

**FEDERAL AVIATION ADMINISTRATION  
FLIGHT STANDARDS SERVICE  
RNAV (RNP) 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><b>AIRPORT ID</b></u> IAD	<u><b>PROCEDURE NAME</b></u> RNAV (RNP) Z RWY 19C	<u><b>ORIGINAL/AMENDMENT</b></u> 1	<u><b>CITY</b></u> WASHINGTON	<u><b>STATE</b></u> DC
<u><b>AIRPORT ELEVATION</b></u> 312	<u><b>TDZE</b></u> 272	<u><b>SUPERSEDED</b></u> RNAV (RNP) Z RWY 19C	<u><b>DATED</b></u> 03/08/2012	<u><b>MAG VAR</b></u> 10W
<u><b>FACILITY</b></u> RNAV	<u><b>COORDINATES OF FACILITIES</b></u>	<u><b>ACTUAL EFFECTIVE DATE</b></u>	<u><b>REQUIRED EFFECTIVE DATE</b></u> ROUTINE	<u><b>EPOCH YEAR</b></u> 2000
		<u><b>ORIGINAL/AMENDMENT</b></u> ORIG-D	<u><b>CANCEL/SUSPEND</b></u>	

**TERMINAL ROUTES**

FROM	FIX TYPE	TO	FIX TYPE	LEG TYPE	FO/FB	RNP	COURSE	DISTANCE	ALTITUDE
NOOXX	IAF	CRLET		TF	FB	1.00	190.65	3.92	8000
CRLET		COWRR		TF	FB	1.00	190.66	3.73	7000
COWRR		COVUL		TF	FB	1.00	190.65	3.09	6000
COVUL	IAF	CHDMN		TF	FB	1.00	190.67	3.45	5000
CHDMN		CUTZZ		TF	FB	1.00	190.63	3.05	4000
CUTZZ	IAF	CRAKL		TF	FB	1.00	190.65	3.27	3000
LOGOW	IAF	PATWY		TF	FB	1.00	095.19	7.84	6000
PATWY		BULGR		TF	FB	1.00	097.89	2.67	6000
BULGR		COVUL		TF	FB	1.00	162.80	2.87	6000
DUBBV	IAF	HUGGZ		TF	FB	1.00	101.90	4.50	5000
HUGGZ		NOGGL		TF	FB	1.00	108.57	3.50	4000
NOGGL		CUTZZ		TF	FB	1.00	150.50	5.20	4000
CRAKL	IF	CLARZ		TF	FB	1.00	190.65	3.14	2000
CLARZ		FEMKO	PFAF	TF	FB	1.00	190.66	1.58	1500
FEMKO	PFAF	RW19C	MAP	TF	FO	0.30	190.65	3.70	
RW19C	MAP	554 MSL		CA			190.65		
554 MSL		MOOOV		DF	FO	1.00			3000

**MISSED APPROACH**

**MAP:**

RNP: DA

**MISSED APPROACH INSTRUCTIONS:**

CLIMB TO 3000 DIRECT MOOOV AND HOLD.

**ALTERNATE MISSED APPROACH INSTRUCTIONS:**



PROFILE:

1.	PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF	(IAF)									
2.	PROFILE STARTS AT NOOXX														
3.	FAC:	190.65	PFAF:	FEMKO	DIST PFAF TO MAP:	DIST PFAF TO THLD:									
4.	MIN ALT:	NOOXX 9000, CRLET 8000, COWRR 7000, COVUL 6000, CHDMN 5000, CUTZZ 4000, CRAKL 3000, CLARZ 2000, FEMKO 1500													
5.	DIST TO THLD FROM OM:	MM:	IM:	150 HAT:	282 HAT:	0.73	GS ANT:								
6.	MIN GP INCPT:	1500	GP ALT AT PFAF:	FEMKO 1500	OM:		MM:		IM:						
7.	GP ANGLE:	3.00	34:1:	IS CLEAR	20:1:	IS CLEAR	TCH:	54.0							
8.	MSA FROM:	RW19C 3500													

PBN REQUIREMENTS NOTE:

RNP AR APCH - GPS.

NOTES:

CHART PROFILE NOTE: VGSI AND RNAV GLIDPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).  
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -13°C OR ABOVE 54°C.  
CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED.  
CHART NOTE: FOR INOPERATIVE ALS, INCREASE RNP 0.11 VISIBILITY ALL CATS TO RVR 4500, AND RNP 0.25 VISIBILITY ALL CATS TO RVR 5500.  
CHART SPEED ICON IN PLANVIEW AT BULGR: MAX 210 KIAS.

