



INSTRUMENT APPROACH PROCEDURE CHARTS



IFR ALTERNATE AIRPORT MINIMUMS

Standard alternate minimums for non-precision approaches and approaches with vertical guidance [NDB, VOR, LOC, TACAN, LDA, SDF, VOR/DME, ASR, RNAV (GPS) or RNAV (RNP)] are 800-2. Standard alternate minimums for precision approaches (ILS, PAR, or GLS) are 600-2. Airports within this geographical area that require alternate minimums other than standard or alternate minimums with restrictions are listed below. NA - means alternate minimums are not authorized due to unmonitored facility, absence of weather reporting service, or lack of adequate navigation coverage. Civil pilots see FAR 91. IFR Alternate Minimums: Ceiling and Visibility Minimums not applicable to USA/USN/USAF. Pilots must review the IFR Alternate Minimums Notes for alternate airfield suitability.

NAME ALTERNATE MINIMUMS
ADRIAN, MI
LENAWEE
COUNTY (ADG)..... RNAV (GPS) Rwy 5
RNAV (GPS) Rwy 23
NA when local weather not available.

ALMA, MI
GRATIOT
COMMUNITY (AMN)..... RNAV (GPS) Rwy 9
RNAV (GPS) Rwy 27
NA when local weather not available.

ALPENA, MI
ALPENA COUNTY
RGNL (APN) RNAV (GPS) Rwy 1
NA when local weather not available.

ANN ARBOR, MI
ANN ARBOR
MUNI (ARB) RNAV (GPS) Rwy 6
RNAV (GPS) Rwy 24
VOR Rwy 6
VOR Rwy 24
NA when local weather not available.

BAD AXE, MI
HURON COUNTY
MEMORIAL (BAX) RNAV (GPS) Rwy 4
RNAV (GPS) Rwy 17
RNAV (GPS) Rwy 22
RNAV (GPS) Rwy 35
NA when local weather not available.

NAME ALTERNATE MINIMUMS
BATTLE CREEK, MI
W.K. KELLOGG (BTL) ILS or LOC Rwy 23R13
NDB Rwy 23R3
RADAR-12
RNAV (GPS) Rwy 5L3
RNAV (GPS) Rwy 23R3
RNAV (GPS) Rwy 313
1NA when control tower closed.
2NA when Kalamazoo control tower closed.
3NA when local weather not available.

BEAVER ISLAND, MI
BEAVER
ISLAND (SJX) RNAV (GPS) Rwy 27
NA when local weather not available.

BELLAIRE, MI
ANTRIM
COUNTY (ACB) RNAV (GPS) Rwy 2
NA when local weather not available.
Category D, 900-2%.

BENTON HARBOR, MI
SOUTHWEST MICHIGAN
RGNL (BEH) RNAV (GPS) Rwy 10
RNAV (GPS) Rwy 28
VOR Rwy 28
NA when local weather not available.

BIG RAPIDS, MI
ROBEN-HOOD (RQB)RNAV (GPS) Rwy 271
VOR/DME-A2
NA when local weather not available.
1Category D, 900-2%.
2Categories A, B, 900-2; Category C, 900-2½;
Category D, 900-2%.

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NAME ALTERNATE MINIMUMS
CADILLAC, MI
 WEXFORD
 COUNTY (CAD) **RNAV (GPS) Rwy 7**
 RNAV (GPS) Rwy 25
 NA when local weather not available.

CARO, MI
 TUSCOLA AREA (CFS) **RNAV (GPS) Rwy 6**
 RNAV (GPS) Rwy 24
 VOR/DME-A
 NA when local weather not available.

CHARLEVOIX, MI
 CHARLEVOIX
 MUNI (CVX) **RNAV (GPS) Rwy 9**
 NA when local weather not available.

CHEBOYGAN, MI
 CHEBOYGAN
 COUNTY (SLH) **RNAV (GPS) Rwy 10**
 RNAV (GPS) Rwy 28
 VOR Rwy 10
 NA when local weather not available.

COLDWATER, MI
 BRANCH COUNTY
 MEMORIAL (OEB) **RNAV (GPS) Rwy 7**
 RNAV (GPS) Rwy 25
 VOR Rwy 7
 VOR/DME Rwy 25
 NA when local weather not available.

DETROIT, MI
 COLEMAN A
 YOUNG MUNI (DET) **ILS or LOC Rwy 15²**
 ILS or LOC Rwy 33¹
 NDB Rwy 15²
 RNAV (GPS) Rwy 15²
 RNAV (GPS) Rwy 33²
 VOR Rwy 33²

¹ILS, 700-2.
²NA when local weather not available.

WILLOW RUN (YIP) **ILS or LOC Rwy 23L³**
 RNAV (GPS) Rwy 5L¹²
 RNAV (GPS) Rwy 5R²
 RNAV (GPS) Rwy 9¹²
 RNAV (GPS) Rwy 23L²
 RNAV (GPS) Rwy 23R²
 VOR-A²

¹NA when local weather not available.
²Category D, 800-2¼.
³ILS Category D, 700-2¼.

NAME ALTERNATE MINIMUMS
DETROIT/GROSSE ILE, MI
 GROSSE ILE MUNI (ONZ) **NDB Rwy 4¹**
 RNAV (GPS) Rwy 4²
 RNAV (GPS) Rwy 22²
 VOR-A²

NA when local weather not available.
¹Category A, B, 1000-2; Category C, 1000-2¾;
 Category D, 1000-3.
²Category A, B, 900-2; Category C, 900-2½;
 Category D, 900-2¾.

DRUMMOND ISLAND, MI
 DRUMMOND
 ISLAND (DRM) **RNAV (GPS) Rwy 8**
 RNAV (GPS) Rwy 26
 NA when local weather not available.

ESCANABA, MI
 DELTA COUNTY (ESC) **ILS or LOC Rwy 9¹³**
 LOC/DME BC Rwy 27²
 RNAV (GPS) Rwy 9²
 RNAV (GPS) Rwy 27²
 RNAV (GPS) Rwy 36²³
 VOR Rwy 36²

¹ILS, Category C, 700-2; Category D, 900-2¾.
 LOC, Category D, 900-2¾.
²Category D, 900-2¾.
³NA when local weather not available.

FLINT, MI
 BISHOP INTL (FNT) **ILS or LOC Rwy 9¹**
 ILS or LOC Rwy 27¹²
 RADAR-1¹
 RNAV (GPS) Rwy 27²
 VOR Rwy 36³

¹NA when control tower closed.
²NA when local weather not available.
³Category D, 800-2¼.

FRANKFORT, MI
 FRANKFORT DOW MEMORIAL
 FIELD (FKS) **RNAV (GPS) Rwy 15¹**
 RNAV (GPS) Rwy 33¹
 VOR/DME-A²

NA when local weather not available.
¹Category C, 900-2¾.
²Categories A, B, 900-2; Category C, 900-2¾.

FREMONT, MI
 FREMONT MUNI (FFX) **RNAV (GPS) Rwy 18**
 RNAV (GPS) Rwy 36
 VOR Rwy 18
 VOR Rwy 36
 NA when local weather not available.

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NAME ALTERNATE MINIMUMS
GAYLORD, MI
 GAYLORD RGNL (GLR).....**RNAV (GPS) Rwy 27**
VOR Rwy 27

Category D, 800-2½.
 NA when local weather not available.

GRAND RAPIDS, MI

GERALD R
 FORD INTL (GRR).....**ILS or LOC Rwy 8R¹**
ILS or LOC Rwy 26L¹
ILS or LOC Rwy 35^{2,3}
RADAR-1³
RNAV (GPS) Rwy 8L¹
RNAV (GPS) Rwy 8R¹
RNAV (GPS) Rwy 17¹
RNAV (GPS) Rwy 26L¹
RNAV (GPS) Rwy 26R¹
RNAV (GPS) Rwy 35¹
VOR Rwy 17¹

¹NA when local weather not available.
²ILS, Categories A, B, C, 700-2; Category D, 700-2¼. LOC, Category D, 800-2¼.
³NA when control tower is closed.

GRAYLING, MI

GRAYLING AAF (GOV).....**RNAV (GPS) Rwy 14**
 NA when local weather not available.

HANCOCK, MI

HOUGHTON COUNTY
 MEMORIAL (CMX).....**ILS or LOC Rwy 31¹**
LOC/DME BC Rwy 13^{2,3}
RNAV (GPS) Rwy 7³
RNAV (GPS) Rwy 13^{2,4}
RNAV (GPS) Rwy 25^{2,4}
RNAV (GPS) Rwy 31³
VOR Rwy 25³

¹ILS, LOC, Category D, 800-2¼.
²NA when local weather not available.
³Category D, 800-2¼.
⁴Category D, 900-2½.

HARBOR SPRINGS, MI

HARBOR
 SPRINGS (MGN).....**RNAV (GPS) Rwy 10**
RNAV (GPS) Rwy 28

NA when local weather not available.
 Category B, 900-2.

HOLLAND, MI

WEST MICHIGAN
 RGNL (BIV).....**RNAV (GPS) Rwy 8**
RNAV (GPS) Rwy 26

NA when local weather not available.

NAME ALTERNATE MINIMUMS
HOUGHTON LAKE, MI

ROSCOMMON COUNTY-BLODGETT
 MEMORIAL (HTL).....**RNAV (GPS) Rwy 9**
RNAV (GPS) Rwy 27
 NA when local weather not available.

HOWELL, MI

LIVINGSTON COUNTY SPENCER
 J HARDY (OZW).....**RNAV (GPS) Rwy 13**
RNAV (GPS) Rwy 31
VOR Rwy 31
 NA when local weather not available.

IRON MOUNTAIN-KINGSFORD, MI

FORD (IMT).....**RNAV (GPS) Rwy 1**
RNAV (GPS) Rwy 19
VOR Rwy 31
 NA when local weather not available.

IRONWOOD, MI

GOGEBIC-IRON
 COUNTY (IWD).....**RNAV (GPS) Rwy 9**
RNAV (GPS) Rwy 27
VOR/DME Rwy 9

NA when local weather not available.
 Category A, B, 900-2; Category C, 900-2½;
 Category D, 1000-3.

JACKSON, MI

JACKSON COUNTY-REYNOLDS
 FIELD (JXN).....**ILS or LOC Rwy 24^{1,2}**
RNAV (GPS) Rwy 6³
RNAV (GPS) Rwy 14³
RNAV (GPS) Rwy 24³
RNAV (GPS) Rwy 32³
VOR Rwy 6³
VOR Rwy 14³
VOR Rwy 32³

¹NA when control tower closed.
²ILS, Category D, 700-2.
³NA when local weather not available.

KALAMAZOO, MI

KALAMAZOO/BATTLE CREEK
 INTL (AZO).....**ILS or LOC Rwy 35^{1,3}**
RADAR-1¹
RNAV (GPS) Rwy 5²
RNAV (GPS) Rwy 17²
RNAV (GPS) Rwy 23²

¹NA when control tower closed.
²NA when local weather not available.
³Category C, D, 700-2.

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NAME ALTERNATE MINIMUMS

LANSING, MI

CAPITAL REGION
INTL (LAN) ILS or LOC Rwy 10R¹
ILS or LOC Rwy 28L¹
RNAV (GPS) Rwy 28L²

¹ILS, Category C, 800-2; Category D, 900-3;
LOC, Category D, 900-3.

²Category D, 900-3.

LAPEER, MI

DUPONT-LAPEER (D95)..... RNAV (GPS) Rwy 18
RNAV (GPS) Rwy 36

NA when local weather not available.

LUDINGTON, MI

MASON COUNTY (LDM)..... RNAV (GPS) Rwy 8
RNAV (GPS) Rwy 26

NA when local weather not available.

MACKINAC ISLAND, MI

MACKINAC
ISLAND (MCD)..... RNAV (GPS) Rwy 8
RNAV (GPS) Rwy 26
VOR/DME-A

NA when local weather not available.

MANISTEE, MI

MANISTEE CO-
BLACKER (MBL)..... RNAV (GPS) Rwy 10
RNAV (GPS) Rwy 28
VOR Rwy 10

NA when local weather not available
Category D, 800-2¹/₄.

MANISTIQUE, MI

SCHOOLCRAFT
COUNTY (ISQ)..... RNAV (GPS) Rwy 10
RNAV (GPS) Rwy 28
VOR Rwy 28

NA when local weather not available.

MARQUETTE, MI

SAWYER INTL (SAW) ILS or LOC Rwy 1¹
RNAV (GPS) Rwy 1²
RNAV (GPS) Rwy 19²

¹LOC, NA.

²NA when local weather not available.

MARSHALL, MI

BROOKS FIELD (RMY) RNAV (GPS) Rwy 28
VOR/DME-A

NA when local weather not available.

NAME ALTERNATE MINIMUMS

MASON, MI

MASON JEWETT
FIELD (TEW)..... RNAV (GPS) Rwy 10
RNAV (GPS) Rwy 28
VOR-A

NA when local weather not available.

MENOMINEE, MI

MENOMINEE-MARINETTE
TWIN COUNTY (MNM)..... RNAV (GPS) Rwy 3
RNAV (GPS) Rwy 21¹
RNAV (GPS) Rwy 32¹
VOR-A¹

NA when local weather not available.

¹Category D, 900-2¹/₄.

MIDLAND, MI

JACK BARSTOW (IKW) RNAV (GPS) Rwy 6
RNAV (GPS) Rwy 24
VOR-A

NA when local weather not available.

MONROE, MI

CUSTER (TTF) RNAV (GPS) Rwy 3
RNAV (GPS) Rwy 21
VOR Rwy 21

NA when local weather not available.

MOUNT PLEASANT, MI

MOUNT PLEASANT
MUNI (MOP)..... RNAV (GPS) Rwy 9
RNAV (GPS) Rwy 27
VOR Rwy 27

NA when local weather not available.

MUSKEGON, MI

MUSKEGON
COUNTY (MKG) ILS or LOC Rwy 24¹
ILS or LOC Rwy 32¹
LOC BC Rwy 14¹
RNAV (GPS) Rwy 6
RNAV (GPS) Rwy 14
RNAV (GPS) Rwy 24

NA when local weather not available.

¹NA when control tower closed.

NEWBERRY, MI

LUCE COUNTY (ERY)..... RNAV (GPS) Rwy 11
RNAV (GPS) Rwy 29

NA when local weather not available.

OSCODA, MI

OSCODA-
WURTSMITH (OSC) RNAV (GPS) Rwy 6
RNAV (GPS) Rwy 24

NA when local weather not available.

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NAME ALTERNATE MINIMUMS

OWOSSO, MI
OWOSSO
COMMUNITY (RNP) **RNAV (GPS) Rwy 11**
RNAV (GPS) Rwy 29
VOR/DME Rwy 29

NA when local weather not available.

PELLSTON, MI
PELLSTON RGNL AIRPORT OF
EMMET COUNTY (PLN) **ILS or LOC Rwy 32¹**
RNAV (GPS) Rwy 5²
RNAV (GPS) Rwy 23³
RNAV (GPS) Rwy 32³
VOR Rwy 23³

NA when local weather not available.
¹ILS, Category D, 700-2¼. LOC, Category D, 800-2¼.
²Categories A,B, 900-2; Category C, 900-2½; Category D, 900-2¾.
³Category D, 800-2¼.

PONTIAC, MI
OAKLAND COUNTY
INTL (PTK) **ILS or LOC Rwy 9R¹²**
LOC BC Rwy 27L¹
RNAV (GPS) Rwy 9R³
RNAV (GPS) Rwy 27L³
VOR Rwy 9R³
VOR Rwy 27L³

¹NA when control tower closed.
²ILS, Categories A, B, C, D, 700-2.
³NA when local weather not available.

PORT HURON, MI
ST CLAIR COUNTY
INTL (PHN) **RNAV (GPS) Rwy 4**
RNAV (GPS) Rwy 22

NA when local weather not available.

SAGINAW, MI
MBS INTL (MBS) **ILS or LOC Rwy 5¹**
ILS or LOC Rwy 23²
RNAV (GPS) Rwy 5³
RNAV (GPS) Rwy 14³
RNAV (GPS) Rwy 23³
RNAV (GPS) Rwy 32³
VOR Rwy 14⁴

¹NA when control tower closed.
²DME or radar required; NA when control tower closed.
³NA when local weather not available.
⁴NA for NON-DME equipped aircraft when control tower closed.

NAME ALTERNATE MINIMUMS

SAGINAW, MI (CON'T)
SAGINAW COUNTY H W
BROWNE (HYX) **ILS or LOC/DME Rwy 27**
RNAV (GPS) Rwy 9¹
RNAV (GPS) Rwy 27
VOR/DME-A

NA when local weather not available.
¹Category C, 800-2¼.

SAULT STE MARIE, MI
CHIPPEWA COUNTY
INTL (CIU) **ILS or LOC Rwy 16¹**
RNAV (GPS) Rwy 10
RNAV (GPS) Rwy 16
RNAV (GPS) Rwy 28
RNAV (GPS) Rwy 34

NA when local weather not available.
¹ILS, Category E, 600-2; LOC, Category E, 800-2.

SAULT STE MARIE MUNI/SANDERSON
FIELD (ANJ) **RNAV (GPS) Rwy 14**
RNAV (GPS) Rwy 32
VOR Rwy 32

NA when local weather not available.

