#### 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.

PROCEDURE NAME **ORIGINAL/AMENDMENT CITY STATE AIRPORT ID** RNAV (GPS) RWY 23R 3 **KNOXVILLE** TN KTYS **AIRPORT ELEVATION TDZE SUPERSEDED ORIGINAL/AMENDMENT DATED MAG VAR EPOCH YEAR** 986 984 RNAV (GPS) RWY 23R 2A 10/12/2017 6W 2015

FACILITY COORDINATES OF FACILITIES ACTUAL EFFECTIVE DATE REQUIRED EFFECTIVE DATE CANCEL/SUSPEND

RNAV 12 AUGUST 2021 08/12/2021

#### **TERMINAL ROUTES**

FROM	FIX TYPE	<u>TO</u>	FIX TYPE	LEG TYPE	FO/FB	RNP	<u>COURSE</u>	DISTANCE	ALTITUDE
NEYLN	IF/IAF	AWOKI		TF	FB	1.00	230.91	5.70	2800
AWOKI	FAF	XIVZU/2.46 NM TO RW23R		TF	FB	0.30	230.87	3.08	
XIVZU/2.46 NM TO RW23R		RW23R	MAP	TF	FO	0.30	230.87	2.46	
RW23R	MAP	1600 MSL		CA			230.87		1600
1600 MSL		GROSS		DF	FO	1.00			3000

#### MISSED APPROACH

MAP: LPV: DA

LNAV/VNAV: DA LNAV: RW23R

**MISSED APPROACH INSTRUCTIONS:** 

CLIMB TO 1600 THEN CLIMB TO 3000 DIRECT GROSS AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



AIRPORT ID<br/>KTYSPROCEDURE NAME<br/>RNAV (GPS) RWY 23RORIGINAL/AMENDMENT<br/>3CITY<br/>KNOXVILLESTATE<br/>KNOXVILLE

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1. PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)

2. HOLD NE NEYLN, LT, 233.00 INBOUND, 3500 FT. IN LIEU OF PT (IAF), MAX 6000.

**3. FAC:** 230.87 **FAF:** AWOKI **DIST FAF TO MAP:** 5.54 **DIST FAF TO THLD:** 5.54

**4. MIN ALT:** NEYLN 3500, AWOKI 2800, XIVZU/2.46 NM TO RW23R 1820

5. DIST TO THLD FROM OM: MM: IM: 150 HAT: 200 HAT: 0.46 GS ANT:

**6. MIN GP INCPT**: 2800 **GP ALT AT FAF**: AWOKI 2800 **OM**: **MM**: **IM**:

**7. GP ANGLE**: 3.00 **34:1**: IS CLEAR **20:1**: IS CLEAR **TCH**: 53.0

**8. MSA FROM:** RW23R 7900

#### PBN REQUIREMENTS NOTE:

RNP APCH - GPS

#### NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -10°C OR ABOVE 54°C.

CHART PLANVIEW NOTE: NOPT FOR ARRIVAL AT NEYLN ON V466-519 SOUTHWEST BOUND.

CHART NOTE: FOR INOPERATIVE ALS, INCREASE LNAV CAT C/D VISIBILITY TO 1 3/8 SM.

#### **ADDITIONAL FLIGHT DATA:**

CHART CIRCLING ICON.

HOLD SW, RT, 050.88 INBOUND.

CHART FAS OBST: 1235 TREE (47-068487) 355108N/0835728W.

CHART 1429 TOWER (47-001674) 355241N/0835311W.

CHART VDP AT 1.44 NM TO RW23R.

WAAS CHANNEL # 81902

REFERENCE PATH ID: W23A

LTP HAE: 269.4 M

#### MINIMUMS:

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

**ALTERNATE:** NA

STANDARD - CAT D 1000-3

CATEGORY:	Α		В			С			D			E			
FINAL TYPE	DA/MDA	<u>VIS</u>	HAT/HAA	DA/MDA	<u>VIS</u>	HAT/HAA	<u>DA/MDA</u>	<u>VIS</u>	HAT/HAA	DA/MDA	<u>VIS</u>	HAT/HAA	DA/MDA	<u>VIS</u>	HAT/HAA
LPV DA	1184	1800	200	1184	1800	200	1184	1800	200	1184	1800	200			
LNAV/VNAV DA	1529	1 1/8	545	1529	1 1/8	545	1529	1 1/8	545	1529	1 1/8	545			
LNAV MDA	1500	2400	516	1500	2400	516	1500	5500	516	1500	5500	516			
CIRCLING	1500	1	514	1560	1	574	1660	2	674	1900	3	914		OI,	ALITY



