

**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE**

TITLE 14 CFR PART 97.33

Bearings, headings, courses, tracks 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 feet RVR.

<u>AIRPORT</u> ELLINGTON	<u>AIRPORT ID</u> KEFD	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 22	<u>ORIGINAL/AMENDMENT</u> 2D	<u>CITY</u> HOUSTON	<u>STATE</u> TX
<u>AIRPORT ELEVATION</u> 33	<u>TDZE</u> 31	<u>SUPERSEDED</u> RNAV (GPS) RWY 22	<u>ORIGINAL/AMENDMENT</u> 2C	<u>DATED</u> 08/17/2017	<u>MAG VAR</u> 5E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 15 AUGUST 2019	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2000

TERMINAL ROUTES

<u>FROM</u>	<u>FIX TYPE</u>	<u>TO</u>	<u>FIX TYPE</u>	<u>LEG TYPE</u>	<u>FO/FB</u>	<u>RNP</u>	<u>COURSE</u>	<u>DISTANCE</u>	<u>ALTITUDE</u>
OPTOC	IAF	SEVSY		TF	FB	1.00	289.21	10.00	2000
SEVSY	IF	WZDOM		TF	FB	1.00	218.93	6.12	2000
WZDOM	FAF	YAKUD/2.20 NM TO RW22		TF	FB	0.30	218.90	3.82	
YAKUD/2.20 NM TO RW22		RW22	MAP	TF	FO	0.30	218.90	2.20	
RW22	MAP	500 MSL		CA			218.90		500
500 MSL		WATFO		DF	FO	1.00			3100

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW22

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 500 THEN CLIMBING LEFT TURN TO 3100 DIRECT WATFO AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. **PT** **SIDE OF COURSE** **OUTBOUND** **FT WITHIN** **MILES OF (IAF)**
2. PROFILE STARTS AT SEVSY
3. **FAC:** 218.90 **FAF:** WZDOM **DIST FAF TO MAP:** 6.02 **DIST FAF TO THLD:** 6.02
4. **MIN ALT:** SEVSY 2000, WZDOM 2000, YAKUD/2.20 NM TO RW22 780*
5. **DIST TO THLD FROM OM:** **MM:** **IM:** **150 HAT:** **200 HAT:** 0.46 **GS ANT:**
6. **MIN GP INCPT:** 2000 **GP ALT AT FAF :** WZDOM 2000 **OM:** **MM:** **IM:**
7. **GP ANGLE:** 3.00 **34:1:** IS CLEAR **20:1:** IS CLEAR **TCH:** 53.6
8. **MSA FROM:** RW22 3100

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: CIRCLING NA WEST OF RWY 17R-35L.
 CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -15°C OR ABOVE 54°C.
 CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
 CHART NOTE: FOR INOPERATIVE ALS, INCREASE LPV CAT E VISIBILITY TO RVR 4000, LNAV/VNAV ALL CATS VISIBILITY TO RVR 4500, AND LNAV CATS C/D/E VISIBILITY TO RVR 5500.

ADDITIONAL FLIGHT DATA:

CHART KT41 IN PLAN AND PROFILE VIEWS.
 CHART CIRCLING ICON.
 CHART VDP AT 1.00 NM TO RW22*
 *LNAV ONLY
 WAAS CHANNEL #61111
 REFERENCE PATH ID: W22A
 CHART FAS OBST: 141 STACK 293758N/0950716W.
 CHART: 178 WATER TOWER 293842N/0950656W.
 HOLD SE, LT, 316.00 INBOUND
 LTP HAE: -17.9 M

MINIMUMS:

TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT

ALTERNATE: NA STANDARD - CAT E 800-2 1/4



CATEGORY:	A			B			C			D			E		
	FINAL TYPE	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS
LPV DA	231	1800	200	231	1800	200	231	1800	200	231	1800	200	231	1800	200
LNAV/VNAV DA	341	2400	310	341	2400	310	341	2400	310	341	2400	310	341	2400	310
LNAV MDA	400	2400	369	400	2400	369	400	3500	369	400	3500	369	400	3500	369
CIRCLING	500	1	467	500	1	467	580	1 1/2	547	640	2	607	700	2 1/4	667

