

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> BOCA RATON	<u>AIRPORT ID</u> KBCT	<u>PROCEDURE NAME</u> RNAV (GPS) Y RWY 23	<u>ORIGINAL/AMENDMENT</u> 1B	<u>CITY</u> BOCA RATON	<u>STATE</u> FL
<u>AIRPORT ELEVATION</u> 13	<u>TDZE</u> 13	<u>SUPERSEDED</u> RNAV (GPS) Y RWY 23	<u>ORIGINAL/AMENDMENT</u> 1A	<u>DATED</u> 07/20/2017	<u>MAG VAR</u> 5W
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<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>
PBI VORTAC		SOBPO		TF	FB	2.00	162.26	6.70	3000
MRLIN	IAF	KISEC	NOPT	TF	FB	1.00	278.28	10.66	2000
SOBPO	IAF	KISEC	NOPT	TF	FB	1.00	139.37	5.62	2000
KISEC	IF/IAF	HIVUR		TF	FB	1.00	229.40	6.14	1500
HIVUR	FAF	RW23	MAP	TF	FO	0.30	229.37	4.50	
RW23	MAP	263 MSL		CA			229.37		
263 MSL		TANAH		DF	FB	1.00			
TANAH		ATONE		TF	FO	1.00	297.09	10.74	2100

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW23

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 2100 DIRECT TANAH AND TRACK 297.09 TO ATONE AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD NE KISEC, RT, 229.40 INBOUND, 2000 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAC: 229.37FAF: HIVURDIST FAF TO MAP: 4.50DIST FAF TO THLD: 4.50

4. MIN ALT: KISEC 2000, HIVUR 1500

5. DIST TO THLD FROM OM:MM:IM:150 HAT:250 HAT: 0.61

6. MIN GP INCPT: 1500GP ALT AT FAF : HIVUR 1500OM:MM:IM:

7. GP ANGLE: 3.0034:1: IS NOT CLEAR20:1: IS CLEARTCH: 55.0

8. MSA FROM: RW23 2600

PBN REQUIREMENTS NOTE

RNP APCH

NOTES:

CHART NOTE: RWY 23 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -15C OR ABOVE 54C.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON PBI VORTAC AIRWAY RADIALS 071 CW 190.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT MRLIN ON BR68V NORTHEAST BOUND, BR64V EASTBOUND, AND ON BR54V-55V SOUTHEAST BOUND.
CHART NOTE: IN MINIMUM VISIBILITY CONDITIONS, BRIGHT LIGHTS ON HIGHWAY 1/4 MILE NORTH OF AIRPORT MAY BE MISTAKEN AS RUNWAY LIGHTS.
CHART NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH{FEET}).
CHART SPEED ICON IN PLANVIEW AT SOBPO: MAX 210 KIAS.

ADDITIONAL FLIGHT DATA:

FAS OBST: 220 AAO 262610N/0800343W
CHART CIRCLING ICON.
CHART A-291A
CHART VDP AT 1.34 NM TO RW23*
*LNAV ONLY
WAAS CHANNEL #42801
REFERENCE PATH ID: W23A
HOLD N, LT, 169.00 INBOUND
LTP HAE: -22 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT D 900-2 3/4

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
LPV DA	263	3/4	250	263	3/4	250	263	3/4	250	263	3/4	250			
LNAV/VNAV DA	357	1 1/8	344	357	1 1/8	344	357	1 1/8	344	357	1 1/8	344			
LNAV MDA	480	1	467	480	1	467	480	1 3/8	467	480	1 3/8	467			
CIRCLING	680	1	667	680	1	667	680	1 3/4	667	880	2 3/4	867			



CHANGES - REASONS

- 1. UPDATED MISSED APPROACH CLIMB-TO ALTITUDE FROM 2000 TO 2100. -RAISED TO MATCH AIRWAY MEA AND REMOVE NOTAM FDC 8/6487.
- 2. ADDED LINE 7: 20:1 IS CLEAR. - IAW 8260.19H.
- 3. REMOVED CHART NOTE: DME/DME RNP-0.3 NA. ADDED PBN REQUIREMENTS NOTE: RNP APCH. - IAW 8260.19H.
- 4. INCREASED CIRCLING CAT A/B MDA/HAA FROM 640/667 TO 680/667. - NEW CONTROLLING OBSTACLE/UPDATED TO MATCH VOR-A.
- 5. CHANGED COURSE AND DISTANCE FROM TANAH TO ATONE FROM 296.82/10.76 TO 297.09/10.74. - TANAH MOVED IN 2004; 8260-3 DID NOT REFLECT CHANGE.
- 6. REMOVED FAHRENHEIT TEMPERATURES FROM UNCOMPENSATED BARO-VNAV SYSTEMS CHART NOTE. - IAW 8260.19H.



