Flight Procedure Tracking Form	Action: FLIGHT CHECK	Task Type: SID	Date Open: 10/02/2012	Task #: 2012060424528802008	Request #: 20120604245288
Procedure: SID JHART (RNAV) TWO ST. LOUIS MO KSTL		Airport ID: KSTL	Airport: LAMBERT-ST LOUIS INTL		Reimbursable #:
City: ST LOUIS	ST: MO	GPS #:		Estimated Chart Date: 06/27/2013	FICO #:
Fac ID:	Fac. Type: Proc D	Specialist: ROSS BARTO			

Procedure Review

	Rec'd	Rel'd	Full Name	Comments
Lead:	10/02/2012	02/20/2013	JEREL PAWLEY	DME / DME
QA:	02/20/2013	03/05/2013	CASIMIR TABAKA	
Liaison:	03/05/2013		Spurlin	DME/DME ESV REQUEST INCLUDED

Procedure Comments: ENROUTE

Remark Type: INFORMATION

RKS 8 of 13

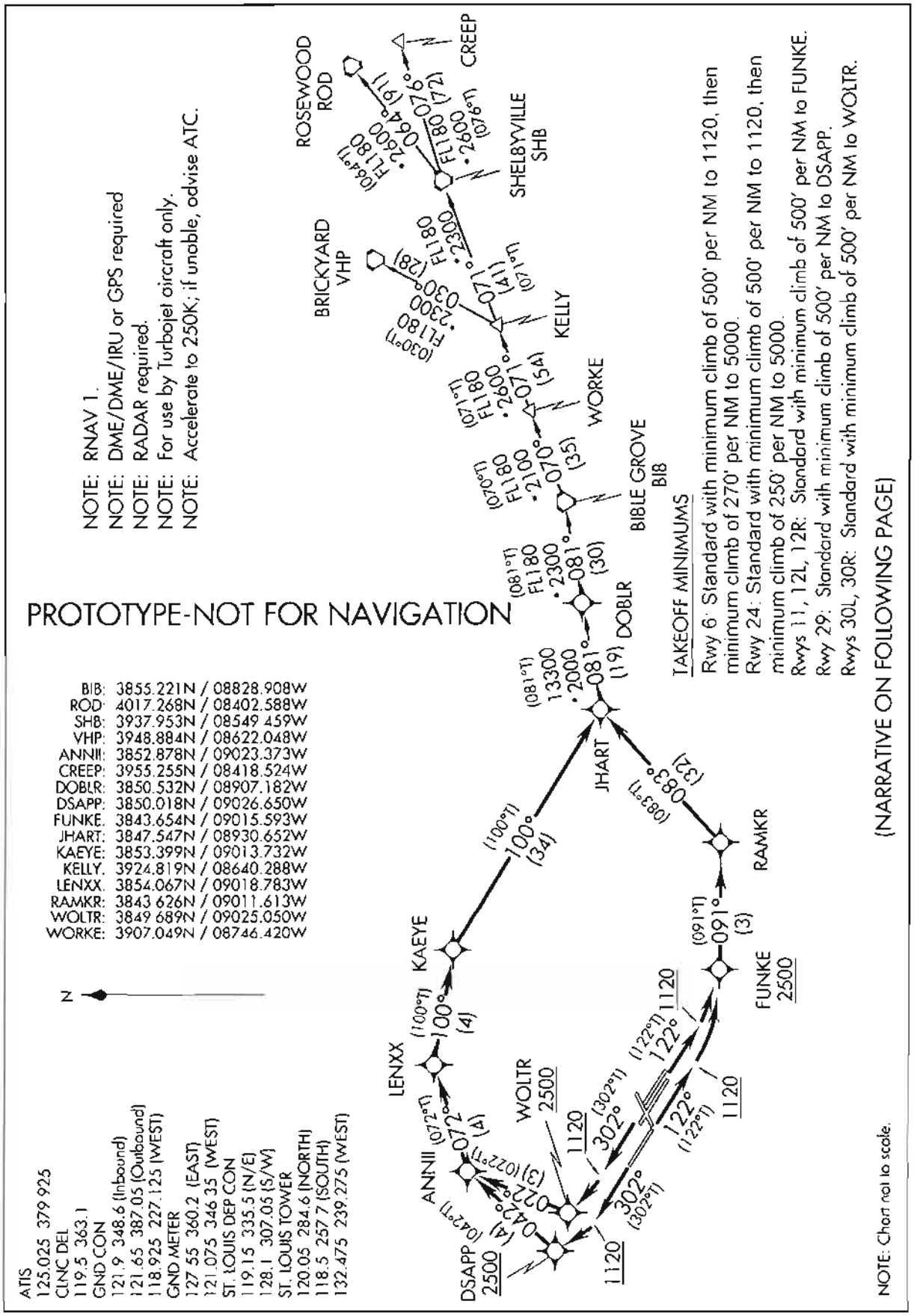
ST LOUIS, MO LAMBERT-ST LOUIS INTL (KSTL) JHART TWO (RNAV) (SID) ENROUTE-YES FC: 4.30.13 PUB: 6.27.13

ATTACHED FORMS: ESV REPORTS, 8260-15B; 8260-15C, 8260-2(S): (INFO ONLY) BIBLE GROVE (BIB) VTAC, REV 9; BRICKYARD (VHP) VTAC, REV 18; CREEP-INT, REV 4; DOBLR, ORIG; DSAPP, ORIG; FUNKE, ORIG; JHART, ORIG; KAEYE, ORIG; KELLY-INT, REV 15; LENXX, ORIG; RAMKR, ORIG; ROSEWOOD (ROD) VTAC, REV 18; SHELBYVILLE (SHB) VTAC, REV 19; WOLTR, ORIG; WORKE-INT, REV 10.

CONTACT: JILL OLSON/STEVE BARNETT -AVJ-353 LEADS, 405.954.4014 / 405.954.9307

New

JHART TWO DEPARTURE (RNAV)



DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 6: Climb heading 063 to 1120, then as assigned by ATC, expect RADAR vectors to JHART. Thence...

TAKEOFF RWY 24: Climb heading 243 to 1120, then as assigned by ATC, expect RADAR vectors to JHART. Thence...

TAKEOFF RWYS 11, 12L, 12R: Climb heading 122° to 1120, then left turn direct FUNKE, cross FUNKE at or above 2500, then on depicted route to JHART. Thence. . . .

TAKEOFF RWY 29: Climb heading 302° to 1120, then right turn direct DSAPP, cross DSAPP at or above 2500, then on depicted route to JHART. Thence. . . .

TAKEOFF RWYS 30L, 30R: Climb heading 302° to 1120, then right turn direct WOLTR, cross WOLTR at or above 2500, then on depicted route to JHART. Thence. . . .

. . . .(transition). Maintain 5000, expect filed altitude 10 minutes after departure.

BIBLE GROVE TRANSITION (JHART2.BIB)

BRICKYARD TRANSITION (JHART2.VHP)

CREEP TRANSITION (JHART2.CREEP)

ROSEWOOD TRANSITION (JHART2.ROD)

DOBLR TRANSITION (JHART2.DOBLR)

TAKEOFF OBSTACLES NOTES:

Rwy 6: Railroad 578' from DER, 620' left of centerline, 23' AGL/557' MSL OL on LDA and antenna on building 1038' from DER, 706' right of centerline, 30' AGL/598' MSL.

Rwy 11: Multiple signs, trees, towers, and buildings beginning 2348' from DER, 205' left of centerline, up to 219' AGL/774' MSL.
Multiple signs, trees, towers, and buildings beginning 2363' from DER, 489' right of centerline, up to 114' AGL/694' MSL

Rwy 12L. Tree 1331' from DER, 667' right of centerline, 75' AGL/654' MSL.

Rwy 12R: Traffic signal and sign beginning 1413' from DER, 702' right of centerline, up to 17' AGL/672' MSL
Tree 1930' from DER, 372' left of centerline, 67' AGL/636' MSL.

Rwy 30L: Multiple trees, poles, and roads beginning 906' from DER, 600' left of centerline, up to 84' AGL/663' MSL.
OL on LOC 614' from DER, on centerline, 9' AGL/558' MSL.
Multiple trees, poles, roads, terrain, and buildings beginning 283' from DER, 185' right of centerline, up to 65' AGL/684' MSL.

Rwy 30R: OL on glideslope 1895' from DER, 899' left of centerline, 28' AGL/587' MSL.
Multiple OL on buildings, trees, and electrical system beginning 2039' from DER, 387' right of centerline, up to 81' AGL/670' MSL.

PROTOTYPE-NOT FOR NAVIGATION

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : ST LOUIS	City : SAINT LOUIS	Ident : STL	State : MO
Type/Class : TACR	Frequency : M1208	Reference No.: 10061457	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 704271-038	90	113	35	40	100

Requirement: ESTABLISH AN ESV FOR THE STL SID JHART

Signature: Mallett Gary | Routing Symbol: AJV-C2 | Date: 06/08/2010

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704271-038	90	113	35	40	100	APPROVE

Requirement/Remarks: ESTABLISH AN ESV FOR THE STL SID JHARTApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

Signature: BOWERS MIKE | Routing Symbol: | Date: 06/14/2010

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704271-038	90	113	35	40	100	APPROVE

Requirement/Remarks: ESTABLISH AN ESV FOR THE STL SID JHARTApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

Signature: CHRISTEIN THOMAS | Routing Symbol: | Date: 06/28/2010

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704271-038	90	113				

Requirement/Remarks:

Signature: | Routing Symbol: | Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : FARMINGTON	City : FARMINGTON	Ident : FAM	State : MO
Type/Class : TACR	Frequency : M1191	Reference No.: 10061456	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 694136-023	2	19	74	40	100

Requirement: ESTABLISH AN ESV FOR THE STL SID JHART

Signature: Mallett Gary	Routing Symbol: AJV-C2	Date: 06/08/2010

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 694136-023	2	19	74	40	100	APPROVE

Requirement/Remarks: ESTABLISH AN ESV FOR THE STL SID JHARTApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

Signature: BOWERS MIKE	Routing Symbol:	Date: 06/14/2010

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 694136-023	2	19	74	40	100	APPROVE

Requirement/Remarks: ESTABLISH AN ESV FOR THE STL SID JHARTApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 06/22/2010

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 694136-023	2	19				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : CENTRALIA	City : CENTRALIA	Ident : ENL	State : IL
Type/Class : TACR	Frequency : M1184	Reference No.: 10061228	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 698174-019	284	307	48	30	90

Requirement: ESTABLISH AN ESV FOR THE STL SID JHART

Signature: Mallett Gary	Routing Symbol: AJV-C2	Date: 06/02/2010

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698174-019	284	307	48	30	90	APPROVE

Requirement/Remarks: ESTABLISH AN ESV FOR THE STL SID JHART.Approved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT

Signature: NASSR NASHAAT	Routing Symbol:	Date: 06/02/2010

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698174-019	284	307	48	30	90	APPROVE

Requirement/Remarks: ESTABLISH AN ESV FOR THE STL SID JHART.Approved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT

Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 06/03/2010

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698174-019	284	307				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

U.S. DEPARTMENT of TRANSPORTATION – FEDERAL AVIATION ADMINISTRATION

GRAPHIC DEPARTURE PROCEDURE (DP)

Bearings, headings, courses, tracks, and radials are magnetic. Elevation and altitudes are in feet MSL. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statue miles or feet RVR unless otherwise indicated. Graphic depictions attached.

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
JHART	TWO	JHART2.JHART	ONE	09/20/2012	

TYPE: RNAV SID

DP ROUTE DESCRIPTION:

TAKEOFF RWY 6: CLIMB HEADING 062.81 TO 1120, THEN AS ASSIGNED BY ATC, EXPECT RADAR VECTORS TO JHART. THENCE...
TAKEOFF RWY 24: CLIMB HEADING 242.83 TO 1120, THEN AS ASSIGNED BY ATC, EXPECT RADAR VECTORS TO JHART. THENCE...
TAKEOFF RWY 11: CLIMB HEADING 122.17 TO 1120, THEN LEFT TURN DIRECT FUNKE, CROSS FUNKE AT OR ABOVE 2500, THEN ON DEPICTED ROUTE TO JHART. THENCE...
TAKEOFF RWY 12L, 12R: CLIMB HEADING 122.19 TO 1120, THEN LEFT TURN DIRECT FUNKE, CROSS FUNKE AT OR ABOVE 2500, THEN ON DEPICTED ROUTE TO JHART. THENCE...
TAKEOFF RWY 29: CLIMB HEADING 302.18 TO 1120, THEN RIGHT TURN DIRECT DSAPP, CROSS DSAPP AT OR ABOVE 2500, THEN ON DEPICTED ROUTE TO JHART. THENCE...
TAKEOFF RWY 30L: CLIMB HEADING 302.20 TO 1120, THEN RIGHT TURN DIRECT WOLTR, CROSS WOLTR AT OR ABOVE 2500, THEN ON DEPICTED ROUTE TO JHART. THENCE...
TAKEOFF RWY 30R: CLIMB HEADING 302.21 TO 1120, THEN RIGHT TURN DIRECT WOLTR, CROSS WOLTR AT OR ABOVE 2500, THEN ON DEPICTED ROUTE TO JHART. THENCE...

... (TRANSITION). MAINTAIN 5000, EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

TRANSITION ROUTES (GRAPHIC DEPICTION ONLY):

Transition Name	Transition Computer Codes	From FIX/NAVAID	To FIX/NAVAID	Course	Distance	MEA	MOCA	Crossing Altitudes/Fixes
BIBLE GROVE	JHART2.BIB	JHART	DOBLR	TRACK 080.64	18.58	13300	2000	
		DOBLR	BIB VORTAC	TRACK 080.89	30.25	FL180	2300	
CREEP	JHART2.CREEP	JHART	DOBLR	TRACK 080.64	18.58	13300	2000	
		DOBLR	BIB VORTAC	TRACK 080.89	30.25	FL180	2300	
		BIB VORTAC	WORKE	TRACK 070.14	35.16	FL180	2100	
		WORKE	KELLY	TRACK 070.58	54.34	FL180	2600	
		KELLY	SHB VORTAC	TRACK 071.28	41.46	FL180	2300	
		SHB VORTAC	CREEP	TRACK 075.66	72.21	FL180	2600	
DOBLR	JHART2.DOBLR	JHART	DOBLR	TRACK 080.64	18.58	13300	2000	
ROSEWOOD	JHART2.ROD	JHART	DOBLR	TRACK 080.64	18.58	13300	2000	
		DOBLR	BIB VORTAC	TRACK 080.89	30.25	FI180	2300	
		BIB VORTAC	WORKE	TRACK 070.14	35.16	FL180	2100	
		WORKE	KELLY	TRACK 070.58	54.34	FL180	2600	
		KELLY	SHB VORTAC	TRACK 071.28	41.46	FL180	2300	
		SHB VORTAC	ROD VORTAC	TRACK 063.88	91.08	FL180	2600	

QUALITY 3 CHECKED

GRAPHIC DEPARTURE PROCEDURE (DP)

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DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
JHART	TWO	JHART2.JHART	ONE	09/20/2012	

BRICKYARD	JHART2.VHP	JHART	DOBLR	TRACK 080.64	18.58	13300	2000
		DOBLR	BIB VORTAC	TRACK 080.89	30.25	FI180	2300
		BIB VORTAC	WORKE	TRACK 070.14	35.16	FL180	2100
		WORKE	KELLY	TRACK 070.58	54.34	FL180	2600
		KELLY	VHP VORTAC	TRACK 030.28	27.87	FL180	2300

PROCEDURAL DATA NOTES/TAKEOFF MINIMUMS:

NOTE: RNAV 1.
NOTE: DME/DME/IRU OR GPS REQUIRED.
NOTE: RADAR REQUIRED.
NOTE: FOR USE BY TURBOJET AIRCRAFT ONLY.
NOTE: ACCELERATE TO 250 KIAS; IF UNABLE, ADVISE ATC.

TAKEOFF MINIMUMS:
RWY 06 STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO1120, THEN MINIMUM CLIMB OF 270 FT PER NM TO 5000.
RWY 24: STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 1120, THEN MINIMUM CLIMB OF 250 FT PER NM TO 5000.
RWY 11, 12L, 12R STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO FUNKE.
RWY 29 STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO DSAPP.
RWY 30L, 30R STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO WOLTR.

TAKEOFF OBSTACLES NOTES:

NOTE: RWY 6, RAILROAD 578 FT FROM DER, 620 FT LEFT OF CENTERLINE, 23 FT AGL/557 FT MSL. OL ON LDA AND ANTENNA ON BLDG 1038 FT FROM DER, 706 FT RIGHT OF CENTERLINE, 30 FT AGL/598 FT MSL.

NOTE: RWY 11, MULTIPLE SIGNS, TREES, TOWERS, AND BLDGS BEGINNING 2348 FT FROM DER, 205 FT LEFT OF CENTERLINE, UP TO 219 FT AGL/774 FT MSL. MULTIPLE SIGNS, TREES, TOWERS, AND BLDGS BEGINNING 2363 FT FROM DER, 489 FT RIGHT OF CENTERLINE, UP TO 114 FT AGL/694 FT MSL.

NOTE: RWY 12L, TREE 1331 FT FROM DER, 667 FT RIGHT OF CENTERLINE, 75 FT AGL/654 FT MSL.

NOTE: RWY 12R, TRAFFIC SIGNAL AND SIGN BEGINNING 1413 FT FROM DER, 702 FT RIGHT OF CENTERLINE, UP TO 17 FT AGL/672 FT MSL. TREE 1930 FT FROM DER, 372 FT LEFT OF CENTERLINE, 67 FT AGL/636 FT MSL.

NOTE: RWY 30L, MULTIPLE TREES, POLES, AND ROADS BEGINNING 906 FT FROM DER, 600 FT LEFT OF CENTERLINE, UP TO 84 FT AGL/663 FT MSL. OL ON LOC 614 FT FROM DER, ON CENTERLINE, 9 FT AGL/558 FT MSL. MULTIPLE TREES, POLES, ROADS, TERRAIN, AND BLDGS BEGINNING 283 FT FROM DER, 185 FT RIGHT OF CENTERLINE, UP TO 65 FT AGL/684 FT MSL.

NOTE: RWY 30R, OL ON GS 1895 FT FROM DER, 899 FT LEFT OF CENTERLINE, 28 FT AGL/587 FT MSL. MULTIPLE OL ON BLDGS, TREES, AND ELECTRICAL SYSTEM BEGINNING 2039 FT FROM DER, 387 FT RIGHT OF CENTERLINE, UP TO 81 FT AGL/670 FT MSL.

QUALITY 3 CHECKED

U.S. DEPARTMENT of TRANSPORTATION – FEDERAL AVIATION ADMINISTRATION

GRAPHIC DEPARTURE PROCEDURE (DP)

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DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
JHART	TWO	JHART2.JHART	ONE	09/20/2012	

CONTROLLING OBSTACLES:

LOST COMMUNICATIONS PROCEDURES:

ADDITIONAL FLIGHT DATA:

REFERENCE MAGVAR: KSTL 00 EPOCH YEAR: 2000
DME/DME ASSESSMENT: SAT (RNP 2.0)
PILOT NAVIGATION AREA:
7NM ARC CENTERED ON JHART (IF) CW
FROM: POINT A (BEARING 036 DEGREES TO JHART)
TO: POINT B (BEARING 126 DEGREES TO JHART)
MINIMUM ALTITUDE – 10,000

AIRPORTS SERVED:

LAMBERT-ST LOUIS INTL — ST LOUIS, MO

COMMUNICATIONS:

ATIS, CLNC DEL, GND CON, GND METER, DEP CON, TOWER

FIXES AND/OR NAVAIDS:

QUALITY 3 CHECKED

U.S. DEPARTMENT of TRANSPORTATION – FEDERAL AVIATION ADMINISTRATION

GRAPHIC DEPARTURE PROCEDURE (DP)

Bearings, headings, courses, tracks, and radials are magnetic. Elevation and altitudes are in feet MSL. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statue miles or feet RVR unless otherwise indicated. Graphic depictions attached.

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
JHART	TWO	JHART2.JHART	ONE	09/20/2012	

REMARKS:

FLIGHT INSPECTED BY:

REQUIRED EFFECTIVE DATE:
ROUTINE

DEVELOPED BY:

JILL OLSON (ROSS BARTO) AJV-353 12/21/2012

APPROVED BY:

LARRY STROUT AJV-353

COORDINATED WITH:

ATA, ALPA, APA, AOPA, NBAA, STL DEP CON, ZKC ARTCC

CHANGES:

1. ADDED RWY 6 AND 24.
2. CLIMB GRADIENT OF 500 FT PER NM TO 2500, CHANGED TO 500 FT PER NM TO FIRST WAYPOINT.
3. CHANGED RADAR REQUIRED FOR NON-GPS EQUIPPED AIRCRAFT TO RADAR REQUIRED.
4. ADDED PNA FOR RWY 6/24 TO ALLOW RADAR VECTORS TO JHART.

REASONS:

PER CENTRAL FPT REQUEST.

QUALITY 3 CHECKED

DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
JHART	TWO	JHART2.JHART	ONE	09/20/2012	

FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
RW06 (AER)	384448.04N/0902252.43W	N	-	-	-	-			
1120 MSL	-	-	-	VA	062.81	-			CG 500 FT/NM TO 1120
-	-	-	-	VM	062.81	-			CG 270 FT/NM TO 5000
JHART	384732.80N/0893039.12W	Y	FB	DF	-	-			
RW11 (AER)	384535.83N/0902435.55W	N	-	-	-	-			
1120 MSL	-	-	-	VA	122.17	-			CG 500 FT/NM TO FUNKE
FUNKE	384339.26N/0901535.58W	Y	FB	DF	-	-	AT/ABOVE 2500		LEFT TURN
RAMKR	384337.54N/0901136.78W	Y	FB	TF	090.51	3.11			
JHART	384732.80N/0893039.12W	Y	FB	TF	082.82	32.28			
RW12L (AER)	384506.41N/0902158.66W	N	-	-	-	-			
1120 MSL	-	-	-	VA	122.19	-			CG 500 FT/NM TO FUNKE
FUNKE	384339.26N/0901535.58W	Y	FB	DF	-	-	AT/ABOVE 2500		LEFT TURN
RAMKR	384337.54N/0901136.78W	Y	FB	TF	090.51	3.11			
JHART	384732.80N/0893039.12W	Y	FB	TF	082.82	32.28			
RW12R (AER)*	384511.59N/0902239.98W*	N	-	-	-	-			*DISPL THLD (467)
1120 MSL	-	-	-	VA	122.19	-			CG 500 FT/NM TO FUNKE
FUNKE	384339.26N/0901535.58W	Y	FB	DF	-	-	AT/ABOVE 2500		LEFT TURN
RAMKR	384337.54N/0901136.78W	Y	FB	TF	090.51	3.11			
JHART	384732.80N/0893039.12W	Y	FB	TF	082.82	32.28			
RW24 (AER)	384522.38N/0902127.02W	N	-	-	-	-			
1120 MSL	-	-	-	VA	242.83	-			CG 500 FT/NM TO 1120
-	-	-	-	VM	242.83	-			CG 250 FT/NM TO 5000
JHART	384732.80N/0893039.12W	Y	FB	DF	-	-			

QUALITY 3

DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
JHART	TWO	JHART2.JHART	ONE	09/20/2012	

FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
RW29 (AER)	384448.46N/0902259.39W	N	-	-	-	-			
1120 MSL	-	-	-	VA	302.18	-			CG 500 FT/NM TO DSAPP
DSAPP	385001.06N/0902638.98W	Y	FB	DF	-	-	AT/ABOVE 2500		RIGHT TURN
ANNII	385252.69N/0902322.37W	Y	FB	TF	041.83	3.84			
LENXX	385404.00N/0901846.99W	Y	FB	TF	071.64	3.78			
KAEYE	385323.93N/0901343.89W	Y	FB	TF	099.58	4.00			
JHART	384732.80N/0893039.12W	Y	FB	TF	099.63	34.16			
RW30L (AER)*	384417.08N/0902049.42W*	N	-	-	-	-			*DISPL THLD (201)
1120 MSL	-	-	-	VA	302.20	-			CG 500 FT/NM TO WOLTR
WOLTR	384941.32N/0902503.02W	Y	FB	DF	-	-	AT/ABOVE 2500		RIGHT TURN
ANNII	385252.69N/0902322.37W	Y	FB	TF	022.35	3.45			
LENXX	385404.00N/0901846.99W	Y	FB	TF	071.64	3.78			
KAEYE	385323.93N/0901343.89W	Y	FB	TF	099.58	4.00			
JHART	384732.80N/0893039.12W	Y	FB	TF	099.63	34.16			
RW30R (AER)	384418.99N/0902022.51W	N	-	-	-	-			
1120 MSL	-	-	-	VA	302.21	-			CG 500 FT/NM TO WOLTR
WOLTR	384941.32N/0902503.02W	Y	FB	DF	-	-	AT/ABOVE 2500		RIGHT TURN
ANNII	385252.69N/0902322.37W	Y	FB	TF	022.35	3.45			
LENXX	385404.00N/0901846.99W	Y	FB	TF	071.64	3.78			
KAEYE	385323.93N/0901343.89W	Y	FB	TF	099.58	4.00			
JHART	384732.80N/0893039.12W	Y	FB	TF	099.63	34.16			
JHART	384732.80N/0893039.12W	Y	-	IF	-	-			JHART2.BIB
DOBLR	385031.91N/0890710.92W	Y	FB	TF	080.64	18.58			
BIB VORTAC	385513.24N/0882854.50W	Y	FB	TF	080.89	30.25			

QUALITY 3 CHECKED

DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
JHART	TWO	JHART2.JHART	ONE	09/20/2012	

FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
JHART	384732.80N/0893039.12W	Y	-	IF	-	-			JHART2.CREEP
DOBLR	385031.91N/0890710.92W	Y	FB	TF	080.64	18.58			
BIB VORTAC	385513.24N/0882854.50W	Y	FB	TF	080.89	30.25			
WORKE	390702.95N/0874625.21W	Y	FB	TF	070.14	35.16			
KELLY	392449.15N/0864017.29W	Y	FB	TF	070.58	54.34			
SHB VORTAC	393757.15N/0854927.54W	Y	FB	TF	071.28	41.46			
CREEP	395515.28N/0841831.41W	Y	FB	TF	075.66	72.21			
JHART	384732.80N/0893039.12W	Y	-	IF	-	-			JHART2.DOBLR
DOBLR	385031.91N/0890710.92W	Y	FB	TF	080.64	18.58			
JHART	384732.80N/0893039.12W	Y	-	IF	-	-			JHART2.ROD
DOBLR	385031.91N/0890710.92W	Y	FB	TF	080.64	18.58			
BIB VORTAC	385513.24N/0882854.50W	Y	FB	TF	080.89	30.25			
WORKE	390702.95N/0874625.21W	Y	FB	TF	070.14	35.16			
KELLY	392449.15N/0864017.29W	Y	FB	TF	070.58	54.34			
SHB VORTAC	393757.15N/0854927.54W	Y	FB	TF	071.28	41.46			
ROD VORTAC	401716.08N/0840235.28W	Y	FB	TF	063.88	91.08			
JHART	384732.80N/0893039.12W	Y	-	IF	-	-			JHART2.VHP
DOBLR	385031.91N/0890710.92W	Y	FB	TF	080.64	18.58			
BIB VORTAC	385513.24N/0882854.50W	Y	FB	TF	080.89	30.25			
WORKE	390702.95N/0874625.21W	Y	FB	TF	070.14	35.16			
KELLY	392449.15N/0864017.29W	Y	FB	TF	070.58	54.34			
VHP VORTAC	394853.02N/0862202.88W	Y	FB	TF	030.28	27.87			

QUALITY CHECKED

DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
JHART	TWO	JHART2.JHART	ONE	09/20/2012	

ARINC PACKET - 424-18 - SID

```
                 1         2         3         4         5         6         7         8         9         0         1         2         3
NAVAID  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAD        BIB   K5010900VTL  N38551324W088285450    N38551324W088285450E0030005351     NARBIBLE GROVE
        SUSAD        ROD   K5011750VTH  N40171608W084023515    N40171608W084023515W0050010802     NARROSEWOOD
        SUSAD        SHB   K5011200VTLA N39375715W085492754    N39375715W085492754E0010008051     NARSHELBYVILLE
        SUSAD        VHP   K5011630VTHW N39485302W086220288    N39485302W086220288E0010008232     NARBRICKYARD

                 1         2         3         4         5         6         7         8         9         0         1         2         3
WP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   ANNII K30    W     N38525269W090232237                      W0011     NAR           ANNII
        SUSAEAENRT   CREEP K50    C   H N39551528W084183141                      W0060     NAR           CREEP
        SUSAEAENRT   DOBLR K50    W     N38503191W089071092                      W0020     NAR           DOBLR
        SUSAEAENRT   DSAPP K30    W     N38500106W090263898                      W0010     NAR           DSAPP
        SUSAEAENRT   FUNKE K30    W     N38433926W090153558                      W0011     NAR           FUNKE
        SUSAEAENRT   JHART K50    W     N38473280W089303912                      W0017     NAR           JHART
        SUSAEAENRT   KAEYE K30    W     N38532393W090134389                      W0012     NAR           KAEYE
        SUSAEAENRT   KELLY K50    C   L N39244915W086401729                      W0040     NAR           KELLY
        SUSAEAENRT   LENXX K30    W     N38540400W090184699                      W0011     NAR           LENXX
        SUSAEAENRT   RAMKR K50    W     N38433754W090113678                      W0012     NAR           RAMKR
        SUSAEAENRT   WOLTR K30    W     N38494132W090250302                      W0010     NAR           WOLTR
        SUSAEAENRT   WORKE K50    C   L N39070295W087462521                      W0031     NAR           WORKE

                 1         2         3         4         5         6         7         8         9         0         1         2         3
AIRPORT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KSTLK3ASTL     0     110YHN38445531W090221210E000000618         1800018000C    MNAR    LAMBERT-ST LOUIS INTL

                 1         2         3         4         5         6         7         8         9         0         1         2         3
SEGMENT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KSTLK3DJHART24RW06  010         0        VA                     0628        + 01120     18000
        SUSAP KSTLK3DJHART24RW06  020         0        VM                     0628
        SUSAP KSTLK3DJHART24RW06  030JHARTK5EA0EE   010DF
        SUSAP KSTLK3DJHART24RW11  010         0        VA                     1222        + 01120     18000
        SUSAP KSTLK3DJHART24RW11  020FUNKEK3EA0E    010DF                                + 02500
        SUSAP KSTLK3DJHART24RW11  030RAMKRK5EA0E    010TF
        SUSAP KSTLK3DJHART24RW11  040JHARTK5EA0EE   010TF
        SUSAP KSTLK3DJHART24RW12B 010         0        VA                     1222        + 01120     18000
        SUSAP KSTLK3DJHART24RW12B 020FUNKEK3EA0E    010DF                                + 02500
        SUSAP KSTLK3DJHART24RW12B 030RAMKRK5EA0E    010TF
        SUSAP KSTLK3DJHART24RW12B 040JHARTK5EA0EE   010TF
        SUSAP KSTLK3DJHART24RW24  010         0        VA                     2428        + 01120     18000
```

QUALITY CHECKED 4

DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
JHART	TWO	JHART2.JHART	ONE	09/20/2012	

```
SUSAP KSTLK3DJHART24RW24  020         0       VM                    2428
SUSAP KSTLK3DJHART24RW24  030JHARTK5EA0EE  L010DF
SUSAP KSTLK3DJHART24RW29  010         0       VA                    3022        + 01120     18000
SUSAP KSTLK3DJHART24RW29  020DSAPPK3EA0E    010DF                               + 02500
SUSAP KSTLK3DJHART24RW29  030ANNIIK3EA0E    010TF
SUSAP KSTLK3DJHART24RW29  040LENXXK3EA0E    010TF
SUSAP KSTLK3DJHART24RW29  050KAEYEK3EA0E    010TF
SUSAP KSTLK3DJHART24RW29  060JHARTK5EA0EE   010TF
SUSAP KSTLK3DJHART24RW30B 010         0       VA                    3022        + 01120     18000
SUSAP KSTLK3DJHART24RW30B 020WOLTRK3EA0E    010DF                               + 02500
SUSAP KSTLK3DJHART24RW30B 030ANNIIK3EA0E    010TF
SUSAP KSTLK3DJHART24RW30B 040LENXXK3EA0E    010TF
SUSAP KSTLK3DJHART24RW30B 050KAEYEK3EA0E    010TF
SUSAP KSTLK3DJHART24RW30B 060JHARTK5EA0EE   010TF
SUSAP KSTLK3DJHART26BIB   010JHARTK5EA0E       IF                                                18000
SUSAP KSTLK3DJHART26BIB   020DOBLRK5EA0E    010TF
SUSAP KSTLK3DJHART26BIB   030BIB  K5D 0VE   010TF
SUSAP KSTLK3DJHART26CREEP 010JHARTK5EA0E       IF                                                18000
SUSAP KSTLK3DJHART26CREEP 020DOBLRK5EA0E    010TF
SUSAP KSTLK3DJHART26CREEP 030BIB  K5D 0V    010TF
SUSAP KSTLK3DJHART26CREEP 040WORKEK5EA0E    010TF
SUSAP KSTLK3DJHART26CREEP 050KELLYK5EA0E    010TF
SUSAP KSTLK3DJHART26CREEP 060SHB  K5D 0V    010TF
SUSAP KSTLK3DJHART26CREEP 070CREEPK5EA0EE   010TF
SUSAP KSTLK3DJHART26DOBLR 010JHARTK5EA0E       IF                                                18000
SUSAP KSTLK3DJHART26DOBLR 020DOBLRK5EA0EE   010TF
SUSAP KSTLK3DJHART26ROD   010JHARTK5EA0E       IF                                                18000
SUSAP KSTLK3DJHART26ROD   020DOBLRK5EA0E    010TF
SUSAP KSTLK3DJHART26ROD   030BIB  K5D 0V    010TF
SUSAP KSTLK3DJHART26ROD   040WORKEK5EA0E    010TF
SUSAP KSTLK3DJHART26ROD   050KELLYK5EA0E    010TF
SUSAP KSTLK3DJHART26ROD   060SHB  K5D 0V    010TF
SUSAP KSTLK3DJHART26ROD   070ROD  K5D 0VE   010TF
SUSAP KSTLK3DJHART26VHP   010JHARTK5EA0E       IF                                                18000
SUSAP KSTLK3DJHART26VHP   020DOBLRK5EA0E    010TF
SUSAP KSTLK3DJHART26VHP   030BIB  K5D 0V    010TF
SUSAP KSTLK3DJHART26VHP   040WORKEK5EA0E    010TF
SUSAP KSTLK3DJHART26VHP   050KELLYK5EA0E    010TF
SUSAP KSTLK3DJHART26VHP   060VHP  K5D 0VE   010TF
```

```
                1         2         3         4         5         6         7         8         9         0         1         2         3
RUNWAY  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KSTLK3GRW06    0076070628 N38444804W090225243-0200    +013660055100004615 0IIJAK1
        SUSAP KSTLK3GRW11    0090011222 N38453583W090243555-0700    +015700061800005915 0IIOGZ3
        SUSAP KSTLK3GRW12L   0090031222 N38450641W090215866+0800    +012970052800005415 0IILDZ3
        SUSAP KSTLK3GRW12R   0110191222 N38451159W090223998+0400    +013320054004675420 0IILMR1
```

DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
JHART	TWO	JHART2.JHART	ONE	09/20/2012	

```
SUSAP KSTLK3GRW24     0076072428 N38452238W090212702+0200     +0131300534000050150IISTL1
SUSAP KSTLK3GRW29     0090013022 N38444846W090225939+0700     +0138100556000056150IIRQN1
SUSAP KSTLK3GRW30L    0110193022 N38441708W090204942-0400     +0146300583020158200IIBKY1     IRMKL
SUSAP KSTLK3GRW30R    0090033022 N38441899W090202251-0800     +0152900605000057150IISJW3
```

DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
JHART	TWO	JHART2.JHART	ONE	09/20/2012	

ARINC SUMMARY - 424-18 - SID

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	RW06		010		VA		FB		062.8()		AA 01120	
	RW06		020		VM		FB		062.8()			
	RW06	JHART	030		DF		FB	1.0				
	RW11		010		VA		FB		122.2()		AA 01120	
	RW11	FUNKE	020		DF		FB	1.0			AA 02500	
	RW11	RAMKR	030		TF		FB	1.0				
	RW11	JHART	040		TF		FB	1.0				
	RW12B		010		VA		FB		122.2()		AA 01120	
	RW12B	FUNKE	020		DF		FB	1.0			AA 02500	
	RW12B	RAMKR	030		TF		FB	1.0				
	RW12B	JHART	040		TF		FB	1.0				
	RW24		010		VA		FB		242.8()		AA 01120	
	RW24		020		VM		FB		242.8()			
	RW24	JHART	030		DF	L	FB	1.0				
	RW29		010		VA		FB		302.2()		AA 01120	
	RW29	DSAPP	020		DF		FB	1.0			AA 02500	
	RW29	ANNII	030		TF		FB	1.0				
	RW29	LENXX	040		TF		FB	1.0				
	RW29	KAEYE	050		TF		FB	1.0				
	RW29	JHART	060		TF		FB	1.0				
	RW30B		010		VA		FB		302.2()		AA 01120	
	RW30B	WOLTR	020		DF		FB	1.0			AA 02500	
	RW30B	ANNII	030		TF		FB	1.0				
	RW30B	LENXX	040		TF		FB	1.0				
	RW30B	KAEYE	050		TF		FB	1.0				
	RW30B	JHART	060		TF		FB	1.0				
	BIB	JHART	010		IF		FB					
	BIB	DOBLR	020		TF		FB	1.0				
	BIB	BIB	030		TF		FB	1.0				
	CREEP	JHART	010		IF		FB					
	CREEP	DOBLR	020		TF		FB	1.0				
	CREEP	BIB	030		TF		FB	1.0				
	CREEP	WORKE	040		TF		FB	1.0				
	CREEP	KELLY	050		TF		FB	1.0				
	CREEP	SHB	060		TF		FB	1.0				
	CREEP	CREEP	070		TF		FB	1.0				
	DOBLR	JHART	010		IF		FB					
	DOBLR	DOBLR	020		TF		FB	1.0				
	ROD	JHART	010		IF		FB					
	ROD	DOBLR	020		TF		FB	1.0				
	ROD	BIB	030		TF		FB	1.0				
	ROD	WORKE	040		TF		FB	1.0				

QUALITY CHECKED

DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
JHART	TWO	JHART2.JHART	ONE	09/20/2012	

ROD	KELLY	050	TF	FB	1.0
ROD	SHB	060	TF	FB	1.0
ROD	ROD	070	TF	FB	1.0
VHP	JHART	010	IF	FB	
VHP	DOBLR	020	TF	FB	1.0
VHP	BIB	030	TF	FB	1.0
VHP	WORKE	040	TF	FB	1.0
VHP	KELLY	050	TF	FB	1.0
VHP	VHP	060	TF	FB	1.0

POINT DATA

WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
BIB	N385513.24	W0882854.50	N3855.221	W08828.908
ROD	N401716.08	W0840235.15	N4017.268	W08402.586
SHB	N393757.15	W0854927.54	N3937.953	W08549.459
VHP	N394853.02	W0862202.88	N3948.884	W08622.048
ANNII	N385252.69	W0902322.37	N3852.878	W09023.373
CREEP	N395515.28	W0841831.41	N3955.255	W08418.524
DOBLR	N385031.91	W0890710.92	N3850.532	W08907.182
DSAPP	N385001.06	W0902638.98	N3850.018	W09026.650
FUNKE	N384339.26	W0901535.58	N3843.654	W09015.593
JHART	N384732.80	W0893039.12	N3847.547	W08930.652
KAEYE	N385323.93	W0901343.89	N3853.399	W09013.732
KELLY	N392449.15	W0864017.29	N3924.819	W08640.288
LENXX	N385404.00	W0901846.99	N3854.067	W09018.783
RAMKR	N384337.54	W0901136.78	N3843.626	W09011.613
WOLTR	N384941.32	W0902503.02	N3849.689	W09025.050
WORKE	N390702.95	W0874625.21	N3907.049	W08746.420
RW06	N384448.04	W0902252.43	N3844.801	W09022.874
RW11	N384535.83	W0902435.55	N3845.597	W09024.593
RW12L	N384506.41	W0902158.66	N3845.107	W09021.978
RW12R	N384511.59	W0902239.98	N3845.193	W09022.666
RW24	N384522.38	W0902127.02	N3845.373	W09021.450
RW29	N384448.46	W0902259.39	N3844.808	W09022.990
RW30L	N384417.08	W0902049.42	N3844.285	W09020.824
RW30R	N384418.99	W0902022.51	N3844.317	W09020.375

RUNWAY DATA

RWY	THRESHOLD ELEVATION	TCH
RW06	00551	46
RW11	00618	59
RW12L	00528	54
RW12R	00540	54
RW24	00534	50
RW29	00556	56
RW30L	00583	58

DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
JHART	TWO	JHART2.JHART	ONE	09/20/2012	

RW30R 00605 57

RADIO FIX AND HOLDING DATA RECORD

NAME: BIBLE GROVE VORTAC **STATE:** IL **COUNTRY:** US

LATITUDE/LONGITUDE: 385513.24N/0882854.50W **TYPE:**

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	DIST FROM FAC FEET	MRA	MAA
1	BIBLE GROVE	BIB	VORTAC	L							17500

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	S	BIB	VORTAC	161.02	341.02	L	1		2300	6000	4	6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
UPN	200	STACK (17-000868)	385606.00N/0881625.00W	1075	6E
1	200	AAO	385821.00N/0882639.00W	768	4E

REASON FOR NONSTANDARD HOLDING:
PAT 1 COMPATIBLE WITH PROCEDURE TURN AT EFFINGHAM

HOLDING RESTRICTIONS:
UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 3000 FEET.

INFO ONLY

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	GATEWAY			KALN	ALTON/ST LOUIS	IL (US)
DP	GATEWAY			KBLV	BELLEVILLE	IL (US)
DP	GATEWAY			KCPS	CAHOKIA/ST LOUIS	IL (US)
DP	GATEWAY			KSTL	ST LOUIS	MO (US)
DP	JHART (RNAV)			KSTL	ST LOUIS	MO (US)
DP	GATEWAY			KSUS	ST LOUIS	MO (US)
EN ROUTE	V12					(US)
EN ROUTE	V221					(US)
EN ROUTE	V429					(US)
EN ROUTE	V72					(US)
IAP	LOC RWY 29		1	K1H2	EFFINGHAM	IL (US)
IAP	VOR RWY 1		1	K1H2	EFFINGHAM	IL (US)
IAP	LOC/DME RWY 21		1	KFOA	FLORA	IL (US)
IAP	RNAV (GPS) RWY 21			KFOA	FLORA	IL (US)
IAP	ILS RWY 23			KMVN	MOUNT VERNON	IL (US)
IAP	VOR RWY 23			KMVN	MOUNT VERNON	IL (US)
IAP	LOC RWY 11			KOLY	OLNEY/NOBLE	IL (US)
IAP	NDB RWY 03			KOLY	OLNEY/NOBLE	IL (US)
IAP	RNAV (GPS) RWY 09			KRSV	ROBINSON	IL (US)
IAP	RNAV (GPS) RWY 27			KRSV	ROBINSON	IL (US)
IAP	NDB RWY 18			KSLO	SALEM	IL (US)
STAR	RACYR			KIND	INDIANAPOLIS	IN (US)
STAR	CHERI			KJVY	JEFFERSONVILLE	IN (US)
STAR	CHERI			KFTK	FORT KNOX	KY (US)
STAR	CHERI			KLOU	LOUISVILLE	KY (US)
STAR	CHERI			KSDF	LOUISVILLE	KY (US)

REQUIRED CHARTING: DP, STAR, IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: LOW

RECORD REVISION NUMBER: 9 **DATE OF REVISION:** 05/31/2012

REASON FOR REVISION:
UPDATE FIX COORDINATES, FIX MOVED 3 FEET.

DEVELOPED BY: **DATE:** 01/03/2012 **OFFICE:** AJV-353 **NAME:** STEVEN BARNETT (GRACE NOWAK)

APPROVED BY: **DATE:** 03/14/2012 **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

QUALITY 3 CHECKED

DISTRIBUTION:

NFDC
FPO: CEN
ARTCC: ZKC
ATC FACILITY:
OTHER: ZID

INFO ONLY

QUALITY CHECKED 3

RADIO FIX AND HOLDING DATA RECORD

NAME: BRICKYARD VORTAC **STATE:** IN **COUNTRY:** US

LATITUDE/LONGITUDE: 394853.02N/0862202.88W **TYPE:**

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** NO CHANGE

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	BRICKYARD	VHP	VORTAC	H							45000

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

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	W	VHP	VORTAC	256.00	076.00	L	1		2600	10000	4	9
2	NW	VHP	VORTAC	311.00	131.00	R	1		3000	10000	4	9
3	S	VHP	VORTAC	202.00	022.00	L	1		2500	10000	4	9
4	NW		WP	311.00	131.00	R		4	3000	6000	5	6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
UPN	200	TOWER (18-001444)	395325.00N/0861220.00W	1866	5D
1	200	TOWER (18-001084)	394806.00N/0863424.00W	1530	5D
2	200	TOWER (18-000853)	395214.00N/0863035.00W	1255	5D
3	200	TOWER (18-001377)	395146.32N/0862648.60W	1194	5D
4	200	TOWER (18-002004)	395455.00N/0862338.00W	1268	5D

REASON FOR NONSTANDARD HOLDING:
PAT 1 COMPATIBILITY WITH PROCEDURE TURN.
PAT 3 ATC REQUEST.

HOLDING RESTRICTIONS:
UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 3000.

INFO ONLY

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	GATEWAY			KALN	ALTON/ST LOUIS	IL (US)
DP	GATEWAY			KBLV	BELLEVILLE	IL (US)
DP	GATEWAY			KCPS	CAHOKIA/ST LOUIS	IL (US)
DP	DAWNN			KEYE	INDIANAPOLIS	IN (US)
DP	HOOSIER			KEYE	INDIANAPOLIS	IN (US)
DP	MAREO			KEYE	INDIANAPOLIS	IN (US)
DP	ROCKY			KEYE	INDIANAPOLIS	IN (US)
DP	DAWNN			KHFY	INDIANAPOLIS	IN (US)
DP	HOOSIER			KHFY	INDIANAPOLIS	IN (US)
DP	MAREO			KHFY	INDIANAPOLIS	IN (US)
DP	ROCKY			KHFY	INDIANAPOLIS	IN (US)
DP	DAWNN			KIND	INDIANAPOLIS	IN (US)
DP	HOOSIER			KIND	INDIANAPOLIS	IN (US)
DP	INDY			KIND	INDIANAPOLIS	IN (US)
DP	MAREO			KIND	INDIANAPOLIS	IN (US)
DP	MEARZ			KIND	INDIANAPOLIS	IN (US)
DP	ROCKY			KIND	INDIANAPOLIS	IN (US)
DP	DAWNN			KMQJ	INDIANAPOLIS	IN (US)
DP	HOOSIER			KMQJ	INDIANAPOLIS	IN (US)
DP	MAREO			KMQJ	INDIANAPOLIS	IN (US)
DP	ROCKY			KMQJ	INDIANAPOLIS	IN (US)
DP	DAWNN			KTYQ	INDIANAPOLIS	IN (US)
DP	HOOSIER			KTYQ	INDIANAPOLIS	IN (US)
DP	MAREO			KTYQ	INDIANAPOLIS	IN (US)
DP	ROCKY			KTYQ	INDIANAPOLIS	IN (US)
DP	DAWNN			KUMP	INDIANAPOLIS	IN (US)
DP	HOOSIER			KUMP	INDIANAPOLIS	IN (US)
DP	MAREO			KUMP	INDIANAPOLIS	IN (US)
DP	ROCKY			KUMP	INDIANAPOLIS	IN (US)
DP	DAWNN			KGEZ	SHELBYVILLE	IN (US)
DP	HOOSIER			KGEZ	SHELBYVILLE	IN (US)
DP	MAREO			KGEZ	SHELBYVILLE	IN (US)
DP	ROCKY			KGEZ	SHELBYVILLE	IN (US)
DP	LOVEY (RNAV)			KCVG	COVINGTON	KY (US)
DP	WHITEWATER			KCVG	COVINGTON	KY (US)
DP	STREP (RNAV)			KSDF	LOUISVILLE	KY (US)
DP	GATEWAY			KSTL	ST LOUIS	MO (US)
DP	JHART (RNAV)			KSTL	ST LOUIS	MO (US)
DP	GATEWAY			KSUS	ST LOUIS	MO (US)
DP	OBRLN			KBKL	CLEVELAND	OH (US)

QUALITY 3 CHECKED

DP	OBRLN		KCGF	CLEVELAND	OH (US)
DP	OBRLN		KCLE	CLEVELAND	OH (US)
DP	DAYTON		KDAY	DAYTON	OH (US)
DP	OBRLN		K1G1	ELYRIA	OH (US)
DP	OBRLN		KLPR	LORAIN/ELYRIA	OH (US)
DP	OBRLN		K1G5	MEDINA	OH (US)
DP	OBRLN		K7G8	MIDDLEFIELD	OH (US)
DP	OBRLN		K2G1	PAINESVILLE	OH (US)
DP	OBRLN		KLNN	WILLOUGHBY	OH (US)
DP	TITAN (OBSTACLE)		KBNA	NASHVILLE	TN (US)
EN ROUTE	J110				(US)
EN ROUTE	J24				(US)
EN ROUTE	J80				(US)
EN ROUTE	V11				(US)
EN ROUTE	V128				(US)
EN ROUTE	V14				(US)
EN ROUTE	V192				(US)
EN ROUTE	V210				(US)
EN ROUTE	V24				(US)
EN ROUTE	V285				(US)
EN ROUTE	V305				(US)
EN ROUTE	V399				(US)
EN ROUTE	V434				(US)
EN ROUTE	V50				(US)
EN ROUTE	V53				(US)
EN ROUTE	V96				(US)
IAP	NDB RWY 4		KCFJ	CRAWFORDSVILLE	IN (US)
IAP	RNAV (GPS) RWY 18		K4I7	GREENCASTLE	IN (US)
IAP	VOR/DME-A		K4I7	GREENCASTLE	IN (US)
IAP	COPTER RNAV (GPS) 291	4	K8A4	INDIANAPOLIS	IN (US)
IAP	LOC RWY 21	1	KEYE	INDIANAPOLIS	IN (US)
IAP	NDB RWY 21	1	KEYE	INDIANAPOLIS	IN (US)
IAP	RNAV (GPS) RWY 21		KEYE	INDIANAPOLIS	IN (US)
IAP	VOR-A	1	KEYE	INDIANAPOLIS	IN (US)
IAP	ILS OR LOC RWY 14		KIND	INDIANAPOLIS	IN (US)
IAP	ILS OR LOC RWY 23L		KIND	INDIANAPOLIS	IN (US)
IAP	ILS OR LOC RWY 23R	2	KIND	INDIANAPOLIS	IN (US)
IAP	ILS OR LOC RWY 32	2	KIND	INDIANAPOLIS	IN (US)
IAP	ILS OR LOC RWY 5L	2	KIND	INDIANAPOLIS	IN (US)
IAP	ILS OR LOC RWY 5R		KIND	INDIANAPOLIS	IN (US)
IAP	ILS RWY 5L (CAT II)	2	KIND	INDIANAPOLIS	IN (US)
IAP	ILS RWY 5L (CAT III)	2	KIND	INDIANAPOLIS	IN (US)
IAP	ILS RWY 5R (CAT II)		KIND	INDIANAPOLIS	IN (US)
IAP	ILS RWY 5R (CAT III)		KIND	INDIANAPOLIS	IN (US)
IAP	VOR RWY 34		KMQJ	INDIANAPOLIS	IN (US)
IAP	ILS OR LOC RWY 36		KTYQ	INDIANAPOLIS	IN (US)
IAP	RNAV (GPS) RWY 36		KTYQ	INDIANAPOLIS	IN (US)
IAP	VOR RWY 36	3	KTYQ	INDIANAPOLIS	IN (US)
IAP	VOR/DME RWY 18	3	KTYQ	INDIANAPOLIS	IN (US)
IAP	NDB RWY 15		KUMP	INDIANAPOLIS	IN (US)
IAP	VOR RWY 33		KUMP	INDIANAPOLIS	IN (US)
IAP	VOR-B		K3I3	TERRE HAUTE	IN (US)
STAR	CLANG		KEYE	INDIANAPOLIS	IN (US)
STAR	DECEE		KEYE	INDIANAPOLIS	IN (US)
STAR	CLANG		KIND	INDIANAPOLIS	IN (US)
STAR	DECEE		KIND	INDIANAPOLIS	IN (US)
STAR	RACYR		KIND	INDIANAPOLIS	IN (US)
STAR	CLANG		KMQJ	INDIANAPOLIS	IN (US)
STAR	CEGRM (RNAV)		KCVG	COVINGTON	KY (US)
STAR	SHELBYVILLE		KCVG	COVINGTON	KY (US)
STAR	AARCH (RNAV)		KSTL	ST LOUIS	MO (US)
STAR	VANDALIA		KSTL	ST LOUIS	MO (US)
STAR	ZABER		KBKL	CLEVELAND	OH (US)
STAR	ZABER		KCGF	CLEVELAND	OH (US)
STAR	ZABER		KCLE	CLEVELAND	OH (US)
STAR	GUNNE		KCMH	COLUMBUS	OH (US)
STAR	GUNNE		KLCK	COLUMBUS	OH (US)
STAR	GUNNE		KOSU	COLUMBUS	OH (US)
STAR	GUNNE		KTZR	COLUMBUS	OH (US)
STAR	ZABER		K1G1	ELYRIA	OH (US)
STAR	GUNNE		KLHQ	LANCASTER	OH (US)
STAR	ZABER		KLPR	LORAIN/ELYRIA	OH (US)
STAR	ZABER		K1G5	MEDINA	OH (US)
STAR	ZABER		K7G8	MIDDLEFIELD	OH (US)
STAR	GUNNE		KVTA	NEWARK	OH (US)
STAR	ZABER		K2G1	PAINESVILLE	OH (US)
STAR	ZABER		KLNN	WILLOUGHBY	OH (US)

REQUIRED CHARTING: DP, STAR, IAP, CONTROLLER, EN ROUTE LOW, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 18 **DATE OF REVISION:** 09/20/2012

REASON FOR REVISION:
DELETED PAT 1 AND 2 CLIMB-IN-HOLD DATA.