AIRPORT ID<br/>KTYSPROCEDURE NAME<br/>RNAV (GPS) RWY 23RORIGINAL/AMENDMENT<br/>3CITY<br/>KNOXVILLESTATE<br/>KNOXVILLE

#### **CHANGES - REASONS**

- 1. AIRPORT ELEVATION CHANGED FROM 979 TO 986 NEW AIRNAV DATA DUE TO RWY CONSTRUCTION.
- 2. TDZE CHANGED FROM 979 TO 984 NEW AIRNAV DATA DUE TO RWY CONSTRUCTION.
- 3. TCH CHANGED FROM 55.8 TO 53.00 MATCH S-ILS 23R PROCEDURE.
- 4. TERMINAL ROUTES: CHANGED THE DISTANCE IN THE INTERMEDIATE SEGMENT FROM NEYLN TO AWOKI FROM 5.69 NM TO 5.70 NM, CHANGED DISTANCE FROM AWOKI TO XIVZU FROM 3.05 TO 3.08, CHANGED DISTANCE FROM XIVZU TO RW23R FROM 2.50 TO 2.46, AND CHANGED THE DISTANCE IN THE LPV FINAL SEGMENT FROM AWOKI TO DA FROM 5.55 NM TO 5.54 NM PFAF AND STEPDOWN FIX MOVED.
- 5. PROFILE LINE: CHANGED 200 HAT FROM 0.45 TO 0.46., CHANGED FAF DISTANCE TO MAP AND TO THLD FROM 5.55 NM TO 5.54 NM UPDATED TARGETS EVALUATION DUE TO RWY EXTENSION PROJECT.
- 6. ADDED 20:1 IS CLEAR TO LINE 7 8260.19I.
- 7. REPLACED CHART NOTE "DME/DME RNP-0.3 NA" WITH PBN REQUIREMENTS NOTE: "RNP APCH GPS" 8260.19I.
- 8. CHANGED CRITICAL TEMPERATURE NOTE FROM "CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -10C (14F) OR ABOVE 54C (130F)" TO "CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -10C OR ABOVE 54C" DOCUMENTATION OF DEGREES FAHRENHEIT IS NO LONGER REQUIRED. IAW 8260.19I
- 9. CHANGED VDP FROM 1.52 NM TO 1.44 NM THRESHOLD ELEVATION AND TCH CHANGED, MDA LOWERED.
- 10. CHANGED FAS OBSTACLE FROM 1259 TREES 355105N/0835729W TO 1235 TREE 355108N/0835728W NEW FINAL CONTROLLER.
- 11. ADDED CHART 1429 TOWER 355241N/0835728W TO ADDITIONAL FLIGHT DATA NEW 7:1 OBSTACLE.
- 12. CHANGED LPV DA/HAT FROM 1181/200 TO 1184/200 NEW TARGETS EVALUATION, THRESHOLD ELEVATION CHANGED TO TDZE ELEVATION.

NBAA X

- 13. CHANGED LNAV/VNAV DA/HAT FROM 1535/554 TO 1529/545 NEW CONTROLLING OBSTACLE/MAP STUDY.
- 14. CHANGED LNAV MDA/HAT FROM 1520/539 TO 1500/516 NEW CONTROLLING OBSTACLE.
- 15. CIRCLING MDA/HAT CAT A CHANGED FROM 1520/539 TO 1500/514, CAT B CHANGED FROM 1620/639 TO 1560/574, CAT C CHANGED FROM 1660/679 TO 1660/674, AND CAT D CHANGED FROM 1900/919 TO 1900/914 NEW CONTROLLING OBSTACLES CAT A/B AND UPDATE FROM THRESHOLD TO TDZE.
- 16. CHANGED LNAV/VNAV VISIBILITY ALL CATS FROM 1 3/8 NM TO 1 1/8 NM 8260.3D TABLE 3-3-1.
- 17. CHANGED LNAV VISIBILITY CAT C/D FROM 5000 RVR TO 5500 8260.3D TABLE 3-3-1.

APA X

May 13, 2021

18. FAS DATA: CHANGED FPAP LATITUDE/LONGITUDE FROM 354815.4530N/0840019.8280W TO 354812.1463N/0840023.8812W - UPDATED TARGETS EVALUATION BASED ON NEW AIRNAV DATA.

OTHER: ZTL, TYS APP CON, TYS ATCT, AMGR

- 19. CRC REMAINDER CHANGED FROM 784A86D9 TO C6D928E8 DUE TO LTP, ELLIPSOIDAL HEIGHT AND FPAP, TCH AND LENGTH OFFSET FAS DATA CHANGES.
- 20. ADDED "MAX 6000" TO HOLD-IN-LIEU ON LINE 2 IAW 8260.19I.

AOPA X

- 21. ADDED CHART CIRCLING ICON 8260.19I.
- 22. ADDED CHART NOTE: FOR INOPERATIVE ALS, INCREASE LNAV CAT C/D VISIBILITY TO 1 3/8 SM 8260.3D TABLE 3-3-1.

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## COORDINATED WITH:

FLIGHT CHECKED BY **OFFICE** DATE Digitally signed by PENDING FICO **DONALD H LANIER** May 13, 2021 **DEVELOPED BY OFFICE** DATE JON DENTON (LORRI DOWNEY) Digitally signed by AJV-A432 01/25/2021 **DONALD H LANIER** APPROVED BY **OFFICE DATE** TITLE May 13, 2021 I ONNIF EVERHART AJV-A430 MANAGER Digitally signed by **DONALD H LANIER** 

AIRPORT ID
KTYS
RNAV (GPS) RWY 23R

GRIGINAL/AMENDMENT
STATE
KNOXVILLE
TN

#### **FAS DATA BLOCK INFORMATION**

DATA FIELD	DATA
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KTYS
RUNWAY	RW23R
APPROACH PERFORMANCE DESIGNATOR	0

ROUTE INDICATOR

REFERENCE PATH DATA SELECTOR 0

REFERENCE PATH IDENTIFIER (APPROACH ID) W23A

 LTP/FTP LATITUDE
 354918.7520N

 LTP/FTP LONGITUDE
 0835902.6220W

**LTP/FTP ELLIPSOIDAL HEIGHT** +02694 **FPAP LATITUDE** 354812.1460N

FPAP LONGITUDE 0840023.8810W

THRESHOLD CROSSING HEIGHT (TCH) 00053.0

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) 35.0

CRC REMAINDER C6D928E8

#### ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODEK7LTP ORTHOMETRIC HEIGHT+03000FPAP ORTHOMETRIC HEIGHT+03000