

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
NDB STANDARD INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.27

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> PINE RIVER RGNL	<u>AIRPORT ID</u> KPWC	<u>PROCEDURE NAME</u> NDB RWY 34	<u>ORIGINAL/AMENDMENT</u> 2	<u>CITY</u> PINE RIVER	<u>STATE</u> MN	
<u>AIRPORT ELEVATION</u> 1296	<u>TDZE</u> 1296	<u>SUPERSEDED</u> NDB RWY 34	<u>ORIGINAL/AMENDMENT</u> 1A	<u>DATED</u> 08/17/2017	<u>MAG VAR</u> 3E	<u>EPOCH YEAR</u> 2000
<u>FACILITY</u> PWC	<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>
PKD VOR/DME		PWC NDB					105.71	30.07	3200

MISSED APPROACH

MAP:

PWC NDB

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3100 THEN RIGHT TURN DIRECT PWC NDB AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT L SIDE OF COURSE 154.14 OUTBOUND 3100 FT WITHIN 10 MILES OF PWC NDB (IAF)
2.
3. FAC: 334.14 FAF: DIST FAF TO MAP: DIST FAF TO THLD:
4. MIN ALT:
8. MSA FROM: PWC NDB 3400

EQUIPMENT REQUIREMENTS NOTES:

NOTES:

CHART NOTE: RWY 34 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 NOT AUTHORIZED.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
CHART FAS OBST: 1780 TOWER 463612N/0941509W.
FAC CROSSES RWY C/L EXTENDED 3000 FT FROM THLD.
HOLD SE, RT, 334.14 INBOUND



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

ALTERNATE: NA ☐ CAT A, B 900-2, CAT C 900-2 3/4, 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
S-34	2180	1 1/4	884	2180	1 1/4	884	2180	2 1/2	884		NA				
CIRCLING	2180	1 1/4	884	2180	1 1/4	884	2180	2 3/4	884		NA				

CHANGES - REASONS

1. CHANGED FAC AND MA HOLDING FROM 340.49 TO 334.14 - INCORPORATED NOTAM 9/1356.
2. RAISED S-34 AND CIRC HAA/MDA FROM 784/2080 (ALL CATS) TO 884/2180 (ALL CATS) - NEW CONTROLLING OBS.
3. CHANGED FAS OBSTACLE FROM 1720 TOWER 463656N/0941818W TO 1780 TOWER 463612N/0941509W - FAC ALIGNMENT AND TARGETS DATA.
4. ADDED: CHART CIRCLING ICON - IAW 8260.19 8-6-10.
5. CHANGED ADDITIONAL FLIGHT DATA NOTE FROM "FAC 498 FT L OF RWY C/L EXTENDED 3000 FT FROM THLD" TO "FAC CROSSES RWY C/L EXTENDED 3000 FT FROM THLD" - IAW 8260.19 8-7-1.
6. CHANGED PT OUTBOUND CRS FROM 160.49 TO 154.14 - INCORPORATED NOTAM 9/1356.
7. INCREASED SI CAT A VIS FROM 1 TO 1 1/4 - NEW CONTROLLING OBSTACLE.
8. INCREASED CIRC CAT A VIS FROM 1 TO 1 1/4 AND CAT C VIS FROM 2 1/2 TO 2 3/4 - NEW CONTROLLING OBSTACLE.
9. CHANGED ALTERNATE MINS FROM "NA" TO CAT A, B 900-2, CAT C 900-2 3/4, NA WHEN LOCAL WEATHER NOT AVAILABLE - LOCAL WEATHER ON WMSCR.

COORDINATED WITH:

A4A ☐ **ALPA** ☒ **AOPA** ☒ **APA** ☐ **HAI** ☐ **NBAA** ☒ **OTHER:** ZMP, KPWC AMGR

FLIGHT CHECKED BY

OFFICE

DATE

DEVELOPED BY

DAVID DANNER (DEAN GRACEY)

OFFICE

AJV-A421

DATE

08/19/2019

APPROVED BY

MARLON ROBINSON

OFFICE

AJV-A420

DATE

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
PINE RIVER RGNL	KPWC	NDB RWY 34	2	PINE RIVER	MN	1296	PWC

PART A: OBSTRUCTION DATA SEGMENTS

FEEDER

FROM PKD VOR/DME TO PWC NDB

<u>RNP</u>	<u>DISTANCE</u> 30.07	<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.TOWER (27-001799)	465550.67N/0950028.02W		2138	250	50	4D	1000					3200
2.TERRAIN	464957.00N/0943603.00W		1654 (1700)								AS1500	3200

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: PT

FROM 10 NM TO PWC NDB

<u>RNP</u>	<u>DISTANCE</u> 10.00	<u>PAT</u>	<u>MAP</u> PWC NDB	<u>HAT</u> 884			<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 (27-001300)	463612.20N/0941508.80W		1780	250	50	4D	350				AC50	2180

COMPUTATIONS

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



PROCEDURE TURN

FROM

PWC NDB

TO

10 NM

RNP	DISTANCE	PAT	MAP	HAT			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
4.TOWER (27-001389)	464046.40N/0942502.57W		1892	50	20	2C	1000				AT208	3100
5.TERRAIN	464548.00N/0941454.00W		1525 (1500)								AS1500	3000

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

MISSED APPROACH

FROM

PWC NDB

TO

PWC NDB

RNP	DISTANCE	PAT	MAP	HAT			HMAS 1830					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC				3100
6.TOWER (27-002152)	464706.32N/0943037.91W		1749	50	20	2C	1000					2800
7.TERRAIN	464806.00N/0942721.00W		1467 (1500)								AS1500	3000

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



AIRPORT

PINE RIVER RGNL

AIRPORT ID

KPWC

PROCEDURE NAME

NDB RWY 34

AMDT NO.

