

RNAV - STANDARD INSTRUMENT APPROACH PROCEDURE TITLE 14 CFR PART 97.33	Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.
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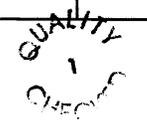
TERMINAL ROUTES				MISSED APPROACH	
FROM	TO	COURSE AND DISTANCE	ALTITUDE		
WOMOP (IF/IAF)	UHOZA (FB)	253.93 / 7.27	2500	LP: RW27 LNAV: RW27	
UHOZA (FAF)	KIYRE/2.70 NM TO RW27 (FB)	277.74 / 2.95		CLIMB TO 3000 DIRECT YOYUG AND ON TRACK 218.43 TO ADENO AND HOLD.	
KIYRE/2.70 NM TO RW27	RW27 (MAP) (FO)	277.69 / 2.70			
RW27 (MAP)	1060 MSL	277.69			
1060 MSL	YOYUG (FB)				
YOYUG	ADENO (FO)	218.43 / 12.95	3000	ADDITIONAL FLIGHT DATA: HOLD SW, RT, 037.76 INBOUND. CHART FAS OBST: 1167 TREE 451232N/0845645W 1397 AAO 451241N/0845051W. 1364 AAO 451255N/0845117W. CHART CHARLEVOIX AWOS-3 WAAS CHANNEL # 50326 REFERENCE PATH ID: W27A UHOZA TO RW27: 3.00/40 LTP HAE: 166 M	

1. PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
2. HOLD E WOMOP, RT, 253.93 INBOUND, 3200 FT. IN LIEU OF PT (IAF)
3. FAC: 277.74 FAF: UHOZA DIST FAF TO MAP: 5.65 THLD: 5.65
4. MIN. ALT: WOMOP 3200, UHOZA 2500, KIYRE/2.70 NM TO RW27 1540
5. DIST TO THLD FROM OM: MM: IM: 150 HAT: 100 HAT: GS ANT:
6. MIN GS INCPT: GS ALT AT: OM: MM: IM:
7. GS ANGLE: TCH: 34:1 IS NOT CLEAR
8. MSA FROM: RW27 3500

MAG VAR: 5W EPOCH YEAR: 1985

MINIMUMS															
TAKEOFF:	SEE FAA FORM 8260-15A FOR THIS AIRPORT						ALTERNATE: N A			X					
CATEGORY =====>	A			B			C			D			E		
	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA
LP MDA	1460	1	801	1460	1 1/4	801		NA			NA				
LNAV MDA	1480	1	821	1480	1 1/4	821		NA			NA				
CIRCLING	1480	1 1/4	820	1500	1 1/4	840		NA			NA				

NOTES:
 CHART NOTE: USE CHARLEVOIX ALTIMETER SETTING; WHEN NOT RECEIVED, USE HARBOR SPRINGS ALTIMETER SETTING.
 CHART NOTE: WHEN VGSI INOP, PROCEDURE NA AT NIGHT.
 CHART NOTE: DME/DME RNP-0.3 NA.
 (SEE FORM 8260-10)



CITY AND STATE	ELEVATION: 660 THRE: 659	FACILITY IDENTIFIER:	PROCEDURE NO./AMDT NO./EFFECTIVE DATE:	SUP:
BOYNE CITY, MI	AIRPORT NAME:	RNAV	RNAV (GPS) RWY 27, ORIG	NONE
	BOYNE CITY MUNI			DATED

ALL AFFECTED PROCEDURES REVIEWED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE <p style="text-align: center;">CONCURRENT</p>
COORDINATED WITH: ATA AAT ALPA APA AOPA NBAA OTHER (specify) <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <u>ZMP, AIRPORT MANAGER</u>		
FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	FIFO	DATE:
JOHN R. ROSARIO	AJV-353	06/21/2011
APPROVED BY		
NAME:	FIFO	DATE:
LARRY H STROUT	AJV-353	
CHANGES:		
REASONS:		
EFFECTIVE CONCURRENT WITH: AIRSPACE DOCKET 11-AGL-16		
<div style="text-align: right; margin-top: 20px;">  </div>		
THIS FORM WAS PDF EDITED TERMINAL ROUTES: ADDED (FAF), REMOVED 1540, REMOVED DUPLICATE RWY 27 LINE 7: REMOVED 3.00 AND 40		

US DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
RNAV - STANDARD
INSTRUMENT APPROACH PROCEDURE - TITLE 14 CFR PART 97.33

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NOTES, (CONT.):

CHART NOTE: VISIBILITY REDUCTION BY HELICOPTERS NA.
 CHART PLANVIEW NOTE: NOPT FOR ARRIVAL AT WOMOP ON V233 SOUTHBOUND.
 CHART PROFILE NOTE: VGSI AND DESCENT ANGLES NOT COINCIDENT.



CITY AND STATE BOYNE CITY, MI	ELEVATION: 660 THRE: 659	FACILITY IDENTIFIER: RNAV	PROCEDURE NO./AMDT NO./EFFECTIVE DATE: RNAV (GPS) RWY 27, ORIG	SUP:
	AIRPORT NAME: BOYNE CITY MUNI			AMDT: NONE
				DATED:

ALL AFFECTED PROCEDURES REVIEWED? <input type="checkbox"/> YES <input type="checkbox"/> NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE				
COORDINATED WITH:						
<input type="checkbox"/> ATA	<input type="checkbox"/> AAT	<input type="checkbox"/> ALPA	<input type="checkbox"/> APA	<input type="checkbox"/> AOPA	<input type="checkbox"/> NBAA	<input type="checkbox"/> OTHER (specify) _____
FLIGHT CHECKED BY						
NAME:					FIFO	DATE:
DEVELOPED BY						
NAME:					FIFO	DATE:
APPROVED BY						
NAME:					FIFO	DATE:
CHANGES:						
REASONS:						



**RNAV STANDARD INSTRUMENT APPROACH PROCEDURE
FLIGHT STANDARDS SERVICE - FAR PART 97.33**

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FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	N98
RUNWAY	RW27
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W27A
LTP/FTP LATITUDE	451230.8165N
LTP/FTP LONGITUDE	0845855.6735W
LTP/FTP ELLIPSOIDAL HEIGHT	+01660
FPAP LATITUDE	451234.9200N
FPAP LONGITUDE	0850101.5700W
THRESHOLD CROSSING HEIGHT (TCH)	00040.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1528
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	0.0

CRC REMAINDER 8F20681C

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K5
LTP ORTHOMETRIC HEIGHT	+02010
FPAP ORTHOMETRIC HEIGHT	+02010



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	AIRPORT NAME: BOYNE CITY MUNI			AMDT: NONE
				DATED:

ALL AFFECTED PROCEDURES REVIEWED? <input type="checkbox"/> YES <input type="checkbox"/> NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE				
COORDINATED WITH:						
<input type="checkbox"/> ATA	<input type="checkbox"/> AAT	<input type="checkbox"/> ALPA	<input type="checkbox"/> APA	<input type="checkbox"/> AOPA	<input type="checkbox"/> NBAA	<input type="checkbox"/> OTHER (specify) _____
FLIGHT CHECKED BY						
NAME:					FIFO	DATE:
DEVELOPED BY						
NAME:					FIFO	DATE:
APPROVED BY						
NAME:					FIFO	DATE:
CHANGES:						
REASONS:						



