

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> DETROIT METROPOLITAN WAYNE COUNTY	<u>AIRPORT ID</u> KDTW	<u>PROCEDURE NAME</u> RNAV (GPS) Z RWY 22R	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>CITY</u> DETROIT	<u>STATE</u> MI	
<u>AIRPORT ELEVATION</u> 645	<u>TDZE</u> 642	<u>SUPERSEDED</u>	<u>ORIGINAL/AMENDMENT</u>	<u>DATED</u>	<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>
HRRON	IAF	PRYDE		TF	FB	1.00	112.61	6.91	4000
PRYDE		FUDDJ		TF	FB	1.00	189.52	5.71	4000
VALLI	IAF	KLIER		TF	FB	1.00	097.09	7.56	4000
KLIER		FUDDJ		TF	FB	1.00	172.97	3.96	4000
INKSR	IAF	FUDDJ		TF	FB	1.00	215.85	1.39	4000
FUDDJ		TARAH		TF	FB	1.00	215.83	2.14	4000
TARAH		GUYVE		TF	FB	1.00	215.81	3.14	4000
GUYVE		JOYDD		TF	FB	1.00	215.79	3.14	3000
JOYDD		NUJNT		TF	FB	1.00	215.76	3.14	3000
NUJNT	IF	GEETR		TF	FB	1.00	215.74	3.14	2000
GEETR	FAF	RW22R	MAP	TF	FO	0.30	215.72	4.09	
RW22R	MAP	1100 MSL		CA			215.72		1100
1100 MSL		DOHNT		DF	FO	1.00			4000



MISSED APPROACH

MAP:
LPV: DA
LNAV/VNAV: DA
LNAV: RW22R

MISSED APPROACH INSTRUCTIONS:
CLIMB TO 1100 THEN CLIMBING RIGHT TURN 4000 DIRECT DOHNT AND HOLD, CONTINUE CLIMB IN HOLD TO 4000.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF (IAF)					
2. PROFILE STARTS AT FUDDJ									
3. FAC:	215.72	FAF: GEETR	DIST FAF TO MAP: 4.09			DIST FAF TO THLD: 4.09			
4. MIN ALT: FUDDJ 4000, TARAH 4000, GUYVE 4000, JOYDD 3000, NUJNT 3000, GEETR 2000									
5. DIST TO THLD FROM OM:		MM:	IM:	150 HAT:	200 HAT: 0.45	GS ANT:			
6. MIN GP INCPT: 2000		GP ALT AT FAF : GEETR 2000			OM:	MM:	IM:		
7. GP ANGLE:	3.00	34:1: IS CLEAR	20:1: IS CLEAR	TCH: 55.0					
8. MSA FROM: RW22R 2800									

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED.
CHART NOTE: USE OF FD OR AP REQUIRED DURING SIMULTANEOUS OPERATIONS.
CHART NOTE: LNAV PROCEDURE NA DURING SIMULTANEOUS OPERATIONS.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: FOR INOPERATIVE ALS, INCREASE LNAV/VNAV ALL CATS VISIBILITY TO RVR 4500.
CHART SPEED ICON IN PLANVIEW AT HRRON: MAX 210 KIAS.
CHART SPEED ICON IN PLANVIEW AT VALLI: MAX 210 KIAS.

ADDITIONAL FLIGHT DATA:

CHART MANDATORY 6000 AT HRRON.
CHART MANDATORY 4000 AT PRYDE.
CHART MANDATORY 6000 AT VALLI.
CHART MANDATORY 4000 AT KLIER.
CHART CIRCLING ICON.
CHART VDP AT 1.02 NM TO RW22R*
*LNAV ONLY
WAAS CHANNEL #70642
REFERENCE PATH ID: W22A
CHART FAS OBST: 771 ANTENNA 421611N/0832045W.
HOLD NW, RT, 117.62 INBOUND
LTP HAE: 161.2 M

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
LPV DA	842	1800	200	842	1800	200	842	1800	200	842	1800	200			
LNAV/VNAV DA	948	2400	306	948	2400	306	948	2400	306	948	2400	306			
LNAV MDA	1040	2400	398	1040	2400	398	1040	3500	398	1040	3500	398			
CIRCLING	1180	1	535	1180	1	535	1180	1 1/2	535	1240	2	595			

CHANGES - REASONS

ORIG.



COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ OTHER: DTW ATCT, ZOB, AMGR, DTW APP CON, ATA

<u>FLIGHT CHECKED BY</u>	<i>Digitally signed by</i>	<u>OFFICE</u>	<u>DATE</u>	
SHAWN D MAXWELL	ROBERT G HAMILTON	FICO	11/11/18	
	Nov 14, 2018			
<u>DEVELOPED BY</u>	<i>Digitally signed by</i>	<u>OFFICE</u>	<u>DATE</u>	
ROBERT G HAMILTON (AUSTIN GOTCHER)	ROBERT G HAMILTON	AJV-5422	07/17/2018	
	Nov 14, 2018			
<u>APPROVED BY</u>	<i>Digitally signed by</i>	<u>OFFICE</u>	<u>DATE</u>	<u>TITLE</u>
JULIE MORGAN	ROBERT G HAMILTON	AJV-5420		MANAGER
	Nov 14, 2018			



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KDTW
RUNWAY	RW22R
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	Z
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W22A
LTP/FTP LATITUDE	421334.4820N
LTP/FTP LONGITUDE	0832158.6115W
LTP/FTP ELLIPSOIDAL HEIGHT	+01612
FPAP LATITUDE	421207.8215N
FPAP LONGITUDE	0832302.4000W
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	0000
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	35.0

CRC REMAINDER 38A28A88

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K5
LTP ORTHOMETRIC HEIGHT	+01957
FPAP ORTHOMETRIC HEIGHT	+01957



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 (GPS) Z RWY 22R	ORIG	DETROIT	MI	645	RNAV

PART A: OBSTRUCTION DATA SEGMENTS

INITIAL

FROM HRRON TO PRYDE

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>				
	6.91										
<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 (26-000767)	423841.00N/0831752.00W	1241	250	50	5D	1000				AT1759	4000
2.TERRAIN	423845.00N/0831924.00W	1024 (1000)								AS1500	2500

COMPUTATIONS

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

SEGMENT
REMARKS:

INITIAL: STEPDOWN

FROM PRYDE TO FUDDJ

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>				
	5.71										
<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.BUILDING (26-000690)	423336.85N/0830938.32W	1059	50	20	2C	1000				AT1941	4000
4.TERRAIN	423551.00N/0831136.00W	847 (800)								AS1500	2300

COMPUTATIONS

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

SEGMENT
REMARKS:



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 (GPS) Z RWY 22R	ORIG	DETROIT	MI	645	RNAV				
MISSED APPROACH : LNAV/VNAV											
<u>FROM</u>				<u>TO</u>							
DA				DOHNT							
<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>						
					787						
<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>
21.TOWER (26-021227)	421339.00N/0832304.22W	830	20	3	1A		ASC				4000
19.TOWER (26-000689)	421802.75N/0833827.86W	1249	20	3	1A	1000					2300
20.TERRAIN	421909.00N/0834254.00W	991 (1000)								AS1500	2500

<u>COMPUTATIONS</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>
<u>SEGMENT</u>												
<u>REMARKS:</u>												

MISSED APPROACH : LNAV												
<u>FROM</u>						<u>TO</u>						
RW22R						DOHNT						
<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>							
					940							
<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				4000	
19.TOWER (26-000689)	421802.75N/0833827.86W	1249	20	3	1A	1000					2300	
20.TERRAIN	421909.00N/0834254.00W	991 (1000)								AS1500	2500	

<u>COMPUTATIONS</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>
<u>SEGMENT</u>												
<u>REMARKS:</u>												



CIRCLING

☐ ALL CATS

☒ CAT A

☒ CAT B

☒ CAT C

☒ CAT D

☐ CAT E

☐ NOT AUTHORIZED

<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>RADIUS</u>	<u>HAA</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>
CATEGORY A											
22.CONTROL_TOWER (26-001770)	421245.80N/0832115.66W	1.30	535	877	20	3	1A	300			1180
CATEGORY B											
22.CONTROL_TOWER (26-001770)	421245.80N/0832115.66W	1.83	535	877	20	3	1A	300			1180
CATEGORY C											
22.CONTROL_TOWER (26-001770)	421245.80N/0832115.66W	2.87	535	877	20	3	1A	300			1180
CATEGORY D											
23.TOWER (26-000777)	421627.36N/0832411.86W	3.75	595	936	20	10	1B	300			1240

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

MSA

<u>CENTER</u>	<u>RADIUS</u>
RW22R	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 (26-000324)	422901.00N/0831844.00W	016	15.6	1750	250	50	4D	1000			2800

MSA REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:

LPV SLOPE: 34:1
LNAV/VNAV SLOPE: 23.74:1

ADVERSE VEGETATION HEIGHT 100 FT PER IFP CHECKLIST.