SOUTH HAVEN, MI
SOUTH HAVEN
AREA RGNL (LWA) **RNAV (GPS) Rwy 5**
RNAV (GPS) Rwy 23
VOR Rwy 23

NA when local weather not available.
Category D, 900-2¾.

SPARTA, MI
PAUL C MILLER-
SPARTA (8D4) **RNAV (GPS) Rwy 7**
RNAV (GPS) Rwy 25
VOR-A

NA when local weather not available.

STURGIS, MI
KIRSCH MUNI (IRS) **RNAV (GPS) Rwy 18**
RNAV (GPS) Rwy 36

NA when local weather not available.
Category D, 800-2¼.

THREE RIVERS, MI
THREE RIVERS MUNI DR
HAINES (HAI) **RNAV (GPS) Rwy 27**
VOR-A

NA when local weather not available.

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ALTERNATE MINS

M6



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NAME	ALTERNATE MINIMUMS	NAME	ALTERNATE MINIMUMS
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TRAVERSE CITY, MI

CHERRY

CAPITAL (TVC).....**ILS or LOC Rwy 28**¹³

RNAV (GPS) Rwy 10²

RNAV (GPS) Rwy 18⁴

RNAV (GPS) Rwy 28⁴

RNAV (GPS) Rwy 36⁴

VOR-A³

NA when local weather not available.

¹NA when control tower closed.

²Categories A, B, 1200-2; Categories C, D, 1200-3.

³Categories A, B, 900-2; Category C, 900-2½; Category D, 1100-3.

⁴Category C, 900-2½; Category D, 1100-3.

WEST BRANCH, MI

WEST BRANCH

COMMUNITY (Y31)**RNAV (GPS) Rwy 9**¹

RNAV (GPS) Rwy 27

NA when local weather not available.

¹Category C, 800-2¼; Category D, 800-2½.

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ALTERNATE MINS

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RADAR MINS

16147

RADAR INSTRUMENT APPROACH MINIMUMS

BATTLE CREEK, MI
W. K. KELLOGG (BTL)
 RADAR-1 119.2 239.25  

Amdt 2, 13DEC90 (16147) (FAA)

ELEV 952

CIRCLING	RWY	GP/TCH/RPI	CAT	DA/	HAT/	CEIL-VIS	CAT	DA/	HAT/	CEIL-VIS
				MDA-VIS	HAA			MDA-VIS	HAA	
	A			1420-1	468	(500-1)		1440-1	488	(500-1)
	C			1480-1½	528	(600-1½)	D	1520-2	568	(600-2)
	E			1740-2¾	788	(800-2¾)				

When Kalamazoo control tower closed, procedure not authorized.

When Battle Creek control tower closed, use Kalamazoo altimeter setting and increase all MDA's 60 feet and Category E visibility ¼ mile.

FLINT, MI
BISHOP INTL (FNT)
 RADAR-1 118.8 257.9  



Amdt 8A, 02MAR06 (16147) (FAA)

ELEV 782

ASR	RWY	GP/TCH/RPI	CAT	DA/	HAT/	CEIL-VIS	CAT	DA/	HAT/	CEIL-VIS
				MDA-VIS	HAA			MDA-VIS	HAA	
	36		ABC	1180-1	398	(400-1)	D	1180-1¼	398	(400-1¼)
	27		ABC	1240-¾	470	(500-¾)	D	1240-1	470	(500-1)
	18		AB	1300-1	523	(600-1)	C	1300-1½	523	(600-1½)
		D	1300-1¾	523	(600-1¾)					
CIRCLING			AB	1300-1	518	(600-1)	C	1300-1½	518	(600-1½)
			D	1340-2	558	(600-2)				

CAUTION: Brightly lighted parking lot 4000' E of approach end of Rwy 27 can easily be confused for Rwy 27.

For inoperative MALSR, increase ASR Rwy 27 Categories A and B visibility to 1.

GRAND RAPIDS, MI
GERALD R FORD INTL (GRR)
 RADAR-1 128.4 257.6  

Amdt 10C, 26AUG10 (16147) (FAA)

ELEV 794

ASR	RWY	GP/TCH/RPI	CAT	DA/	HAT/	CEIL-VIS	CAT	DA/	HAT/	CEIL-VIS
				MDA-VIS	HAA			MDA-VIS	HAA	
	26L		ABC	1100/24	310	(400-½)	D	1100/50	310	(400-1)
	26R		AB	1280-1	493	(500-1)	C	1280-1¼	493	(500-1¼)
		D	1280-1½	493	(500-1½)					
	8R		AB	1200-½	406	(500-½)	C	1200-¾	406	(500-¾)
		D	1200-1	406	(500-1)					
	8L		AB	1220-1	433	(500-1)	C	1220-1¼	433	(500-1¼)
		D	1220-1½	433	(500-1½)					
CIRCLING			AB	1280-1	486	(500-1)	C	1280-1½	486	(500-1½)
			D	1360-2	566	(600-2)				

When control tower closed, ASR not authorized.

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RADAR INSTRUMENT APPROACH MINIMUMS

RADAR MINS

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RADAR MINS

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RADAR INSTRUMENT APPROACH MINIMUMS

KALAMAZOO, MI

Amdt 9B, 03APR14 (16147) (FAA)

ELEV 874

KALAMAZOO/BATTLE CREEK INTL (AZO)

RADAR-1 121.2 239.25 **▽** **△**

	RWY	GP/TCH/RPI	CAT	HAT/ HATh/			CAT	HAT/ HATh/		
				DA/ MDA-VIS	HAA	CEIL-VIS		DA/ MDA-VIS	HAA	CEIL-VIS
ASR	35		AB	1320/24	452	(500-1/2)	C	1320/40	452	(500-3/4)
			D	1320/50	452	(500-1)				
			AB	1320-1	453	(500-1)				
D	1320-1 1/2	453	(500-1 1/2)							
CIRCLING			AB	1380-1	506	(600-1)	C	1380-1 1/2	506	(600-1 1/2)
			D	1440-2	566	(600-2)				

When control tower closed, ASR NA.

Night Landing: Rwy 5, 9, 23, 27 NA.

LANSING, MI

Amdt 15, 27AUG09 (16147) (FAA)

ELEV 861

CAPITAL REGION INTL (LAN)

RADAR-1 118.65 133.475 226.4 **▽**

	RWY	GP/TCH/RPI	CAT	HAT/ HATh/			CAT	HAT/ HATh/		
				DA/ MDA-VIS	HAA	CEIL-VIS		DA/ MDA-VIS	HAA	CEIL-VIS
ASR	10R		ABC	1260/24	399	(400-1/2)	D	1260/50	399	(400-1)
			AB	1260-1	403	(400-1)				
	6		AB	1320/24	469	(500-1/2)	C	1320/40	469	(500-3/4)
			D	1320/50	469	(500-1)				
			AB	1320-1	462	(500-1)				
D	1320-1 1/2	462	(500-1 1/2)							
CIRCLING			AB	1380-1	519	(600-1)	C	1380-1 1/2	519	(600-1 1/2)
			D	1440-2	579	(600-2)				

For inoperative MALS, increase S-10R CAT D visibility to RVR 6000.

Visibility reduction by helicopters NA for Rwy 6, and Rwy 24.

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RADAR INSTRUMENT APPROACH MINIMUMS

RADAR MINS

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RADAR MINS

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RADAR INSTRUMENT APPROACH MINIMUMS

MUSKEGON, MI

Amdt 15, 03JUN10 (16147) (FAA)

ELEV 629

MUSKEGON COUNTY (MKG)

RADAR-1 119.8 290.35 (N OF V2) 133.825 290.35 (S OF V2) 

	RWY	GP/TCH/RPI	CAT	HAT/ HATh/		CEIL-VIS	CAT	HAT/ HATh/		CEIL-VIS	
				DA/ MDA-VIS	HAA			DA/ MDA-VIS	HAA		
ASR	32		AB	1100/24	471	(500-½)	C	1100/40	471	(500-¾)	
				1100/50	471	(500-1)					
	24		ABC	1040-¾	413	(500-¾)	D	1040-1	413	(500-1)	
				1080-1	453	(500-1)					
	14		AB	1080-1¼	453	(500-1¼)	C	1080-1¼	453	(500-1¼)	
				1080-1½	453	(500-1½)					
	6		AB	1140-1	517	(600-1)	C	1140-1½	517	(600-1½)	
				1140-1¾	517	(600-1¾)					
	CIRCLING			AB	1140-1	511	(600-1)	C	1140-1½	511	(600-1½)
					1200-2	571	(600-2)				

Procedure NA when Muskegon Approach Control closed.

For inoperative MALSR increase S-24 visibility CAT A, B, and D ¼ mile.

Visibility reduction by helicopters NA.

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EC-1

RADAR INSTRUMENT APPROACH MINIMUMS

RADAR MINS

16147



TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

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IFR TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

Civil Airports and Selected Military Airports

ALL USERS: Airports that have Departure Procedures (DPs) designed specifically to assist pilots in avoiding obstacles during the climb to the minimum enroute altitude, and/or airports that have civil IFR takeoff minimums other than standard, are listed below. Takeoff Minimums and Departure Procedures apply to all runways unless otherwise specified. Altitudes, unless otherwise indicated, are minimum altitudes in MSL.

DPs specifically designed for obstacle avoidance are referred to as Obstacle Departure Procedures (ODPs) and are textually described below, or published separately as a graphic procedure. If the ODP is published as a graphic procedure, its name will be listed below, and it can be found in either this volume (civil), or the applicable military volume, as appropriate. Users will recognize graphic obstacle DPs by the term "(OBSTACLE)" included in the procedure title; e.g., TETON TWO (OBSTACLE). If not specifically assigned an ODP, SID, or radar vector as part of an IFR clearance, an ODP may be required to be flown for obstacle clearance, even though not specifically stated in the IFR clearance. When doing so in this manner, ATC should be informed when the ODP being used contains a specified route to be flown, restrictions before turning, and/or altitude restrictions.

Some ODPs, which are established solely for obstacle avoidance, require a climb in visual conditions to cross the airport, a fix, or a NAVAID in a specified direction, at or above a specified altitude. These procedures are called Visual Climb Over Airport (VCOA). To ensure safe and efficient operations, the pilot must verbally request approval from ATC to fly the VCOA when requesting their IFR clearance.

At some locations where an ODP has been established, a diverse vector area (DVA) may be created to allow radar vectors to be used in lieu of an ODP. DVA information will state that headings will be as assigned by ATC and climb gradients, when applicable, will be published immediately following the specified departure procedure.

Graphic DPs designed by ATC to standardize traffic flows, ensure aircraft separation and enhance capacity are referred to as "Standard Instrument Departures (SIDs)". SIDs also provide obstacle clearance and are published under the appropriate airport section. ATC clearance must be received prior to flying a SID.

CIVIL USERS NOTE: Title 14 Code of Federal Regulations Part 91 prescribes standard takeoff rules and establishes takeoff minimums for certain operators as follows: (1) For aircraft, other than helicopters, having two engines or less – one statute mile visibility. (2) For aircraft having more than two engines – one-half statute mile visibility. (3) For helicopters – one-half statute mile visibility. These standard minima apply in the absence of any different minima listed below.

MILITARY USERS NOTE: Civil (nonstandard) takeoff minima are published below. For military takeoff minima, refer to appropriate service directives.

NAME	TAKEOFF MINIMUMS	NAME	TAKEOFF MINIMUMS
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ADRIAN, MI

LENAAWEE COUNTY (ADG)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
ORIG 07130 (FAA)
TAKEOFF MINIMUMS: **Rwys 11, 29**, NA-ATC.
NOTE: **Rwy 5**, multiple trees beginning 1837' from DER, 149' left of centerline, up to 75' AGL/873' MSL. Multiple trees beginning 953' from DER, 146' right of centerline, up to 74' AGL/872' MSL. **Rwy 23**, tree 1231' from DER, 633' left of centerline, 55' AGL/849' MSL.

ALLEGAN, MI

PADGHAM FIELD (35D)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 2 10042 (FAA)
TAKEOFF MINIMUMS: **Rwys 15, 33**, NA-Environmental.
DEPARTURE PROCEDURE: **Rwy 11**, climb heading 103° to 1200 before turning right.
NOTE: **Rwy 11**, multiple trees beginning 46' from DER, 10' left of centerline, up to 97' AGL/806' MSL. Multiple trees beginning 1' from DER, 2' right of centerline, up to 100' AGL/794' MSL. **Rwy 29**, multiple trees beginning 37' from DER, 4' left of centerline, up to 83' AGL/802' MSL. Multiple trees beginning 22' from DER, 20' right of centerline, up to 84' AGL/803' MSL.

ALMA, MI

GRATIOT COMMUNITY (AMN)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
ORIG 10042 (FAA)
TAKEOFF MINIMUMS: **Rwy 9**, 400-3 or std. w/ min. climb of 251' per NM to 1400.
NOTE: **Rwy 9**, multiple trees beginning 841' from DER, 438' right of centerline, up to 58' AGL/817' MSL. Multiple trees beginning 1383' from DER, 380' left of centerline, up to 71' AGL/820' MSL. **Rwy 18**, multiple trees beginning 1067' from DER, 152' right of centerline, up to 70' AGL/829' MSL. Multiple trees beginning 923' from DER, 374' left of centerline, up to 70' AGL/824' MSL. **Rwy 27**, multiple trees beginning 306' from DER, 272' right of centerline, up to 81' AGL/840' MSL. Multiple trees beginning 1168' from DER, 593' left of centerline, up to 93' AGL/852' MSL. **Rwy 36**, multiple trees beginning 239' from DER, 3' right of centerline, up to 86' AGL/845' MSL. Multiple trees beginning 143' from DER, 38' left of centerline, up to 103' AGL/852' MSL.

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TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)



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TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)



ALPENA, MI

ALPENA COUNTY RGNL (APN)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

ORIG 09015 (FAA)

NOTE: **Rwy 1**, tree 2293' from DER, 525' left of centerline, 100' AGL/749' MSL. **Rwy 7**, trees beginning 858' from DER, 567' right of centerline up to 100' AGL/774' MSL. Trees beginning 1059' from DER, 166' left of centerline up to 100' AGL/769' MSL. **Rwy 19**, trees beginning 1789' from DER, 270' left of centerline up to 100' AGL/779' MSL. Trees beginning 1049' from DER, 777' right of centerline up to 100' AGL/789' MSL. Vent on cable 44' from DER, 147' left of centerline up to 25' AGL/685' MSL. **Rwy 25**, trees beginning 652' from DER, 53' left of centerline up to 100' AGL/755' MSL. Trees beginning 1021' from DER, 275' right of centerline up to 100' AGL/751' MSL.

ANN ARBOR, MI

ANN ARBOR MUNI (ARB)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 9 10322 (FAA)

TAKEOFF MINIMUMS: **Rwys 12, 30**, NA-Environmental.

NOTE: **Rwy 6**, building and multiple poles beginning 312' from DER, 385' right of centerline, up to 24' AGL/853' MSL. Multiple trees beginning 538' from DER, 47' right of centerline, up to 100' AGL/929' MSL. Building 99' from DER, 351' left of centerline, 22' AGL/849' MSL. Multiple trees beginning 634' from DER, 182' left of centerline, up to 58' AGL/887' MSL. **Rwy 24**, terrain 138' from DER, 475' right of centerline, 837' MSL. Multiple trees beginning 462' from DER, 486' right of centerline, 50' AGL/885' MSL. Multiple trees beginning 479' from DER, 473' left of centerline, up to 100' AGL/926' MSL.

BAD AXE, MI

HURON COUNTY MEMORIAL (BAX)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 4 07354 (FAA)

NOTE: **Rwy 4**, vehicle on road 244' from DER, 531' left of centerline, 15' AGL/774' MSL. Tree 810' from DER, 43' left of centerline, 100' AGL/859' MSL. Vehicle on road 223' from DER, 470' right of centerline, 15' AGL/774' MSL. **Rwy 17**, vehicle on road 164' from DER, on centerline, 15' AGL/784' MSL. Bush 81' from DER, 497' right of centerline, 4' AGL/757' MSL. Railroad 695' from DER, 684' right of centerline, 23' AGL/792' MSL. Terrain beginning 222' from DER, 70' right of centerline, 0' AGL/757' MSL. Trees beginning 855' from DER, 392' right of centerline, up to 100' AGL/879' MSL. Tree 2334' from DER, 422' left of centerline, 35' AGL/798' MSL. Terrain beginning 44' from DER, 9' left of centerline, 0' AGL/765' MSL. Trees beginning 1693' from DER, 372' left of centerline, up to 100' AGL/859' MSL. **Rwy 22**, terrain beginning 3' from DER, 172' left of centerline, 0' AGL/765' MSL. Tree 2334' from DER, 422' left of centerline, 100' AGL/869' MSL. Terrain beginning 49' from DER, 165' right of centerline, 0' AGL/762' MSL. Railroad 41' from DER, 390' right of centerline, 23' AGL/782' MSL. **Rwy 35**, antenna on tower 355' from DER, 478' right of centerline, 34' AGL/793' MSL. Antenna 359' from DER, 477' right of centerline, 30' AGL/793' MSL. Vehicle on road 575' from DER, 412' right of centerline, 15' AGL/778' MSL. Trees beginning 1259' from DER, 53' right of centerline, up to 100' AGL/842' MSL. Trees beginning 1509' from DER, 375' left of centerline, up to 100' AGL/859' MSL. Tower 1085' from DER, 698' left of centerline, 63' AGL/822' MSL.