QUALITY CHECKED 3

DEVELOPED BY:	**DATE:** 03/29/2012	**OFFICE:** AJV-353	**NAME:** JILL OLSON (MARK BURTZ)
APPROVED BY:	**DATE:** 06/19/2012	**OFFICE:** AJV-353	**NAME:** LARRY STROUT
	SIGNATURE:		

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZID
ATC FACILITY: IND APP CON
OTHER:

QUALITY CHECKED 3

RADIO FIX AND HOLDING DATA RECORD

NAME: CREEP **STATE:** OH **COUNTRY:** US

LATITUDE/LONGITUDE: 395515.28N/0841831.41W **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	DIST FROM FAC FEET	MRA	MAA
1	BRICKYARD	VHP	VORTAC	H	084.51	085.51	95.32	95.32		18000	45000
2	ROSEWOOD	ROD	VORTAC	H	214.15	209.15	25.17	25.17		18000	45000

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

REMARKS:
BRICKYARD (FAC 1) USED TO ESTABLISH FIX COORDINATES

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	GATEWAY	2		KALN	ALTON/ST LOUIS	IL (US)
DP	GATEWAY	2		KBLV	BELLEVILLE	IL (US)
DP	GATEWAY	2		KCPS	CAHOKIA/ST LOUIS	IL (US)
DP	GATEWAY	2		KSTL	ST LOUIS	MO (US)
DP	JHART (RNAV)			KSTL	ST LOUIS	MO (US)
DP	GATEWAY	2		KSUS	ST LOUIS	MO (US)
EN ROUTE	J39	1, 2				(US)
EN ROUTE	J80-110	1, 2				(US)

REQUIRED CHARTING: DP, CONTROLLER, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 4 **DATE OF REVISION:** 09/20/2012

REASON FOR REVISION:
1. ADDED FIX TYPE WP.
2. DELETED FIX RESTRICTION DME AIRCRAFT ONLY.
3. UPDATED FIX USE.

DEVELOPED BY: **DATE:** 04/05/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (STEVE NELSON)

APPROVED BY: **DATE:** 08/27/2012 **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: CEN
ARTCC: ZID
ATC FACILITY:
OTHER:

INFO ONLY

QUALITY CHECKED 3

RADIO FIX AND HOLDING DATA RECORD

NAME: DOBLR **STATE:** IL **COUNTRY:** US

LATITUDE/LONGITUDE: 385031.91N/0890710.92W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	JHART (RNAV)			KSTL	ST LOUIS	MO (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 09/20/2012

DEVELOPED BY: **DATE:** 04/10/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON

APPROVED BY: **DATE:** 08/27/2012 **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZKC
ATC FACILITY: STL APP CON
OTHER:

INFO ONLY

QUALITY

RADIO FIX AND HOLDING DATA RECORD

NAME: DSAPP **STATE:** MO **COUNTRY:** US

LATITUDE/LONGITUDE: 385001.06N/0902638.98W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	EEMOS (RNAV)			KSTL	ST LOUIS	MO (US)
DP	JHART (RNAV)			KSTL	ST LOUIS	MO (US)
DP	KSHEE (RNAV)			KSTL	ST LOUIS	MO (US)
DP	NATCA (RNAV)			KSTL	ST LOUIS	MO (US)
DP	ROTRY (RNAV)			KSTL	ST LOUIS	MO (US)
DP	TEDDD (RNAV)			KSTL	ST LOUIS	MO (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 09/20/2012

DEVELOPED BY: **DATE:** 04/09/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (STEVE NELSON)

APPROVED BY: **DATE:** 08/27/2012 **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZKC
ATC FACILITY: STL APP CON
OTHER:

INFO ONLY

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: FUNKE **STATE:** MO **COUNTRY:** US

LATITUDE/LONGITUDE: 384339.26N/0901535.58W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	EEMOS (RNAV)			KSTL	ST LOUIS	MO (US)
DP	JHART (RNAV)			KSTL	ST LOUIS	MO (US)
DP	KSHEE (RNAV)			KSTL	ST LOUIS	MO (US)
DP	NATCA (RNAV)			KSTL	ST LOUIS	MO (US)
DP	ROTRY (RNAV)			KSTL	ST LOUIS	MO (US)
DP	TEDDD (RNAV)			KSTL	ST LOUIS	MO (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 09/20/2012

DEVELOPED BY: **DATE:** 04/09/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (STEVE NELSON)

APPROVED BY: **DATE:** 08/27/2012 **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZKC
ATC FACILITY: STL APP CON
OTHER:

INFO ONLY

QUALITY CHECKED 3

RADIO FIX AND HOLDING DATA RECORD

NAME: JHART **STATE:** IL **COUNTRY:** US

LATITUDE/LONGITUDE: 384732.80N/0893039.12W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	JHART (RNAV)			KSTL	ST LOUIS	MO (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 09/20/2012

DEVELOPED BY: **DATE:** 04/10/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (STEVE NELSON)

APPROVED BY: **DATE:** 08/27/2012 **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZKC
ATC FACILITY: STL APP CON
OTHER:

INFO ONLY

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: KAEYE **STATE:** MO **COUNTRY:** US

LATITUDE/LONGITUDE: 385323.93N/0901343.89W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	JHART (RNAV)			KSTL	ST LOUIS	MO (US)
DP	TEDDD (RNAV)			KSTL	ST LOUIS	MO (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 09/20/2012

DEVELOPED BY: **DATE:** 04/10/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (STEVE NELSON)

APPROVED BY: **DATE:** 08/27/2012 **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZKC
ATC FACILITY: STL APP CON
OTHER:

INFO ONLY

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: KELLY **STATE:** IN **COUNTRY:** US

LATITUDE/LONGITUDE: 392449.15N/0864017.29W **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	DIST FROM FAC FEET	MRA	MAA
1	BRICKYARD	VHP	VORTAC	H	209.48	210.48	27.87	27.87		2900	17500
2	SHELBYVILLE	SHB	VORTAC	L	250.82	251.82	41.46	41.46		6000	17500
3	TERRE HAUTE	TTH	VORTAC	H	097.36	099.36		27.22		2900	17500

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
SHB	VORTAC	R-251	42	6000	17500

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	SW	VHP	VORTAC	209.48	029.48	R	1-1 1/2		6000	17500	9	18
2	W		WP	250.82	070.82	R		4	3100	14000	5	11

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	230	TOWER (18-001287)	391132.16N/0864146.01W	1349	5D
2	200	AAO	392442.00N/0864912.00W	1175	4E

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERNS.

INFO ONLY

REMARKS:
BRICKYARD (FAC 1) AND SHELBYVILLE (FAC 2) USED TO ESTABLISH FIX COORDINATES
PRECIPITIOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	GATEWAY	1, 2, 3		KALN	ALTON/ST LOUIS	IL (US)
DP	GATEWAY	1, 2, 3		KBLV	BELLEVILLE	IL (US)
DP	GATEWAY	1, 2, 3		KCPS	CAHOKIA/ST LOUIS	IL (US)
DP	GATEWAY	1, 2, 3		KSTL	ST LOUIS	MO (US)
DP	JHART (RNAV)			KSTL	ST LOUIS	MO (US)
DP	GATEWAY	1, 2, 3		KSUS	ST LOUIS	MO (US)
EN ROUTE	V11	1, 2, 3	1			(US)
EN ROUTE	V12	1, 2, 3				(US)
IAP	RNAV (GPS) RWY27			K0I2	BRAZIL	IN (US)
IAP	ILS OR LOC RWY 05R	1		KIND	INDIANAPOLIS	IN (US)
IAP	ILS RWY 05L (CAT II)	1		KIND	INDIANAPOLIS	IN (US)
IAP	ILS RWY 05L (CAT III)	1		KIND	INDIANAPOLIS	IN (US)
IAP	ILS RWY 05R (CAT II)	1		KIND	INDIANAPOLIS	IN (US)
IAP	ILS RWY 05R (CAT III)	1		KIND	INDIANAPOLIS	IN (US)
IAP	ILSOR LOC RWY 05L			KIND	INDIANAPOLIS	IN (US)
IAP	RNAV (GPS) Y RWY 05L			KIND	INDIANAPOLIS	IN (US)
IAP	RNAV (GPS) Y RWY 05R			KIND	INDIANAPOLIS	IN (US)
IAP	RNAV (GPS) Y RWY 23L			KIND	INDIANAPOLIS	IN (US)
IAP	RNAV (GPS) Y RWY 23R			KIND	INDIANAPOLIS	IN (US)
IAP	RNAV (RNP) Z RWY 05L			KIND	INDIANAPOLIS	IN (US)
IAP	RNAV (RNP) Z RWY 05R			KIND	INDIANAPOLIS	IN (US)
IAP	RNAV (RNP) Z RWY 23L			KIND	INDIANAPOLIS	IN (US)
IAP	RNAV (RNP) Z RWY 23R			KIND	INDIANAPOLIS	IN (US)
STAR	RACYR	1, 2, 3		KIND	INDIANAPOLIS	IN (US)

REQUIRED CHARTING: DP, STAR, IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 15 **DATE OF REVISION:** 05/31/2012

REASON FOR REVISION:
UPDATED FIX USE.
DELETED FAC 4; NO LONGER REQUIRED.
ADDED DIST FROM FAC 1, 2, AND 3 IN NM.
UPDATED ESV DATA, MOVED TO CORRECT LOCATION, AND CHANGED TO CORRECT FORMAT.
ADDED PRECIPITIOUS TERRAIN EVALUATION COMPLETED REMARK.
MOVED HOLDING LIMITED TO ESTABLISHED PATTERNS REMARK TO HOLDING RESTRICTIONS.

QUALITY 3 CHECKED

DEVELOPED BY:	**DATE:** 10/17/2011	**OFFICE:** AJV-353	**NAME:** STEVEN BARNETT (GRACE NOWAK)
APPROVED BY:	**DATE:** 03/14/2012	**OFFICE:** AJV-353	**NAME:** LARRY STROUT
	SIGNATURE:		

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZID
ATC FACILITY: IND APP CON
OTHER:

INFO ONLY

QUALITY CHECKED 3

RADIO FIX AND HOLDING DATA RECORD

NAME: LENXX **STATE:** MO **COUNTRY:** US

LATITUDE/LONGITUDE: 385404.00N/0901846.99W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	JHART (RNAV)			KSTL	ST LOUIS	MO (US)
DP	TEDDD (RNAV)			KSTL	ST LOUIS	MO (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 09/20/2012

DEVELOPED BY: **DATE:** 04/10/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (STEVE NELSON)

APPROVED BY: **DATE:** 08/27/2012 **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZKC
ATC FACILITY: STL APP CON
OTHER:

INFO ONLY

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: RAMKR **STATE:** IL **COUNTRY:** US

LATITUDE/LONGITUDE: 384337.54N/0901136.78W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	JHART (RNAV)			KSTL	ST LOUIS	MO (US)
DP	TEDDD (RNAV)			KSTL	ST LOUIS	MO (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 09/20/2012

DEVELOPED BY: **DATE:** 04/10/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (STEVE NELSON)

APPROVED BY: **DATE:** 08/27/2012 **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZKC
ATC FACILITY: STL APP CON
OTHER:

INFO ONLY

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: ROSEWOOD VORTAC **STATE:** OH **COUNTRY:** US

LATITUDE/LONGITUDE: 401716.08N/0840235.28W **TYPE:**

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** NO CHANGE

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	ROSEWOOD	ROD	VORTAC	H							45000

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

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	NW	ROD	VORTAC	310.00	130.00	R	1		2800	6000	4	5
2	NE	ROD	VORTAC	063.00	243.00	R	1		2800	6000	4	5
3	SE	ROD	VORTAC	142.00	322.00	R	1		3000	6000	4	5
4	NE	ROD	VORTAC	066.00	246.00	R	1		3000	6000	4	5
5	W	ROD	VORTAC	248.49	068.49	R	1		3000	6000	4	5
6	SW		WP	244.00	064.00	R		4	3000	6000	5	6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
UPN	200	TOWER (39-002629)	400822.15N/0835750.07W	1630	2C
1	200	TOWER (39-000804)	401821.00N/0840654.00W	1530	5D
2	200	TOWER (39-000804)	401821.00N/0840654.00W	1530	5D
3	200	TOWER (39-000804)	401821.00N/0840654.00W	1530	5D
4	200	TOWER (39-000804)	401821.00N/0840654.00W	1530	5D
5	200	TOWER (39-000804)	401821.00N/0840654.00W	1530	5D
6	200	TOWER (39-000804)	401821.00N/0840654.00W	1530	5D

HOLDING RESTRICTIONS:
UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 5000.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETE.

INFO ONLY

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	GATEWAY			KALN	ALTON/ST LOUIS	IL (US)
DP	GATEWAY			KBLV	BELLEVILLE	IL (US)
DP	GATEWAY			KCPS	CAHOKIA/ST LOUIS	IL (US)
DP	MAREO			KEYE	INDIANAPOLIS	IN (US)
DP	MAREO			KHFY	INDIANAPOLIS	IN (US)
DP	INDY			KIND	INDIANAPOLIS	IN (US)
DP	MAREO			KIND	INDIANAPOLIS	IN (US)
DP	MAREO			KMQJ	INDIANAPOLIS	IN (US)
DP	MAREO			KTYQ	INDIANAPOLIS	IN (US)
DP	MAREO			KUMP	INDIANAPOLIS	IN (US)
DP	MAREO			KGEZ	SHELBYVILLE	IN (US)
DP	CINCINNATI			KCVG	COVINGTON	KY (US)
DP	HAGOL (RNAV)			KCVG	COVINGTON	KY (US)
DP	STREP (RNAV)			KSDF	LOUISVILLE	KY (US)
DP	ROSEWOOD			KARB	ANN ARBOR	MI (US)
DP	MOTOWN			KDET	DETROIT	MI (US)
DP	ROSEWOOD			KDET	DETROIT	MI (US)
DP	ROSEWOOD			KDTW	DETROIT	MI (US)
DP	ROSEWOOD			KYIP	DETROIT	MI (US)
DP	ROSEWOOD			KPTK	PONTIAC	MI (US)
DP	GATEWAY			KSTL	ST LOUIS	MO (US)
DP	JHART (RNAV)			KSTL	ST LOUIS	MO (US)
DP	GATEWAY			KSUS	ST LOUIS	MO (US)
DP	OBRLN			KBKL	CLEVELAND	OH (US)
DP	OBRLN			KCGF	CLEVELAND	OH (US)
DP	OBRLN			KCLE	CLEVELAND	OH (US)
DP	LOCKBOURNE			KLCK	COLUMBUS	OH (US)
DP	DAYTON			KDAY	DAYTON	OH (US)
DP	OBRLN			K1G1	ELYRIA	OH (US)
DP	OBRLN			KLPR	LORAIN/ELYRIA	OH (US)
DP	OBRLN			K1G5	MEDINA	OH (US)
DP	OBRLN			K7G8	MIDDLEFIELD	OH (US)
DP	OBRLN			K2G1	PAINESVILLE	OH (US)
DP	OBRLN			KLNN	WILLOUGHBY	OH (US)
EN ROUTE	J149					(US)
EN ROUTE	J152					(US)
EN ROUTE	J29					(US)
EN ROUTE	J39					(US)
EN ROUTE	J43					(US)
EN ROUTE	V210					(US)
EN ROUTE	V277					(US)

QUALITY CHECKED 3

EN ROUTE	V383				(US)
EN ROUTE	V416				(US)
EN ROUTE	V435				(US)
EN ROUTE	V47				(US)
EN ROUTE	V542				(US)
IAP	ILS OR LOC RWY 5		KFWA	FORT WAYNE	IN (US)
IAP	ILS RWY 5 (CAT II)		KFWA	FORT WAYNE	IN (US)
IAP	RNAV (GPS) RWY 25	6	KEDJ	BELLEFONTAINE	OH (US)
IAP	RNAV (GPS) RWY 7	6	KEDJ	BELLEFONTAINE	OH (US)
IAP	VOR/DME RWY 25	5	KEDJ	BELLEFONTAINE	OH (US)
IAP	VOR/DME RWY 7	5	KEDJ	BELLEFONTAINE	OH (US)
IAP	RNAV (GPS) RWY 26		KCQA	CELINA	OH (US)
IAP	RNAV (GPS) RWY 8		KCQA	CELINA	OH (US)
IAP	ILS OR LOC RWY 18		KDAY	DAYTON	OH (US)
IAP	ILS OR LOC RWY 24L		KDAY	DAYTON	OH (US)
IAP	ILS OR LOC RWY 24R		KDAY	DAYTON	OH (US)
IAP	ILS OR LOC RWY 6L	2	KDAY	DAYTON	OH (US)
IAP	ILS RWY 6L (CAT II)	2	KDAY	DAYTON	OH (US)
IAP	ILS RWY 6L (CAT III)	2	KDAY	DAYTON	OH (US)
IAP	RNAV (GPS) RWY 18		KDAY	DAYTON	OH (US)
IAP	RNAV (GPS) RWY 24L		KDAY	DAYTON	OH (US)
IAP	RNAV (GPS) RWY 24R		KDAY	DAYTON	OH (US)
IAP	RNAV (GPS) RWY 36		KFDY	FINDLAY	OH (US)
IAP	RNAV (GPS) RWY 4		KI95	KENTON	OH (US)
IAP	NDB OR GPS RWY 9		KAOH	LIMA	OH (US)
IAP	NDB RWY 9		KUYF	LONDON	OH (US)
IAP	RNAV (GPS) RWY 26		KI17	PIQUA	OH (US)
IAP	VOR RWY 26	2	KI17	PIQUA	OH (US)
IAP	VOR OR GPS RWY 23	4	KI12	SIDNEY	OH (US)
IAP	VOR/DME RNAV OR GPS RWY 28		KI12	SIDNEY	OH (US)
IAP	HI-ILS OR LOC/DME RWY 24		KSGH	SPRINGFIELD	OH (US)
IAP	HI-TACAN RWY 6		KSGH	SPRINGFIELD	OH (US)
IAP	HI-TACAN RWY 24		KSGH	SPRINGFIELD	OH (US)
IAP	ILS OR LOC RWY 24		KSGH	SPRINGFIELD	OH (US)
IAP	NDB RWY 24		KSGH	SPRINGFIELD	OH (US)
IAP	VOR RWY 24		KSGH	SPRINGFIELD	OH (US)
IAP	VOR/DME RWY 33		KSGH	SPRINGFIELD	OH (US)
IAP	HI-ILS OR LOC RWY 07		KTOL	TOLEDO	OH (US)
IAP	HI-ILS OR LOC RWY 25		KTOL	TOLEDO	OH (US)
IAP	HI-TACAN RWY 07		KTOL	TOLEDO	OH (US)
IAP	HI-TACAN RWY 25		KTOL	TOLEDO	OH (US)
IAP	RNAV (GPS) RWY 20		KI74	URBANA	OH (US)
IAP	VOR-A	1	KI74	URBANA	OH (US)
IAP	RNAV (GPS) RWY 27		KVES	VERSAILLES	OH (US)
IAP	VOR-A	3	KAXV	WAPAKONETA	OH (US)
STAR	WATSN (RNAV)		KORD	CHICAGO	IL (US)
STAR	CLANG		KIND	INDIANAPOLIS	IN (US)
STAR	REDSTONE		KJVY	JEFFERSONVILLE	IN (US)
STAR	DEBAR		KCVG	COVINGTON	KY (US)
STAR	TIGRR (RNAV)		KCVG	COVINGTON	KY (US)
STAR	HEDEE		KK62	FALMOUTH	KY (US)
STAR	REDSTONE		KLOU	LOUISVILLE	KY (US)
STAR	DLAMP (RNAV)		KSDF	LOUISVILLE	KY (US)
STAR	GEMNI		KDTW	DETROIT	MI (US)
STAR	WEEDA		KDTW	DETROIT	MI (US)
STAR	HEDEE		KI69	BATAVIA	OH (US)
STAR	HEDEE		KISZ	CINCINNATI	OH (US)
STAR	HEDEE		KLUK	CINCINNATI	OH (US)
STAR	ZABER		KBKL	CLEVELAND	OH (US)
STAR	ZABER		KCGF	CLEVELAND	OH (US)
STAR	ZABER		KCLE	CLEVELAND	OH (US)
STAR	GUNNE		KCMH	COLUMBUS	OH (US)
STAR	ZABER		K1G1	ELYRIA	OH (US)
STAR	HEDEE		KHAO	HAMILTON	OH (US)
STAR	GUNNE		KLHQ	LANCASTER	OH (US)
STAR	ZABER		KLPR	LORAIN/ELYRIA	OH (US)
STAR	ZABER		K1G5	MEDINA	OH (US)
STAR	ZABER		K7G8	MIDDLEFIELD	OH (US)
STAR	GUNNE		KVTA	NEWARK	OH (US)
STAR	ZABER		K2G1	PAINESVILLE	OH (US)
STAR	ZABER		KLNN	WILLOUGHBY	OH (US)

REQUIRED CHARTING: DP, STAR, MILITARY IAP, IAP, CONTROLLER, EN ROUTE LOW, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 18 **DATE OF REVISION:** 05/03/2012

REASON FOR REVISION:
1. UPDATED PAT 6 INBOUND COURSE FROM 64.04 TO 64.00.
2. UPDATED UNPLANNED HOLDING CONTROLLING OBSTACLE.
3. UPDATED FIX USE.

DEVELOPED BY: **DATE:** 11/01/2011 **OFFICE:** AJV-353 QUALITY CHECKED 3 **NAME:** JOSE ALFONSO (MIKE MELSSEN)

APPROVED BY: **DATE:** 03/01/2012 **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZID
ATC FACILITY: DAY APP CON
OTHER:

QUALITY CHECKED 3

RADIO FIX AND HOLDING DATA RECORD

NAME: SHELBYVILLE VORTAC **STATE:** IN **COUNTRY:** US

LATITUDE/LONGITUDE: 393757.15N/0854927.54W **TYPE:**

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	DIST FROM FAC FEET	MRA	MAA
1	SHELBYVILLE	SHB	VORTAC	L							17500

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	NW	SHB	VORTAC	336.00	156.00	L	1		2400	8000	4	8
2	SE	SHB	VORTAC	150.00	330.00	R	1		2600	8000	4	8
3	E	SHB	VORTAC	089.00	269.00	R	1		2600	8000	4	8
4	NW	SHB	VORTAC	334.00	154.00	R	1		2400	8000	4	8
5	S	SHB	VORTAC	166.00	346.00	R	1		2500	8000	4	8
6	NE		WP	038.88	218.88	R		4	2500	6000	5	6
7	SE		WP	142.71	322.71	R		4	2900	6000	5	6
8	SE	SHB	VORTAC	149.92	329.92	R	1		2600	6000	4	5

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
UPN	200	TOWER (18-000936)	394006.00N/0860144.00W	1542	5D
1	200	TOWER (18-000878)	393629.00N/0855211.00W	1229	3C
2	200	TOWER (18-000878)	393629.00N/0855211.00W	1229	3C
3	200	TOWER (18-000878)	393629.00N/0855211.00W	1229	3C
4	200	TOWER (18-000878)	393629.00N/0855211.00W	1229	3C
5	200	TOWER (18-000878)	393629.00N/0855211.00W	1229	3C
6	200	TOWER (18-000611)	394659.00N/0854740.00W	1255	5D
7	200	TOWER (18-000878)	393629.00N/0855211.00W	1229	3C
8	200	TOWER (18-000878)	393629.00N/0855211.00W	1229	3C

REASON FOR NONSTANDARD HOLDING:
PAT 1 ATC REQUEST

HOLDING RESTRICTIONS:
UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 6000.

INFO ONLY

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	GATEWAY			KALN	ALTON/ST LOUIS	IL (US)
DP	GATEWAY			KBLV	BELLEVILLE	IL (US)
DP	GATEWAY			KCPS	CAHOKIA/ST LOUIS	IL (US)
DP	INDY			KIND	INDIANAPOLIS	IN (US)
DP	LOVEY			KCVG	COVINGTON	KY (US)
DP	STREP (RNAV)			KSDF	LOUISVILLE	KY (US)
DP	GATEWAY			KSTL	ST LOUIS	MO (US)
DP	JHART (RNAV)			KSTL	ST LOUIS	MO (US)
DP	GATEWAY			KSUS	ST LOUIS	MO (US)
EN ROUTE	V12					(US)
EN ROUTE	V221					(US)
EN ROUTE	V51					(US)
EN ROUTE	V97					(US)
IAP	ILS RWY 23			KBAK	COLUMBUS	IN (US)
IAP	RNAV (GPS) RWY 14		6	KBAK	COLUMBUS	IN (US)
IAP	RNAV (GPS) RWY 23			KBAK	COLUMBUS	IN (US)
IAP	VOR-A			KI34	GREENSBURG	IN (US)
IAP	COPTER GPS 291			K8A4	INDIANAPOLIS	IN (US)
IAP	COPTER VOR/DME 287			K8A4	INDIANAPOLIS	IN (US)
IAP	NDB RWY 1		3	KHFY	INDIANAPOLIS	IN (US)
IAP	RNAV (GPS) RWY 1			KHFY	INDIANAPOLIS	IN (US)
IAP	VOR-A		3	KHFY	INDIANAPOLIS	IN (US)
IAP	ILS OR LOC RWY 14		2	KIND	INDIANAPOLIS	IN (US)
IAP	ILS OR LOC RWY 32 (ALT MA)	1	4	KIND	INDIANAPOLIS	IN (US)
IAP	ILS OR LOC RWY 25		4	KMQJ	INDIANAPOLIS	IN (US)
IAP	RNAV (GPS) RWY 25		7	KMQJ	INDIANAPOLIS	IN (US)
IAP	VOR RWY 34		5	KMQJ	INDIANAPOLIS	IN (US)
IAP	VOR RWY 33		8	KUMP	INDIANAPOLIS	IN (US)
IAP	RNAV (GPS) RWY 1			KGEZ	SHELBYVILLE	IN (US)
IAP	RNAV (GPS) RWY 19			KGEZ	SHELBYVILLE	IN (US)
IAP	VOR RWY 19		1	KGEZ	SHELBYVILLE	IN (US)
IAP	RNAV (GPS) RWY 8			KI22	WINCHESTER	IN (US)
IAP	NDB RWY 20			KLUG	LEWISBURG	TN (US)

QUALITY CHECKED 3

STAR	CLANG	KEYE	INDIANAPOLIS	IN (US)
STAR	DECEE	KEYE	INDIANAPOLIS	IN (US)
STAR	CLANG	KIND	INDIANAPOLIS	IN (US)
STAR	DECEE	KIND	INDIANAPOLIS	IN (US)
STAR	RACYR	KIND	INDIANAPOLIS	IN (US)
STAR	CLANG	KMQJ	INDIANAPOLIS	IN (US)
STAR	CEGRM	KCVG	COVINGTON	KY (US)
STAR	SHELBYVILLE	KCVG	COVINGTON	KY (US)

REQUIRED CHARTING: DP, STAR, IAP, CONTROLLER, EN ROUTE LOW, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 19 **DATE OF REVISION:** 09/20/2012

REASON FOR REVISION:
DELETED FIX RESTRICTIONS DATA.

DEVELOPED BY: **DATE:** 03/29/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (MARK BURTZ)

APPROVED BY: **DATE:** 06/19/2012 **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: CEN
ARTCC: ZID
ATC FACILITY: IND APP CON
OTHER:

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: WOLTR **STATE:** MO **COUNTRY:** US

LATITUDE/LONGITUDE: 384941.32N/0902503.02W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	EEMOS (RNAV)			KSTL	ST LOUIS	MO (US)
DP	JHART (RNAV)			KSTL	ST LOUIS	MO (US)
DP	KSHEE (RNAV)			KSTL	ST LOUIS	MO (US)
DP	NATCA (RNAV)			KSTL	ST LOUIS	MO (US)
DP	ROTRY (RNAV)			KSTL	ST LOUIS	MO (US)
DP	TEDDD (RNAV)			KSTL	ST LOUIS	MO (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 09/20/2012

DEVELOPED BY: **DATE:** 04/09/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (STEVE NELSON)

APPROVED BY: **DATE:** 08/27/2012 **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZKC
ATC FACILITY: STL APP CON
OTHER:

INFO ONLY

QUALITY CHECKED 3

RADIO FIX AND HOLDING DATA RECORD

NAME: WORKE **STATE:** IL **COUNTRY:** US

LATITUDE/LONGITUDE: 390702.95N/0874625.21W **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	DIST FROM FAC FEET	MRA	MAA
1	BIBLE GROVE	BIB	VORTAC	L	067.14	070.14	35.16	35.16		2300	17500
2	MATTOON	MTO	VOR/DME	L	129.00	132.00		32.20		2300	17500

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

REMARKS:
BIBLE GROVE (FAC 1) AND MATTOON (FAC 2) USED TO ESTABLISH FIX COORDINATES

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	GATEWAY	1, 2		KALN	ALTON/ST LOUIS	IL (US)
DP	GATEWAY	1, 2		KBLV	BELLEVILLE	IL (US)
DP	GATEWAY	1, 2		KCPS	CAHOKIA/ST LOUIS	IL (US)
DP	GATEWAY	1, 2		KSTL	ST LOUIS	MO (US)
DP	JHART (RNAV)			KSTL	ST LOUIS	MO (US)
DP	GATEWAY	1, 2		KSUS	ST LOUIS	MO (US)
EN ROUTE	V12	1, 2				(US)
IAP	RNAV (GPS) RWY 4			K1H8	CASEY	IL (US)
IAP	RNAV (GPS) RWY 9			KRSV	ROBINSON	IL (US)
IAP	RNAV (GPS) RWY 18			KSIV	SULLIVAN	IN (US)
IAP	RNAV (GPS) RWY 36			KSIV	SULLIVAN	IN (US)
IAP	ILS OR LOC RWY 5			KHUF	TERRE HAUTE	IN (US)

REQUIRED CHARTING: DP, IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 10 **DATE OF REVISION:** 09/20/2012

INFO ONLY

REASON FOR REVISION:
1. ADDED FIX TYPE WP.
2. UPDATED FACILITY USED TO ESTABLISH FIX COORDINATES NOTE.
3. UPDATED FIX USE.

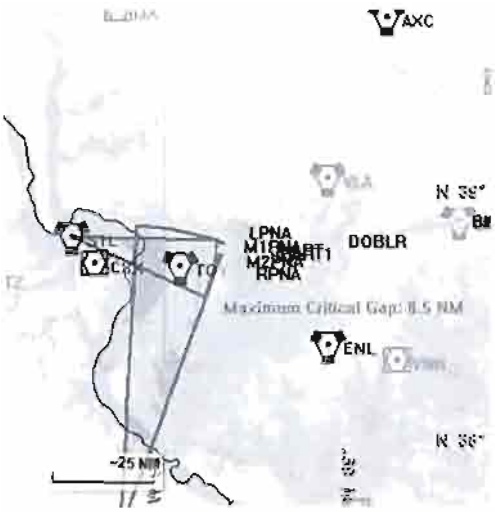
DEVELOPED BY: **DATE:** 04/06/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (STEVE NELSON)

APPROVED BY: **DATE:** 08/27/2012 **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZID
ATC FACILITY: HUF APP CON
OTHER:

QUALITY CHECKED 3



Name:	enanders
Project Name:	
Software:	RNAV-Pro™
Version:	2.36
Date/Time:	7/17/2012 2:14:07 PM
Input File:	Grid Area Assessment
Databases:	AVNIS Date. 02/07/2012
	Obstacle Date: 08/26/2011
	NFD Date. 09/30/2010
	DTED® (MAX) Date: 2002

Results Summary:

Grid ✔ DME/DME Grid Analysis

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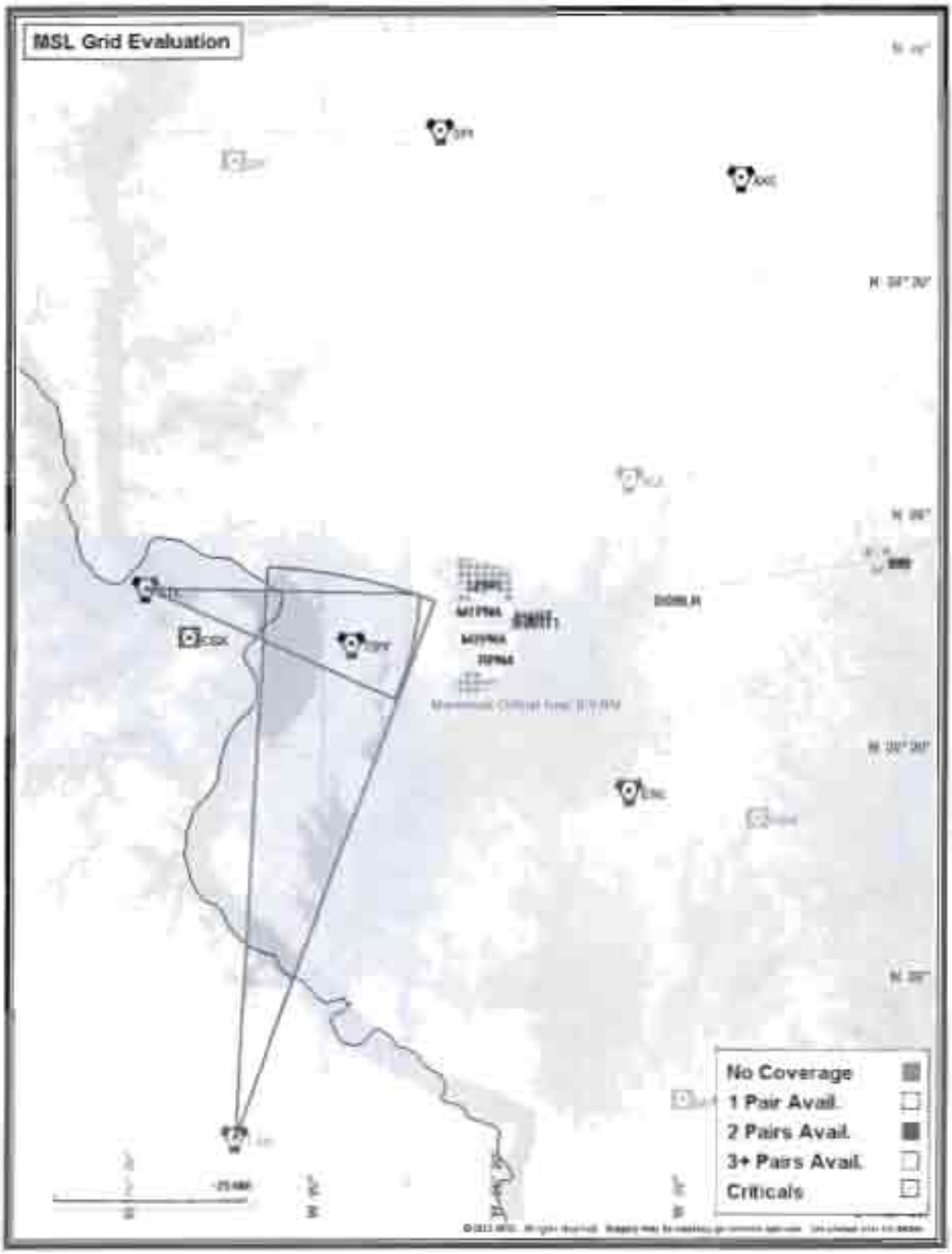

MSL Grid Evaluation
No Coverage
1 Pair Avail.
2 Pairs Avail.
3+ Pairs Avail.
Criticals

DME/DME Grid Analysis

Return To Summary

Coverage Exists (Criticals)

Polygon Grid Definition:

Settings:

1	Lat. N 38° 51' 39 18" Lon: W 89° 37' 54.60"	21	Lat: N 38° 37' 55 91" Lon W 89° 36' 49.18"
2	Lat: N 38° 54' 0.02" Lon: W 89° 42' 3 58"	22	Lat N 38° 38' 2.96" Lon: W 89° 37' 25.48"
3	Lat: N 38° 54' 22.69" Lon: W 89° 41' 39 77"	23	Lat N 38° 38' 13 42" Lon: W 89° 38' 0.42"
4	Lat: N 38° 54' 42 93" Lon: W 89° 41' 12.59"	24	Lat: N 38° 38' 27.14" Lon: W 89° 38' 33.47"
5	Lat: N 38° 55' 0.42" Lon: W 89° 40' 42.46"	25	Lat: N 38° 38' 37.59" Lon: W 89° 38' 53 50"
6	Lat: N 38° 55' 14.92" Lon: W 89° 40' 9.82"	26	Lat. N 38° 41' 52.19" Lon: W 89° 35' 53.81"
7	Lat: N 38° 55' 26 19" Lon: W 89° 39' 35 15"	27	Lat: N 38° 41' 52.19" Lon: W 89° 35' 53 81"
8	Lat. N 38° 55' 34 08" Lon: W 89° 38' 58 99"	28	Lat: N 38° 42' 24.75" Lon: W 89° 36' 44 46"
9	Lat. N 38° 55' 38 46" Lon: W 89° 38' 21.86"	29	Lat. N 38° 43' 1 89" Lon. W 89° 37' 29 68"
10	Lat: N 38° 55' 39.27" Lon: W 89° 37' 44 32"	30	Lat: N 38° 43' 43.06" Lon: W 89° 38' 8.81"
11	Lat: N 38° 55' 36.50" Lon. W 89° 37' 6 94"	31	Lat: N 38° 44' 27 67" Lon: W 89° 38' 41.24"
12	Lat: N 38° 55' 32.85" Lon: W 89° 36' 43.25"	32	Lat: N 38° 45' 15.03" Lon: W 89° 39' 6 51"
13	Lat: N 38° 54' 13.21" Lon: W 89° 29' 27.99"	33	Lat: N 38° 46' 4.45" Lon: W 89° 39' 24 22"
14	Lat: N 38° 41' 34.86" Lon: W 89° 26' 48 31"	34	Lat: N 38° 46' 55 20" Lon: W 89° 39' 34.12"
15	Lat. N 38° 38' 27 51" Lon: W 89° 33' 13.37"	35	Lat. N 38° 47' 46.50" Lon: W 89° 39' 36.04"
16	Lat: N 38° 38' 13 71" Lon. W 89° 33' 46.37"	36	Lat: N 38° 48' 37.61" Lon: W 89° 39' 29.95"
17	Lat: N 38° 38' 3.17" Lon: W 89° 34' 21.27"	37	Lat. N 38° 49' 27 76" Lon: W 89° 39' 15.95"

DME/DME Grid Analysis (Continued.)

Return To Summary

Coverage Exists (Criticals)

Settings:

Polygon Grid Definition:

18	Lat: N 38° 37' 56.04" Lon: W 89° 34' 57.55"	38	Lat: N 38° 50' 16.20" Lon W 89° 38' 54 23"
19	Lat. N 38° 37' 52.42" Lon: W 89° 35' 34.66"	39	Lat: N 38° 51' 2.20" Lon: W 89° 38' 25.12"
20	Lat. N 38° 37' 52.38" Lon. W 89° 36' 12.05"	40	Lat: N 38° 51' 39 18" Lon: W 89° 37' 54.60"

Lat Step: 1 NM
Lon Step: 1 NM
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Co-Frequencies: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , and User
DME Include Angles: 30 to 150
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Altitude: 10000.0 Ft. MSL
PNA Import from RDVA-Pro: KSTL PNA JHART DOBLR

DME/DME Grid Analysis (Continued.)

Return To Summary

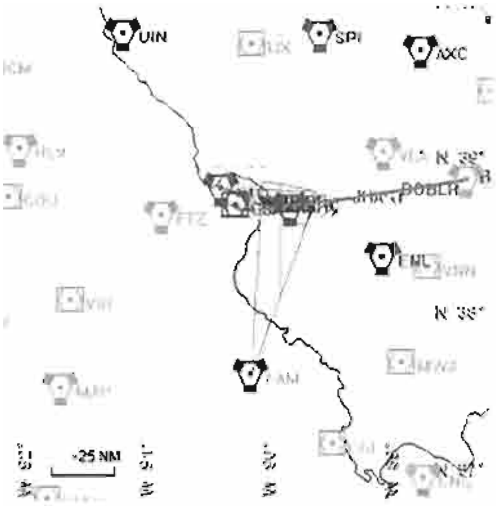
Maximum Gap: 0.0 NM

Maximum Critical Gap: 8.5 NM

	AGL Altitudes
Min Cell Altitude	9,386.5 Ft.
Max Cell Altitude	9,540.7 Ft.
Mean Cell Altitude	9,467.1 Ft.
Std Dev. Cell Altitude	37.6 Ft.

Statistics based only on passing cells

Most Used DMEs: VLA (169), TOY (169), ENL (169), CSX (130), VNN (31), and STL (25).



Name:	enanders
Project Name:	
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	2/9/2012 2:43:06 PM
Input File:	JHART RW11 BIB 20120 ..
Databases:	AVNIS Date: 08/26/2011
	NFD Date: 07/02/2009
	DTED® (MAX) Date. 2002

Results Summary:

Flyability	✔	**Please Check Flyability Results**
DME/DME	✔	
Radars	✔	
Comms		
TERPS		

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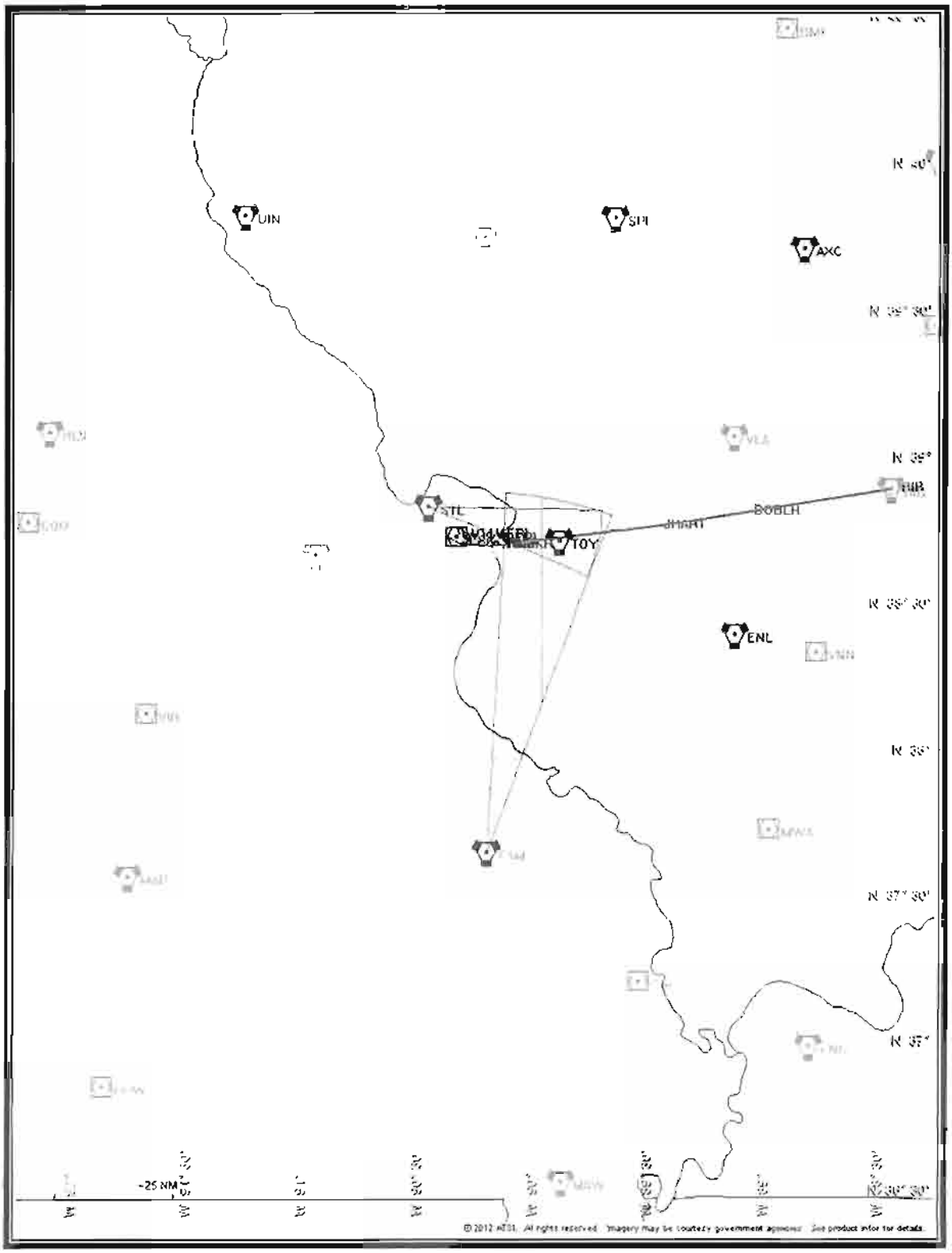

UIN
SPI
AXC
STL
TOY
JHART
DOBLH
HIR
ENL
25 NM

Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW11(A...	WP	N 38° 45' 35.83" W 90° 24' 35.55"	618.0	VNAV	0 0	Fly Over	TF
RW29(D...	WP	N 38° 44' 48.46" W 90° 22' 59.39"	591 0	VNAV	130.0	Fly Over	VA
GH11:	WP	N 38° 44' 12.37" W 90° 21' 46.18"	1120.0	VNAV	145.0	Fly Over	DF
FUNKE	WP	N 38° 43' 39.26" W 90° 15' 35.58"	2500.0	VNAV	180.0	Fly By	TF
RAMKR	WP	N 38° 43' 37.54" W 90° 11' 36.78"	3122.9	VNAV	180.0	Fly By	TF
JHART	WP	N 38° 47' 32.80" W 89° 30' 39.12"	9578.6	VNAV	180.0	Fly By	TF
DOBLR	WP	N 38° 50' 31.91" W 89° 7' 10.92"	13295.5	VNAV	210.0	Fly By	TF
BIB	WP	N 38° 55' 13.24" W 88° 28' 54.50"	18000.0	VNAV	240.0	Fly Over	TF

Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL

Climb Gradient: 200 Ft/NM after next to last waypoint up to 18000 0 Ft

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KSTL
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL
Ground Speeds:
Departure. **120.0 Kts** out to **10.0 NM**
Table:
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Flight Track comes into contact with terrain. Minimum AGL along route was -2.94 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

DME/DME

Return To Summary

Settings:

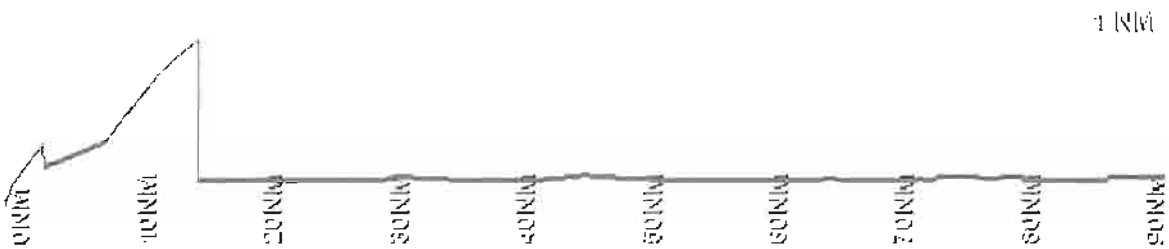
RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
  Initial Drift: 0.165 NM
  INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
Minimum MSL DMEs Avail: 1839 Ft.

Total Number of DMEs Used: 15

Maximum DME Error: 0.856 NM.

No Critical DMEs were found.

Available DMEs: STL, FTZ, CSX, FAM, TOY, VLA, ENL, VNN, BIB, PXV, SPI, TTH, AXC, SAM, MTO



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	STL	N 38° 51' 38 48" W 90° 28' 56 52"	H + ESV	User	NO	1 174	Enabled	22 8 %	21.8 %
2	FTZ	N 38° 41' 39 58" W 90° 58' 16 17"	L	Database	NO	1 174	Enabled	7 9 %	5 3 %
3	FAM	N 37° 40' 24 39" W 90° 14' 2 53"	H + ESV	User	NO	1.309	Enabled	15.3 %	17 0 %
4	CSX	N 38° 45' 9.88" W 90° 21' 39.46"	H	Database	NO	0.856	Enabled	8.5 %	9.4 %
5	ENL	N 38° 25' 12.00" W 89° 9' 32.39"	H	Database	NO	0.856	Enabled	34 7 %	38 5 %
6	VLA	N 39° 5' 37.26" W 89° 9' 44.87"	L	Database	NO	0.856	Enabled	20 2 %	22.4 %
7	TOY	N 38° 44' 20.97" W 89° 55' 7.06"	L	Database	NO	0.856	Enabled	13.3 %	14.7 %
8	BIB	N 38° 55' 13 26" W 88° 28' 54.47"	L	Database	NO	0.856	Enabled	17.3 %	19.2 %
9	VNN	N 38° 21' 43 03" W 88° 48' 26 41"	L	Database	NO	0.856	Enabled	9 9 %	11.0 %
10	AXC	N 39° 44' 15.08" W 88° 51' 23 15"	H	Database	NO	0 856	Enabled	9 8 %	10.8 %
11	SAM	N 38° 29' 6.68" W 88° 5' 8.93"	L	Database	NO	0 856	Enabled	2 1 %	2 4 %
12	PXV	N 37° 55' 41.95" W 87° 45' 44.56"	H	Database	NO	0.856	Enabled	0.0 %	0.0 %
13	TTH	N 39° 29' 20.19" W 87° 14' 56.47"	H	Database	NO	0.856	Enabled	0.0 %	0 0 %
14	MTO	N 39° 28' 40 42" W 88° 17' 10 44"	L	Database	NO	0.856	Enabled	0.0 %	0.0 %
15	SPI	N 39° 50' 23.04" W 89° 40' 39.83"	H	Database	NO	0 856	Enabled	4 4 %	4 8 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0 0						
1.5	STL					
2 5	STL	FTZ	CSX			
7 4	STL	FTZ	CSX			
10.5	STL	FTZ	CSX	FAM		
26.3	STL	VLA	CSX	FAM	ENL	TOY
42 7	BIB	VLA	TOY	VNN	ENL	

DME/DME (Continued.)

Return To Summary

Flight Check DME Selection (Continued.)

Distance [NM]	Selected DMEs					Alternate
61.4	BIB	VLA	TOY	VNN	ENL	PXV
71.5	BIB	CSX	AXC	VNN	STL	VLA
81 7	BIB	SAM	AXC	SPI	ENL	STL

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 38° 45' 35.83" W 90° 24' 35.55"	N 38° 44' 5 41" W 90° 21' 13.44"	3.1
	VOR: CSX	Available from N 38° 45' 35.83" W 90° 24' 35 55" to N 38° 44' 5.41" W 90° 21' 13.44"	
	VOR. FTZ	Available from N 38° 45' 35 83" W 90° 24' 35.55" to N 38° 44' 5.41" W 90° 21' 13.44"	
	VOR. STL	Available from N 38° 45' 35.83" W 90° 24' 35 55" to N 38° 44' 5.41" W 90° 21' 13 44"	
	VOR: TOY	Available from N 38° 45' 35.83" W 90° 24' 35 55" to N 38° 44' 5 41" W 90° 21' 13.44"	
2	N 38° 43' 38 90" W 90° 15' 1.93"	N 38° 44' 11.82" W 90° 5' 45 67"	7.3
	VOR: CSX	Available from N 38° 43' 38.90" W 90° 15' 1.93" to N 38° 44' 11 82" W 90° 5' 45.67"	
	VOR: FTZ	Available from N 38° 43' 38.90" W 90° 15' 1 93" to N 38° 44' 2.73" W 90° 7' 18.03"	
	VOR STL	Available from N 38° 43' 38.90" W 90° 15' 1.93" to N 38° 44' 11.82" W 90° 5' 45 67"	
	VOR TOY	Available from N 38° 43' 38.90" W 90° 15' 1.93" to N 38° 44' 11.82" W 90° 5' 45.67"	

User DMEs

#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	STL	N 38° 51' 38.48" W 90° 28' 56 52"	H	449 5	117.40	STL	Used

ESV: Bearing [True]: 91.0° to 114 0°
Bearing [Mag]: 90.0° to 113 0°

Arc Distance: Out to 35.0 NM
Altitude: 4000 0 to 10000 0 Ft.

DME/DME (Continued.)

Return To Summary

User DMEs (Continued.)

