

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 ID</u> KAOO	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 21	<u>ORIGINAL/AMENDMENT</u> 1E	<u>CITY</u> ALTOONA	<u>STATE</u> PA		
<u>AIRPORT ELEVATION</u> 1503	<u>TDZE</u> 1486	<u>SUPERSEDED</u> RNAV (GPS) RWY 21	<u>ORIGINAL/AMENDMENT</u> 1D	<u>DATED</u> 04/23/2020	<u>MAG VAR</u> 10W	<u>EPOCH YEAR</u> 2005
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u> 11/30/2023	<u>CANCEL/SUSPEND</u>		

TAA

FROM	FIX TYPE	TO	FIX TYPE	ALTITUDE
1. 116/30 CW 296/30	NOPT	116/10 CW 296/10		5100
2. 116/10 CW 296/10		KEWER	IF/IAF	4500
3. 296/30 CW 116/30		296/10 CW 116/10		5400
4. 296/10 CW 116/10		KEWER	IF/IAF	4500

TERMINAL ROUTES

FROM	FIX TYPE	TO	FIX TYPE	LEG TYPE	FO/FB	RNP	COURSE	DISTANCE	ALTITUDE
KEWER	IF/IAF	ROBPO		TF	FB	1.00	206.03	5.88	3500
ROBPO	FAF	ZAVMA/3.00 NM TO RW21		TF	FB	0.30	206.00	3.21	
ZAVMA/3.00 NM TO RW21		RW21	MAP	TF	FO	0.30	206.00	3.00	
RW21	MAP	1903 MSL		CA			206.00		
1903 MSL		YOLUP		DF	FB	1.00			
YOLUP		CRYSS		TF	FO	1.00	223.25	10.42	5000



MISSED APPROACH**MAP:**

LPV: DA
LNAV/VNAV: DA
LNAV: RW21

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 5000 DIRECT YOLUP AND ON TRACK 223.25 TO CRYSS AND HOLD, CONTINUE CLIMB-IN-HOLD TO 5000.

ALTERNATE MISSED APPROACH INSTRUCTIONS:**PROFILE:**

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF	(IAF)
2. HOLD NE KEWER, RT, 206.03 INBOUND, 4500 FT. IN LIEU OF PT (IAF), MAX 6000.					
3. FAC:	206.00	FAF: ROBPO	DIST FAF TO MAP: 6.21		DIST FAF TO THLD: 6.21
4. MIN ALT: KEWER 4500, ROBPO 3500, ZAVMA/3.00 NM TO RW21 2460					
5. DIST TO THLD FROM OM:	MM:	IM:	150 HAT:	491 HAT: 1.37	GS ANT:
6. MIN GP INCPT:	3500	GP ALT AT PFAF :	ROBPO 3500	OM:	MM:
7. GP ANGLE:	3.00	34:1: IS CLEAR	20:1: IS CLEAR	TCH: 52.0	IM:
8. MSA FROM:					

PBN REQUIREMENTS NOTE:

RNP APCH - GPS.

NOTES:

CHART NOTE: CIRCLING NA TO RWYS 12 AND 30.
CHART NOTE: CIRCLING NA FOR CATS C, D NW OF RWYS 12 AND 21.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -17°C OR ABOVE 54°C.
CHART NOTE: FOR INOPERATIVE ALS, INCREASE LPV VISIBILITY ALL CATS TO 1 3/8 SM.

ADDITIONAL FLIGHT DATA:

HOLD SW, RT, 040.88 INBOUND.
CHART FAS OBST: 1692 POLE (42-001763) 401936N/0781810W.
2219 AAO 402413N/0781801W, 1716 AAO 402112N/0781718W.
CHART VDP AT 2.01 NM TO RW21.
WAAS CHANNEL # 90105
REFERENCE PATH ID: W21A
CHART CIRCLING ICON.
LTP HAE: 414.8 M

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

ALTERNATE: NA ☐ STANDARD - CAT C 1300-3, CAT D 1400-3, NA WHEN LOCAL WEATHER NOT AVAILABLE.