BALDWIN, MI

BALDWIN MUNI (7D3)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

ORIG 84075 (FAA)

TAKEOFF MINIMUMS: **Rwys 5, 9, 23, 27**, 300-1.

BATTLE CREEK, MI

W. K. KELLOGG (BTL)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 3 11125 (FAA)

TAKEOFF MINIMUMS: **Rwys 5R, 23L**, NA - Environmental.

NOTE: **Rwy 5L**, trees beginning 1590' from DER, 484' right of centerline, up to 80' AGL/999' MSL. Vehicle on road 896' from DER, left and right of centerline, 17' AGL/956' MSL. **Rwy 13**, vehicles on road 480' from DER, on centerline, 15' AGL/945' MSL. Trees beginning 800' from DER, 3' right of centerline, up to 102' AGL/1021' MSL. Trees and fence beginning 193' from DER, 31' left of centerline, up to 101' AGL/1030' MSL. **Rwy 23R**, trees beginning 1995' from DER, 3' right of centerline, up to 103' AGL/1072' MSL. Trees beginning 2065' from DER, 25' left of centerline, up to 80' AGL/1049' MSL. **Rwy 31**, trees and tower beginning 1797' from DER, 2' right of centerline, up to 166' AGL/1058' MSL. Trees and railroad beginning 14' from DER, 116' left of centerline, up to 68' AGL/977' MSL.

BAY CITY, MI

JAMES CLEMENTS MUNI (3CM)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 6 13346 (FAA)

TAKEOFF MINIMUMS: **Rwys 9, 13, 18, 27, 31, 36**, NA - environmental.

DEPARTURE PROCEDURE: **Rwy 18**, climb heading 180° to 2000 before turning left. **Rwy 23**, climb heading 229° to 1200 before turning left.

NOTE: **Rwy 5**, road 260' from DER, left and right of centerline, up to 15' AGL/604' MSL. Tree 1171' from DER 277' left of centerline, 87' AGL/678' MSL. **Rwy 18**, bushes beginning 186' from DER, 151' right of centerline, 6' AGL/596' MSL. Trees beginning 350' from DER, 200' left of centerline, 10' AGL/597' MSL. Trees beginning 1368' from DER, 59' right of centerline, up to 80' AGL/673' MSL. Trees beginning 1768' from DER, 330' left of centerline, up to 95' AGL/699' MSL. Trees beginning 2353' from DER, 127' left of centerline, up to 110' AGL/680' MSL. **Rwy 23**, trees 1120' from DER, 130' right of centerline, 40' AGL/624' MSL. **Rwy 36**, trees beginning 103' from DER, 50' left of centerline, up to 27' AGL/621' MSL. Trees beginning 436' from DER, 162' right of centerline, up to 90' AGL/681' MSL. Pole 538' from DER, 434' left of centerline, up to 20' AGL/609' MSL. Trees beginning 1856' from DER, 17' left of centerline, up to 87' AGL/681' MSL.

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TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)





TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)



BEAVER ISLAND, MI

BEAVER ISLAND (SJX)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES

ORIG 98001 (FAA)

TAKEOFF MINIMUMS: **Rwys 9,27**, 300-1.

Rwys 5,14,23,32, NA.

BELLAIRE, MI

ANTRIM COUNTY (ACB)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES

AMDT 6 06215 (FAA)

TAKEOFF MINIMUMS: **Rwy 2**, 700-3 or std. w/ a min.
climb of 417' per NM to 1500.

DEPARTURE PROCEDURE: **Rwy 2**, climb heading
022° to 1200 before turning right. **Rwy 20**, climb
heading 202° to 1300 before turning left.

NOTE: **Rwy 2**, road 385' from DER, 528' right of
centerline, 15' AGL/646' MSL. Multiple trees beginning
2535' from DER, 96' left of centerline, up to 100'
AGL/884' MSL. Multiple trees beginning 406' from
DER, 235' right of centerline, up to 100' AGL/1147'
MSL. Tower 2.57 NM from DER, 3271' right of
centerline, 168' AGL/1198' MSL.

Rwy 20, multiple trees beginning 64' from DER, 204'
right of centerline up to 100' AGL/693' MSL. Multiple
buildings and antenna on tower beginning 2641' from
DER, 909' right of centerline, up to 121' AGL/721' MSL.
Multiple trees beginning 125' from DER, 220' left of
centerline, up to 100' AGL/720' MSL.

BENTON HARBOR, MI

SOUTHWEST MICHIGAN RGNL (BEH)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES

AMDT 7 11237 (FAA)

TAKEOFF MINIMUMS: **Rwy 32**, 200-1½ or std. w/min.
climb of 283' per NM to 900.

NOTE: **Rwy 10**, trees beginning 39' from DER, right and
left of centerline, up to 100' AGL/760' MSL. Pole 1036'
from DER, 551' right of centerline, 25' AGL/676' MSL.
Towers 4217' from DER, 221' left of centerline, 100'
AGL/755' MSL. **Rwy 14**, trees, buildings, poles, and
vehicles on road beginning 550' from DER, right and
left of centerline, up to 100' AGL/748' MSL. Tower
1979' from DER, 528' left of centerline, 65' AGL/713'
MSL. Stack 2200' from DER, 373' left of centerline, 40'
AGL/689' MSL. **Rwy 18**, vehicles on road, trees,
buildings, and poles beginning 15' from DER, right and
left of centerline, up to 100' AGL/732' MSL. Fence 190'
from DER, 263' left of centerline, 8' AGL/632' MSL.

Rwy 28, trees beginning 583' from DER, 590' right
of centerline, up to 100' AGL/662' MSL. Pole and rod
956' from DER, 312' left of centerline, up to 50'
AGL/663' MSL. Trees beginning 1150' from DER, 634'
left of centerline, up to 100' AGL/698' MSL.

Rwy 32, trees and towers beginning 77' from DER,
right and left of centerline, up to 100' AGL/819' MSL.

Rwy 36, trees beginning 20' from DER, right and
left of centerline, up to 100' AGL/732' MSL. Bush 107'
from DER, 54' right of centerline, 15' AGL/634' MSL.

Pole 1626' from DER, 817' right of centerline, 115'
AGL/725' MSL. Pole and tower 2661' from DER, 92'
left of centerline, 170' AGL/711' MSL.

BERRIEN SPRINGS, MI

ANDREW UNIVERSITY AIRPARK (C20)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES

ORIG 03023 (FAA)

TAKEOFF MINIMUMS: **Rwys 3, 13, 21**, NA. **Rwy 31**, 700

-1½ or std. with a min. climb of 260' per NM to 1500. NA
at night.

NOTE: **Rwy 31**, tower 6789' northeast of DER, 565'
AGL/1224' MSL.

BIG RAPIDS, MI

ROBEN-HOOD (RQB)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES

AMDT 6 15008 (FAA)

TAKEOFF MINIMUMS: **Rwy 27**: 300-1½ or std. w/min.
climb of 400'/NM to 1200. **Rwy 32**: 200-1½ or std. w/min.
climb of 300'/NM to 1200.

NOTE: **Rwy 9**, REILs 40' from DER, left and right of
centerline, up to 5' AGL/946' MSL. Trees beginning 1880'
from DER, left and right of centerline, up to 100'
AGL/1013' MSL. Trees beginning 2938' from DER, left
and right of centerline, up to 100' AGL/1052' MSL. Trees
beginning 4403' from DER, 1496' left of centerline, up to
126' AGL/1091' MSL. **Rwy 14**, trees beginning 74' from
DER, 64' right of centerline, up to 74' AGL/992' MSL.
Pole 78' from DER, 451' left of centerline, 37' AGL/959'
MSL. Vehicles on road beginning 161' from DER, 494'
left of centerline, up to 15' AGL/938' MSL. Trees
beginning 177' from DER, 211' left of centerline, up to 81'
AGL/994' MSL. Trees beginning 787' from DER, 26' left
of centerline, up to 104' AGL/1007' MSL. Trees
beginning 834' from DER, 89' right of centerline, up to 71'
AGL/1003' MSL. Pole 1104' from DER, 452' left of
centerline, 36' AGL/958' MSL. Trees beginning 1824'
from DER, 151' left of centerline, up to 102' AGL/1005'
MSL. Trees beginning 2563' from DER, 53' right of
centerline, up to 91' AGL/1013' MSL. **Rwy 27**, tree 2'
from DER, 362' right of centerline, 5' AGL/1006' MSL.
REILs 99' from DER, left and right of centerline, up to 10'
AGL/991' MSL. Trees beginning 240' from DER, 473' left
of centerline, up to 40' AGL/1038' MSL. Trees beginning
745' from DER, 35' right of centerline, up to 132'
AGL/1104' MSL. Buildings, poles and trees beginning
1970' from DER, left and right of centerline, up to 94'
AGL/1121' MSL. Building 2754' from DER, 1168' right of
centerline, 30' AGL/1076' MSL. **Rwy 32**, ground, lights
and trees beginning 20' from DER, left and right of
centerline, up to 11' AGL/958' MSL. Trees beginning
1965' from DER, left and right of centerline, up to 68'
AGL/1033' MSL. Trees beginning 4265' from DER, left
and right of centerline, up to 104' AGL/1128' MSL.

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TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)



BOIS BLANC ISLAND, MI

BOIS BLANC ISLAND (6Y1)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

ORIG 14317 (FAA)

NOTE: **Rwy 10**, trees beginning abeam DER, 144' left of centerline, up to 100' AGL/759' MSL. Trees beginning abeam DER, 200' right of centerline, up to 100' AGL/759' MSL. Trees beginning 1738' from DER, left and right of centerline, up to 100' AGL/759' MSL. **Rwy 28**, trees beginning abeam DER, 217' left of centerline, up to 100' AGL/769' MSL. Trees beginning abeam DER, 266' right of centerline, up to 100' AGL/799' MSL. Vehicles on road beginning abeam DER, 170' left of centerline, up to 15' AGL/684' MSL. Vehicles on road beginning 440' from DER, crossing centerline from left to right, up to 15' AGL/684' MSL. Trees beginning 1590' from DER, left and right of centerline up to 100' AGL/799' MSL.

BOYNE CITY, MI

BOYNE CITY MUNI (N98)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

ORIG 12152 (FAA)

TAKEOFF MINIMUMS: **Rwy 9**, 600-3 w/ min. climb of 207' per NM to 1400, or alternatively, with standard takeoff minimums and a normal 200' per NM climb gradient, takeoff must occur no later than 1600' prior to DER, or std. w/min. climb of 500' per NM to 1400.

Rwy 27, 300-½ w/ min. climb of 230' per NM to 1800.

DEPARTURE PROCEDURE: **Rwy 27**, climb heading 278° to 1900 before turning left.

NOTE: **Rwy 9**, trees beginning 9' from DER, 23' right of centerline, up to 100' AGL/1167' MSL. Trees beginning 38' from DER, 299' left of centerline; up to 100' AGL/1167' MSL. Navaid 13' from DER, 112' left of centerline, 24' AGL/661' MSL. Vehicles on roads beginning 102' from DER, crossing left to right of centerline, up to 15' AGL/680' MSL. T-L towers beginning 730' from DER, 177' right of centerline, up to 75' AGL/732' MSL. Poles beginning 735' from DER, 180' right of centerline, up to 98' AGL/1109' MSL. Sign 218' from DER, 146' right of centerline, 22' AGL/669' MSL. Ground beginning 5490' from DER, 1064' left of centerline, up to 1070' MSL. Catenary 1.3 NM from DER, 6' right of centerline, 936' MSL. **Rwy 27**, trees beginning 30' from DER, 437' right of centerline, up to 100' AGL/743' MSL. Trees beginning 65' from DER, 203' left of centerline, up to 100' AGL/743' MSL. Buildings beginning 30' from DER, 437' right of centerline, up to 47' AGL/691' MSL. Vehicles on roads beginning 65' from DER, 203' left of centerline, up to 15' AGL/676' MSL. Poles beginning 113' from DER, 515' left of centerline, up to 36' AGL/693' MSL. Antenna on building 118' from DER, 374' left of centerline, 37' AGL/694' MSL. Fence beginning 172' from DER, 67' left of centerline, up to 12' AGL/662' MSL. Antenna 765' from DER, 226' right of centerline, 36' AGL/683' MSL.

BOYNE FALLS, MI

BOYNE MOUNTAIN (BFA)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 4 14149 (FAA)

TAKEOFF MINIMUMS: **Rwy 17**, std w/min. climb of 490' per NM to 1400 or 1300-2½ for climb in visual conditions.

Rwy 35, std w/min. climb of 310' per NM to 1400 or 1300-2½ for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 17**, climb heading 175° to 1400 before proceeding on course, or for climb in visual conditions cross Boyne Mountain airport at or above 1900 before proceeding on course. When executing VCOA, notify ATC prior to departure. **Rwy 35**, climb heading 355° to 1400 before proceeding on course, or for climb in visual conditions cross Boyne Mountain airport at or above 1900 before proceeding on course. When executing VCOA, notify ATC prior to departure.

NOTE: **Rwy 17**, vehicles on road beginning 10' from DER, 93' right of centerline, up to 15' AGL/753' MSL. Trees beginning 13' from DER, 170' left of centerline, up to 100' AGL/854' MSL. Vehicles on road beginning 402' from DER, 16' left of centerline, up to 15' AGL/736' MSL. Trees beginning 529' from DER, 143' right of centerline, up to 100' AGL/838' MSL. Trees beginning 2915' from DER, 1028' right of centerline, up to 100' AGL/903' MSL. Trees beginning 2.4 NM from DER, left and right of centerline, up to 100' AGL/1231' MSL. **Rwy 35**, vehicles on road beginning 28' from DER, left and right of centerline, up to 15' AGL/720' MSL. Trees beginning 613' from DER, 599' left of centerline, up to 100' AGL/805' MSL. Trees beginning 1355' from DER, left and right of centerline, up to 100' AGL/805' MSL. Trees beginning 2319' from DER, 465' right of centerline, up to 100' AGL/797' MSL. Multiple trees beginning 1.6 NM from DER, left and right of centerline, up to 100' AGL/1069' MSL. Trees beginning 1.7 NM from DER, left and right of centerline, up to 100' AGL/1091' MSL. Trees beginning 1.8 NM from DER, left and right of centerline, up to 100' AGL/1124' MSL. Multiple trees beginning 1.9 NM from DER, left and right of centerline, up to 100' AGL/1127' MSL. Multiple trees beginning 2.1 NM from DER, left and right of centerline, up to 100' AGL/1161' MSL.

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TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

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CADILLAC, MI

WEXFORD COUNTY (CAD)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 7 09183 (FAA)

TAKEOFF MINIMUMS: **Rwys 18, 36**, NA - Environmental.

DEPARTURE PROCEDURE: **Rwy 25**, climb heading 250° to 1800 before turning left.

NOTE: **Rwy 7**, trees beginning 783' from DER, 129' right of centerline, up to 53' AGL/1348' MSL. Trees beginning 849' from DER, 348' left of centerline, up to 74' AGL/1378' MSL. Poles beginning 1221' from DER, 596' left of centerline, up to 30' AGL/1336' MSL. Poles beginning 1228' from DER, 366' right of centerline, up to 38' AGL/1333' MSL. Train and tracks 1386' from DER, 819' left of centerline, 23' AGL/1335' MSL. **Rwy 25**, bush 14' from DER, 275' right of centerline, 10' AGL/1317' MSL. Vehicle and road 660' from DER, 623' left of centerline, 15' AGL/1327' MSL.

CARO, MI

TUSCOLA AREA (CFS)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 2 16147 (FAA)

TAKEOFF MINIMUMS: **Rwys 13, 31** NA - Environmental.

NOTE: **Rwy 6**, NAVIAID 41' from DER, 83' left of centerline, 702' MSL. Bush, tree, pole beginning 152' from DER, 238' left of centerline, up to 715' MSL. Trees beginning 665' from DER, 224' left of centerline, up to 727' MSL. Tree 697' from DER, 674' right of centerline, 753' MSL. Trees beginning 819' from DER, 11' right of centerline, up to 759' MSL. Tree 944' from DER, 419' left of centerline, 766' MSL. Trees beginning 990' from DER, 97' left of centerline, up to 775' MSL. Tree, building, pole, t-tower beginning 1278' from DER, 204' right of centerline, up to 778' MSL. Trees, t-tower, pole, tank, beginning 1615' from DER, 471' right of centerline, up to 793' MSL. Tree 3612' from DER, 797' right of centerline, 800' MSL. **Rwy 24**, pole 21' from DER, 330' left of centerline, up to 6' AGL/687' MSL. Tree, NAVIAID, pole beginning 35' from DER, 76' left of centerline, up to 703' MSL. Trees beginning 178' from DER, 472' left of centerline, up to 714' MSL. Trees beginning 723' from DER, 565' left of centerline, up to 730' MSL. Tree, pole, t-tower, catenary beginning 948' from DER, 167' left of centerline, up to 737' MSL. Tree, catenary, pole, t-tower beginning 1243' from DER, 46' left of centerline, up to 741' MSL. Trees beginning 1369' from DER, 25' right of centerline, up to 770' MSL. Tree, t-tower, pole beginning 2360' from DER, 108' right of centerline, up to 808' MSL.

CHARLEVOIX, MI

CHARLEVOIX MUNI (CVX)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 4 05020 (FAA)

TAKEOFF MINIMUMS: **Rwys 4, 22**, N/A.