#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
2	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H	1220 0	115 70	FAM	Used

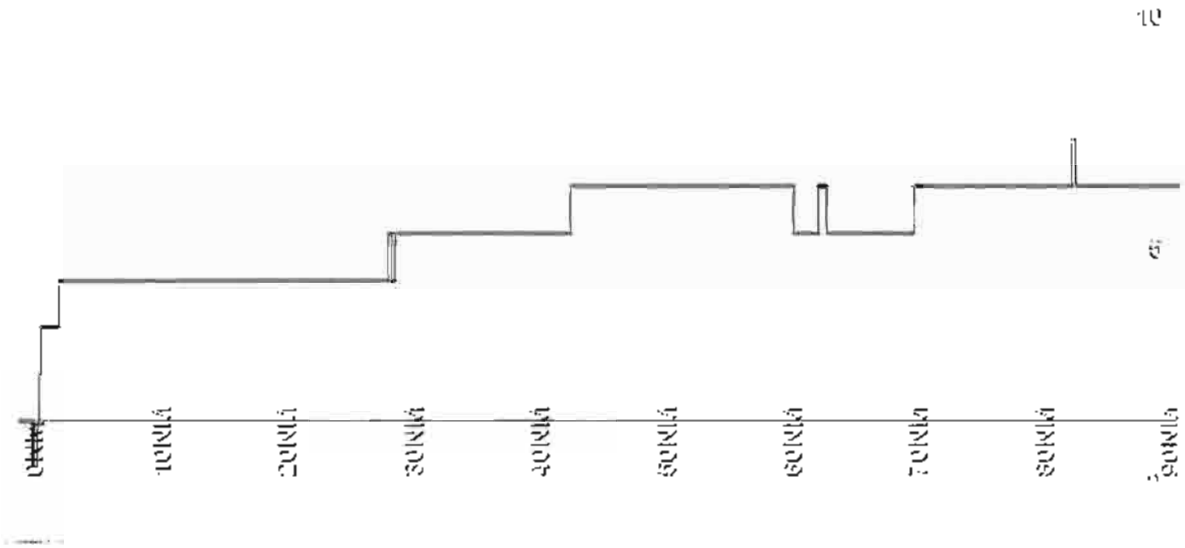
ESV: Bearing [True]: 3.0° to 20.0°
Bearing [Mag]: 2 0° to 19.0°

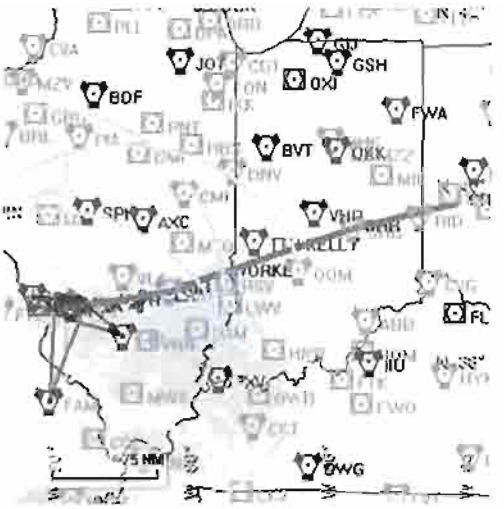
Arc Distance: Out to 74.0 NM
Altitude. 4000 0 to 10000.0 Ft.

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR





Name:	enanders
Project Name:	
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	4/8/2012 3:04:02 PM
Input File:	JHART RW11 CREEP_20.
Databases:	AVNIS Date: 08/26/2011
	NFD Date. 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔	**Please Check Flyability Results**
DME/DME	✔	
Radars	✔	
Comms		
TERPS		

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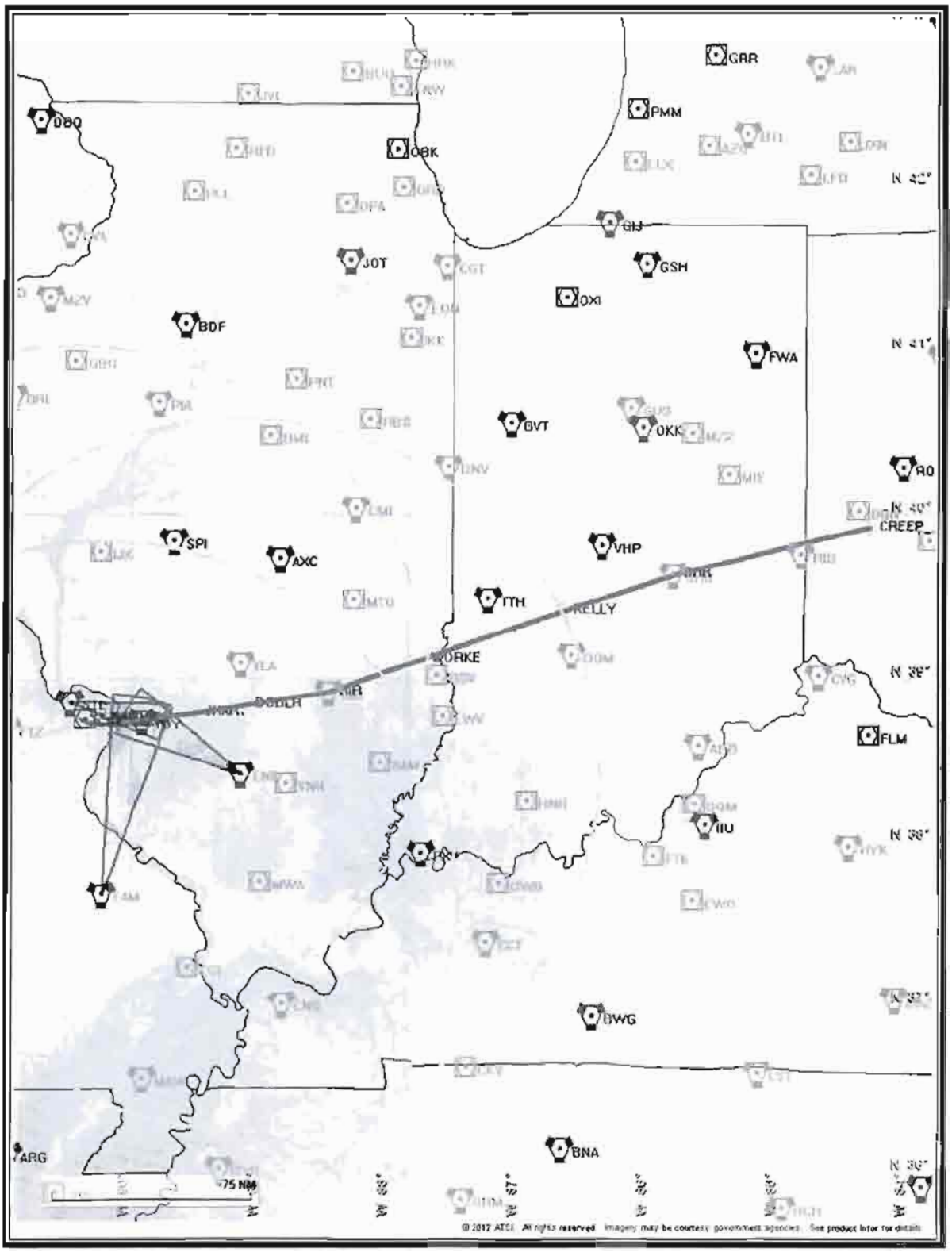

GRR
PMM
DBQ
OBK
GIJ
GSH
JOT
OXI
BDF
FWA
BVT
OKK
RO
CREEP_
SPI
AXC
VHP
ITH
KELLY
BURKE
FLM
IIU
BWG
BNA
ARG
75 NM

Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW11(A	WP	N 38° 45' 35.83" W 90° 24' 35.55"	618.0	VNAV	0.0	Fly Over	TF
RW29(D.	WP	N 38° 44' 48.46" W 90° 22' 59 39"	591.0	VNAV	130.0	Fly Over	VA
GH11	WP	N 38° 44' 12 38" W 90° 21' 46.17"	1120.0	VNAV	145.0	Fly Over	DF
FUNKE	WP	N 38° 43' 39.26" W 90° 15' 35.58"	2500.0	VNAV	180.0	Fly By	TF
RAMKR	WP	N 38° 43' 37 54" W 90° 11' 36 78"	3122.9	VNAV	180.0	Fly By	TF
JHART	WP	N 38° 47' 32.80" W 89° 30' 39 12"	9578 6	VNAV	180 0	Fly By	TF
DOBLR	WP	N 38° 50' 31 91" W 89° 7' 10.92"	13295.5	VNAV	210.0	Fly By	TF
BIB	WP	N 38° 55' 13.24" W 88° 28' 54.50"	18000.0	VNAV	240 0	Fly By	TF
WORKE	WP	N 39° 7' 2.95" W 87° 46' 25.21"	18000.0	VNAV	240.0	Fly By	TF
KELLY	WP	N 39° 24' 49 15" W 86° 40' 17.29"	18000.0	VNAV	240 0	Fly By	TF
SH8	WP	N 39° 37' 57.15" W 85° 49' 27.54"	18000.0	VNAV	240.0	Fly By	TF
CREEP_	WP	N 39° 55' 15.28" W 84° 18' 31.41"	18000 0	VNAV	240.0	Fly Over	TF

Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL

Climb Gradient: 200 Ft/NM after next to last waypoint up to 18000.0 Ft

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KSTL
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL
Ground Speeds:
Departure: **120.0 Kts** out to **10.0 NM**
Table:
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Flight Track comes into contact with terrain. Minimum AGL along route was -2.94 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

DME/DME

Return To Summary

Settings:

RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0 165 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3 0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
Minimum MSL DMEs Avail: 1839 Ft.

Total Number of DMEs Used: 28

Maximum DME Error: 0.856 NM.

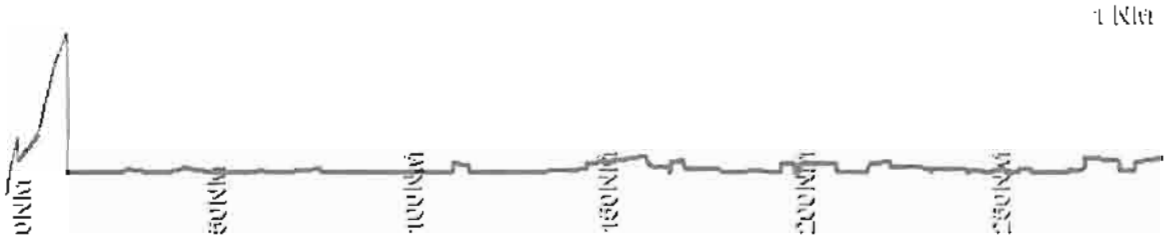
No Critical DMEs were found

Available DMEs: STL, FTZ, CSX, FAM, ENL, TOY, VLA, VNN, BIB, PXV, SPI, TTH, AXC, SAM, MTO, VHP, BVT, OKK, OOM, IIU, SHB, FWA, FLM, ROD, RID, MIE, DQN, APE

Foreign DMEs within range: YQG, YQO, YXU

DME/DME (Continued.)

Return To Summary



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H + ESV	User	NO	1.174	Enabled	6.4 %	5.5 %
2	FTZ	N 38° 41' 39.58" W 90° 58' 16.17"	L	Database	NO	1.174	Enabled	2.6 %	1.6 %
3	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H + ESV	User	NO	1.309	Enabled	5.1 %	5.3 %
4	CSX	N 38° 45' 9.88" W 90° 21' 39.46"	H	Database	NO	0.856	Enabled	3.9 %	4.0 %
5	ENL	N 38° 25' 12.00" W 89° 9' 32.39"	H + ESV	User	NO	0.856	Enabled	11.1 %	11.5 %
6	VLA	N 39° 5' 37.26" W 89° 9' 44.87"	L	Database	NO	0.856	Enabled	8.3 %	8.6 %
7	TOY	N 38° 44' 20.97" W 89° 55' 7.06"	L	Database	NO	0.856	Enabled	4.4 %	4.6 %
8	BIB	N 38° 55' 13.26" W 88° 28' 54.47"	L	Database	NO	0.856	Enabled	9.7 %	10.1 %
9	VNN	N 38° 21' 43.03" W 88° 48' 26.41"	L	Database	NO	0.856	Enabled	4.9 %	5.1 %
10	AXC	N 39° 44' 15.08" W 88° 51' 23.15"	H	Database	NO	1.038	Enabled	15.8 %	16.4 %
11	SAM	N 38° 29' 6.68" W 88° 5' 8.93"	L	Database	NO	0.856	Enabled	2.5 %	2.6 %
12	PXV	N 37° 55' 41.95" W 87° 45' 44.56"	H	Database	NO	0.856	Enabled	7.1 %	7.3 %
13	TTH	N 39° 29' 20.19" W 87° 14' 56.47"	H	Database	NO	0.856	Enabled	23.7 %	24.5 %
14	MTO	N 39° 28' 40.42" W 88° 17' 10.44"	L	Database	NO	0.856	Enabled	8.2 %	8.4 %
15	SPI	N 39° 50' 23.04" W 89° 40' 39.83"	H	Database	NO	0.856	Enabled	0.0 %	0.0 %
16	VHP	N 39° 48' 53.02" W 86° 22' 2.88"	H	Database	NO	0.856	Enabled	12.8 %	13.2 %
17	OKK	N 40° 31' 40.00" W 86° 3' 28.81"	H	Database	NO	0.856	Enabled	8.8 %	9.1 %
18	OOM	N 39° 8' 37.76" W 86° 36' 46.87"	L	Database	NO	0.856	Enabled	1.2 %	1.3 %
19	BVT	N 40° 33' 22.03" W 87° 4' 9.55"	H	Database	NO	0.856	Enabled	3.4 %	3.6 %
20	SHB	N 39° 37' 57.15" W 85° 49' 27.54"	L	Database	NO	0.856	Enabled	8.8 %	9.1 %

DME/DME (Continued.)

Return To Summary

DMEs Used (Continued.)

#	Name	Lat/Lon	Range	Source	Critical	Err. (NM)	Status	Time	Distance
21	IIU	N 38° 6' 12.47" W 85° 34' 38.77"	H	Database	NO	0.856	Enabled	6.0 %	6.3 %
22	FWA	N 40° 58' 44.63" W 85° 11' 17.01"	H	Database	NO	0.856	Enabled	9.0 %	9.3 %
23	MIE	N 40° 14' 14.25" W 85° 23' 38.53"	L	Database	NO	0.856	Enabled	5.5 %	5.7 %
24	ROD	N 40° 17' 16.08" W 84° 2' 35.28"	H	Database	NO	0.856	Enabled	3.7 %	3.8 %
25	RID	N 39° 45' 18.08" W 84° 50' 19.85"	L	Database	NO	0.856	Enabled	3.4 %	3.5 %
26	FLM	N 38° 38' 58.16" W 84° 18' 38.27"	H	Database	NO	0.856	Enabled	6.9 %	7.2 %
27	DQN	N 40° 0' 59.19" W 84° 23' 48.83"	L	Database	NO	0.856	Enabled	2.4 %	2.4 %
28	APE	N 40° 9' 3.82" W 82° 35' 17.88"	H	Database	NO	0.856	Enabled	2.9 %	3.0 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0						
1.5	STL					
2.5	STL	FTZ	CSX			
7.4	STL	FTZ	CSX			
10.5	STL	FTZ	CSX	FAM	ENL	
26.3	STL	VLA	CSX	FAM	ENL	TOY
42.7	BIB	VLA	TOY	VNN	ENL	
61.4	BIB	VLA	TOY	VNN	ENL	
71.5	BIB	VLA	AXC	VNN	CSX	ENL
91.3	BIB	PXV	AXC	SAM	TTH	MTO
102.4	BIB	MTO	AXC	ENL	TTH	SPI
112.5	BIB	MTO	VHP	ENL	TTH	PXV
126.9	AXC	MTO	PXV	ENL	TTH	VHP
137.0	AXC	OOM	PXV	OKK	TTH	VHP
169.5	VHP	OOM	PXV	OKK	TTH	BVT
181.2	BVT	OOM	SHB	OKK	TTH	IIU
191.3	BVT	IIU	SHB	VHP	TTH	OKK

DME/DME (Continued.)

Return To Summary

Flight Check DME Selection (Continued.)

Distance [NM]	Selected DMEs					Alternate
211.5	OKK	IIU	SHB	VHP	TTH	FWA
222.5	FWA	IIU	FLM	VHP	TTH	ROD
233.0	FWA	OKK	MIE	VHP	ROD	FLM
243.5	FWA	SHB	MIE	VHP	RID	FLM
253.7	DQN	ROD	MIE	VHP	FLM	FWA
271.5	DQN	RID	OKK	APE	FLM	VHP
283.2	VHP	RID	FWA	APE	FLM	OKK

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 38° 45' 35.83" W 90° 24' 35.55"	N 38° 44' 5.42" W 90° 21' 13.43"	3.1
	VOR: CSX	Available from N 38° 45' 35.83" W 90° 24' 35.55" to N 38° 44' 5.42" W 90° 21' 13.43"	
	VOR: FTZ	Available from N 38° 45' 35.83" W 90° 24' 35.55" to N 38° 44' 5.42" W 90° 21' 13.43"	
	VOR: STL	Available from N 38° 45' 35.83" W 90° 24' 35.55" to N 38° 44' 5.42" W 90° 21' 13.43"	
	VOR: TOY	Available from N 38° 45' 35.83" W 90° 24' 35.55" to N 38° 44' 5.42" W 90° 21' 13.43"	
2	N 38° 43' 38.90" W 90° 15' 1.92"	N 38° 44' 11.82" W 90° 5' 45.66"	7.3
	VOR: CSX	Available from N 38° 43' 38.90" W 90° 15' 1.92" to N 38° 44' 11.82" W 90° 5' 45.66"	
	VOR: FTZ	Available from N 38° 43' 38.90" W 90° 15' 1.92" to N 38° 44' 2.73" W 90° 7' 18.02"	
	VOR: STL	Available from N 38° 43' 38.90" W 90° 15' 1.92" to N 38° 44' 11.82" W 90° 5' 45.66"	
	VOR: TOY	Available from N 38° 43' 38.90" W 90° 15' 1.92" to N 38° 44' 11.82" W 90° 5' 45.66"	

DME/DME (Continued.)

Return To Summary

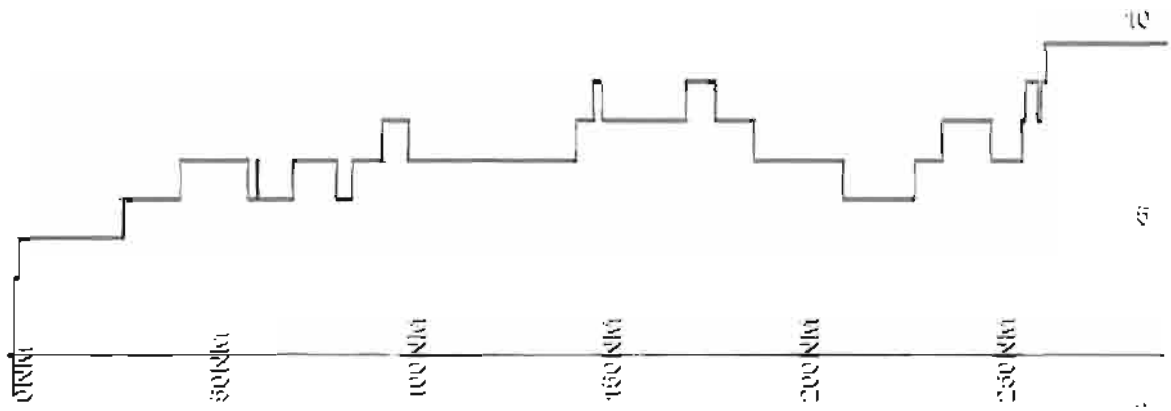
User DMEs

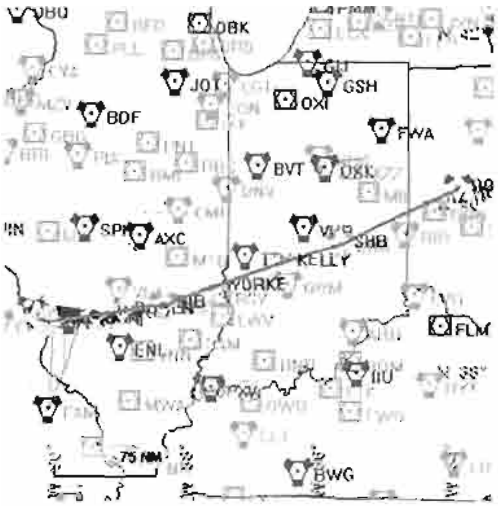
#	Name	Lat/Lon	Range	Elevation (Ft)	Frequency	Replaces:	Status
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H	449.5	117.40	STL	Used
		ESV: Bearing (True): 91.0° to 114.0° Bearing (Mag): 90.0° to 113.0°			Arc Distance: Out to 35.0 NM Altitude: 4000.0 to 10000.0 Ft		
2	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H	1220.0	115.70	FAM	Used
		ESV: Bearing (True): 3.0° to 20.0° Bearing (Mag): 2.0° to 19.0°			Arc Distance: Out to 74.0 NM Altitude: 4000.0 to 10000.0 Ft		
3	ENL	N 38° 25' 12.00" W 89° 9' 32.39"	H	545.8	115.00	ENL	Used
		ESV: Bearing (True): 288.0° to 311.0° Bearing (Mag): 284.0° to 307.0°			Arc Distance: Out to 48.0 NM Altitude: 3000.0 to 9000.0 Ft.		

Radar Analysis

Return To Summary

Settings: **Radar Types**: ARSR and ASR





Name:	enanders
Project Name:	
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	2/9/2012 3:59.39 PM
Input File:	JHART RW11 ROD 20120
Databases:	AVNIS Date: 08/26/2011
	NFD Date: 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✓ Please Check Flyability Results
DME/DME	✓
Radars	✓
Comms	
TERPS	

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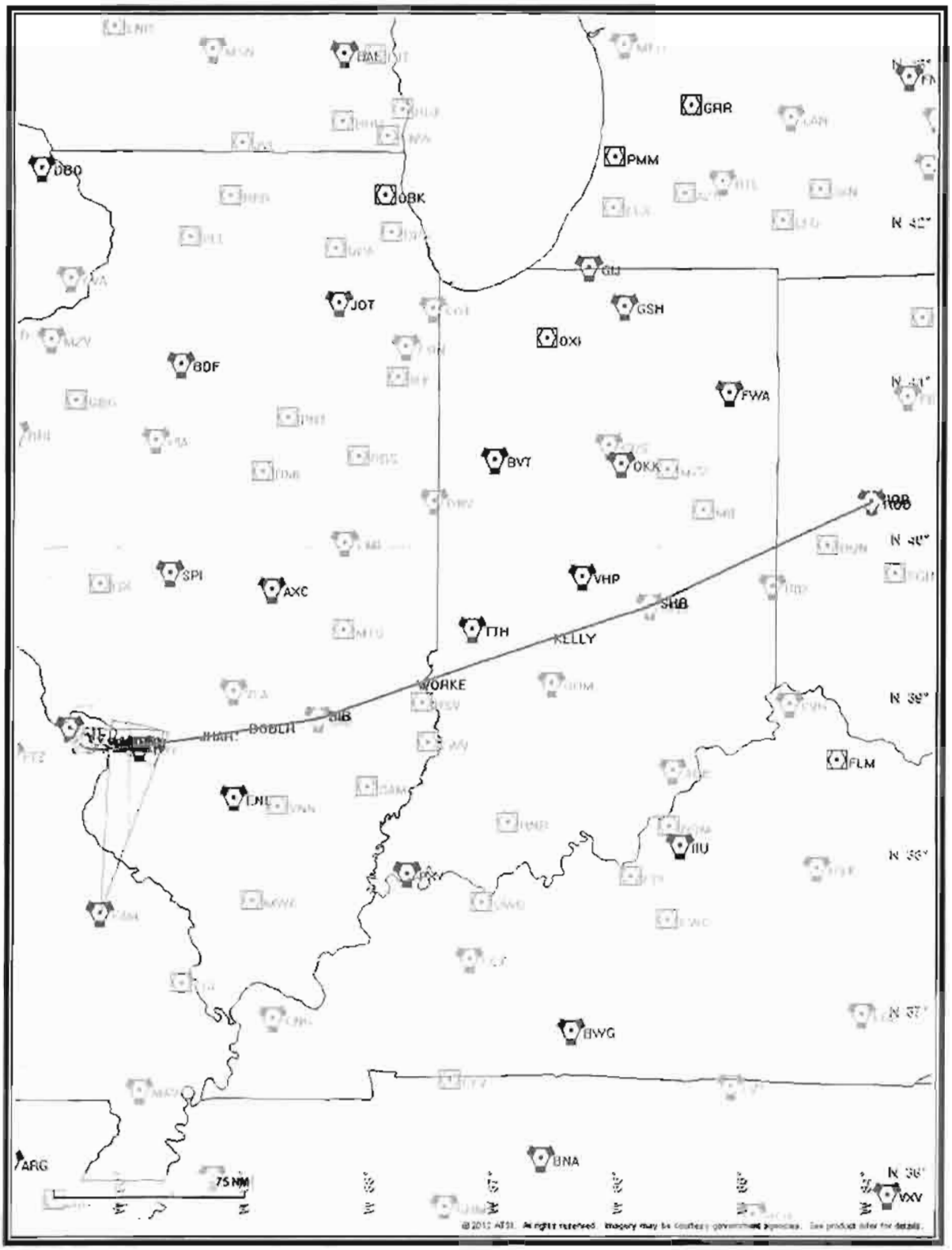

GRR
PMM
DBQ
OBK
JOT
GSH
OXI
BOF
FWA
BVT
OKK
SPI
AXC
VHP
TTH
KELLY
WORKE
JHART
DOBLR
FLM
IIU
BWG
BNA
ARG
75 NM
N 42°
N 41°
N 40°
N 39°
N 38°
N 37°
N 36°

Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW11(A...	WP	N 38° 45' 35.83" W 90° 24' 35.55"	618.0	VNAV	0.0	Fly Over	TF
RW29(D.	WP	N 38° 44' 48.46" W 90° 22' 59.39"	591.0	VNAV	130.0	Fly Over	VA
GH11	WP	N 38° 44' 12.37" W 90° 21' 46.18"	1120.0	VNAV	145.0	Fly Over	DF
FUNKE	WP	N 38° 43' 39.26" W 90° 15' 35.58"	2500.0	VNAV	180.0	Fly By	TF
RAMKR	WP	N 38° 43' 37.54" W 90° 11' 36.78"	3122.9	VNAV	180.0	Fly By	TF
JHART	WP	N 38° 47' 32.80" W 89° 30' 39.12"	9578.6	VNAV	180.0	Fly By	TF
DOBLR	WP	N 38° 50' 31.91" W 89° 7' 10.92"	13295.5	VNAV	210.0	Fly By	TF
BIB	WP	N 38° 55' 13.24" W 88° 28' 54.50"	18000.0	VNAV	240.0	Fly By	TF
WORKE	WP	N 39° 7' 2.95" W 87° 46' 25.21"	18000.0	VNAV	240.0	Fly By	TF
KELLY	WP	N 39° 24' 49.15" W 86° 40' 17.29"	18000.0	VNAV	240.0	Fly By	TF
SHB	WP	N 39° 37' 57.15" W 85° 49' 27.54"	18000.0	VNAV	240.0	Fly By	TF
ROD	WP	N 40° 17' 16.08" W 84° 2' 35.28"	18000.0	VNAV	240.0	Fly Over	TF

Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL

Climb Gradient: 200 Ft/NM after next to last waypoint up to 18000.0 Ft

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KSTL
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL
Ground Speeds:
Departure: **120.0 Kts** out to **10.0 NM**
Table.
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Flight Track comes into contact with terrain. Minimum AGL along route was -2.94 Ft
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER

DME/DME

Return To Summary

Settings:

RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
  Initial Drift: 0.165 NM
  INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
Minimum MSL DMEs Avail: 1839 Ft.

Total Number of DMEs Used: 28

Maximum DME Error: 0.856 NM

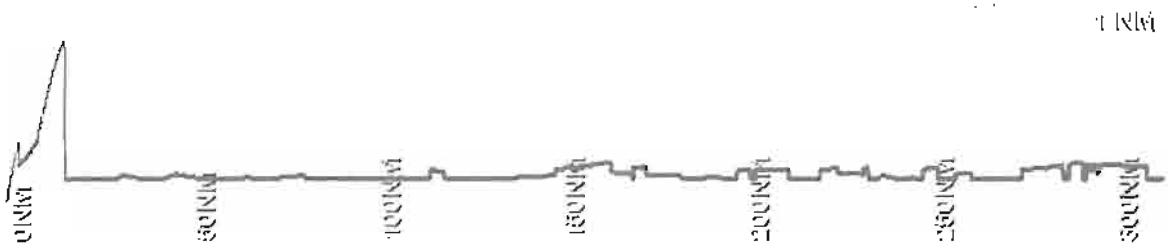
No Critical DMEs were found

Available DMEs: STL, FTZ, CSX, FAM, TOY, VLA, ENL, VNN, BIB, PXV, SPI, TTH, AXC, SAM, MTO, VHP, BVT, OKK, OOM, IIU, SHB, FWA, FLM, ROD, MIE, RID, DQN, APE

Foreign DMEs within range: YQG, YQO, YXU

DME/DME (Continued.)

Return To Summary



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H + ESV	User	NO	1.174	Enabled	6.0 %	5.2 %
2	FTZ	N 38° 41' 39.58" W 90° 58' 16.17"	L	Database	NO	1.174	Enabled	2.5 %	1.5 %
3	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H + ESV	User	NO	1.309	Enabled	4.8 %	5.0 %
4	CSX	N 38° 45' 9.88" W 90° 21' 39.46"	H	Database	NO	0.856	Enabled	3.7 %	3.8 %
5	ENL	N 38° 25' 12.00" W 89° 9' 32.39"	H	Database	NO	0.856	Enabled	10.4 %	10.8 %
6	VLA	N 39° 5' 37.26" W 89° 9' 44.87"	L	Database	NO	0.856	Enabled	7.8 %	8.0 %
7	TOY	N 38° 44' 20.97" W 89° 55' 7.06"	L	Database	NO	0.856	Enabled	4.2 %	4.3 %
8	BIB	N 38° 55' 13.26" W 88° 28' 54.47"	L	Database	NO	0.856	Enabled	9.2 %	9.5 %
9	VNN	N 38° 21' 43.03" W 88° 48' 26.41"	L	Database	NO	0.856	Enabled	4.6 %	4.8 %
10	AXC	N 39° 44' 15.08" W 88° 51' 23.15"	H	Database	NO	1.038	Enabled	14.9 %	15.4 %
11	SAM	N 38° 29' 6.68" W 88° 5' 8.93"	L	Database	NO	0.856	Enabled	2.3 %	2.4 %
12	PXV	N 37° 55' 41.95" W 87° 45' 44.56"	H	Database	NO	0.856	Enabled	6.7 %	6.9 %
13	TTH	N 39° 29' 20.19" W 87° 14' 56.47"	H	Database	NO	0.856	Enabled	23.4 %	24.1 %
14	MTO	N 39° 28' 40.42" W 88° 17' 10.44"	L	Database	NO	0.856	Enabled	7.7 %	7.9 %
15	SPI	N 39° 50' 23.04" W 89° 40' 39.83"	H	Database	NO	0.856	Enabled	0.0 %	0.0 %
16	VHP	N 39° 48' 53.02" W 86° 22' 2.88"	H	Database	NO	0.856	Enabled	13.8 %	14.2 %
17	OKK	N 40° 31' 40.00" W 86° 3' 28.81"	H	Database	NO	0.856	Enabled	9.2 %	9.5 %
18	OOM	N 39° 8' 37.76" W 86° 36' 46.87"	L	Database	NO	0.856	Enabled	1.1 %	1.2 %
19	BVT	N 40° 33' 22.03" W 87° 4' 9.55"	H	Database	NO	0.856	Enabled	3.2 %	3.3 %
20	SHB	N 39° 37' 57.15" W 85° 49' 27.54"	L	Database	NO	0.856	Enabled	10.6 %	10.9 %

DME/DME (Continued.)

Return To Summary

DMEs Used (Continued.)

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
21	IIU	N 38° 6' 12.47" W 85° 34' 38.77"	H	Database	NO	0.856	Enabled	5.8 %	6.0 %
22	FWA	N 40° 58' 44.63" W 85° 11' 17.01"	H	Database	NO	0.856	Enabled	8.2 %	8.4 %
23	RID	N 39° 45' 18.08" W 84° 50' 19.85"	L	Database	NO	0.856	Enabled	3.5 %	3.6 %
24	ROD	N 40° 17' 16.08" W 84° 2' 35.28"	H	Database	NO	0.856	Enabled	1.3 %	1.4 %
25	MIE	N 40° 14' 14.25" W 85° 23' 38.53"	L	Database	NO	0.856	Enabled	3.6 %	3.7 %
26	FLM	N 38° 38' 58.16" W 84° 18' 38.27"	H	Database	NO	0.856	Enabled	10.4 %	10.8 %
27	DQN	N 40° 0' 59.19" W 84° 23' 48.83"	L	Database	NO	0.856	Enabled	4.9 %	5.0 %
28	APE	N 40° 9' 3.82" W 82° 35' 17.88"	H	Database	NO	0.856	Enabled	5.6 %	5.8 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0						
1.5	STL					
2.5	STL	FTZ	CSX			
7.4	STL	FTZ	CSX			
10.5	STL	FTZ	CSX	FAM		
26.3	STL	VLA	CSX	FAM	ENL	TOY
42.7	BIB	VLA	TOY	VNN	ENL	
61.4	BIB	VLA	TOY	VNN	ENL	
71.5	BIB	VLA	AXC	VNN	CSX	ENL
91.3	BIB	PXV	AXC	SAM	TTH	MTO
102.4	BIB	M O	AXC	ENL	TTH	SPI
112.5	BIB	M O	VHP	ENL	TTH	PXV
126.9	AXC	MTO	PXV	ENL	TTH	VHP
137.0	AXC	OOM	PXV	OKK	TTH	VHP
169.5	VHP	OOM	PXV	OKK	TTH	BVT
181.2	BVT	OOM	SHB	OKK	TTH	IIU
191.3	BVT	IIU	SHB	VHP	TTH	OKK

DME/DME (Continued.)

Return To Summary

Flight Check DME Selection (Continued.)

Distance (NM)	Selected DMEs					Alternate
211.5	OKK	IIU	SHB	VHP	TTH	FWA
222.4	FWA	IIU	RID	VHP	TTH	FLM
233.5	MIE	ROD	OKK	VHP	SHB	FWA
243.7	MIE	RID	FWA	VHP	TTH	OKK
253.9	MIE	SHB	FWA	VHP	FLM	RID
263.9	DQN	RID	FWA	VHP	FLM	OKK
279.2	DQN	RID	APE	VHP	FLM	FWA
289.3	DQN	ROD	APE	VHP	FLM	FWA
303.6	DQN	FWA	APE	OKK	FLM	ROD

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 38° 45' 35.83" W 90° 24' 35.55"	N 38° 44' 5.41" W 90° 21' 13.44"	3.1
	VOR: CSX	Available from N 38° 45' 35.83" W 90° 24' 35.55" to N 38° 44' 5.41" W 90° 21' 13.44"	
	VOR: FTZ	Available from N 38° 45' 35.83" W 90° 24' 35.55" to N 38° 44' 5.41" W 90° 21' 13.44"	
	VOR: STL	Available from N 38° 45' 35.83" W 90° 24' 35.55" to N 38° 44' 5.41" W 90° 21' 13.44"	
	VOR: TOY	Available from N 38° 45' 35.83" W 90° 24' 35.55" to N 38° 44' 5.41" W 90° 21' 13.44"	
2	N 38° 43' 38.90" W 90° 15' 1.93"	N 38° 44' 11.82" W 90° 5' 45.67"	7.3
	VOR: CSX	Available from N 38° 43' 38.90" W 90° 15' 1.93" to N 38° 44' 11.82" W 90° 5' 45.67"	
	VOR: FTZ	Available from N 38° 43' 38.90" W 90° 15' 1.93" to N 38° 44' 2.73" W 90° 7' 18.03"	
	VOR: STL	Available from N 38° 43' 38.90" W 90° 15' 1.93" to N 38° 44' 11.82" W 90° 5' 45.67"	
	VOR: TOY	Available from N 38° 43' 38.90" W 90° 15' 1.93" to N 38° 44' 11.82" W 90° 5' 45.67"	

DME/DME (Continued.)

Return To Summary

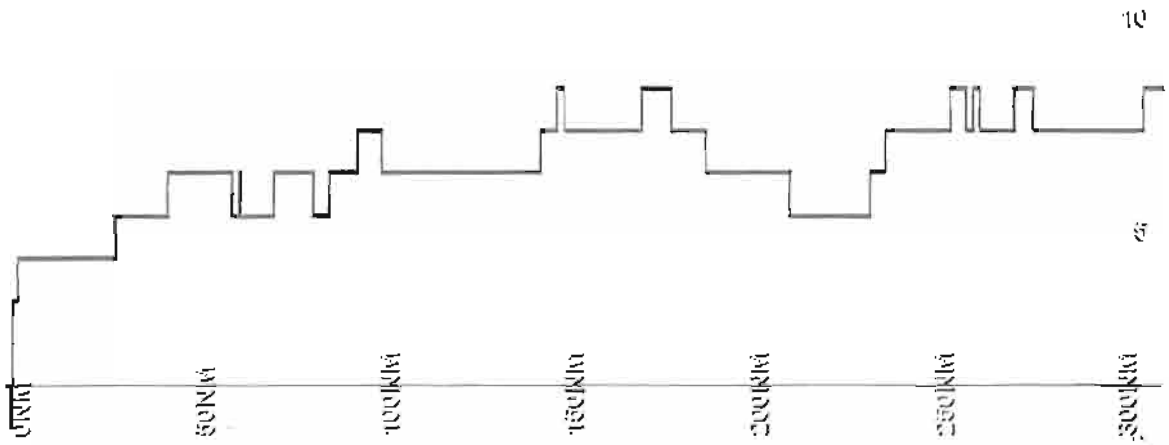
User DMEs

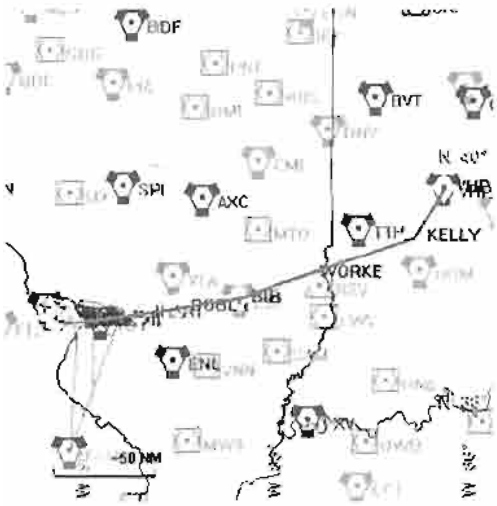
#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	STL	N 38° 51' 38 48" W 90° 28' 56.52"	H	449 5	117 40	STL	Used
		ESV: Bearing [True] 91.0° to 114.0° Bearing [Mag] 90.0° to 113 0°			Arc Distance: Out to 35 0 NM Altitude: 4000 0 to 10000 0 Ft		
2	FAM	N 37° 40' 24 39" W 90° 14' 2.53"	H	1220 0	115.70	FAM	Used
		ESV: Bearing [True]: 3 0° to 20.0° Bearing [Mag]: 2 0° to 19.0°			Arc Distance: Out to 74.0 NM Altitude: 4000.0 to 10000.0 Ft.		

Radar Analysis

Return To Summary

Settings: Radar Types: ARSR and ASR





Name:	enanders
Project Name:	
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	2/10/2012 8:11:14 AM
Input File:	JHART RW11 VHP 20120...
Databases:	AVNIS Date: 08/26/2011
	NFD Date: 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✓	Please Check Flyability Results
DME/DME	✓	
Radars	✓	
Comms		
TERPS		

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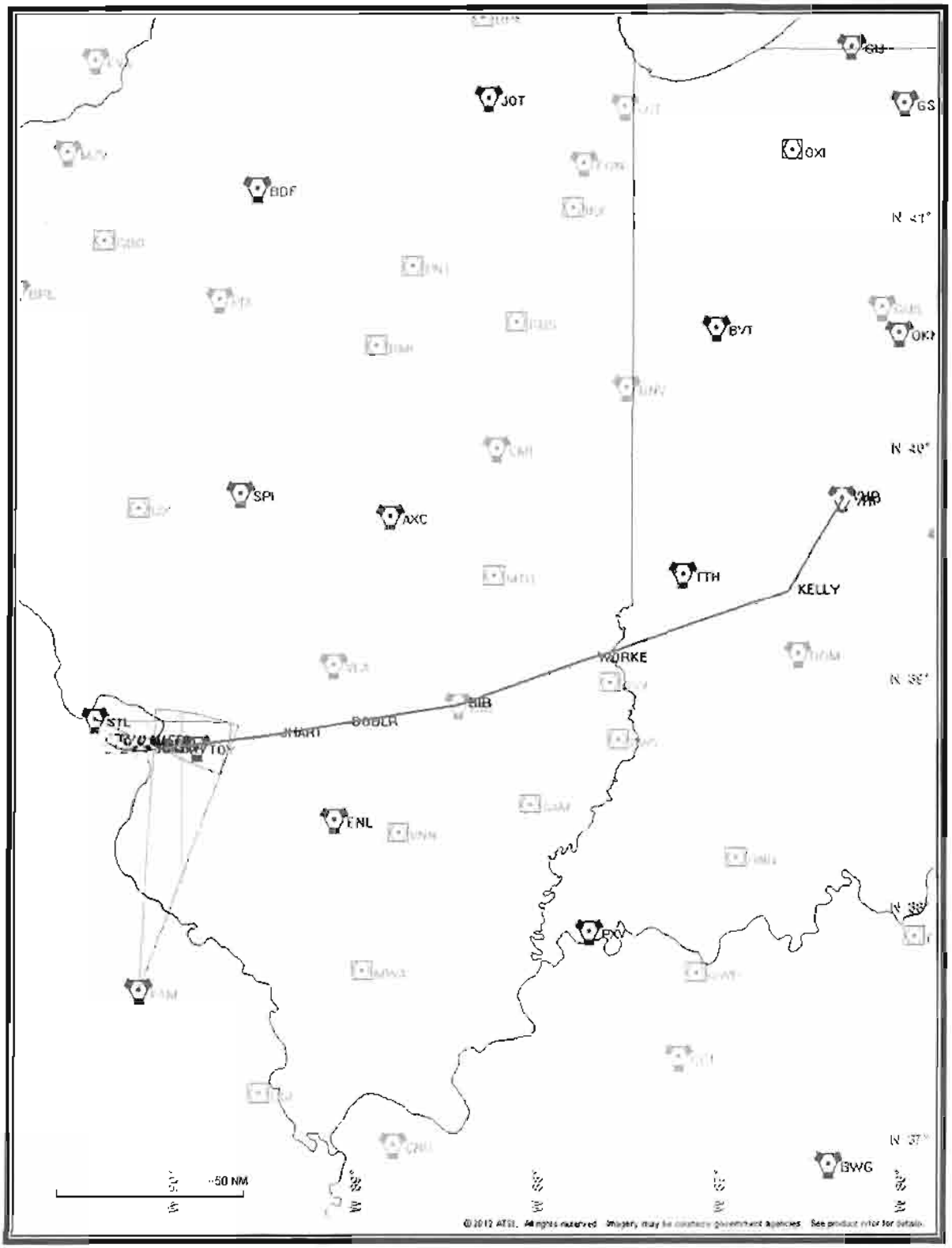

JOT
GS
OXI
BDF
BVT
SPI
AXC
ITH
KELLY
WORKE
JHART
ENL
BWG
50 NM

Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW11(A...	WP	N 38° 45' 35.83" W 90° 24' 35.55"	618.0	VNAV	0.0	Fly Over	TF
RW29(D...	WP	N 38° 44' 48.46" W 90° 22' 59.39"	591.0	VNAV	130.0	Fly Over	VA
GH11.	WP	N 38° 44' 12.37" W 90° 21' 46.18"	1120.0	VNAV	145.0	Fly Over	DF
FUNKE	WP	N 38° 43' 39.26" W 90° 15' 35.58"	2500.0	VNAV	180.0	Fly By	TF
RAMKR	WP	N 38° 43' 37.54" W 90° 11' 36.78"	3122.9	VNAV	180.0	Fly By	TF
JHART	WP	N 38° 47' 32.80" W 89° 30' 39.12"	9578.6	VNAV	180.0	Fly By	TF
DOBLR	WP	N 38° 50' 31.91" W 89° 7' 10.92"	13295.5	VNAV	210.0	Fly By	TF
BIB	WP	N 38° 55' 13.24" W 88° 28' 54.50"	18000.0	VNAV	240.0	Fly By	TF
WORKE	WP	N 39° 7' 2.95" W 87° 46' 25.21"	18000.0	VNAV	240.0	Fly By	TF
KELLY	WP	N 39° 24' 49.15" W 86° 40' 17.29"	18000.0	VNAV	240.0	Fly By	TF
VHP	WP	N 39° 48' 53.02" W 86° 22' 2.88"	18000.0	VNAV	240.0	Fly Over	TF

Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL

Climb Gradient: 200 Ft/NM after next to last waypoint up to 18000.0 Ft

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KSTL
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1120 0 Ft MSL
Ground Speeds:
Departure. **120.0 Kts** out to **10.0 NM**
Table:
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Flight Track comes into contact with terrain. Minimum AGL along route was -2.94 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

DME/DME

Return To Summary

Settings:

RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.165 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
Minimum MSL DMEs Avail: 1839 Ft.

Total Number of DMEs Used: 20

Maximum DME Error: 0.856 NM.

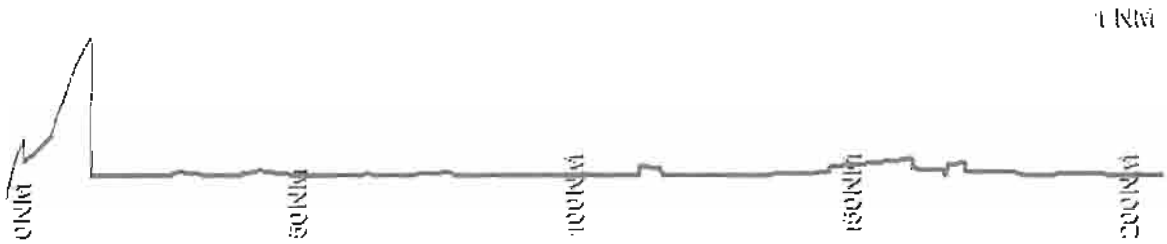
No Critical DMEs were found

Available DMEs: STL, FTZ, CSX, FAM, TOY, VLA, ENL, VNN, BIB, PXV, SPI, TTH, AXC, SAM, MTO, VHP, BVT, OKK, OOM, IIU, SHB, FWA, OXI

Foreign DMEs within range: YQG

DME/DME (Continued.)

Return To Summary



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H + ESV	User	NO	1.174	Enabled	8.9 %	7.8 %
2	FTZ	N 38° 41' 39.58" W 90° 58' 16.17"	L	Database	NO	1.174	Enabled	3.7 %	2.3 %
3	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H + ESV	User	NO	1.309	Enabled	7.1 %	7.4 %
4	CSX	N 38° 45' 9.88" W 90° 21' 39.46"	H	Database	NO	0.856	Enabled	5.4 %	5.7 %
5	ENL	N 38° 25' 12.00" W 89° 9' 32.39"	H	Database	NO	0.856	Enabled	15.4 %	16.2 %
6	VLA	N 39° 5' 37.26" W 89° 9' 44.87"	L	Database	NO	0.856	Enabled	11.5 %	12.1 %
7	TOY	N 38° 44' 20.97" W 89° 55' 7.06"	L	Database	NO	0.856	Enabled	6.2 %	6.5 %
8	BIB	N 38° 55' 13.26" W 88° 28' 54.47"	L	Database	NO	0.856	Enabled	13.6 %	14.2 %
9	VNN	N 38° 21' 43.03" W 88° 48' 26.41"	L	Database	NO	0.856	Enabled	6.8 %	7.2 %
10	AXC	N 39° 44' 15.08" W 88° 51' 23.15"	H	Database	NO	1.038	Enabled	22.0 %	23.1 %
11	SAM	N 38° 29' 6.68" W 88° 5' 8.93"	L	Database	NO	0.856	Enabled	3.4 %	3.6 %
12	PXV	N 37° 55' 41.95" W 87° 45' 44.56"	H	Database	NO	0.856	Enabled	9.8 %	10.3 %
13	TTH	N 39° 29' 20.19" W 87° 14' 56.47"	H	Database	NO	0.856	Enabled	32.7 %	34.2 %
14	MTO	N 39° 28' 40.42" W 88° 17' 10.44"	L	Database	NO	0.856	Enabled	11.4 %	11.9 %
15	SPI	N 39° 50' 23.04" W 89° 40' 39.83"	H	Database	NO	0.856	Enabled	0.0 %	0.0 %
16	VHP	N 39° 48' 53.02" W 86° 22' 2.88"	H	Database	NO	0.856	Enabled	2.0 %	2.0 %
17	OKK	N 40° 31' 40.00" W 86° 3' 28.81"	H	Database	NO	0.856	Enabled	9.7 %	10.2 %
18	OOM	N 39° 8' 37.76" W 86° 36' 46.87"	L	Database	NO	0.856	Enabled	4.8 %	5.1 %
19	BVT	N 40° 33' 22.03" W 87° 4' 9.55"	H	Database	NO	0.856	Enabled	5.9 %	6.2 %
20	SHB	N 39° 37' 57.15" W 86° 49' 27.54"	L	Database	NO	0.856	Enabled	3.9 %	4.1 %

Flight Check DME Selection

Distance [NM]	Selected DMEs	Alternate

DME/DME (Continued.)

Return To Summary

Flight Check DME Selection (Continued.)

Distance [NM]	Selected DMEs					Alternate
0.0						
0.0						
1.5	STL					
2.5	STL	FTZ	CSX			
7.4	STL	FTZ	CSX			
10.5	STL	FTZ	CSX	FAM		
26.3	STL	VLA	CSX	FAM	ENL	TOY
42.7	BIB	VLA	TOY	VNN	ENL	
61.4	BIB	VLA	TOY	VNN	ENL	
71.5	BIB	VLA	AXC	VNN	CSX	ENL
91.3	BIB	PXV	AXC	SAM	TTH	MTO
102.4	BIB	MTO	AXC	ENL	TTH	SPI
112.5	BIB	MTO	VHP	ENL	TTH	PXV
126.9	AXC	MTO	PXV	ENL	TTH	VHP
137.0	AXC	OOM	PXV	OKK	TTH	VHP
169.5	VHP	OOM	PXV	OKK	TTH	BVT
180.5	BVT	OOM	SHB	OKK	TTH	VHP
190.7	BVT	VHP	SHB	OKK	TTH	FWA

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 38° 45' 35.83" W 90° 24' 35.55"	N 38° 44' 5.41" W 90° 21' 13.44"	3.1
	VOR: CSX	Available from N 38° 45' 35.83" W 90° 24' 35.55" to N 38° 44' 5.41" W 90° 21' 13.44"	
	VOR: FTZ	Available from N 38° 45' 35.83" W 90° 24' 35.55" to N 38° 44' 5.41" W 90° 21' 13.44"	
	VOR: STL	Available from N 38° 45' 35.83" W 90° 24' 35.55" to N 38° 44' 5.41" W 90° 21' 13.44"	
	VOR: TOY	Available from N 38° 45' 35.83" W 90° 24' 35.55" to N 38° 44' 5.41" W 90° 21' 13.44"	

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments (Continued.)

#	Start Location	End Location	Length [NM]
2	N 38° 43' 38.90" W 90° 15' 1.93"	N 38° 44' 11.82" W 90° 5' 45.67"	7.3
	VOR. CSX	Available from N 38° 43' 38.90" W 90° 15' 1.93" to N 38° 44' 11.82" W 90° 5' 45.67"	
	VOR. FTZ	Available from N 38° 43' 38.90" W 90° 15' 1.93" to N 38° 44' 2.73" W 90° 7' 18.03"	
	VOR. STL	Available from N 38° 43' 38.90" W 90° 15' 1.93" to N 38° 44' 11.82" W 90° 5' 45.67"	
	VOR. TOY	Available from N 38° 43' 38.90" W 90° 15' 1.93" to N 38° 44' 11.82" W 90° 5' 45.67"	

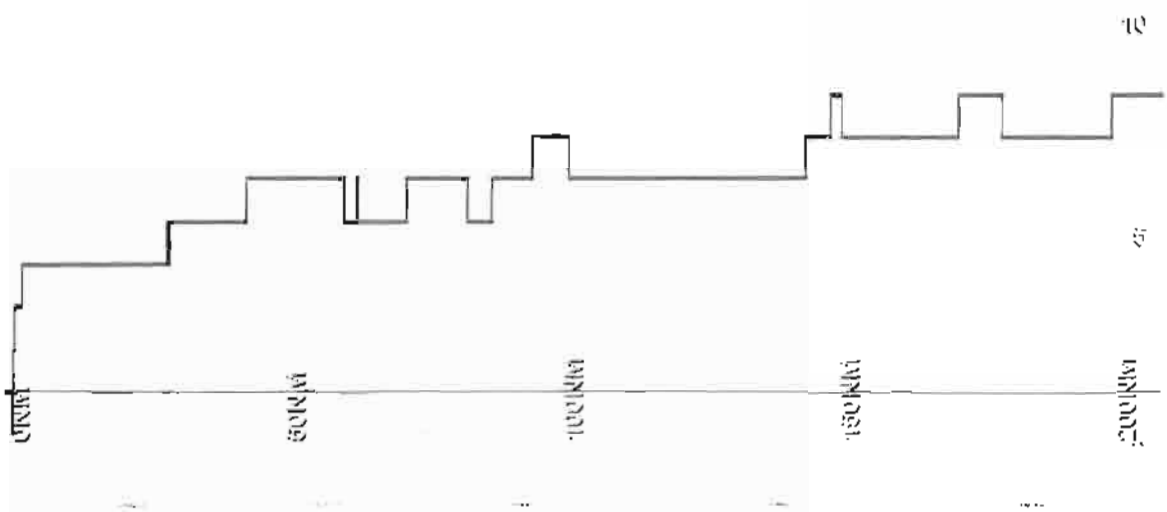
User DMEs

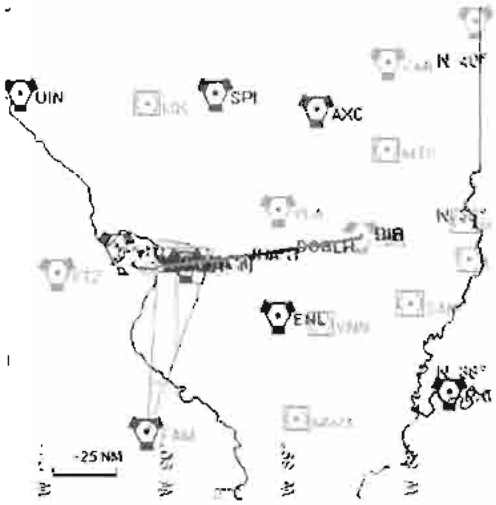
#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H	449.5	117.40	STL	Used
		ESV: Bearing [True]: 91.0° to 114.0° Bearing [Mag]: 90.0° to 113.0°			Arc Distance: Out to 35.0 NM Altitude: 4000.0 to 10000.0 Ft.		
2	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H	1220.0	115.70	FAM	Used
		ESV: Bearing [True]: 3.0° to 20.0° Bearing [Mag]: 2.0° to 19.0°			Arc Distance: Out to 74.0 NM Altitude: 4000.0 to 10000.0 Ft.		