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	1977	1	491	1977	1	491	1977	1	491	1977	1	491			
LNAV/VNAV DA	1999	1	513	1999	1	513	1999	1	513	1999	1	513			
LNAV MDA	2160	1/2	674	2160	1/2	674	2160	1 1/2	674	2160	1 1/2	674			
CIRCLING	2240	1	737	2240	1	737	2800	3	1297	2840	3	1337			

CHANGES - REASONS

1. INCORPORATED AMDT 1A, 1B, 1C, AND 1D. - 8260.19I 8-3-4C(2).
2. PROFILE LINE 5: ADDED "DIST TO THLD FROM 491 HAT: 1.37" - 8260.19I 8-6-7E(3).
3. PROFILE LINE 7: ADDED 20:1 IS CLEAR - 8260.19I 8-6-7.G (3).
4. PBN REQUIREMENTS NOTE: CHANGED FROM "RNP APCH." TO "RNP APCH - GPS" - 8260.19I 8-6-8B.
5. ADDED "CIRCLING NA FOR CATS C, D NW OF RWYS 12 AND 21." - CIRCLING RESTRICTION REALIGNMENT
6. NOTES: CHANGED FROM "CHART NOTE: CIRCLING TO RWY 3, 12, 30 NA AT NIGHT." TO "CIRCLING NA TO RWYS 12 AND 30" - STANDARDIZED CIRCLING RESTRICTIONS BETWEEN RWYS AND RWY 3 NO LONGER REQUIRES A RESTRICTION.
7. NOTES: UPDATED CHART NOTE: FROM "FOR INOPERATIVE ALS, INCREASE LPV VISIBILITY ALL CATS TO 1 5/8 SM." TO "CHART NOTE: FOR INOPERATIVE ALS, INCREASE LPV VISIBILITY ALL CATS TO 1 3/8 SM." - 8260.3E TABLE 3-3-1
8. NOTES: MOVED TO PART C: GENERAL REMARKS AND UPDATED CHART NOTE: FROM "CHART NOTE: FOR INOPERATIVE ALS WHEN USING BEDFORD COUNTY ALTIMETER SETTING, INCREASE LPV AND LNAV/VNAV ALL CATS VISIBILITY TO 2 SM AND INCREASE LNAV CATS C, D VISIBILITY TO 2 1/2 SM." TO "NOTE: FOR INOPERATIVE ALS WHEN USING BEDFORD COUNTY ALTIMETER SETTING, INCREASE LPV ALL CATS VISIBILITY TO 1 5/8; INCREASE LNAV CATS C, D VISIBILITY TO 2 1/2 SM." - 8260.3E TABLE 3-3-1
9. RELOCATED BACKUP ALTIMETER NOTES FROM THIS FORM TO THE 8260-9 FOR CONTINGENCY PURPOSES - 8260.19I, 8-6-9.F (3).
10. ADDITIONAL FLIGHT DATA: UPDATED CHART FAS OBST: FROM "1693 POLE 401936N/0781810W. " TO "CHART FAS OBST: 1692 POLE (42-001763) 401936N/0781810W." - UPDATED OBSTACLE DATA, 8260.19I 8-6-10 C
11. VISIBILITY: LPV ALL CATS CHANGED FROM "1 1/8" TO "1"; LNAV/VNAV ALL CATS CHANGED FROM "1 1/4" TO "1"; CIRCLING CAT B CHANGED FROM "1 1/4" TO "1" - 8260.3E TABLE 3-3-1
12. CRC REMAINDER CHANGED FROM "FEB0E207" TO "16C9AD18" - FPAP LATITUDE CHANGED FROM "401645.5900N" TO "401645.5930N"; FPAP LONGITUDE CHANGED FROM "0781935.8900W" TO "0781935.8995W"
13. TERMINAL ROUTES: COURSE ZAVMA/3.00 NM TO RW21 AND RW21 TO 1903 MSL CHANGED FROM "205.99" TO "206.00" - PREVIOUS AMENDMENT DOCUMENTATION ERROR.
14. PROFILE LINE 2: ADDED "MAX 6000" - 8260.19I 8-6-7B (2).
15. PROFILE LINE 4: UPDATED FROM "KEWER 4500, ROBPO 3500, ZAVMA/3.00 NM TO RW21 2460*" TO "KEWER 4500, ROBPO 3500, ZAVMA/3.00 NM TO RW21 2460" AND DELETED "LNAV ONLY" FROM ADDITIONAL FLIGHT DATA. - NO LONGER REQUIRED.

COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ZOB, JOHNSTOWN APP CON, AMGR

FLIGHT CHECKED BY

PENDING

Digitally signed by

ERIC N SUSKI

OFFICE

DATE

Sep 19, 2023

Digitally signed by

ERIC N SUSKI

OFFICE

DATE

AJV-A431

07/03/2023

DEVELOPED BY

ERIC N SUSKI (COLE NESBITT)

Sep 19, 2023

APPROVED BY

ERIC N SUSKI

Digitally signed by

ERIC N SUSKI

OFFICE

AJV-A430

DATE

TITLE
MANAGER

Sep 19, 2023



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KAOO
RUNWAY	RW21
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W21A
LTP/FTP LATITUDE	401811.3110N
LTP/FTP LONGITUDE	0781903.8430W
LTP/FTP ELLIPSOIDAL HEIGHT	+04148
FPAP LATITUDE	401645.5930N
FPAP LONGITUDE	0781935.8995W
THRESHOLD CROSSING HEIGHT (TCH)	00052.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1088
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	16C9AD18

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K6
LTP ORTHOMETRIC HEIGHT	+04478
FPAP ORTHOMETRIC HEIGHT	+04478



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

<u>AIRPORT ID</u> KAOO	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 21	<u>AMDT NO.</u> 1E	<u>CITY</u> ALTOONA	<u>STATE</u> PA	<u>AIRPORT ELEVATION</u> 1503	<u>FACILITY</u> RNAV
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PART A: OBSTRUCTION DATA SEGMENTS

STRAIGHT-IN AREA

FROM 116/30 CW 296/30 TO 116/10 CW 296/10

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>							<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.WINDMILL (42-020793)	404319.72N/0781631.89W	3040	500	125	5E	2000					5100
												TERRAIN	404319.72N/0781631.89W	2640 (2600)								AS1500	4100

COMPUTATIONS

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

SEGMENT REMARKS:

STRAIGHT-IN AREA

FROM 116/10 CW 296/10 TO KEWER

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>							<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.TOWER (42-001286)	402915.00N/0782108.00W	2850	500	125	5E	2000				MT-400	4500
												TERRAIN	403118.00N/0782000.00W	2573 (2600)								AS1500	4100

COMPUTATIONS

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

SEGMENT REMARKS:



STRAIGHT-IN AREA

FROM
296/30 CW 116/30

TO
296/10 CW 116/10

RNP	DISTANCE	PAT	MAP	HAT			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
AAO	401721.00N/0783348.00W		3327	164	98	4E	2000					5400
TERRAIN	401721.00N/0783348.00W		3127 (3100)								AS1500	4600

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

STRAIGHT-IN AREA

FROM
296/10 CW 116/10

TO
KEWER

RNP	DISTANCE	PAT	MAP	HAT			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
3.TOWER (42-001286)	402915.00N/0782108.00W		2850	500	125	5E	2000				MT-400	4500
TERRAIN	403118.00N/0782000.00W		2573 (2600)								AS1500	4100

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



INTERMEDIATE

FROM
KEWER (IF/IAF)

TO
ROBPO

RNP	DISTANCE 5.88	PAT	MAP	HAT			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
AAO	403121.00N/0781657.00W		2471	164	98	4E	500				XP529	3500
TERRAIN	402500.00N/0781733.00W		1992 (2000)								AS1000	3000

COMPUTATIONS	ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE
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SEGMENT REMARKS:
INTERMEDIATE XP = MAINTAIN PREVIOUSLY PUBLISHED ALTITUDE
FINAL: LPV

FROM
ROBPO

TO
RW21

RNP	DISTANCE 6.21	PAT	MAP DA	HAT 491			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC			MA291	1977

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



FINAL: LNAV/VNAV

FROM
ROBPO

TO
RW21

RNP	DISTANCE 6.21	PAT	MAP DA	HAT 513			HMAS						
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT	
10.TREE (42-027483)	401925.15N/0781821.70W		1661	20	3	1A		23.33:1			MA28	1999	

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

FINAL: LNAV

FROM
ROBPO

TO
ZAVMA/3.00 NM TO RW21

RNP	DISTANCE 3.21	PAT	MAP	HAT			HMAS						
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT	
AAO	402343.00N/0781818.00W		2219	50	20	2C	250				XL11 SA-172 RA100 XP52	2460	

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

XP ADJUSTED TO MATCH PREVIOUS AMENDMENT.



