

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 ID</u> KMDH	<u>PROCEDURE NAME</u> NDB RWY 18L		<u>ORIGINAL/AMENDMENT</u> 13A	<u>CITY</u> CARBONDALE/MURPHYSBORO	<u>STATE</u> IL	
<u>AIRPORT ELEVATION</u> 411	<u>TDZE</u> 407	<u>SUPERSEDED</u> NDB RWY 18L	<u>ORIGINAL/AMENDMENT</u> 13	<u>DATED</u> 02/11/2010	<u>MAG VAR</u> 1W	<u>EPOCH YEAR</u> 2010
<u>FACILITY</u> MDH	<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>
GENTS INT		CABBI LOM					042.12	11.15	2400
MWA VOR/DME		CABBI LOM					298.04	13.11	2400
ENL VORTAC	IAF	HEMPA INT	NOPT				184.47	27.04	2400
HEMPA INT	IF	CABBI LOM					182.12	6.20	2000

MISSED APPROACH

MAP:

4.90 NM AFTER CABBI LOM

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 2100 THEN CLIMBING RIGHT TURN TO 2400 DIRECT CABBI LOM AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT L SIDE OF COURSE 002.34 OUTBOUND 2400 FT WITHIN 10 MILES OF CABBI LOM (IAF)
2.
3. FAC: 182.34 FAF: CABBI LOM DIST FAF TO MAP: 4.90 DIST FAF TO THLD: 4.90
4. MIN ALT: CABBI LOM 2000
8. MSA FROM: CABBI LOM 090-180 2700, 180-090 2400

EQUIPMENT REQUIREMENTS NOTES:

NOTES:

CHART NOTE: CIRCLING RWY 6, 36L NA AT NIGHT.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT ENL VORTAC ON V72 NORTHEAST BOUND.



CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-18L CAT A/B VISIBILITY TO 1 SM.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT MWA VOR/DME ON V335 EASTBOUND.

ADDITIONAL FLIGHT DATA:

HOLD N, RT, 182.22 INBOUND.
CHART FAS OBST: 550 TREE 374944N/0891430W.
CABBI LOM TO RW18L: 2.99/40.

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

ALTERNATE: NA ☐ STANDARD - CAT C 800-2 1/4, CAT D 800-2 1/2, NA WHEN LOCAL WEATHER NOT AVAILABLE., NA WHEN CONTROL TOWER CLOSED.

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-18L	860	3/4	453	860	3/4	453	860	7/8	453	860	7/8	453			
CIRCLING	900	1	489	920	1	509	1180	2 1/4	769	1180	2 1/2	769			

CHANGES - REASONS

1. RAISED S-18L MDA/HAT ALL CATS FROM 760/353 TO 860/453 - NEW OBSTACLE EVALUATION.
2. RAISED S-18L VISIBILITY CAT C FROM 3/4 SM TO 7/8 SM, LOWERED CAT D FROM 1 SM TO 7/8 SM - NEW OBSTACLE EVALUATION WITH UPDATED VIS CHECK PER 8260.3D TABLE 3-3-7.
3. RAISED CIRCLING CAT B MDA/HAA FROM 900/489 TO 920/509, CAT C MDA/HAA FROM 900/489 TO 1180/769, CAT D MDA/HAA FROM 980/569 TO 1180/769 - NEW CIRCLING CRITERIA ADDED WITH NEW OBSTACLE EVALUATION.
4. RAISED CIRCLING CAT C VISIBILITY FROM 1 1/2 TO 2 1/4, CAT D VISIBILITY FROM 2 TO 2 1/2 - NEW CIRCLING CRITERIA ADDED WITH UPDATED OBSTACLE EVALUATION AND VIS CHECK PER 8260.3D TABLE 3-3-7.
5. REMOVED BACK UP ALTIMETER NOTES AND MOVED TO BACK OF -9 AS CONTINGENCY NOTES - IAW 8260.19H 8-6-9F(3).
6. CHANGED CHART FAS OBST FROM 463 TREE 374747N/0891443W TO 550 TREE 374944N/0891430W - NEW OBSTACLE EVALUATION.
7. ADDED CHART NOTE: CIRCLING RWY 6, 36L NA AT NIGHT - 20:1 VISUAL PENETRATIONS EXIST IN OBSTACLE EVALUATION FOR RWY 6 AND 36L.
8. ADDED ALTERNATE MINIMUMS STANDARD - CAT C 800-2 1/4, CAT D 800-2 1/2, NA WHEN LOCAL WEATHER NOT AVAILABLE., NA WHEN CONTROL TOWER CLOSED - FACILITY IS CAT I WHEN TOWER OPEN.
9. ADDED CHART NOTES: FOR INOPERATIVE ALS, INCREASE CAT A/B VISIBILITY TO 1 SM - UPDATED VIS CHECK PER 8260.3D TABLE 3-3-3/4/5.
10. ADDED PROCEDURE NA NOTE AT MWA VOR/DME - TURN ON EXCEEDS 120 DEGREES.
11. DIST FAF TO MAP: AND DIST FAF TO THLD: UPDATED FROM 4.88 TO 4.90 ON PROFILE LINE 3 - NEW PROCEDURE EVALUATION.
12. IF DIST FROM HEMPA INT TO CABBI LOM DECREASED FROM 6.22 NM TO 6.20 NM - DIST FAF TO MAP INCREASED .02 NM.

COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: ZKC, AMGR, MDH ATCT

FLIGHT CHECKED BY

PATRICK MURRAY

OFFICE

FICO

Digitally signed by

WARDELL HENNING

DATE

02/06/2021

Nov 03, 2020

Digitally signed by

WARDELL HENNING

Nov 03, 2020

OFFICE

AJV-A432

DATE

05/04/2020

OFFICE

AJV-A430

DATE

DEVELOPED BY

WARDELL HENNING (RICHARD J. HENNING)

WARDELL HENNING

Nov 03, 2020

APPROVED BY

LONNIE EVERHART

TITLE
MANAGER



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

<u>AIRPORT ID</u> KMDH	<u>PROCEDURE NAME</u> NDB RWY 18L	<u>AMDT NO.</u> 13A	<u>CITY</u> CARBONDALE/MURPHYSBORO	<u>STATE</u> IL	<u>AIRPORT ELEVATION</u> 411	<u>FACILITY</u> MDH
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PART A: OBSTRUCTION DATA SEGMENTS

FEEDER

FROM
GENTS INT

TO
CABBI LOM

<u>RNP</u>	<u>DISTANCE</u> 11.15	<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 (17-002734)	374204.00N/0892218.00W	1130	500	125	5E	1000				AT270	2400
												2.TERRAIN	374639.00N/0892806.00W	680 (700)								AS1500	2200

COMPUTATIONS

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

SEGMENT REMARKS:

FEEDER

FROM
MWA VOR/DME

TO
CABBI LOM

<u>RNP</u>	<u>DISTANCE</u> 13.11	<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>
												3.TOWER (17-001946)	374519.00N/0890858.00W	870	500	50	5D	1000				AT530	2400
												4.TERRAIN	374518.00N/0890900.00W	522 (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
ENL VORTAC

TO
HEMPA INT

RNP	DISTANCE 27.04	PAT	MAP	HAT			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
5.TOWER (17-000209)	380612.00N/0891440.00W		1389	50	50	2D	1000					2400
6.TERRAIN	382203.00N/0891300.00W		598 (600)								AS1500	2100

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INTERMEDIATE

FROM
HEMPA INT

TO
CABBI LOM

RNP	DISTANCE 6.20	PAT	MAP	HAT			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
7.TOWER (17-000322)	375905.00N/0891405.00W		847	20	50	1D	500					1400
8.TERRAIN	375821.00N/0891621.00W		463 (500)								AS1500	2000

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



INTERMEDIATE: PT

FROM
10 NM

TO
CABBI LOM

RNP	DISTANCE 10.00	PAT	MAP	HAT			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
7.TOWER (17-000322)	375905.00N/0891405.00W		847	20	50	1D	500					1400
9.TERRAIN	375842.00N/0891706.00W		466 (500)								AS1500	2000

