MANITOWOC COUNTY		TDZE: 651		FACILITY IDENTIFIER: MTW		PROCEDURE NO./AMDТ NO./EFFECTIVE DATE: VOR RWY 17, AMDT 15, 10/30/2003				SUP AMDT 14B DATE 06/23/1994							

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION NDB STANDARD INSTRUMENT APPROACH PROCEDURE FLIGHT STANDARDS SERVICE - TITLE 14 CFR PART 97.27										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											
										ADDITIONAL FLIGHT DATA:									
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF)																			
2. _____																			
3. FAC _____ FAF _____ DIST FAF TO MAP _____ THLD _____																			
4. MIN. ALT _____																			
8. MSA FROM: _____										MAG VAR: _____ EPOCH YEAR: _____									
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT										ALTERNATE: N A _____									
CATEGORY =====>																			
		MDA	VIS			MDA	VIS			MDA	VIS			MDA	VIS				
NOTES:																			
PROCEDURE CANCELED EFFECTIVE 5 JANUARY 2017																			
CITY AND STATE MARSHFIELD, WI		ELEVATION: 1278 TDZE: 1258 AIRPORT NAME: MARSHFIELD MUNI				FACILITY IDENTIFIER: MFI		PROCEDURE NO./AMD'T NO./EFFECTIVE DATE: NDB RWY 5, AMDT 14B, 02/04/2016						SUP AMD'T 14A DATE 04/02/2015					