FINAL: LNAV STEPDOWN

FROM
ZAVMA/3.00 NM TO RW21

TO
RW21

<u>RNP</u>	<u>DISTANCE</u> 3.00	<u>PAT</u>	<u>MAP</u> RW21	<u>HAT</u> 674			<u>HMAS</u>					
<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>
12.POLE (42-001763)	401936.00N/0781810.00W		1692	20	3	1A	250				MA181 DG37	2160

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

HOLD-IN-LIEU OF PT

FROM
KEWER

TO
P-5

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u> P-5	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>				
<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.TOWER (42-001286)	402915.00N/0782108.00W	2850	500	125	5E	1000				DG650	4500
TERRAIN	403118.00N/0782000.00W	2573 (2600)								AS1500	4100

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



MISSED APPROACH : LPV

FROM
DA

TO
CRYSS

RNP	DISTANCE	PAT	MAP	HAT			HMAS 1676					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
AAO	401242.00N/0781950.00W		2728	50	20	2C		ASC				5000
AAO	401205.10N/0782018.40W		2759	50	20	2C	1000					3800
TERRAIN	401236.00N/0781954.00W		2539 (2500)								AS1500	4000

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

MISSED APPROACH : LNAV/VNAV

FROM
DA

TO
CRYSS

RNP	DISTANCE	PAT	MAP	HAT			HMAS 1838					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
AAO	401242.00N/0781950.00W		2728	50	20	2C		ASC				5000
AAO	401205.10N/0782018.40W		2759	50	20	2C	1000					3800
TERRAIN	401236.00N/0781954.00W		2539 (2500)								AS1500	4000

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



MISSED APPROACH : LNAV

FROM
RW21

TO
CRYSS

RNP	DISTANCE	PAT	MAP	HAT			HMAS 2060					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
AAO	401242.00N/0781950.00W		2728	50	20	2C		ASC				5000
AAO	401205.10N/0782018.40W		2759	50	20	2C	1000					3800
TERRAIN	401236.00N/0781954.00W		2539 (2500)								AS1500	4000

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											
TREE	401712.00N/0781803.00W	1.31	737	1705	250	10	4B	300		XP235	2240
CATEGORY B											
TREE	401712.00N/0781803.00W	1.86	737	1705	250	10	4B	300		XP235	2240
CATEGORY C											
18.TOWER (42-002950)	401735.00N/0781538.00W	2.94	1297	2365	500	125	5E	300		AC125	2800
CATEGORY D											
AAO	401336.45N/0781907.39W	3.85	1337	2522	50	20	2C	300			2840

CIRCLING REMARKS:

XP ADJUSTED TO MATCH CURRENT MINS.

CENTER

RADIUS

REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:



PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH
ZOB ARTCC, AOO FSS

<u>WX SERVICE</u> ASOS	<u>LOCATION</u> KAOO	<u>HRS OPERATION</u> 24	<u>ALTIMETER SOURCE</u> KAOO	<u>DISTANCE</u> 0	<u>SERVICE-A</u> Y	<u>ADJUSTMENTS</u> 0
<u>BACK-UP WX SERVICE</u> AWOS-3	<u>LOCATION</u> KHMZ	<u>HRS OPERATION</u> 24	<u>ALTIMETER SOURCE</u> KHMZ	<u>DISTANCE</u> 15.51	<u>SERVICE-A</u> Y	<u>ADJUSTMENTS</u> 86

WX REMARKS:
RASS PRESSURE PATTERNS THE SAME
KAOO 1503 KHMZ 1149
RA = 85.3

<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>
RW12 - MIRL (PCL), REIL (PCL), PAPI-4L (PCL)		BSC-G	
RW03 - HIRL (PCL), REIL (PCL), PAPI-4L (PCL)		NPI-G	
RW30 - MIRL (PCL), REIL (PCL), PAPI-4R (PCL)		NPI-G	
RW21 - MALSR (PCL), HIRL (PCL), PAPI-4L (PCL)		PIR-G	