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR





Name:	enanders
Project Name:	
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	2/10/2012 8.21:23 AM
Input File:	JHART RW12L BIB 2012..
Databases:	AVNIS Date: 08/26/2011
	NFD Date 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✓	Please Check Flyability Results
DME/DME	✓	
Radars	✓	
Comms		
TERPS		

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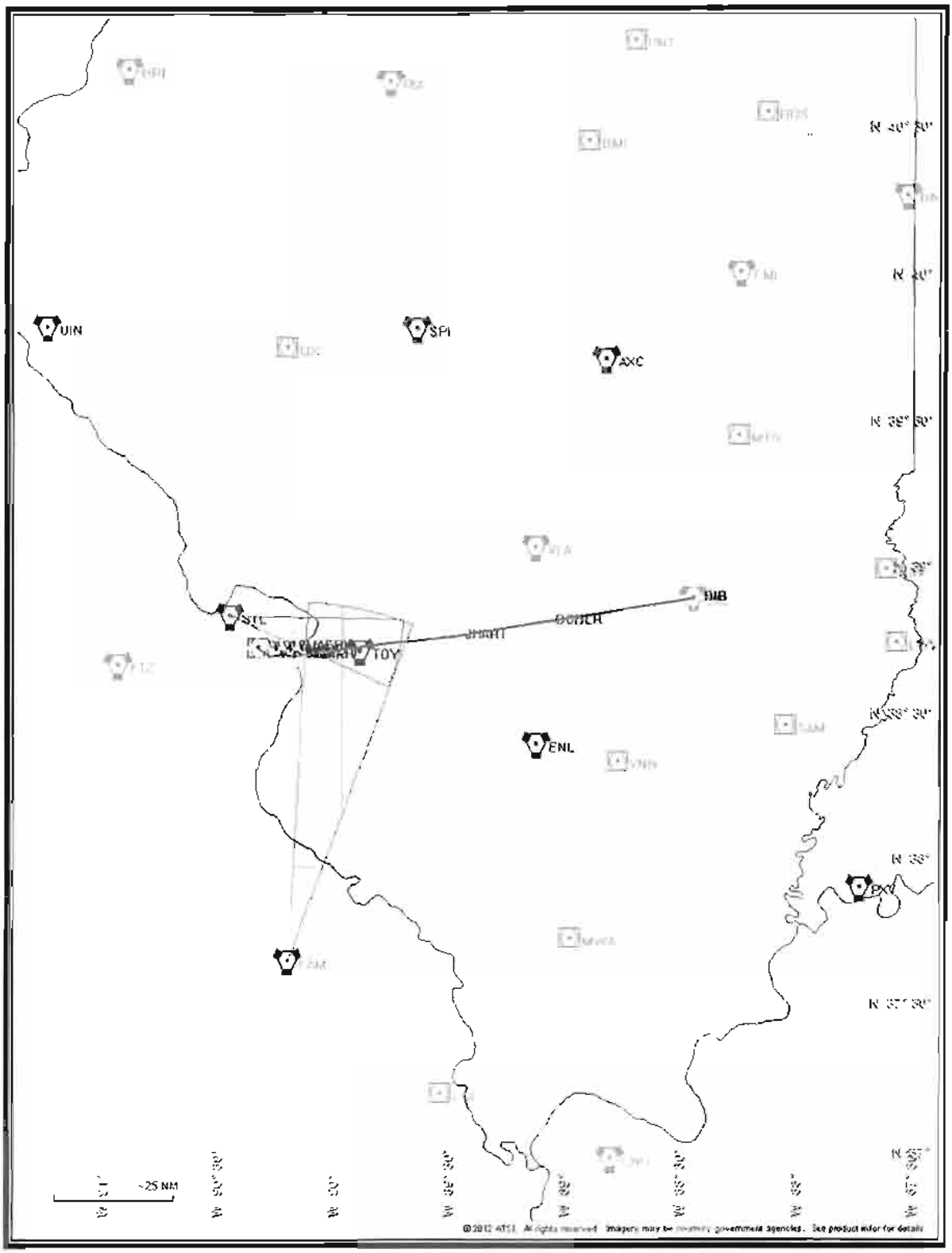

UIN
SPI
AXC
BIB
JHART
DOBER
TOY
ENL
25 NM

Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW12L(.	WP	N 38° 45' 6.41" W 90° 21' 58 66"	528 3	VNAV	0.0	Fly Over	TF
RW30R(..	WP	N 38° 44' 18 99" W 90° 20' 22 51"	639 5	VNAV	130 0	Fly Over	VA
GH12L	WP	N 38° 43' 45 97" W 90° 19' 15 62"	1120 0	VNAV	145 0	Fly Over	DF
FUNKE	WP	N 38° 43' 39.26" W 90° 15' 35.58"	2500.0	VNAV	180.0	Fly By	TF
RAMKR	WP	N 38° 43' 37.54" W 90° 11' 36.78"	3122.9	VNAV	180.0	Fly By	TF
JHART	WP	N 38° 47' 32 80" W 89° 30' 39.12"	9578 6	VNAV	180.0	Fly By	TF
DOBLR	WP	N 38° 50' 31.91" W 89° 7' 10.92"	13295.5	VNAV	210.0	Fly By	TF
BIB	WP	N 38° 55' 13.24" W 88° 28' 54.50"	18000.0	VNAV	240 0	Fly Over	TF

Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL

Climb Gradient: 200 Ft/NM after next to last waypoint up to 18000.0 Ft

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KSTL
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1120 0 Ft MSL
Ground Speeds:
Departure. **120.0 Kts** out to **10.0 NM**
Table:
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Flight Track comes into contact with terrain. Minimum AGL along route was -64.22 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

DME/DME

Return To Summary

Settings:

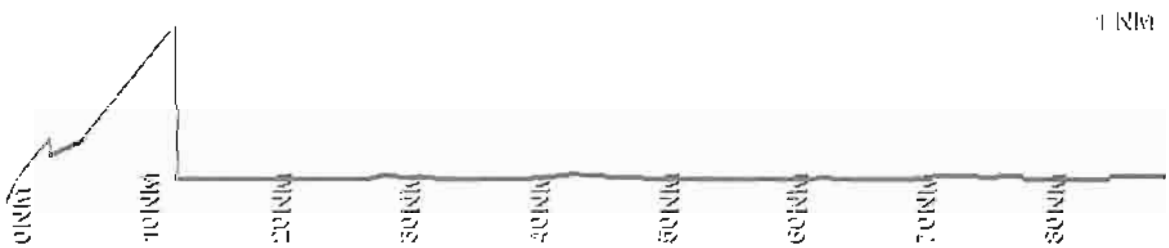
RNP: 2 0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0 165 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
Minimum MSL DMEs Avail: 2122 Ft

Total Number of DMEs Used: 15

Maximum DME Error: 0.906 NM

No Critical DMEs were found.

Available DMEs: STL, FTZ, CSX, FAM, TOY, VLA, ENL, VNN, BIB, PXV, SPI, TTH, AXC, SAM, MTO



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H + ESV	User	NO	1.085	Enabled	19.5 %	19.8 %
2	FTZ	N 38° 41' 39.58" W 90° 58' 16.17"	L	Database	NO	1.085	Enabled	4.2 %	2.8 %
3	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H + ESV	User	NO	1.364	Enabled	15.8 %	17.4 %
4	CSX	N 38° 45' 9.86" W 90° 21' 39.46"	H	Database	NO	0.906	Enabled	8.8 %	9.6 %
5	ENL	N 38° 25' 12.00" W 89° 9' 32.39"	H	Database	NO	0.906	Enabled	35.4 %	39.4 %
6	VLA	N 39° 5' 37.26" W 89° 9' 44.87"	L	Database	NO	0.906	Enabled	20.6 %	22.9 %
7	TOY	N 38° 44' 20.97" W 89° 55' 7.06"	L	Database	NO	0.906	Enabled	13.5 %	15.0 %
8	BIB	N 38° 55' 13.26" W 88° 28' 54.47"	L	Database	NO	0.906	Enabled	17.7 %	19.7 %
9	VNN	N 38° 21' 43.03" W 88° 48' 26.41"	L	Database	NO	0.906	Enabled	10.1 %	11.2 %
10	AXC	N 39° 44' 15.08" W 88° 51' 23.15"	H	Database	NO	0.906	Enabled	10.0 %	11.2 %
11	SAM	N 38° 29' 6.68" W 88° 5' 8.93"	L	Database	NO	0.906	Enabled	2.2 %	2.5 %
12	PXV	N 37° 55' 41.95" W 87° 45' 44.56"	H	Database	NO	0.906	Enabled	0.0 %	0.0 %
13	TTH	N 39° 29' 20.19" W 87° 14' 56.47"	H	Database	NO	0.906	Enabled	0.0 %	0.0 %
14	MTO	N 39° 28' 40.42" W 88° 17' 10.44"	L	Database	NO	0.906	Enabled	0.0 %	0.0 %
15	SPI	N 39° 50' 23.04" W 89° 40' 39.83"	H	Database	NO	0.906	Enabled	4.4 %	4.9 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0						
1.5						
2.5	STL	FTZ	CSX			
5.4	STL	FTZ	CSX			
8.4	STL	FTZ	CSX	FAM		
24.3	STL	VLA	CSX	FAM	ENL	TOY
40.7	BIB	VLA	TOY	VNN	ENL	

DME/DME (Continued.)

Return To Summary

Flight Check DME Selection (Continued.)

Distance [NM]	Selected DMEs					Alternate
59.4	BIB	VLA	TOY	VNN	ENL	PXV
69.4	BIB	CSX	AXC	VNN	STL	VLA
79.5	BIB	SAM	AXC	SPI	ENL	STL

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 38° 45' 6.41" W 90° 21' 58.66"	N 38° 43' 37.87" W 90° 18' 20.88"	3.3
	VOR: CSX	Available from N 38° 45' 6.41" W 90° 21' 58.66" to N 38° 43' 37.87" W 90° 18' 20.88"	
	VOR: FTZ	Available from N 38° 45' 6.41" W 90° 21' 58.66" to N 38° 43' 37.87" W 90° 18' 20.88"	
	VOR: STL	Available from N 38° 45' 6.41" W 90° 21' 58.66" to N 38° 43' 37.87" W 90° 18' 20.88"	
	VOR: TOY	Available from N 38° 45' 6.41" W 90° 21' 58.66" to N 38° 43' 37.87" W 90° 18' 20.88"	
2	N 38° 43' 39.12" W 90° 15' 4.10"	N 38° 44' 11.52" W 90° 5' 48.92"	7.3
	VOR: CSX	Available from N 38° 43' 39.12" W 90° 15' 4.10" to N 38° 44' 11.52" W 90° 5' 48.92"	
	VOR: FTZ	Available from N 38° 43' 39.12" W 90° 15' 4.10" to N 38° 44' 2.94" W 90° 7' 16.07"	
	VOR: STL	Available from N 38° 43' 39.12" W 90° 15' 4.10" to N 38° 44' 11.52" W 90° 5' 48.92"	
	VOR: TOY	Available from N 38° 43' 39.12" W 90° 15' 4.10" to N 38° 44' 11.52" W 90° 5' 48.92"	

User DMEs

#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H	449.5	117.40	STL	Used

ESV: Bearing [True]: 91.0° to 114.0°
Bearing [Mag]: 90.0° to 113.0°

Arc Distance: Out to 35.0 NM
Altitude: 4000.0 to 10000.0 Ft

DME/DME (Continued.)

Return To Summary

User DMEs (Continued.)

#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
2	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H	1220.0	115.70	FAM	Used

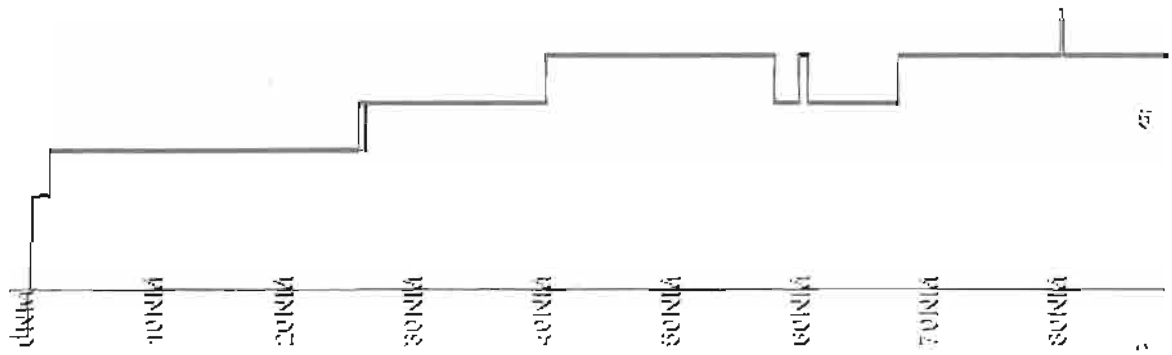
ESV: Bearing [True]: 3.0° to 20.0°
Bearing [Mag]: 2.0° to 19.0°

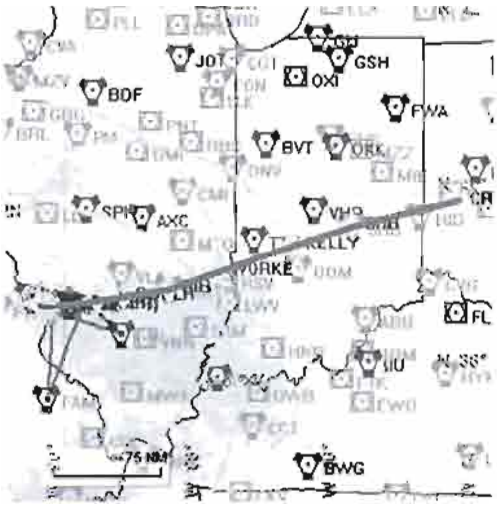
Arc Distance: Out to 74.0 NM
Altitude: 4000.0 to 10000.0 Ft.

Radar Analysis

Return To Summary

Settings: Radar Types: ARSR and ASR





Name:	enanders
Project Name:	
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	4/8/2012 3:42:05 PM
Input File:	JHART RW12L CREEP_ 2...
Databases:	AVNIS Date: 08/26/2011
	NFD Date. 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✓	Please Check Flyability Results
DME/DME	✓	
Radars	✓	
Comms		
TERPS		

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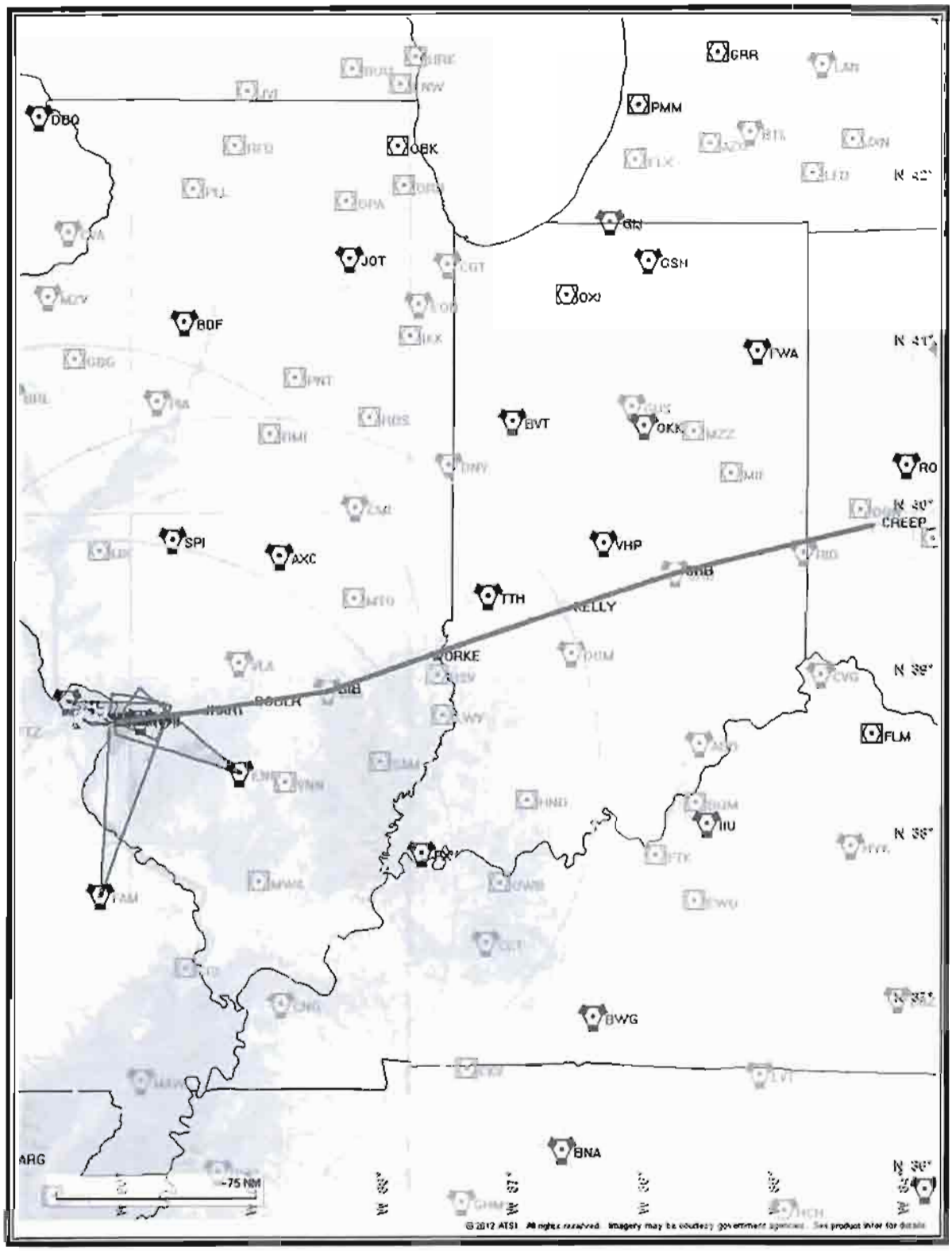

GRR
PMM
DBQ
OBK
JOT
GN
GSH
OXI
BDF
TWA
BVT
OKK
RO
CREEP
SPI
AXC
VHP
TTH
KELLY
FLM
IIU
BWG
BNA
ARG
75 NM

Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW12L(	WP	N 38° 45' 6.41" W 90° 21' 58.66"	528 3	VNAV	0 0	Fly Over	TF
RW30R(...	WP	N 38° 44' 18.99" W 90° 20' 22.51"	639.5	VNAV	130.0	Fly Over	VA
GH12L	WP	N 38° 43' 45 99" W 90° 19' 15.61"	1120.0	VNAV	145.0	Fly Over	DF
FUNKE	WP	N 38° 43' 39.26" W 90° 15' 35.58"	2500.0	VNAV	180.0	Fly By	TF
RAMKR	WP	N 38° 43' 37 54" W 90° 11' 36.78"	3122.9	VNAV	180.0	Fly By	TF
JHART	WP	N 38° 47' 32.80" W 89° 30' 39.12"	9578.6	VNAV	180 0	Fly By	TF
DOBLR	WP	N 38° 50' 31 91" W 89° 7' 10 92"	13295.5	VNAV	210 0	Fly By	TF
BIB	WP	N 38° 55' 13.24" W 88° 28' 54 50"	18000.0	VNAV	240 0	Fly By	TF
WORKE	WP	N 39° 7' 2.95" W 87° 46' 25.21"	18000 0	VNAV	240.0	Fly By	TF
KELLY	WP	N 39° 24' 49.15" W 86° 40' 17.29"	18000.0	VNAV	240.0	Fly By	TF
SHB	WP	N 39° 37' 57.15" W 85° 49' 27.54"	18000 0	VNAV	240 0	Fly By	TF
CREEP_	WP	N 39° 55' 15 28" W 84° 18' 31 41"	18000 0	VNAV	240.0	Fly Over	TF

Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL

Climb Gradient: 200 Ft/NM after next to last waypoint up to 18000 0 Ft

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KSTL
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL
Ground Speeds:
Departure: **120.0 Kts** out to **10.0 NM**
Table
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Flight Track comes into contact with terrain. Minimum AGL along route was -64.22 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

DME/DME

Return To Summary

Settings:

RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0 165 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
Minimum MSL DMEs Avail: 2122 Ft.

Total Number of DMEs Used: 28

Maximum DME Error: 0.906 NM

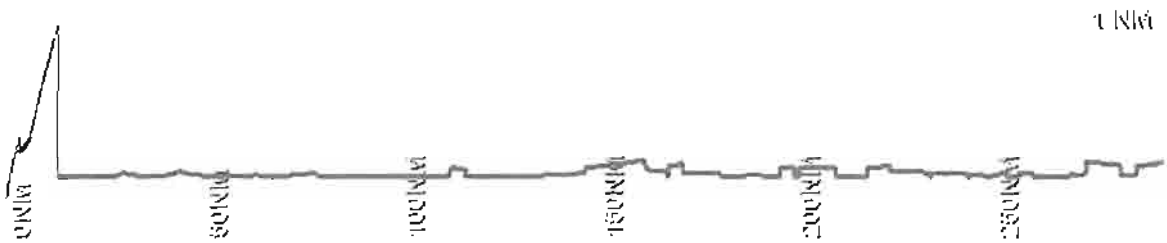
No Critical DMEs were found

Available DMEs: STL, FTZ, CSX, FAM, ENL, TOY, VLA, VNN, BIB, PXV, SPI, TTH, AXC, SAM, MTO, VHP, BVT, OKK, OOM, IIU, SHB, FWA, ROD, FLM, RID, MIE, DQN, APE

Foreign DMEs within range: YQG, YQO, YXU

DME/DME (Continued.)

Return To Summary



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H + ESV	User	NO	1.085	Enabled	5.2 %	4.8 %
2	FTZ	N 38° 41' 39.58" W 90° 58' 16.17"	L	Database	NO	1.085	Enabled	1.4 %	0.9 %
3	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H + ESV	User	NO	1.364	Enabled	5.2 %	5.3 %
4	CSX	N 38° 45' 9.88" W 90° 21' 39.46"	H	Database	NO	0.906	Enabled	4.0 %	4.1 %
5	ENL	N 38° 25' 12.00" W 89° 9' 32.39"	H + ESV	User	NO	0.906	Enabled	11.2 %	11.5 %
6	VLA	N 39° 5' 37.26" W 89° 9' 44.87"	L	Database	NO	0.906	Enabled	8.3 %	8.6 %
7	TOY	N 38° 44' 20.97" W 89° 55' 7.06"	L	Database	NO	0.906	Enabled	4.4 %	4.6 %
8	BIB	N 38° 55' 13.26" W 88° 28' 54.47"	L	Database	NO	0.906	Enabled	9.8 %	10.2 %
9	VNN	N 38° 21' 43.03" W 88° 48' 26.41"	L	Database	NO	0.906	Enabled	5.0 %	5.1 %
10	AXC	N 39° 44' 15.08" W 88° 51' 23.15"	H	Database	NO	1.038	Enabled	15.9 %	16.5 %
11	SAM	N 38° 29' 6.68" W 88° 5' 8.93"	L	Database	NO	0.906	Enabled	2.5 %	2.6 %
12	PXV	N 37° 55' 41.95" W 87° 45' 44.56"	H	Database	NO	0.906	Enabled	7.1 %	7.4 %
13	TTH	N 39° 29' 20.19" W 87° 14' 56.47"	H	Database	NO	0.906	Enabled	23.9 %	24.7 %
14	MTO	N 39° 28' 40.42" W 88° 17' 10.44"	L	Database	NO	0.906	Enabled	8.2 %	8.5 %
15	SPI	N 39° 50' 23.04" W 89° 40' 39.83"	H	Database	NO	0.906	Enabled	0.0 %	0.0 %
16	VHP	N 39° 48' 53.02" W 86° 22' 2.88"	H	Database	NO	0.906	Enabled	12.9 %	13.3 %
17	OKK	N 40° 31' 40.00" W 86° 3' 28.81"	H	Database	NO	0.906	Enabled	8.9 %	9.2 %
18	OOM	N 39° 8' 37.76" W 86° 36' 46.87"	L	Database	NO	0.906	Enabled	1.2 %	1.3 %
19	BVT	N 40° 33' 22.03" W 87° 4' 9.55"	H	Database	NO	0.906	Enabled	3.5 %	3.6 %
20	SHB	N 39° 37' 57.15" W 85° 49' 27.54"	L	Database	NO	0.906	Enabled	8.9 %	9.2 %

DME/DME (Continued.)

Return To Summary

DMEs Used (Continued.)

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
21	IIU	N 38° 6' 12.47" W 85° 34' 38.77"	H	Database	NO	0.906	Enabled	6.1 %	6.3 %
22	FWA	N 40° 58' 44.63" W 85° 11' 17.01"	H	Database	NO	0.906	Enabled	9.1 %	9.4 %
23	MIE	N 40° 14' 14.25" W 85° 23' 38.53"	L	Database	NO	0.906	Enabled	5.6 %	5.7 %
24	ROD	N 40° 17' 16.08" W 84° 2' 35.28"	H	Database	NO	0.906	Enabled	3.7 %	3.9 %
25	RID	N 39° 45' 18.08" W 84° 50' 19.85"	L	Database	NO	0.906	Enabled	3.4 %	3.5 %
26	FLM	N 38° 38' 58.16" W 84° 18' 38.27"	H	Database	NO	0.906	Enabled	7.0 %	7.2 %
27	DQN	N 40° 0' 59.19" W 84° 23' 48.83"	L	Database	NO	0.906	Enabled	2.4 %	2.5 %
28	APE	N 40° 9' 3.82" W 82° 35' 17.88"	H	Database	NO	0.906	Enabled	2.9 %	3.0 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0						
1.6						
2.5	STL	FTZ	CSX			
5.4	STL	FTZ	CSX			
8.4	STL	FTZ	CSX	FAM	ENL	
24.3	STL	VLA	CSX	FAM	ENL	TOY
40.7	BIB	VLA	TOY	VNN	ENL	
59.4	BIB	VLA	TOY	VNN	ENL	
69.4	BIB	VLA	AXC	VNN	CSX	ENL
89.5	BIB	PXV	AXC	SAM	TTH	MTO
100.3	BIB	MTO	AXC	ENL	TTH	SPI
110.4	BIB	MTO	VHP	ENL	TTH	PXV
124.8	AXC	MTO	PXV	ENL	TTH	VHP
134.9	AXC	OOM	PXV	OKK	TTH	VHP
167.4	VHP	OOM	PXV	OKK	TTH	BVT
179.1	BVT	OOM	SHB	OKK	TTH	IIU
189.2	BVT	IIU	SHB	VHP	TTH	OKK

DME/DME (Continued.)

Return To Summary

Flight Check DME Selection (Continued.)

Distance [NM]	Selected DMEs					Alternate
209.4	OKK	IIU	SHB	VHP	TTH	FWA
220.4	FWA	IIU	FLM	VHP	TTH	ROD
230.9	FWA	OKK	MIE	VHP	ROD	FLM
241.4	FWA	SHB	MIE	VHP	RID	FLM
251.5	DQN	ROD	MIE	VHP	FLM	FWA
269.4	DQN	RID	OKK	APE	FLM	VHP
281.1	VHP	RID	FWA	APE	FLM	OKK

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 38° 45' 6.41" W 90° 21' 58.66"	N 38° 43' 37.88" W 90° 18' 20.87"	3.3
	VOR: CSX	Available from N 38° 45' 6.41" W 90° 21' 58.66" to N 38° 43' 37.88" W 90° 18' 20.87"	
	VOR: FTZ	Available from N 38° 45' 6.41" W 90° 21' 58.66" to N 38° 43' 37.88" W 90° 18' 20.87"	
	VOR: STL	Available from N 38° 45' 6.41" W 90° 21' 58.66" to N 38° 43' 37.88" W 90° 18' 20.87"	
	VOR: TOY	Available from N 38° 45' 6.41" W 90° 21' 58.66" to N 38° 43' 37.88" W 90° 18' 20.87"	
2	N 38° 43' 39.12" W 90° 15' 4.09"	N 38° 44' 11.52" W 90° 5' 48.91"	7.3
	VOR: CSX	Available from N 38° 43' 39.12" W 90° 15' 4.09" to N 38° 44' 11.52" W 90° 5' 48.91"	
	VOR: FTZ	Available from N 38° 43' 39.12" W 90° 15' 4.09" to N 38° 44' 2.94" W 90° 7' 16.06"	
	VOR: STL	Available from N 38° 43' 39.12" W 90° 15' 4.09" to N 38° 44' 11.52" W 90° 5' 48.91"	
	VOR: TOY	Available from N 38° 43' 39.12" W 90° 15' 4.09" to N 38° 44' 11.52" W 90° 5' 48.91"	

DME/DME (Continued.)

Return To Summary

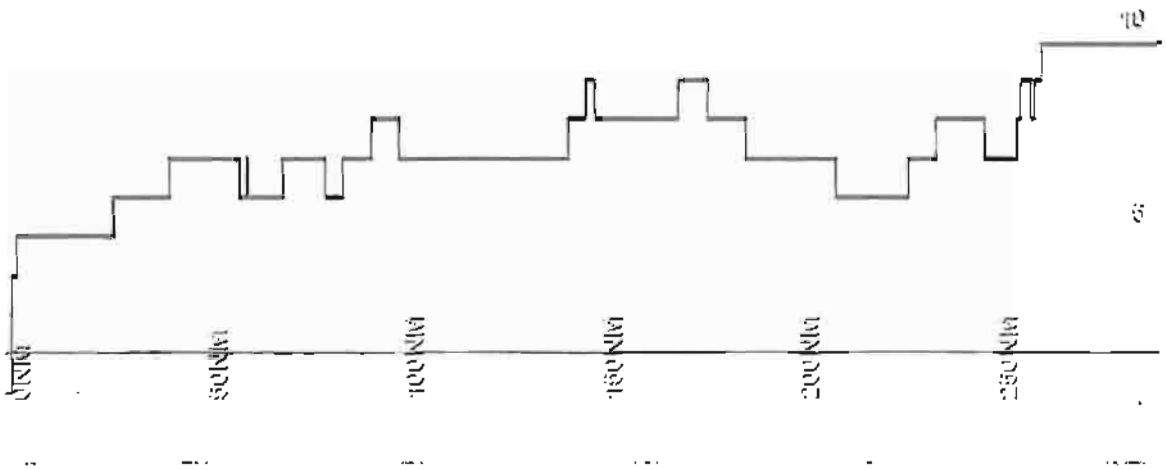
User DMEs

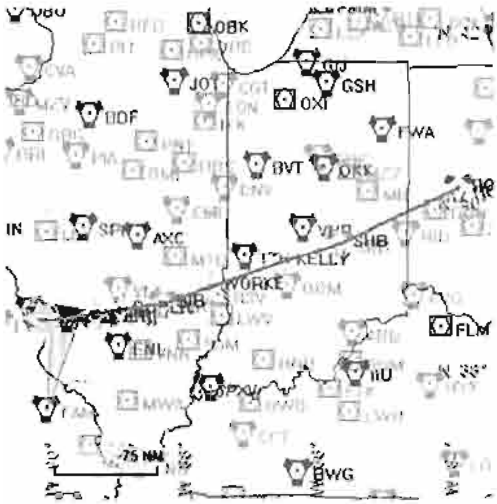
#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H	449.5	117.40	STL	Used
		ESV Bearing [True]: 91 0° to 114 0° Bearing [Mag]: 90 0° to 113.0°			Arc Distance: Out to 35 0 NM Altitude: 4000 0 to 10000.0 Ft		
2	FAM	N 37° 40' 24 39" W 90° 14' 2.53"	H	1220.0	115 70	FAM	Used
		ESV Bearing [True]: 3 0° to 20.0° Bearing [Mag]: 2 0° to 19.0°			Arc Distance: Out to 74.0 NM Altitude: 4000 0 to 10000 0 Ft		
3	ENL	N 38° 25' 12.00" W 89° 9' 32.39"	H	545 8	115 00	ENL	Used
		ESV Bearing [True]: 288.0° to 311 0° Bearing [Mag]: 284 0° to 307 0°			Arc Distance: Out to 48 0 NM Altitude: 3000 0 to 9000.0 Ft		

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR





Name:	enanders
Project Name:	
Software:	RNAV-Pro™
Version:	2 35
Date/Time:	2/10/2012 9:44:53 AM
Input File:	JHART RW12L ROD 2012 .
Databases:	AVNIS Date: 08/26/2011
	NFD Date: 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔ Please Check Flyability Results
DME/DME	✔
Radars	✔
Comms	
TERPS	

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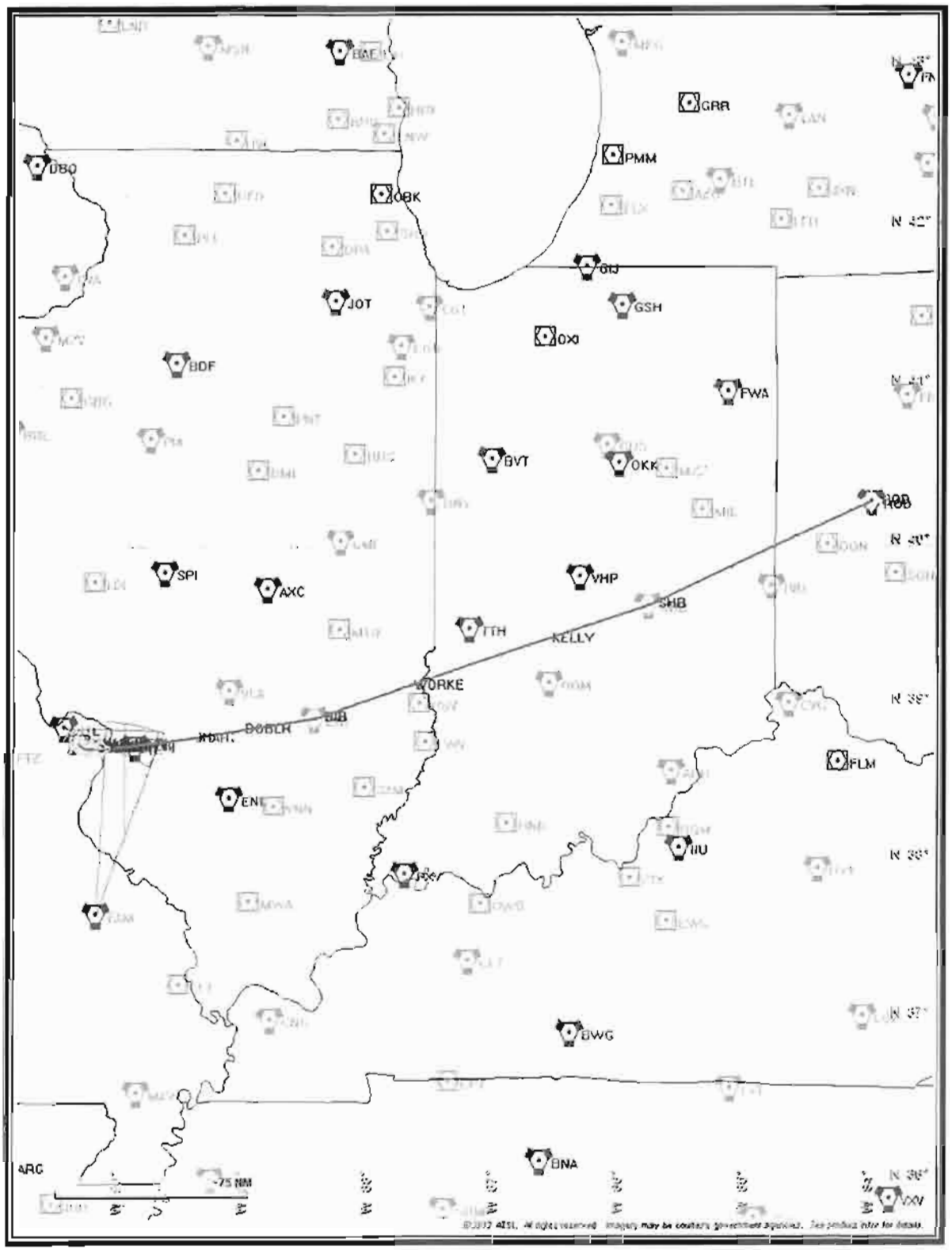

GRR
PMM
DBQ
OBK
GIJ
JOT
GSH
OXI
BDF
FWA
BVT
OKK
SPI
AXC
VHP
SHB
ITH
KELLY
WORKE
DOBLR
ENE
FLM
IIU
BWG
BNA
75 NM

Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW12L(...	WP	N 38° 45' 6.41" W 90° 21' 58.66"	528.3	VNAV	0.0	Fly Over	TF
RW30R(.	WP	N 38° 44' 18.99" W 90° 20' 22 51"	639 5	VNAV	130 0	Fly Over	VA
GH12L	WP	N 38° 43' 45.97" W 90° 19' 15.62"	1120 0	VNAV	145.0	Fly Over	DF
FUNKE	WP	N 38° 43' 39.26" W 90° 15' 35.58"	2500.0	VNAV	180.0	Fly By	TF
RAMKR	WP	N 38° 43' 37 54" W 90° 11' 36 78"	3122.9	VNAV	180.0	Fly By	TF
JHART	WP	N 38° 47' 32.80" W 89° 30' 39.12"	9578.6	VNAV	180.0	Fly By	TF
DOBLR	WP	N 38° 50' 31.91" W 89° 7' 10.92"	13295.5	VNAV	210.0	Fly By	TF
BIB	WP	N 38° 55' 13.24" W 88° 28' 54.50"	18000.0	VNAV	240.0	Fly By	TF
WORKE	WP	N 39° 7' 2.95" W 87° 46' 25.21"	18000 0	VNAV	240.0	Fly By	TF
KELLY	WP	N 39° 24' 49.15" W 86° 40' 17.29"	18000 0	VNAV	240.0	Fly By	TF
SHB	WP	N 39° 37' 57 15" W 85° 49' 27 54"	18000.0	VNAV	240.0	Fly By	TF
ROD	WP	N 40° 17' 16.08" W 84° 2' 35.28"	18000.0	VNAV	240.0	Fly Over	TF

Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL

Climb Gradient: 200 Ft/NM after next to last waypoint up to 18000 0 Ft

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KSTL
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL
Ground Speeds:
Departure: **120.0 Kts** out to **10.0 NM**
Table:
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Flight Track comes into contact with terrain. Minimum AGL along route was -64.22 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER

DME/DME

Return To Summary

Settings:

RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
  Initial Drift: 0.165 NM
  INS Drift Rate: 8 000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4 0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
Minimum MSL DMEs Avail: 2122 Ft

Total Number of DMEs Used: 28

Maximum DME Error: 0.906 NM.

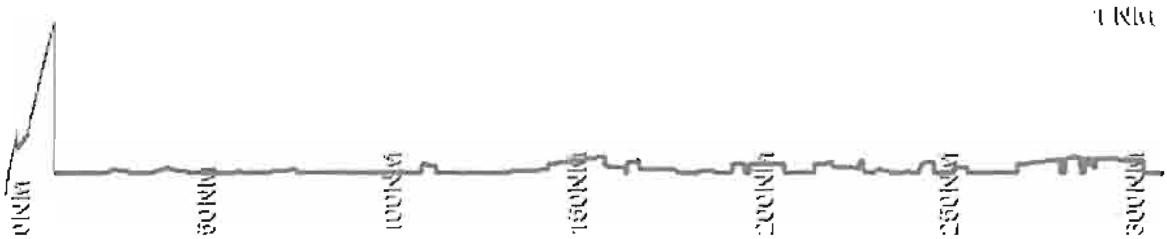
No Critical DMEs were found

Available DMEs: STL, FTZ, CSX, FAM, TOY, VLA, ENL, VNN, BIB, PXV, SPI, TTH, AXC, SAM, MTO, VHP, BVT, OKK, OOM, IIU, SHB, FWA, ROD, FLM, MIE, RID, DQN, APE

Foreign DMEs within range: YQG, YQO, YXU

DME/DME (Continued.)

Return To Summary



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. (NM)	Status	Time	Distance
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H + ESV	User	NO	1.085	Enabled	4.9 %	4.5 %
2	FTZ	N 38° 41' 39.58" W 90° 58' 16.17"	L	Database	NO	1.085	Enabled	1.3 %	0.8 %
3	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H + ESV	User	NO	1.364	Enabled	4.9 %	5.0 %
4	CSX	N 38° 45' 9.88" W 90° 21' 39.46"	H	Database	NO	0.906	Enabled	3.7 %	3.8 %
5	ENL	N 38° 25' 12.00" W 89° 9' 32.39"	H	Database	NO	0.906	Enabled	10.5 %	10.8 %
6	VLA	N 39° 5' 37.26" W 89° 9' 44.87"	L	Database	NO	0.906	Enabled	7.8 %	8.1 %
7	TOY	N 38° 44' 20.97" W 89° 55' 7.06"	L	Database	NO	0.906	Enabled	4.2 %	4.3 %
8	BIB	N 38° 55' 13.26" W 88° 28' 54.47"	L	Database	NO	0.906	Enabled	9.2 %	9.5 %
9	VNN	N 38° 21' 43.03" W 88° 48' 26.41"	L	Database	NO	0.906	Enabled	4.7 %	4.8 %
10	AXC	N 39° 44' 15.08" W 88° 51' 23.15"	H	Database	NO	1.038	Enabled	15.0 %	15.5 %
11	SAM	N 38° 29' 6.68" W 88° 5' 8.93"	L	Database	NO	0.906	Enabled	2.3 %	2.4 %
12	PXV	N 37° 55' 41.95" W 87° 45' 44.56"	H	Database	NO	0.906	Enabled	6.7 %	6.9 %
13	TTH	N 39° 29' 20.19" W 87° 14' 56.47"	H	Database	NO	0.906	Enabled	23.5 %	24.3 %
14	MTO	N 39° 28' 40.42" W 88° 17' 10.44"	L	Database	NO	0.906	Enabled	7.7 %	8.0 %
15	SPI	N 39° 50' 23.04" W 89° 40' 39.83"	H	Database	NO	0.906	Enabled	0.0 %	0.0 %
16	VHP	N 39° 48' 53.02" W 86° 22' 2.88"	H	Database	NO	0.906	Enabled	13.9 %	14.4 %
17	OKK	N 40° 31' 40.00" W 86° 3' 28.81"	H	Database	NO	0.906	Enabled	9.2 %	9.5 %
18	OOM	N 39° 8' 37.76" W 86° 36' 46.[illegible]	L	Database	NO	0.906	Enabled	1.1 %	1.2 %
19	BVT	N 40° 33' 22.03" W 87° 4' 9.55"	H	Database	NO	0.906	Enabled	3.3 %	3.4 %
20	SHB	N 39° 37' 57.15" W 85° 49' 27.54"	L	Database	NO	0.906	Enabled	10.6 %	11.0 %

DME/DME (Continued.)

Return To Summary

DMEs Used (Continued.)

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
21	IIU	N 38° 6' 12.47" W 85° 34' 38.77"	H	Database	NO	0.906	Enabled	5.8 %	6.0 %
22	FWA	N 40° 58' 44.63" W 85° 11' 17.01"	H	Database	NO	0.906	Enabled	8.3 %	8.5 %
23	RID	N 39° 45' 18.08" W 84° 50' 19.85"	L	Database	NO	0.906	Enabled	3.5 %	3.6 %
24	ROD	N 40° 17' 16.08" W 84° 2' 35.28"	H	Database	NO	0.906	Enabled	1.3 %	1.4 %
25	MIE	N 40° 14' 14.25" W 85° 23' 38.53"	L	Database	NO	0.906	Enabled	3.6 %	3.7 %
26	FLM	N 38° 38' 58.16" W 84° 18' 38.27"	H	Database	NO	0.906	Enabled	10.4 %	10.8 %
27	DON	N 40° 0' 59.19" W 84° 23' 48.83"	L	Database	NO	0.906	Enabled	5.0 %	5.1 %
28	APE	N 40° 9' 3.82" W 82° 35' 17.88"	H	Database	NO	0.906	Enabled	5.6 %	5.8 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0						
1.5						
2.5	STL	FTZ	CSX			
5.4	STL	FTZ	CSX			
8.4	STL	FTZ	CSX	FAM		
24.3	STL	VLA	CSX	FAM	ENL	TOY
40.7	BIB	VLA	TOY	VNN	ENL	
59.4	BIB	VLA	TOY	VNN	ENL	
69.4	BIB	VLA	AXC	VNN	CSX	ENL
89.3	BIB	PXV	AXC	SAM	TTH	MTO
100.3	BIB	MTO	AXC	ENL	TTH	SPI
110.4	BIB	MTO	VHP	ENL	TTH	PXV
124.8	AXC	MTO	PXV	ENL	TTH	VHP
134.9	AXC	OOM	PXV	OKK	TTH	VHP
167.4	VHP	OOM	PXV	OKK	TTH	BVT
179.1	BVT	OOM	SHB	OKK	TTH	IIU
189.2	BVT	IIU	SHB	VHP	TTH	OKK

DME/DME (Continued.)

Return To Summary

Flight Check DME Selection (Continued.)

Distance (NM)	Selected DMEs					Alternate
209.4	OKK	IIU	SHB	VHP	TTH	FWA
220.3	FWA	IIU	RID	VHP	TTH	FLM
231.5	MIE	ROD	OKK	VHP	SHB	FWA
241.7	MIE	RID	FWA	VHP	TTH	OKK
251.8	MIE	SHB	FWA	VHP	FLM	RID
261.9	DQN	RID	FWA	VHP	FLM	OKK
277.1	DQN	RID	APE	VHP	FLM	FWA
287.2	DQN	ROD	APE	VHP	FLM	FWA
301.5	DQN	FWA	APE	OKK	FLM	ROD

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 38° 45' 6.41" W 90° 21' 58.66"	N 38° 43' 37.87" W 90° 18' 20.88"	3.3
	VOR: CSX	Available from N 38° 45' 6.41" W 90° 21' 58.66" to N 38° 43' 37.87" W 90° 18' 20.88"	
	VOR: FTZ	Available from N 38° 45' 6.41" W 90° 21' 58.66" to N 38° 43' 37.87" W 90° 18' 20.88"	
	VOR: STL	Available from N 38° 45' 6.41" W 90° 21' 58.66" to N 38° 43' 37.87" W 90° 18' 20.88"	
	VOR: TOY	Available from N 38° 45' 6.41" W 90° 21' 58.66" to N 38° 43' 37.87" W 90° 18' 20.88"	
2	N 38° 43' 39.12" W 90° 15' 4.10"	N 38° 44' 11.52" W 90° 5' 48.92"	7.3
	VOR: CSX	Available from N 38° 43' 39.12" W 90° 15' 4.10" to N 38° 44' 11.52" W 90° 5' 48.92"	
	VOR: FTZ	Available from N 38° 43' 39.12" W 90° 15' 4.10" to N 38° 44' 2.94" W 90° 7' 16.07"	
	VOR: STL	Available from N 38° 43' 39.12" W 90° 15' 4.10" to N 38° 44' 11.52" W 90° 5' 48.92"	
	VOR: TOY	Available from N 38° 43' 39.12" W 90° 15' 4.10" to N 38° 44' 11.52" W 90° 5' 48.92"	

DME/DME (Continued.)

Return To Summary

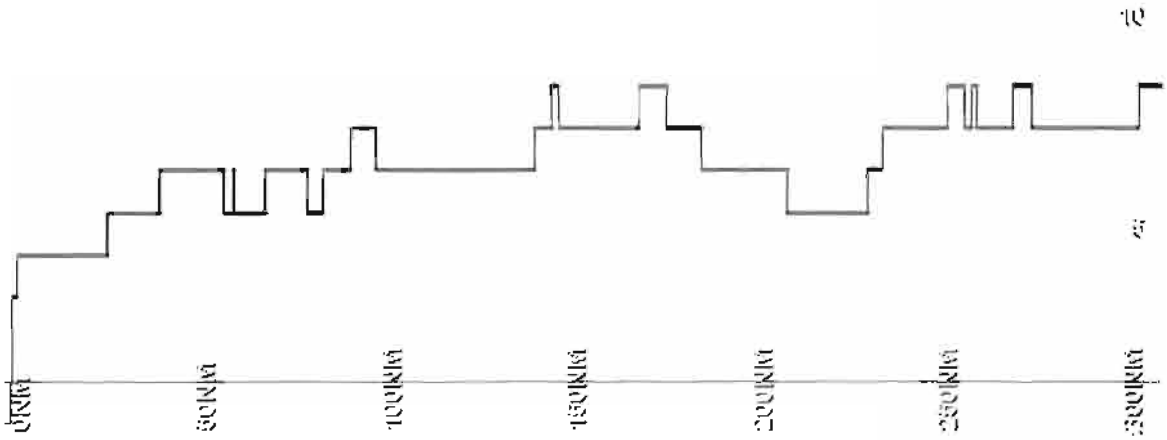
User DMEs

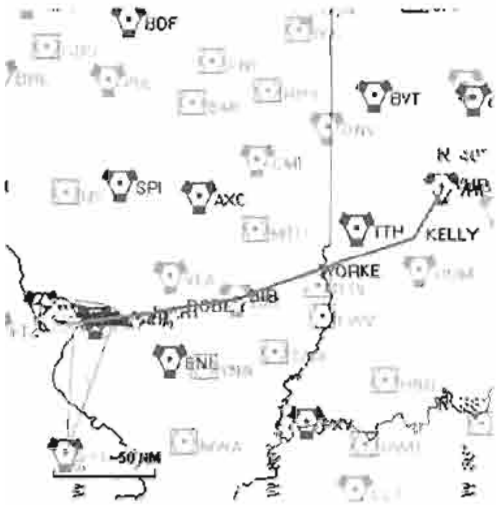
#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	STL	N 38° 51' 38 48" W 90° 28' 56 52"	H	449.5	117.40	STL	Used
		ESV. Bearing [True] 91.0° to 114.0° Bearing [Mag]. 90.0° to 113.0°			Arc Distance Out to 35.0 NM Altitude. 4000.0 to 10000.0 Ft.		
2	FAM	N 37° 40' 24.39" W 90° 14' 2 53"	H	1220 0	115.70	FAM	Used
		ESV. Bearing [True] 3 0° to 20 0° Bearing [Mag] 2.0° to 19 0°			Arc Distance. Out to 74 0 NM Altitude. 4000 0 to 10000.0 Ft		

Radar Analysis

Return To Summary

Settings: Radar Types: ARSR and ASR





Name:	enanders
Project Name:	
Software:	RNAV-Pro™
Version:	2 35
Date/Time:	2/10/2012 10:20.53 AM
Input File:	JHART RW12L VHP 2012 ..
Databases:	AVNIS Date: 08/26/2011
	NFD Date: 07/02/2009
	DTED® (MAX) Date 2002

Results Summary:

Flyability	✓	Please Check Flyability Results
DME/DME	✓	
Radars	✓	
Comms		
TERPS		

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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW12L(	WP	N 38° 45' 6.41" W 90° 21' 58.66"	528.3	VNAV	0.0	Fly Over	TF
RW30R(	WP	N 38° 44' 18.99" W 90° 20' 22.51"	639.5	VNAV	130.0	Fly Over	VA
GH12L	WP	N 38° 43' 45.97" W 90° 19' 15.62"	1120.0	VNAV	145.0	Fly Over	DF
FUNKE	WP	N 38° 43' 39.26" W 90° 15' 35.58"	2500.0	VNAV	180.0	Fly By	TF
RAMKR	WP	N 38° 43' 37.54" W 90° 11' 36.78"	3122.9	VNAV	180.0	Fly By	TF
JHART	WP	N 38° 47' 32.80" W 89° 30' 39.12"	9578.6	VNAV	180.0	Fly By	TF
DOBLR	WP	N 38° 50' 31.91" W 89° 7' 10.92"	13295.5	VNAV	210.0	Fly By	TF
BIB	WP	N 38° 55' 13.24" W 88° 28' 54.50"	18000.0	VNAV	240.0	Fly By	TF
WORKE	WP	N 39° 7' 2.95" W 87° 46' 25.21"	18000.0	VNAV	240.0	Fly By	TF
KELLY	WP	N 39° 24' 49.15" W 86° 40' 17.29"	18000.0	VNAV	240.0	Fly By	TF
VHP	WP	N 39° 48' 53.02" W 86° 22' 2.88"	18000.0	VNAV	240.0	Fly Over	TF

Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL

Climb Gradient: 200 Ft/NM after next to last waypoint up to 18000.0 Ft

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KSTL
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL
Ground Speeds:
Departure: **120.0 Kts** out to **10.0 NM**
Table:
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Flight Track comes into contact with terrain. Minimum AGL along route was -64.22 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

DME/DME

Return To Summary

Settings:

RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.165 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
Minimum MSL DMEs Avail: 2122 Ft

Total Number of DMEs Used: 20

Maximum DME Error: 0.906 NM

No Critical DMEs were found

Available DMEs: STL, FTZ, CSX, FAM, TOY, VLA, ENL, VNN, BIB, PXV, SPI, TTH, AXC, SAM, MTO, VHP, BVT, OKK, OOM, IIU, SHB, FWA, OXI

Foreign DMEs within range: YQG

DME/DME (Continued.)