ADDITIONAL FLIGHT DATA:

HOLD N, RT, 187.14 INBOUND.  
CHART AT OR ABOVE 9000 AT NOOXX.  
CHART AT OR ABOVE 6000 AT LOGOW.  
CHART AT OR ABOVE 5000 AT DUBBV.

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD

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
AUTHORIZATION REQUIRED															
RNP 0.11 DA	554	2400	282	554	2400	282	554	2400	282	554	2400	282			
RNP 0.25 DA	624	3000	352	624	3000	352	624	3000	352	624	3000	352			
RNP 0.30 DA	702	4000	430	702	4000	430	702	4000	430	702	4000	430			



CHANGES - REASONS

1. TERMINAL ROUTES – DELETED LEGS SHNON TO CRVER, DRUZZ TO CRVER, CRVER TO DIMKE, MULRR TO DIMKE, DIMKE TO BOYDS, TRING TO BGBRO, BGBRO TO BOYDS, BOYDS TO CIREP, CIREP TO FEMKO – ATC/FPT REQUESTED COMPLETE REBUILD OF TERMINAL ROUTES
2. TERMINAL ROUTES – ADDED LEGS NOOXX TO CRLET, CRLET TO COWRR, COWRR TO COVUL, COVUL TO CHDMN, CHDMN TO CUTZZ, CUTZZ TO CRAKL, CRAKL TO CLARZ, LOGOW TO PATWY, PATWY TO BULGR, BULGR TO COVUL, DUBBV TO HUGGZ, HUGGZ TO NOGGL, NOGGL TO CUTZZ, CLARZ TO FEMKO - ATC/FPT REQUESTED COMPLETE REBUILD OF TERMINAL ROUTES
3. TERMINAL ROUTES – CHANGED LEG FROM FEMKO TO RW19C DISTANCE FROM 3.65 TO 3.70 – FEMKO FIX MOVED TO ALIGN WITH DESIGN TCH ON SISTER ILS PROCEDURE TO SAME RWY.
4. MISSED APPROACH INSTRUCTIONS CHANGED FROM “CLIMB TO 4000 VIA TRACK 190.65 TO BOPAC AND VIA TRACK 265.33 TO BLUES AND HOLD” TO “CLIMB TO 3000 DIRECT MOOOV AND HOLD” - ATC/FPT REQUESTED COMPLETE REBUILD OF MISSED
5. PROFILE LINE 2 – PROFILE STARTS CHANGED FROM BOYDS TO NOOXX - ATC/FPT REQUESTED COMPLETE REBUILD
6. PROFILE LINE 3 – ADDED PFAF FEMKO – IAW 8260.19I 8-6-7
7. PROFILE LINE 4 – MIN ALT CHANGED FROM “BOYDS 4000, CIREP 2500” TO “NOOXX 9000, CRLET 8000, COWRR 7000, COVUL 6000, CHDMN 5000, CUTZZ 4000, CRAKL 3000, CLARZ 2000, FEMKO 1500” - ATC/FPT REQUESTED COMPLETE REBUILD
8. PROFILE LINE 5 – REMOVED DIST FROM OM 3.66 AND ADDED “282 HAT: 0.73” – IAW 8260.19I 8-6-7
9. PROFILE LINE 7 – ADDED 20:1 IS CLEAR - IAW 8260.19 8-6-7.G.
10. NOTES – REMOVED “GPS REQUIRED” NOTE AND REPLACED IT WITH PBN REQUIREMENTS NOTE: “RNP AR APCH – GPS” – IAW FAAO 8260.19I PARAGRAPH 8-6-8.B.(2).
11. NOTES – CHANGED NOTE FROM “FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -13°C OR ABOVE 54°C” - IAW 8260-58B, 3-3-1
12. NOTES – ADDED CHART SPEED ICON IN PLANVIEW AT BULGR: MAX 210 KIAS - ATC/FPT REQUESTED
13. NOTES – CHANGED SIMULTANEOUS APPROACH NOTE FROM “SIMULTANEOUS APPROACH AUTHORIZED WITH ILS OR LOC/DME RWY 19L, ILS RWY 19L (CAT II)” TO “SIMULTANEOUS APPROACH AUTHORIZED” - 8260.19I, PARA 8-6-11.O.(8).(A).
14. NOTES – DELETED NOTE “USE OF FD OR AP PROVIDING RNAV TRACK GUIDANCE REQUIRED DURING SIMULTANEOUS OPERATIONS” – NO LONGER REQUIRED PER 8260.19I, PARA 8-6-11.O.(8).(D).
15. ADDITIONAL FLIGHT DATA – CHANGED HOLDING FROM “HOLD W, RT, 076.21 INBOUND” TO “HOLD N, RT, 187.14 INBOUND” - ATC/FPT REQUESTED MOVING MISSED HOLDING TO MOOOV FIX
16. ADDITIONAL FLIGHT DATA – FAS OBSTACLE 430 TWR 385914N/0772651W REMOVED - 8260.19I 8-6-10.C
17. ADDITIONAL FLIGHT DATA – ADDED “CHART AT OR ABOVE 9000 AT NOOXX, 6000 AT LOGOW, 5000 AT DUBBV, – ATC/FPT REQUESTED
18. ADDED RNP 0.11 AND RNP 0.25 TO MINIMUMS – ATC/FPT REQUESTED
19. CHANGED MINIMUMS FOR RNP 0.30 FROM ALL CATS 740/6000/468 TO 702/4000/430 – UPDATED EVALUATION
20. ADDED "CHART NOTE: FOR INOPERATIVE ALS, INCREASE RNP 0.11 VISIBILITY ALL CATS TO RVR 4500, AND RNP 0.25 VISIBILITY ALL CATS TO RVR 5500" - 8260.19I 8-6-11.D