2

CITY

PINE RIVER

STATE

MN

AIRPORT ELEVATION

1296

FACILITY

PWC

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											
8.TREE	464221.00N/0942226.00W	1.31	884	1449	50	20	2C	300		SI	2180
CATEGORY B											
9.AAO	464454.00N/0942115.00W	1.85	884	1539	50	20	2C	300		SI	2180
CATEGORY C											
9.AAO	464454.00N/0942115.00W	2.91	884	1539	50	20	2C	300		SI	2180

CIRCLING REMARKS:

MSA

CENTER

PWC NDB

RADIUS

25

SECTOR	OBSTRUCTION	COORDINATES	BEARING	DISTANCE	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
360-360	TWR (27-000202)	465605.00N/0942720.00W	344	12.8	2387	250	50	4D	1000			3400

MSA REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:

QUALITY
30
CHECKED

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PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH
ZMP ARTCC, PNM FSS

<u>WX SERVICE</u> AWOS	<u>LOCATION</u> KPWC	<u>HRS OPERATION</u> 24	<u>ALTIMETER SOURCE</u> KPWC	<u>DISTANCE</u> 0	<u>SERVICE-A</u> Y	<u>ADJUSTMENTS</u> 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:

<u>PRIMARY NAVAID</u> PWC NDB	<u>MONITOR POINT</u> INTERNAL	<u>HRS OPERATION</u> 24	<u>CAT</u> 3
<u>APPROACH AND RUNWAY LIGHTING SYSTEM</u>		<u>RUNWAY MARKINGS</u>	<u>RUNWAY VISUAL RANGE</u>
RW16 - MIRL (PCL), REIL (PCL), VASI-2L (PCL)		NPI-G	
RW34 - MIRL (PCL), REIL (PCL), VASI-2L (PCL)		NPI-G	

<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> 3.00	<u>TCH</u> 22.0
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FINAL APPROACH COURSE AIMING

RUNWAY THRESHOLD	<input type="checkbox"/>	3000	FT FROM THRESHOLD	DISPLACED THRESHOLD DISTANCE
ON CENTERLINE	<input type="checkbox"/>		FT FROM CENTERLINE	

CRITICAL TEMPERATURES

<u>CRITICAL LOW</u>	<u>CRITICAL HIGH</u>	<u>ACT</u>	<u>APT ISA</u>
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CRITICAL TEMPERATURE REMARKS:



"VISUAL PORTION OF FINAL" PENETRATIONS

Final Type	S 34
34:1	
1339 TREE (27-034378) 464302.74N/0942244.00W (13.04)	1361 TREE (27-034596) 464254.71N/0942244.51W (12.49)
1348 TREE (27-031781) 464259.39N/0942241.36W (10.91)	1339 TREE (27-034374) 464301.62N/0942244.01W (9.86)
1349 TREE (27-034357) 464257.95N/0942241.84W (8.1)	1351 TREE (27-031779) 464256.94N/0942241.77W (7.18)
1350 TREE (27-061836) 464256.32N/0942245.85W (6.88)	1335 TREE (27-061704) 464302.22N/0942242.26W (6.51)
1353 TREE (27-032354) 464254.86N/0942243.76W (4.46)	1338 TREE (27-034370) 464259.94N/0942243.81W (3.95)
1355 TREE (27-032352) 464254.73N/0942240.13W (3.9)	1304 TREE (27-034541) 464311.92N/0942243.17W (3.67)
1305 TREE (27-034540) 464311.59N/0942243.04W (3.66)	1301 TREE (27-034386) 464312.54N/0942243.29W (2.51)
1334 TREE (27-034371) 464301.11N/0942242.06W (2.23)	1302 TREE (27-034543) 464311.92N/0942243.85W (2.08)
1304 TREE (27-034538) 464311.36N/0942243.13W (2.06)	1301 TREE (27-061705) 464312.20N/0942243.16W (1.46)
1300 TREE (27-061709) 464312.16N/0942243.94W (0.82)	1331 TREE (27-031783) 464302.21N/0942238.70W (0.33)

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.

NO VGSI/VDP PUBLISHED (NON FAF PROCEDURE)
100 FOOT VEGETATION USED AS PER FTP.

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



<u>AIRPORT</u> PINE RIVER RGNL	<u>AIRPORT ID</u> KPWC	<u>PROCEDURE NAME</u> NDB RWY 34	<u>AMDT NO.</u> 2	<u>CITY</u> PINE RIVER	<u>STATE</u> MN	<u>AIRPORT ELEVATION</u> 1296	<u>FACILITY</u> PWC
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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	FACILITY	TO 1000FT POINT	7.00
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	2.48
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	337.14
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	1400
DISTANCE FROM	FACILITY	TO 1500FT POINT	7.00
WIDTH OF	FINAL	SEGMENT AT 1500FT POINT	2.48
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1500FT POINT	337.14
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1500FT POINT	1400

THRESHOLD
COORDINATES
(IF STR-IN)

464315.09N/0942247.77W

ARP COORDINATES

464329.24N/0942254.12W

RUNWAY APCH END
AND DIST FURTHEST
FROM ARP

RUNWAY 34 DISTANCE 0.25 NM

FAF
COORDINATES

FIX NAME
COORDINATES

REMARKS

NO ADDITIONAL AIRSPACE REQUIRED

QUALITY
30
CHECKED

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PART E: PREPARED BY							
<u>NAME</u> DAVID DANNER (DEAN GRACEY)			<u>OFFICE</u> AJV-A421	<u>DATE</u> 08/19/2019	<u>TITLE</u> AERONAUTICAL INFORMATION SPECIALIST		