ALL AFFECTED PROCEDURES REVIEWED? <input type="checkbox"/> YES <input type="checkbox"/> NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE							
COORDINATED WITH: <table style="width: 100%; border: none;"> <tr> <td style="text-align: center; padding: 2px;">ATA <input type="checkbox"/></td> <td style="text-align: center; padding: 2px;">AAT <input type="checkbox"/></td> <td style="text-align: center; padding: 2px;">ALPA <input type="checkbox"/></td> <td style="text-align: center; padding: 2px;">APA <input type="checkbox"/></td> <td style="text-align: center; padding: 2px;">AOPA <input type="checkbox"/></td> <td style="text-align: center; padding: 2px;">NBAA <input type="checkbox"/></td> <td style="text-align: center; padding: 2px;">OTHER (specify) <input type="checkbox"/> _____</td> </tr> </table>			ATA <input type="checkbox"/>	AAT <input type="checkbox"/>	ALPA <input type="checkbox"/>	APA <input type="checkbox"/>	AOPA <input type="checkbox"/>	NBAA <input type="checkbox"/>	OTHER (specify) <input type="checkbox"/> _____
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FLIGHT CHECKED BY									
NAME:	FIFO	DATE:							
DEVELOPED BY									
NAME:	FIFO	DATE:							
APPROVED BY									
NAME:	FIFO	DATE:							
CHANGES:									
REASONS:									

ALL AFFECTED PROCEDURES REVIEWED? <input type="checkbox"/> YES <input type="checkbox"/> NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
COORDINATED WITH: ATA AAT ALPA APA AOPA NBAA OTHER (specify) _____ <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
FLIGHT CHECKED BY		
NAME: _____	FIFO	DATE: _____
DEVELOPED BY		
NAME: _____	FIFO	DATE: _____
APPROVED BY		
NAME: _____	FIFO	DATE: _____
CHANGES:		
REASONS:		

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

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FLIGHT STANDARDS SERVICE - FAR PART 97.33**

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ARINC FLIGHT INSPECTION SUMMARY - VERSION 424-18 - RNAV (GPS)

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG (TRUE)	DISTANCE	ALTITUDE
	WOMOP	WOMOP	010	IAF	HF	R	FO		253.9 (248.9T)	004.0	03200
		WOMOP	010	FACF	IF						03200
		UHOZA	020	FAF	TF		FB	0.5	253.9 (248.9T)	007.3	02500
		KIYRE	021	SDF	TF		FB	0.3	277.7 (272.7T)	003.0	0154001559
		RW27	030	MAP	TF		FO	0.3	277.7 (272.7T)	002.7	00699

MISSED APPROACH	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG (TRUE)	DISTANCE	ALTITUDE
		040		CA				277.7 (272.7T)		01060
	YOVUG	050		DF		FB				
	ADENO	060		TF		FO	1.0	218.4 (213.4T)		03000
	ADENO	070		HM	R	FO		037.8 (032.8T)	004.0	03000

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	ADENO	N450150.32	W0851313.53	N4501.839	W08513.226
	KIYRE	N451223.27	W0845506.78	N4512.388	W08455.113
	UHOZA	N451214.86	W0845056.34	N4512.248	W08450.939
	WOMOP	N451452.03	W0844120.79	N4514.867	W08441.347
	YOVUG	N451239.06	W0850310.01	N4512.651	W08503.167
	RW27	N451230.82	W0845855.67	N4512.514	W08458.928

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW27	00659	40



CITY AND STATE BOYNE CITY, MI	ELEVATION: 660	THRE: 659	FACILITY IDENTIFIER: RNAV	PROCEDURE NO./AMDT NO./EFFECTIVE DATE: RNAV (GPS) RWY 27, ORIG	SUP:
	AIRPORT NAME: BOYNE CITY MUNI				AMDT: NONE
					DATED:

ALL AFFECTED PROCEDURES REVIEWED? <input type="checkbox"/> YES <input type="checkbox"/> NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
COORDINATED WITH: ATA AAT ALPA APA AOPA NBAA OTHER (specify) _____ <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		
FLIGHT CHECKED BY		
NAME: _____	FIFO _____	DATE: _____
DEVELOPED BY		
NAME: _____	FIFO _____	DATE: _____
APPROVED BY		
NAME: _____	FIFO _____	DATE: _____
CHANGES:		
REASONS:		

STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

PART - A OBSTRUCTION DATA

1. APP SEGMENT	FROM	TO	OBSTRUCTION	COORDINATES	ELEV. MSL	ROC	ALT. ADJUSTMENTS	MIN. ALT.				
INTERMEDIATE	WOMOP	UHOZA	1. AAO	451228.00N/0844636.00W	1545 (2C)	500	AT455	2500				
			2. TERRAIN	451228.00N/0844636.00W	1345 (1300)		AS1000	2300				
FINAL: LP	UHOZA	KIYRE/2.70 NM TO RW27	3. AAO	451238.00N/0845403.00W	1200 (2C)	250	RA35 DG55	1540				
FINAL: LP STEPDOWN	KIYRE/2.70 NM TO RW27	RW27	4. TREE (KN98T2393)	451231.95N/0845645.05W	1167 (1A)	250	RA35	1460				
FINAL: LNAV	UHOZA	KIYRE/2.70 NM TO RW27	5. AAO	451143.00N/0845157.00W	1249 (2C)	250	RA35	1540				
FINAL: LNAV STEPDOWN	KIYRE/2.70 NM TO RW27	RW27	4. TREE (KN98T2393)	451231.95N/0845645.05W	1167 (1A)	250	RA35 XP20	1480				
2. HOLD-IN-LIEU-OF-PT	WOMOP	P-5	1. AAO	451228.00N/0844636.00W	1545 (2C)	1000	AT655	3200				
			2. TERRAIN	451228.00N/0844636.00W	1345 (1300)		AS1500	2800				
3. MISSED APPROACH	MAP:	RW27	ADENO			ASC		3000				
	ELEV:	1325/1345		6. TOWER (26-001068)	451049.00N/0850550.20W	1676 (2C)	1000	2700				
				7. TERRAIN	450951.00N/0850515.00W	1132 (1100)		AS1500	2600			
4. CIRCLING AREA	DISTANCE	HT. ABV. ARPT.										
CATEGORY A	1.3 NM	REQUIRED	ACTUAL	350	820	8. TREE (KN98T2063)	451248.52N/0845709.89W	1127 (1A)	300	RA35	1480	
CATEGORY B	1.5 NM			450	840	9. TREE (KN98T2309)	451240.32N/0845651.68W	1149 (1A)	300		RA35	1500
CATEGORY C	1.7 NM			450								
CATEGORY D	2.3 NM			550								
CATEGORY E	4.5 NM			550								
5. MINIMUM SAFE ALTITUDES				PRIMARY NAVAID: RW27								
SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A	SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A			
360-360	TOWER (26-000479)	193/ 27.9	2470 (4D)	3500								
CITY AND STATE		ELEVATION: 660		FACILITY		PROCEDURE AND AMENDMENT NO:		REGION				
BOYNE CITY, MI		AIRPORT NAME: BOYNE CITY MUNI		RNAV		RNAV (GPS) RWY 27, ORIG		REG CHECKED				

PART B - SUPPLEMENTAL DATA

1. COMMUNICATIONS WITH:		2. WEATHER SERVICE		3. ALTIMETER SETTING	
ZMP ARTCC		NWS	OTHER:		SOURCE:KCVX / KMGN
		FAA	AWOS-3		DISTANCE: 13.40 / 13.40
		A/C			HOURS REMOTE OPERATION: 24 / BACKUP
SATISFACTORY ON:					
X	VHF	X	UHF	X	H F
LOCATION: KCVX			ADJUSTMENT: 35 / 35		
4. MONITOR STATUS	PRIMARY NAVAID:				
	MONITOR POINT:				
	HRS OPTN:	CAT 1			
		CAT 3			
5. APPROACH & RUNWAY LIGHTING	ALS				
	(S) SALS				
	MALS				
	HIRL				
	X	MIRL 27 (PCL), 09 (PCL)			
	X	REIL 09			
		TDZ			
	C/LINE				
X	OTHER (SPECIFY) PAPI-2L 27, 09 (PCL)				
6. RUNWAY MARKINGS	BASIC BSC-F 27, 09				
	ALL WEATHER				
	INSTRUMENT				
7. RUNWAY VISUAL RANGE	APPROACH				
	MIDFIELD				
	ROLL OUT				
8. GLIDE PATH	GP ANGLE:			ELEV RWY THRESHOLD:	
	DISTANCE FROM RWY:			ELEV GP ANTENNA:	
	THRESHOLD CROSSING HEIGHT:				
9. FINAL APPROACH COURSE AIMING	X	RUNWAY THRESHOLD		FT. FROM THRESHOLD	
	X	ON CENTERLINE		FT. FROM CENTERLINE	
10. WAIVERS: NONE					

