

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>AIRPORT</u> DETROIT METROPOLITAN WAYNE COUNTY	<u>AIRPORT ID</u> KDTW	<u>PROCEDURE NAME</u> RNAV (RNP) X RWY 21L	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>CITY</u> DETROIT	<u>STATE</u> MI	
<u>AIRPORT ELEVATION</u> 645	<u>TDZE</u> 632	<u>SUPERSEDED</u> RNAV (RNP) X RWY 21L	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>DATED</u> 05/24/2018	<u>MAG VAR</u> 7W	<u>EPOCH YEAR</u> 2020
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL SUSPEND</u>		

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>
RYEDR	IAF	STRNG		TF	FB	1.00	272.01	4.34	6000
STRNG		WISIV		RF	FB	1.00	(4.75 NM RADIUS CCW (CFVGH))	2.08	5000
WISIV		COUNT		RF	FB	1.00	(3.25 NM RADIUS CCW (CFPHV))	1.75	5000
COUNT	IAF	TIGRZ		TF	FB	1.00	215.86	5.62	5000
TIGRZ		ROBBI		TF	FB	1.00	215.84	3.14	5000
COBBO	IAF	STTIK		TF	FB	1.00	253.52	7.45	5000
JEEEP	IAF	NOOVA		TF	FB	1.00	035.05	3.30	5000
NOOVA		STTIK		RF	FB	1.00	(2.85 NM RADIUS CCW (CFPGV))	7.04	5000
STTIK		ROBBI		RF	FB	1.00	(2.85 NM RADIUS CCW (CFPGV))	1.87	5000
ROBBI		BALAS		TF	FB	1.00	215.82	3.14	4000
BALAS		NESBI		TF	FB	1.00	215.80	3.14	3000
NESBI	IF	PUKLE	PFAF	TF	FB	1.00	215.78	3.14	2000
PUKLE	PFAF	RW21L	MAP	TF	FO	0.30	215.75	4.12	
RW21L	MAP	1100 MSL		CA			215.75		1100
1100 MSL		GAAGE		DF	FO	1.00			4000



MISSED APPROACH

MAP:

RNP: DA

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 1100 THEN CLIMBING LEFT TURN TO 4000 DIRECT GAAGE AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF (IAF)				
2.	PROFILE STARTS AT ROBBI							
3. FAC:	215.75	PFAF: PUKLE	DIST PFAF TO MAP:	DIST PFAF TO THLD:				
4. MIN ALT:	ROBBI 5000, BALAS 4000, NESBI 3000, PUKLE 2000							
5. DIST TO THLD FROM OM:	4.12	MM:	IM:	150 HAT:	430 HAT: 1.18			
6. MIN GP INCPT:	2000	GP ALT AT PFAF :	PUKLE 2000	OM:		MM:		IM:
7. GP ANGLE:	3.00	34:1:	IS CLEAR	20:1:	IS CLEAR	TCH:	55.0	
8. MSA FROM:	RW21L 2800							

PBN EQUIPMENT REQUIREMENTS NOTES

RNP AR APCH.

NOTES:

CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED.
CHART NOTE: USE OF FD OR AP PROVIDING RNAV TRACK GUIDANCE REQUIRED DURING SIMULTANEOUS OPERATIONS.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -19C (-2F) OR ABOVE 54C (130F).
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART PLANVIEW NOTE ADJACENT TO RYEDR IAF: RF REQUIRED.
CHART PLANVIEW NOTE ADJACENT TO COBBO IAF: RF REQUIRED.
CHART PLANVIEW NOTE ADJACENT TO JEEEP IAF: RF REQUIRED.
CHART SPEED ICON IN PLANVIEW AT RYEDR: MAX 200 KIAS.
CHART SPEED ICON IN PLANVIEW AT COBBO: MAX 200 KIAS.
CHART SPEED ICON IN PLANVIEW AT JEEEP: MAX 200 KIAS.

ADDITIONAL FLIGHT DATA:

ROUTE TYPE: A, H
ROUTE TYPE QUALIFIER 1: F
ROUTE TYPE QUALIFIER 2: S
CHART MANDATORY 5000 AT WISIV.
CHART MANDATORY 7000 AT RYEDR.
CHART MANDATORY 6000 AT COBBO.
CHART MINIMUM 5000 AT JEEEP.
CHART AT OR BELOW 6000 AT STRNG.
CHART MINIMUM 5000 AT COUNT.
HOLD SE, RT, 303.46 INBOUND

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 0.30 DA	1062	4000	430	1062	4000	430	1062	4000	430	1062	4000	430			

CHANGES - REASONS

1. REMOVED "RF REQUIRED" FROM PBN REQUIREMENTS NOTE. - INCORRECT NOTE.
2. ADDED "RF REQUIRED" AT RYEDR, COBBO AND JEEEP. - REQUIRED TO FLY THE APPROACH FROM THE IAFS.



COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ZOB ARTCC, DTW APP CON, METRO TOWER, AMGR

FLIGHT CHECKED BY

FLIGHT INSPECTION REVIEW NOT REQUIRED - PROCESSED IAW AIRCRAFT OPERATIONS
GROUP (AJW-333) MEMO, DEC 22, 2017.

