

**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
ILS STANDARD INSTRUMENT APPROACH PROCEDURE**

TITLE 14 CFR PART 97.29

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> ILS Z OR LOC Z RWY 35L	<u>ORIGINAL/AMENDMENT</u> 7	<u>CITY</u> HOUSTON	<u>STATE</u> TX
<u>AIRPORT ELEVATION</u> 33	<u>TDZE</u> 28	<u>SUPERSEDED</u> ILS OR LOC RWY 35L	<u>ORIGINAL/AMENDMENT</u> 6B	<u>DATED</u> 09/15/2016	<u>MAG VAR</u> 5E
<u>FACILITY</u> I-EFD	<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>
TAPOW/EFD 15.00 DME CW	IAF	PAHSU INT/EFD 14.98 DME/RADAR					15.00 DME ARC (EFD LR-167)		3100
PAHSU INT/EFD 14.98 DME/RADAR	IF	MARZY INT/EFD 7.08 DME/RADAR					353.84	7.91 (I-EFD)	2100

MISSED APPROACH

MAP:

ILS: DA
LOC: 5.69 NM AFTER MARZY INT/EFD 7.08 DME/RADAR OR AT BAYUU/1.40 DME FIX

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 700 THEN CLIMBING RIGHT TURN TO 3100 ON VUH VOR/DME R-320 TO WATFO INT/VUH 9.33 DME AND HOLD.
(TACAN AIRCRAFT CLIMB TO 700 THEN CLIMBING RIGHT TURN TO 3100 ON EFD TACAN R-136 TO WATFO/EFD 15.98 DME AND HOLD SE, LT, 316.00 INBOUND).

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

- PT **SIDE OF COURSE** **OUTBOUND** **FT WITHIN** **MILES OF (IAF)**
- PROFILE STARTS AT PAHSU
- FAC:** 353.84 **FAF:** MARZY INT/EFD 7.08 DME/RADAR **DIST FAF TO MAP:** 5.69 **DIST FAF TO THLD:** 6.34
- MIN ALT:** PAHSU INT/EFD 14.98 DME/RADAR 3100, MARZY INT/EFD 7.08 DME/RADAR 2100, JUVUM/EFD 2.45 DME 620*
- DIST TO THLD FROM OM:** **MM:** **IM:** **150 HAT:** **GS ANT:** 1047
- MIN GS INCPT:** 2100 **GS ALT AT FAF:** MARZY INT/EFD 7.08 DME/RADAR 2100 **OM:** **MM:** **IM:**
- GP ANGLE:** 3.00 **34:1:** **20:1:** **TCH:** 54.0
- MSA FROM:** MHF VOR/DME 3100

EQUIPMENT REQUIREMENTS NOTES:

RADAR REQUIRED FOR PROCEDURE ENTRY.



NOTES:

CHART NOTE: CIRCLING NA WEST OF RWY 17R-35L.
 CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
 *LOC ONLY
 CHART NOTE: DME FROM EFD TACAN. SIMULTANEOUS RECEPTION OF I-EFD AND EFD DME REQUIRED.
 CHART NOTE: INOPERATIVE TABLE DOES NOT APPLY TO S-ILS 35L.
 CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-LOC 35L CAT C/D/E VISIBILITY TO 1 3/4 SM.
 CHART NOTE: FOR INOPERATIVE ALS WHEN USING JUVUM FIX MINIMUMS, INCREASE S-LOC 35L CAT C/D/E VISIBILITY TO RVR 6000.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
 CHART EFD R-151 AT TAPOW.
 CHART FAS OBST: 75 BUILDING 293436N/0950947W.
 HOLD SE, LT, 319.82 INBOUND

MINIMUMS:

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

ALTERNATE: NA ILS: STANDARD; LOC: 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	HAT/HAA
S-ILS 35L	228	4000	200	228	4000	200	228	4000	200	228	4000	200	228	4000	200
S-LOC 35L	620	4000	592	620	4000	592	620	1 3/8	592	620	1 3/8	592	620	1 3/8	592
CIRCLING	620	1	587	620	1	587	620	1 3/4	587	640	2	607	700	2 1/4	667
JUVUM FIX MINIMUMS (DME REQUIRED)															
S-LOC 35L	440	4000	412	440	4000	412	440	5000	412	440	5000	412	440	5000	412
CIRCLING	500	1	467	500	1	467	580	1 1/2	547	640	2	607	700	2 1/4	667