NOTES: **Rwy 9**, terrain beginning at DER, left and right of centerline up to 660' MSL. **Rwy 27**, terrain beginning at DER, left and right of centerline up to 693' MSL.

CHARLOTTE, MI

FITCH H BEACH (FPK)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 3 17173 (FAA)

TAKEOFF MINIMUMS: **Rwys 15, 33**, NA - Environmental.

NOTE: **Rwy 3**, tree 21' from DER, 482' left of centerline, 14' AGL/899' MSL. REILS and electrical system 35' from DER, 77' left and right of centerline, 4' AGL/894' MSL. Tree and vehicles on road 248' from DER, 337' left of centerline, 909' MSL. Vehicles on road 367' from DER, 516' left of centerline, 911' MSL. Vehicles on road 457' from DER, 461' left of centerline, 912' MSL. Power lines, pole and vehicles on road beginning 520' from DER, 298' left of centerline, up to 40' AGL/936' MSL. Trees, vehicles on road, building, pole, beginning 746' from DER, 101' left of centerline, up to 970' MSL. Tree and OL pole 1108' from DER, 10' left of centerline, 973' MSL. Trees, pole, OL pole, vehicles on road, building, and power lines beginning 1223' from DER, 14' left of centerline, up to 74' AGL/1000' MSL. Trees beginning 2366' from DER, 58' left of centerline, up to 1008' MSL. Tree 4540' from DER, 23' left of centerline, 87' AGL/1021' MSL. Tree 298' from DER, 328' right of centerline, 911' MSL. Pole and tree 465' from DER, 264' right of centerline, 935' MSL. Pole 637' from DER, 546' right of centerline, 936' MSL. Pole and trees beginning 676' from DER, 137' right of centerline, up to 38' AGL/938' MSL. Pole and tree 841' from DER, 79' right of centerline, 36' AGL/939' MSL. Poles and tree, beginning 969' from DER, 476' right of centerline, up to 35' AGL/940' MSL. Pole 1003' from DER, 436' right of centerline, 35' AGL/941' MSL. Pole, building and vehicles on road beginning 1135' from DER, 108' right of centerline, up to 944' MSL. Pole, tree and vehicles on road beginning 1235' from DER, 16' right of centerline, up to 35' AGL/945' MSL. Sign and pole 1332' from DER, 119' right of centerline, 949' MSL. Pole, building, power lines and vehicles on road beginning 1430' from DER, 13' right of centerline, up to 35' AGL/953' MSL. Sign, vehicles on road and building beginning 1642' from DER, 105' right of centerline, up to 37' AGL/958' MSL. Building, pole, power lines and vehicles on road beginning 1721' from DER, 72' right of centerline, up to 35' AGL/959' MSL. Pole and building 1814' from DER, 500' right of centerline, 43' AGL/968' MSL. Sign, vehicles on road, pole, tree and power lines beginning 1842' from DER, 185' right of centerline, up to 971' MSL. Tree and pole 2181' from DER, 119' right of centerline, 991' MSL. Tree and pole 2292' from DER, 105' right of centerline, 993' MSL. Trees beginning 2426' from DER, 88' right of centerline, up to 1000' MSL. Trees beginning 2487' from DER, 836' right of centerline, up to 1008' MSL. Tree, power lines and pole beginning 2542' from DER, 25' right of centerline, up to 1010' MSL. Trees, antenna and tower beginning 2663' from DER, 35' right of centerline, up to 94' AGL/1026' MSL. **Rwy 21**, trees beginning 17' from DER, 427' right of centerline, up to 53' AGL/929' MSL. REILS and electrical system 33' from DER, 77' left and right of centerline, 5' AGL/884' MSL. Trees beginning 941' from DER, 182' right of centerline, up to 935' MSL. Trees beginning 1042' from DER, 414' right of centerline, up to 944' MSL. Tree, powerlines and pole beginning 1046' from DER, 536' right of centerline, up to 950' MSL. Trees beginning 2319' from DER, 269' right of centerline, up to 952' MSL. Trees beginning 2453' from DER, 682' right of centerline, up to 976' MSL. Trees beginning 2554' from DER, 53' right of centerline, up to 982' MSL. Tree 34' from DER, 284' left of centerline, 889' MSL. Tower, airport beacon, pole, powerlines and tree beginning 489' from DER, 553' left of centerline, up to 80' AGL/964' MSL.

17173

TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)



TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)



CHEBOYGAN, MI

CHEBOYGAN COUNTY (SLH)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 3 86156 (FAA)
TAKEOFF MINIMUMS: **Rwys 10, 16**, 300-1.

CLARE, MI

CLARE MUNI (48D)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 2 13262 (FAA)
TAKEOFF MINIMUMS: **Rwy 9**, 300-1 or std. w/min.
climb of 371' per NM to 1100.
NOTE: **Rwy 4**, bush 24' from DER, 131' left of
centerline, 8' AGL/859' MSL. Trees beginning 495'
from DER, 431' right of centerline, up to 56'
AGL/897' MSL. Pole and trees beginning 728' from
DER, 629' left of centerline, up to 55' AGL/906' MSL.
Tree 1158' from DER, 166' left of centerline, 48'
AGL/889' MSL. Trees beginning 1693' from DER,
607' right of centerline, up to 67' AGL/908' MSL.
Trees beginning 1668' from DER, 111' left of
centerline, up to 114' AGL/955' MSL. **Rwy 9**, vehicle
on road 7' from DER, 92' left of centerline, 15'
AGL/834' MSL. Vehicle on road 229' from DER,
crossing centerline, 15' AGL/834' MSL. Buildings
beginning 394' from DER, 275' right of centerline, up
to 30' AGL/849' MSL. Trees beginning 81' from
DER, 417' right of centerline, up to 45' AGL/864'
MSL. Trees beginning 1894' from DER, crossing
centerline, up to 130' AGL/989' MSL. **Rwy 22**, terrain
38' from DER, 486' right of centerline, 828' MSL.
Light 39' from DER, 111' right of centerline, 4'
AGL/829' MSL. Light 40' from DER, 111' left of
centerline, 4' AGL/828' MSL. Windsock 373' from
DER, 559' right of centerline, 34' AGL/855' MSL.
Trees beginning 1033' from DER, crossing
centerline, up to 129' AGL/934' MSL. **Rwy 27**,
building 290' from DER, 574' right of centerline, 20'
AGL/851' MSL. Antenna 329' from DER, 399' right of
centerline, 32' AGL/863' MSL. Building 434' from
DER, 552' right of centerline, 21' AGL/852' MSL.
Vehicle on road 532' from DER, 516' right of
centerline, 15' AGL/854' MSL. Trees beginning 566'
from DER, 238' right of centerline, up to 98'
AGL/918' MSL. Trees beginning 411' from DER,
212' left of centerline, up to 95' AGL/906' MSL.
Trees beginning 1261' from DER, 462' right of
centerline, up to 124' AGL/932' MSL. Trees
beginning 2372' from DER, 230' left of centerline, up
to 109' AGL/930' MSL.

COLDWATER, MI

BRANCH COUNTY MEMORIAL (OEB)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 4 08101 (FAA)
TAKEOFF MINIMUMS: **Rwys 16, 34**, NA -Environmental.
NOTE: **Rwy 4**, vehicles on road and trees beginning 5' from
DER, 92' right of centerline, up to 100' AGL/1059' MSL.
Vehicles on road and trees beginning 347' from DER, 317' left
of centerline, up to 100' AGL/1,059' MSL. **Rwy 7**, trees
beginning 1246' from DER, 430' left of centerline, up to 100'
AGL/1059' MSL. Vehicles on road and trees beginning 154'
from DER, 315' right of centerline, up to 100' AGL/1039' MSL.
Pole 336' from DER, 274' right of centerline, 18' AGL/977'
MSL. **Rwy 22**, trains on railroad and trees beginning 769' from
DER, 986' left to 945' right of centerline, up to 100' AGL/1099'
MSL. **Rwy 25**, vehicles on road and trees beginning 1171'
from DER, 394' left of centerline, up to 100' AGL/1,059' MSL.
Trees beginning 732' from DER, 95' right of centerline, up to
100' AGL/1034' MSL.

DAVISON, MI

ATHELONE WILLIAMS MEMORIAL (6G0)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 2 97338 (FAA)
TAKEOFF MINIMUMS: **Rwys 8, 26**, 300-1.

DETROIT, MI

COLEMAN A YOUNG MUNI (DET)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 7 10322 (FAA)
TAKEOFF MINIMUMS: **Rwy 25**, std. with a minimum climb of
215' per NM to 1400, or alternatively, with standard takeoff
minimums and a normal 200' per NM climb gradient, takeoff
must occur no later than 1300' prior to DER.
DEPARTURE PROCEDURE: **Rwy 33**, climb heading 328° to
1800 before turning left.
NOTE: **Rwy 7**, multiple poles, lights and trees, stack and
antenna beginning 132' from DER, from 405' left to 314' right
of centerline, up to 60' AGL/687' MSL. **Rwy 15**, trees, antenna
on building, and OB light on building beginning 299' from DER,
289' right of centerline, up to 68' AGL/692' MSL. Trees and
rod, antenna, pipe and floodlight on buildings beginning 450'
from DER, 221' left of centerline, up to 78' AGL/692' MSL.
Tower 3375' from DER, 1117' right of centerline, 103' AGL/723'
MSL, building 3748' from DER, 569' left of centerline, 114'
AGL/723' MSL. **Rwy 25**, railroad, construction lights on
buildings and stacks, trees and stack beginning 1' from DER,
12' left of centerline, up to 76' AGL/703' MSL. Trees and light
beginning 334' from DER, 132' right of centerline, up to 58'
AGL/685' MSL. Tower 2827' from DER, 1225' left of centerline,
141' AGL/770' MSL. Stack 1.5 NM from DER, 2414' left of
centerline, 241' AGL/872' MSL. **Rwy 33**, trees beginning 113'
from DER, 118' left of centerline, up to 73' AGL/694' MSL.
Trees beginning 572' from DER, 84' right of centerline, up to
92' AGL/709' MSL. Flag pole 963' from DER, 379' left of
centerline, 28' AGL/658' MSL.

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TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

DETROIT, MI (CON'T)

DETROIT METROPOLITAN/WAYNE
COUNTY (DTW)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 10 10322 (FAA)

NOTE: **Rwy 3R**, headwall 399' from DER, 566' right of centerline, 17' AGL/647' MSL. **Rwy 3L**, tree 3794' from DER, 1441' left of centerline, 100' AGL/734' MSL. **Rwy 4R**, trees beginning 2850' from DER, 1058' left of centerline, up to 100' AGL/744' MSL. Antenna on building 3348' from DER, 1301' left of centerline, 100' AGL/736' MSL. **Rwy 4L**, transmission towers beginning 1516' from DER, 827' left of centerline, up to 60' AGL/690' MSL. Rods on towers beginning 2751' from DER, 762' right of centerline, up to 41' AGL/714' MSL. **Rwy 9R**, trees beginning 1172' from DER, 686' right of centerline, up to 100' AGL/729' MSL. **Rwy 9L**, trees beginning 968' from DER, 461' left of centerline, up to 15' AGL/682' MSL. Trees beginning 987' from DER, 607' right of centerline, up to 45' AGL/715' MSL. **Rwy 21R**, tree 1963' from DER, 554' left of centerline, 100' AGL/739' MSL. Trees beginning 2468' from DER, 721' right of centerline, up to 100' AGL/739' MSL. **Rwy 21L**, trees beginning 1079' from DER, 586' left of centerline, up to 100' AGL/739' MSL. Tree 3910' from DER, 1188' right of centerline, 101' AGL/733' MSL. **Rwy 22R**, trees beginning 1014' from DER, 729' left of centerline, up to 100' AGL/749' MSL. Trees beginning 1039' from DER, 680' right of centerline, up to 100' AGL/749' MSL. **Rwy 22L**, bush 514' from DER, 619' right of centerline, 17' AGL/652' MSL. Trees beginning 794' from DER, 611' right of centerline, up to 100' AGL/739' MSL. Trees beginning 1726' from DER, 921' left of centerline, up to 100' AGL/744' MSL. **Rwy 27R**, trees beginning 2998' from DER, 949' left of centerline, up to 100' AGL/754' MSL. Rod on OL ASR 4461' from DER, 464' left of centerline, 106' AGL/756' MSL. Multiple trees beginning 3289' from DER, 1239' right of centerline, up to 100' AGL/744' MSL. **Rwy 27L**, trees beginning 2623' from DER, 693' left of centerline, up to 100' AGL/744' MSL. Tree 3589' from DER, 777' right of centerline, 100' AGL/739' MSL.

DETROIT, MI (CON'T)

WILLOW RUN (YIP)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 10A 15120 (FAA)

TAKEOFF MINIMUMS: **Rwy 27**, 300-1½ or std. w/min. climb of 206' per NM to 1000, or alternatively, with standard takeoff minimums and a normal 200' per NM climb gradient, takeoff must occur no later than 1300' prior to DER.

NOTE: **Rwy 5R**, trees beginning 1877' from DER, 803' right of centerline, up to 78' AGL/763' MSL. Trees beginning 2028' from DER, 134' left of centerline, up to 80' AGL/777' MSL. **Rwy 5L**, trees beginning 2091' from DER, 224' left of centerline, up to 100' AGL/809' MSL. **Rwy 23R**, sign 73' from DER, 255' left of centerline, 10' AGL/718' MSL. Vehicle on road 587' from DER, 294' right of centerline, 15' AGL/732' MSL. Trees beginning 1020' from DER, 281' right of centerline, up to 60' AGL/793' MSL. Tree 1333' from DER, 316' left of centerline, 55' AGL/757' MSL. **Rwy 23L**, sign 44' from DER, 499' right of centerline, 8' AGL/718' MSL. Tree 1304' from DER, 438' right of centerline, 42' AGL/757' MSL. Tree 2457' from DER, 720' left of centerline, 66' AGL/781' MSL. **Rwy 27**, tree and poles beginning 1023' from DER, 353' right of centerline, up 56' AGL/771' MSL. Railroad and lights beginning 564' from DER, 4' left of centerline, up to 55' AGL/770' MSL. Light on building 724' from DER, 333' left of centerline, 35' AGL/746' MSL. Tower 7161' from DER, 502' left of centerline, 162' AGL/900' MSL.

DETROIT/GROSSE ILE, MI

GROSSE ILE MUNI (ONZ)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 5 12236 (FAA)

TAKEOFF MINIMUMS: **Rwy 35**, 800-1½ or std. w/min. climb of 500' per NM to 1100.

DEPARTURE PROCEDURE: **Rwy 4**, climb heading 037° to 1200 before turning left. **Rwy 35**, climb heading 006° to 1800 before turning left.

NOTE: **Rwy 4**, trees and bushes beginning 12' from DER, left and right of centerline, up to 82' AGL/672' MSL. Building 493' from DER, 630' left of centerline, 32' AGL/626' MSL. Trees beginning 515' from DER, left and right of centerline, up to 78' AGL/673' MSL. Pole 585' from DER, 350' right of centerline, 74' AGL/613' MSL. Trees beginning 1033' from DER, left and right of centerline, up to 74' AGL/713' MSL. **Rwy 17**, trees and bushes abeam DER, 378' right of centerline, up to 47' AGL/622' MSL. Fence beginning 121' from DER, 218' right of centerline, 12' AGL/588' MSL. Trees 148' from DER, left and right of centerline, up to 68' AGL/643' MSL. Trees 2311' from DER, 764' left of centerline, up to 97' AGL/672' MSL. **Rwy 22**, trees abeam DER, 100' left of centerline, up to 12' AGL/587' MSL. Bushes abeam DER, 40' right of centerline, up to 15' AGL/590' MSL. Fence 387' from DER, 518' right of centerline, 12' AGL/587' MSL. Trees 369' from DER, 385' right of centerline, up to 47' AGL/622' MSL. Trees 1037' from DER, 63' right of centerline, up to 106' AGL/686' MSL. Trees 1539' from DER, 51' right of centerline, up to 111' AGL/691' MSL. **Rwy 35**, fence 60' from DER, crossing centerline, 10' AGL/591' MSL. Trees abeam DER, 196' left of centerline, up to 85' AGL/663' MSL. Buildings abeam DER, 430' left of centerline, up to 40' AGL/612' MSL. Buildings 310' from DER, 400' left of centerline, up to 25' AGL/613' MSL. Buildings 450' from DER, 515' right of centerline, up to 19' AGL/614' MSL. Trees beginning 504' from DER, 199' left of centerline, up to 100' AGL/675' MSL. Vehicle on road, 690' from DER, crossing centerline, 15' AGL/619' MSL. Chimney 694' from DER, 359' left of centerline, 35' AGL/619' MSL. Poles 843' from DER, left and right of centerline, up to 47' AGL/628' MSL. Trees beginning 1029' from DER, left and right of centerline, up to 60' AGL/678' MSL.

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TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)



17173

TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)



DOWAGIAC, MI

DOWAGIAC MUNI (C91)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 5 10210 (FAA)

TAKEOFF MINIMUMS: **Rwy 4, 21**, NA-Environmental.