<u>GLIDESLOPE ANGLE</u> 3.00	<u>ELEV RWY THRESHOLD</u> 1469.3	<u>TCH</u> 52.0	<u>ELEV GS ANTENNA</u>	<u>DISTANCE FROM RWY</u>	<u>VGSI ANGLE</u> 3.00	<u>TCH</u> 52.0
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FINAL APPROACH COURSE AIMING

RUNWAY THRESHOLD	☒	FT FROM THRESHOLD	DISPLACED THRESHOLD DISTANCE
ON CENTERLINE	☒	FT FROM CENTERLINE	

CRITICAL TEMPERATURES

<u>CRITICAL LOW</u> -17C	<u>CRITICAL HIGH</u> +54C	<u>ACT</u> -17C	<u>APT ISA</u> +12.02C
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CRITICAL TEMPERATURE REMARKS:

AVERAGE COLD TEMPERATURE DERIVED FROM STANDARD -30C ISA DEVIATION.
CRITICAL LOW TEMPERATURE BASED ON ACT.
DESCENT RATE (FPM): STANDARD TEMP 975 HIGH TEMP 1286.



"VISUAL PORTION OF FINAL" PENETRATIONS

HELICOPTER 'VISUAL PORTION OF FINAL' PENETRATIONS

and/or
5280-FT "PROCEED VFR" SEGMENT LEVEL SURFACE AREA PENETRATIONS

PENETRATIONS REMARKS:

PART C: GENERAL REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

100FT VEGETATION HEIGHT USED

FOR CONTINGENCY PURPOSES:
NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE BEDFORD ALTIMETER SETTING AND INCREASE LPV DA TO 2063 FEET AND ALL VISIBILITIES 1/4 SM. INCREASE LNAV/VNAV DA TO 2085 FEET AND ALL VISIBILITIES 1/4 SM. INCREASE ALL MDAS 100 FEET AND LNAV VISIBILITY CAT B/C/D 1/4 SM, AND CIRCLING VISIBILITY CAT B 1/4 SM.

NOTE: FOR INOPERATIVE ALS WHEN USING BEDFORD COUNTY ALTIMETER SETTING, INCREASE LPV ALL CATS VISIBILITY TO 1 5/8 SM; INCREASE LNAV CATS C, D VISIBILITY TO 2 1/2 SM.

NOTE: BARO-VNAV AND VDP NA WHEN USING BEDFORD COUNTY ALTIMETER SETTING.

ORDER 8260.3 CHAPTER 2 APPLIED TO 2219 AAO 402413.00N/0781801.00W.
ORDER 8260.3 CHAPTER 2 APPLIED TO 1716 AAO 402112.00N/0781718.00W.

ORDER 8260.3, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED.

AIRPORT ID KAOO	PROCEDURE NAME RNAV (GPS) RWY 21	AMDT NO. 1E	CITY ALTOONA	STATE PA	AIRPORT ELEVATION 1503	FACILITY RNAV
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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	4.64
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	1.20
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	196.00
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	2000
DISTANCE FROM	THLD	TO 1500FT POINT	6.21
WIDTH OF	FINAL	SEGMENT AT 1500FT POINT	2.14
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1500FT POINT	196.00
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1500FT POINT	2000

THRESHOLD
COORDINATES
(IF STR-IN)

401811.31N/0781903.84W

ARP COORDINATES

401746.90N/0781912.10W

RUNWAY APCH END
AND DIST FURTHEST
FROM ARP

RUNWAY 3 DISTANCE 0.48 NM

FAF
COORDINATES

402409.92N/0781649.50W

FIX NAME
COORDINATES

REMARKS

NO ADDITIONAL AIRSPACE REQUIRED.

QUALITY
26
CHECKED

FAA Form 8260-9 / (11/16) Supersedes Previous Edition

Electronic Version

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PART E: PREPARED BY

<u>NAME</u> ERIC N SUSKI (COLE NESBITT)	<u>OFFICE</u> AJV-A431	<u>DATE</u> 07/03/2023	<u>TITLE</u> AERONAUTICAL INFORMATION SPECIALIST
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