

**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> MDW	<u>PROCEDURE NAME</u> RNAV (GPS) Z RWY 31R	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>CITY</u> CHICAGO	<u>STATE</u> IL
<u>AIRPORT ELEVATION</u> 620	<u>TDZE</u> 613	<u>ORIGINAL/AMENDMENT</u> NONE	<u>DATED</u>	<u>MAG VAR</u> 4W
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>EPOCH YEAR</u> 2015
				<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>
HILLS	IAF	GLEAM		TF	FB	1.00	317.72	3.14	4000
GLEAM	IF	RUNTS		TF	FB	1.00	317.68	4.71	2500
RUNTS		HOBEL		TF	FB	1.00	317.63	2.51	1700
HOBEL	FAF	RW31R	MAP	TF	FO	0.30	317.61	3.27	
RW31R	MAP	1100 MSL		CA			317.61		1100
1100 MSL		EON VORTAC		DF	FO	1.00			2600

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW31R

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 1100 THEN CLIMBING LEFT TURN TO 2600 DIRECT EON VORTAC AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

- PT** **SIDE OF COURSE** **OUTBOUND** **FT WITHIN** **MILES OF** (IAF)
- PROFILE STARTS AT HILLS
- FAC:** 317.61 **FAF:** HOBEL **DIST FAF TO MAP:** 3.27 **DIST FAF TO THLD:** 3.27
- MIN ALT:** HILLS 5000, GLEAM 4000, RUNTS 2500, HOBEL 1700
- DIST TO THLD FROM OM:** **MM:** **IM:** **150 HAT:** **250 HAT:** 0.64 **GS ANT:**
- MIN GP INCPT:** 1700 **GP ALT AT PFAF:** HOBEL 1700 **OM:** **MM:** **IM:**
- GP ANGLE:** 3.00 **34:1:** IS NOT CLEAR **20:1:** IS CLEAR **TCH:** 47.9
- MSA FROM:** RW31R 3400

QUALITY
39
CHECKED

PBN REQUIREMENTS NOTE:

RNP APCH - GPS.

NOTES:

CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -20°C OR ABOVE 54°C.
CHART NOTE: RWY 31R HELICOPTER VISIBILITY REDUCTION BELOW RVR 4000 NOT AUTHORIZED.
CHART SPEED ICON IN PLANVIEW AT HILLS: MAX 240 KIAS.

ADDITIONAL FLIGHT DATA:

CHART MANDATORY 5000 AT HILLS.
HOLD N, RT, 181.00 INBOUND.
CHART FAS OBST: 762 TOWER (17-024655) 414718N/0874419W.
CHART VDP AT 1.08 NM TO RW31R.
WAAS CHANNEL # 61147
REFERENCE PATH ID: W31A
CHART CIRCLING ICON.
LTP HAE: 153.1 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT D 800-2 1/4

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	863	4000	250	863	4000	250	863	4000	250	863	4000	250			
LNAV/VNAV DA	953	5000	340	953	5000	340	953	5000	340	953	5000	340			
LNAV MDA	1020	5500	407	1020	5500	407	1020	6000	407	1020	6000	407			
CIRCLING	1120	1	500	1120	1	500	1340	2	720	1340	2 1/4	720			

CHANGES - REASONS



COORDINATED WITH:

A4A

X

ALPA

X

AOPA

X

APA

HAI

NBAA

X

OTHER:

ZAU, ORD APP CON, MDW ATCT, AMGR

FLIGHT CHECKED BY

GLEN B FREEMAN

Digitally signed by

ROBERT G HAMILTON

Apr 03, 2025

OFFICE

AJF

DATE

04/03/2025

DEVELOPED BY

TROY PURNELL

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TROY PURNELL

Feb 10, 2025

OFFICE

AJV-A433

DATE

12/20/2024

APPROVED BY

ROBERT G HAMILTON

Digitally signed by

ROBERT G HAMILTON

Apr 03, 2025

OFFICE

AJV-A433

DATE

TITLE

MANAGER

FAS DATA BLOCK INFORMATION

DATA FIELD

OPERATION TYPE
SBAS SERVICE PROVIDER IDENTIFIER
AIRPORT IDENTIFIER
RUNWAY
APPROACH PERFORMANCE DESIGNATOR
ROUTE INDICATOR
REFERENCE PATH DATA SELECTOR
REFERENCE PATH IDENTIFIER (APPROACH ID)
LTP/FTP LATITUDE
LTP/FTP LONGITUDE
LTP/FTP ELLIPSOIDAL HEIGHT
FPAP LATITUDE
FPAP LONGITUDE
THRESHOLD CROSSING HEIGHT (TCH)
TCH UNITS SELECTOR (METERS OR FEET USED)
GLIDEPATH ANGLE (GPA)
COURSE WIDTH AT THRESHOLD
LENGTH OFFSET
HORIZONTAL ALERT LIMIT (HAL)
VERTICAL ALERT LIMIT (VAL)