NOTE: **Rwy 9**, building, 258' from DER, 549' right of centerline, 26' AGL/778' MSL. Multiple poles beginning 372' from DER, 432' right of centerline, up to 42'

AGL/795' MSL. Antenna, 459' from DER, 367' right of centerline, 35' AGL/787' MSL. Antenna, 615' from DER, 341' right of centerline, 35' AGL/775' MSL.

Multiple poles beginning 654' from DER, 341' left of centerline, up to 48' AGL/779' MSL. Trees beginning 667' from DER, 21' left of centerline, up to 77'

AGL/839' MSL. Trees beginning 864' from DER, 7' right of centerline, up to 121' AGL/879' MSL. **Rwy 27**,

trees beginning 21' from DER, 33' right of centerline, up to 93' AGL/828' MSL. Trees beginning 154' from DER, 112' left of centerline, up to 111' AGL/837' MSL.

ESCANABA, MI

DELTA COUNTY (ESC)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

ORIG 09127 (FAA)

TAKEOFF MINIMUMS: **Rwy 36**, 400-2¼ or std. w/ min. climb of 261' per NM to 1100.

NOTE: **Rwy 9**, vehicles on roadway at DER, 272' right of centerline, 15' AGL/607' MSL. Trees beginning 1013'

from DER, 444' left of centerline, up to 100' AGL/690' MSL. Trees beginning 1185' from DER, 55' right of centerline, up to 100' AGL/690' MSL. **Rwy 18**, buildings 1' from DER, 480' right of centerline, up to 26' AGL/616' MSL. Fences 139' from DER, 402' right of centerline, up to 9' AGL/599' MSL. Pole 255' from DER, 563' right of centerline, 20' AGL/618' MSL. Trees beginning 329' from DER, 18' left of centerline, up to 100' AGL/664' MSL. Trees beginning 375' from DER, 19' right of centerline, up to 100' AGL/673' MSL. **Rwy 36**, tower 1.87 NM from DER, 2362' left of centerline, 293' AGL/915' MSL. Vehicles on roadway beginning 41' from DER, 40' right of centerline, 15' AGL/621' MSL. Trees beginning 349' from DER, 555' right of centerline, up to 100' AGL/697' MSL. Trees beginning 366' from DER, 2' left of centerline, up to 100' AGL/700' MSL.

DRUMMOND ISLAND, MI

DRUMMOND ISLAND (DRM)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 1 12152 (FAA)

TAKEOFF MINIMUMS: **Rwys 1,19**, NA - environmental.

Rwy 8, 300-1 or std. w/min. climb of 449' per NM to 1000.

NOTE: **Rwy 8**, fence beginning 72' from DER, left and right of centerline, up to 5' AGL/664' MSL. Vehicle on road beginning 199' from DER, left and right of centerline, up to 15' AGL/675' MSL. Buildings beginning 11' from DER, left and right of centerline, up to 20' AGL/679' MSL. Poles 123' from DER, 182' left of centerline, up to 30' AGL/689' MSL. Trees beginning 91' from DER, left and right of centerline, up to 100' AGL/860' MSL. **Rwy 26**, trees beginning 42' from DER, left and right of centerline, up to 100' AGL/809' MSL. Buildings beginning 102' from DER, 87' left of centerline, up to 20' AGL/669' MSL.

FLINT, MI

BISHOP INTL (FNT)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 5 02052 (FAA)

NOTE: **Rwy 18**, trees 1200' from DER, 500' right of centerline, 65' AGL/863' MSL.

FRANKFORT, MI

FRANKFORT DOW MEMORIAL FIELD (FKS)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 3 11069 (FAA)

TAKEOFF MINIMUMS: **Rwy 15**, 400-2¼ or std. w/min. climb of 300' per NM to 1100. **Rwy 33**, 500-2¼ or 300-1 w/ min. climb of 600' per NM to 1200.

DEPARTURE PROCEDURE: **Rwy 15**, climb heading 143° to 1500 before turning left. **Rwy 33**, climb heading 323° to 1200 before turning.

NOTE: **Rwy 15**, vehicles on roadway, beginning 13' from DER, right and left of centerline, up to 15' AGL/654' MSL. Trees beginning 33' from DER, 507' right of centerline, 100' AGL/706' MSL. Trees beginning 345' from DER, 293' left of centerline, 100' AGL/756' MSL. Trees beginning 1.2 NM from DER, 1030' left of centerline, 100' AGL/969' MSL. Tree 1.9 NM from DER, 903' right of centerline, 100' AGL/936' MSL. Tree 2.2 NM from DER, 15' left of centerline, 100' AGL/953' MSL. **Rwy 33**, vehicles on roadway, beginning 6' from DER, right and left of centerline, up to 15' AGL/687' MSL. Trees beginning 316' from DER, 323' right of centerline, 100' AGL/805' MSL. Trees beginning 470' from DER, 256' left of centerline, 100' AGL/838' MSL. Trees beginning 2759' from DER, 1219' right of centerline, 100' AGL/1035' MSL. Tree 1.3 NM from DER, 379' left of centerline, 100' AGL/1002' MSL.

EAST TAWAS, MI

IOSCO COUNTY (6D9)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 1 13206 (FAA)

NOTE: **Rwy 8**, trees beginning at DER, 400' left and right of centerline, up to 100' AGL/704' MSL. Vehicles on roadway 17' from DER, 306' left of centerline, up to 15' AGL/619' MSL. Train 113' from DER, 510' right of centerline, up to 23' AGL/627' MSL. **Rwy 26**, trees beginning at DER, 100' left and right of centerline, up to 100' AGL/714' MSL.

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TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)





TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)



FREMONT, MI

FREMONT MUNI (FFX)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
ORIG 09351 (FAA)

TAKEOFF MINIMUMS: **Rwy 27**, 300-1½ or std. w/ a min climb of 211' per NM to 1100, or alternatively, with standard takeoff minimums and a normal 200' per NM climb gradient, TAKEOFF must occur no later than 1400' prior to DER.

NOTE: **Rwy 9**, trees beginning 947' from DER, on centerline, up to 100' AGL/866' MSL. **Rwy 18**, trees beginning 1055' from DER, 763' right of centerline, up to 100' AGL/859' MSL. Pole 1140' from DER, 617' right of centerline, 27' AGL/784' MSL. Trees beginning 2276' from DER, 1029' left of centerline, up to 100' AGL/847' MSL. **Rwy 27**, trees beginning 816' from DER, 635' right of centerline, up to 100' AGL/876' MSL. Trees beginning 2640' from DER on centerline, up to 100' AGL/876' MSL. Trees beginning 1.18 NM from DER, 1830' right of centerline, up to 100' AGL/960' MSL.

Rwy 36, terrain 81' from DER, 484' left of centerline, 774' MSL. Transmission poles beginning 1157' from DER, 728' left to 497' right of centerline, up to 40' AGL/817' MSL. Catenary 1564' from DER, 41' right of centerline, 37' AGL/814' MSL. Trees beginning 1584' from DER, 577' left to 412' right of centerline, up to 67' AGL/844' MSL.

GAYLORD, MI

GAYLORD RGNL (GLR)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
ORIG 09127 (FAA)

NOTE: **Rwy 9**, trees beginning 917' from DER, 318' right of centerline, up to 57' AGL/1387' MSL. Trees beginning 918' from DER, 357' left of centerline, up to 79' AGL/1407' MSL. Ceilometer 166' from DER, 258' left of centerline, 4' AGL/1334' MSL. **Rwy 18**, power line pylon 2125' from DER, 917' right of centerline, 79' AGL/1398' MSL. Bushes beginning 18' from DER, 255' left of centerline, up to 21' AGL/1338' MSL. **Rwy 27**, trees beginning 2870' from DER, 345' right of centerline, up to 83' AGL/1403' MSL. Tree 2906' from DER, 234' left of centerline, 75' AGL/1395' MSL. **Rwy 36**, trees and bush beginning 79' from DER, 191' left of centerline, up to 54' AGL/1374' MSL.

GLADWIN, MI

CHARLES ZETTEL MEMORIAL (GDW)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 3 11293 (FAA)

TAKEOFF MINIMUMS: **Rwy 27**, 400-2 or std. with min. climb of 341' per NM to 1300.

Rwys 15, 33, NA - Environmental.

DEPARTURE PROCEDURE: **Rwy 27**, climb heading 272° to 1500 before turning left.

NOTE: **Rwy 9**, trees beginning 42' from DER left and right of centerline, up to 82' AGL/850' MSL. **Rwy 27**, vehicle on road 108' from DER, across centerline, 15' AGL/789' MSL. Trees beginning 736' from DER, left and right of centerline, up to 111' AGL/991' MSL. Tank 5787' from DER, 1118' right of centerline, 170' AGL/996' MSL. Tower 1.5 NM from DER, 1250' right of centerline, 187' AGL/1080' MSL. Tower 1.6 NM from DER, 1390' right of centerline, 199' AGL/1118' MSL.

GRAND HAVEN, MI

GRAND HAVEN MEMORIAL AIRPARK (3GM)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 5 12040 (FAA)

TAKEOFF MINIMUMS: **Rwy 27**, 300-1¼ or std. w/min. climb of 231' per NM to 900.

NOTE: **Rwy 9**, trees beginning 23' from DER, left and right of centerline, up to 96' AGL/705' MSL. Terrain beginning 47' from DER, 322' left of centerline, up to 594' MSL. Wire 22' from DER, 1064' left of centerline, 22' AGL/620' MSL. **Rwy 18**, tree 204' from DER, 553' right of centerline, 69' AGL/678' MSL. **Rwy 27**, building 7' from DER, 472' left of centerline, 18' AGL/619' MSL. Trees beginning 25' from DER, 604' right and left of centerline, up to 112' AGL/746' MSL. **Rwy 36**, stack 2732' from DER, 430' left of centerline, 128' AGL/735' MSL.

GRAND LEDGE, MI

ABRAMS MUNI (4D0)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 3 12096 (FAA)

TAKEOFF MINIMUMS: **Rwys 18, 36, NA**, - ATC.

Rwy 27, 300-1 or std. w/min. climb of 306' per NM to 1100.

NOTE: **Rwy 9**, trees beginning 75' from DER, left and right of centerline, up to 114' AGL/954' MSL. Terrain beginning 82' from DER, 242' right of centerline, up to 852' MSL. Pole 1433' from DER, 61' left of centerline, 45' AGL/877' MSL. Nav aids beginning 30' from DER, left and right of centerline, up to 2' AGL/841' MSL. **Rwy 27**, vehicle on road 59' from DER, 359' right of centerline, 15' AGL/846' MSL. Fence 70' from DER, 405' left of centerline, 4' AGL/836' MSL. Nav aid 587' from DER, 490' left of centerline, 15' AGL/852' MSL. Buildings beginning 740' from DER, 326' right of centerline, up to 34' AGL/878' MSL. Buildings beginning 771' from DER, 555' left of centerline, up to 21' AGL/859' MSL. Flagpole 819' from DER, 601' right of centerline, 25' AGL/869' MSL. Trees beginning 827' from DER, left and right of centerline, up to 88' AGL/932' MSL. Power poles beginning 868' from DER, left and right of centerline, up to 24' AGL/871' MSL. Tank 4595' from DER, 478' left of centerline, 169' AGL/1004' MSL. Vertical structure, 4597' from DER, 470' left of centerline, 171' AGL/1006' MSL. Elevator 4646' from DER, 555' left of centerline, 162' AGL/997' MSL.





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TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)



GRAND RAPIDS, MI

GERALD R FORD INTL (GRR)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 2 09183(FAA)

NOTE: **Rwy 8L**, vehicle on road 20' from DER, 156' left of centerline, 15' AGL/794' MSL. Trees beginning 1419' from DER, 740' left of centerline, up to 100' AGL/859' MSL. **Rwy 17**, trees beginning 1382' from DER, 134' left of centerline, up to 100' AGL/929' MSL. Trees beginning 1389' from DER, 819' right of centerline, up to 100' AGL/899' MSL. **Rwy 26R**, terrain beginning 102' from DER, 381' right of centerline, up to 808' MSL. **Rwy 35**, vehicle on road 742' from DER, 675' left of centerline, up to 15' AGL/804' MSL. Trees beginning 2002' from DER, 715' left of centerline, up to 100' AGL/869' MSL. Trees beginning 1339' from DER, 7' right of centerline, up to 100' AGL/879' MSL.

GRAYLING, MI

GRAYLING AAF (GOV)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 3 10154 (FAA)

NOTE: **Rwy 5**, tree 1192' from DER, 275' right of centerline, 56' AGL/1215' MSL. Tree 1684' from DER, 600' left of centerline, 56' AGL/1225' MSL. **Rwy 14**, tree 435' from DER, 402' right of centerline, 57' AGL/1216' MSL. Antenna 3937' from DER, 1179' right of centerline, 136' AGL/1279' MSL. **Rwy 23**, trees beginning 1438' from DER, 29' right of centerline, up to 100' AGL/1269' MSL. **Rwy 32**, trees beginning 1611' from DER, 50' left of centerline, up to 66' AGL/1216' MSL.

GREENVILLE, MI

GREENVILLE MUNI (6D6)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 2A 11153 (FAA)

TAKEOFF MINIMUMS: **Rwys 1,19**, NA, environmental.
NOTE: **Rwy 10**, trees and poles beginning 128' from DER, 25' left of centerline, up to 100' AGL/925' MSL. Trees and poles beginning 5' from DER, 5' right of centerline, up to 84' AGL/923' MSL. **Rwy 28**, trees and building beginning 34' from DER, 26' right of centerline, up to 87' AGL/942' MSL. Trees beginning 87' from DER, 6' left of centerline, up to 79' AGL/958' MSL.

HANCOCK, MI

HOUGHTON COUNTY MEMORIAL (CMX)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 3 11349 (FAA)

TAKEOFF MINIMUMS: **Rwy 25**, 400-2½ or std. w/min. climb of 205' per NM to 1600 or alternatively, with standard takeoff minimums and a normal 200' per NM climb gradient, takeoff must occur no later than 1300' prior to DER. **Rwy 31**, 300-1½ or std. w/min. climb of 245' per NM to 1400 or alternatively, with standard takeoff minimums and a normal 200' per NM climb gradient, takeoff must occur no later than 2200' prior to DER.

NOTE: **Rwy 7**, vehicles on roadway beginning 27' from DER, left and right of centerline, up to 15' AGL/1094' MSL. Trees beginning 445' from DER, 236' left of centerline, up to 59' AGL/1120' MSL. Trees beginning 1491' from DER, 240' right of centerline, up to 61' AGL/1122' MSL. **Rwy 13**, trees beginning 133' from DER, 513' left of centerline, up to 80' AGL/1139' MSL. **Rwy 25**, vehicles on roadway beginning 27' from DER, left and right of centerline, up to 15' AGL/1094' MSL. Trees beginning 386' from DER, 397' left of centerline, up to 84' AGL/1145' MSL. Trees beginning 1769' from DER, 405' right of centerline, up to 77' AGL/1178' MSL. **Rwy 31**, trees beginning 1625' from DER, 77' right of centerline, up to 100' AGL/1299' MSL. Trees beginning 1814' from DER, 496' left of centerline, up to 81' AGL/1202' MSL.

HARBOR SPRINGS, MI

HARBOR SPRINGS (MGN)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 2 08073 (FAA)

TAKEOFF MINIMUMS: **Rwy 28**, 300-1½ or std. w/ min. climb of 295' per NM to 2000.

DEPARTURE PROCEDURE: **Rwy 10**, Climb heading 101° to 1400 before proceeding on course. **Rwy 28**, Climb heading 281° to 2000 before turning right.

NOTE: **Rwy 10**, trees beginning abeam DER, 350' right of centerline, up to 100' AGL/788' MSL. Vehicle and road beginning 188' from DER, left to right of centerline, up to 15' AGL/736' MSL. Trees beginning 1671' from DER, 720' left of centerline, up to 100' AGL/821' MSL. **Rwy 28**, trees beginning abeam DER, 398' left of centerline, up to 100' AGL/723' MSL. Trees beginning abeam DER, 313' right of centerline, up to 100' AGL/936' MSL. Vehicle and road beginning abeam DER, left to right of centerline, up to 15' AGL/720' MSL.

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TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)



HART/SHELBY, MI

OCEANA COUNTY (C04)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

ORIG 15344 (FAA)

TAKEOFF MINIMUMS: **Rwy 15, 33**, NA-Environmental.
Rwy 9, 300-1° or std. w/min. climb of 265' per NM to 1200.

DEPARTURE PROCEDURE: **Rwy 27**, climb heading 268° to 1500 before turning right.

NOTE: **Rwy 9**, terrain beginning 74' from DER, 196' right of centerline, up to 908' MSL. Terrain beginning 54' from DER, 314' left of centerline, up to 904' MSL. Trees beginning 257' from DER, 41' right of centerline, up to 114' AGL/1056' MSL. Vehicle on road 787' from DER, 654' left of centerline, 15' AGL/926' MSL. Trees beginning 895' from DER, 10' left of centerline, up to 100' AGL/1017' MSL. Transmission line tower 1809' from DER, 400' left of centerline, 41' AGL/958' MSL.