Return To Summary

DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H + ESV	User	NO	1.085	Enabled	7.2 %	6.8 %
2	FTZ	N 38° 41' 39.58" W 90° 58' 16.17"	L	Database	NO	1.085	Enabled	1.9 %	1.2 %
3	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H + ESV	User	NO	1.364	Enabled	7.2 %	7.5 %
4	CSX	N 38° 45' 9.88" W 90° 21' 39.46"	H	Database	NO	0.906	Enabled	5.5 %	5.7 %
5	ENL	N 38° 25' 12.00" W 89° 9' 32.39"	H	Database	NO	0.906	Enabled	15.6 %	16.3 %
6	VLA	N 39° 5' 37.26" W 89° 9' 44.87"	L	Database	NO	0.906	Enabled	11.6 %	12.2 %
7	TOY	N 38° 44' 20.97" W 89° 55' 7.06"	L	Database	NO	0.906	Enabled	6.2 %	6.5 %
8	BIB	N 38° 55' 13.26" W 88° 28' 54.47"	L	Database	NO	0.906	Enabled	13.7 %	14.4 %
9	VNN	N 38° 21' 43.03" W 88° 48' 26.41"	L	Database	NO	0.906	Enabled	6.9 %	7.3 %
10	AXC	N 39° 44' 15.08" W 88° 51' 23.15"	H	Database	NO	1.038	Enabled	22.2 %	23.3 %
11	SAM	N 38° 29' 6.68" W 88° 5' 8.93"	L	Database	NO	0.906	Enabled	3.5 %	3.7 %
12	PXV	N 37° 55' 41.95" W 87° 45' 44.56"	H	Database	NO	0.906	Enabled	9.9 %	10.4 %
13	TTH	N 39° 29' 20.19" W 87° 14' 56.47"	H	Database	NO	0.906	Enabled	32.9 %	34.6 %
14	MTO	N 39° 28' 40.42" W 88° 17' 10.44"	L	Database	NO	0.906	Enabled	11.5 %	12.0 %
15	SPI	N 39° 50' 23.04" W 89° 40' 39.83"	H	Database	NO	0.906	Enabled	0.0 %	0.0 %
16	VHP	N 39° 48' 53.02" W 86° 22' 2.88"	H	Database	NO	0.906	Enabled	2.0 %	2.1 %
17	OKK	N 40° 31' 40.00" W 86° 3' 28.81"	H	Database	NO	0.906	Enabled	9.8 %	10.3 %
18	OOM	N 39° 8' 37.76" W 86° 36' 46.87"	L	Database	NO	0.906	Enabled	4.9 %	5.1 %
19	BVT	N 40° 33' 22.03" W 87° 4' 9.55"	H	Database	NO	0.906	Enabled	5.9 %	6.2 %
20	SHB	N 39° 37' 57.15" W 85° 49' 27.54"	L	Database	NO	0.906	Enabled	4.0 %	4.2 %

Flight Check DME Selection

Distance [NM]	Selected DMEs	Alternate

DME/DME (Continued.)

Return To Summary

Flight Check DME Selection (Continued.)

Distance [NM]	Selected DMEs					Alternate
0.0						
0.0						
1.5						
2.5	STL	FTZ	CSX			
5.4	STL	FTZ	CSX			
8.4	STL	FTZ	CSX	FAM		
24.3	STL	VLA	CSX	FAM	ENL	TOY
40.7	BIB	VLA	TOY	VNN	ENL	
59.4	BIB	VLA	TOY	VNN	ENL	
69.4	BIB	VLA	AXC	VNN	CSX	ENL
89.3	BIB	PXV	AXC	SAM	TTH	MTO
100.3	BIB	MTO	AXC	ENL	TTH	SPI
110.4	BIB	MTO	VHP	ENL	TTH	PXV
124.8	AXC	MTO	PXV	ENL	TTH	VHP
134.9	AXC	OOM	PXV	OKK	TTH	VHP
167.4	VHP	OOM	PXV	OKK	TTH	BVT
178.4	BVT	OOM	SHB	OKK	TTH	VHP
188.5	BVT	VHP	SHB	OKK	TTH	FWA

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 38° 45' 6.41" W 90° 21' 58.66"	N 38° 43' 37.87" W 90° 18' 20.88"	3.3
	VOR: CSX	Available from N 38° 45' 6.41" W 90° 21' 58.66" to N 38° 43' 37.87" W 90° 18' 20.88"	
	VOR: FTZ	Available from N 38° 45' 6.41" W 90° 21' 58.66" to N 38° 43' 37.87" W 90° 18' 20.88"	
	VOR: STL	Available from N 38° 45' 6.41" W 90° 21' 58.66" to N 38° 43' 37.87" W 90° 18' 20.88"	
	VOR: TOY	Available from N 38° 45' 6.41" W 90° 21' 58.66" to N 38° 43' 37.87" W 90° 18' 20.88"	

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments (Continued.)

#	Start Location	End Location	Length [NM]
2	N 38° 43' 39.12" W 90° 15' 4.10"	N 38° 44' 11.52" W 90° 5' 48.92"	7 3
	VOR: CSX	Available from N 38° 43' 39.12" W 90° 15' 4.10" to N 38° 44' 11.52" W 90° 5' 48 92"	
	VOR: FTZ	Available from N 38° 43' 39.12" W 90° 15' 4.10" to N 38° 44' 2.94" W 90° 7' 16.07"	
	VOR. STL	Available from N 38° 43' 39.12" W 90° 15' 4.10" to N 38° 44' 11.52" W 90° 5' 48 92"	
	VOR. TOY	Available from N 38° 43' 39 12" W 90° 15' 4 10" to N 38° 44' 11 52" W 90° 5' 48 92"	

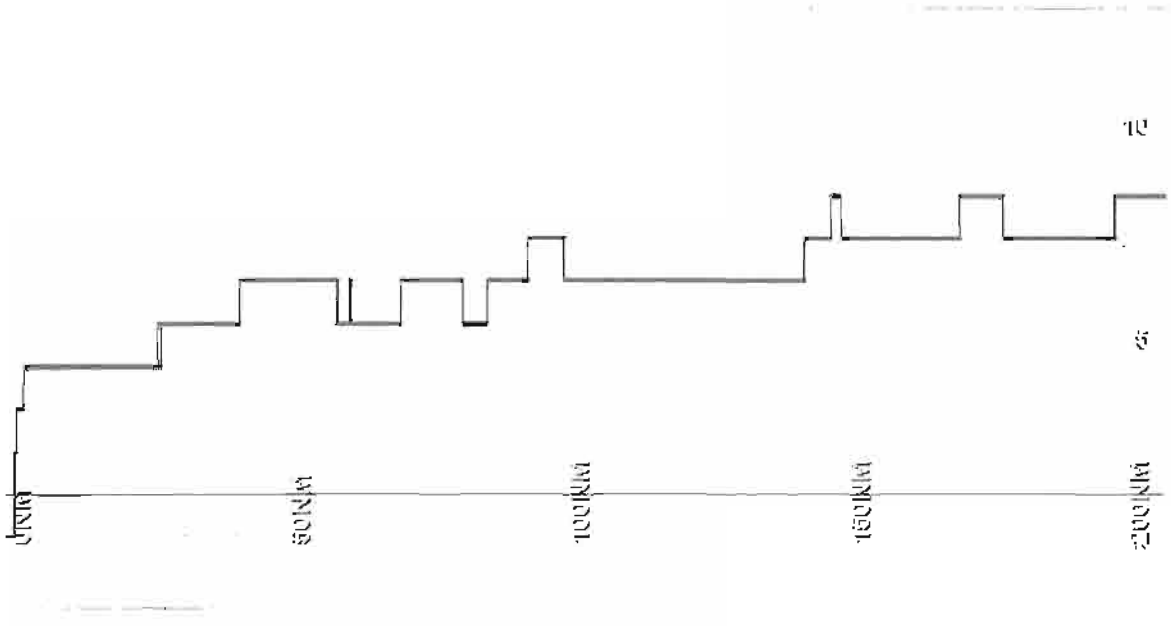
User DMEs

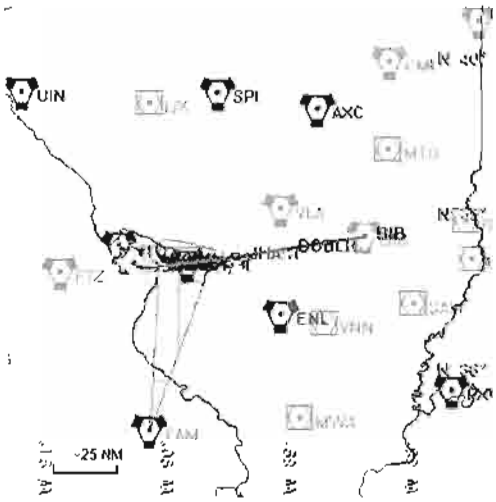
#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H	449 5	117.40	STL	Used
		ESV: Bearing [True]: 91.0° to 114.0° Bearing [Mag]: 90.0° to 113 0°			Arc Distance: Out to 35.0 NM Altitude: 4000 0 to 10000.0 Ft.		
2	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H	1220.0	115.70	FAM	Used
		ESV: Bearing [True]: 3.0° to 20 0° Bearing [Mag]: 2.0° to 19 0°			Arc Distance: Out to 74.0 NM Altitude: 4000 0 to 10000.0 Ft		

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR





Name:	enanders
Project Name:	
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	2/10/2012 10:31:15 AM
Input File:	JHART RW12R BIB 2012...
Databases:	AVNIS Date: 08/26/2011
	NFD Date: 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✓	Please Check Flyability Results
DME/DME	✓	
Radars	✓	
Comms		
TERPS		

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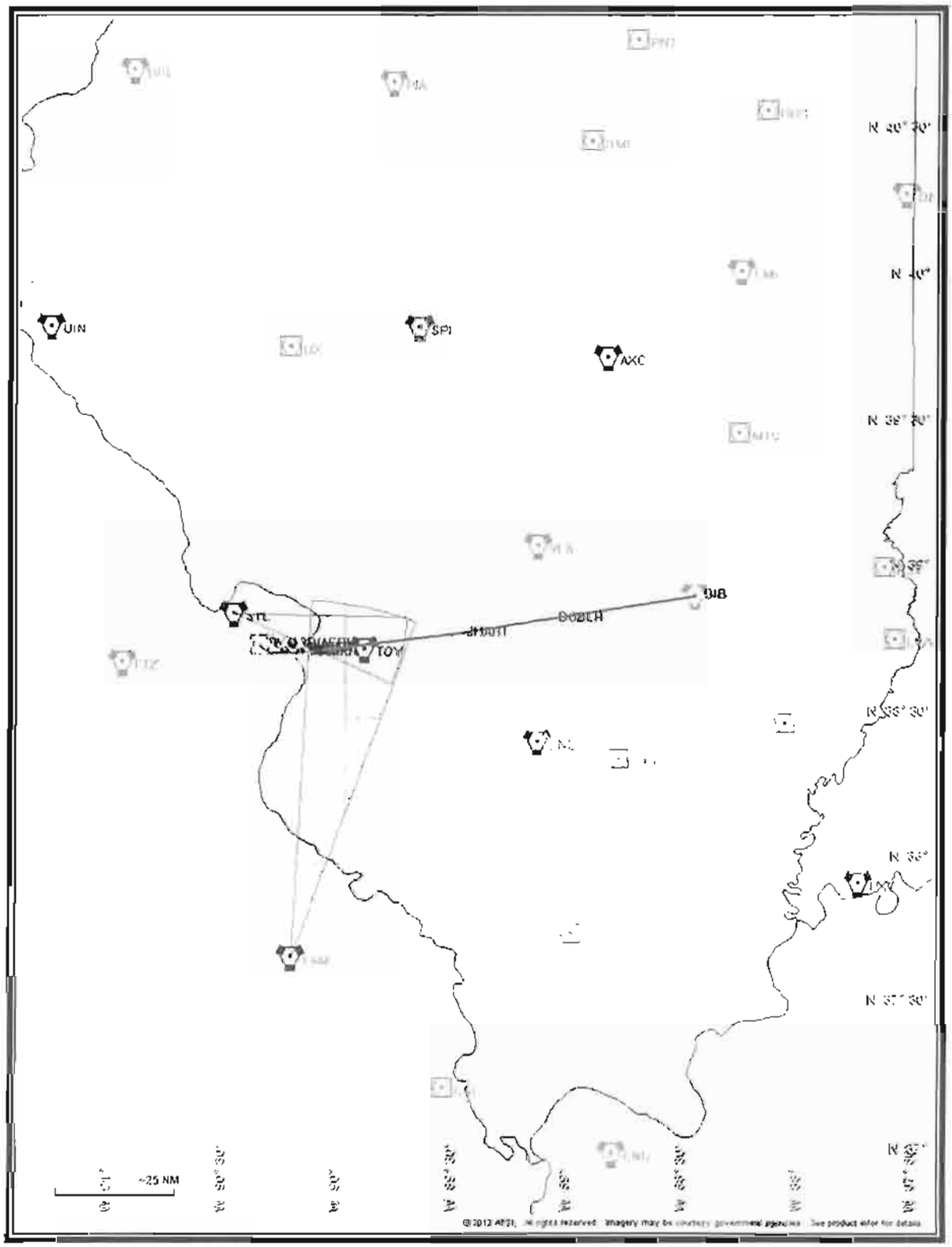

UIN
SPI
AXC
BIB
DOBLH
TOY
~25 NM

Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW12R(...	WP	N 38° 45' 11.59" W 90° 22' 39.98"	541.6	VNAV	0.0	Fly Over	TF
RW30L(...	WP	N 38° 44' 16.01" W 90° 20' 47.27"	620.8	VNAV	130.0	Fly Over	VA
GH12R	WP	N 38° 43' 41.81" W 90° 19' 37.96"	1120.0	VNAV	145 0	Fly Over	DF
FUNKE	WP	N 38° 43' 39.26" W 90° 15' 35 58"	2500.0	VNAV	180.0	Fly By	TF
RAMKR	WP	N 38° 43' 37.54" W 90° 11' 36.78"	3122.9	VNAV	180.0	Fly By	TF
JHART	WP	N 38° 47' 32.80" W 89° 30' 39.12"	9578.6	VNAV	180.0	Fly By	TF
DOBLR	WP	N 38° 50' 31 91" W 89° 7' 10.92"	13295.5	VNAV	210.0	Fly By	TF
BIB	WP	N 38° 55' 13.24" W 88° 28' 54.50"	18000.0	VNAV	240.0	Fly Over	TF

Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL

Climb Gradient: 200 Ft/NM after next to last waypoint up to 18000.0 Ft

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KSTL
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL
Ground Speeds:
Departure **120.0 Kts** out to **10.0 NM**
Table:
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Flight Track comes into contact with terrain. Minimum AGL along route was -71.92 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER

DME/DME

Return To Summary

Settings:

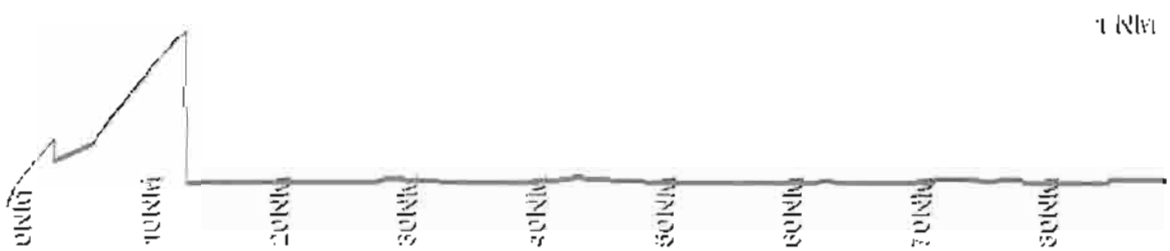
RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.165 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
Minimum MSL DMEs Avail: 2017 Ft.

Total Number of DMEs Used: 15

Maximum DME Error: 0.900 NM

No Critical DMEs were found.

Available DMEs: STL, FTZ, CSX, FAM, TOY, VLA, ENL, VNN, BIB, PXV, SPI, TTH, AXC, SAM, MTO



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H + ESV	User	NO	1.118	Enabled	20.1 %	20 2 %
2	FTZ	N 38° 41' 39.58" W 90° 58' 16.17"	L	Database	NO	1.118	Enabled	4 9 %	3 3 %
3	FAM	N 37° 40' 24.39" W 90° 14' 2 53"	H + ESV	User	NO	1.355	Enabled	15 6 %	17 3 %
4	CSX	N 38° 45' 9 88" W 90° 21' 39.46"	H	Database	NO	0 900	Enabled	8 6 %	9 5 %
5	ENL	N 38° 25' 12 00" W 89° 9' 32.39"	H	Database	NO	0.900	Enabled	35 1 %	39.1 %
6	VLA	N 39° 5' 37.26" W 89° 9' 44 87"	L	Database	NO	0 900	Enabled	20 4 %	22.7 %
7	TOY	N 38° 44' 20.97" W 89° 55' 7 06"	L	Database	NO	0.900	Enabled	13.5 %	15.0 %
8	BIB	N 38° 55' 13 26" W 88° 28' 54.47"	L	Database	NO	0.900	Enabled	17.5 %	19 5 %
9	VNN	N 38° 21' 43.03" W 88° 48' 26.41"	L	Database	NO	0.900	Enabled	10 0 %	11 1 %
10	AXC	N 39° 44' 15 08" W 88° 51' 23 15"	H	Database	NO	0 900	Enabled	10 0 %	11 1 %
11	SAM	N 38° 29' 6 68" W 88° 5' 8 93"	L	Database	NO	0 900	Enabled	2.2 %	2.4 %
12	PXV	N 37° 55' 41 95" W 87° 45' 44 56"	H	Database	NO	0.900	Enabled	0 0 %	0 0 %
13	TTH	N 39° 29' 20.19" W 87° 14' 56 47"	H	Database	NO	0.900	Enabled	0 0 %	0 0 %
14	MTO	N 39° 28' 40.42" W 88° 17' 10.44"	L	Database	NO	0.900	Enabled	0.0 %	0 0 %
15	SPI	N 39° 50' 23 04" W 89° 40' 39 83"	H	Database	NO	0.900	Enabled	4.4 %	4.9 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0 0						
1 8						
2.8	STL	FTZ	CSX			
6.0	STL	FTZ	CSX			
9.0	STL	FTZ	CSX	FAM		
24 8	STL	VLA	CSX	FAM	ENL	TOY
41 3	BIB	VLA	TOY	VNN	ENL	

DME/DME (Continued.)

Return To Summary

Flight Check DME Selection (Continued.)

Distance [NM]	Selected DMEs					Alternate
60.0	BIB	VLA	TOY	VNN	ENL	PXV
70.0	BIB	CSX	AXC	VNN	STL	VLA
80.2	BIB	SAM	AXC	SPI	ENL	STL

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 38° 45' 11.59" W 90° 22' 39.98"	N 38° 43' 34.33" W 90° 18' 50.18"	3.5
	VOR: CSX	Available from N 38° 45' 11.59" W 90° 22' 39.98" to N 38° 43' 34.33" W 90° 18' 50.18"	
	VOR: FTZ	Available from N 38° 45' 11.59" W 90° 22' 39.98" to N 38° 43' 34.33" W 90° 18' 50.18"	
	VOR: STL	Available from N 38° 45' 11.59" W 90° 22' 39.98" to N 38° 43' 34.33" W 90° 18' 50.18"	
	VOR: TOY	Available from N 38° 45' 11.59" W 90° 22' 39.98" to N 38° 43' 34.33" W 90° 18' 50.18"	
2	N 38° 43' 39.12" W 90° 15' 2.83"	N 38° 44' 11.71" W 90° 5' 46.91"	7.3
	VOR: CSX	Available from N 38° 43' 39.12" W 90° 15' 2.83" to N 38° 44' 11.71" W 90° 5' 46.91"	
	VOR: FTZ	Available from N 38° 43' 39.12" W 90° 15' 2.83" to N 38° 44' 2.93" W 90° 7' 16.14"	
	VOR: STL	Available from N 38° 43' 39.12" W 90° 15' 2.83" to N 38° 44' 11.71" W 90° 5' 46.91"	
	VOR: TOY	Available from N 38° 43' 39.12" W 90° 15' 2.83" to N 38° 44' 11.71" W 90° 5' 46.91"	

User DMEs

#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H	449.5	117.40	STL	Used

ESV: Bearing [True]: 91.0° to 114.0°
Bearing [Mag]: 90.0° to 113.0°

Arc Distance: Out to 35.0 NM
Altitude: 4000.0 to 10000.0 Ft.

DME/DME (Continued.)

Return To Summary

User DMEs (Continued.)

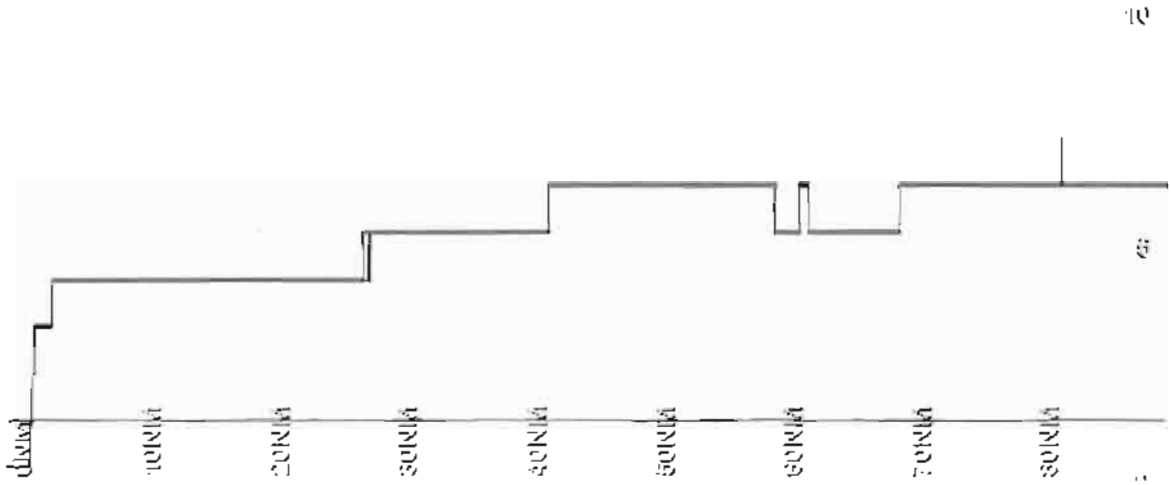
#	Name	Lat/Lon	Range	Elevation (Ft)	Frequency	Replaces:	Status
2	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H	1220.0	115.70	FAM	Used

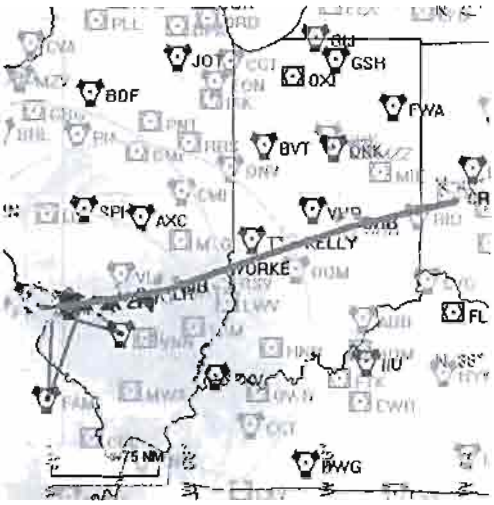
ESV: Bearing [True] 3.0° to 20.0° Arc Distance Out to 74.0 NM
Bearing [Mag] 2.0° to 19.0° Altitude 4000.0 to 10000.0 Ft.

Radar Analysis

Return To Summary

Settings: Radar Types: ARSR and ASR





Name:	enanders
Project Name:	
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	4/9/2012 2:27:54 PM
Input File:	JHART RW12R CREEP_ 2..
Databases:	AVNIS Date: 02/07/2012
	NFD Date: 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✓	Please Check Flyability Results
DME/DME	✓	
Radars	✓	
Comms		
TERPS		

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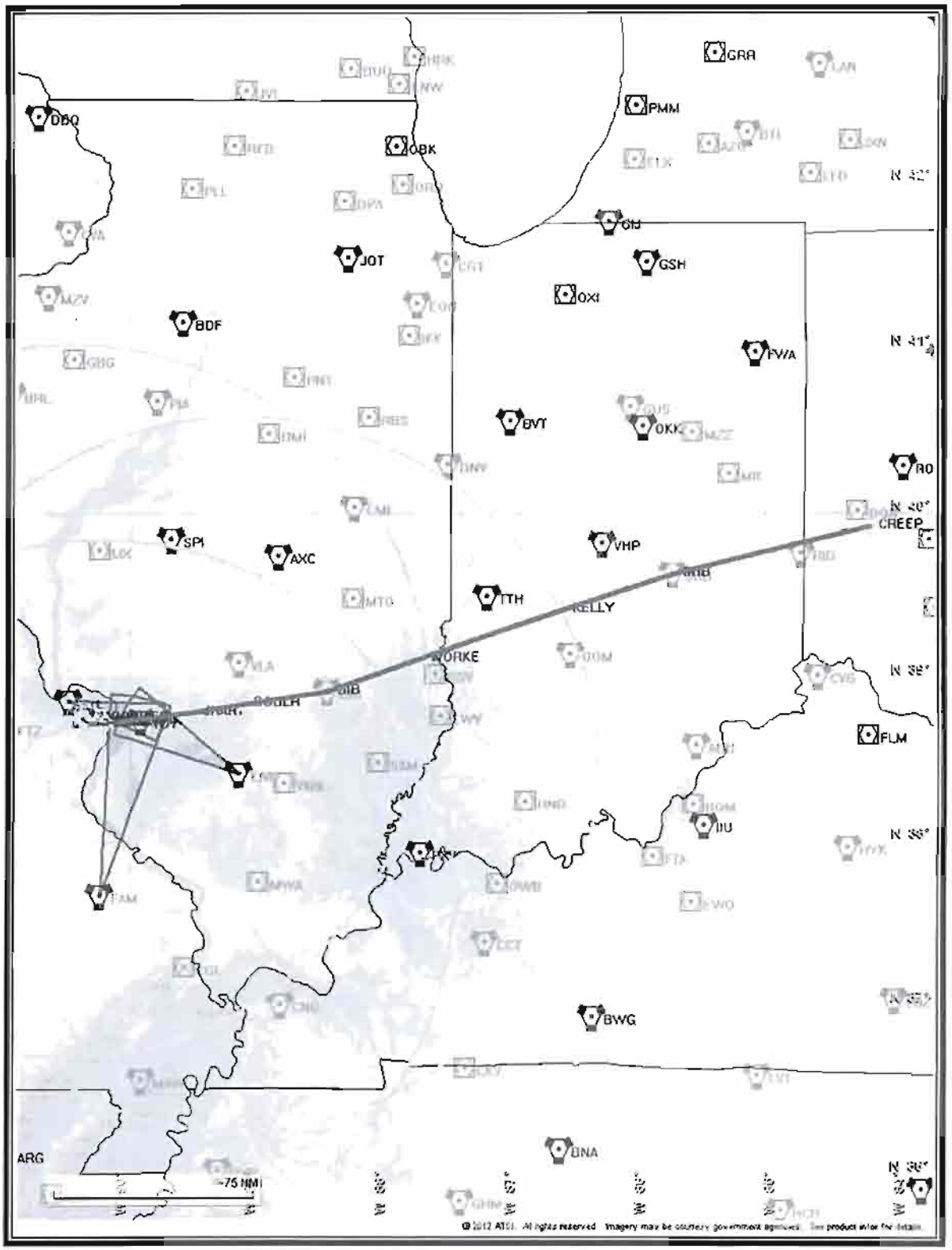

GRR
PMM
DBQ
OBK
OIJ
JOT
GSH
OXI
BDF
FWA
BVT
OKK
RO
CREEP
SPI
AXC
VHP
TTH
KELLY
FLM
IIU
BWG
BNA
ARG
75 NM

Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW12R(...	WP	N 38° 45' 11.59" W 90° 22' 39.98"	541.6	VNAV	0.0	Fly Over	TF
RW30L(...	WP	N 38° 44' 16.01" W 90° 20' 47.27"	620.8	VNAV	130.0	Fly Over	VA
GH12R	WP	N 38° 43' 41.83" W 90° 19' 37.95"	1120.0	VNAV	145.0	Fly Over	DF
FUNKE	WP	N 38° 43' 39.26" W 90° 15' 35 58"	2500.0	VNAV	180 0	Fly By	TF
RAMKR	WP	N 38° 43' 37 54" W 90° 11' 36.78"	3122 9	VNAV	180.0	Fly By	TF
JHART	WP	N 38° 47' 32.80" W 89° 30' 39.12"	9578 6	VNAV	180.0	Fly By	TF
DOBLR	WP	N 38° 50' 31 91" W 89° 7' 10.92"	13295.5	VNAV	210 0	Fly By	TF
BIB	WP	N 38° 55' 13.24" W 88° 28' 54.50"	18000.0	VNAV	240 0	Fly By	TF
WORKE	WP	N 39° 7' 2 95" W 87° 46' 25 21"	18000.0	VNAV	240 0	Fly By	TF
KELLY	WP	N 39° 24' 49.15" W 86° 40' 17.29"	18000.0	VNAV	240.0	Fly By	TF
SHB	WP	N 39° 37' 57.15" W 85° 49' 27.54"	18000 0	VNAV	240 0	Fly By	TF
CREEP_	WP	N 39° 55' 15.28" W 84° 18' 31.41"	18000.0	VNAV	240 0	Fly Over	TF

Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL

Climb Gradient: 200 Ft/NM after next to last waypoint up to 18000 0 Ft

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KSTL
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL
Ground Speeds:
Departure **120.0 Kts** out to **10.0 NM**
Table:
200.0 Kts up to **11000.0 Ft.**
240.0 Kts up to **18000.0 Ft.**
260.0 Kts up to **24000.0 Ft.**
340.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Flight Track comes into contact with terrain. Minimum AGL along route was -71.92 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

DME/DME

Return To Summary

Settings:

RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
  Initial Drift: 0.165 NM
  INS Drift Rate: 8 000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
Minimum MSL DMEs Avail: 2017 Ft.

Total Number of DMEs Used: 28

Maximum DME Error: 0.900 NM

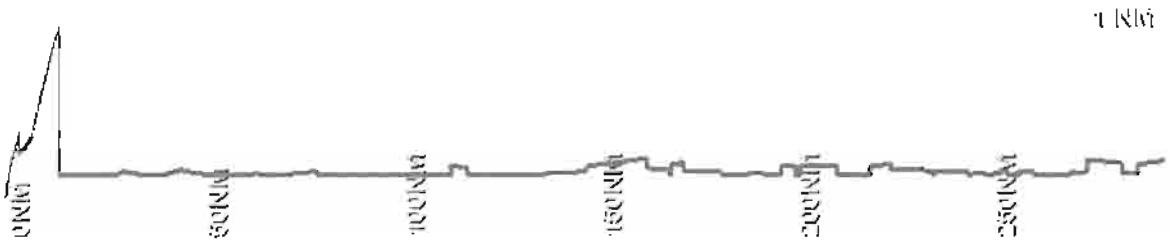
No Critical DMEs were found.

Available DMEs: STL, FTZ, CSX, FAM, ENL, TOY, VLA, VNN, BIB, PXV, SPI, TTH, AXC, SAM, MTO, VHP, BVT, OKK, OOM, IIU, SHB, FWA, FLM, ROD, RID, MIE, DQN, APE

Foreign DMEs within range: YQG, YQO, YXU

DME/DME (Continued.)

Return To Summary



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. (NM)	Status	Time	Distance
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H + ESV	User	NO	1.118	Enabled	6.5 %	4.9 %
2	FTZ	N 38° 41' 39.58" W 90° 58' 16.17"	L	Database	NO	1.118	Enabled	2.0 %	1.0 %
3	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H + ESV	User	NO	1.355	Enabled	6.3 %	5.3 %
4	CSX	N 38° 45' 9.88" W 90° 21' 39.46"	H	Database	NO	0.900	Enabled	4.2 %	4.0 %
5	ENL	N 38° 25' 12.00" W 89° 9' 32.39"	H + ESV	User	NO	0.900	Enabled	12.5 %	11.5 %
6	VLA	N 39° 5' 37.82" W 89° 9' 44.08"	L	Database	NO	0.900	Enabled	9.3 %	8.5 %
7	TOY	N 38° 44' 20.97" W 89° 55' 7.06"	L	Database	NO	0.900	Enabled	4.9 %	4.7 %
8	BIB	N 38° 55' 13.24" W 88° 28' 54.50"	L	Database	NO	0.900	Enabled	9.6 %	10.1 %
9	VNN	N 38° 21' 43.03" W 88° 48' 26.41"	L	Database	NO	0.900	Enabled	5.0 %	5.1 %
10	AXC	N 39° 44' 15.08" W 88° 51' 23.15"	H	Database	NO	0.900	Enabled	15.2 %	16.5 %
11	SAM	N 38° 29' 6.68" W 88° 5' 8.93"	L	Database	NO	0.900	Enabled	2.3 %	2.6 %
12	PXV	N 37° 55' 41.95" W 87° 45' 44.56"	H	Database	NO	0.900	Enabled	6.7 %	7.4 %
13	TTH	N 39° 29' 20.19" W 87° 14' 56.47"	H	Database	NO	0.900	Enabled	22.4 %	24.7 %
14	MTO	N 39° 28' 40.42" W 88° 17' 10.44"	L	Database	NO	0.900	Enabled	7.6 %	8.5 %
15	SPI	N 39° 50' 23.04" W 89° 40' 39.83"	H	Database	NO	0.900	Enabled	0.0 %	0.0 %
16	VHP	N 39° 48' 53.02" W 86° 22' 2.88"	H	Database	NO	0.900	Enabled	12.0 %	13.3 %
17	OKK	N 40° 31' 40.00" W 86° 3' 28.81"	H	Database	NO	0.900	Enabled	8.2 %	9.1 %
18	OOM	N 39° 8' 37.76" W 86° 36' 46.87"	L	Database	NO	0.900	Enabled	1.1 %	1.3 %
19	BVT	N 40° 33' 22.03" W 87° 4' 9.55"	H	Database	NO	0.900	Enabled	3.2 %	3.6 %
20	SHB	N 39° 37' 57.15" W 85° 49' 27.54"	L	Database	NO	0.900	Enabled	8.3 %	9.2 %

DME/DME (Continued.)

Return To Summary

DMEs Used (Continued.)

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
21	IIU	N 38° 6' 12.47" W 85° 34' 38.77"	H	Database	NO	0.900	Enabled	5.7 %	6.3 %
22	FWA	N 40° 58' 44.63" W 85° 11' 17.01"	H	Database	NO	0.900	Enabled	8.4 %	9.3 %
23	MIE	N 40° 14' 14.25" W 85° 23' 38.53"	L	Database	NO	0.900	Enabled	5.2 %	5.8 %
24	ROD	N 40° 17' 16.08" W 84° 2' 35.28"	H	Database	NO	0.900	Enabled	3.5 %	3.9 %
25	RID	N 39° 45' 18.08" W 84° 50' 19.85"	L	Database	NO	0.900	Enabled	3.2 %	3.5 %
26	FLM	N 38° 38' 58.16" W 84° 18' 38.27"	H	Database	NO	0.900	Enabled	6.5 %	7.2 %
27	DQN	N 40° 0' 59.19" W 84° 23' 48.83"	L	Database	NO	0.900	Enabled	2.2 %	2.5 %
28	APE	N 40° 9' 3.82" W 82° 35' 17.88"	H	Database	NO	0.900	Enabled	2.7 %	3.0 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0						
1.8						
2.8	STL	FTZ	CSX			
6.0	STL	FTZ	CSX			
9.0	STL	FTZ	CSX	FAM	ENL	
24.8	STL	VLA	CSX	FAM	ENL	TOY
41.3	BIB	VLA	TOY	VNN	ENL	
60.0	BIB	VLA	TOY	VNN	ENL	
70.0	BIB	VLA	AXC	VNN	CSX	ENL
89.7	BIB	PXV	AXC	SAM	TTH	MTO
100.9	BIB	MTO	AXC	ENL	TTH	SPI
111.0	BIB	MTO	VHP	ENL	TTH	PXV
125.4	AXC	MTO	PXV	ENL	TTH	VHP
135.5	AXC	OOM	PXV	OKK	TTH	VHP
168.0	VHP	OOM	PXV	OKK	TTH	BVT
179.7	BVT	OOM	SHB	OKK	TTH	IIU
189.8	BVT	IIU	SHB	VHP	TTH	OKK

DME/DME (Continued.)

Return To Summary

Flight Check DME Selection (Continued.)

Distance [NM]	Selected DMEs					Alternate
210.0	OKK	IIU	SHB	VHP	TTH	FWA
220.9	FWA	IIU	FLM	VHP	TTH	ROD
231.4	FWA	OKK	MIE	VHP	ROD	FLM
241.9	FWA	SHB	MIE	VHP	RID	FLM
252.1	DQN	ROD	MIE	VHP	FLM	FWA
270.0	DQN	RID	OKK	APE	FLM	VHP
281.7	VHP	RID	FWA	APE	FLM	OKK

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 38° 45' 11.59" W 90° 22' 39.98"	N 38° 43' 34.35" W 90° 18' 50.17"	3.5
	VOR: CSX	Available from N 38° 45' 11.59" W 90° 22' 39.98" to N 38° 43' 34.35" W 90° 18' 50.17"	
	VOR: FTZ	Available from N 38° 45' 11.59" W 90° 22' 39.98" to N 38° 43' 34.35" W 90° 18' 50.17"	
	VOR: STL	Available from N 38° 45' 11.59" W 90° 22' 39.98" to N 38° 43' 34.35" W 90° 18' 50.17"	
	VOR: TOY	Available from N 38° 45' 11.59" W 90° 22' 39.98" to N 38° 43' 34.35" W 90° 18' 50.17"	
2	N 38° 43' 39.12" W 90° 15' 2.81"	N 38° 44' 11.71" W 90° 5' 46.90"	7.3
	VOR: CSX	Available from N 38° 43' 39.12" W 90° 15' 2.81" to N 38° 44' 11.71" W 90° 5' 46.90"	
	VOR: FTZ	Available from N 38° 43' 39.12" W 90° 15' 2.81" to N 38° 44' 2.93" W 90° 7' 16.12"	
	VOR: STL	Available from N 38° 43' 39.12" W 90° 15' 2.81" to N 38° 44' 11.71" W 90° 5' 46.90"	
	VOR: TOY	Available from N 38° 43' 39.12" W 90° 15' 2.81" to N 38° 44' 11.71" W 90° 5' 46.90"	

DME/DME (Continued.)

Return To Summary

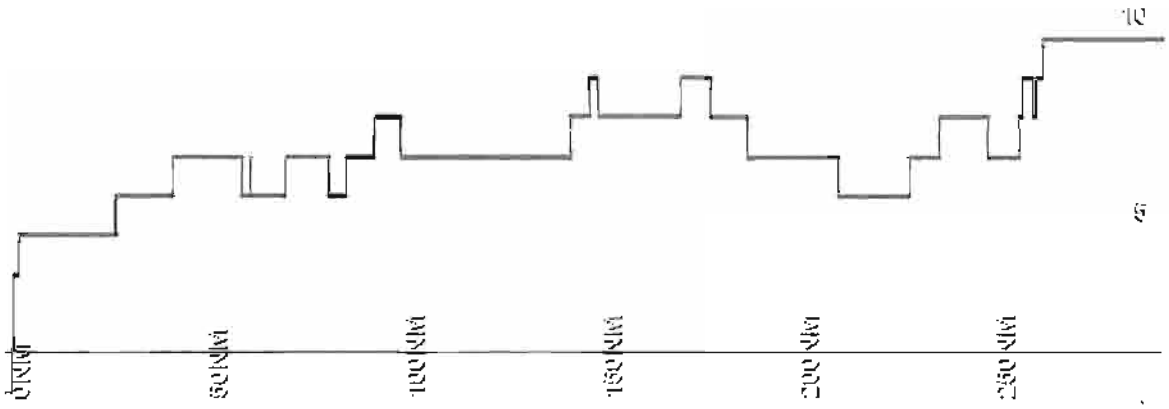
User DMEs

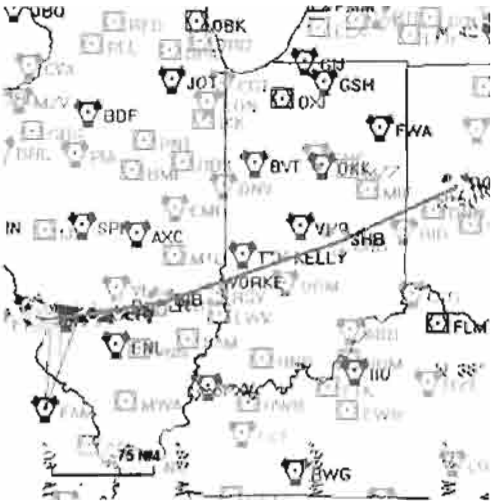
#	Name	Lat/Lon	Range	Elevation (Ft)	Frequency	Replaces:	Status
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H	449.5	117 40	STL	Used
		ESV: Bearing [True]: 91 0° to 114.0° Bearing [Mag]: 90 0° to 113.0°			Arc Distance. Out to 35.0 NM Altitude: 4000.0 to 10000 0 Ft		
2	FAM	N 37° 40' 24.39" W 90° 14' 2 53"	H	1220 0	115.70	FAM	Used
		ESV: Bearing [True]: 3 0° to 20 0° Bearing [Mag]: 2.0° to 19 0°			Arc Distance: Out to 74 0 NM Altitude: 4000 0 to 10000 0 Ft.		
3	ENL	N 38° 25' 12 00" W 89° 9' 32 39"	H	545 8	115.00	ENL	Used
		ESV: Bearing [True]: 288 0° to 311 0° Bearing [Mag]. 284.0° to 307 0°			Arc Distance. Out to 48.0 NM Altitude: 3000.0 to 9000.0 Ft.		

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR





Name:	enanders
Project Name:	
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	2/10/2012 11:44.33 AM
Input File:	JHART RW12R ROD 2012...
Databases:	AVNIS Date: 08/26/2011
	NFD Date: 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✓ Please Check Flyability Results
DME/DME	✓
Radars	✓
Comms	
TERPS	

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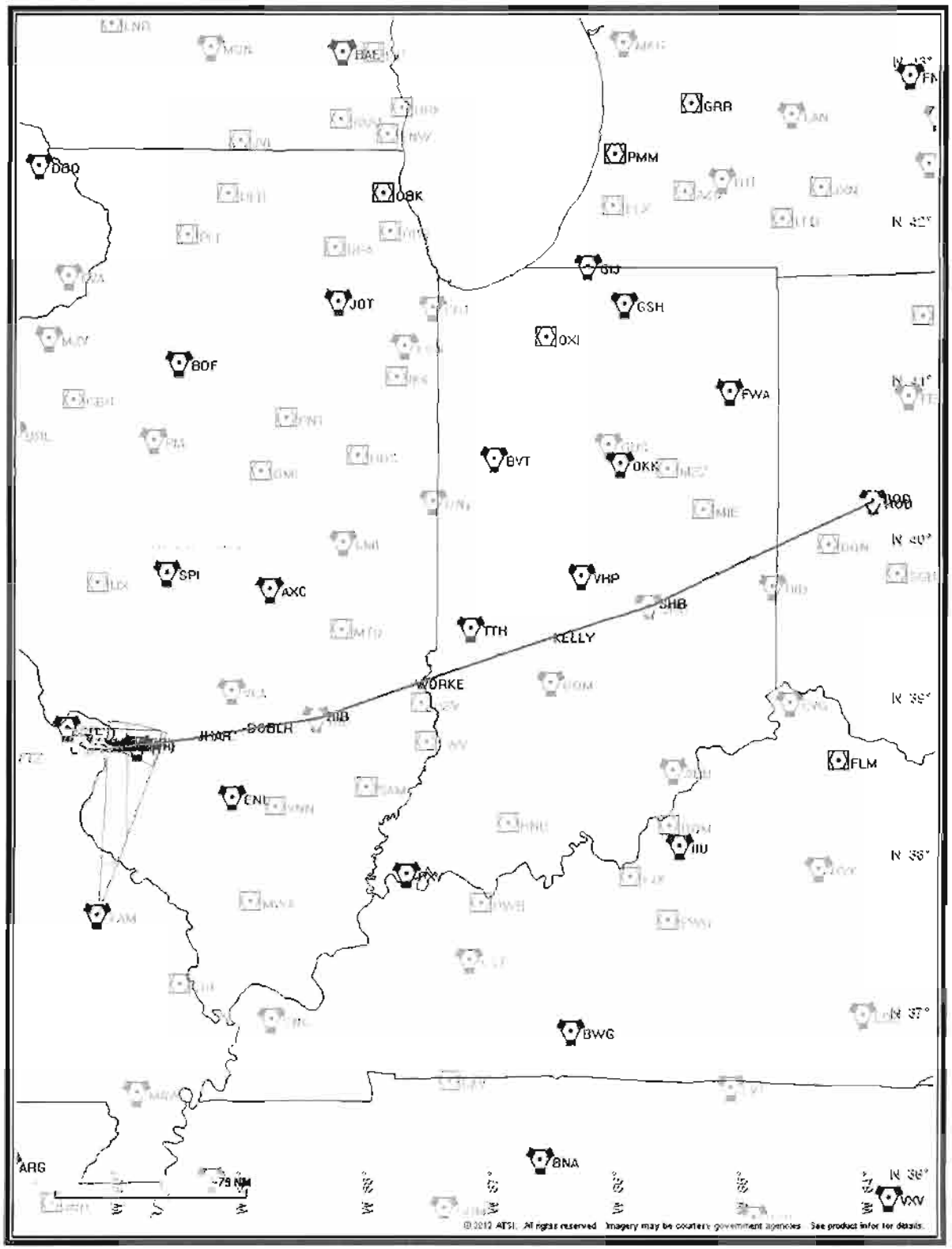
GRB
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AXC
VHP
TTH
KELLY
WORKE
JHART
FLM
ENL
IIU
BWG
BNA
ARG
VXV
N 42°
N 41°
N 40°
N 39°
N 38°
N 37°
N 36°
75 NM

Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW12R(...	WP	N 38° 45' 11.59" W 90° 22' 39.98"	541.6	VNAV	0.0	Fly Over	TF
RW30L(...	WP	N 38° 44' 16.01" W 90° 20' 47.27"	620 8	VNAV	130.0	Fly Over	VA
GH12R	WP	N 38° 43' 41.81" W 90° 19' 37.96"	1120 0	VNAV	145.0	Fly Over	DF
FUNKE	WP	N 38° 43' 39.26" W 90° 15' 35.58"	2500 0	VNAV	180.0	Fly By	TF
RAMKR	WP	N 38° 43' 37.54" W 90° 11' 36.78"	3122.9	VNAV	180.0	Fly By	TF
JHART	WP	N 38° 47' 32 80" W 89° 30' 39.12"	9578.6	VNAV	180.0	Fly By	TF
DOBLR	WP	N 38° 50' 31.91" W 89° 7' 10.92"	13295.5	VNAV	210.0	Fly By	TF
BIB	WP	N 38° 55' 13.24" W 88° 28' 54 50"	18000.0	VNAV	240.0	Fly By	TF
WORKE	WP	N 39° 7' 2.95" W 87° 46' 25.21"	18000.0	VNAV	240.0	Fly By	TF
KELLY	WP	N 39° 24' 49 15" W 86° 40' 17.29"	18000.0	VNAV	240.0	Fly By	TF
SHB	WP	N 39° 37' 57.15" W 85° 49' 27.54"	18000.0	VNAV	240.0	Fly By	TF
ROD	WP	N 40° 17' 16 08" W 84° 2' 35.28"	18000.0	VNAV	240.0	Fly Over	TF

Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL

Climb Gradient: 200 Ft/NM after next to last waypoint up to 18000 0 Ft

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KSTL
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL
Ground Speeds:
Departure: **120.0 Kts** out to **10.0 NM**
Table:
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Flight Track comes into contact with terrain. Minimum AGL along route was -71.92 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER

DME/DME

Return To Summary

Settings:

RNP: 2 0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0 165 NM
INS Drift Rate: 8 000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
Minimum MSL DMEs Avail: 2017 Ft

Total Number of DMEs Used: 28

Maximum DME Error 0.900 NM

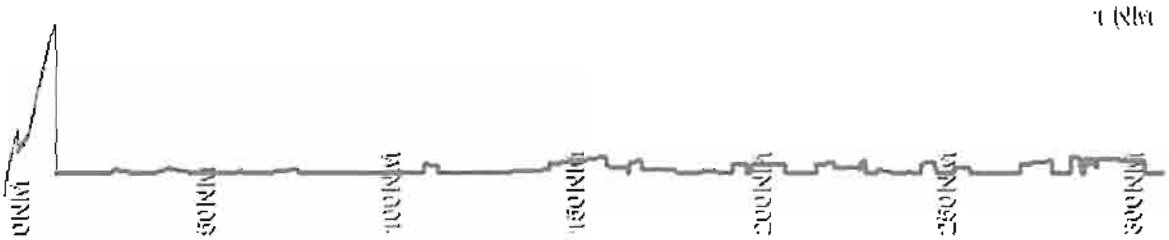
No Critical DMEs were found.

Available DMEs: STL, FTZ, CSX, FAM, TOY, VLA, ENL, VNN, BIB, PXV, SPI, TTH, AXC, SAM, MTO, VHP, BVT, OKK, OOM, IIU, SHB, FWA, FLM, ROD, MIE, RID, DQN, APE

Foreign DMEs within range: YQG, YQO, YXU

DME/DME (Continued.)

Return To Summary



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	STL	N 38° 51' 38 48" W 90° 28' 56 52"	H + ESV	User	NO	1.118	Enabled	5.1 %	4.6 %
2	FTZ	N 38° 41' 39 58" W 90° 58' 16.17"	L	Database	NO	1.118	Enabled	1.5 %	0.9 %
3	FAM	N 37° 40' 24 39" W 90° 14' 2 53"	H + ESV	User	NO	1.355	Enabled	4.9 %	5.0 %
4	CSX	N 38° 45' 9.88" W 90° 21' 39.46"	H	Database	NO	0.900	Enabled	3.7 %	3 8 %
5	ENL	N 38° 25' 12.00" W 89° 9' 32 39"	H	Database	NO	0 900	Enabled	10.5 %	10 8 %
6	VLA	N 39° 5' 37.26" W 89° 9' 44.87"	L	Database	NO	0.900	Enabled	7.8 %	8.0 %
7	TOY	N 38° 44' 20.97" W 89° 55' 7.06"	L	Database	NO	0 900	Enabled	4.2 %	4.3 %
8	BIB	N 38° 55' 13.26" W 88° 28' 54 47"	L	Database	NO	0.900	Enabled	9 2 %	9.5 %
9	VNN	N 38° 21' 43.03" W 88° 48' 26.41"	L	Database	NO	0.900	Enabled	4.6 %	4.8 %
10	AXC	N 39° 44' 15.08" W 88° 51' 23 15"	H	Database	NO	1 038	Enabled	15 0 %	15.5 %
11	SAM	N 38° 29' 6.68" W 88° 5' 8.93"	L	Database	NO	0.900	Enabled	2 3 %	2.4 %
12	PXV	N 37° 55' 41.95" W 87° 45' 44.56"	H	Database	NO	0 900	Enabled	6.7 %	7 0 %
13	TTH	N 39° 29' 20.19" W 87° 14' 56.47"	H	Database	NO	0 900	Enabled	23 4 %	24.2 %
14	MTO	N 39° 28' 40.42" W 88° 17' 10.44"	L	Database	NO	0.900	Enabled	7.7 %	8 0 %
15	SPI	N 39° 50' 23.04" W 89° 40' 39.83"	H	Database	NO	0.900	Enabled	0 0 %	0.0 %
16	VHP	N 39° 48' 53.02" W 86° 22' 2 88"	H	Database	NO	0.900	Enabled	12 7 %	13.1 %
17	OKK	N 40° 31' 40.00" W 86° 3' 28.81"	H	Database	NO	0 900	Enabled	9.2 %	9 5 %
18	OOM	N 39° 8' 37.76" W 86° 36' 46 87"	L	Database	NO	0.900	Enabled	1.1 %	1.2 %
19	BVT	N 40° 33' 22 03" W 87° 4' 9 55"	H	Database	NO	0.900	Enabled	3.3 %	3.4 %
20	SHB	N 39° 37' 57 15" W 85° 49' 27 54"	L	Database	NO	0.900	Enabled	10 6 %	11.0 %

DME/DME (Continued.)

Return To Summary

DMEs Used (Continued.)

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
21	IIU	N 38° 6' 12.47" W 85° 34' 38.77"	H	Database	NO	0.900	Enabled	5.8 %	6.0 %
22	FWA	N 40° 58' 44.63" W 85° 11' 17.01"	H	Database	NO	0.900	Enabled	9.9 %	10.2 %
23	RID	N 39° 45' 18.08" W 84° 50' 19.85"	L	Database	NO	0.900	Enabled	3.0 %	3.1 %
24	ROD	N 40° 17' 16.08" W 84° 2' 35.28"	H	Database	NO	0.900	Enabled	3.0 %	3.1 %
25	MIE	N 40° 14' 14.25" W 85° 23' 38.53"	L	Database	NO	0.900	Enabled	3.6 %	3.7 %
26	FLM	N 38° 38' 58.16" W 84° 18' 38.27"	H	Database	NO	0.900	Enabled	9.3 %	9.6 %
27	DQN	N 40° 0' 59.19" W 84° 23' 48.83"	L	Database	NO	0.900	Enabled	4.4 %	4.6 %
28	APE	N 40° 9' 3.82" W 82° 35' 17.88"	H	Database	NO	0.900	Enabled	5.6 %	5.8 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0						
1.8						
2.8	STL	FTZ	CSX			
6.0	STL	FTZ	CSX			
9.0	STL	FTZ	CSX	FAM		
24.8	STL	VLA	CSX	FAM	ENL	TOY
41.3	BIB	VLA	TOY	VNN	ENL	
60.0	BIB	VLA	TOY	VNN	ENL	
70.0	BIB	VLA	AXC	VNN	CSX	ENL
89.8	BIB	PXV	AXC	SAM	TTH	MTO
100.9	BIB	MTO	AXC	ENL	TTH	SPI
111.0	BIB	MTO	VHP	ENL	TTH	PXV
125.4	AXC	MTO	PXV	ENL	TTH	VHP
135.5	AXC	OOM	PXV	OKK	TTH	VHP
168.0	VHP	OOM	PXV	OKK	TTH	BVT
179.7	BVT	OOM	SHB	OKK	TTH	IIU
189.8	BVT	IIU	SHB	VHP	TTH	OKK

DME/DME (Continued.)