03/22/2024: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 02/22/2024.  
CHANGED PROFILE NOTE "VGSI AND DESCENT ANGLES NOT COINCIDENT... TO VGSI AND RNAV GLIDEPATH NOT COINCIDENT...

COORDINATED WITH:

A4A

☒

ALPA

☒

AOPA

☒

APA

☒

HAI

☐

NBAA

☒

OTHER:

POTOMAC TRACON, APT MGR

FLIGHT CHECKED BY

ANTHONY D VALLERA

Digitally signed by

CASIMIR L TABAKA

Mar 08, 2024

OFFICE

FPO

DATE

03/07/2024

DEVELOPED BY

JOSEPH BLANCO

Digitally signed by

JOSEPH A BLANCO

Feb 20, 2024

OFFICE

AJV-A432

DATE

10/26/2023

APPROVED BY

BEV L BORDY

Digitally signed by

CASIMIR L TABAKA

Feb 22, 2024

OFFICE

AJV-A430

DATE

TITLE

MANAGER



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

<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>
IAD	RNAV (RNP) Z RWY 19C	1	WASHINGTON	DC	312	RNAV

## PART A: OBSTRUCTION DATA SEGMENTS

INITIAL

FROM NOOXX TO CRLET

RNP 1.00 DISTANCE 3.92 PAT MAP HAT HMAS

<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>
AAO	392812.00N/0772942.00W	1815	215	8	4B	1000				AC8 AT5177	8000
TERRAIN	392700.00N/0772912.00W	1256 (1300)								AS1500	2800

## COMPUTATIONS

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

## SEGMENT REMARKS:

INITIAL STEPDOWN

FROM CRLET TO COWRR

RNP 1.00 DISTANCE 3.73 PAT MAP HAT HMAS

<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>
AAO	392351.00N/0772945.00W	870	215	8	4B	1000				AC8 AT5122	7000
TERRAIN	392315.00N/0772945.00W	561 (600)								AS1500	2100

## COMPUTATIONS

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

## SEGMENT REMARKS:



INITIAL STEPDOWN

FROM

COWRR

TO

COVUL

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>		<u>HAT</u>		<u>HMAS</u>				
1.00	3.09										
<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>
AAO	391539.00N/0772445.00W	844	215	8	4B	1000				AC8 AT4148	6000
TERRAIN	391627.00N/0772445.00W	479 (500)								AS1500	2000

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INITIAL

FROM

COVUL

TO

CHDMN

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>		<u>HAT</u>		<u>HMAS</u>				
1.00	3.45										
<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>
STACK (24-000078)	391232.00N/0772750.00W	995	100	20	3C	1000				AC20 AT2985	5000
TERRAIN	391536.00N/0772445.00W	643 (600)								AS1500	2100

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



INITIAL STEPDOWN

FROM

CHDMN

TO

CUTZZ

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>
1.00	3.05				

<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>
STACK (24-000078)	391232.00N/0772750.00W	995	100	20	3C	1000				AC20 AT1985	4000
TERRAIN	391039.00N/0772451.00W	521 (500)								AS1500	2000