Rwy 27, terrain beginning 10' from DER, 181' right of centerline, up to 970' MSL. Trees beginning 115' from DER, 455' left of centerline, up to 61' AGL/976' MSL. Trees beginning 468' from DER, 467' right of centerline, up to 56' AGL/971' MSL. Vehicles on road beginning 446' from DER, left and right of centerline, up to 15' AGL/939' MSL. Building 677' from DER, 595' left of centerline, 21' AGL/941' MSL. Irrigation equipment 1163' from DER, 657' right of centerline, 13' AGL/947' MSL. Terrain beginning 1876' from DER, 335' left of centerline, up to 974' MSL. Trees beginning 1992' from DER, 12' left of centerline, up to 93' AGL/1067' MSL. Trees beginning 2033' from DER, 9' right of centerline, up to 64' AGL/1048' MSL. Poles and transmission line towers beginning 2323' from DER, 480' right of centerline, up to 60' AGL/1034' MSL. Trees beginning 4343' from DER, 589' left of centerline, up to 84' AGL/1063' MSL.

HASTINGS, MI

HASTINGS (9D9)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 5 13066 (FAA)

TAKEOFF MINIMUMS: **Rwys 9, 18, 27, 36** NA-Environmental. **Rwy 12**, 300-1½° or std. w/min climb of 240' per NM to 1100.

NOTE: **Rwy 12**, ground, 11' from DER, 434' right of centerline, 798' MSL. Trees, beginning 29' from DER, left and right of centerline, up to 100' AGL/ 880' MSL. Vehicles on road beginning 114' from DER, 233' left of centerline, up to 15' AGL/ 812' MSL. Tower, 1.13 NM from DER, 2233' right of centerline, 159' AGL/ 1009' MSL. **Rwy 30**, trees beginning 19' from DER, left and right of centerline, up to 100' AGL/ 879' MSL. Antenna on building 22' from DER, 482' right of centerline, 14' AGL/ 814' MSL. Vehicles on road beginning 776' from DER, left and right of centerline, up to 15' AGL/824' MSL.

HILLSDALE, MI

HILLSDALE MUNI (JYM)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 1 13206 (FAA)

NOTE: **Rwy 10**, trees beginning 73' from DER 25' right of centerline, up to 110' AGL/1277' MSL. Tree 1188' from DER, 413' left of centerline, 82' AGL/1261' MSL. Vehicles on road beginning 1125' from DER, 722' right of centerline, up to 15' AGL/1214' MSL. **Rwy 28**, trees beginning 147' from DER, 38' right of centerline, up to 117' AGL/1216' MSL. Trees beginning 1052' from DER, 575' left of centerline, up to 116' AGL/1275' MSL.

HOLLAND, MI

WEST MICHIGAN RGNL (BIV)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 1 09183 (FAA)

NOTE: **Rwy 8**, vehicles on road beginning 48' from DER, 500' right of centerline, up to 15' AGL/694' MSL. Trees beginning 1828' from DER, 829' left of centerline, up to 72' AGL/741' MSL. **Rwy 26**, vehicles on road beginning 86' from DER, 517' left of centerline, up to 15' AGL/714' MSL, pole 805' from DER, 475' left of centerline, 35' AGL/734' MSL, trees 1056' from DER, 468' left of centerline, up to 41' AGL/740' MSL.

HOUGHTON LAKE, MI

ROSCOMMON COUNTY-BLODGETT

MEMORIAL (HTL)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 1 07298 (FAA)

TAKEOFF MINIMUMS: **Rwy 9**, 200-1¼° or std. w/min. climb of 237' per NM to 1400. **Rwys 18, 36**, NA-ATC. DEPARTURE PROCEDURE: **Rwy 27**, climb heading 274° to 2600 before turning south.

NOTE: **Rwy 9**, multiple trees beginning 2330' from DER, on centerline, up to 71' AGL/1216' MSL. Multiple trees beginning 5927' from DER 275' left of centerline, up to 100' AGL/1299' MSL. Terrain beginning 31' from DER, 215' right of centerline, up to 0' AGL/1165' MSL. Terrain beginning 43' from DER, 84' left of centerline, up to 0' AGL/1162' MSL. **Rwy 27**, multiple trees beginning 791' from DER, on centerline, up to 90' AGL/1239' MSL. Fence and road beginning 323' from DER, on centerline, up to 15' AGL/1164' MSL. Terrain beginning 100' from DER, 171' right of centerline, up to 0' AGL/1165' MSL. Terrain beginning 112' from DER, 128' left of centerline, up to 0' AGL/1162' MSL.

HOWELL, MI

LIVINGSTON COUNTY SPENCER J HARDY
(OZW)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 3 06215 (FAA)

NOTE: **Rwy 31**, multiple trees and light pole beginning 138' from DER, 334' right of centerline, up to 88' AGL/1030' MSL. Multiple trees beginning 914' from DER, 483' left of centerline, up to 83' AGL/1012' MSL. **Rwy 13**, tree 1776' from DER, 696' right of centerline, 70' AGL/1009' MSL.

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TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)





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TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)



IONIA, MI

IONIA COUNTY (Y70)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES

ORIG 83230 (FAA)

DEPARTURE PROCEDURE: **Rwys 9, 18, 27, 36**, climb
runway heading to 1400 before turning.

IRON MOUNTAIN-KINGSFORD, MI

FORD (IMT)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES

AMDT 5 09071 (FAA)

TAKEOFF MINIMUMS: **Rwy 13**, 300-1 or std. w/ min.
climb of 590' per NM to 1400. **Rwy 31**, 300-1¼ or std.
w/ min. climb of 260' per NM to 1400.

DEPARTURE PROCEDURE: **Rwy 1**, climb heading
010° to 1700 before turning right. **Rwy 13**, climb
heading 134° to 1900 before turning left.

NOTE: **Rwy 1**, trees and bushes beginning 526' from
DER, 292' right of centerline, up to 79' AGL/1259'
MSL. Antenna, trees and bushes beginning 378' from
DER, 192' left of centerline, up to 76' AGL/1276' MSL.
Rwy 13, tree 1276' from DER, 312' right of
centerline, 88' AGL/1188' MSL. Trees and poles
beginning 547' from DER, 100' left of centerline, up to
86' AGL/1306' MSL. **Rwy 19**, trees beginning 992'
from DER, 245' right of centerline, up to 56' AGL/1192'
MSL. Trees beginning 1229' from DER, 376' left of
centerline, up to 48' AGL/1183' MSL. **Rwy 31**, trees
1711' from DER, 113' right of centerline, 66' AGL/1186'
MSL. Bush 165' from DER, 161' right of centerline, 11'
AGL/1131' MSL. Trees beginning 66' from DER, 182'
left of centerline, up to 95' AGL/1315' MSL.

IRONWOOD, MI

GOGEBIC-IRON COUNTY (IWD)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES

AMDT 6 09127 (FAA)

DEPARTURE PROCEDURE: **Rwy 9**, climb heading
090° to 2300 before turning right. **Rwy 27**, climb
heading 270° to 1700 before turning left.

NOTE: **Rwy 9**, trees beginning 61' from DER, 544' left
of centerline, up to 31' AGL/1244' MSL. Tree 1853'
from DER, 972' left of centerline, 100' AGL/1346' MSL.
Rwy 27, vehicle on road 287' from DER, 2' right of
centerline, 15' AGL/1237' MSL. Tree 1946' from DER,
952' right of centerline, 69' AGL/1283' MSL. Tree 2817'
from DER, 588' left of centerline, 74' AGL/1304' MSL.

JACKSON, MI

JACKSON COUNTY-REYNOLDS FIELD
(JXN)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES

AMDT 5 09295 (FAA)

NOTE: **Rwy 6**, antenna 3131' from DER, 1331' left of
centerline, 75' AGL/1075' MSL. **Rwy 14**, tank 2617' from
DER, 373' left of centerline, 107' AGL/1107' MSL.

Antenna 3102' from DER, 597' left of centerline, 111'
AGL/1111' MSL. Trees beginning 1137' from DER, 8' left
of centerline, up to 84' AGL/1083' MSL. Trees and poles
beginning 518' from DER, 13' right of centerline, up to
114' AGL/1113' MSL. Road plus vehicle 541' from DER,
245' right of centerline, 15' AGL/1015' MSL.

Rwy 24, trees and poles beginning 367' from DER, 48'
left of centerline, up to 80' AGL/1079' MSL. Buildings
beginning 125' from DER, 372' left of centerline, 23'
AGL/1022' MSL. Fence beginning 98' from DER, 247'
right of centerline, 10' AGL/1002' MSL. Road plus vehicle
306' from DER, 3' right of centerline, 15' AGL/1007' MSL.
Trees beginning 1231' from DER, 232' right of centerline,
up to 62' AGL/1051' MSL. Localizer obstruction light 140'
from DER, on centerline, 10' AGL/999' MSL. **Rwy 32**,
trees and poles beginning 169' from DER, 69' left of
centerline, up to 104' AGL/1093' MSL. Fence beginning
475' from DER, 148' left of centerline, up to 10' AGL/985'
MSL. Trees beginning 94' from DER, 5' right of
centerline, up to 103' AGL/1092' MSL. Fence beginning
278' from DER, 367' right of centerline, up to 10'
AGL/999' MSL.

KALAMAZOO, MI

KALAMAZOO/BATTLE CREEK INTL (AZO)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES

AMDT 9 07242 (FAA)

NOTE: **Rwy 5**, light pole 906' from DER, 511' left of
centerline, 25' AGL/879' MSL. Multiple trees beginning
1433' from DER, 90' left of centerline, up to 65' AGL/914'
MSL. Multiple towers beginning 2399' from DER, 331'
right of centerline, up to 119' AGL/970' MSL. Multiple
trees beginning 156' from DER, 163' right of centerline,
up to 78' AGL/917' MSL. **Rwy 9**, multiple trees beginning
588' from DER, on centerline, up to 104' AGL/958' MSL.
Antenna 2187' from DER, 222' right of centerline, 69'
AGL/928' MSL. Tree 677' from DER, 214' right of
centerline, 45' AGL/899' MSL. **Rwy 17**, railroad 587'
from DER, 613' left of centerline, 17' AGL/885' MSL.
Tree 691' from DER, 583' right of centerline, 57'
AGL/894' MSL. **Rwy 23**, multiple trees beginning 937'
from DER, 50' left of centerline, up to 72' AGL/956' MSL.
Multiple poles and hangar beginning 22' from DER, 331'
right of centerline, up to 24' AGL/905' MSL. Multiple
trees beginning 943' from DER, 144' right of centerline,
up to 107' AGL/986' MSL. **Rwy 27**, road 543' from DER,
on centerline, 15' AGL/890' MSL. Multiple trees
beginning 414' from DER, 292' left of centerline, up to 23'
AGL/972' MSL. Multiple light poles and towers beginning
521' from DER, 18' right of centerline, up to 180'
AGL/1015' MSL. Multiple trees beginning 1012' from
DER, 23' right of centerline, up to 75' AGL/969' MSL.
Rwy 35, multiple trees beginning 2319' from DER,
163' left of centerline, up to 75' AGL/934' MSL. Multiple
trees beginning 1961' from DER, 753' right of centerline,
up to 77' AGL/836' MSL.

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TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

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LAKEVIEW, MI

LAKEVIEW-GRIFFITH FIELD (13C)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
ORIG 98281 (FAA)
TAKEOFF MINIMUMS: **Rwy 28**, 300-1 or std. with a min. climb of 400' per NM to 1200.
NOTE: **Rwy 10**, 1018' tree 50' from DER, 490' right of centerline.

LAMBERTVILLE, MI

TOLEDO SUBURBAN (DUH)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 1 80360 (FAA)
TAKEOFF MINIMUMS: **Rwys 9, 27**, 300-1.

LANSING, MI

CAPITAL REGION INTL (LAN)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 14 14317 (FAA)
DEPARTURE PROCEDURE: **Rwys 10L, 10R**, climb runway heading to 2000 before turning south.
Rwys 6, 24, 28L, 28R, climb runway heading to 1500 before turning southeast.
NOTE: **Rwy 6**, trees beginning 1441' from DER, 321' left of centerline, up to 102' AGL/942' MSL. Trees beginning 2536' from DER, 7' right of centerline, up to 107' AGL/947' MSL. Trees beginning 2711' from DER, 126' left of centerline, up to 107' AGL/956' MSL. **Rwy 10L**, tree 350' from DER, 394' left of centerline, 86' AGL/916' MSL. Fence 525' from DER, 148' right of centerline, 17' AGL/864' MSL. Trees beginning 883' from DER, 198' left of centerline, up to 90' AGL/920' MSL. Trees beginning 1698' from DER, 368' right of centerline, up to 104' AGL/934' MSL. **Rwy 10R**, pole 111' from DER, 290' right of centerline, 41' AGL/871' MSL. MALSR 155' from DER, 4' right of centerline, 18' AGL/866' MSL. Pole 575' from DER, 290' right of centerline, 35' AGL/865' MSL. Trees beginning 700' from DER, 551' right of centerline, up to 84' AGL/924' MSL. Trees beginning 1077' from DER, 599' left of centerline, up to 98' AGL/928' MSL. Trees beginning 1831' from DER, left and right of centerline, up to 93' AGL/956' MSL. **Rwy 24**, trees beginning 549' from DER, 114' left of centerline, up to 68' AGL/918' MSL. Poles beginning 830' from DER, 358' left of centerline, up to 41' AGL/893' MSL. Trees beginning 1107' from DER, 81' right of centerline, up to 89' AGL/919' MSL. Trees beginning 1271' from DER, 386' left of centerline, up to 104' AGL/937' MSL. **Rwy 28L**, trees beginning 1690' from DER, 862' right of centerline, up to 83' AGL/923' MSL. Trees beginning 1782' from DER, 786' left of centerline, up to 100' AGL/959' MSL. **Rwy 28R**, rod on ASR 987' from DER, 516' right of centerline, 104' AGL/954' MSL. Trees beginning 1853' from DER, 902' right of centerline, up to 100' AGL/939' MSL. Tree 2209' from DER, 221' left of centerline, 79' AGL/919' MSL.

LAPEER, MI

DUPONT-LAPEER (D95)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 3 86156 (FAA)
TAKEOFF MINIMUMS: **Rwys 9, 27**, 300-1.

LINDEN, MI

PRICES (9G2)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 5 13346 (FAA)
NOTE: **Rwy 9**, trees beginning 446' from DER, left and right of centerline, up to 100' AGL/1009' MSL. **Rwy 27**, trees beginning 18' from DER, 103' left of centerline, up to 100' AGL/1019' MSL. Trees beginning 30' from DER, 204' right of centerline, up to 100' AGL/1009' MSL.

LUDINGTON, MI

MASON COUNTY (LDM)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 6 92233 (FAA)
TAKEOFF MINIMUMS: **Rwys 1, 19, 26**, 300-1.

MACKINAC ISLAND, MI

MACKINAC ISLAND (MCD)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 2 12236 (FAA)
TAKEOFF MINIMUMS: **Rwy 8**, 300-1 or std. w/min. climb of 608' per NM to 1000.
NOTE: **Rwy 8**, trees and building beginning 69' from DER, 16' left of centerline, up to 100' AGL/841' MSL. Trees beginning 34' from DER, 34' right of centerline, up to 100' AGL/896' MSL. Fence 49' from DER, 295' right of centerline, 8' AGL/741' MSL. Vehicle on road 525' from DER, 610' right of centerline, 15' AGL/774' MSL. **Rwy 26**, trees beginning 8' from DER, 193' left of centerline, up to 100' AGL/829' MSL. Vehicle on road 36' from DER, 334' left of centerline, 15' AGL/744' MSL. Trees beginning at DER, 196' right of centerline, up to 100' AGL/829' MSL. Fence 53' from DER, 202' right of centerline, 8' AGL/727' MSL. Building 129' from DER, 498' right of centerline, 28' AGL/747' MSL. Vehicle on road 354' from DER, 20' right of centerline, 15' AGL/734' MSL.

MANISTEE, MI

MANISTEE CO-BLACKER (MBL)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 7 14149 (FAA)
TAKEOFF MINIMUMS: **Rwy 1**, 300-1 or std. w/min. climb of 380' per NM to 900.
DEPARTURE PROCEDURE: **Rwy 1**, climb heading 007° to 1400 before turning right.
NOTE: **Rwy 1**, vehicle on road 484' from DER, 158' right of centerline, 15' AGL/632' MSL. Building 3301' from DER, 1095' right of centerline, 33' AGL/727' MSL. Trees beginning 1076' from DER, 127' left of centerline, up to 110' AGL/808' MSL. **Rwy 10**, vehicle on road, 101' from DER, 393' left of centerline, 15' AGL/636' MSL. Trees beginning 3326' from DER, 1146' left of centerline, 85' AGL/712' MSL. **Rwy 19**, trees beginning 79' from DER, 50' left of centerline, up to 100' AGL/678' MSL. Trees beginning 1005' from DER, 365' right of centerline, up to 85' AGL/675' MSL. Trees 5393' from DER, 1185' left of centerline, up to 100' AGL/758' MSL. **Rwy 28**, trees beginning 21' from DER, 58' left of centerline, up to 93' AGL/687' MSL. Vehicle on road 146' from DER, 356' right of centerline, up to 15' AGL/630' MSL. Trees beginning 2195' from DER, 57' right of centerline, up to 93' AGL/678' MSL.