DEVELOPED BY

JIMMY S. HUGHES

Digitally signed by

JIMMY S HUGHES

May 02, 2018

APPROVED BY

JULIE MORGAN

OFFICE

OFFICE

AJV-5422

OFFICE

AJV-5420

DATE

DATE

05/01/2018

DATE

Digitally signed by
ROBERT G HAMILTON
May 08, 2018

Digitally signed by
ROBERT G HAMILTON
May 08, 2018

TITLE

MANAGER



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

AIRPORT	AIRPORT ID	PROCEDURE NAME	AMDT NO.	CITY	STATE	AIRPORT ELEVATION	FACILITY
DETROIT METROPOLITAN WAYNE COUNTY	KDTW	RNAV (RNP) X RWY 21L	ORIG-A	DETROIT	MI	645	RNAV

PART A: OBSTRUCTION DATA SEGMENTS

INITIAL

FROM TO
RYEDR STRNG

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>				
1.00	4.34										
<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 (26-001830)	423324.00N/0825533.00W	961	500	50	5D	1000				AC50 AT3989	3000
2.TERRAIN	423509.00N/0830242.00W	653 (700)								AS1500	2200

COMPUTATIONS

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

INITIAL: STEPDOWN

FROM TO
STRNG WISIV

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>				
1.00	2.08										
<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.AAO	423524.00N/0830527.00W	873	250	125	4E	1000				AC98 AT3029	5000
4.TERRAIN	423524.00N/0830527.00W	673 (700)								AS1500	2200

COMPUTATIONS

RF SEGMENT	ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE
STRNG-WISIV	6000	200	236	5355	59	2.08	15		0			(CFVGH)/4.75 NM

SEGMENT
REMARKS:



<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>
DETROIT METROPOLITAN WAYNE COUNTY	KDTW	RNAV (RNP) X RWY 21L	ORIG-A	DETROIT	MI	645	RNAV

INITIAL: STEPDOWN

<u>FROM</u>	<u>TO</u>
TIGRZ	ROBBI

[illegible]

COMPUTATIONS

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

INITIAL	
<u>FROM</u>	<u>TO</u>
COBBO	STTIK

[illegible]

COMPUTATIONS

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



<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>
DETROIT METROPOLITAN WAYNE COUNTY	KDTW	RNAV (RNP) X RWY 21L	ORIG-A	DETROIT	MI	645	RNAV

INITIAL

FROM

JEEEP

TO

NOOVA

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>					
1.00	3.30											
<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>
10.TOWER (26-001912)	422106.00N/0830348.00W		1190	500	50	5D	1000				AC50 AT2760	5000
11.TERRAIN	422254.00N/0830627.00W		663 (700)								AS1500	2200

COMPUTATIONS

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

INITIAL: STEPDOWN

FROM

NOOVA

TO

STTIK

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>					
1.00	7.04											
<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>
7.TOWER (26-002338)	422653.00N/0831023.00W		1749	50	20	2C	1000				AC20 AT2231	5000
8.TERRAIN	422709.00N/0831215.00W		712 (700)								AS1500	2200

COMPUTATIONS

<u>RF SEGMENT</u>	<u>ALT</u>	<u>KIAS</u>	<u>KTAS</u>	<u>HAA</u>	<u>VKTW</u>	<u>TR</u>	<u>BA</u>	<u>DTA</u>	<u>COURSE CHANGE</u>	<u>DVEB</u>	<u>VEB OCS</u>	<u>RF CENTER FIX/DISTANCE</u>
NOOVA-STTIK	7229	200	240	6584	61.3	7.04	25		0			(CFPGV)/2.85 NM

SEGMENT
REMARKS:



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<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>
DETROIT METROPOLITAN WAYNE COUNTY	KDTW	RNAV (RNP) X RWY 21L	ORIG-A	DETROIT	MI	645	RNAV

INITIAL: STEPDOWN

FROM

BALAS

TO

NESBI

<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>
14.TOWER (26-000133)	422239.60N/0831435.10W		1124	50	20	2C	1000				AC20 AT856	3000
15.TERRAIN	421918.00N/0831715.00W		673 (700)								AS1500	2200

COMPUTATIONS

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

INTERMEDIATE

FROM

NESBI

TO

PUKLE

<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>
16.AAO	422015.00N/0831445.00W		869	250	125	4E	500				AC98 AT533	2000
17.TERRAIN	422015.00N/0831445.00W		669 (700)								AS1000	1700

COMPUTATIONS

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



<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>
DETROIT METROPOLITAN WAYNE COUNTY	KDTW	RNAV (RNP) X RWY 21L	ORIG-A	DETROIT	MI	645	RNAV

RUNWAY THRESHOLD	<div>X</div>	FT FROM THRESHOLD	DISPLACED THRESHOLD DISTANCE
ON CENTERLINE	<div>X</div>	FT FROM CENTERLINE	

CRITICAL TEMPERATURES

<u>CRITICAL LOW</u>	<u>CRITICAL HIGH</u>	<u>ACT</u>	<u>APT ISA</u>
-19C (-2F)	+54C (+130F)	-19C	+13.72C

CRITICAL TEMPERATURE REMARKS:

AVERAGE COLD TEMPERATURE DERIVED FROM STANDARD 13C ISA DEVIATION (2012-2016).
CRITICAL LOW TEMPERATURE BASED ON ACT.
DESCENT RATE (FPM): STANDARD TEMP 962 HIGH TEMP 1123.

"VISUAL PORTION OF FINAL" PENETRATIONS

HELICOPTER 'VISUAL PORTION OF FINAL' PENETRATIONS

and/or

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

PART C: GENERAL REMARKS:

VDP NOT ESTABLISHED - RNP PROCEDURE.

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

MAX SPEED RYEDR TO PUKLE - 200 KIAS.

MAX SPEED COBBO TO PUKLE - 200 KIAS.

MAX SPEED JEEEP TO PUKLE - 200 KIAS.

VEGETATION HEIGHT: 100 FT.

NO ADDITIONAL AIRSPACE REQUIRED.

PART E: PREPARED BY

<u>NAME</u>	<u>OFFICE</u>	<u>DATE</u>	<u>TITLE</u>
JIMMY S. HUGHES	AJV-5422	05/01/2018	AERONAUTICAL INFORMATION SPECIALIST