PART D - PREPARED BY: JOHN R. ROSARIO		DATE: 06/21/2011
TITLE: AERONAUTICAL INFORMATION SPECIALIST		OFFICE: AJV-353

PART C - REMARKS:

VDP NOT ESTABLISHED - FULL TIME REMOTE ALTIMETER.

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

SEE ATTACHED AIRSPACE LETTER.

LPV AND LNAV/VNAV NOT DEVELOPED DUE TO NUMEROUS PENETRATIONS REQUIRING WAIVER ACTION

KN98, KCVX, AND KMGN PRESSURE PATTERNS SAME
KN98 660, KMGN 686, KCVX 669
KMGN RA=34.46
KCVX RA = 32.08
KCVX AND KMGN ARE SAME DISTANCE FROM KN98. THE GREATER ADJUSTMENT (35 FEET) WAS APPLIED FOR BOTH LOCATIONS

DTED NOT USED IN FINAL, CIRCLING, AND MISSED APPROACH DUE TO REQUIRED ACCURACY ADJUSTMENT. AAO AND TREE OBSTACLES WERE DERIVED FROM 1:24/25 TOPO CHART, BY THE NEXT HIGHER METRIC CONTOUR, MINUS ONE FOOT METHOD

TERPS PARAGRAPH 289 APPLIED TO 1397 AAO
451241N/0845051W AND 1364 AAO 451255N/0845117W

TERPS, VOLUME 1, "VISUAL PORTION OF FINAL" PENETRATIONS

20:1 1027 TREE (KN98T1816) 451234.87N/0845731.18W (76.65)
1141 TREE (KN98T2240) 451240.99N/0845656.77W (69.10)
1147 TREE (KN98T2283) 451240.87N/0845653.98W (65.10)
985 TREE (KN98T1640) 451236.84N/0845739.43W (64.60)
THE TOP FOUR PENETRATIONS ARE LISTED HERE. THE ENTIRE LIST OF PENETRATORS IS VERY EXTENSIVE (SEE MR#1) AND HAS BEEN SUBMITTED AS SUPPORTING DATA. IT WILL BE FILED ALONG WITH PROCEDURE FORMS AND CORRESPONDENCE

34:1 1167 TREE (KN98T2393) 451231.95N/0845645.05W (239.09)
1149 TREE (KN98T2309) 451240.32N/0845651.68W (236.20)
1161 TREE (KN98T2384) 451233.48N/0845645.97W (235.24)
1163 TREE (KN98T2403) 451230.99N/0845644.36W (233.51)
THE TOP FOUR PENETRATIONS ARE LISTED HERE. THE ENTIRE LIST OF PENETRATORS IS VERY EXTENSIVE (SEE MR#2) AND HAS BEEN SUBMITTED AS SUPPORTING DATA. IT WILL BE FILED ALONG WITH PROCEDURE FORMS AND CORRESPONDENCE

NIGHT EFFECT OF RWY 9 AND 27 CIRCLING VISUAL AREAS PENETRATIONS (VAAR) MITIGATED BY VGSI NOTE, IAW 8260.3B CHANGE 20 PARAGRAPH 3.3.2.D(2)(D)

KCVX AND KMGN AWOS ON SERVICE-A

TREE HEIGHT 100'

VGSI DATA: 4.00/43

XP = TO ALLOW PUBLICATION OF LP MINIMA

THIS FORM WAS PDF EDITED

BLOCK 3: MAP: REMOVED DOUBLE PRINTALITY

BLOCK 5: COMPLETED OBSTACLE NUMBER

PART B, BLOCK 2: REPLACED NULL WITH 3'