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TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)



TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)



MANISTIQUE, MI

SCHOOLCRAFT COUNTY (ISQ)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
ORIG 11349 (FAA)

NOTE: **Rwy 1**, trees beginning 511' from DER, 54' left of centerline, up to 30' AGL/779' MSL. Trees beginning 753' from DER, 372' right of centerline, up to 100' AGL/779' MSL. Vehicle on road beginning 360' from DER, 587' right of centerline, up to 15' AGL/694' MSL. Power line beginning 446' from DER, 611' right of centerline, up to 30' AGL/709' MSL. Transmission lines beginning 4758' from DER, left and right of centerline, up to 114' AGL/803' MSL. **Rwy 10**, trees beginning 92' from DER, 263' right of centerline, up to 100' AGL/769' MSL. Trees beginning 30' from DER, 165' left of centerline, up to 100' AGL/769' MSL. Trees beginning 1131' from DER, left and right of centerline, up to 100' AGL/769' MSL. **Rwy 19**, trees beginning 50' from DER, left and right of centerline, up to 100' AGL/779' MSL. Vehicle on road beginning abeam DER, 506' left of centerline, up to 15' AGL/694' MSL. Aircraft tail on taxiway abeam DER, 127' right of centerline, up to 19' AGL/698' MSL. Hangar 380' from DER, 540' right of centerline, 20' AGL/699' MSL. Buildings beginning 474' from DER, 220' left of centerline, up to 20' AGL/699' MSL. Vehicle on road 658' from DER, left and right of centerline, up to 15' AGL/694' MSL. Power lines 707' from DER, left and right of centerline, up to 30' AGL/709' MSL. Billboards and buildings beginning 744' from DER, left and right of centerline, up to 20' AGL/699' MSL. Drive-in theater beginning 857' from DER, 510' right of centerline, up to 100' AGL/779' MSL. **Rwy 28**, trees beginning 41' from DER, 376' right of centerline, up to 100' AGL/784' MSL. Poles beginning 1174' from DER, 488' left of centerline, up to 82' AGL/761' MSL. Trees beginning 1254' from DER, 159' left of centerline, up to 100' AGL/779' MSL. Transmission lines beginning 4321' from DER, left and right of centerline, up to 112' AGL/796' MSL.

MARLETTE, MI

MARLETTE (77G)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
ORIG 11125 (FAA)

NOTE: **Rwy 1**, trees beginning 21' from DER, right and left of centerline, up to 100' AGL/950' MSL. Rising terrain beginning 112' from DER, 432' left of centerline, up to 907' MSL. **Rwy 9**, trees beginning 10' from DER, 149' left of centerline, up to 100' AGL/979' MSL. Vehicle on road 882' from DER, right and left of centerline, up to 17' AGL/906' MSL. Building 1035' from DER, 588' right of centerline, 30' AGL/919' MSL. **Rwy 19**, trees beginning abeam DER, 149' left of centerline, up to 100' AGL/979' MSL. Vehicles on road 882' from DER, 730' right of centerline, up to 17' AGL/906' MSL. Building 1035' from DER, 588' right of centerline, 30' AGL/919' MSL. **Rwy 27**, vehicles on road 559' from DER, right and left of centerline. Trees beginning 660' from DER, right and left of centerline, up to 100' AGL/984' MSL.

MARQUETTE, MI

SAWYER INTL (SAW)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
ORIG 10098 (FAA)

NOTE: **Rwy 19**, trees beginning 2582' from DER, left and right of centerline, up to 100' AGL/1269' MSL.

MARSHALL, MI

BROOKS FIELD (RMY)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
ORIG 13122 (FAA)

NOTE: **Rwy 10**, trees beginning 31' from DER, 37' right of centerline, up to 100' AGL/1012' MSL. Trees beginning 168' from DER, 15' left of centerline, up to 100' AGL/1035' MSL. Fence beginning 211' from DER, 457' right of centerline, up to 13' AGL/953' MSL. **Rwy 28**, vehicles on roadway 535' from DER, left and right of centerline, up to 15' AGL/954' MSL. Trees beginning 1222' from DER, 572' right of centerline, up to 100' AGL/1039' MSL. Trees beginning 1665' from DER, 408' left of centerline, up to 100' AGL/1039' MSL.

MASON, MI

MASON JEWETT FIELD (TEW)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 2A 10154 (FAA)

NOTE: **Rwy 10**, trees, pole, and vehicle on road beginning 109' from DER, 57' right of centerline, up to 100' AGL/1023' MSL. Poles and vehicles on road 276' from DER, 245' left of centerline, up to 35' AGL/944' MSL.

MENOMINEE, MI

MENOMINEE-MARINETTE TWIN COUNTY (MNM)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 3 09239 (FAA)

NOTE: **Rwy 3**, trees and bush beginning 196' from DER, 340' left of centerline, up to 100' AGL/719' MSL. Multiple trees beginning 1568' from DER, 702' right of centerline, up to 100' AGL/759' MSL. **Rwy 14**, multiple trees, poles, and building beginning 451' from DER, 85' left of centerline, up to 135' AGL/735' MSL. Multiple trees and pole beginning 651' from DER, 171' right of centerline, up to 100' AGL/704' MSL. **Rwy 21**, multiple trees beginning 932' from DER, 469' left of centerline, up to 77' AGL/677' MSL. Multiple trees beginning 1808' from DER, 701' right of centerline, up to 65' AGL/685' MSL. **Rwy 32**, multiple trees beginning 64' from DER, 71' left of centerline, up to 100' AGL/739' MSL. Multiple trees beginning 875' from DER, 15' right of centerline, up to 100' AGL/759' MSL.

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TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)



MIDLAND, MI

JACK BARSTOW (IKW)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

ORIG 09183 (FAA)

NOTE: **Rwy 6**, trees beginning 56' from DER, 493' right of centerline, up to 25' AGL/655' MSL. Trees beginning 920' from DER, 47' left of centerline, up to 20' AGL/660' MSL. Trees beginning 1144' from DER, from right to left of centerline, up to 100' AGL/754' MSL. Pole 1495' from DER, 331' right of centerline, 37' AGL/672' MSL. **Rwy 18**, trees beginning 339' from DER, 279' left of centerline, up to 100' AGL/729' MSL. Trees beginning 358' from DER, 306' right of centerline, up to 100' AGL/724' MSL. **Rwy 24**, vehicles on road beginning 225' from DER, from right to left of centerline, up to 15' AGL/634' MSL. Trees beginning 510' from DER, 103' right of centerline, up to 100' AGL/710' MSL. Trees beginning 787' from DER, 152' left of centerline, up to 100' AGL/709' MSL. **Rwy 36**, trees beginning 105' from DER, 200' right of centerline, up to 100' AGL/744' MSL. Trees beginning 147' from DER, 242' left of centerline, up to 100' AGL/729' MSL.

MONROE, MI

CUSTER (TTF)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 6 08213

NOTE: **Rwy 21**, Trees and light poles beginning 81' from DER, 9' right of centerline, up to 122' AGL/736' MSL. Trees and light poles beginning 243' from DER, 218' left of centerline, up to 98' AGL/707' MSL. Road and vehicle beginning 1954' from DER, on centerline, 15' AGL/626' MSL.

MOUNT PLEASANT, MI

MOUNT PLEASANT MUNI (MOP)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 5 09239 (FAA)

TAKEOFF MINIMUMS: **Rwys 5, 23**, NA-Environmental.

NOTE: **Rwy 9**, trees beginning 420' from DER, 512' right of centerline, up to 86' AGL/845' MSL. Trees beginning 420' from DER, 266' left of centerline, up to 23' AGL/836' MSL. **Rwy 27**, trees beginning 1115' from DER, 39' right of centerline, up to 99' AGL/858' MSL. Trees beginning 1025' from DER, 3' left of centerline, up to 108' AGL/867' MSL.

MUSKEGON, MI

MUSKEGON COUNTY (MKG)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 10 09015 (FAA)

NOTE: **Rwy 6**, tree 1700' from DER, 600' right of centerline, 25' AGL/672' MSL. Multiple trees beginning 1980' from DER, 300' left of centerline, up to 75' AGL/709' MSL. **Rwy 14**, pole 1040' from DER, 700' left of centerline, 25' AGL/655' MSL. Multiple poles beginning 1500' from DER, 880' right of centerline, up to 50' AGL/677' MSL. Tree 1900' from DER, 940' left of centerline, 79' AGL/709' MSL. **Rwy 24**, bush 124' from DER, 480' left of centerline, 19' AGL/630' MSL. Tree 500' from DER, 300' right of centerline, 42' AGL/649' MSL. Tree 1210' from DER, 450' left of centerline, 42' AGL/653' MSL. Antenna 1220' from DER, 500' right of centerline, 43' AGL/654' MSL. Multiple trees beginning 2200' from DER, 50' left of centerline, up to 86' AGL/697' MSL. **Rwy 32**, tree 1040' from DER, 740' right of centerline, 65' AGL/659' MSL. Tree 1190' from DER, 500' left of centerline, 65' AGL/663' MSL. Tree 1270' from DER, 800' left of centerline, 89' AGL/690' MSL.

NEW HUDSON, MI

OAKLAND SOUTHWEST (Y47)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 2 88350 (FAA)

TAKEOFF MINIMUMS: **Rwys 7, 25**, 300-1.

NEWBERRY, MI

LUCE COUNTY (ERY)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

ORIG 10210 (FAA)

TAKEOFF MINIMUMS: **Rwys 4, 22**, NA-Environmental. NOTE: **Rwy 11**, trees beginning 15' from DER, 112' right of centerline, up to 79' AGL/919' MSL. Trees beginning 1207' from DER, 10' left of centerline, up to 119' AGL, 969' MSL. **Rwy 29**, ground 1' from DER, 221' right of centerline, 0' AGL/872' MSL. Tree 1' from DER, 431' right of centerline, 12' AGL/872' MSL. Trees and antenna on building beginning 88' from DER, 13' left of centerline, up to 84' AGL/954' MSL. Trees, vehicle on road, and antenna on building beginning 561' from DER, 28' right of centerline, up to 89' AGL/959' MSL.

NILES, MI

JERRY TYLER MEMORIAL (3TR)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 6 11125 (FAA)

TAKEOFF MINIMUMS: **Rwy 22**, NA-obstacles.

NOTE: **Rwy 4**, vehicles on road beginning 192' from DER, crossing left to right of centerline, up to 15' AGL/754' MSL. Trees beginning 360' from DER, 276' right of centerline, up to 100' AGL/849' MSL. Building 410' from DER, 225' left of centerline, 30' AGL/759' MSL. **Rwy 15**, trees beginning 470' from DER, 461' left of centerline, up to 100' AGL/869' MSL. Trees beginning 568' from DER, 187' right of centerline, up to 100' AGL/869' MSL. **Rwy 33**, vehicles on road beginning 198' from DER, crossing right to left of centerline, up to 15' AGL/764' MSL. Building 705' from DER, 604' left of centerline, 30' AGL/779' MSL.

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TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)





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TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)



ONTONAGON, MI

ONTONAGON COUNTY-SCHUSTER
FIELD (OGM)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 2 12152 (FAA)

TAKEOFF MINIMUMS: **Rwy 17**, 300-1¾ or std. w/ a climb gradient of 390' per NM to 1000.

NOTE: **Rwy 35**, hanger 70' from DER, 467' right of centerline up to 50' AGL/689' MSL. Vehicle on road 225' from DER, 367' right of centerline up to 17' AGL/664' MSL. Trees beginning abeam DER, 537' right of centerline, up to 100' AGL/756' MSL. Trees 80' from DER, 179' left of centerline, up to 100' AGL/756' MSL. Sailing boat 3128' from DER, on centerline, up to 100' AGL/719' MSL. **Rwy 17**, trees beginning 439' from DER, 423' left of centerline up to 100' AGL/ 901' MSL. Trees beginning 354' from DER, 243' right of centerline, up to 100' AGL /851' MSL.

OSCODA, MI

OSCODA-WURTHSMITH (OSC)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
ORIG 08157 (FAA)

NOTE: **Rwy 6**, Trees beginning 3096' from DER, 967' left of centerline up to 100' AGL/719' MSL. **Rwy 24**, Trees beginning 2192' from DER, 578' right of centerline up to 100' AGL/739' MSL. Trees beginning 1415' from DER, 559' left of centerline, up to 100' AGL/739' MSL.

OWOSSO, MI

OWOSSO COMMUNITY (RNP)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 4 08213 (FAA)

TAKEOFF MINIMUMS: **Rwys 6, 18, 24, 36**, NA - Environmental.

NOTE: **Rwy 11**, bush 187' from DER, 158' right of centerline, 3' AGL/742' MSL. Trees beginning 1136' from DER, 630' left of centerline, up to 75' AGL/814' MSL. Trees and pole beginning 1111' from DER, 596' right of centerline, up to 90' AGL/829' MSL. Power line with towers beginning 2029' from DER, left and right of centerline, 90' AGL/829' MSL. **Rwy 29**, bush 212' from DER, 436' right of centerline, 11' AGL/741' MSL. Vent, trees, and a building beginning 266' from DER, 46' left of centerline, up to 100' AGL/836' MSL. Trees and a pole beginning 1184' from DER, 244' right of centerline, up to 60' AGL/815' MSL.

PELLSTON, MI

PELLSTON RGNL AIRPORT OF EMMET
COUNTY (PLN)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 4 09183 (FAA)

TAKEOFF MINIMUMS: **Rwy 23**, std. w/ a min. climb of 260' per NM to 1800, or 1000-2½ for climb in visual conditions. **Rwy 32**, std. w/ a min. climb of 290' per NM to 1100, or 1000-2½ for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwys 23, 32**, for climb in visual conditions: cross Pellston Rgnl airport of Emmet County at or above 1600.

NOTE: **Rwy 5**, vehicle on road 411' from DER, 588' left of centerline, 15' AGL/738' MSL. Trees beginning 1070' from DER, 12' left of centerline, up to 100' AGL/838' MSL. Railroad 810' from DER, 672' right of centerline, 23' AGL/744' MSL. Trees beginning 1001' from DER, 288' right of centerline, up to 100' AGL/821' MSL. **Rwy 14**, trees beginning 1290' from DER, 814' left of centerline, up to 100' AGL/805' MSL. **Rwy 23**, vehicle on road 14' from DER, 463' left of centerline, 15' AGL/720' MSL. Trees beginning 476' from DER, 53' left of centerline, up to 100' AGL/805' MSL. Trees beginning 953' from DER, 240' right of centerline, up to 100' AGL/820' MSL. Tree 2.97 NM from DER, 2771' right of centerline, 100' AGL/1297' MSL. **Rwy 32**, bush 107' from DER, 309' right of centerline, 4' AGL/722' MSL. Vehicle on road 1213' from DER, 809' right of centerline, 15' AGL/752' MSL. Terrain 2127' from DER, 715' right of centerline, 775' MSL. Trees beginning 4336' from DER, 315' right of centerline, up to 100' AGL/872' MSL. Trees beginning 1932' from DER, 20' left of centerline, up to 100' AGL/996' MSL.

PLYMOUTH, MI

CANTON-PLYMOUTH-METTETAL (1D2)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
TAKEOFF MINIMUMS: **Rwys 18, 36**, 300-1.

PONTIAC, MI

OAKLAND COUNTY INTL (PTK)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 6 10322 (FAA)

TAKEOFF MINIMUMS: **Rwys 18, 36**, NA-Environmental.
NOTE: **Rwy 9R**, antenna on hanger 870' from DER, 732' right of centerline, 36' AGL/1006' MSL. Trees beginning 1136' from DER, 480' right of centerline, up to 100' AGL/1079' MSL. Trees beginning 1383' from DER, 646' left of centerline, up to 41' AGL/1011' MSL. **Rwy 9L**, hangars beginning 203' from DER, 510' left of centerline, 30' AGL/1000' MSL. Trees beginning 3347' from DER, 1252' left of centerline, up to 100' AGL/1089' MSL. **Rwy 27R**, vehicle on road 416' from DER, 24' right of centerline, 15' AGL/992' MSL. Trees beginning 451' from DER, 2' right of centerline, up to 62' AGL/1041' MSL. Trees beginning 1234' from DER, 19' left of centerline, up to 36' AGL/1015' MSL. **Rwy 27L**, vehicle on road 401' from DER, 539' left of centerline, 15' AGL/991' MSL. Vehicle on road 417' from DER, 574' right of centerline, 15' AGL/992' MSL. Trees beginning 452' from DER, 552' right of centerline, 23' AGL/1002' MSL. Trees beginning 565' from DER, 521' left of centerline, up to 76' AGL/1046' MSL.

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TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)





TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)



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PORT HURON, MI

ST. CLAIR COUNTY INTL (PHN)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 6 11237 (FAA)

NOTE: **Rwy 4**, trees beginning 1196' from DER, 140' right of centerline, up to 115' AGL/764' MSL. Trees and bush beginning 13' from DER, 80' left of centerline, up to 115' AGL/779' MSL. **Rwy 10**, trees and building beginning 150' from DER, 2' right of centerline, up to 115' AGL/769' MSL. Trees beginning 329' from DER, 161' left of centerline, up to 115' AGL/769' MSL. **Rwy 22**, trees beginning 2376' from DER, 171' right of centerline, up to 103' AGL/738' MSL. Trees beginning 2138' from DER, 612' left of centerline, up to 101' AGL/737' MSL. **Rwy 28**, trees beginning 192' from DER, 361' right of centerline, up to 115' AGL/759' MSL. Trees beginning 667' from DER, 112' left of centerline, up to 114' AGL/749' MSL.