Return To Summary

Flight Check DME Selection (Continued.)

Distance [NM]	Selected DMEs					Alternate
210 0	OKK	IIU	SHB	VHP	TTH	FWA
220.9	FWA	IIU	RID	VHP	TTH	FLM
232 0	MIE	ROD	OKK	VHP	SHB	FWA
242 2	MIE	RID	FWA	VHP	TTH	OKK
252 4	MIE	SHB	FWA	VHP	FLM	RID
262.4	DQN	RID	FWA	VHP	FLM	OKK
277.7	APE	ROD	FWA	VHP	FLM	RID
287 8	APE	ROD	DQN	VHP	FLM	FWA
302 2	APE	FWA	DQN	OKK	FLM	ROD

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 38° 45' 11 59" W 90° 22' 39 98"	N 38° 43' 34 33" W 90° 18' 50.18"	3.5
	VOR. CSX	Available from N 38° 45' 11.59" W 90° 22' 39.98" to N 38° 43' 34.33" W 90° 18' 50.18"	
	VOR: FTZ	Available from N 38° 45' 11 59" W 90° 22' 39.98" to N 38° 43' 34 33" W 90° 18' 50.18"	
	VOR: STL	Available from N 38° 45' 11.59" W 90° 22' 39 98" to N 38° 43' 34.33" W 90° 18' 50 18"	
	VOR: TOY	Available from N 38° 45' 11 59" W 90° 22' 39 98" to N 38° 43' 34 33" W 90° 18' 50.18"	
2	N 38° 43' 39.12" W 90° 15' 2 83"	N 38° 44' 11 71" W 90° 5' 46.91"	7.3
	VOR CSX	Available from N 38° 43' 39 12" W 90° 15' 2.83" to N 38° 44' 11 71" W 90° 5' 46 91"	
	VOR FTZ	Available from N 38° 43' 39 12" W 90° 15' 2.83" to N 38° 44' 2 93" W 90° 7' 16.14"	
	VOR STL	Available from N 38° 43' 39 12" W 90° 15' 2.83" to N 38° 44' 11.71" W 90° 5' 46.91"	
	VOR TOY	Available from N 38° 43' 39 12" W 90° 15' 2.83" to N 38° 44' 11 71" W 90° 5' 46.91"	

DME/DME (Continued.)

Return To Summary

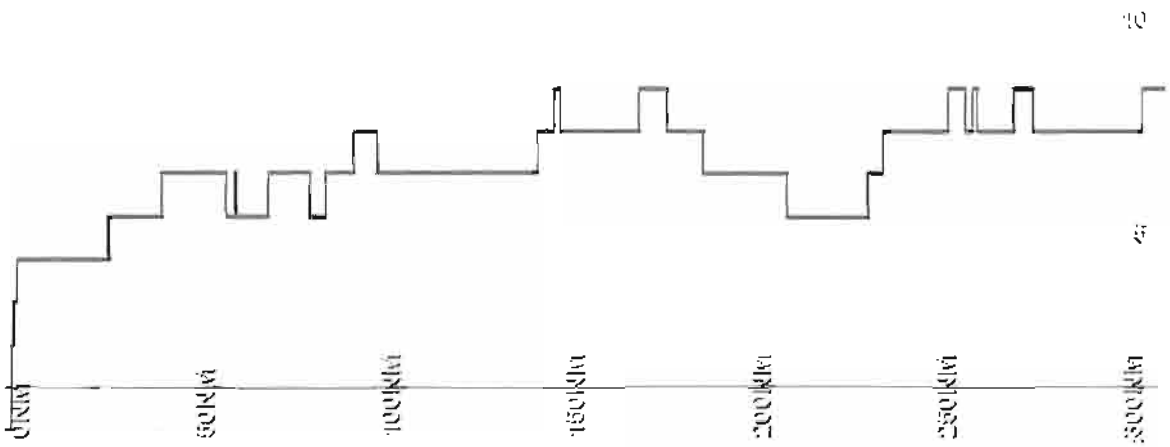
User DMEs

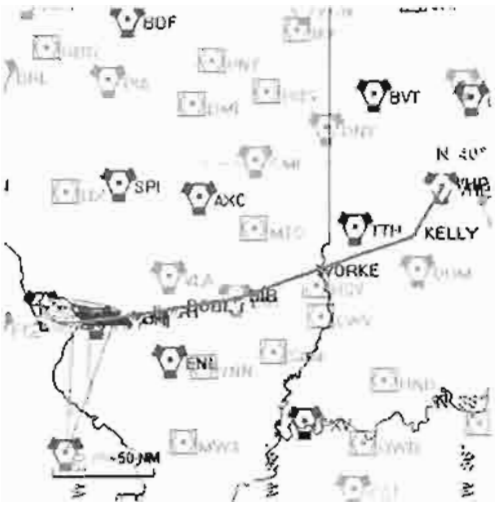
#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H	449.5	117.40	STL	Used
		ESV: Bearing [True]: 91.0° to 114.0° Bearing [Mag]: 90.0° to 113.0°			Arc Distance: Out to 35.0 NM Altitude: 4000.0 to 10000.0 Ft.		
2	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H	1220.0	115.70	FAM	Used
		ESV: Bearing [True]: 3.0° to 20.0° Bearing [Mag]: 2.0° to 19.0°			Arc Distance: Out to 74.0 NM Altitude: 4000.0 to 10000.0 Ft.		

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR





Name:	enanders
Project Name:	
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	2/10/2012 12.11:24 PM
Input File:	JHART RW12R VHP 2012...
Databases:	AVNIS Date: 08/26/2011
	NFD Date: 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✓	Please Check Flyability Results
DME/DME	✓	
Radars	✓	
Comms		
TERPS		

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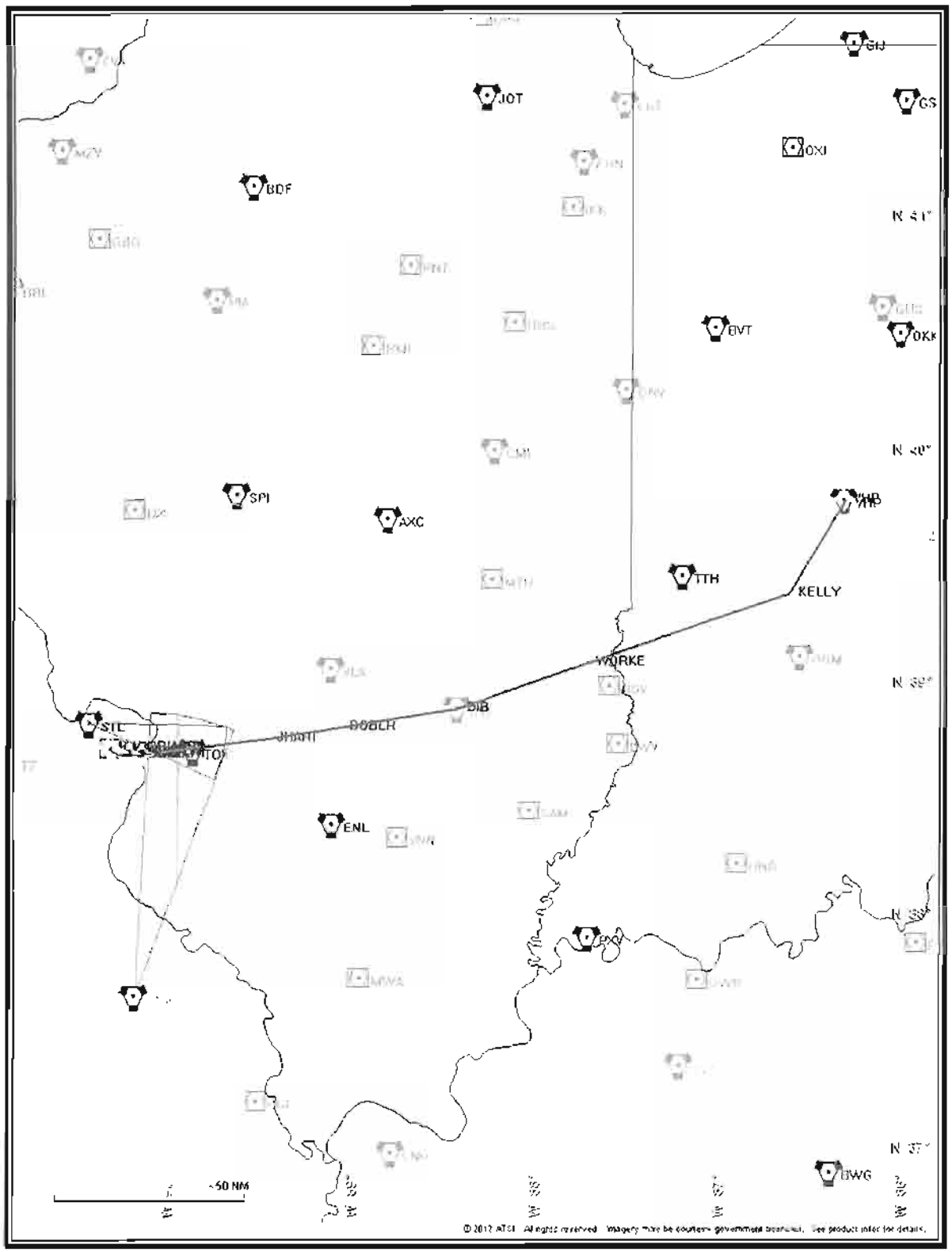

JOT
GS
OXI
BDF
BVT
OKK
SPI
AXC
TTH
KELLY
WORKE
BIB
ENL
BWG
50 NM

Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW12R(	WP	N 38° 45' 11 59" W 90° 22' 39.98"	541 6	VNAV	0 0	Fly Over	TF
RW30L(	WP	N 38° 44' 16 01" W 90° 20' 47.27"	620 8	VNAV	130.0	Fly Over	VA
GH12R	WP	N 38° 43' 41 81" W 90° 19' 37.96"	1120.0	VNAV	145.0	Fly Over	DF
FUNKE	WP	N 38° 43' 39.26" W 90° 15' 35 58"	2500.0	VNAV	180 0	Fly By	TF
RAMKR	WP	N 38° 43' 37 54" W 90° 11' 36.78"	3122.9	VNAV	180.0	Fly By	TF
JHART	WP	N 38° 47' 32.80" W 89° 30' 39.12"	9578.6	VNAV	180.0	Fly By	TF
DOBLR	WP	N 38° 50' 31.91" W 89° 7' 10.92"	13295 5	VNAV	210.0	Fly By	TF
BIB	WP	N 38° 55' 13 24" W 88° 28' 54.50"	18000 0	VNAV	240 0	Fly By	TF
WORKE	WP	N 39° 7' 2.95" W 87° 46' 25.21"	18000.0	VNAV	240.0	Fly By	TF
KELLY	WP	N 39° 24' 49.15" W 86° 40' 17 29"	18000.0	VNAV	240.0	Fly By	TF
VHP	WP	N 39° 48' 53.02" W 86° 22' 2.88"	18000.0	VNAV	240.0	Fly Over	TF

Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL

Climb Gradient: 200 Ft/NM after next to last waypoint up to 18000.0 Ft

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KSTL
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL
Ground Speeds:
Departure: **120.0 Kts** out to **10.0 NM**
Table:
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Flight Track comes into contact with terrain. Minimum AGL along route was -71.92 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

DME/DME

Return To Summary

Settings:

RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0 165 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3 0 NM
Allowed Gap Length: 4 0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
Minimum MSL DMEs Avail: 2017 Ft.

Total Number of DMEs Used: 20

Maximum DME Error: 0.900 NM

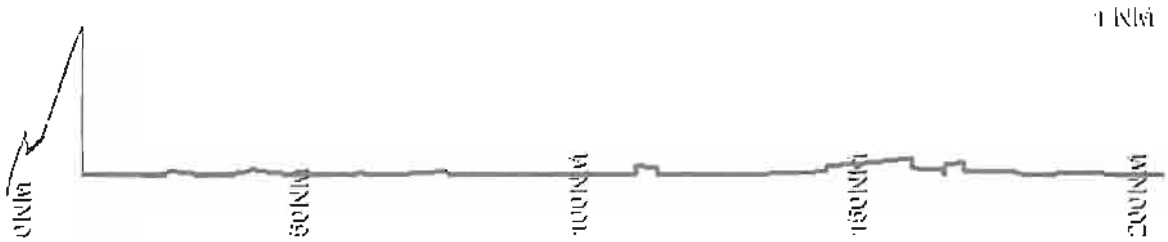
No Critical DMEs were found.

Available DMEs: STL, FTZ, CSX, FAM, TOY, VLA, ENL, VNN, BIB, PXV, SPI, TTH, AXC, SAM, MTO, VHP, BVT, OKK, OOM, IIU, SHB, FWA, OXI

Foreign DMEs within range: YQG

DME/DME (Continued.)

Return To Summary



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H + ESV	User	NO	1.118	Enabled	7.5 %	6.9 %
2	FTZ	N 38° 41' 39.58" W 90° 58' 16.17"	L	Database	NO	1.118	Enabled	2.2 %	1.4 %
3	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H + ESV	User	NO	1.355	Enabled	7.2 %	7.5 %
4	CSX	N 38° 45' 9.88" W 90° 21' 39.46"	H	Database	NO	0.900	Enabled	5.5 %	5.7 %
5	ENL	N 38° 25' 12.00" W 89° 9' 32.39"	H	Database	NO	0.900	Enabled	15.5 %	16.3 %
6	VLA	N 39° 5' 37.26" W 89° 9' 44.87"	L	Database	NO	0.900	Enabled	11.5 %	12.1 %
7	TOY	N 38° 44' 20.97" W 89° 55' 7.06"	L	Database	NO	0.900	Enabled	6.2 %	6.5 %
8	BIB	N 38° 55' 13.26" W 88° 28' 54.47"	L	Database	NO	0.900	Enabled	13.7 %	14.3 %
9	VNN	N 38° 21' 43.03" W 88° 48' 26.41"	L	Database	NO	0.900	Enabled	6.9 %	7.2 %
10	AXC	N 39° 44' 15.08" W 88° 51' 23.15"	H	Database	NO	1.038	Enabled	22.2 %	23.3 %
11	SAM	N 38° 29' 6.68" W 88° 5' 8.93"	L	Database	NO	0.900	Enabled	3.4 %	3.6 %
12	PXV	N 37° 55' 41.95" W 87° 45' 44.56"	H	Database	NO	0.900	Enabled	10.0 %	10.5 %
13	TTH	N 39° 29' 20.19" W 87° 14' 56.47"	H	Database	NO	0.900	Enabled	32.8 %	34.4 %
14	MTO	N 39° 28' 40.42" W 88° 17' 10.44"	L	Database	NO	0.900	Enabled	11.4 %	12.0 %
15	SPI	N 39° 50' 23.04" W 89° 40' 39.83"	H	Database	NO	0.900	Enabled	0.0 %	0.0 %
16	VHP	N 39° 48' 53.02" W 86° 22' 2.88"	H	Database	NO	0.900	Enabled	1.9 %	2.0 %
17	OKK	N 40° 31' 40.00" W 86° 3' 28.81"	H	Database	NO	0.900	Enabled	9.8 %	10.3 %
18	OOM	N 39° 8' 37.76" W 86° 36' 46.87"	L	Database	NO	0.900	Enabled	4.8 %	5.1 %
19	BVT	N 40° 33' 22.03" W 87° 4' 9.55"	H	Database	NO	0.900	Enabled	5.9 %	6.2 %
20	SHB	N 39° 37' 57.15" W 85° 49' 27.54"	L	Database	NO	0.900	Enabled	4.0 %	4.2 %

Flight Check DME Selection

Distance [NM]	Selected DMEs	Alternate

DME/DME (Continued.)

Return To Summary

Flight Check DME Selection (Continued.)

Distance [NM]	Selected DMEs					Alternate
0.0						
0.0						
1.8						
2.8	STL	FTZ	CSX			
6.0	STL	FTZ	CSX			
9.0	STL	FTZ	CSX	FAM		
24.8	STL	VLA	CSX	FAM	ENL	TOY
41.3	BIB	VLA	TOY	VNN	ENL	
60.0	BIB	VLA	TOY	VNN	ENL	
70.0	BIB	VLA	AXC	VNN	CSX	ENL
89.8	BIB	PXV	AXC	SAM	TTH	MTO
100.9	BIB	MTO	AXC	ENL	TTH	SPI
111.0	BIB	MTO	VHP	ENL	TTH	PXV
125.4	AXC	MTO	PXV	ENL	TTH	VHP
135.5	AXC	OOM	PXV	OKK	TTH	VHP
168.0	VHP	OOM	PXV	OKK	TTH	BVT
179.0	BVT	OOM	SHB	OKK	TTH	VHP
189.2	BVT	VHP	SHB	OKK	TTH	FWA

Inertial Drift Segments

#	Start Location	End Location	Length (NM)
1	N 38° 45' 11.59" W 90° 22' 39.98"	N 38° 43' 34.33" W 90° 18' 50.18"	3.5
	VOR: CSX	Available from N 38° 45' 11.59" W 90° 22' 39.98" to N 38° 43' 34.33" W 90° 18' 50.18"	
	VOR: FTZ	Available from N 38° 45' 11.59" W 90° 22' 39.98" to N 38° 43' 34.33" W 90° 18' 50.18"	
	VOR: STL	Available from N 38° 45' 11.59" W 90° 22' 39.98" to N 38° 43' 34.33" W 90° 18' 50.18"	
	VOR: TOY	Available from N 38° 45' 11.59" W 90° 22' 39.98" to N 38° 43' 34.33" W 90° 18' 50.18"	

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments (Continued.)

#	Start Location	End Location	Length (NM)
2	N 38° 43' 39 12" W 90° 15' 2 83"	N 38° 44' 11.71" W 90° 5' 46 91"	7.3
	VOR. CSX	Available from N 38° 43' 39.12" W 90° 15' 2 83" to N 38° 44' 11.71" W 90° 5' 46.91"	
	VOR. FTZ	Available from N 38° 43' 39.12" W 90° 15' 2.83" to N 38° 44' 2 93" W 90° 7' 16 14"	
	VOR. STL	Available from N 38° 43' 39.12" W 90° 15' 2.83" to N 38° 44' 11 71" W 90° 5' 46 91"	
	VOR: TOY	Available from N 38° 43' 39.12" W 90° 15' 2 83" to N 38° 44' 11 71" W 90° 5' 46.91"	

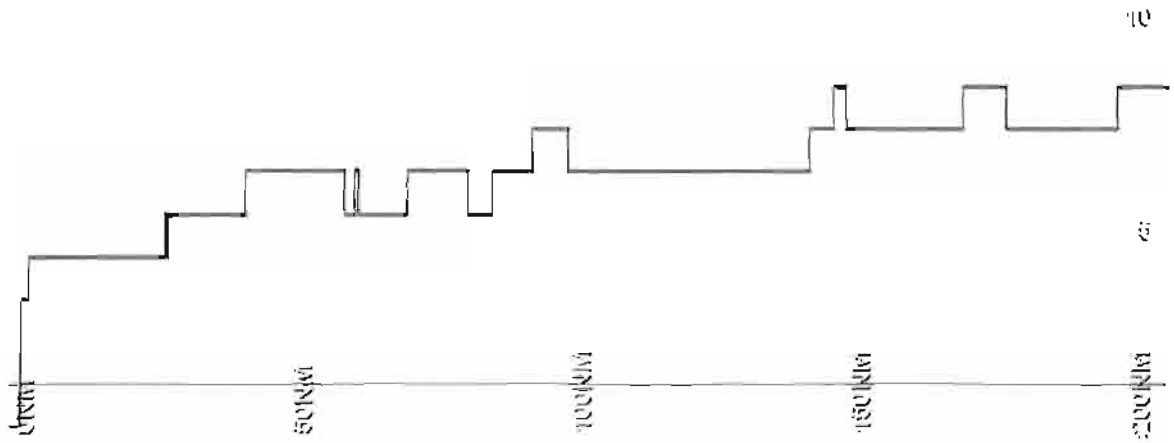
User DMEs

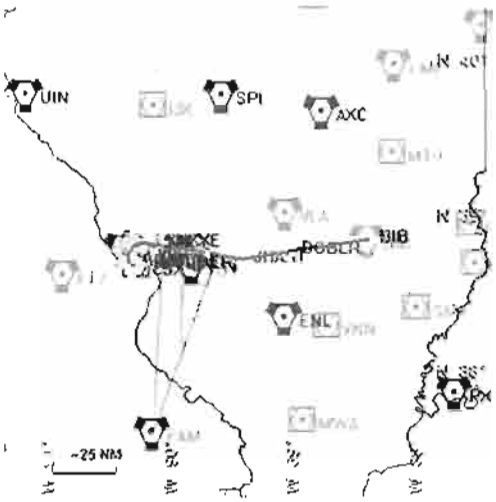
#	Name	Lat/Lon	Range	Elevation (Ft)	Frequency	Replaces:	Status
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H	449 5	117 40	STL	Used
		ESV: Bearing [True]: 91.0° to 114 0° Bearing [Mag]: 90.0° to 113 0°			Arc Distance. Out to 35.0 NM Altitude. 4000 0 to 10000.0 Ft.		
2	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H	1220.0	115 70	FAM	Used
		ESV: Bearing [True]: 3.0° to 20.0° Bearing [Mag]: 2.0° to 19 0°			Arc Distance: Out to 74.0 NM Altitude: 4000.0 to 10000 0 Ft.		

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR





Name:	enanders
Project Name:	
Software:	RNAV-Pro™
Version:	2 35
Date/Time:	2/16/2012 7:34:06 AM
Input File:	JHART RW29 BIB 20120
Databases:	AVNIS Date: 08/26/2011
	NFD Date: 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✓	Please Check Flyability Results
DME/DME	✓	
Radars	✓	
Comms		
TERPS		

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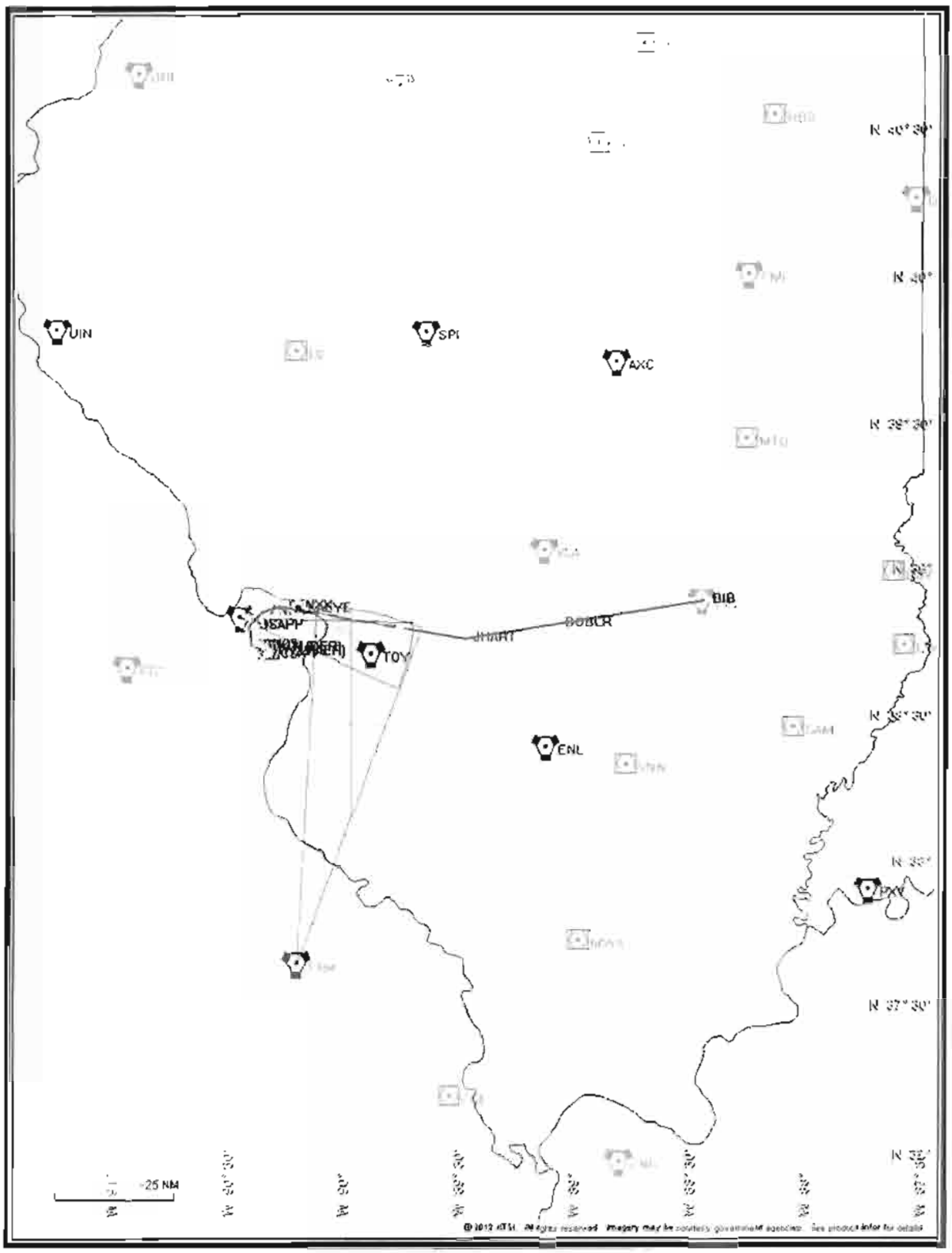

UIN
SPI
AXC
BIB
JHART
BOBLR
TOY
ENL
25 NM

Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW29(A...	WP	N 38° 44' 48.46" W 90° 22' 59.39"	556.0	VNAV	0 0	Fly Over	TF
RW11(D ..	WP	N 38° 45' 35.83" W 90° 24' 35.55"	653.0	VNAV	130 0	Fly Over	VA
GH29:	WP	N 38° 46' 7.93" W 90° 25' 40.75"	1120 0	VNAV	145.0	Fly Over	DF
DSAPP	WP	N 38° 50' 1.06" W 90° 26' 38 98"	2500.0	VNAV	180.0	Fly By	TF
ANNII	WP	N 38° 52' 52 69" W 90° 23' 22.37"	3267.3	VNAV	180.0	Fly By	TF
LENXX	WP	N 38° 54' 4.00" W 90° 18' 46.99"	4022.3	VNAV	180.0	Fly By	TF
KAEYE	WP	N 38° 53' 23.93" W 90° 13' 43 89"	4822.3	VNAV	180 0	Fly By	TF
JHART	WP	N 38° 47' 32 80" W 89° 30' 39.12"	11654 8	VNAV	210.0	Fly By	TF
DOBLR	WP	N 38° 50' 31 91" W 89° 7' 10 92"	15371.7	VNAV	210 0	Fly By	TF
BIB	WP	N 38° 55' 13 24" W 88° 28' 54.50"	18000 0	VNAV	240 0	Fly Over	TF

Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL

Climb Gradient: 200 Ft/NM after next to last waypoint up to 18000 0 Ft

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KSTL
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1120 0 Ft MSL
Ground Speeds:
Departure. **120.0 Kts** out to **10.0 NM**
Table:
200.0 Kts up to **11000.0 Ft.**
240.0 Kts up to **18000.0 Ft.**
260.0 Kts up to **24000.0 Ft.**
340.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Required IAS at Fly-By WP LENXX could not be reached with given A/C acceleration performance

Flight Track comes into contact with terrain. Minimum AGL along route was -47.99 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER

DME/DME

Return To Summary

Settings:

RNP: 2 0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
  Initial Drift: 0.165 NM
  INS Drift Rate: 8 000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
Minimum MSL DMEs Avail: 1661 Ft.

Total Number of DMEs Used: 15

Maximum DME Error: 0.608 NM.

No Critical DMEs were found.

Available DMEs: STL, FTZ, TOY, CSX, VLA, ENL, VNN, BIB, PXV, SPI, TTH, AXC, FAM, SAM, MTO

DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	STL	N 38° 51' 38.48" W 90° 28' 56 52"	H + ESV	User	NO	0.512	Enabled	24.6 %	21.9 %
2	FTZ	N 38° 41' 39.58" W 90° 58' 16 17"	L	Database	NO	0 734	Enabled	9 3 %	5.6 %
3	CSX	N 38° 45' 9.88" W 90° 21' 39.46"	H	Database	NO	0 790	Enabled	28.4 %	25 8 %
4	TOY	N 38° 44' 20.97" W 89° 55' 7.06"	L	Database	NO	1 222	Enabled	25 5 %	27 6 %
5	VLA	N 39° 5' 37.26" W 89° 9' 44.87"	L	Database	NO	0.608	Enabled	13 5 %	14 5 %
6	ENL	N 38° 25' 12.00" W 89° 9' 32 39"	H	Database	NO	0.857	Enabled	31.4 %	36.3 %
7	BIB	N 38° 55' 13.26" W 88° 28' 54.47"	L	Database	NO	0 608	Enabled	5.9 %	7 4 %
8	SPI	N 39° 50' 23.04" W 89° 40' 39 83"	H	Database	NO	0 608	Enabled	3.3 %	4 4 %
9	TTH	N 39° 29' 20 19" W 87° 14' 56.47"	H	Database	NO	0.608	Enabled	2.5 %	3.0 %
10	VNN	N 38° 21' 43.03" W 88° 48' 26.41"	L	Database	NO	0.608	Enabled	7.1 %	8 7 %
11	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H + ESV	User	NO	0 608	Enabled	4 1 %	4.9 %
12	PXV	N 37° 55' 41.95" W 87° 45' 44.56"	H	Database	NO	0.608	Enabled	4.1 %	4 9 %
13	AXC	N 39° 44' 15.08" W 88° 51' 23.15"	H	Database	NO	0.608	Enabled	7.7 %	9 9 %
14	SAM	N 38° 29' 6.68" W 88° 5' 8.93"	L	Database	NO	0.608	Enabled	1.7 %	2.2 %
15	MTO	N 39° 28' 40.42" W 88° 17' 10 44"	L	Database	NO	0 608	Enabled	0 0 %	0.0 %

Flight Check DME Selection

Distance [NM]	Selected DMEs				Alternate
0.0					
1.5	STL				
2.5	STL	FTZ	CSX	TOY	
6 2	STL	FTZ	CSX	TOY	
10 1	STL	FTZ	CSX	TOY	
13 5	STL	FTZ	CSX	TOY	
18 0	STL	FTZ	CSX	TOY	

DME/DME (Continued.)

Return To Summary

Flight Check DME Selection (Continued.)

Distance [NM]	Selected DMEs					Alternate
28.1	STL	VLA	CSX	TOY	ENL	
51.6	STL	VLA	CSX	TOY	ENL	VNN
70.8	BIB	VNN	FAM	PXV	TTH	ENL
80.8	BIB	VNN	STL	AXC	CSX	VLA
90.9	BIB	SAM	SPI	AXC	ENL	STL

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 38° 44' 48.46" W 90° 22' 59.39"	N 38° 46' 23.72" W 90° 26' 0.03"	2.9
	VOR: CSX	Available from N 38° 44' 48.46" W 90° 22' 59.39" to N 38° 46' 23.72" W 90° 26' 0.03"	
	VOR: FTZ	Available from N 38° 44' 48.46" W 90° 22' 59.39" to N 38° 46' 23.72" W 90° 26' 0.03"	
	VOR: STL	Available from N 38° 44' 48.46" W 90° 22' 59.39" to N 38° 46' 23.72" W 90° 26' 0.03"	
	VOR: TOY	Available from N 38° 44' 48.46" W 90° 22' 59.39" to N 38° 46' 23.72" W 90° 26' 0.03"	
2	N 38° 50' 7.01" W 90° 26' 31.24"	N 38° 50' 49.20" W 90° 25' 44.13"	0.9
	VOR: CSX	Available from N 38° 50' 7.01" W 90° 26' 31.24" to N 38° 50' 49.20" W 90° 25' 44.13"	
	VOR: FTZ	Available from N 38° 50' 7.01" W 90° 26' 31.24" to N 38° 50' 49.20" W 90° 25' 44.13"	
	VOR: STL	Available from N 38° 50' 7.01" W 90° 26' 31.24" to N 38° 50' 49.20" W 90° 25' 44.13"	
	VOR: TOY	Available from N 38° 50' 7.01" W 90° 26' 31.24" to N 38° 50' 49.20" W 90° 25' 44.13"	
3	N 38° 52' 44.55" W 90° 8' 46.21"	N 38° 52' 20.35" W 90° 5' 45.29"	2.4
	VOR: CSX	Available from N 38° 52' 44.55" W 90° 8' 46.21" to N 38° 52' 20.35" W 90° 5' 45.29"	
	VOR: STL	Available from N 38° 52' 44.55" W 90° 8' 46.21" to N 38° 52' 20.35" W 90° 5' 45.29"	
	VOR: TOY	Available from N 38° 52' 44.55" W 90° 8' 46.21" to N 38° 52' 20.35" W 90° 5' 45.29"	

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments (Continued.)

#	Start Location	End Location	Length [NM]
4	N 38° 51' 38.55" W 90° 0' 34.03"	N 38° 51' 20.41" W 89° 58' 19.46"	1.8
	VOR: CSX	Available from N 38° 51' 38.55" W 90° 0' 34.03" to N 38° 51' 20.41" W 89° 58' 19.46"	
	VOR: STL	Available from N 38° 51' 38.55" W 90° 0' 34.03" to N 38° 51' 20.41" W 89° 58' 19.46"	
	VOR: TOY	Available from N 38° 51' 38.55" W 90° 0' 34.03" to N 38° 51' 20.41" W 89° 58' 19.46"	
5	N 38° 51' 0.51" W 89° 55' 52.30"	N 38° 50' 25.72" W 89° 51' 35.87"	3.4
	VOR: CSX	Available from N 38° 51' 0.51" W 89° 55' 52.30" to N 38° 50' 25.72" W 89° 51' 35.87"	
	VOR: STL	Available from N 38° 51' 0.51" W 89° 55' 52.30" to N 38° 50' 25.72" W 89° 51' 35.87"	
	VOR: TOY	Available from N 38° 51' 0.51" W 89° 55' 52.30" to N 38° 50' 25.72" W 89° 51' 35.87"	
	VOR: VLA	Available from N 38° 51' 0.51" W 89° 55' 52.30" to N 38° 50' 25.72" W 89° 51' 35.87"	

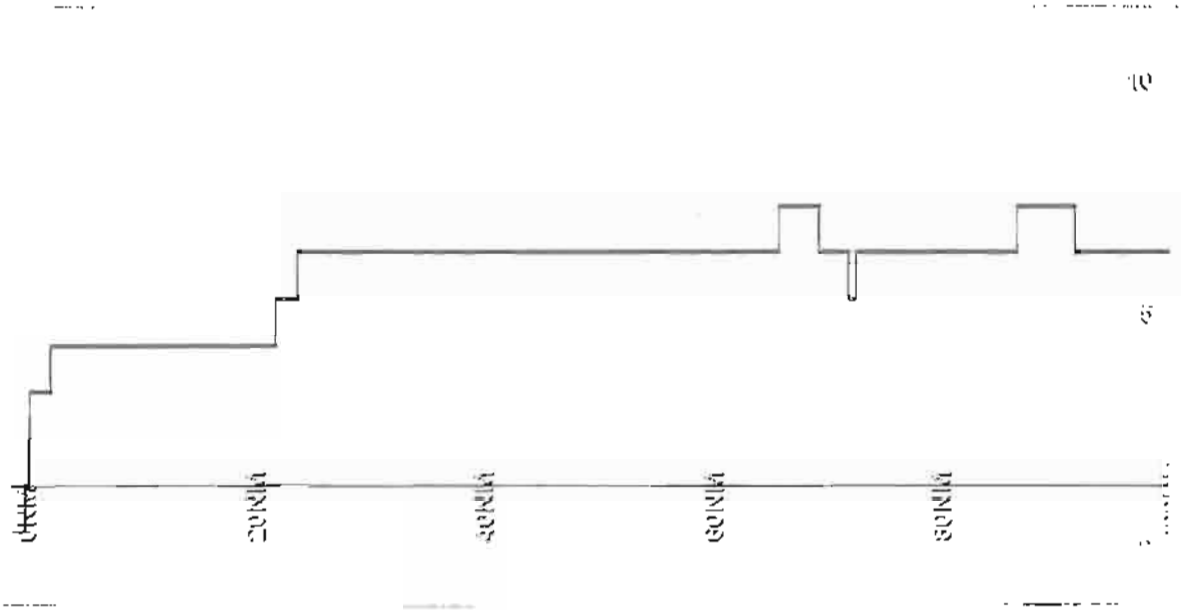
User DMEs

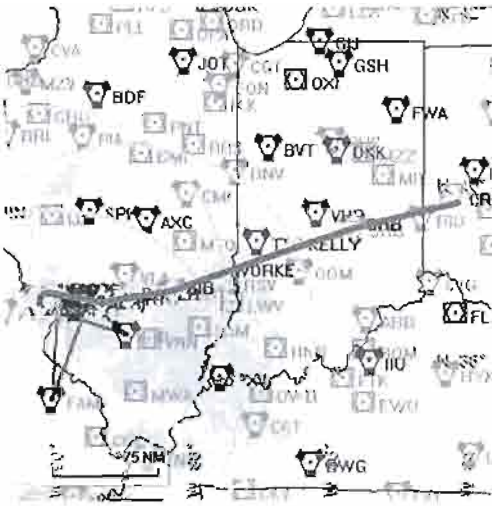
#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces	Status
1	STL	N 38° 51' 38.48" W 90° 29' 56.53"	H	449.5	117.40	STL	Used
		ESV Bearing [True] 91.0° to 114.0° Bearing [Mag] 80.0° to 113.0°			Arc Distance: Out to 36.0 NM Altitude: 4000.0 to 10000.0 Ft		
2	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H	1220.0	115.70	FAM	Used
		ESV Bearing [True] 3.0° to 20.0° Bearing [Mag] 2.0° to 19.0°			Arc Distance: Out to 74.0 NM Altitude: 4000.0 to 10000.0 Ft		

Radar Analysis

Return To Summary

Settings: **Radar Types**: ARSR and ASR





Name:	enanders
Project Name:	
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	4/9/2012 3:07:29 PM
Input File:	JHART RW29 CREEP_20 .
Databases:	AVNIS Date: 02/07/2012
	NFD Date: 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✓	Please Check Flyability **Results**
DME/DME	✓	
Radars	✓	
Comms		
TERPS		

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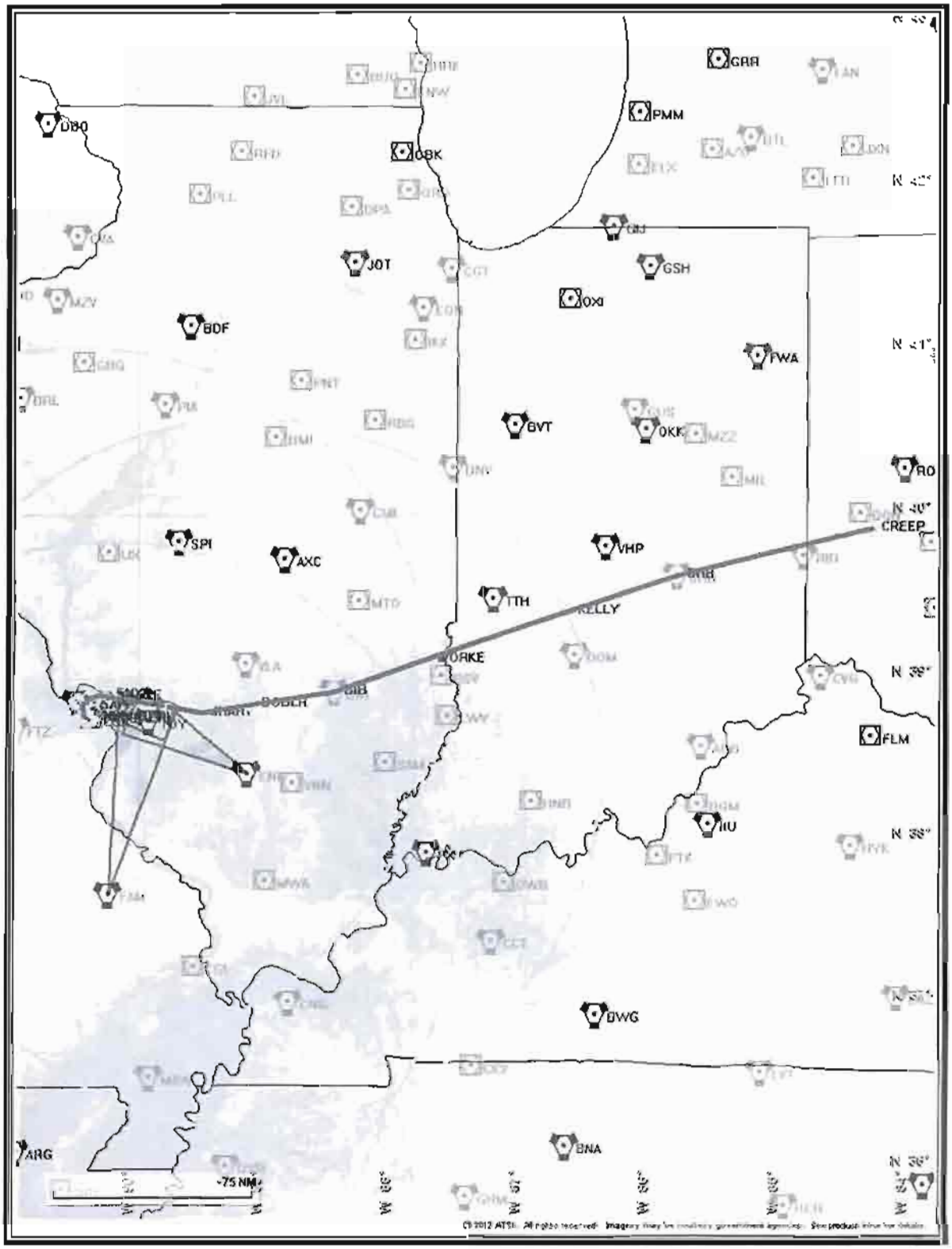

GRR
PMM
DBQ
OBK
JOT
GSH
OXI
BDF
FWA
BVT
OKK
RO
CREEP
SPI
AXC
VHP
TTH
KELLY
FLM
IIU
BWG
BNA
ARG
75 NM

Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW29(A .	WP	N 38° 44' 48.46" W 90° 22' 59.39"	556.0	VNAV	0 0	Fly Over	TF
RW11(D.	WP	N 38° 45' 35 83" W 90° 24' 35.55"	653.0	VNAV	130 0	Fly Over	VA
GH29:	WP	N 38° 46' 7 94" W 90° 25' 40.74"	1120.0	VNAV	145.0	Fly Over	DF
DSAPP	WP	N 38° 50' 1.06" W 90° 26' 38 98"	2500 0	VNAV	180 0	Fly By	TF
ANNII	WP	N 38° 52' 52 69" W 90° 23' 22.37"	3267 3	VNAV	180 0	Fly By	TF
LENXX	WP	N 38° 54' 4 00" W 90° 18' 46.99"	4022.3	VNAV	180.0	Fly By	TF
KAEYE	WP	N 38° 53' 23 93" W 90° 13' 43.89"	4822.3	VNAV	180.0	Fly By	TF
JHART	WP	N 38° 47' 32 80" W 89° 30' 39 12"	11654.8	VNAV	210.0	Fly By	TF
DOBLR	WP	N 38° 50' 31.91" W 89° 7' 10.92"	15371 7	VNAV	210 0	Fly By	TF
BIB	WP	N 38° 55' 13.24" W 88° 28' 54.50"	18000 0	VNAV	240 0	Fly By	TF
WORKE	WP	N 39° 7' 2 95" W 87° 46' 25.21"	18000.0	VNAV	240 0	Fly By	TF
KELLY	WP	N 39° 24' 49.15" W 86° 40' 17.29"	18000 0	VNAV	240.0	Fly By	TF
SHB	WP	N 39° 37' 57.15" W 85° 49' 27.54"	18000.0	VNAV	240.0	Fly By	TF
CREEP_	WP	N 39° 55' 15.28" W 84° 18' 31.41"	18000 0	VNAV	240 0	Fly Over	TF

Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL

Climb Gradient: 200 Ft/NM after next to last waypoint up to 18000 0 Ft

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KSTL
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL
Ground Speeds:
Departure **120.0 Kts** out to **10.0 NM**
Table:
200.0 Kts up to **11000.0 Ft.**
240.0 Kts up to **18000.0 Ft.**
260.0 Kts up to **24000.0 Ft.**
340.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Required IAS at Fly-By WP LENXX could not be reached with given A/C acceleration performance.

Flight Track comes into contact with terrain. Minimum AGL along route was -47.99 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

DME/DME

Return To Summary

Settings:

RNP: 2 0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.165 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
Minimum MSL DMEs Avail: 1661 Ft

Total Number of DMEs Used: 28

Maximum DME Error: 0.608 NM

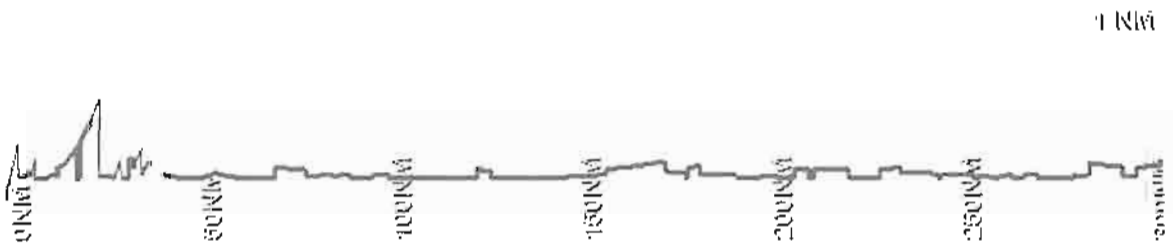
No Critical DMEs were found.

Available DMEs: STL, FTZ, TOY, CSX, ENL, VLA, VNN, BIB, PXV, SPI, TTH, AXC, FAM, SAM, MTO, VHP, BVT, OKK, OOM, IIU, SHB, FWA, ROD, FLM, RID, MIE, DQN, APE

Foreign DMEs within range: YQG, YQO, YXU

DME/DME (Continued.)

Return To Summary



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. (NM)	Status	Time	Distance
1	STL	N 38° 51' 38 48" W 90° 28' 56.52"	H + ESV	User	NO	0.512	Enabled	10 7 %	8 3 %
2	FTZ	N 38° 41' 39 58" W 90° 58' 16 17"	L	Database	NO	0 734	Enabled	3.6 %	1.9 %
3	CSX	N 38° 45' 9 88" W 90° 21' 39 46"	H	Database	NO	0 790	Enabled	11.7 %	9 0 %
4	TOY	N 38° 44' 20.97" W 89° 55' 7.06"	L	Database	NO	0.846	Enabled	10.0 %	9 2 %
5	ENL	N 38° 25' 12 00" W 89° 9' 32 39"	H + ESV	User	NO	0 857	Enabled	14.3 %	14 0 %
6	VLA	N 39° 5' 37 82" W 89° 9' 44.08"	L	Database	NO	0 608	Enabled	5.3 %	4 9 %
7	BIB	N 38° 55' 13 24" W 88° 28' 54.50"	L	Database	NO	0 608	Enabled	4.3 %	4.6 %
8	SPI	N 39° 50' 23 04" W 89° 40' 39.83"	H	Database	NO	0.608	Enabled	3.9 %	4.0 %
9	TTH	N 39° 29' 20.19" W 87° 14' 56.47"	H	Database	NO	0.608	Enabled	24.3 %	26.6 %
10	VNN	N 38° 21' 43 03" W 88° 48' 26.41"	L	Database	NO	0.608	Enabled	0 0 %	0.0 %
11	FAM	N 37° 40' 24.39" W 90° 14' 2 53"	H + ESV	User	NO	0.608	Enabled	0.0 %	0.0 %
12	PXV	N 37° 55' 41 95" W 87° 45' 44 56"	H	Database	NO	0.608	Enabled	6 5 %	7.2 %
13	AXC	N 39° 44' 15.08" W 88° 51' 23.15"	H	Database	NO	0 894	Enabled	15 9 %	17 2 %
14	SAM	N 38° 29' 6 68" W 88° 5' 8 93"	L	Database	NO	0 608	Enabled	2.9 %	3.2 %
15	MTO	N 39° 28' 40.42" W 88° 17' 10 44"	L	Database	NO	0 720	Enabled	7.4 %	8.2 %
16	VHP	N 39° 48' 53 02" W 86° 22' 2.88"	H	Database	NO	0.608	Enabled	11 6 %	12.8 %
17	OKK	N 40° 31' 40.00" W 86° 3' 28 81"	H	Database	NO	0 608	Enabled	8.0 %	8 8 %
18	OOM	N 39° 8' 37.76" W 86° 36' 46 87"	L	Database	NO	0 608	Enabled	1.1 %	1.2 %
19	BVT	N 40° 33' 22 03" W 87° 4' 9.55"	H	Database	NO	0.608	Enabled	3 1 %	3 5 %
20	SHB	N 39° 37' 57.15" W 85° 49' 27 54"	L	Database	NO	0 608	Enabled	8.0 %	8.9 %

DME/DME (Continued.)

Return To Summary

DMEs Used (Continued.)

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
21	IIU	N 38° 6' 12.47" W 85° 34' 38.77"	H	Database	NO	0.608	Enabled	5.5 %	6.0 %
22	FWA	N 40° 58' 44.63" W 85° 11' 17.01"	H	Database	NO	0.608	Enabled	8.1 %	9.0 %
23	MIE	N 40° 14' 14.25" W 85° 23' 38.53"	L	Database	NO	0.608	Enabled	5.0 %	5.6 %
24	ROD	N 40° 17' 16.08" W 84° 2' 35.28"	H	Database	NO	0.608	Enabled	3.3 %	3.7 %
25	RID	N 39° 45' 18.08" W 84° 50' 19.85"	L	Database	NO	0.608	Enabled	3.1 %	3.4 %
26	FLM	N 38° 38' 58.16" W 84° 18' 38.27"	H	Database	NO	0.608	Enabled	6.3 %	6.9 %
27	DQN	N 40° 0' 59.19" W 84° 23' 48.83"	L	Database	NO	0.608	Enabled	2.1 %	2.4 %
28	APE	N 40° 9' 3.82" W 82° 35' 17.88"	H	Database	NO	0.608	Enabled	2.7 %	2.9 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0						
1.5	STL					
2.5	STL	FTZ	CSX	TOY		
6.2	STL	FTZ	CSX	TOY		
10.1	STL	FTZ	CSX	TOY		
13.5	STL	FTZ	CSX	TOY		
18.0	STL	FTZ	CSX	TOY		
28.1	STL	ENL	CSX	TOY	VLA	
51.6	STL	ENL	CSX	TOY	VLA	VNN
70.8	STL	TTH	CSX	AXC	SPI	ENL
90.4	ENL	SAM	BIB	AXC	SPI	STL
100.6	PXV	SAM	BIB	AXC	TTH	MTO
111.8	ENL	MTO	BIB	AXC	TTH	SPI
121.9	ENL	MTO	BIB	VHP	TTH	PXV
136.2	ENL	MTO	AXC	PXV	TTH	VHP
146.3	OKK	OOM	AXC	PXV	TTH	VHP
178.8	OKK	OOM	VHP	PXV	TTH	BVT

DME/DME (Continued.)

Return To Summary

Flight Check DME Selection (Continued.)

Distance (NM)	Selected DMEs					Alternate
190.5	OKK	OOM	SHB	BVT	TTH	IIU
200.7	VHP	IIU	SHB	BVT	TTH	OKK
220.9	VHP	IIU	SHB	OKK	TTH	FWA
231.7	VHP	IIU	FWA	FLM	TTH	ROD
242.3	VHP	MIE	FWA	OKK	ROD	FLM
252.8	VHP	MIE	FWA	SHB	RID	FLM
263.0	VHP	MIE	DQN	FLM	ROD	FWA
280.8	OKK	RID	DQN	FLM	APE	VHP
292.5	FWA	RID	VHP	FLM	APE	OKK

Inertial Drift Segments

#	Start Location	End Location	Length (NM)
1	N 38° 44' 48.46" W 90° 22' 59.39"	N 38° 46' 23.73" W 90° 26' 0.02"	2.9
	VOR: CSX	Available from N 38° 44' 48.46" W 90° 22' 59.39" to N 38° 46' 23.73" W 90° 26' 0.02"	
	VOR: FTZ	Available from N 38° 44' 48.46" W 90° 22' 59.39" to N 38° 46' 23.73" W 90° 26' 0.02"	
	VOR: STL	Available from N 38° 44' 48.46" W 90° 22' 59.39" to N 38° 46' 23.73" W 90° 26' 0.02"	
	VOR: TOY	Available from N 38° 44' 48.46" W 90° 22' 59.39" to N 38° 46' 23.73" W 90° 26' 0.02"	
2	N 38° 50' 7.02" W 90° 26' 31.24"	N 38° 50' 49.21" W 90° 25' 44.13"	0.9
	VOR: CSX	Available from N 38° 50' 7.02" W 90° 26' 31.24" to N 38° 50' 49.21" W 90° 25' 44.13"	
	VOR: FTZ	Available from N 38° 50' 7.02" W 90° 26' 31.24" to N 38° 50' 49.21" W 90° 25' 44.13"	
	VOR: STL	Available from N 38° 50' 7.02" W 90° 26' 31.24" to N 38° 50' 49.21" W 90° 25' 44.13"	
	VOR: TOY	Available from N 38° 50' 7.02" W 90° 26' 31.24" to N 38° 50' 49.21" W 90° 25' 44.13"	
3	N 38° 52' 44.54" W 90° 8' 46.20"	N 38° 52' 20.35" W 90° 5' 45.29"	2.4
	VOR: CSX	Available from N 38° 52' 44.54" W 90° 8' 46.20" to N 38° 52' 20.35" W 90° 5' 45.29"	
	VOR: STL	Available from N 38° 52' 44.54" W 90° 8' 46.20" to N 38° 52' 20.35" W 90° 5' 45.29"	
	VOR: TOY	Available from N 38° 52' 44.54" W 90° 8' 46.20" to N 38° 52' 20.35" W 90° 5' 45.29"	

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments (Continued.)