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<u>COORDINATED WITH:</u>					
A4A <input type="checkbox"/> ALPA <input checked="" type="checkbox"/> AOPA <input checked="" type="checkbox"/> APA <input type="checkbox"/> HAI <input type="checkbox"/> NBAA <input checked="" type="checkbox"/> <u>OTHER:</u> ZMA, BCT ATCT, PBI APP CON, AMGR					
<u>FLIGHT CHECKED BY</u>			<u>OFFICE</u>	<u>DATE</u>	
<u>DEVELOPED BY</u>			<u>OFFICE</u>	<u>DATE</u>	
LONNIE EVERHART (BARBARA GORMAN)			AJV-5400	02/28/2018	
<u>APPROVED BY</u>			<u>OFFICE</u>	<u>DATE</u>	<u>TITLE</u>
LONNIE EVERHART			AJV-5400		MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KBCT
RUNWAY	RW23
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	Y
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W23A
LTP/FTP LATITUDE	262302.0925N
LTP/FTP LONGITUDE	0800606.4990W
LTP/FTP ELLIPSOIDAL HEIGHT	+00221
FPAP LATITUDE	262158.1700N
FPAP LONGITUDE	0800715.8300W
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	0952
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0

CRC REMAINDER	7FD7E35B
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ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K7
LTP ORTHOMETRIC HEIGHT	+00038
FPAP ORTHOMETRIC HEIGHT	+00038



FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

<u>AIRPORT</u> BOCA RATON	<u>AIRPORT ID</u> KBCT	<u>PROCEDURE NAME</u> RNAV (GPS) Y RWY 23	<u>AMDT NO.</u> 1B	<u>CITY</u> BOCA RATON	<u>STATE</u> FL	<u>AIRPORT ELEVATION</u> 13	<u>FACILITY</u> RNAV
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PART A: OBSTRUCTION DATA SEGMENTS

FEEDER

FROM PBI VORTAC TO SOBPO

RNP DISTANCE PAT MAP HAT HMAS
6.70

<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
1.TOWER (12-000744)	263833.00N/0800447.00W	291	250	50	4D	1000				AT1709	3000
2.TERRAIN	263815.00N/0800100.00W	7 (0)								AC1500	1500

COMPUTATIONS

ALT KIAS KTAS HAA VKTW TR BA DTA COURSE CHANGE DVEB VEB OCS RF CENTER FIX/DISTANCE

SEGMENT
REMARKS:

INITIAL

FROM MRLIN TO KISEC

RNP DISTANCE PAT MAP HAT HMAS
10.66

<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
3.SHIP MAST	262920.22N/0795314.84W	207	50	20	2C	1000				AT793	2000
4.TERRAIN	262920.22N/0795314.84W	0 (0)								AS1500	1500

COMPUTATIONS

ALT KIAS KTAS HAA VKTW TR BA DTA COURSE CHANGE DVEB VEB OCS RF CENTER FIX/DISTANCE

SEGMENT
REMARKS:



FINAL: LPV

FROM

HIVUR

TO

RW23

RNP

DISTANCE

PAT

MAP

HAT

HMAS

4.50

DA

250

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
9.TREE (KBCTL045)	262311.28N/0800556.83W	49	20	10	1B		34:1			AC10	263

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT

REMARKS:

FINAL: LNAV/VNAV

FROM

HIVUR

TO

RW23

RNP

DISTANCE

PAT

MAP

HAT

HMAS

4.50

DA

344

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
10.POLE (12-027364)	262235.97N/0800603.29W	146	250	50	4D	161				AC50	357

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT

REMARKS:



FINAL: LNAV

FROM

HIVUR

TO

RW23

RNP	DISTANCE	PAT	MAP	HAT		HMAS						
	4.50		RW23	467								
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
11.AAO	262609.89N/0800343.32W		220	50	20	2C	250					480