CHANGES - REASONS

1. AMENDED ALL INSTANCES OF FIX NAME WITZI TO WZDOM - ATC REQUEST.
2. REPLACED NOTE DME/DME RNP-0.3 NA WITH PBN REQUIREMENT NOTE RNP APCH - 8260.19H, 8-6-8.
3. ADDED 20:1 IS CLEAR ON LINE 7 - 8260.19H, 8-6-7G(3).
4. REMOVED FAHRENHEIT VALUES FROM UNCOMPENSATED BARO-VNAV SYSTEMS NOTE - 8260-19H, 8-6-9S.
5. ADDED CHART CIRCLING ICON TO ADDITIONAL FLIGHT DATA - 8260.19H, 8-6-10T.
6. AMENDED CAT C CIRCLING MDA/HAA FROM 500/468 TO 580/547 - NEW CONTROLLING OBSTACLE IDENTIFIED IN LARGER CIRCLING RADIUS.
7. AMENDED CAT D CIRCLING MDA/HAA FROM 600/568 TO 640/607 - NEW CONTROLLING OBSTACLE IDENTIFIED IN LARGER CIRCLING RADIUS.
8. AMENDED CAT E CIRCLING MDA/HAA FROM 660/628 TO 700/667 - NEW CONTROLLING OBSTACLE IDENTIFIED IN LARGER CIRCLING RADIUS.
9. AMENDED NOTE FOR INOPERATIVE MALSR, INCREASE LPV CAT E VISIBILITY TO RVR 4000, LNAV/VNAV CAT E VISIBILITY TO RVR 5000 AND LNAV CATS C, D AND E VISIBILITY TO RVR 5000 TO FOR INOPERATIVE ALS, INCREASE LPV CAT E VISIBILITY TO RVR 4000, LNAV/VNAV ALL CATS VISIBILITY TO RVR 4500, AND LNAV CATS C/D/E VISIBILITY TO RVR 5500" - RECALCULATED USING 8260.3D, CHAPTER 3 VISIBILITY TABLES.
10. AMENDED ADDITIONAL FLIGHT DATA FROM "CHART: LA PORTE MUNI" TO "CHART KT41 IN PLAN AND PROFILE VIEWS" - 8260-19H, 8-6-10U.
11. ADDED CHART 178 WATER TOWER 293842N/0950656W IN ADDITIONAL FLIGHT DATA - NEW OBSTACLE STUDY, NO CHANGE TO PUBLISHED LNAV MINIMUMS.
12. AMENDED SEVSY TO WZDOM INTERMEDIATE SEGMENT RNP VALUE FROM "0.50" TO "1.00" - 8260.58A, TABLE 1-2-1.
13. CRC REMAINDER AMENDED FROM "1BB2871C" TO "0845A935" - COMPUTED USING CURRENT AIRNAV THRESHOLD COORDINATES (TEN THOUSANDTH ARC SECOND VALUES IN LAT/LONG CHANGED).

COORDINATED WITH:

A4A **ALPA** **AOPA** **APA** **HAI** **NBAA** **OTHER:** ZHU, HOU APP, EFD ATCT, AMGR

FLIGHT CHECKED BY

Digitally signed by
DAVID DANNER
May 24, 2019

THOMAS CONKLIN

OFFICE

FICO

DATE

5/22/19

DEVELOPED BY

DAVID DANNER (KELLY CARLSON)

Digitally signed by
DAVID DANNER
May 24, 2019

OFFICE

AJV-A421

DATE

04/17/2019

APPROVED BY

MARLON ROBINSON

Digitally signed by
DAVID DANNER
May 24, 2019

OFFICE

AJV-A420

DATE

TITLE
MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KEFD
RUNWAY	RW22
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W22A
LTP/FTP LATITUDE	293650.5425N
LTP/FTP LONGITUDE	0950843.9700W
LTP/FTP ELLIPSOIDAL HEIGHT	-00179
FPAP LATITUDE	293546.1300N
FPAP LONGITUDE	0950954.7900W
THRESHOLD CROSSING HEIGHT (TCH)	00053.6
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0312
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	35.0
CRC REMAINDER	0845A935

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K4
LTP ORTHOMETRIC HEIGHT	+00092
FPAP ORTHOMETRIC HEIGHT	+00092