#	Start Location	End Location	Length [NM]
4	N 38° 51' 38.55" W 90° 0' 34.03"	N 38° 51' 20.40" W 89° 58' 19.46"	1.8
	VOR: CSX	Available from N 38° 51' 38.55" W 90° 0' 34.03" to N 38° 51' 20.40" W 89° 58' 19.46"	
	VOR: STL	Available from N 38° 51' 38.55" W 90° 0' 34.03" to N 38° 51' 20.40" W 89° 58' 19.46"	
	VOR: TOY	Available from N 38° 51' 38.55" W 90° 0' 34.03" to N 38° 51' 20.40" W 89° 58' 19.46"	
5	N 38° 50' 45.70" W 89° 54' 2.99"	N 38° 50' 25.72" W 89° 51' 35.86"	1.9
	VOR: CSX	Available from N 38° 50' 45.70" W 89° 54' 2.99" to N 38° 50' 25.72" W 89° 51' 35.86"	
	VOR: STL	Available from N 38° 50' 45.70" W 89° 54' 2.99" to N 38° 50' 25.72" W 89° 51' 35.86"	
	VOR: TOY	Available from N 38° 50' 45.70" W 89° 54' 2.99" to N 38° 50' 25.72" W 89° 51' 35.86"	
	VOR: VLA	Available from N 38° 50' 45.70" W 89° 54' 2.99" to N 38° 50' 25.72" W 89° 51' 35.86"	

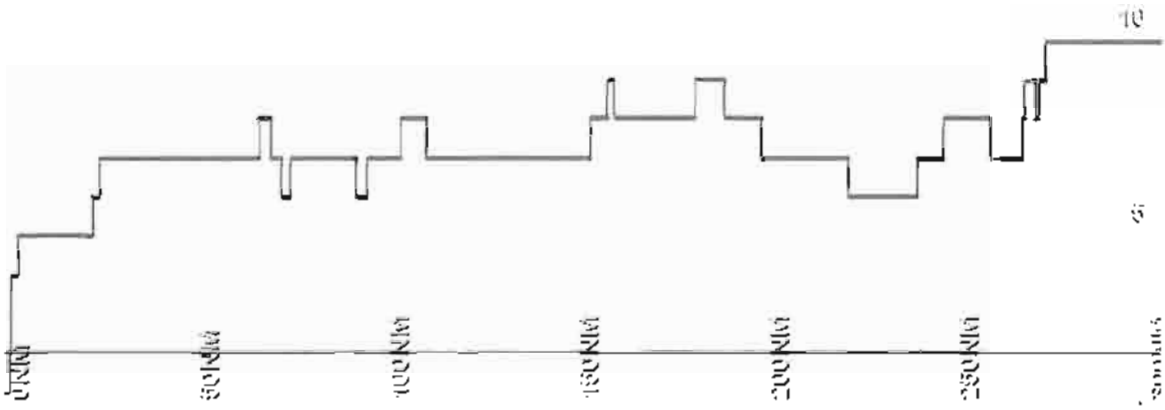
User DMEs

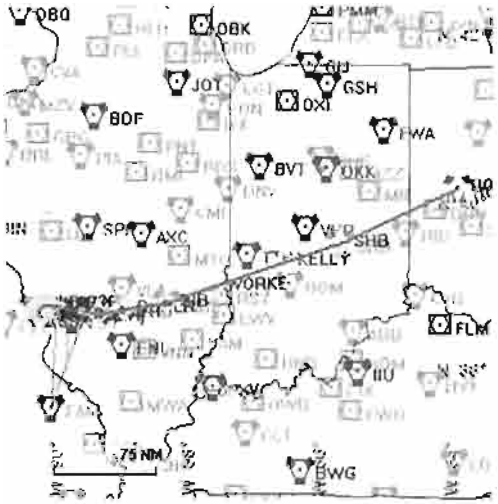
#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H	449.5	117.40	STL	Used
		ESV: Bearing [True]: 91.0° to 114.0° Bearing [Mag]: 90.0° to 113.0°			Arc Distance: Out to 35.0 NM Altitude: 4000.0 to 10000.0 Ft.		
2	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H	1220.0	115.70	FAM	Used
		ESV: Bearing [True]: 3.0° to 20.0° Bearing [Mag]: 2.0° to 19.0°			Arc Distance: Out to 74.0 NM Altitude: 4000.0 to 10000.0 Ft.		
3	ENL	N 38° 25' 12.00" W 89° 9' 32.39"	H	545.8	115.00	ENL	Used
		ESV: Bearing [True]: 288.0° to 311.0° Bearing [Mag]: 284.0° to 307.0°			Arc Distance: Out to 48.0 NM Altitude: 3000.0 to 9000.0 Ft.		

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR





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Project Name:	
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	2/16/2012 9.02:28 AM
Input File:	JHART RW29 ROD 20120 .
Databases:	AVNIS Date. 08/26/2011
	NFD Date· 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✓ Please Check Flyability Results
DME/DME	✓
Radars	✓
Comms	
TERPS	

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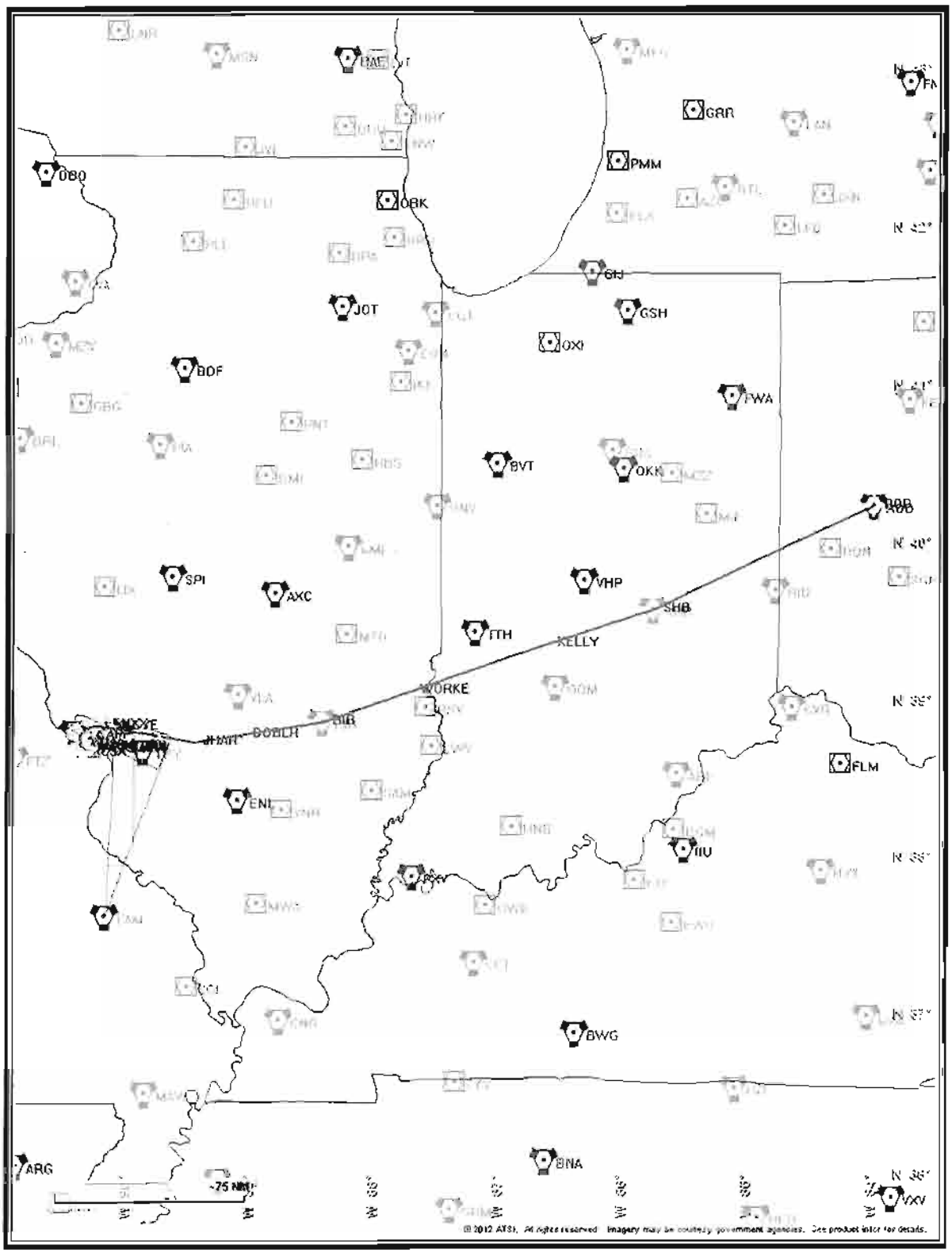

GRR
PMM
OBK
GH
JOT
GSH
OXI
BDF
FWA
BVT
OKK
SPI
AXC
VHP
SHB
ITH
KELLY
WORKE
JHART
DOBLH
FLM
ENI
IIU
BWG
BNA
ARG
75 NM

Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW29(A...	WP	N 38° 44' 48.46" W 90° 22' 59.39"	556.0	VNAV	0.0	Fly Over	TF
RW11(D...	WP	N 38° 45' 35.83" W 90° 24' 35.55"	653.0	VNAV	130 0	Fly Over	VA
GH29:	WP	N 38° 46' 7.93" W 90° 25' 40 75"	1120.0	VNAV	145 0	Fly Over	DF
DSAPP	WP	N 38° 50' 1.06" W 90° 26' 38.98"	2500.0	VNAV	180.0	Fly By	TF
ANNII	WP	N 38° 52' 52.69" W 90° 23' 22.37"	3267.3	VNAV	180 0	Fly By	TF
LENXX	WP	N 38° 54' 4.00" W 90° 18' 46.99"	4022.3	VNAV	180 0	Fly By	TF
KAEYE	WP	N 38° 53' 23 93" W 90° 13' 43.89"	4822 3	VNAV	180 0	Fly By	TF
JHART	WP	N 38° 47' 32.80" W 89° 30' 39 12"	11654.8	VNAV	210.0	Fly By	TF
DOBLR	WP	N 38° 50' 31 91" W 89° 7' 10.92"	15371 7	VNAV	210 0	Fly By	TF
BIB	WP	N 38° 55' 13.24" W 88° 28' 54.50"	18000.0	VNAV	240.0	Fly By	TF
WORKE	WP	N 39° 7' 2 95" W 87° 46' 25.21"	18000 0	VNAV	240.0	Fly By	TF
KELLY	WP	N 39° 24' 49 15" W 86° 40' 17.29"	18000.0	VNAV	240.0	Fly By	TF
SHB	WP	N 39° 37' 57 15" W 85° 49' 27.54"	18000 0	VNAV	240 0	Fly By	TF
ROD	WP	N 40° 17' 16.08" W 84° 2' 35 28"	18000.0	VNAV	240.0	Fly Over	TF

Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL

Climb Gradient: 200 Ft/NM after next to last waypoint up to 18000 0 Ft

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KSTL
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1120 0 Ft MSL
Ground Speeds:
Departure **120.0 Kts** out to **10.0 NM**
Table:
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Required IAS at Fly-By WP LENXX could not be reached with given A/C acceleration performance.

Flight Track comes into contact with terrain. Minimum AGL along route was -47.99 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

DME/DME

Return To Summary

Settings:

RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0 165 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4 0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
Minimum MSL DMEs Avail: 1661 Ft

Total Number of DMEs Used: 28

Maximum DME Error: 0.608 NM

No Critical DMEs were found.

Available DMEs: STL, FTZ, TOY, CSX, VLA, ENL, VNN, BIB, PXV, SPI, TTH, AXC, FAM, SAM, MTO, VHP, BVT, OKK, OOM, IIU, SHB, FWA, FLM, ROD, MIE, RID, DQN, APE

Foreign DMEs within range: YQG, YQO, YXU

DME/DME (Continued.)

Return To Summary

DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H + ESV	User	NO	0.512	Enabled	8.7 %	7.9 %
2	FTZ	N 38° 41' 39.58" W 90° 58' 16.17"	L	Database	NO	0.734	Enabled	2.8 %	1.7 %
3	CSX	N 38° 45' 9.88" W 90° 21' 39.46"	H	Database	NO	0.790	Enabled	9.0 %	8.1 %
4	TOY	N 38° 44' 20.97" W 89° 55' 7.06"	L	Database	NO	1.222	Enabled	8.5 %	8.6 %
5	VLA	N 39° 5' 37.26" W 89° 9' 44.87"	L	Database	NO	0.608	Enabled	4.4 %	4.6 %
6	ENL	N 38° 25' 12.00" W 89° 9' 32.39"	H	Database	NO	0.864	Enabled	12.4 %	12.8 %
7	BIB	N 38° 55' 13.26" W 88° 28' 54.47"	L	Database	NO	0.608	Enabled	4.2 %	4.4 %
8	SPI	N 39° 50' 23.04" W 89° 40' 39.83"	H	Database	NO	0.608	Enabled	3.7 %	3.8 %
9	TTH	N 39° 29' 20.19" W 87° 14' 56.47"	H	Database	NO	0.608	Enabled	25.2 %	26.0 %
10	VNN	N 38° 21' 43.03" W 88° 48' 26.41"	L	Database	NO	0.608	Enabled	0.0 %	0.0 %
11	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H + ESV	User	NO	0.608	Enabled	0.0 %	0.0 %
12	PXV	N 37° 55' 41.95" W 87° 45' 44.56"	H	Database	NO	0.608	Enabled	6.5 %	6.7 %
13	AXC	N 39° 44' 15.08" W 88° 51' 23.15"	H	Database	NO	1.038	Enabled	15.7 %	16.2 %
14	SAM	N 38° 29' 6.68" W 88° 5' 8.93"	L	Database	NO	0.608	Enabled	2.9 %	3.0 %
15	MTO	N 39° 28' 40.42" W 88° 17' 10.44"	L	Database	NO	0.853	Enabled	7.5 %	7.7 %
16	VHP	N 39° 48' 53.02" W 86° 22' 2.88"	H	Database	NO	0.608	Enabled	12.3 %	12.7 %
17	OKK	N 40° 31' 40.00" W 86° 3' 28.81"	H	Database	NO	0.608	Enabled	8.9 %	9.2 %
18	OOM	N 39° 8' 37.76" W 86° 36' 46.87"	L	Database	NO	0.608	Enabled	1.1 %	1.2 %
19	BVT	N 40° 33' 22.03" W 87° 4' 9.55"	H	Database	NO	0.608	Enabled	3.2 %	3.3 %
20	SHB	N 39° 37' 57.15" W 85° 49' 27.54"	L	Database	NO	0.608	Enabled	10.3 %	10.6 %

DME/DME (Continued.)

Return To Summary

DMEs Used (Continued.)

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
21	IIU	N 38° 6' 12.47" W 85° 34' 38.77"	H	Database	NO	0.608	Enabled	5.6 %	5.8 %
22	FWA	N 40° 58' 44.63" W 85° 11' 17.01"	H	Database	NO	0.608	Enabled	9.5 %	9.8 %
23	RID	N 39° 45' 18.08" W 84° 50' 19.85"	L	Database	NO	0.608	Enabled	2.9 %	3.0 %
24	ROD	N 40° 17' 16.08" W 84° 2' 35.28"	H	Database	NO	0.608	Enabled	2.9 %	3.0 %
25	MIE	N 40° 14' 14.25" W 85° 23' 38.53"	L	Database	NO	0.608	Enabled	3.5 %	3.6 %
26	FLM	N 38° 38' 58.16" W 84° 18' 38.27"	H	Database	NO	0.608	Enabled	9.0 %	9.3 %
27	DQN	N 40° 0' 59.19" W 84° 23' 48.83"	L	Database	NO	0.608	Enabled	4.3 %	4.4 %
28	APE	N 40° 9' 3.82" W 82° 35' 17.88"	H	Database	NO	0.608	Enabled	5.4 %	5.6 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0						
1.5	STL					
2.5	STL	FTZ	CSX	TOY		
6.2	STL	FTZ	CSX	TOY		
10.1	STL	FTZ	CSX	TOY		
13.5	STL	FTZ	CSX	TOY		
18.0	STL	FTZ	CSX	TOY		
28.1	STL	VLA	CSX	TOY	ENL	
51.7	STL	VLA	CSX	TOY	ENL	VNN
70.8	STL	TTH	CSX	AXC	SPI	ENL
90.5	ENL	SAM	BIB	AXC	SPI	STL
100.7	PXV	SAM	BIB	AXC	TTH	MTO
111.8	ENL	MTO	BIB	AXC	TTH	SPI
121.9	ENL	MTO	BIB	VHP	TTH	PXV
136.2	ENL	MTO	AXC	PXV	TTH	VHP
146.3	OKK	OOM	AXC	PXV	TTH	VHP
178.8	OKK	OOM	VHP	PXV	TTH	BVT

DME/DME (Continued.)

Return To Summary

Flight Check DME Selection (Continued.)

Distance [NM]	Selected DMEs					Alternate
190.5	OKK	OOM	SHB	BVT	TTH	IIU
200.7	VHP	IIU	SHB	BVT	TTH	OKK
220.9	VHP	IIU	SHB	OKK	TTH	FWA
231.7	VHP	IIU	FWA	RID	TTH	FLM
242.9	VHP	MIE	OKK	ROD	SHB	FWA
253.1	VHP	MIE	FWA	RID	TTH	OKK
263.2	VHP	MIE	FWA	SHB	FLM	RID
273.3	VHP	DQN	FWA	RID	FLM	OKK
288.5	VHP	APE	FWA	ROD	FLM	RID
298.6	VHP	APE	DQN	ROD	FLM	FWA
312.9	FWA	APE	DQN	OKK	FLM	ROD

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 38° 44' 48.46" W 90° 22' 59.39"	N 38° 46' 23.72" W 90° 26' 0.03"	2.9
	VOR: CSX	Available from N 38° 44' 48.46" W 90° 22' 59.39" to N 38° 46' 23.72" W 90° 26' 0.03"	
	VOR: FTZ	Available from N 38° 44' 48.46" W 90° 22' 59.39" to N 38° 46' 23.72" W 90° 26' 0.03"	
	VOR: STL	Available from N 38° 44' 48.46" W 90° 22' 59.39" to N 38° 46' 23.72" W 90° 26' 0.03"	
	VOR: TOY	Available from N 38° 44' 48.46" W 90° 22' 59.39" to N 38° 46' 23.72" W 90° 26' 0.03"	
2	N 38° 50' 7.01" W 90° 26' 31.24"	N 38° 50' 49.20" W 90° 25' 44.13"	0.9
	VOR: CSX	Available from N 38° 50' 7.01" W 90° 26' 31.24" to N 38° 50' 49.20" W 90° 25' 44.13"	
	VOR: FTZ	Available from N 38° 50' 7.01" W 90° 26' 31.24" to N 38° 50' 49.20" W 90° 25' 44.13"	
	VOR: STL	Available from N 38° 50' 7.01" W 90° 26' 31.24" to N 38° 50' 49.20" W 90° 25' 44.13"	
	VOR: TOY	Available from N 38° 50' 7.01" W 90° 26' 31.24" to N 38° 50' 49.20" W 90° 25' 44.13"	

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments (Continued.)

#	Start Location	End Location	Length (NM)
3	N 38° 52' 44.55" W 90° 8' 46.21"	N 38° 52' 20.35" W 90° 5' 45.29"	2.4
	VOR. CSX	Available from N 38° 52' 44.55" W 90° 8' 46.21" to N 38° 52' 20.35" W 90° 5' 45.29"	
	VOR: STL	Available from N 38° 52' 44.55" W 90° 8' 46.21" to N 38° 52' 20.35" W 90° 5' 45.29"	
	VOR: TOY	Available from N 38° 52' 44.55" W 90° 8' 46.21" to N 38° 52' 20.35" W 90° 5' 45.29"	
4	N 38° 51' 38.55" W 90° 0' 34.03"	N 38° 51' 20.41" W 89° 58' 19.46"	1.8
	VOR. CSX	Available from N 38° 51' 38.55" W 90° 0' 34.03" to N 38° 51' 20.41" W 89° 58' 19.46"	
	VOR: STL	Available from N 38° 51' 38.55" W 90° 0' 34.03" to N 38° 51' 20.41" W 89° 58' 19.46"	
	VOR. TOY	Available from N 38° 51' 38.55" W 90° 0' 34.03" to N 38° 51' 20.41" W 89° 58' 19.46"	
5	N 38° 51' 0.51" W 89° 55' 52.30"	N 38° 50' 25.72" W 89° 51' 35.87"	3.4
	VOR. CSX	Available from N 38° 51' 0.51" W 89° 55' 52.30" to N 38° 50' 25.72" W 89° 51' 35.87"	
	VOR. STL	Available from N 38° 51' 0.51" W 89° 55' 52.30" to N 38° 50' 25.72" W 89° 51' 35.87"	
	VOR. TOY	Available from N 38° 51' 0.51" W 89° 55' 52.30" to N 38° 50' 25.72" W 89° 51' 35.87"	
	VOR. VLA	Available from N 38° 51' 0.51" W 89° 55' 52.30" to N 38° 50' 25.72" W 89° 51' 35.87"	

User DMEs

#	Name	Lat/Lon	Range	Elevation (Ft)	Frequency	Replaces:	Status
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H	449.5	117.40	STL	Used

ESV Bearing [True]: 91.0° to 114.0° Arc Distance: Out to 35.0 NM
Bearing [Mag]: 90.0° to 113.0° Altitude: 4000.0 to 10000.0 Ft

DME/DME (Continued.)

Return To Summary

User DMEs (Continued.)

#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
2	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H	1220.0	115.70	FAM	Used

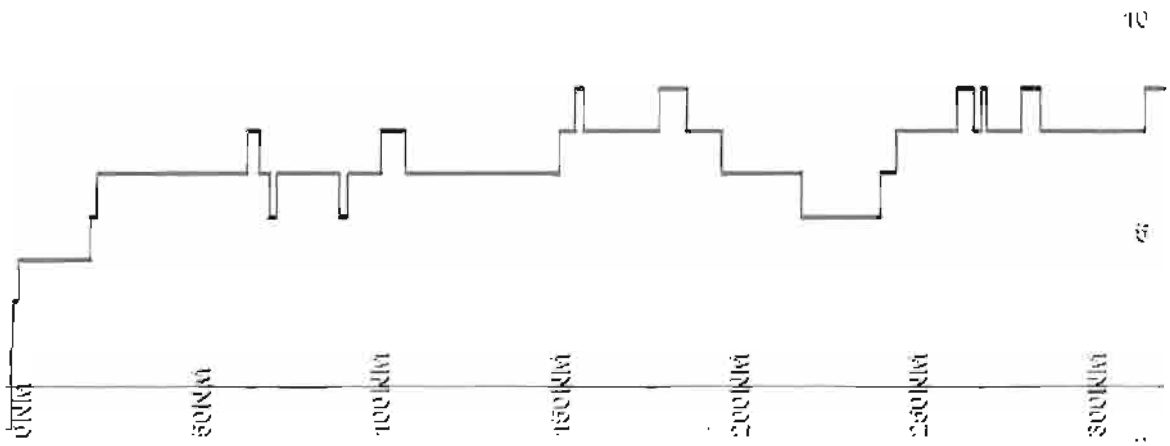
ESV: Bearing [True]: 3.0° to 20.0°
Bearing [Mag]: 2.0° to 19.0°

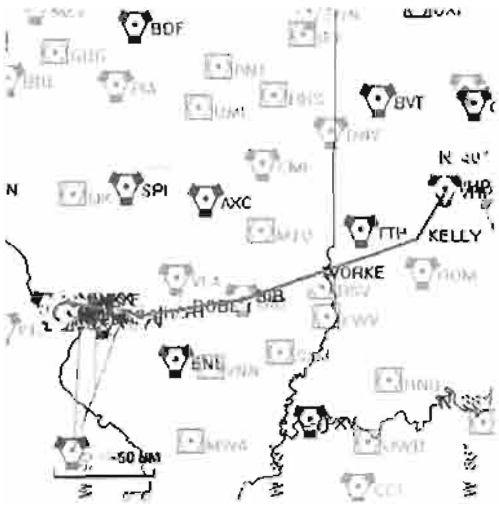
Arc Distance: Out to 74.0 NM
Altitude: 4000.0 to 10000.0 Ft

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR





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Version:	2.35
Date/Time:	2/16/2012 9:29:16 AM
Input File:	JHART RW29 VHP 20120.
Databases:	AVNIS Date: 08/26/2011
	NFD Date: 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✓	Please Check Flyability Results
DME/DME	✓	
Radars	✓	
Comms		
TERPS		

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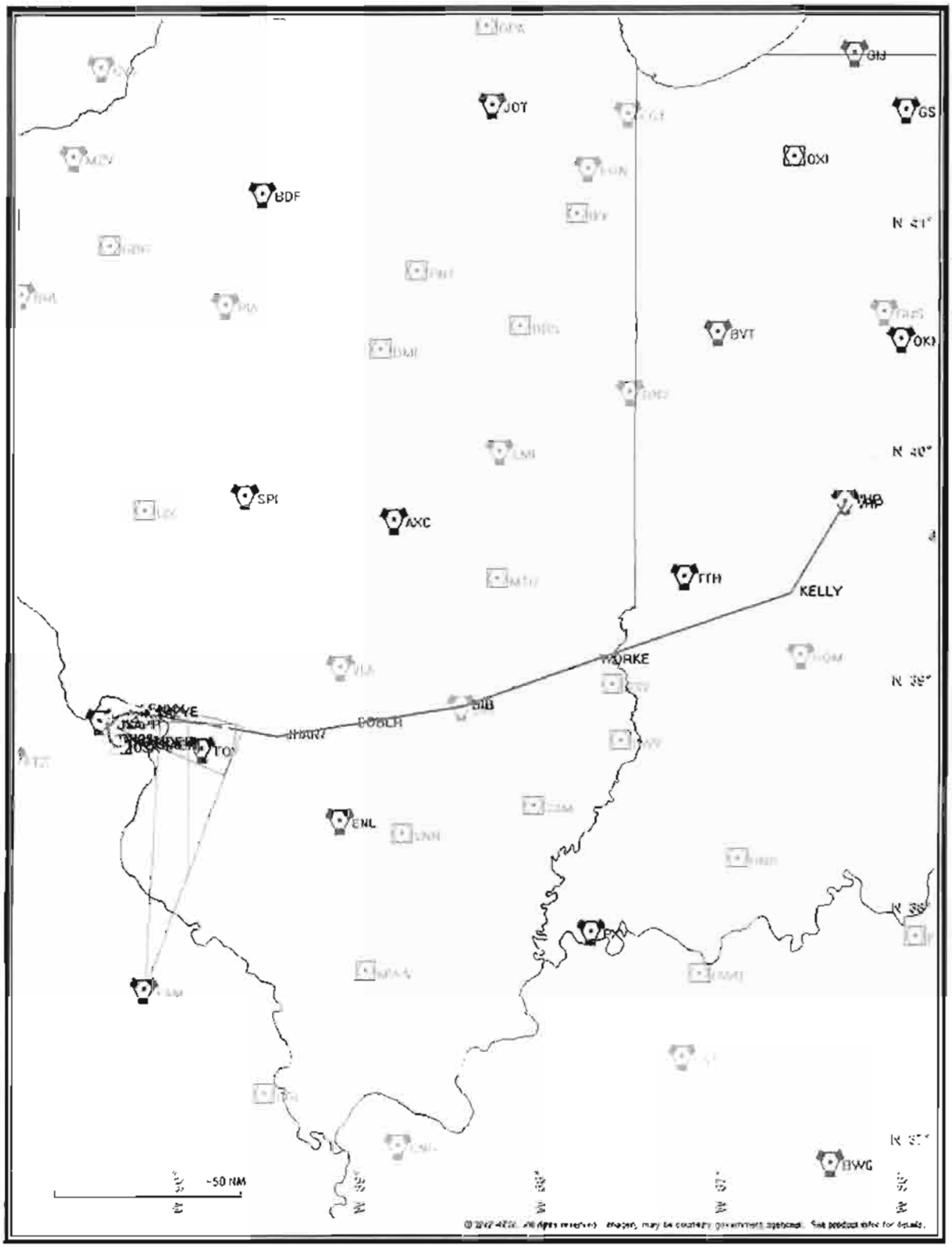

JOT
GS
OXI
BDF
BVT
OKI
SPI
AXC
VHP
TTH
KELLY
WARKE
JHART
ENL
BWG
~50 NM

Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW29(A...	WP	N 38° 44' 48.46" W 90° 22' 59.39"	556 0	VNAV	0 0	Fly Over	TF
RW11(D...	WP	N 38° 45' 35.83" W 90° 24' 35.55"	653.0	VNAV	130 0	Fly Over	VA
GH29:	WP	N 38° 46' 7.93" W 90° 25' 40 75"	1120.0	VNAV	145 0	Fly Over	DF
DSAPP	WP	N 38° 50' 1.06" W 90° 26' 38.98"	2500 0	VNAV	180 0	Fly By	TF
ANNII	WP	N 38° 52' 52.69" W 90° 23' 22.37"	3267.3	VNAV	180.0	Fly By	TF
LENXX	WP	N 38° 54' 4.00" W 90° 18' 46.99"	4022.3	VNAV	180.0	Fly By	TF
KAEYE	WP	N 38° 53' 23.93" W 90° 13' 43.89"	4822.3	VNAV	180.0	Fly By	TF
JHART	WP	N 38° 47' 32.80" W 89° 30' 39 12"	11654.8	VNAV	210.0	Fly By	TF
DOBLR	WP	N 38° 50' 31.91" W 89° 7' 10.92"	15371.7	VNAV	210.0	Fly By	TF
BIB	WP	N 38° 55' 13.24" W 88° 28' 54.50"	18000.0	VNAV	240.0	Fly By	TF
WORKE	WP	N 39° 7' 2.95" W 87° 46' 25 21"	18000.0	VNAV	240 0	Fly By	TF
KELLY	WP	N 39° 24' 49.15" W 86° 40' 17.29"	18000 0	VNAV	240 0	Fly By	TF
VHP	WP	N 39° 48' 53.02" W 86° 22' 2 88"	18000 0	VNAV	240.0	Fly Over	TF

Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL

Climb Gradient: 200 Ft/NM after next to last waypoint up to 18000.0 Ft

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KSTL
Aircraft Category: Cat D
Climb Gradient: 500 0 Ft/NM up to 1120 0 Ft MSL
Ground Speeds:
Departure: **120.0 Kts** out to **10.0 NM**
Table.
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Required IAS at Fly-By WP LENXX could not be reached with given A/C acceleration performance.

Flight Track comes into contact with terrain. Minimum AGL along route was -47.99 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

DME/DME

Return To Summary

Settings:

RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0 165 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4 0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
Minimum MSL DMEs Avail: 1661 Ft.

Total Number of DMEs Used: 20

Maximum DME Error: 0.608 NM

No Critical DMEs were found

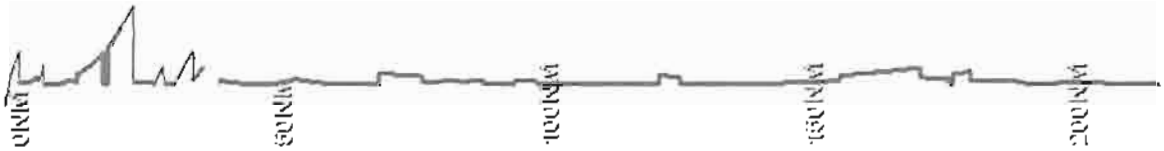
Available DMEs: STL, FTZ, TOY, CSX, VLA, ENL, VNN, BIB, PXV, SPI, TTH, AXC, FAM, SAM, MTO, VHP, BVT, OKK, OOM, IIU, SHB, FWA, OXI

Foreign DMEs within range: YQG

DME/DME (Continued.)

Return To Summary

1 NM



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H + ESV	User	NO	0.512	Enabled	12.7 %	11.6 %
2	FTZ	N 38° 41' 39.58" W 90° 58' 16.17"	L	Database	NO	0.734	Enabled	4.1 %	2.6 %
3	CSX	N 38° 45' 9.88" W 90° 21' 39.46"	H	Database	NO	0.790	Enabled	13.1 %	11.9 %
4	TOY	N 38° 44' 20.97" W 89° 55' 7.06"	L	Database	NO	1.222	Enabled	12.4 %	12.8 %
5	VLA	N 39° 5' 37.26" W 89° 9' 44.87"	L	Database	NO	0.608	Enabled	6.4 %	6.7 %
6	ENL	N 38° 25' 12.00" W 89° 9' 32.39"	H	Database	NO	0.864	Enabled	18.1 %	18.9 %
7	BIB	N 38° 55' 13.26" W 88° 28' 54.47"	L	Database	NO	0.608	Enabled	6.2 %	6.5 %
8	SPI	N 39° 50' 23.04" W 89° 40' 39.83"	H	Database	NO	0.608	Enabled	5.4 %	5.6 %
9	TTH	N 39° 29' 20.19" W 87° 14' 56.47"	H	Database	NO	0.608	Enabled	35.0 %	36.6 %
10	VNN	N 38° 21' 43.03" W 88° 48' 26.41"	L	Database	NO	0.608	Enabled	0.0 %	0.0 %
11	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H + ESV	User	NO	0.608	Enabled	0.0 %	0.0 %
12	PXV	N 37° 55' 41.95" W 87° 45' 44.56"	H	Database	NO	0.608	Enabled	9.5 %	9.9 %
13	AXC	N 39° 44' 15.08" W 88° 51' 23.15"	H	Database	NO	1.038	Enabled	23.0 %	24.0 %
14	SAM	N 38° 29' 6.68" W 88° 5' 8.93"	L	Database	NO	0.608	Enabled	4.2 %	4.4 %
15	MTO	N 39° 28' 40.42" W 88° 17' 10.44"	L	Database	NO	0.853	Enabled	10.9 %	11.4 %
16	VHP	N 39° 48' 53.02" W 86° 22' 2.88"	H	Database	NO	0.608	Enabled	1.8 %	1.9 %
17	OKK	N 40° 31' 40.00" W 86° 3' 28.81"	H	Database	NO	0.608	Enabled	9.3 %	9.7 %
18	OOM	N 39° 8' 37.76" W 86° 36' 46.87"	L	Database	NO	0.608	Enabled	4.6 %	4.8 %
19	BVT	N 40° 33' 22.03" W 87° 4' 9.55"	H	Database	NO	0.608	Enabled	5.6 %	5.9 %
20	SHB	N 39° 37' 57.15" W 85° 49' 27.54"	L	Database	NO	0.608	Enabled	3.7 %	3.9 %

Flight Check DME Selection

Distance [NM]	Selected DMEs	Alternate

DME/DME (Continued.)

Return To Summary

Flight Check DME Selection (Continued.)

Distance [NM]	Selected DMEs					Alternate
0.0						
0.0						
1.5	STL					
2.5	STL	FTZ	CSX	TOY		
6.2	STL	FTZ	CSX	TOY		
10.1	STL	FTZ	CSX	TOY		
13.5	STL	FTZ	CSX	TOY		
18.0	STL	FTZ	CSX	TOY		
28.1	STL	VLA	CSX	TOY	ENL	
51.7	STL	VLA	CSX	TOY	ENL	VNN
70.8	STL	TTH	CSX	AXC	SPI	ENL
90.5	ENL	SAM	BIB	AXC	SPI	STL
100.7	PXV	SAM	BIB	AXC	TTH	MTO
111.8	ENL	MTO	BIB	AXC	TTH	SPI
121.9	ENL	MTO	BIB	VHP	TTH	PXV
136.2	ENL	MTO	AXC	PXV	TTH	VHP
146.3	OKK	OOM	AXC	PXV	TTH	VHP
178.8	OKK	OOM	VHP	PXV	TTH	BVT
189.9	OKK	OOM	SHB	BVT	TTH	VHP
200.0	OKK	VHP	SHB	BVT	TTH	FWA

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 38° 44' 48.46" W 90° 22' 59.39"	N 38° 46' 23.72" W 90° 26' 0.03"	2.9
	VOR CSX	Available from N 38° 44' 48.46" W 90° 22' 59.39" to N 38° 46' 23.72" W 90° 26' 0.03"	
	VOR FTZ	Available from N 38° 44' 48.46" W 90° 22' 59.39" to N 38° 46' 23.72" W 90° 26' 0.03"	
	VOR STL	Available from N 38° 44' 48.46" W 90° 22' 59.39" to N 38° 46' 23.72" W 90° 26' 0.03"	
	VOR TOY	Available from N 38° 44' 48.46" W 90° 22' 59.39" to N 38° 46' 23.72" W 90° 26' 0.03"	

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments (Continued.)

#	Start Location	End Location	Length [NM]
2	N 38° 50' 7.01" W 90° 26' 31.24"	N 38° 50' 49.20" W 90° 25' 44.13"	0.9
	VOR: CSX	Available from N 38° 50' 7.01" W 90° 26' 31.24" to N 38° 50' 49.20" W 90° 25' 44.13"	
	VOR: FTZ	Available from N 38° 50' 7.01" W 90° 26' 31.24" to N 38° 50' 49.20" W 90° 25' 44.13"	
	VOR: STL	Available from N 38° 50' 7.01" W 90° 26' 31.24" to N 38° 50' 49.20" W 90° 25' 44.13"	
	VOR: TOY	Available from N 38° 50' 7.01" W 90° 26' 31.24" to N 38° 50' 49.20" W 90° 25' 44.13"	
3	N 38° 52' 44.55" W 90° 8' 46.21"	N 38° 52' 20.35" W 90° 5' 45.29"	2.4
	VOR: CSX	Available from N 38° 52' 44.55" W 90° 8' 46.21" to N 38° 52' 20.35" W 90° 5' 45.29"	
	VOR: STL	Available from N 38° 52' 44.55" W 90° 8' 46.21" to N 38° 52' 20.35" W 90° 5' 45.29"	
	VOR: TOY	Available from N 38° 52' 44.55" W 90° 8' 46.21" to N 38° 52' 20.35" W 90° 5' 45.29"	
4	N 38° 51' 38.55" W 90° 0' 34.03"	N 38° 51' 20.41" W 89° 58' 19.46"	1.8
	VOR: CSX	Available from N 38° 51' 38.55" W 90° 0' 34.03" to N 38° 51' 20.41" W 89° 58' 19.46"	
	VOR: STL	Available from N 38° 51' 38.55" W 90° 0' 34.03" to N 38° 51' 20.41" W 89° 58' 19.46"	
	VOR: TOY	Available from N 38° 51' 38.55" W 90° 0' 34.03" to N 38° 51' 20.41" W 89° 58' 19.46"	
5	N 38° 51' 0.51" W 89° 55' 52.30"	N 38° 50' 25.72" W 89° 51' 35.87"	3.4
	VOR: CSX	Available from N 38° 51' 0.51" W 89° 55' 52.30" to N 38° 50' 25.72" W 89° 51' 35.87"	
	VOR: STL	Available from N 38° 51' 0.51" W 89° 55' 52.30" to N 38° 50' 25.72" W 89° 51' 35.87"	
	VOR: TOY	Available from N 38° 51' 0.51" W 89° 55' 52.30" to N 38° 50' 25.72" W 89° 51' 35.87"	
	VOR: VLA	Available from N 38° 51' 0.51" W 89° 55' 52.30" to N 38° 50' 25.72" W 89° 51' 35.87"	

DME/DME (Continued.)

Return To Summary

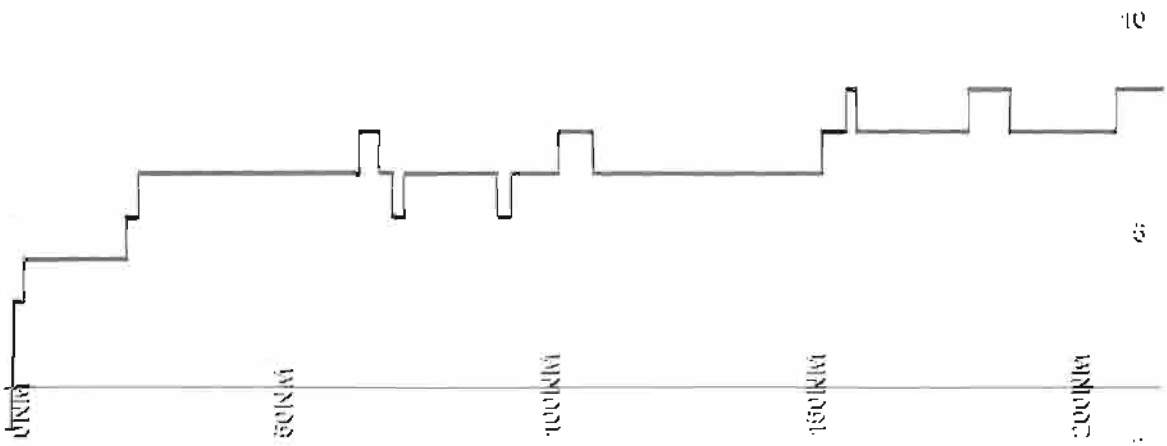
User DMEs

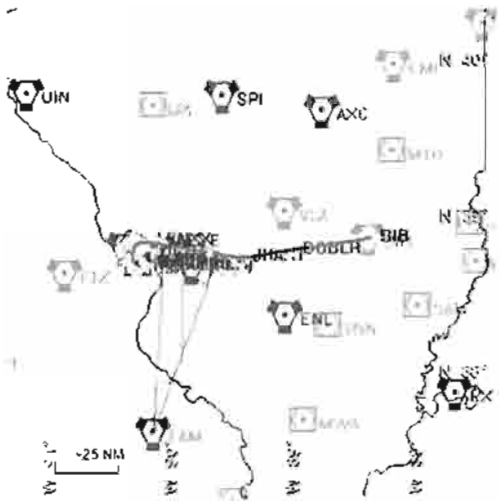
#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H	449.5	117 40	STL	Used
		ESV. Bearing [True]. 91.0° to 114.0° Bearing [Mag]: 90 0° to 113 0°			Arc Distance: Out to 35 0 NM Altitude 4000.0 to 10000.0 Ft.		
2	FAM	N 37° 40' 24 39" W 90° 14' 2 53"	H	1220.0	115 70	FAM	Used
		ESV. Bearing [True]. 3.0° to 20.0° Bearing [Mag]: 2 0° to 19 0°			Arc Distance: Out to 74 0 NM Altitude: 4000.0 to 10000.0 Ft.		

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR





Name:	enanders
Project Name:	
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	2/16/2012 9:40:33 AM
Input File:	JHART RW30L BIB 2012 ..
Databases:	AVNIS Date. 08/26/2011
	NFD Date 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔ **Please Check Flyability Results**
DME/DME	✔
Radars	✔
Comms	
TERPS	

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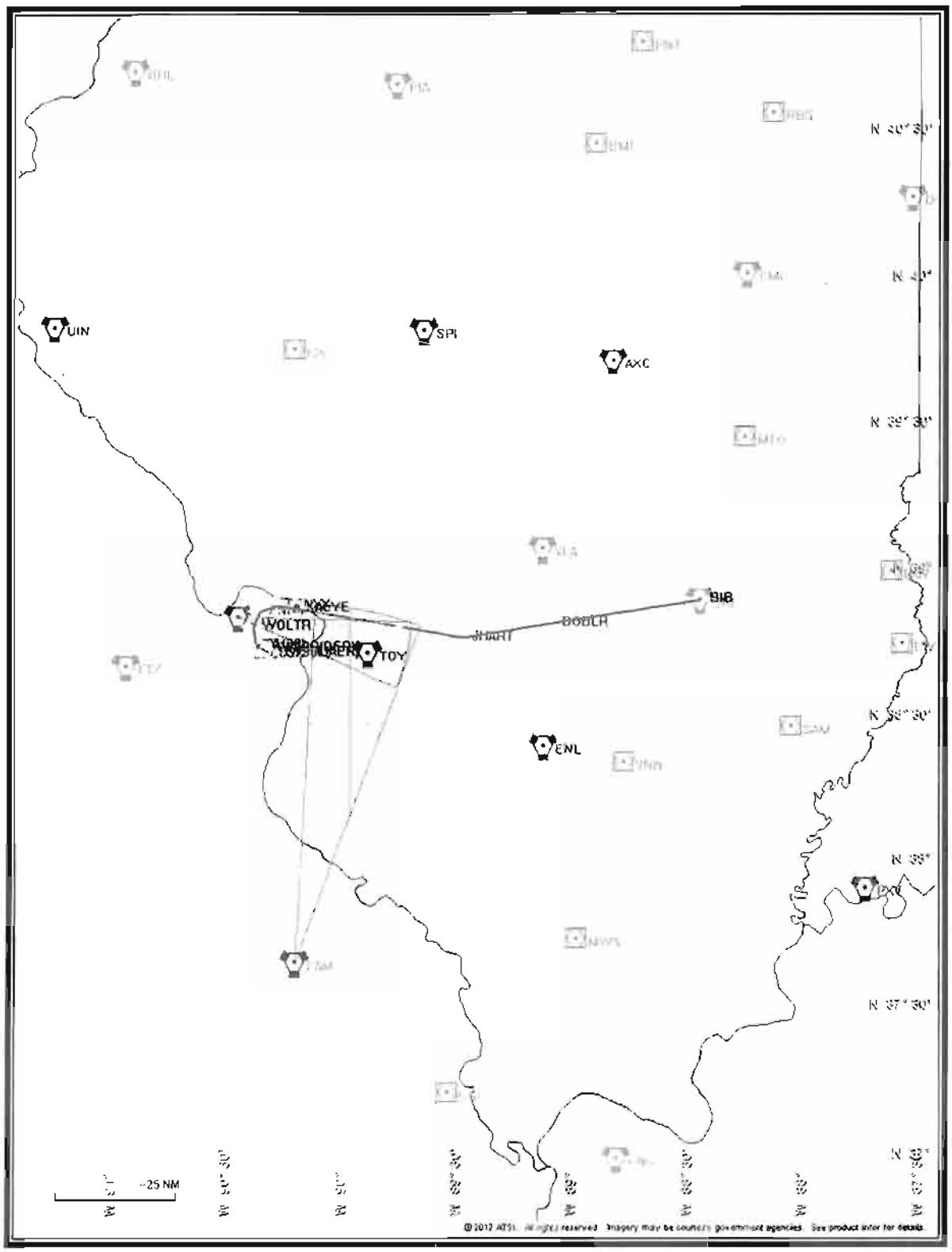

UIN
SPI
AXC
BIB
WOLTR
JHART
BOBLR
TOY
ENL
~25 NM

Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW30L(...	WP	N 38° 44' 17.08" W 90° 20' 49.42"	585 8	VNAV	0 0	Fly Over	TF
RW12R(...	WP	N 38° 45' 14.05" W 90° 22' 44.97"	576.6	VNAV	130 0	Fly Over	VA
GH30L	WP	N 38° 45' 51.05" W 90° 24' 0.07"	1120.0	VNAV	145.0	Fly Over	DF
WOLTR	WP	N 38° 49' 41 32" W 90° 25' 3.02"	2500 0	VNAV	180 0	Fly By	TF
ANNII	WP	N 38° 52' 52.69" W 90° 23' 22.37"	3189 1	VNAV	180 0	Fly By	TF
LENXX	WP	N 38° 54' 4 00" W 90° 18' 46.99"	3944 1	VNAV	180.0	Fly By	TF
KAEYE	WP	N 38° 53' 23.93" W 90° 13' 43 89"	4744.1	VNAV	180 0	Fly By	TF
JHART	WP	N 38° 47' 32 80" W 89° 30' 39.12"	11576.6	VNAV	210.0	Fly By	TF
DOBLR	WP	N 38° 50' 31.91" W 89° 7' 10.92"	15293.5	VNAV	210.0	Fly By	TF
BIB	WP	N 38° 55' 13 24" W 88° 28' 54.50"	18000 0	VNAV	240.0	Fly Over	TF

Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL

Climb Gradient: 200 Ft/NM after next to last waypo.nt up to 18000.0 Ft

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KSTL
Aircraft Category: Cat D
Climb Gradient: 500 0 Ft/NM up to 1120 0 Ft MSL
Ground Speeds:
Departure: **120.0 Kts** out to **10.0 NM**
Table
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Required IAS at Fly-By WP LENXX could not be reached with given A/C acceleration performance.

Flight Track comes into contact with terrain. Minimum AGL along route was -31.97 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

DME/DME

Return To Summary

Settings:

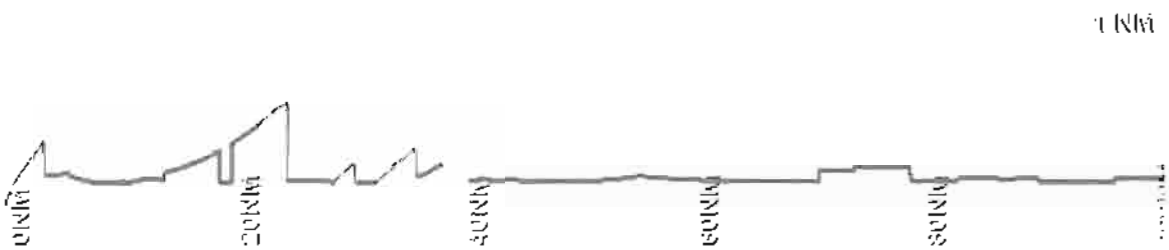
RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.165 NM
INS Drift Rate: 8 000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3 0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
Minimum MSL DMEs Avail: 1662 Ft.

Total Number of DMEs Used: 15

Maximum DME Error: 0.609 NM

No Critical DMEs were found.

Available DMEs: STL, FTZ, TOY, CSX, VLA, ENL, VNN, BIB, PXV, SPI, TTH, AXC, FAM, SAM, MTO



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. (NM)	Status	Time	Distance
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H + ESV	User	NO	0.585	Enabled	20.8 %	20.1 %
2	FTZ	N 38° 41' 39.58" W 90° 58' 16.17"	L	Database	NO	0.609	Enabled	10.3 %	6.8 %
3	CSX	N 38° 45' 9.88" W 90° 21' 39.46"	H	Database	NO	0.792	Enabled	29.2 %	27.2 %
4	TOY	N 38° 44' 20.97" W 89° 55' 7.06"	L	Database	NO	1.222	Enabled	25.8 %	28.0 %
5	VLA	N 39° 5' 37.26" W 89° 9' 44.87"	L	Database	NO	0.609	Enabled	13.6 %	15.0 %
6	ENL	N 38° 25' 12.00" W 89° 9' 32.39"	H	Database	NO	0.863	Enabled	32.6 %	35.9 %
7	BIB	N 38° 55' 13.26" W 88° 28' 54.47"	L	Database	NO	0.609	Enabled	6.7 %	7.4 %
8	SPI	N 39° 50' 23.04" W 89° 40' 39.83"	H	Database	NO	0.609	Enabled	3.9 %	4.3 %
9	TTH	N 39° 29' 20.19" W 87° 14' 56.47"	H	Database	NO	0.609	Enabled	2.7 %	3.0 %
10	VNN	N 38° 21' 43.03" W 88° 48' 26.41"	L	Database	NO	0.609	Enabled	7.8 %	8.6 %
11	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H + ESV	User	NO	0.609	Enabled	4.4 %	4.9 %
12	PXV	N 37° 55' 41.95" W 87° 45' 44.56"	H	Database	NO	0.609	Enabled	4.4 %	4.9 %
13	AXC	N 39° 44' 15.08" W 88° 51' 23.15"	H	Database	NO	0.609	Enabled	9.0 %	9.9 %
14	SAM	N 38° 29' 6.68" W 88° 5' 8.93"	L	Database	NO	0.609	Enabled	2.0 %	2.2 %
15	MTO	N 39° 28' 40.42" W 88° 17' 10.44"	L	Database	NO	0.609	Enabled	0.0 %	0.0 %

Flight Check DME Selection

Distance (NM)	Selected DMEs				Alternate
0.0					
1.8					
2.9	STL	FTZ	CSX	TOY	
6.7	TOY	FTZ	CSX		
10.0	TOY	FTZ	CSX	STL	
13.5	TOY	FTZ	CSX	STL	
18.0	TOY	FTZ	CSX	STL	

DME/DME (Continued.)

Return To Summary

Flight Check DME Selection (Continued.)

Distance [NM]	Selected DMEs					Alternate
28.1	TOY	VLA	CSX	STL	ENL	
51.7	TOY	VLA	CSX	STL	ENL	VNN
70.8	BIB	VNN	FAM	PXV	TTH	ENL
80.8	BIB	VNN	STL	AXC	CSX	VLA
90.9	BIB	SAM	SPI	AXC	ENL	STL

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 38° 44' 17.08" W 90° 20' 49.42"	N 38° 46' 5.15" W 90° 24' 16.02"	3.3
	VOR: CSX	Available from N 38° 44' 17.08" W 90° 20' 49.42" to N 38° 46' 5.15" W 90° 24' 16.02"	
	VOR: FTZ	Available from N 38° 44' 17.08" W 90° 20' 49.42" to N 38° 46' 5.15" W 90° 24' 16.02"	
	VOR: STL	Available from N 38° 44' 17.08" W 90° 20' 49.42" to N 38° 46' 5.15" W 90° 24' 16.02"	
	VOR: TOY	Available from N 38° 44' 17.08" W 90° 20' 49.42" to N 38° 46' 5.15" W 90° 24' 16.02"	
2	N 38° 52' 44.37" W 90° 8' 44.76"	N 38° 52' 20.17" W 90° 5' 43.85"	2.4
	VOR: CSX	Available from N 38° 52' 44.37" W 90° 8' 44.76" to N 38° 52' 20.17" W 90° 5' 43.85"	
	VOR: STL	Available from N 38° 52' 44.37" W 90° 8' 44.76" to N 38° 52' 20.17" W 90° 5' 43.85"	
	VOR: TOY	Available from N 38° 52' 44.37" W 90° 8' 44.76" to N 38° 52' 20.17" W 90° 5' 43.85"	
3	N 38° 51' 38.36" W 90° 0' 32.59"	N 38° 51' 20.22" W 89° 58' 18.02"	1.8
	VOR: CSX	Available from N 38° 51' 38.36" W 90° 0' 32.59" to N 38° 51' 20.22" W 89° 58' 18.02"	
	VOR: STL	Available from N 38° 51' 38.36" W 90° 0' 32.59" to N 38° 51' 20.22" W 89° 58' 18.02"	
	VOR: TOY	Available from N 38° 51' 38.36" W 90° 0' 32.59" to N 38° 51' 20.22" W 89° 58' 18.02"	

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments (Continued.)