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT
REMARKS:

HOLD-IN-LIEU OF PT

FROM

KISEC

TO

P-4

RNP	DISTANCE	PAT	MAP	HAT		HMAS						
		P-4										
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
7.SHIP MAST	262849.73N/0800036.44W		207	50	20	2C	1000				AT793	2000
12.TERRAIN	263039.00N/0800306.00W		7 (0)								AS1500	1500

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT
REMARKS:



MISSED APPROACH : LNAV

FROM

RW23

TO

ATONE

RNP	DISTANCE	PAT	MAP	HAT				HMAS			
			RW23					380			
OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
							ASC				2100
13.TOWER (12-000548)	262213.00N/0801022.00W	516	500	50	5D	1000					1600
14.TERRAIN	261730.00N/0801130.00W	23 (0)								AS1500	1500

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT
REMARKS:

CIRCLING

☐ ALL CATS

☒ CAT A

☒ CAT B

☒ CAT C

☒ CAT D

☐ CAT E

☐ NOT AUTHORIZED

OBSTRUCTION	COORDINATES	RADIUS	HAA	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
CATEGORY A											
15.TOWER (12-027932)	262217.31N/0800506.94W	1.30	667	325	250	50	4D	300		AC50	680
CATEGORY B											
15.TOWER (12-027932)	262217.31N/0800506.94W	1.81	667	325	250	50	4D	300		AC50	680
CATEGORY C											
16.BLDG (12-000817)	262028.00N/0800439.00W	2.84	667	328	500	50	5D	300		AC50	680
CATEGORY D											
13.TOWER (12-000548)	262213.00N/0801022.00W	3.70	867	516	500	50	5D	300		AC50	880

CIRCLING REMARKS:



MSA

<u>CENTER</u>	<u>RADIUS</u>
RW23	25

<u>SECTOR</u>	<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>BEARING</u>	<u>DISTANCE</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
360-360	TWR (12-001773)	263438.00N/0801431.00W	332	13.8	1549	100	3	3A	1000			2600

MSA REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:

100 FOOT TREES USED PER EASTERN FPT.

MISSED APPROACH USES 25 DEGREE BANK ANGLE.

LPV OCS SURFACE = 34:1

LNAV/VNAV OCS SURFACE = 23.44:1

TCH INCREASED TO 55FT TO CLEAR GQS PENETRATION. 49 TREE (12-029717) 262311.28N/0800556.83W

NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE PALM BEACH INTL ALTIMETER SETTING: INCREASE LPV DA TO 306 AND ALL VISIBILITIES 1/8 SM; INCREASE LNAV/VNAV DA TO 400 AND ALL VISIBILITIES 1/8 SM; INCREASE ALL MDAS 60 FEET, LNAV VISIBILITY CATS C AND D 1/8 SM, AND CIRCLING VISIBILITY CATS C AND D 1/4 SM.

PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH
PBI APP CON, BCT TOWER

<u>WX SERVICE</u>	<u>LOCATION</u>	<u>HRS OPERATION</u>	<u>ALTIMETER SOURCE</u>	<u>DISTANCE</u>	<u>SERVICE-A</u>	<u>ADJUSTMENTS</u>
AWOS-3	KBCT	24	KBCT	0	Y	0
<u>BACK-UP WX SERVICE</u>	<u>LOCATION</u>	<u>HRS OPERATION</u>	<u>ALTIMETER SOURCE</u>	<u>DISTANCE</u>	<u>SERVICE-A</u>	<u>ADJUSTMENTS</u>
ASOS-3	KPBI	24	KPBI	18.3	Y	43

WX REMARKS:
RASS PRESSURE PATTERNS SAME
KBCT 13.0, KPBI 19.5
RA = 42.86

<u>PRIMARY NAVAID</u>	<u>MONITOR POINT</u>	<u>HRS OPERATION</u>	<u>CAT</u>
<u>APPROACH AND RUNWAY LIGHTING SYSTEM</u>		<u>RUNWAY MARKINGS</u>	<u>RUNWAY VISUAL RANGE</u>
RW05 - MIRL (PCL), REIL (PCL), PAPI-4R (PCL)		NPI-F	
RW23 - MIRL (PCL), REIL (PCL), PAPI-4L (PCL)		NPI-F	