CHANGES - REASONS

1. AMENDED CHART NOTE FROM "CHART NOTE: FOR INOPERATIVE MALSF, INCREASE S-LOC 35L CATS A/B VISIBILITY TO RVR 5000, CATS C/D/E VISIBILITY TO 1 3/4 MILE" TO "CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-LOC 35L CAT C/D/E VISIBILITY TO 1 3/4 SM" - UPDATED VISCHECK RESULTS AND UPDATED TO CURRENT CRITERIA.
2. AMENDED CHART NOTE FROM "CHART NOTE: FOR INOPERATIVE MALSF WHEN USING JUVUM FIX MINIMUMS, INCREASE S-LOC 35L CATS A/B VISIBILITY TO RVR 5000, CATS C/D/E VISIBILITY TO 1 1/8 MILE" TO "CHART NOTE: FOR INOPERATIVE ALS WHEN USING JUVUM FIX MINIMUMS, INCREASE S-LOC 35L CAT C/D/E VISIBILITY TO RVR 6000" - UPDATED VISCHECK RESULTS AND UPDATED TO CURRENT CRITERIA.
3. AMENDED MSA CENTER FROM HUB VOR/DME AT 25NM TO MHF VOR/DME AT 25 NM - VOR MON CANCELLATION PROJECT.
4. ADDED "CHART NOTE: DME FROM EFD TACAN, SIMULTANEOUS RECEPTION OF I-EFD AND EFD DME REQUIRED" - 8260.19H, 8-6-9, K.
5. ADDED "CHART CIRCLING ICON" TO ADDITIONAL FLIGHT DATA - 8260-19H, 8-6-10, T.
6. AMENDED JUVUM FIX MINIMUMS CAT C CIRCLING MDA/HAA FROM 500/467 TO 580/547 - NEW CONTROLLING OBSTACLE IDENTIFIED IN LARGER CIRCLING RADIUS.
7. AMENDED JUVUM FIX MINIMUMS CAT D CIRCLING MDA/HAA FROM 600/567 TO 640/607 - NEW CONTROLLING OBSTACLE IDENTIFIED IN LARGER CIRCLING RADIUS.
8. AMENDED JUVUM FIX MINIMUMS CAT E CIRCLING MDA/HAA FROM 660/627 TO 700/667 - NEW CONTROLLING OBSTACLE IDENTIFIED IN LARGER CIRCLING RADIUS.
9. AMENDED S-ILS 35L ALTERNATE MINIMUMS FROM "CAT E 700-2 1/2" TO "ILS: STANDARD" AND S-LOC 35L FROM "CAT E 800-2 1/4" TO "LOC: STANDARD - CAT E 800-2 1/4" - 8260.3D, 3-4-1, A(2).
10. DELETED PLANVIEW NOTE DME OR RADAR REQUIRED AND ADDED RADAR REQUIRED FOR PROCEDURE ENTRY EQUIPMENT REQUIREMENT NOTE - 8260.19H, 8-6-8.
11. AMENDED MISSED APPROACH INSTRUCTIONS FROM "CLIMB TO 700 THEN CLIMBING RIGHT TURN TO 3100 ON HUB VOR/DME R-129 TO WATFO INT/HUB 22.33 DME AND HOLD" TO "CLIMB TO 700 THEN CLIMBING RIGHT TURN TO 3100 ON VUH VOR/DME R-320 TO WATFO INT/VUH 9.33 DME AND HOLD" - VORMON CANCELLATION PROJECT. PUBLISHED ALTERNATE MISSED IS NOW THE PRIMARY MISSED.
12. REMOVED ALTERNATE MISSED APPROACH INSTRUCTIONS - AN ALTERNATE MISSED WAS NOT REQUESTED FOR THIS PROCEDURE.
13. AMENDED DISTANCE BETWEEN PAHSU INT/EFD 14.98 DME RADAR TO MARZY INT/EFD 7.08 DME/RADAR FROM "8.02 (I-EFD)" TO "7.91 (I-EFD)" - UPDATED GEODETIC CALCULATION.
14. REMOVED "CHART IN PLANVIEW: WATFO" FROM ADDITIONAL FLIGHT DATA - NO LONGER NECESSARY.
15. AMENDED ADDITIONAL FLIGHT DATA NOTE FROM "CHART FAS OBST: 74 POLE 293522N/0950959W" TO "CHART FAS OBSTACLE : 75 BUILDING 293436N/0950947W" - NEW CONTROLLING OBSTACLE IDENTIFIED.
16. AMENDED MINIMUMS ANNOTATION FROM "JUVUM DME MINIMUMS" TO "JUVUM FIX MINIMUMS (DME REQUIRED)" - 8260.19H, 8-6-11, N(3)C.
17. AMENDED PROCEDURE ID FROM "ILS OR LOC RWY 35L" TO "ILS Z OR LOC Z RWY 35L" - 8260-.3D, 1-6-2, B.
18. REMOVED "CHART MANDATORY 2100 AT MARZY" FROM ADDITIONAL FLIGHT DATA - ATC NO LONGER REQUIRES A MANDATORY ALTITUDE AT MARZY.

COORDINATED WITH:

A4A **ALPA** **AOPA** **APA** **HAI** **NBAA** **OTHER:** EFD ATCT, HOU APP CON, ZHU, ST AV DIR., AMGR

FLIGHT CHECKED BY	<i>Digitally signed by</i>	OFFICE	DATE
THOMAS CONKLIN	DAVID DANNER	FICO	5/22/19
	May 24, 2019		

DEVELOPED BY	<i>Digitally signed by</i>	OFFICE	DATE
DAVID DANNER (KELLY CARLSON)	DAVID DANNER	AJV-A421	11/28/2018

APPROVED BY	<i>Digitally signed by</i>	OFFICE	DATE	TITLE
MARLON ROBINSON	DAVID DANNER	AJV-A420		MANAGER
	May 24, 2019			