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

FROM
CABBI LOM

TO
4.90 NM AFTER CABBI LOM

RNP	DISTANCE 4.90	PAT	MAP 4.90 NM AFTER CABBI LOM	HAT 453			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
10.TREE (17-033914)	374943.96N/0891430.00W		550	50	20	2C	300					860

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
CABBI LOM

TO
10 NM

RNP	DISTANCE	PAT	MAP	HAT			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
5.TOWER (17-000209)	380612.00N/0891440.00W		1389	50	50	2D	1000				AT11	2400
11.TERRAIN	380557.00N/0892539.00W		555 (600)								AT1500	2100

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

MISSED APPROACH

FROM
4.90 NM AFTER CABBI LOM

TO
CABBI LOM

RNP	DISTANCE	PAT	MAP	HAT			HMAS 560					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC				2400
1.TOWER (17-002734)	374204.00N/0892218.00W		1130	500	125	5E	1000					2200
9.TERRAIN	375842.00N/0891706.00W		466 (500)								AS1500	2000

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											
12.TOWER (17-000627)	374516.00N/0891622.00W	1.30	489	550	250	50	4D	300		AC50	900
CATEGORY B											
13.TOWER (17-024251)	374501.75N/0891713.92W	1.82	509	604	20	3	1A	300			920
CATEGORY C											
14.TOWER (17-000321)	374330.66N/0891525.50W	2.86	769	866	20	3	1A	300			1180
CATEGORY D											
14.TOWER (17-000321)	374330.66N/0891525.50W	3.73	769	866	20	3	1A	300			1180

CIRCLING REMARKS:

MSA

CENTER
CABBI LOM

RADIUS
25

SECTOR	OBSTRUCTION	COORDINATES	BEARING	DISTANCE	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
090-180	TOWER (17-000329)	373650.00N/0885220.00W	129	23.5	1638	500	50	5D	1000			2700
180-090	TOWER (17-000209)	380612.00N/0891440.00W	358	14.0	1389	50	50	2D	1000			2400

MSA REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:



PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH
MDH TOWER, STL FSS, ZKC ARTCC

<u>WX SERVICE</u> ASOS	<u>LOCATION</u> KMDH	<u>HRS OPERATION</u> 24	<u>ALTIMETER SOURCE</u> KMDH	<u>DISTANCE</u> 0	<u>SERVICE-A</u> Y	<u>ADJUSTMENTS</u> 0
<u>BACK-UP WX SERVICE</u> AWOS	<u>LOCATION</u> KMWA	<u>HRS OPERATION</u> 24	<u>ALTIMETER SOURCE</u> KMWA	<u>DISTANCE</u> 11.546	<u>SERVICE-A</u> Y	<u>ADJUSTMENTS</u> 36

WX REMARKS:
RASS PRESSURE PATTERNS THE SAME
KMDH 411, KMWA 472
RA = 35.1.

<u>PRIMARY NAVAID</u> MDH NDB	<u>MONITOR POINT</u> MDH ATCT	<u>HRS OPERATION</u> *TWR OPEN (SEE CHART SUPPLEMENT FOR HOURS OF OPERATION) **TWR CLOSED	<u>CAT</u> 1 3
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<u>APPROACH AND RUNWAY LIGHTING SYSTEM</u>	<u>RUNWAY MARKINGS</u>	<u>RUNWAY VISUAL RANGE</u>
RW06 - MIRL (PCL), REIL, VASI-4L (PCL)	BSC-G	
RW18R - MIRL, PVASI-PSIL	BSC-G	
RW24 - MIRL (PCL), REIL, PAPI-4R (PCL)	BSC-G	
RW36L - MIRL, PVASI-PSIL	BSC-G	
RW36R - HIRL (PCL), REIL, PAPI-4L (PCL)	NPI-G	
RW18L - MALSR (PCL), HIRL (PCL)	PIR-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>	<u>TCH</u>
FINAL APPROACH COURSE AIMING						
RUNWAY THRESHOLD	☒	FT FROM THRESHOLD	DISPLACED THRESHOLD DISTANCE			
ON CENTERLINE	☒	FT FROM CENTERLINE				



CRITICAL TEMPERATURES

CRITICAL LOW

CRITICAL HIGH

ACT

APT ISA

CRITICAL TEMPERATURE REMARKS:

"VISUAL PORTION OF FINAL" PENETRATIONS

Final Type	CIRCLING RWY 36L		
20:1			
411 TERRAIN (17-033944) 374610.49N/0891533.01W (0.93)			
Final Type	CIRCLING RWY 6		
20:1			
488 TREE (17-040587) 374630.73N/0891540.97W (51.75)		478 TREE (17-046835) 374627.95N/0891541.00W (34.75)	
491 TREE (17-046924) 374628.72N/0891546.54W (30.27)		487 TREE (17-046923) 374627.89N/0891545.31W (28.52)	
463 TREE (17-040585) 374629.79N/0891540.02W (27.74)		489 TREE (17-056800) 374628.87N/0891547.18W (26.4)	
493 TREE (17-043573) 374628.45N/0891548.29W (25.48)		486 TREE (17-040637) 374624.10N/0891545.02W (19.14)	
481 TREE (17-046925) 374623.91N/0891543.52W (18.92)		476 TREE (17-056686) 374626.90N/0891544.69W (17.24)	
451 TREE (17-045794) 374628.28N/0891538.95W (15.74)		487 TREE (17-044839) 374627.21N/0891548.57W (15.43)	
463 TREE (17-040630) 374628.19N/0891542.62W (14.68)		473 TREE (17-033714) 374627.43N/0891545.20W (13.77)	
467 TREE (17-046269) 374626.16N/0891542.68W (13.44)		471 TREE (17-040633) 374625.55N/0891544.08W (11.03)	
464 TREE (17-042578) 374625.02N/0891542.11W (9.61)		479 TREE (17-040638) 374625.47N/0891547.19W (7.94)	
477 TREE (17-040613) 374628.17N/0891549.83W (3.4)		472 TREE (17-056688) 374623.94N/0891545.69W (2.4)	
477 TREE (17-044840) 374625.77N/0891548.69W (1.44)		474 TREE (17-040539) 374623.40N/0891546.31W (0.9)	
465 TREE (17-046270) 374625.70N/0891545.52W (0.36)			

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 - FINAL FACILITY DOES NOT HAVE DME.

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

CONTINGENCY NOTES:
USE WILLIAMSON CO RGNL ALTIMETER SETTING AND INCREASE ALL MDA 40 FEET AND INCREASE S-18L CAT C/D VISIBILITY 1/8 SM.
FOR INOPERATIVE ALS, WHEN USING WILLIAMSON CO RGNL ALTIMETER SETTING, INCREASE CAT A/B VISIBILITY TO 1 SM, AND CAT C/D TO 1 3/8 SM.

ORDER 8260.3, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED.



AIRPORT ID KMDH	PROCEDURE NAME NDB RWY 18L	AMDT NO. 13A	CITY CARBONDALE/MURPHYSBORO	STATE IL	AIRPORT ELEVATION 411	FACILITY MDH
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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	THLD	TO 1000FT POINT	2.90
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	2.83
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	181.34
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	400
DISTANCE FROM	THLD	TO 1500FT POINT	4.70
WIDTH OF	FINAL	SEGMENT AT 1500FT POINT	2.53
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1500FT POINT	181.34
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1500FT POINT	400

THRESHOLD
COORDINATES
(IF STR-IN)

374718.87N/0891452.56W

ARP COORDINATES

374641.10N/0891507.30W

RUNWAY APCH END
AND DIST FURTHEST
FROM ARP

RUNWAY 18L DISTANCE 0.66 NM

FAF
COORDINATES

375212.21N/0891444.69W

FIX NAME
COORDINATES

REMARKS

NO ADDITIONAL AIRSPACE REQUIRED

QUALITY
18
CHECKED

FAA Form 8260-9 / (11/16) Supersedes Previous Edition

Electronic Version

Page 9 of 10

PART E: PREPARED BY

<u>NAME</u> WARDELL HENNING (RICHARD CHRISTENSEN)	<u>OFFICE</u> AJV-A432	<u>DATE</u> 05/04/2020	<u>TITLE</u> AERONAUTICAL INFORMATION SPECIALIST
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