<u>GLIDESLOPE ANGLE</u>	<u>ELEV RWY THRESHOLD</u>	<u>TCH</u>	<u>ELEV GS ANTENNA</u>	<u>DISTANCE FROM RWY</u>	<u>VGSI ANGLE</u>	<u>TCH</u>
3.00	12.6	55.0			3.00	40.0

FINAL APPROACH COURSE AIMING

RUNWAY THRESHOLD	<input checked="" type="checkbox"/>	FT FROM THRESHOLD	DISPLACED THRESHOLD DISTANCE	378
ON CENTERLINE	<input checked="" type="checkbox"/>	FT FROM CENTERLINE		

CRITICAL TEMPERATURES

<u>CRITICAL LOW</u>	<u>CRITICAL HIGH</u>	<u>ACT</u>	<u>APT ISA</u>
-15C (+5F)	+54C (+130F)	-15C	+14.974C

CRITICAL TEMPERATURE REMARKS:

AVERAGE COLD TEMPERATURE DERIVED FROM STANDARD -30C ISA DEVIATION.
CRITICAL LOW TEMPERATURE BASED ON ACT.
DESCENT RATE (FPM): STANDARD TEMP 954 HIGH TEMP 1114.

"VISUAL PORTION OF FINAL" PENETRATIONS

Final Type	LPV, LNAV/VNAV, AND LPV
20:1	
NONE	
Final Type	LPV, LNAV/VNAV, AND LPV
34:1	
49 TREE (12-029717) 262311.28N/0800556.83W (4.69)	

HELICOPTER 'VISUAL PORTION OF FINAL' PENETRATIONS

and/or

5280-FT "PROCEED VFR" SEGMENT LEVEL SURFACE AREA PENETRATIONS

PART C: GENERAL REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

ADVERSE SHIP HEIGHTS (OBSTACLE #3 AND #7) PER FPT.

TAA NOT DEVELOPED PER ATC REQUEST.

ORDER 8260.3, VOLUME 1, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED.

<u>AIRPORT</u>	<u>AIRPORT ID</u>	<u>PROCEDURE NAME</u>	<u>AMDT NO.</u>	<u>CITY</u>	<u>STATE</u>	<u>AIRPORT ELEVATION</u>	<u>FACILITY</u>
BOCA RATON	KBCT	RNAV (GPS) Y RWY 23	1B	BOCA RATON	FL	13	RNAV

PART D: AIRSPACE
DOCKET #

ALL DISTANCES TO 1/100NM; ELEVATION TO NEAREST 100 FEET; COORDINATES TO 1/100 SECOND; DEG TO 1/100 DEGREE

DISTANCE FROM	THLD	TO 1000FT POINT	2.93
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	1.20
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	224.37
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	16
DISTANCE FROM	THLD	TO 1500FT POINT	4.50
WIDTH OF	FINAL	SEGMENT AT 1500FT POINT	2.13
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1500FT POINT	224.37
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1500FT POINT	16

THRESHOLD
COORDINATES
(IF STR-IN)262302.09N/0800606.50W*

ARP COORDINATES262242.60N/0800627.70W

RUNWAY APCH END
AND DIST FURTHEST
FROM ARP RUNWAY 5 DISTANCE 0.52 NM

FAF
COORDINATES

FIX NAME
COORDINATES

REMARKS
*THLD DISPLACED 378FT, ACTUAL COORDINATES: 262304.77N/0800603.59W.



<u>AIRPORT</u>	<u>AIRPORT ID</u>	<u>PROCEDURE NAME</u>	<u>AMDT NO.</u>	<u>CITY</u>	<u>STATE</u>	<u>AIRPORT ELEVATION</u>	<u>FACILITY</u>
BOCA RATON	KBCT	RNAV (GPS) Y RWY 23	1B	BOCA RATON	FL	13	RNAV

PART E: PREPARED BY

<u>NAME</u>	<u>OFFICE</u>	<u>DATE</u>	<u>TITLE</u>
LONNIE EVERHART (BARBARA GORMAN)	AJV-5400	02/28/2018	AERONAUTICAL INFORMATION SPECIALIST