DATA

0
0
KMDW
RW31R
0
Z
0
W31A
414650.0035N
0874444.1175W
+01531
414751.4245N
0874610.4390W
00047.9
F
03.00
106.75
0976
40.0
50.0

CRC REMAINDER

5C3F228A

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE
LTP ORTHOMETRIC HEIGHT
FPAP ORTHOMETRIC HEIGHT

K5
+01865
+01865



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>
MDW	RNAV (GPS) Z RWY 31R	ORIG	CHICAGO	IL	620	RNAV

PART A: OBSTRUCTION DATA SEGMENTS

INITIAL

FROM HILLS **TO** GLEAM

RNP 1.00 DISTANCE 3.14 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>
TOWER (17-000525)	413749.69N/0873140.54W	1111	250	50	4D	1000				AT1800	4000
TERRAIN	413918.00N/0873448.00W	738 (700)								AS1500	2200

COMPUTATIONS

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

SEGMENT REMARKS:

INTERMEDIATE

FROM GLEAM **TO** RUNTS

RNP 1.00 DISTANCE 4.71 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	413921.00N/0873439.00W	939	215	8	4B	500				AT1061	2500
TERRAIN	413924.00N/0873451.00W	695 (700)								AS1500	2200

COMPUTATIONS

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

SEGMENT REMARKS:

QUALITY
39
CHECKED

INTERMEDIATE: STEPDOWN

FROM

RUNTS

TO

HOBEL

RNP

1.00

DISTANCE

2.51

PAT

MAP

HAT

HMAS

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
AAO	414333.00N/0874057.00W	876	215	8	4B	500					1400
TERRAIN	414333.00N/0874057.00W	675 (700)								AS1000	1700

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

FINAL: LPV

FROM

HOBEL

TO

RW31R

RNP

0.30

DISTANCE

3.27

PAT

MAP

DA

HAT

250

HMAS

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
POLE (17-024907)	414642.60N/0874437.68W	632	20	3	1A		34.00:1				863

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



FINAL: LNAV/VNAV

FROM

HOBEL

TO

RW31R

RNP

0.30

DISTANCE

3.27

PAT

MAP

DA

HAT

340

HMAS

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
TOWER (17-024655)	414717.55N/0874418.87W	762	20	3	1A	161				XP30	953

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

XP- ATC REQUEST TO MATCH MINS FROM REPLACED RNAV (GPS) Z RWY 31C.

FINAL: LNAV

FROM

HOBEL

TO

RW31R

RNP

0.30

DISTANCE

3.27

PAT

MAP

RW31R

HAT

407

HMAS

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
TOWER (17-024655)	414717.55N/0874418.87W	762	20	3	1A	250					1020

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



MISSED APPROACH: LPV

FROM

DA

TO

EON VORTAC

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>				<u>HAT</u>	<u>HMAS</u>			
0.30-1.00										675	
<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				2600
TOWER (17-000002)	413320.00N/0875055.00W	1330	50	50	2D	1000					2400
TERRAIN	412448.00N/0874600.00W	836 (800)								AS1500	2300

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

MISSED APPROACH: LNAV/VNAV

FROM

DA

TO

EON VORTAC

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>				<u>HAT</u>	<u>HMAS</u>			
0.30-1.00										792	
<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				2600
TOWER (17-000002)	413320.00N/0875055.00W	1330	50	50	2D	1000					2400
TERRAIN	412448.00N/0874600.00W	836 (800)								AS1500	2300

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



MISSSED APPROACH: LNAV

FROM

RW31R

TO

EON VORTAC

<u>RNP</u> 0.30-1.00	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>				<u>HAT</u>	<u>HMAS</u> 920			
<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				2600
TOWER (17-000002)	413320.00N/0875055.00W	1330	50	50	2D	1000					2400
TERRAIN	412448.00N/0874600.00W	836 (800)								AS1500	2300

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											
STACK (17-001632)	414606.00N/0874537.00W	1.30	500	811	20	3	1A	300			1120
CATEGORY B											
STACK (17-001632)	414606.00N/0874537.00W	1.83	500	811	20	3	1A	300			1120
CATEGORY C											
STACK (17-022572)	414943.00N/0874224.00W	2.87	720	864	500	50	5D	300		XP176	1340
CATEGORY D											
TOWER (17-000018)	414956.66N/0874220.96W	3.75	720	915	20	10	1B	300		XP125	1340

CIRCLING REMARKS:

XP- TO MATCH OTHER PUBLISHED CIRCLING MINS. XP- TO MATCH OTHER PUBLISHED CIRCLING MINS.