RAY, MI

RAY COMMUNITY (57D)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
ORIG 15008 (FAA)

TAKEOFF MINIMUMS: **Rwys 18, 36**, NA - ATC.
NOTE: **Rwy 9**, road 60' from DER, left to right of centerline, 15' AGL/645' MSL. Tree 119' from DER, 181' right of centerline, 25' AGL/655' MSL. Trees beginning 353' from DER, 204' left of centerline, up to 100' AGL/729' MSL. Trees beginning 2067' from DER, 137' left of centerline, up to 100' AGL/729' MSL. **Rwy 27**, trees beginning 158' from DER, 232' right of centerline, up to 100' AGL/729' MSL. Trees 184' from DER, 131' left of centerline, up to 100' AGL/729' MSL. Trees 920' from DER, 233' right of centerline, up to 100' AGL/729' MSL.

ROGERS CITY, MI

PRESQUE ISLE COUNTY (PZQ)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 2 12124 (FAA)

NOTE: **Rwy 9**, trees beginning 348' from DER, 378' left of centerline, up to 100' AGL/759' MSL. Pole 730' from DER, 620' right of centerline, 43' AGL/723' MSL. Trees beginning 899' from DER, 708' right of centerline, up to 100' AGL/789' MSL. Tower 1021' from DER, 68' right of centerline, 44' AGL/716' MSL. **Rwy 27**, trees beginning 940' from DER, 289' left of centerline, up to 100' AGL/799' MSL. Trees beginning 977' from DER, 11' right of centerline, up to 56' AGL/739' MSL.

ROMEO, MI

ROMEO STATE (D98)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 5 13122 (FAA)

NOTE: **Rwy 18**, pole 239' from DER, 395' right of centerline, 30' AGL/760' MSL. Trees along and vehicles on road 342' from DER, left and right of centerline, up to 15' AGL/741' MSL. Line of trees beginning 401' from DER, 498' right of centerline, up to 65' AGL/770' MSL. Trees beginning 420' from DER, 228' left of centerline, up to 75' AGL/793' MSL. Pole 500' from DER, 337' left of centerline, 45' AGL/759' MSL. **Rwy 36**, pole on building 118' from DER, 444' left of centerline, 37' AGL/772' MSL. Buildings beginning 228' from DER, 322' right of centerline, up to 25' AGL/754' MSL. Building 303' from DER, 454' left of centerline, 23' AGL/758' MSL. Vehicles on road beginning 410' from DER, 159' left of centerline, up to 15' AGL/760' MSL. Trees beginning 639' from DER, 654' left of centerline, up to 70' AGL/809' MSL. Catenary beginning 774' from DER, left and right of centerline, up to 43' AGL/782' MSL. Poles 887' from DER, 170' right of centerline, up to 35' AGL/770' MSL. Trees beginning 2747' from DER, left and right of centerline, up to 100' AGL/841' MSL.

SAGINAW, MI

MBS INTL (MBS)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
ORIG 86240 (FAA)
DEPARTURE PROCEDURE: **Rwys 5, 23**, climb runway heading to 1100 before turning.

SAGINAW COUNTY H W BROWNE (HYX)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 8 12208 (FAA)

DEPARTURE PROCEDURE: **Rwy 5**, climb on heading 049° to 1900 before turning left. **Rwy 9**, climb on heading 094° to 1600 before turning left. **Rwy 23**, climb on heading 229° to 1300 before proceeding on course. **Rwy 27**, climb on heading 275° to 1300 before proceeding on course.

NOTE: **Rwy 5**, Vehicles on road beginning 14' from DER, left and right of centerline, up to 15' AGL/614' MSL. Power lines 463' from DER, 161' right of centerline, 35' AGL/634' MSL. **Rwy 9**, Power lines beginning 1036' from DER, 631' left of centerline, up to 33' AGL/632' MSL. **Rwy 23**, Vehicles on road beginning 25' from DER, left and right of centerline, up to 15' AGL/619' MSL. Trees beginning 83' from DER, 343' left of centerline, up to 50' AGL/654' MSL. Power lines beginning 136' from DER, 275' left of centerline, up to 35' AGL/639' MSL.

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TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)



**TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND
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ST IGNACE

MACKINAC COUNTY (83D)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES

ORIG 11125 (FAA)

TAKEOFF MINIMUMS: **Rwy 25**, 300-1 or std. w/min.
climb of 430' per NM to 900.

NOTE: **Rwy 7**, vehicles on road beginning 10' from DER, 322' right of centerline, up to 15' AGL/627' MSL. Trees beginning 70' from DER, 363' right of centerline, up to 85' AGL/686' MSL. Poles beginning 117' from DER, 381' left of centerline, up to 54' AGL/629' MSL. Vehicles on road beginning 310' from DER, left and right of centerline, up to 15' AGL/631' MSL. Poles beginning 602' from DER, 328' right of centerline, up to 54' AGL/644' MSL. Ships beginning 3099' from DER, left and right of centerline, up to 155' AGL/735' MSL. **Rwy 25**, trees beginning 20' from DER, left and right of centerline, up to 85' AGL/809' MSL. Vehicles on road 366' from DER, left and right of centerline, up to 17' AGL/663' MSL. Poles beginning 919' from DER, left and right of centerline, up to 62' AGL/682' MSL.

SAULT STE MARIE, MI

CHIPPEWA COUNTY INTL (CIU)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES

ORIG-A 15064 (FAA)

NOTE: **Rwy 10**, poles beginning 156' from DER, 518' left and 439' right of centerline up to 45' AGL/839' MSL. Buildings beginning 379' from DER, 532' right of centerline, up to 55' AGL/848' MSL. Building 416' from DER, 503' left of centerline, 31' AGL/823' MSL. Trees beginning 348' from DER, 456' right of centerline, up to 100' AGL/899' MSL. Tank 1475' from DER, 75' right of centerline, 49' AGL/842' MSL. **Rwy 16**, trees beginning 3645' from DER, extending from 1018' right of centerline to 1221' left of centerline, up to 100' AGL/899' MSL. **Rwy 28**, vertical structure, 11' from DER, 4' right of centerline, 2' AGL/794' MSL. Natural high point, 33' from DER, 355' left of centerline, 0' AGL/793' MSL. Vehicle on road, 412' from DER, 510' left of centerline, up to 15' AGL/804' MSL. Trees beginning 520' from DER, extending from 581' left of centerline to 827' right of centerline, up to 100' AGL/879' MSL.

SAULT STE MARIE MUNI/SANDERSON
FIELD (ANJ)TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES

ORIG 11237 (FAA)

NOTE: **Rwy 14**, trees, poles, and road beginning 25' from DER, 56' left of centerline, up to 54' AGL/763' MSL. Trees and poles beginning 5' from DER, 49' right of centerline, up to 65' AGL/774' MSL. **Rwy 32**, tree 200' from DER, 330' left of centerline, 24' AGL/723' MSL. Trees beginning 91' from DER, 300' right of centerline, up to 24' AGL/723' MSL.

SELFRIDGE ANGB (KMTC),

MT. CLEMENS, MI

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES

AMDT 3A, 14149

TAKE-OFF MINIMUMS: **Rwy 1**, Standard. **Rwy 19**, Standard with a minimum climb of 234 ft/NM to 1500.

TAKE-OFF OBSTACLES: **Rwy 19**, Numerous trees beginning 1872' from DER, 269' left of centerline, up to 100' AGL/693' MSL. Numerous trees beginning 3007' from DER, 57' right of centerline, up to 100' AGL/704' MSL. **Rwy 1**, Numerous trees beginning 2290' from DER, 800' left of centerline, up to 100' AGL/689' MSL. Numerous trees beginning 2308' from DER, 539' right of centerline, up to 100' AGL/683' MSL.

SOUTH HAVEN, MI

SOUTH HAVEN AREA RGNL (LWA)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES

AMDT 4 13178 (FAA)

NOTE: **Rwy 5**, trees beginning 1440' from DER, 94' left of centerline, up to 93' AGL/773' MSL. Poles beginning 1272' from DER, 122' right of centerline, up to 43' AGL/713' MSL. Trees beginning 1812' from DER, 137' right of centerline, up to 81' AGL/771' MSL. **Rwy 23**, pole 520' from DER, 582' left of centerline, 53' AGL/703' MSL. Building 185' from DER, 334' left of centerline, 20' AGL/670' MSL. Trees beginning 436' from DER, 428' left of centerline, up to 81' AGL/731' MSL. Trees beginning 1172' from DER, 133' right of centerline, up to 89' AGL/739' MSL.

SPARTA, MI

PAUL C MILLER-SPARTA (8D4)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES

AMDT 2 10126 (FAA)

NOTE: **Rwy 7**, multiple trees beginning 564' from DER, 105' right of centerline, up to 97' AGL/827' MSL. Tree 782' from DER, 379' left of centerline, 47' AGL/784' MSL. **Rwy 25**, multiple trees beginning 507' from DER, 47' right of centerline, up to 81' AGL/841' MSL. Tree 117' from DER, 218' left of centerline, 47' AGL/817' MSL. Tree 656' from DER, 464' left of centerline, 67' AGL/822' MSL.

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**TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND
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STURGIS, MI

KIRSCH MUNI (IRS)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 3A 14177 (FAA)

TAKEOFF MINIMUMS: **Rwy 6**, 300-2 or std. w/ min. climb of 243' per NM to 1200.

DEPARTURE PROCEDURE: **Rwy 18**, climb heading 184° to 1400 before turning left.

NOTE: **Rwy 6**, trees beginning 1476' from DER, 137' left of centerline, up to 60' AGL/1102' MSL. Trees beginning 1945' from DER, 155' right of centerline, up to 60' AGL/984' MSL. Obstruction light on pole 1120' from DER, 401' right of centerline, 50' AGL/957' MSL. Obstruction light on pole 1193' from DER, 236' right of centerline, 50' AGL/957' MSL. Vehicle on road 504' from DER, 289' right of centerline, up to 15' AGL/953' MSL. **Rwy 18**, trees beginning 1687' from DER, 149' right of centerline, up to 60' AGL/971' MSL. Pole 1495' from DER, 842' left of centerline, 70' AGL/979' MSL. **Rwy 24**, vehicles on road beginning 81' from DER, 74' right of centerline, up to 15' AGL/926' MSL. Trees beginning 123' from DER, 136' right of centerline, up to 13' AGL/926' MSL. Trees beginning 798' from DER, 251' right of centerline, up to 78' AGL/991' MSL. Trees beginning 1981' from DER, 112' left of centerline, up to 71' AGL/984' MSL. Transmission line tower with power lines, 915' from DER, 291' right of centerline, 29' AGL/938' MSL. **Rwy 36**, trees beginning 99' from DER, left and right of centerline, up to 60' AGL/1014' MSL.

THREE RIVERS, MI

THREE RIVERS MUNI DR. HAINES (HAI)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
ORIG 11349 (FAA)

NOTE: **Rwy 5**, vehicles on road beginning 1' from DER, 221' left of centerline, up to 15' AGL/839' MSL. Trees beginning 1' from DER, left and right of centerline, up to 100' AGL/929' MSL. Airplane on tarmac 2' from DER, 394' right of centerline, 40' AGL/864' MSL. Building 1094' from DER, 937' right of centerline, 25' AGL/849' MSL. **Rwy 9**, vehicles on road 484' from DER, 624' left of centerline, up to 15' AGL/839' MSL. Trees beginning 104' from DER, left and right of centerline, up to 100' AGL/934' MSL. Buildings beginning 1258' from DER, left and right of centerline, up to 25' AGL/859' MSL. **Rwy 23**, rising terrain beginning 25' from DER, 497' left of centerline, 826' MSL. Vehicles on roads beginning 258' from DER, right and left of centerline, up to 15' AGL/844' MSL. Trees beginning 128' from DER, 125' right of centerline, up to 100' AGL/924' MSL. Buildings beginning 256' from DER, 144' right of centerline, up to 25' AGL/849' MSL. **Rwy 27**, vehicles on road 369' from DER, 595' right of centerline, up to 15' AGL/834' MSL. Building 892' from DER, 678' right of centerline, 25' AGL/844' MSL. Trees beginning 544' from DER, left and right of centerline, up to 100' AGL/924' MSL.

TRAVERSE CITY, MI

CHERRY CAPITAL (TVC)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 11 13346 (FAA)

TAKEOFF MINIMUMS: **Rwy 10**, standard w/min. climb of 288' per NM to 1400 or 1400-2½ for climb in visual conditions. **Rwy 18**, std. w/min. climb of 216' per NM to 1400, or alternatively, with standard takeoff minimums and a normal 200' per NM climb gradient, takeoff must occur no later than 1800' prior to DER, or 1400-2½ for climb in visual conditions. **Rwy 28**, std. min. climb of 342' per NM to 2100, or 1400-2½ for climb in visual conditions. **Rwy 36**, 400- 2½ or std. w/min. climb of 202' per NM to 1100, or alternatively, with standard takeoff minimums and a normal 200' per NM climb gradient, takeoff must occur no later than 1200' prior to DER.

DEPARTURE PROCEDURE: **Rwy 10**, for climb in visual conditions, cross Cherry Capital airport at or above 1900 before proceeding on course. When executing VCOA, notify ATC prior to departure. **Rwy 18**, climb heading 185° to 1400 before turning, or for climb in visual conditions, cross Cherry Capital airport at or above 1900 before proceeding on course. When executing VCOA, notify ATC prior to departure. **Rwy 28**, for climb in visual conditions, cross Cherry Capital airport at or above 1900 before proceeding on course. When executing VCOA, notify ATC prior to departure. **Rwy 36**, climb heading 005° to 1400 before turning left.

NOTE: **Rwy 10**, trees beginning 1233' from DER, 741' left and 868' right of centerline, up to 100' AGL/696' MSL. Trees beginning 1.4 NM from DER, 1822' right of centerline, up to 100' AGL/932' MSL. **Rwy 18**, fence 229' from DER, 556' left of centerline, 13' AGL/636' MSL. Trees beginning 622' from DER, across centerline, up to 100' AGL/1009' MSL. Poles beginning 857' from DER, 414' right of centerline, 24' AGL/667' MSL. Pole 967' from DER, 654' left of centerline, 23' AGL/655' MSL. Transmission line tower 1.9 NM from DER, 3319' left of centerline, 121' AGL/920' MSL. **Rwy 28**, trees beginning 1272' from DER, 9' left and 16' right of centerline, up to 100' AGL/707' MSL. Poles beginning 1274' from DER, 726' left of centerline, up to 25' AGL/665' MSL. Poles beginning 1078' from DER, 620' right of centerline, up to 27' AGL/657' MSL. Transmission lines beginning 1275' from DER, 744' left and 632' right of centerline, up to 25' AGL/665' MSL. **Rwy 36**, poles beginning 734' from DER, 256' left of centerline, up to 72' AGL/687' MSL. Trees beginning 757' from DER, 4' left and right of centerline, up to 100' AGL/938' MSL. Poles beginning 868' from DER, 299' right of centerline, up to 41' AGL/655' MSL.

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TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)



TROY, MI

OAKLAND/TROY (VLL)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 4A 14037 (FAA)

TAKEOFF MINIMUMS: **Rwy 27**, std. w/min. climb of 476' per NM to 1500.

DEPARTURE PROCEDURE: **Rwy 9**, climb heading 096° to 1400 before turning right. **Rwy 27**, climb heading 276° to 1500 before turning left.

NOTE: **Rwy 9**, building 78' from DER, 370' left of centerline, 30' AGL/729' MSL. Buildings and air con on building beginning 314' from DER, 64' right of centerline, up to 47' AGL/745' MSL. Trees beginning 1495' from DER, left and right of centerline, up to 100' AGL/799' MSL. **Rwy 27**, trees beginning 21' from DER, 8' right of centerline, up to 103' AGL//843' MSL. Buildings beginning 1422' from DER, 19' right of centerline, up to 59' AGL/799' MSL. Vehicles on road beginning 3' from DER, 41' left of centerline, up to 17' AGL/746' MSL. Trees beginning 176' from DER, 20' left of centerline, up to 105' AGL/845' MSL. Buildings beginning 72' from DER, 468' left of centerline, up to 158' AGL/784' MSL. Poles beginning 426' from DER, 11' right of centerline, up to 111' AGL/851' MSL. Poles beginning 146' from DER, 19' left of centerline, up to 91' AGL/831' MSL. Railroad 1682' from DER, 428' left of centerline, up to 30' AGL/770' MSL. Power line with catenary balls, 1888' from DER, left and right of centerline, up to 80' AGL/820' MSL. Tower 2456' from DER, 867' right of centerline, up to 132' AGL/872' MSL. Buildings beginning 1.08 NM from DER, 3' left of centerline, up to 178' AGL/940' MSL.

WEST BRANCH, MI

WEST BRANCH COMMUNITY (Y31)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 3 11069 (FAA)

TAKEOFF MINIMUMS: **Rwy 27**, std. w/min. climb of 313' per NM to 1600 or 1000-2½ for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 27**, for climb in visual conditions cross West Branch Community Airport at or above 1700 before proceeding on course.

NOTE: **Rwy 27**, trees beginning 42' from DER, 7' right of centerline, up to 100' AGL/ 984' MSL. Trees beginning 538' from DER, 194' left of centerline, up to 100' AGL/ 1094' MSL. **Rwy 9**, trees beginning 24' from DER, 181' left of centerline, up to 100' AGL/959' MSL. Trees beginning 30' from DER, 208' right of centerline, up to 100' AGL/ 959' MSL.

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