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INITIAL

FROM

CUTZZ

TO

CRAKL

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>
1.00	3.27				

<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>
AAO	391039.00N/0772451.00W	722	215	8	4B	1000				AC8 AT1270	3000
TERRAIN	391024.00N/0772500.00W	501 (500)								AS1500	2000

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



INITIAL

FROM

LOGOW

TO

PATWY

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>		<u>HAT</u>		<u>HMAS</u>				
1.00	7.84										
<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>
AAO	391615.00N/0774224.00W	1631	215	8	4B	1000				AC8 AT3361	6000
TERRAIN	391657.00N/0774221.00W	1391 (1400)								AS1500	2900

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INITIAL STEPDOWN

FROM

PATWY

TO

BULGR

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>		<u>HAT</u>		<u>HMAS</u>				
1.00	2.67										
<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>
TOWER (24-020216)	391908.00N/0773149.50W	1238	500	125	5E	1000				AC125 AT3637	6000
TERRAIN	391857.00N/0773154.00W	1131 (1100)								AS1500	2600

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



INITIAL STEPDOWN

FROM

BULGR

TO

COVUL

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>		<u>HAT</u>		<u>HMAS</u>				
1.00	2.87										
<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>
AAO	391554.00N/0772445.00W	768	215	8	4B	1000				AC8 AT4224	6000
TERRAIN	391706.00N/0772606.00W	459 (500)								AS1500	2000

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INITIAL

FROM

DUBBV

TO

HUGGZ

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>		<u>HAT</u>		<u>HMAS</u>				
1.00	4.50										
<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>
AAO	391609.00N/0774224.00W	1644	215	8	4B	1000				AT2348 AC8	5000
TERRAIN	391606.00N/0774148.00W	715 (700)								AS1500	2200

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:





INITIAL STEPDOWN

FROM

HUGGZ

TO

NOGGL

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>
1.00	3.50				

<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>
AAO	391551.00N/0773315.00W	1096	215	8	4B	1000				AC8 AT1896	4000
TERRAIN	391551.00N/0773315.00W	895 (900)								AS1500	2400

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INITIAL STEPDOWN

FROM

NOGGL

TO

CUTZZ

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>
1.00	5.20				

<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>
STACK (24-000078)	391232.00N/0772750.00W	995	100	20	3C	1000				AC20 AT1985	4000
TERRAIN	391036.00N/0772500.00W	495 (500)								AS1500	2000

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



INTERMEDIATE

FROM

CRAKL

TO

CLARZ

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>		<u>HAT</u>					<u>HMAS</u>	
1.00	3.14										
<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>
AAO	390739.00N/0772551.00W	604	215	8	4B	500				AC8 AT888	2000
TERRAIN	390412.00N/0772939.00W	406 (400)								AS1000	1400

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INTERMEDIATE STEPDOWN

FROM

CLARZ

TO

FEMKO

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>		<u>HAT</u>					<u>HMAS</u>	
1.00	1.58										
<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>
AAO	390345.00N/0772645.00W	561	215	8	4B	500				AC8 AT431	1500
TERRAIN	390321.00N/0772909.00W	341 (300)								AS1000	1300

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



FINAL

FROM

FEMKO

TO

RW19C

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>				<u>HAT</u>	<u>HMAS</u>			
0.30	3.70		DA				430				
<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>
TOWER (51-020622)	385914.91N/0772651.32W	423	20	3	1A		21.42:1			AC3	702

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

FINAL

FROM

FEMKO

TO

RW19C

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>				<u>HAT</u>	<u>HMAS</u>			
0.25	3.70		DA				352				
<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>
GENERAL_UTILITY (11-026094)	385853.07N/0772655.56W	358	20	3	1A		21.42:1			AC3 XP352	624

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

XP UP TO 352 TO OBTAIN 50 FT SPREAD FROM 0.11 AT FPT REQUEST



FINAL

FROM

FEMKO

TO

RW19C

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>
0.11	3.70		DA	282	

<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>
TREE (11-025751)	385855.31N/0772727.97W	355	20	3	1A		21.45:1			AC3	554

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

MISSED APPROACH: LEVEL SURFACE

FROM

DA

TO

MOOOV

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>
0.30-1.00					

<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>
							ASC				3000
CONTROL_TOWER (51-002134)	385620.68N/0772655.19W	640	20	3	1A	1000					1700
TERRAIN	385000.00N/0772539.00W	406 (400)								AS1500	1900