BLOCK 3: ADDED 35

BLOCK 8: REMOVED DATA



RADIO FIX AND HOLDING DATA RECORD

NAME: ADENO **STATE:** MI **COUNTRY:** US

LATITUDE/LONGITUDE: 450150.32N/0851313.53W **TYPE:** WP, INT, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	FAC FEET	MRA	MAA
1	TRAVERSE CITY	TVC	VORTAC	H	034.76	032.76	25.92	25.92		3000	17500
2	GAYLORD	GLR	VOR/DME	L	279.02	273.02		21.99		3000	17500

HOLDING: **HOLDING TYPE OF ACTION:** MODIFY

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	DME	HOLDING ALTITUDES MIN	MAX	TEMPLATES MIN	MAX
1	SW		WP	217.76	037.76	R		4	3000	6000	5	6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
UPN	200	TOWER (26-001068)	451049.00N/0850550.20W	1676	2C
1	200	AAO	445652.00N/0850918.00W	1381	2C

HOLDING RESTRICTIONS:
UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 3000

REMARKS:

GAYLORD (FAC 2) AND TRAVERSE CITY (FAC 1) USED TO ESTABLISH FIX COORDINATES
PRECIPITOUS TERRAIN EVALUATION COMPLETED

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE (US)
EN ROUTE	V193-320	1, 2				
IAP	RNAV (GPS) RWY 27		1	KN98	BOYNE CITY	MI (US)
IAP	RNAV (GPS) RWY 9			KN98	BOYNE CITY	MI (US)
IAP	RNAV (GPS) RWY 17			KBFA	BOYNE FALLS	MI (US)
IAP	RNAV (GPS) RWY 35			KBFA	BOYNE FALLS	MI (US)
IAP	RNAV (GPS) RWY 9			KGLR	GAYLORD	MI (US)

REQUIRED CHARTING: IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 5 **DATE OF REVISION:** 02/09/2012

REASON FOR REVISION:

FAC 1 AND 2 UPDATED, ADDED DIST FROM FACS 1 & 2 - CRITERIA
REFORMATTED UNPLANNED HOLDING DATA, UPDATED CONTROLLING OBSTACLE, UNPLANNED HOLDING ALTITUDE REVISED FROM 3500 TO 3000 - NEW OBSTACLE DATA
ADDED PAT 1 HOLDING DATA, OBSTACLE, ALTITUDES - FPT REQUEST
FORMATTED FIX USE AND ADDED KN98 SIAPS
ADDED PRECIPITOUS TERRAIN REMARK - CRITERIA
ADDED WP TO FIX TYPE - WP HOLDING FOR RNAV SIAPS

DEVELOPED BY: **DATE:** 06/16/2011 **OFFICE:** AJV-353 **NAME:** JOHN ROSARIO

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION: NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY:
OTHER:



RADIO FIX AND HOLDING DATA RECORD

NAME: KIYRE

STATE: MI

COUNTRY: US

LATITUDE/LONGITUDE: 451223.27N/0845506.78W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

FIX USE:

USE TYPE
IAP

USE TITLE

RNAV (GPS) RWY 27

FAC

PAT

AIRPORT IDENT

KN98

CITY

BOYNE CITY

STATE

MI (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 02/09/2012

DEVELOPED BY:

DATE: 06/06/2011

OFFICE: AJV-353

NAME: JOHN ROSARIO

APPROVED BY:

DATE:

OFFICE: AJV-353

NAME: LARRY STROUT

SIGNATURE:

DISTRIBUTION:

NFDC

FPO: CEN

ARTCC: ZMP

ATC FACILITY:

OTHER:



RADIO FIX AND HOLDING DATA RECORD

NAME: UHOZA

STATE: MI

COUNTRY: US

LATITUDE/LONGITUDE: 451214.86N/0845056.34W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

FIX USE:

USE TYPE
IAP

USE TITLE
RNAV (GPS) RWY 27

FAC PAT

AIRPORT IDENT
KN98

CITY
BOYNE CITY

STATE
MI (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 02/09/2012

DEVELOPED BY:

DATE: 06/15/2011

OFFICE: AJV-353

NAME: JOHN ROSARIO

APPROVED BY:

DATE:

OFFICE: AJV-353

NAME: LARRY STROUT

SIGNATURE:

DISTRIBUTION:

NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY:
OTHER:



RADIO FIX AND HOLDING DATA RECORD

NAME: WOMOP STATE: MI COUNTRY: US

LATITUDE/LONGITUDE: 451452.03N/0844120.79W TYPE: WP, DME

AIRSPACE DOCKET: FIX TYPE OF ACTION: ESTABLISH

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM NM	FAC FEET	MRA	MAA
1	PELLSTON	PLN	VORTAC	L	188.64	182.64	23.00	23.00		3200	17500

HOLDING: HOLDING TYPE OF ACTION: ESTABLISH

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	DME	HOLDING ALTITUDES MIN	MAX	TEMPLATES MIN	MAX
1	E		WP	073.93	253.93	R		4	3200	6000	5	6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	AAO	451228.00N/0844636.00W	1545	2C

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERN

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V233	1				(US)
IAP	RNAV (GPS) RWY 27		1	KN98	BOYNE CITY	MI (US)
IAP	RNAV (GPS) RWY 9		1	KN98	BOYNE CITY	MI (US)

REQUIRED CHARTING: IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 02/09/2012

DEVELOPED BY: DATE: 06/15/2011 OFFICE: AJV-353 NAME: JOHN ROSARIO

APPROVED BY: DATE: OFFICE: AJV-353 NAME: LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY:
OTHER:



RADIO FIX AND HOLDING DATA RECORD

NAME: YOVUG

STATE: MI

COUNTRY: US

LATITUDE/LONGITUDE: 451239.06N/0850310.01W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

FIX USE:

USE TYPE

USE TITLE

FAC

PAT

AIRPORT IDENT

CITY

STATE

IAP

RNAV (GPS) RWY 27

KN98

BOYNE CITY

MI (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 02/09/2012

DEVELOPED BY:

DATE: 06/15/2011

OFFICE: AJV-353

NAME: JOHN ROSARIO

APPROVED BY:

DATE:

OFFICE: AJV-353

NAME: LARRY STROUT

SIGNATURE:

DISTRIBUTION:

NFDC

FPO: CEN

ARTCC: ZMP

ATC FACILITY:

OTHER:



TERMINAL AIRSPACE DATA REQUIREMENTS

CITY: **BOYNE CITY**

STATE: **MI**

AIRPORT NAME: **BOYNE CITY MUNI**

ID: **KN98**

PROCEDURE: **RNAV (GPS) RWY 27**

AMDT: **ORIG**

DOCKET # : **11-AGL-16**

(96-AXX-X/Required/Not Required)

ALL DIST TO 1/100 NM; ELEV TO NEAREST FT; COORD TO 1/100 SEC; DEG TO 1/100 DG.

1. Distance from **THLD** to 1000' point **4.65**
(Enter THLD, FAF, ARP, FACILITY, as appropriate)
2. Width of **FINAL** segment at 1000' point **1.20**
(Enter appropriate segment , final, intermediate, etc.)
3. True Course of **FINAL** segment containing 1000' point **272.74**
4. High Terrain in **FINAL** segment containing 1000' point **1200**
5. Distance from **FAF** to 1500' point **6.47**
(If 1500' point in PT maneuvering area or holding pattern note in remarks)
6. Width of **INTERMEDIATE** segment at 1500' point **4.00**
7. True Course of **INTERMEDIATE** segment containing 1500' point **248.93**
8. High Terrain in **INTERMEDIATE** segment containing 1500' point **1300**
9. Threshold Coordinates (if straight-in) ... **451230.82N / 0845855.67W**
10. ARP Coordinates **451231.73N / 0845923.59W**
11. Runway Approach End and distance furthest from ARP.....RWY **27**
Distance **0.33** NM
12. FAF Coordinates **451214.86N / 0845056.34W**
(Click to Select)

REMARKS: Approach/Drawing attached. NOTE: FINAL AND INTERMEDIATE COURSES ARE DIFFERENT.