PART B: SUPPLEMENTAL DATA
COMMUNICATIONS WITH

DTW APP CON, DTW TOWER, ZOB ARTCC



<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 (GPS) Z RWY 22R		DETROIT	MI	645	RNAV

<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	KDTW		KDTW	0	Y	
<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:

<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>
RW03L - HIRL, REIL, C/LINE, PAPI-4R	NPI-G	APPROACH, ROLL OUT
RW21R - HIRL, REIL, C/LINE, PAPI-4L	NPI-G	APPROACH, ROLL OUT
RW03R - TDZ, ALSF-2, HIRL, C/LINE, PAPI-4R	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW04L - TDZ, ALSF-2, HIRL, C/LINE, PAPI-4L	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW04R - TDZ, ALSF-2, HIRL, C/LINE	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW09L - HIRL, REIL	PIR-G	ROLL OUT
RW09R - HIRL, REIL, C/LINE	PIR-G	ROLL OUT
RW21L - MALSR, HIRL, C/LINE, PAPI-4L	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW22L - MALSR, HIRL, C/LINE	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW22R - TDZ, MALSR, HIRL, C/LINE, PAPI-4R	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW27L - MALSR, HIRL, C/LINE, PAPI-4L	PIR-G	APPROACH
RW27R - MALSR, HIRL, PAPI-4L	PIR-G	APPROACH

<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	642.1	55.0			3.00	70.8

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	



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DETROIT METROPOLITAN WAYNE COUNTY	KDTW	RNAV (GPS) Z RWY 22R	ORIG	DETROIT	MI	645	RNAV

CRITICAL TEMPERATURES

<u>CRITICAL LOW</u>	<u>CRITICAL HIGH</u>	<u>ACT</u>	<u>APT ISA</u>
-19C	+54C	-20C	+13.72C

CRITICAL TEMPERATURE REMARKS:

AVERAGE COLD TEMPERATURE DERIVED FROM 5-YEAR HISTORY (2013-2017).
CRITICAL LOW TEMPERATURE BASED ON EFFECTIVE GPA.
DESCENT RATE (FPM): STANDARD TEMP 962 HIGH TEMP 1124.

"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:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.
KDTW ASOS TRANSMITTED TO WMSCR. BACK-UP ALTIMETER SOURCE NOT USED DUE TO REDUNDANT WEATHER SOURCING.

TAA/FEEDERS NOT DEVELOPED PER CENTRAL FPT/ATC REQUEST. IAFS HRRON AND VALLI WILL TIE TO FUTURE RNAV STARS.

RNAV TRANSITIONS EVALUATED IN IPDS. 25-DEGREE BANK ANGLE USED AT KLIER.

PBN LEG LENGTHS MEET 8260.58A CRITERIA.
8260.58 MIN LEG LENGTHS:
HRRON-PRYDE 6.77
PRYDE-FUDDJ 4.05
VALLI-KLIER 5.86
KLIER-FUDDJ 3.38
FUDDJ-TARAH 2.00



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DETROIT METROPOLITAN WAYNE COUNTY	KDTW	RNAV (GPS) Z RWY 22R		DETROIT	MI	645	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	3.15
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	0.90
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	208.72
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	679
DISTANCE FROM	THLD	TO 1500FT POINT	5.63
WIDTH OF	INTERMEDIATE	SEGMENT AT 1500FT POINT	4.49
TRUE COURSE OF	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	208.72
HIGH TERRAIN IN	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	693

THRESHOLD
COORDINATES
(IF STR-IN)421334.48N/0832158.61W

ARP COORDINATES421244.80N/0832112.20W

RUNWAY APCH END
AND DIST FURTHEST
FROM ARP

RUNWAY 4L DISTANCE 1.50 NM

FAF
COORDINATES421709.86N/0831919.85W

FIX NAME
COORDINATES

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 (GPS) Z RWY 22R	ORIG	DETROIT	MI	645	RNAV

PART E: PREPARED BY

<u>NAME</u>	<u>OFFICE</u>	<u>DATE</u>	<u>TITLE</u>
ROBERT G HAMILTON (AUSTIN GOTCHER)	AJV-5422	07/17/2018	AERONAUTICAL INFORMATION SPECIALIST