MSA

CENTER

RW31R

RADIUS

25



SECTOR	OBSTRUCTION	COORDINATES	BEARING	DISTANCE	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
360-360	BUILDING (17-000687)	415244.00N/0873809.00W	044	7.7	2325	50	50	2D	1000			3400

MSA REMARKS:

<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>
MDW	RNAV (GPS) Z RWY 31R	ORIG	CHICAGO	IL	620	RNAV

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:



PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH

ZAU ARTCC, ORD APP CON, MDW TOWER

<u>WX SERVICE</u>	<u>LOCATION</u>	<u>HRS OPERATION</u>	<u>ALTIMETER SOURCE</u>	<u>DISTANCE</u>	<u>WMSCR</u>	<u>ADJUSTMENTS</u>
ASOS	MDW	24	MDW	0	Y	0
<u>BACK-UP WX SERVICE</u>	<u>LOCATION</u>	<u>HRS OPERATION</u>	<u>ALTIMETER SOURCE</u>	<u>DISTANCE</u>	<u>WMSCR</u>	<u>ADJUSTMENTS</u>

WX REMARKS:

24 HOUR ATCT HAS REDUNDANT ALTIMETER REPORTING EQUIPMENT. NO BACK UP ALTIMETER SOURCE NEEDED.

<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>	
RW13R - MIRL	BSC-G		
RW31L - MIRL	BSC-G		
RW04L - MIRL, PAPI-4L	NPI-G		
RW22R - MIRL, PAPI-4L	NPI-G		
RW04R - C/LINE, HIRL, REIL, PAPI-4L	PIR-G	APPROACH, ROLL OUT	
RW13L - LDIN, HIRL, C/LINE, PAPI-4R	PIR-G	APPROACH, ROLL OUT	
RW13C - LDIN, C/LINE, HIRL, PAPI-4R	PIR-G	APPROACH, ROLL OUT	
RW22L - HIRL, REIL, C/LINE, PAPI-4R	PIR-G	APPROACH, ROLL OUT	
RW31C - LDIN, REIL, HIRL, C/LINE, PAPI-4L	PIR-G	APPROACH, ROLL OUT	
RW31R - LDIN, HIRL, C/LINE, REIL, 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	611.9	47.9			3.00	63.4

FINAL APPROACH COURSE AIMING

RUNWAY THRESHOLD	<div>X</div>	FT FROM THRESHOLD	DISPLACED THRESHOLD DISTANCE	696
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>
-20C	+54C	-20C	+13.77C

CRITICAL TEMPERATURE REMARKS:

AVERAGE COLD TEMPERATURE DERIVED FROM 5-YEAR HISTORY (2020-2024).
CRITICAL LOW TEMPERATURE BASED ON ACT.
DESCENT RATE (FPM): STANDARD TEMP 963 HIGH TEMP 1270.



"VISUAL PORTION OF FINAL" PENETRATIONS

FINAL TYPE	LPV, LNAV/VNAV, LNAV
34:1	
632 POLE (17-024907) 414642.60N/0874437.68W (0.4)	
PENETRATIONS REMARKS:	

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.
ORDER 8260.3 CHAPTER 2 APPLIED TO 840 AAO 414421N/0874121W
TAA NOT DEVELOPED PER AIR TRAFFIC AND CENTRAL FPT.
VEGETATION HEIGHT 100FT PER FPT.
ORDER 8260.3, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED.

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	2.95
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	1.83
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	313.61
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	600
DISTANCE FROM	THLD	TO 1500FT POINT	4.59
WIDTH OF	FINAL	SEGMENT AT 1500FT POINT	3.64
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1500FT POINT	313.63
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1500FT POINT	700

THRESHOLD COORDINATES (IF STR-IN)	414650.00N/0874444.12W
ARP COORDINATES	414708.32N/0874509.82W
RUNWAY APCH END AND DIST FURTHEST FROM ARP	RUNWAY 22L DISTANCE 0.58 NM
FAF COORDINATES	414434.81N/0874134.43W
FIX NAME COORDINATES	

REMARKS

THLD DISPLACED 696FT, ACTUAL COORDINATES: 414645.27N/0874437.47W



<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>
MDW	RNAV (GPS) Z RWY 31R	ORIG	CHICAGO	IL	620	RNAV
PART E: PREPARED BY						
<u>NAME</u>			<u>OFFICE</u>	<u>DATE</u>		<u>TITLE</u>
TROY PURNELL			AJV-A433	12/20/2024		AERONAUTICAL INFORMATION SPECIALIST