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



MISSED APPROACH: LEVEL SURFACE

FROM

DA

TO

MOOOV

<div>RNP</div> <div>0.25-1.00</div>	DISTANCE	PAT	MAP		HAT		HMAS				
OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
							ASC				3000
CONTROL_TOWER (51-002134)	385620.68N/0772655.19W	640	20	3	1A	1000					1700
TERRAIN	385000.00N/0772539.00W	406 (400)								AS1500	1900

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

MISSED APPROACH: LEVEL SURFACE

FROM

DA

TO

MOOOV

<div>RNP</div> <div>0.11-1.00</div>	DISTANCE	PAT	MAP		HAT		HMAS				
OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
							ASC				3000
CONTROL_TOWER (51-002134)	385620.68N/0772655.19W	640	20	3	1A	1000					1700
TERRAIN	385000.00N/0772539.00W	406 (400)								AS1500	1900

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

MSA

CENTER

RW19C

RADIUS

25

SECTOR	OBSTRUCTION	COORDINATES	BEARING	DISTANCE	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
360-360	AAO	385724.00N/0780127.00W	278	26.4	2402	215	8	4B	1000			3500

MSA REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:

PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH

<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>
ASOS	IAD	24	IAD	1.32	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>

WX REMARKS:

NO BACKUP ALTIMETER DESIGNATED, REDUNDANT ALTIMETER AVAILABLE.

<u>PRIMARY NAVAID</u>	<u>MONITOR POINT</u>	<u>HRS OPERATION</u>	<u>CAT</u>
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<u>APPROACH AND RUNWAY LIGHTING SYSTEM</u>	<u>RUNWAY MARKINGS</u>	<u>RUNWAY VISUAL RANGE</u>
RW01L - ALSF-2, TDZ, C/LINE, HIRL, PAPI-4L	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW01C - MALSR, C/LINE, HIRL, TDZ, PAPI-4L	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW01R - ALSF-2, C/LINE, HIRL, TDZ, PAPI-4R	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW12 - MALSR, HIRL, TDZ, C/LINE, PAPI-4R	PIR-G	APPROACH, ROLL OUT
RW19L - ALSF-2, HIRL, C/LINE, PAPI-4L	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW19C - ALSF-2, HIRL, TDZ, C/LINE, PAPI-4R	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW19R - ALSF-2, HIRL, TDZ, C/LINE, PAPI-4L	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW30 - C/LINE, REIL, HIRL, PAPI-4L	PIR-G	APPROACH, ROLL OUT

<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	268.6	54.0			3.00	72.1

FINAL APPROACH COURSE AIMING

RUNWAY THRESHOLD	<input checked="" type="checkbox"/>	FT FROM THRESHOLD	DISPLACED THRESHOLD DISTANCE
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>
-13C	+54C	-13C	+14.38C

CRITICAL TEMPERATURE REMARKS:

AVERAGE COLD TEMPERATURE DERIVED FROM 5-YEAR HISTORY (2018-2022).  
CRITICAL LOW TEMPERATURE BASED ON ACT.  
DESCENT RATE (FPM): STANDARD TEMP 958 HIGH TEMP 1264.

"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:

VDP NOT ESTABLISHED - RNP PROCEDURE..  
PRECIPITOUS TERRAIN EVALUATION COMPLETED.  
VEGETATION HEIGHT: 100 FEET PER FPT.

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	3.07
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	1.20
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	180.65
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	300
DISTANCE FROM	THLD	TO 1500FT POINT	6.21
WIDTH OF	INTERMEDIATE	SEGMENT AT 1500FT POINT	4.00
TRUE COURSE OF	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	180.65
HIGH TERRAIN IN	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	400

THRESHOLD COORDINATES (IF STR-IN)	385814.31N/0772733.55W
ARP COORDINATES	385650.84N/0772735.74W
RUNWAY APCH END AND DIST FURTHEST FROM ARP	RUNWAY 1R DISTANCE 1.80 NM
FAF COORDINATES	390156.34N/0772730.31W
FIX NAME COORDINATES	IF CRAKL 390639.60N/0772726.18W

REMARKS

PART E: PREPARED BY

NAME	OFFICE	DATE	TITLE
JOSEPH BLANCO	AJV-A432	10/26/2023	AERONAUTICAL INFORMATION SPECIALIST