#	Start Location	End Location	Length [NM]
4	N 38° 51' 0.32" W 89° 55' 50.86"	N 38° 50' 25.53" W 89° 51' 34.43"	3.4
	VOR: CSX	Available from N 38° 51' 0.32" W 89° 55' 50.86" to N 38° 50' 25.53" W 89° 51' 34.43"	
	VOR: STL	Available from N 38° 51' 0.32" W 89° 55' 50.86" to N 38° 50' 25.53" W 89° 51' 34.43"	
	VOR: TOY	Available from N 38° 51' 0.32" W 89° 55' 50.86" to N 38° 50' 25.53" W 89° 51' 34.43"	
	VOR: VLA	Available from N 38° 51' 0.32" W 89° 55' 50.86" to N 38° 50' 25.53" W 89° 51' 34.43"	

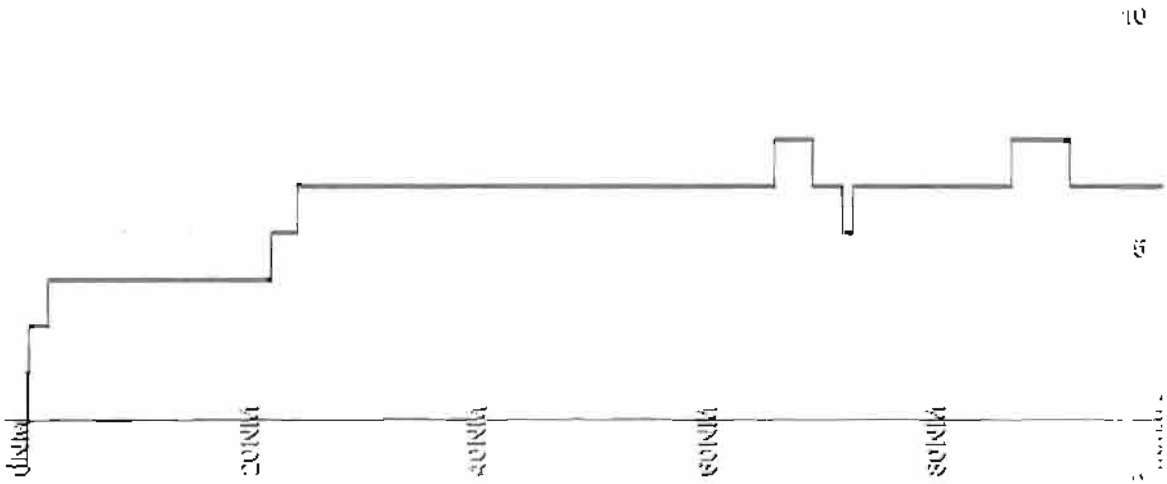
User DMEs

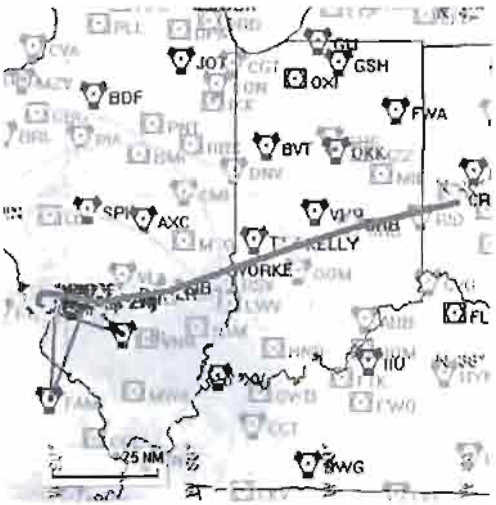
#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H	449.5	117.40	STL	Used
		ESV: Bearing [True]: 91.0° to 114.0° Bearing [Mag]: 90.0° to 113.0°			Arc Distance: Out to 35.0 NM Altitude: 4000.0 to 10000.0 Ft		
2	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H	1220.0	115.70	FAM	Used
		ESV: Bearing [True]: 3.0° to 20.0° Bearing [Mag]: 2.0° to 19.0°			Arc Distance: Out to 74.0 NM Altitude: 4000.0 to 10000.0 Ft		

Radar Analysis

Return To Summary

Settings: **Radar Types**: ARSR and ASR





Name:	enanders
Project Name:	
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	4/9/2012 3:46:22 PM
Input File:	JHART RW30L CREEP_ 2 .
Databases:	AVNIS Date. 02/07/2012
	NFD Date: 07/02/2009
	DTED® (MAX) Date. 2002

Results Summary:

Flyability	✔	Please Check Flyability Results
DME/DME	✔	
Radars	✔	
Comms		
TERPS		

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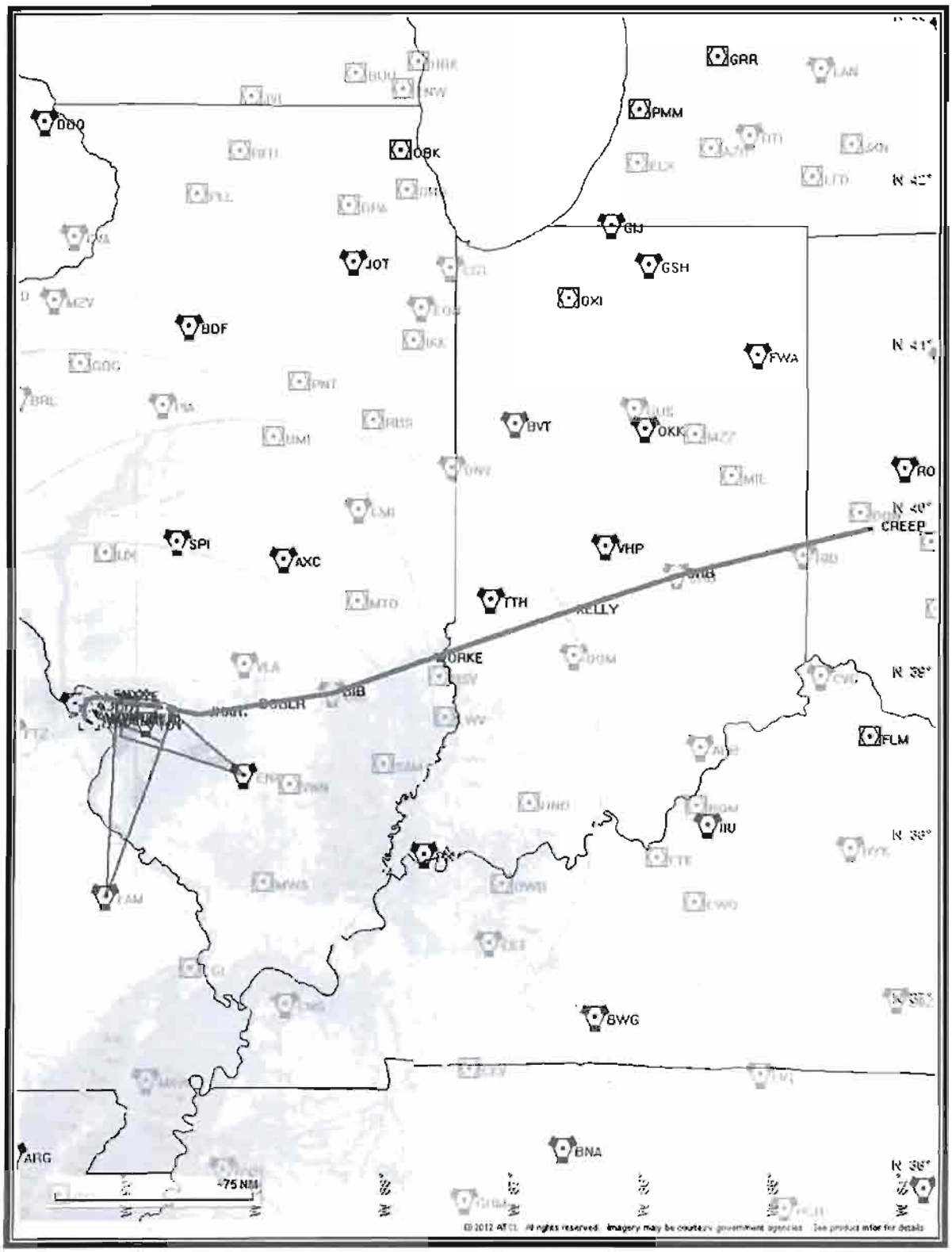

GRR
PMM
DBQ
OBK
GIJ
JOT
GSH
OXI
BDF
FWA
BVT
OKK
RO
CREEP
SPI
AXC
VHP
TTH
KELLY
ORKE
JHART
FLM
IIU
BWG
BNA
ARG
75 NM

Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW30L(..	WP	N 38° 44' 17 08" W 90° 20' 49 42"	585 8	VNAV	0.0	Fly Over	TF
RW12R(	WP	N 38° 45' '4.05" W 90° 22' 44.97"	576 6	VNAV	130 0	Fly Over	VA
GH30L	WP	N 38° 45' 51.06" W 90° 24' 0 06"	1120 0	VNAV	145.0	Fly Over	DF
WOLTR	WP	N 38° 49' 41 32" W 90° 25' 3 02"	2500.0	VNAV	180.0	Fly By	TF
ANNII	WP	N 38° 52' 52.69" W 90° 23' 22.37"	3189 1	VNAV	180.0	Fly By	TF
LENXX	WP	N 38° 54' 4 00" W 90° 18' 46 99"	3944.1	VNAV	180 0	Fly By	TF
KAEYE	WP	N 38° 53' 23.93" W 90° 13' 43 89"	4744.1	VNAV	180.0	Fly By	TF
JHART	WP	N 38° 47' 32.80" W 89° 30' 39.12"	11576.6	VNAV	210.0	Fly By	TF
DOBLR	WP	N 38° 50' 31.91" W 89° 7' 10.92"	15293 5	VNAV	210.0	Fly By	TF
BIB	WP	N 38° 55' 13.24" W 88° 28' 54.50"	18000 0	VNAV	240 0	Fly By	TF
WORKE	WP	N 39° 7' 2 95" W 87° 46' 25.21"	18000 0	VNAV	240 0	Fly By	TF
KELLY	WP	N 39° 24' 49.15" W 86° 40' 17.29"	18000.0	VNAV	240 0	Fly By	TF
SHB	WP	N 39° 37' 57.15" W 85° 49' 27.54"	18000.0	VNAV	240 0	Fly By	TF
CREEP_	WP	N 39° 55' 15.28" W 84° 18' 31 41"	18000.0	VNAV	240 0	Fly Over	TF

Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL

Climb Gradient: 200 Ft/NM after next to last waypoint up to 18000.0 Ft

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KSTL
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL
Ground Speeds:
Departure: **120.0 Kts** out to **10.0 NM**
Table.
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Required IAS at Fly-By WP LENXX could not be reached with given A/C acceleration performance.

Flight Track comes into contact with terrain. Minimum AGL along route was -31.97 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

DME/DME

Return To Summary

Settings:

RNP: 2 0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.165 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4 0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
Minimum MSL DMEs Avail: 1662 Ft.

Total Number of DMEs Used: 28

Maximum DME Error: 0.609 NM

No Critical DMEs were found.

Available DMEs: STL, FTZ, TOY, CSX, ENL, VLA, VNN, BIB, PXV, SPI, TTH, AXC, FAM, SAM, MTO, VHP, BVT, OKK, OOM, IIU, SHB, FWA, ROD, FLM, RID, MIE, DQN, APE

Foreign DMEs within range: YQG, YQO, YXU

DME/DME (Continued.)

Return To Summary

DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H + ESV	User	NO	0.585	Enabled	8.4 %	7.7 %
2	FTZ	N 38° 41' 39.58" W 90° 58' 16.17"	L	Database	NO	0.609	Enabled	3.6 %	2.3 %
3	CSX	N 38° 45' 9.88" W 90° 21' 39.46"	H	Database	NO	0.792	Enabled	10.8 %	9.5 %
4	TOY	N 38° 44' 20.97" W 89° 55' 7.06"	L	Database	NO	0.847	Enabled	9.1 %	9.3 %
5	ENL	N 38° 25' 12.00" W 89° 9' 32.39"	H + ESV	User	NO	0.863	Enabled	13.5 %	13.9 %
6	VLA	N 39° 5' 37.82" W 89° 9' 44.08"	L	Database	NO	0.609	Enabled	4.8 %	5.0 %
7	BIB	N 38° 55' 13.24" W 88° 28' 54.50"	L	Database	NO	0.609	Enabled	4.4 %	4.6 %
8	SPI	N 39° 50' 23.04" W 89° 40' 39.83"	H	Database	NO	0.609	Enabled	3.9 %	4.1 %
9	TTH	N 39° 29' 20.19" W 87° 14' 56.47"	H	Database	NO	0.609	Enabled	25.7 %	26.6 %
10	VNN	N 38° 21' 43.03" W 88° 48' 26.41"	L	Database	NO	0.609	Enabled	0.0 %	0.0 %
11	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H + ESV	User	NO	0.609	Enabled	0.0 %	0.0 %
12	PXV	N 37° 55' 41.95" W 87° 45' 44.56"	H	Database	NO	0.609	Enabled	6.8 %	7.1 %
13	AXC	N 39° 44' 15.08" W 88° 51' 23.15"	H	Database	NO	1.040	Enabled	16.7 %	17.2 %
14	SAM	N 38° 29' 6.68" W 88° 5' 8.93"	L	Database	NO	0.609	Enabled	3.1 %	3.2 %
15	MTO	N 39° 28' 40.42" W 88° 17' 10.44"	L	Database	NO	0.853	Enabled	7.9 %	8.2 %
16	VHP	N 39° 48' 53.02" W 86° 22' 2.88"	H	Database	NO	0.609	Enabled	12.4 %	12.8 %
17	OKK	N 40° 31' 40.00" W 86° 3' 28.81"	H	Database	NO	0.609	Enabled	8.5 %	8.8 %
18	OOM	N 39° 8' 37.76" W 86° 36' 46.87"	L	Database	NO	0.609	Enabled	1.2 %	1.2 %
19	BVT	N 40° 33' 22.03" W 87° 4' 9.55"	H	Database	NO	0.609	Enabled	3.4 %	3.5 %
20	SHB	N 39° 37' 57.15" W 85° 49' 27.54"	L	Database	NO	0.609	Enabled	8.6 %	8.9 %

DME/DME (Continued.)

Return To Summary

DMEs Used (Continued.)

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
21	IIU	N 38° 6' 12.47" W 85° 34' 38.77"	H	Database	NO	0.609	Enabled	5.9 %	6.1 %
22	FWA	N 40° 58' 44.63" W 85° 11' 17.01"	H	Database	NO	0.609	Enabled	8.7 %	9.0 %
23	MIE	N 40° 14' 14.25" W 85° 23' 38.53"	L	Database	NO	0.609	Enabled	5.4 %	5.5 %
24	ROD	N 40° 17' 16.08" W 84° 2' 35.28"	H	Database	NO	0.609	Enabled	3.6 %	3.7 %
25	RID	N 39° 45' 18.08" W 84° 50' 19.85"	L	Database	NO	0.609	Enabled	3.3 %	3.4 %
26	FLM	N 38° 38' 58.16" W 84° 18' 38.27"	H	Database	NO	0.609	Enabled	6.7 %	7.0 %
27	DQN	N 40° 0' 59.19" W 84° 23' 48.83"	L	Database	NO	0.609	Enabled	2.3 %	2.4 %
28	APE	N 40° 9' 3.82" W 82° 35' 17.88"	H	Database	NO	0.609	Enabled	2.8 %	2.9 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0						
1.8						
2.9	STL	FTZ	CSX	TOY		
6.7	TOY	FTZ	CSX			
10.0	TOY	FTZ	CSX	STL		
13.5	TOY	FTZ	CSX	STL		
18.0	TOY	FTZ	CSX	STL		
28.1	TOY	ENL	CSX	STL	VLA	
51.[illegible]	TOY	ENL	CSX	STL	VLA	VNN
70.8	SPI	TTH	CSX	STL	AXC	ENL
90.6	SPI	SAM	ENL	BIB	AXC	STL
100.7	PXV	SAM	TTH	BIB	AXC	MTO
111.7	ENL	MTO	TTH	BIB	AXC	SPI
121.8	ENL	MTO	TTH	BIB	VHP	PXV
136.2	ENL	MTO	TTH	PXV	AXC	VHP
146.3	OOM	OKK	TTH	PXV	AXC	VHP
178.8	OOM	OKK	TTH	PXV	VHP	BVT

DME/DME (Continued.)

Return To Summary

Flight Check DME Selection (Continued.)

Distance [NM]	Selected DMEs					Alternate
190.6	OOM	OKK	TTH	BVT	SHB	IIU
200.7	IIU	VHP	TTH	BVT	SHB	OKK
220.9	IIU	VHP	TTH	OKK	SHB	FWA
231.8	IIU	VHP	TTH	FWA	FLM	ROD
242.3	OKK	VHP	MIE	FWA	ROD	FLM
252.8	SHB	VHP	MIE	FWA	RID	FLM
263.0	DQN	VHP	MIE	FLM	ROD	FWA
280.8	DQN	RID	OKK	FLM	APE	VHP
292.5	FWA	RID	VHP	FLM	APE	OKK

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 38° 44' 17.08" W 90° 20' 49.42"	N 38° 46' 5.16" W 90° 24' 16.01"	3.3
	VOR: CSX	Available from N 38° 44' 17.08" W 90° 20' 49.42" to N 38° 46' 5.16" W 90° 24' 16.01"	
	VOR: FTZ	Available from N 38° 44' 17.08" W 90° 20' 49.42" to N 38° 46' 5.16" W 90° 24' 16.01"	
	VOR: STL	Available from N 38° 44' 17.08" W 90° 20' 49.42" to N 38° 46' 5.16" W 90° 24' 16.01"	
	VOR: TOY	Available from N 38° 44' 17.08" W 90° 20' 49.42" to N 38° 46' 5.16" W 90° 24' 16.01"	
2	N 38° 52' 44.37" W 90° 8' 44.76"	N 38° 52' 20.17" W 90° 5' 43.85"	2.4
	VOR: CSX	Available from N 38° 52' 44.37" W 90° 8' 44.76" to N 38° 52' 20.17" W 90° 5' 43.85"	
	VOR: STL	Available from N 38° 52' 44.37" W 90° 8' 44.76" to N 38° 52' 20.17" W 90° 5' 43.85"	
	VOR: TOY	Available from N 38° 52' 44.37" W 90° 8' 44.76" to N 38° 52' 20.17" W 90° 5' 43.85"	
3	N 38° 51' 38.36" W 90° 0' 32.59"	N 38° 51' 20.22" W 89° 58' 18.02"	1.8
	VOR: CSX	Available from N 38° 51' 38.36" W 90° 0' 32.59" to N 38° 51' 20.22" W 89° 58' 18.02"	
	VOR: STL	Available from N 38° 51' 38.36" W 90° 0' 32.59" to N 38° 51' 20.22" W 89° 58' 18.02"	
	VOR: TOY	Available from N 38° 51' 38.36" W 90° 0' 32.59" to N 38° 51' 20.22" W 89° 58' 18.02"	

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments (Continued.)

#	Start Location	End Location	Length [NM]
4	N 38° 50' 45.51" W 89° 54' 1.55"	N 38° 50' 25.53" W 89° 51' 34.42"	1.9

VOR: CSX — Available from N 38° 50' 45.51" W 89° 54' 1.55" to N 38° 50' 25.53" W 89° 51' 34.42"

VOR: STL — Available from N 38° 50' 45.51" W 89° 54' 1.55" to N 38° 50' 25.53" W 89° 51' 34.42"

VOR: TOY — Available from N 38° 50' 45.51" W 89° 54' 1.55" to N 38° 50' 25.53" W 89° 51' 34.42"

VOR: VLA — Available from N 38° 50' 45.51" W 89° 54' 1.55" to N 38° 50' 25.53" W 89° 51' 34.42"

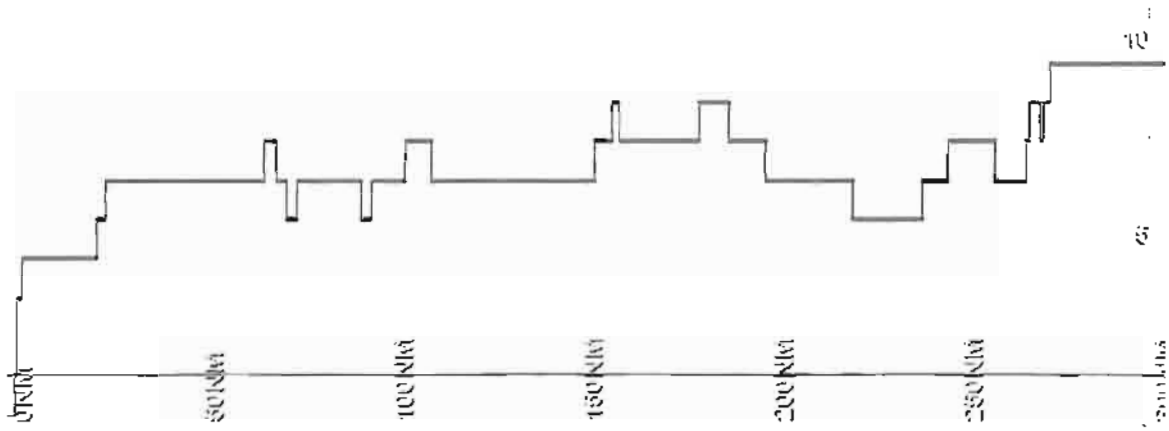
User DMEs

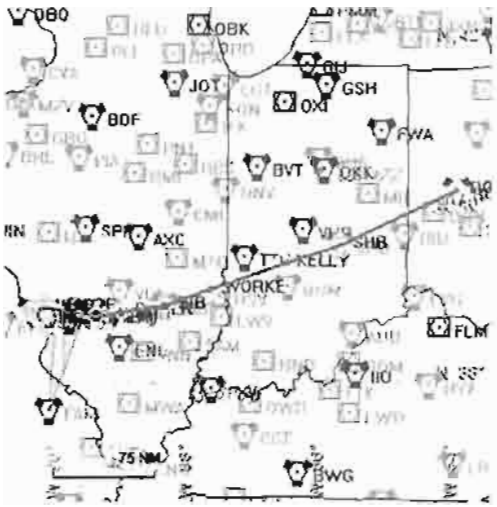
#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H	449.5	117.40	STL	Used
		ESV: Bearing [True]: 91.0° to 114.0° Bearing [Mag]: 90.0° to 113.0°			Arc Distance: Out to 35.0 NM Altitude: 4000.0 to 10000.0 Ft.		
2	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H	1220.0	115.70	FAM	Used
		ESV: Bearing [True]: 3.0° to 20.0° Bearing [Mag]: 2.0° to 19.0°			Arc Distance: Out to 74.0 NM Altitude: 4000.0 to 10000.0 Ft		
3	ENL	N 38° 25' 12.00" W 89° 9' 32.39"	H	545.8	115.00	ENL	Used
		ESV: Bearing [True]: 288.0° to 311.0° Bearing [Mag]: 284.0° to 307.0°			Arc Distance: Out to 48.0 NM Altitude: 3000.0 to 9000.0 Ft.		

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR





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Project Name:	
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	2/16/2012 10 56:42 AM
Input File:	JHART RW30L ROD 2012
Databases:	AVNIS Date: 08/26/2011
	NFD Date: 07/02/2009
	DTED® (MAX) Date. 2002

Results Summary:

Flyability	✔ Please Check Flyability Results
DME/DME	✔
Radars	✔
Comms	
TERPS	

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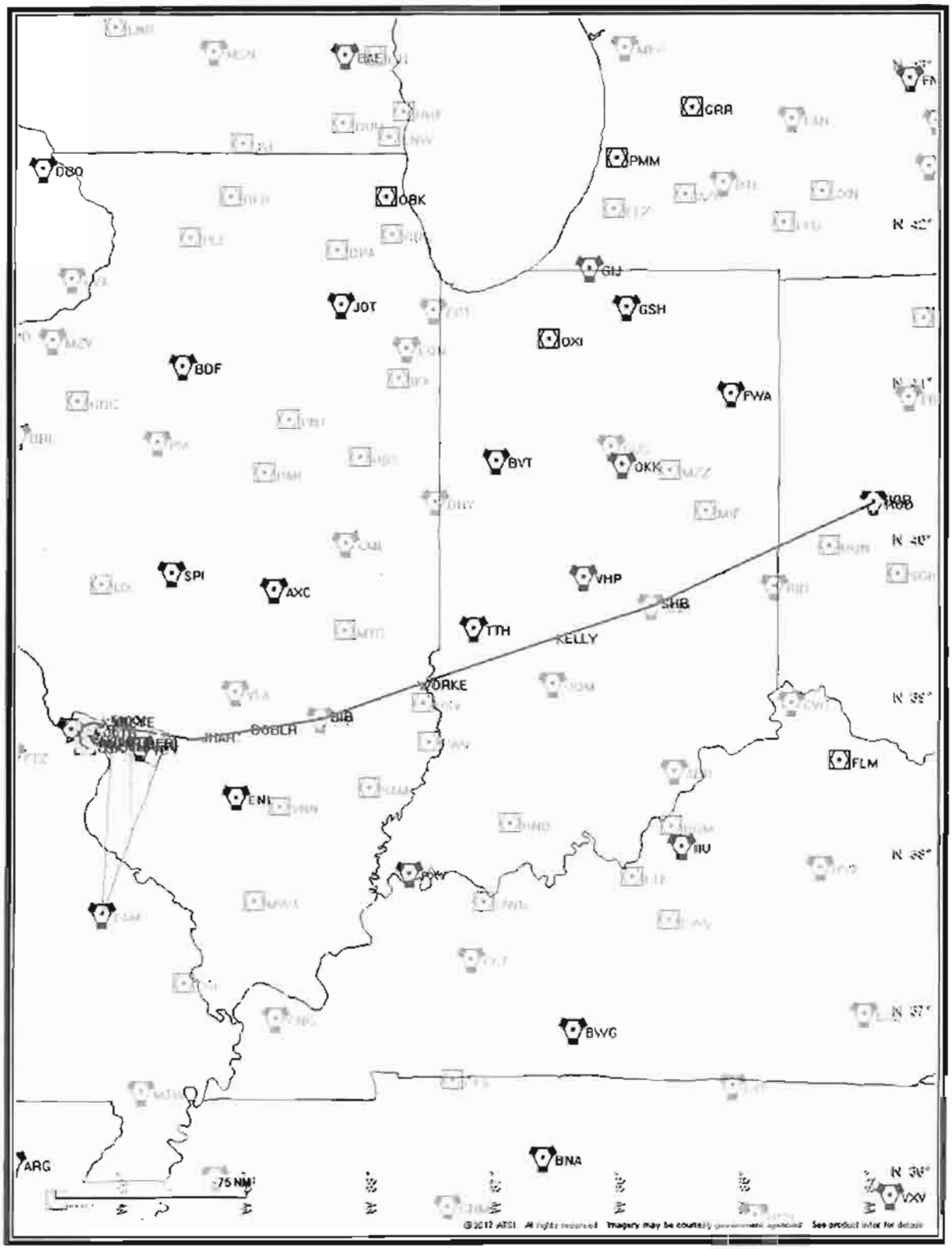
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PMM
DBQ
OBK
GIJ
JOT
GSH
OXI
BDF
PWA
BVT
OKK
SPI
AXC
VHP
SHB
TTH
KELLY
DRKE
JHART
DOBLH
FLM
ENI
IIU
BWG
BNA
ARG
75 NM

Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW30L(...	WP	N 38° 44' 17.08" W 90° 20' 49.42"	585 8	VNAV	0 0	Fly Over	TF
RW12R(.	WP	N 38° 45' 14.05" W 90° 22' 44.97"	576 6	VNAV	130 0	Fly Over	VA
GH30L	WP	N 38° 45' 51 05" W 90° 24' 0.07"	1120 0	VNAV	145.0	Fly Over	DF
WOLTR	WP	N 38° 49' 41 32" W 90° 25' 3.02"	2500.0	VNAV	180 0	Fly By	TF
ANNII	WP	N 38° 52' 52.69" W 90° 23' 22 37"	3189.1	VNAV	180 0	Fly By	TF
LENXX	WP	N 38° 54' 4.00" W 90° 18' 46.99"	3944.1	VNAV	180.0	Fly By	TF
KAEYE	WP	N 38° 53' 23.93" W 90° 13' 43.89"	4744.1	VNAV	180.0	Fly By	TF
JHART	WP	N 38° 47' 32 80" W 89° 30' 39.12"	11576.6	VNAV	210.0	Fly By	TF
DOBLR	WP	N 38° 50' 31.91" W 89° 7' 10.92"	15293 5	VNAV	210 0	Fly By	TF
BIB	WP	N 38° 55' 13 24" W 88° 28' 54.50"	18000.0	VNAV	240.0	Fly By	TF
WORKE	WP	N 39° 7' 2.95" W 87° 46' 25 21"	18000.0	VNAV	240 0	Fly By	TF
KELLY	WP	N 39° 24' 49.15" W 86° 40' 17 29"	18000.0	VNAV	240 0	Fly By	TF
SHB	WP	N 39° 37' 57.15" W 85° 49' 27.54"	18000.0	VNAV	240 0	Fly By	TF
ROD	WP	N 40° 17' 16 08" W 84° 2' 35 28"	18000.0	VNAV	240.0	Fly Over	TF

Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL

Climb Gradient: 200 Ft/NM after next to last waypoint up to 18000.0 Ft

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KSTL
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1120 0 Ft MSL
Ground Speeds:
Departure: **120.0 Kts** out to **10.0 NM**
Table:
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Required IAS at Fly-By WP LENXX could not be reached with given A/C acceleration performance.

Flight Track comes into contact with terrain. Minimum AGL along route was -31.97 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

DME/DME

Return To Summary

Settings:

RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.165 NM
INS Drift Rate: 8 000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3 0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
Minimum MSL DMEs Avail: 1662 Ft.

Total Number of DMEs Used: 28

Maximum DME Error: 0.609 NM.

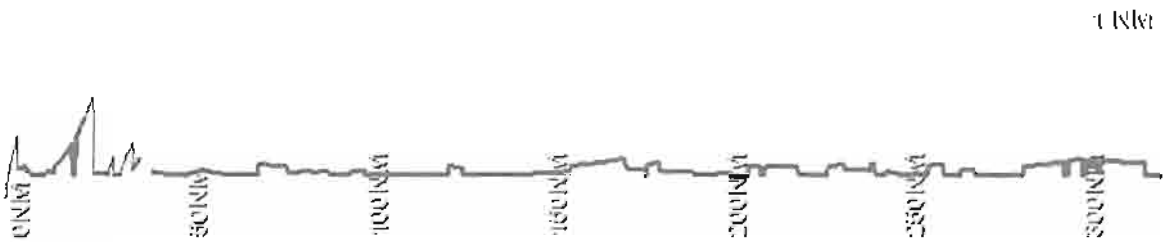
No Critical DMEs were found.

Available DMEs: STL, FTZ, TOY, CSX, VLA, ENL, VNN, BIB, PXV, SPI, TTH, AXC, FAM, SAM, MTO, VHP, BVT, OKK, OOM, IIU, SHB, FWA, ROD, FLM, MIE, RID, DQN, APE

Foreign DMEs within range: YQG, YQO, YXU

DME/DME (Continued.)

Return To Summary



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H + ESV	User	NO	0.585	Enabled	7.9 %	7.3 %
2	FTZ	N 38° 41' 39.58" W 90° 58' 16.17"	L	Database	NO	0.609	Enabled	3.4 %	2.1 %
3	CSX	N 38° 45' 9.88" W 90° 21' 39.46"	H	Database	NO	0.792	Enabled	9.8 %	8.5 %
4	TOY	N 38° 44' 20.97" W 89° 55' 7.06"	L	Database	NO	1.222	Enabled	8.6 %	8.8 %
5	VLA	N 39° 5' 37.26" W 89° 9' 44.87"	L	Database	NO	0.609	Enabled	4.5 %	4.7 %
6	ENL	N 38° 25' 12.00" W 89° 9' 32.39"	H	Database	NO	0.863	Enabled	12.3 %	12.7 %
7	BIB	N 38° 55' 13.26" W 88° 28' 54.47"	L	Database	NO	0.609	Enabled	4.2 %	4.3 %
8	SPI	N 39° 50' 23.04" W 89° 40' 39.83"	H	Database	NO	0.609	Enabled	3.7 %	3.8 %
9	T[illegible]H	N 39° 29' 20.19" W 87° 14' 56.47"	H	Database	NO	0.609	Enabled	25.2 %	26.0 %
10	VNN	N 38° 21' 43.03" W 88° 48' 26.41"	L	Database	NO	0.609	Enabled	0.0 %	0.0 %
11	[illegible]AM	N 37° 40' 24.39" W 90° 14' 2.53"	[illegible] + ESV	User	NO	0.609	Enabled	0.0 %	0.0 %
12	PXV	N 37° 55' 41.95" W 87° 45' 44.56"	H	Database	NO	0.609	Enabled	6.5 %	6.7 %
13	AXC	N 39° 44' 15.08" W 88° 51' 23.15"	H	Database	NO	1.040	Enabled	15.7 %	16.2 %
14	SAM	N 38° 29' 6.68" W 88° 5' 8.93"	L	Database	NO	0.609	Enabled	2.9 %	3.0 %
15	MTO	N 39° 28' 40.42" W 88° 17' 10.44"	L	Database	NO	0.853	Enabled	7.5 %	7.7 %
16	VHP	N 39° 48' 53.02" W 86° 22' 2.88"	H	Database	NO	0.609	Enabled	13.4 %	13.9 %
17	OKK	N 40° 31' 40.00" W 86° 3' 28.81"	H	Database	NO	0.609	Enabled	8.9 %	9.2 %
18	OOM	N 39° 8' 37.76" W 86° 36' 46.87"	L	Database	NO	0.609	Enabled	1.1 %	1.1 %
19	BVT	N 40° 33' 22.03" W 87° 4' 9.55"	H	Database	NO	0.609	Enabled	3.2 %	3.3 %
20	SHB	N 39° 37' 57.15" W 85° 49' 27.54"	L	Database	NO	0.609	Enabled	10.3 %	10.6 %

DME/DME (Continued.)

Return To Summary

DMEs Used (Continued.)

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
21	IIU	N 38° 6' 12.47" W 85° 34' 38.77"	H	Database	NO	0.609	Enabled	5.7 %	5.8 %
22	FWA	N 40° 58' 44.63" W 85° 11' 17.01"	H	Database	NO	0.609	Enabled	8.0 %	8.2 %
23	RID	N 39° 45' 18.08" W 84° 50' 19.85"	L	Database	NO	0.609	Enabled	3.4 %	3.5 %
24	ROD	N 40° 17' 16.08" W 84° 2' 35.28"	H	Database	NO	0.609	Enabled	1.3 %	1.3 %
25	MIE	N 40° 14' 14.25" W 85° 23' 38.53"	L	Database	NO	0.609	Enabled	3.5 %	3.6 %
26	FLM	N 38° 38' 58.16" W 84° 18' 38.27"	H	Database	NO	0.609	Enabled	10.1 %	10.4 %
27	DQN	N 40° 0' 59.19" W 84° 23' 48.83"	L	Database	NO	0.609	Enabled	4.8 %	4.9 %
28	APE	N 40° 9' 3.82" W 82° 35' 17.88"	H	Database	NO	0.609	Enabled	5.4 %	5.6 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0						
1.8						
2.9	STL	FTZ	CSX	TOY		
6.7	TOY	FTZ	CSX			
10.0	TOY	FTZ	CSX	STL		
13.5	TOY	FTZ	CSX	STL		
18.0	TOY	FTZ	CSX	STL		
28.1	TOY	VLA	CSX	STL	ENL	
51.7	TOY	VLA	CSX	STL	ENL	VNN
70.8	SPI	TTH	CSX	STL	AXC	ENL
90.6	SPI	SAM	ENL	BIB	AXC	STL
100.7	PXV	SAM	TTH	BIB	AXC	MTO
111.7	ENL	MTO	TTH	BIB	AXC	SPI
121.8	ENL	MTO	TTH	BIB	VHP	PXV
136.2	ENL	MTO	TTH	PXV	AXC	VHP
146.3	OOM	OKK	TTH	PXV	AXC	VHP
178.8	OOM	OKK	TTH	PXV	VHP	BV

DME/DME (Continued.)

Return To Summary

Flight Check DME Selection (Continued.)

Distance [NM]	Selected DMEs					Alternate
190.8	GOM	OKK	TTH	BVT	SHB	IIU
200.7	IIU	VHP	TTH	BVT	SHB	OKK
220.9	IIU	VHP	TTH	OKK	SHB	FWA
231.7	IIU	VHP	TTH	FWA	RID	FLM
243.0	MIE	VHP	OKK	ROD	SHB	FWA
253.1	MIE	VHP	RID	FWA	TTH	OKK
263.2	MIE	VHP	SHB	FWA	FLM	RID
273.3	RID	VHP	DQN	FWA	FLM	OKK
288.5	RID	VHP	DQN	APE	FLM	FWA
298.6	ROD	VHP	DQN	APE	FLM	FWA
313.0	OKK	FWA	DQN	APE	FLM	ROD

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 38° 44' 17.08" W 90° 20' 49.42"	N 38° 46' 5.15" W 90° 24' 16.02"	3.3
	VOR: CSX	Available from N 38° 44' 17.08" W 90° 20' 49.42" to N 38° 46' 5.15" W 90° 24' 16.02"	
	VOR: FTZ	Available from N 38° 44' 17.08" W 90° 20' 49.42" to N 38° 46' 5.15" W 90° 24' 16.02"	
	VOR: STL	Available from N 38° 44' 17.08" W 90° 20' 49.42" to N 38° 46' 5.15" W 90° 24' 16.02"	
	VOR: TOY	Available from N 38° 44' 17.08" W 90° 20' 49.42" to N 38° 46' 5.15" W 90° 24' 16.02"	
2	N 38° 52' 44.37" W 90° 8' 44.76"	N 38° 52' 20.17" W 90° 5' 43.85"	2.4
	VOR: CSX	Available from N 38° 52' 44.37" W 90° 8' 44.76" to N 38° 52' 20.17" W 90° 5' 43.85"	
	VOR: STL	Available from N 38° 52' 44.37" W 90° 8' 44.76" to N 38° 52' 20.17" W 90° 5' 43.85"	
	VOR: TOY	Available from N 38° 52' 44.37" W 90° 8' 44.76" to N 38° 52' 20.17" W 90° 5' 43.85"	
3	N 38° 51' 36.36" W 90° 0' 32.59"	N 38° 51' 20.22" W 89° 58' 18.02"	1.8
	VOR: CSX	Available from N 38° 51' 36.36" W 90° 0' 32.59" to N 38° 51' 20.22" W 89° 58' 18.02"	
	VOR: STL	Available from N 38° 51' 36.36" W 90° 0' 32.59" to N 38° 51' 20.22" W 89° 58' 18.02"	
	VOR: TOY	Available from N 38° 51' 36.36" W 90° 0' 32.59" to N 38° 51' 20.22" W 89° 58' 18.02"	

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments (Continued.)

#	Start Location	End Location	Length [NM]
4	N 38° 51' 0.32" W 89° 55' 50.86"	N 38° 50' 25 53" W 89° 51' 34.43"	3 4
	VOR CSX	Available from N 38° 51' 0 32" W 89° 55' 50 86" to N 38° 50' 25 53" W 89° 51' 34.43"	
	VOR: STL	Available from N 38° 51' 0.32" W 89° 55' 50.86" to N 38° 50' 25 53" W 89° 51' 34 43"	
	VOR: TOY	Available from N 38° 51' 0 32" W 89° 55' 50 86" to N 38° 50' 25 53" W 89° 51' 34.43"	
	VOR: VLA	Available from N 38° 51' 0.32" W 89° 55' 50 86" to N 38° 50' 25 53" W 89° 51' 34 43"	

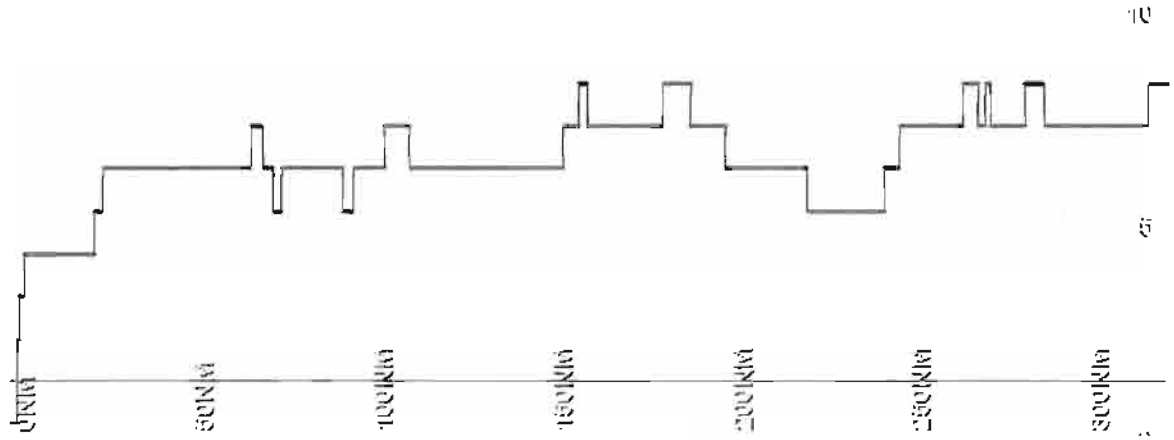
User DMEs

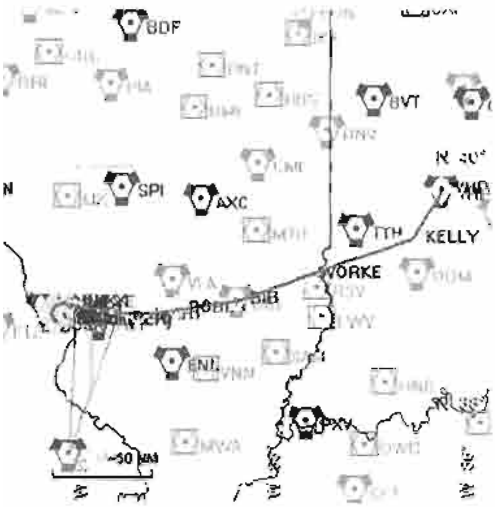
#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H	449.5	117.40	STL	Used
		ESV Bearing [True]. 91 0° to 114 0° Bearing [Mag]: 90 0° to 113.0°			Arc Distance: Out to 35.0 NM Altitude: 4000.0 to 10000 0 Ft.		
2	FAM	N 37° 40' 24 39" W 90° 14' 2 53"	H	1220 0	115.70	FAM	Used
		ESV. Bearing [True] 3 0° to 20.0° Bearing [Mag] 2 0° to 19.0°			Arc Distance. Out to 74 0 NM Altitude 4000 0 to 10000 0 Ft		

Radar Analysis

Return To Summary

Settings: Radar Types: ARSR and ASR





Name:	enanders
Project Name:	
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	2/16/2012 11:26:00 AM
Input File:	JHART RW30L VHP 2012...
Databases:	AVNIS Date: 08/26/2011
	NFD Date: 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔ Please Check Flyability Results
DME/DME	✔
Radars	✔
Comms	
TERPS	

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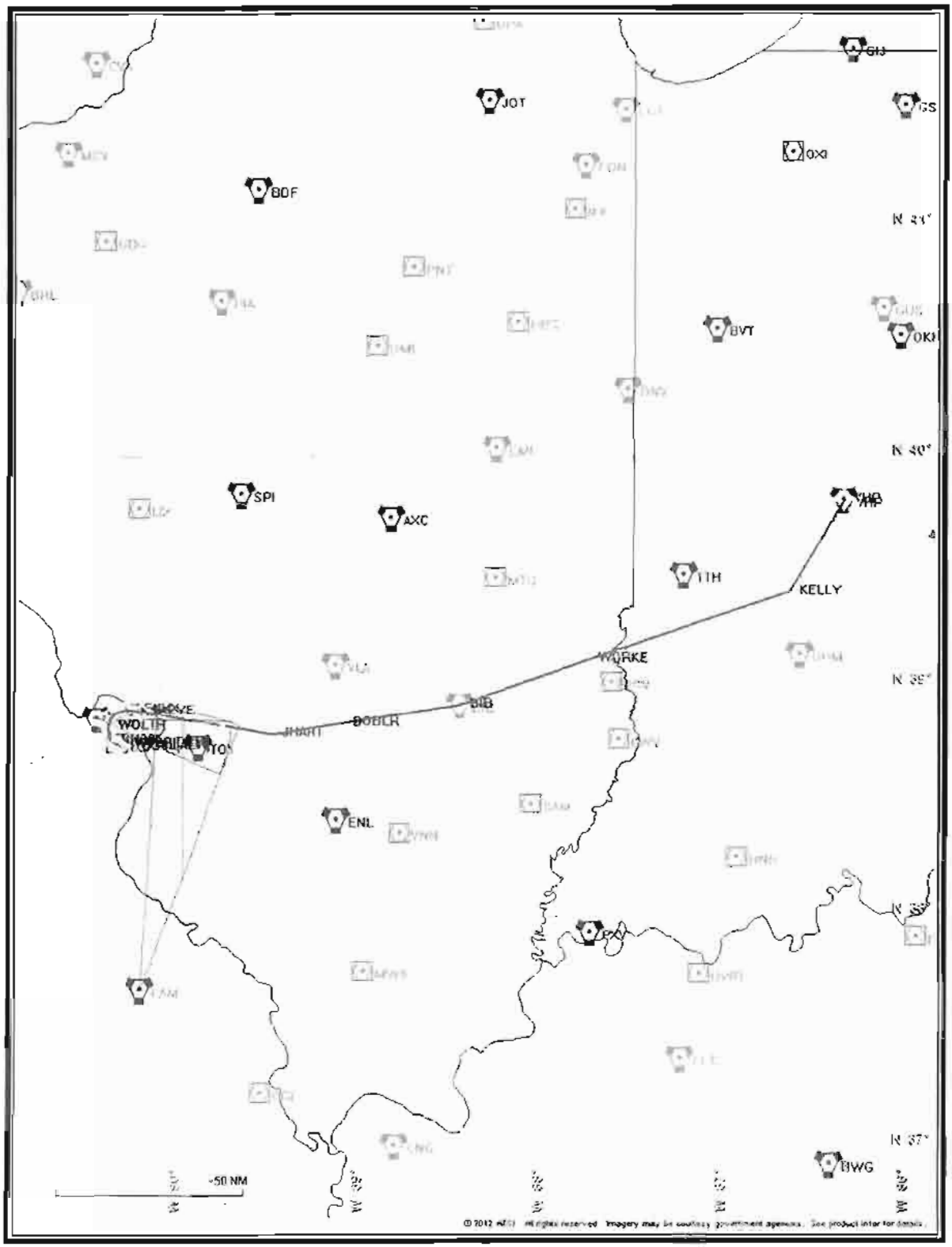

JOT
BDF
BVT
SPI
AXC
KELLY
WORKE
DOBLR
JHART
ENL
BWG
50 NM

Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW30L(...	WP	N 38° 44' 17.08" W 90° 20' 49.42"	585.8	VNAV	0.0	Fly Over	TF
RW12R(.	WP	N 38° 45' 14.05" W 90° 22' 44.97"	576.6	VNAV	130.0	Fly Over	VA
GH30L	WP	N 38° 45' 51 05" W 90° 24' 0.07"	1120.0	VNAV	145.0	Fly Over	DF
WOLTR	WP	N 38° 49' 41.32" W 90° 25' 3.02"	2500 0	VNAV	180.0	Fly By	TF
ANNII	WP	N 38° 52' 52.69" W 90° 23' 22.37"	3189 1	VNAV	180.0	Fly By	TF
LENXX	WP	N 38° 54' 4 00" W 90° 18' 46 99"	3944.1	VNAV	180.0	Fly By	TF
KAEYE	WP	N 38° 53' 23.93" W 90° 13' 43 89"	4744.1	VNAV	180.0	Fly By	TF
JHART	WP	N 38° 47' 32.80" W 89° 30' 39.12"	11576.6	VNAV	210 0	Fly By	TF
DOBLR	WP	N 38° 50' 31 91" W 89° 7' 10 92"	15293 5	VNAV	210.0	Fly By	TF
BIB	WP	N 38° 55' 13 24" W 88° 28' 54.50"	18000 0	VNAV	240.0	Fly By	TF
WORKE	WP	N 39° 7' 2.95" W 87° 46' 25.21"	18000.0	VNAV	240.0	Fly By	TF
KELLY	WP	N 39° 24' 49 15" W 86° 40' 17 29"	18000 0	VNAV	240 0	Fly By	TF
VHP	WP	N 39° 48' 53 02" W 86° 22' 2.88"	18000.0	VNAV	240.0	Fly Over	TF

Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL

Climb Gradient: 200 Ft/NM after next to last waypoint up to 18000.0 Ft

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KSTL
Aircraft Category: Cat D
Climb Gradient: 500 0 Ft/NM up to 1120 0 Ft MSL
Ground Speeds:
Departure: **120.0 Kts** out to **10.0 NM**
Table:
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Required IAS at Fly-By WP LENXX could not be reached with given A/C acceleration performance.

Flight Track comes into contact with terrain. Minimum AGL along route was -31.97 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER

DME/DME

Return To Summary

Settings:

RNP: 2 0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.165 NM
INS Drift Rate: 8 000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3 0 NM
Allowed Gap Length: 4 0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
Minimum MSL DMEs Avail: 1662 Ft.

Total Number of DMEs Used: 20

Maximum DME Error: 0 609 NM.

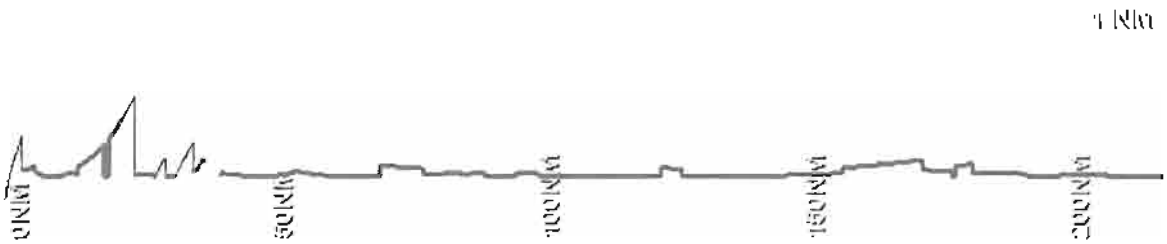
No Critical DMEs were found

Available DMEs: STL, FTZ, TOY, CSX, VLA, ENL, VNN, BIB, PXV, SPI, TTH, AXC, FAM, SAM, MTO, VHP, BVT, OKK, OOM, IIU, SHB, FWA, OXI

Foreign DMEs within range: YQG

DME/DME (Continued.)

Return To Summary



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. (NM)	Status	Time	Distance
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H + ESV	User	NO	0.585	Enabled	11.5 %	10.8 %
2	FTZ	N 38° 41' 39.58" W 90° 58' 16.17"	L	Database	NO	0.609	Enabled	5.0 %	3.1 %
3	CSX	N 38° 45' 9.88" W 90° 21' 39.46"	H	Database	NO	0.792	Enabled	14.2 %	12.6 %
4	TOY	N 38° 44' 20.97" W 89° 55' 7.06"	L	Database	NO	1.222	Enabled	12.5 %	13.0 %
5	VLA	N 39° 5' 37.26" W 89° 9' 44.87"	L	Database	NO	0.609	Enabled	6.6 %	6.9 %
6	ENL	N 38° 25' 12.00" W 89° 9' 32.39"	H	Database	NO	0.863	Enabled	17.9 %	18.7 %
7	BIB	N 38° 55' 13.26" W 88° 28' 54.47"	L	Database	NO	0.609	Enabled	6.1 %	6.4 %
8	SPI	N 39° 50' 23.04" W 89° 40' 39.83"	H	Database	NO	0.609	Enabled	5.4 %	5.6 %
9	TTH	N 39° 29' 20.19" W 87° 14' 56.47"	H	Database	NO	0.609	Enabled	35.0 %	36.6 %
10	VNN	N 38° 21' 43.03" W 88° 48' 26.41"	L	Database	NO	0.609	Enabled	0.0 %	0.0 %
11	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H + ESV	User	NO	0.609	Enabled	0.0 %	0.0 %
12	PXV	N 37° 55' 41.95" W 87° 45' 44.56"	H	Database	NO	0.609	Enabled	9.4 %	9.8 %
13	AXC	N 39° 44' 15.08" W 88° 51' 23.15"	H	Database	NO	1.040	Enabled	22.9 %	24.0 %
14	SAM	N 38° 29' 6.68" W 88° 5' 8.93"	L	Database	NO	0.609	Enabled	4.3 %	4.5 %
15	MTO	N 39° 28' 40.42" W 88° 17' 10.44"	L	Database	NO	0.853	Enabled	10.9 %	11.4 %
16	VHP	N 39° 48' 53.02" W 86° 22' 2.88"	H	Database	NO	0.609	Enabled	1.9 %	2.0 %
17	OKK	N 40° 31' 40.00" W 86° 3' 28.81"	H	Database	NO	0.609	Enabled	9.3 %	9.8 %
18	OOM	N 39° 8' 37.76" W 86° 36' 46.87"	L	Database	NO	0.609	Enabled	4.6 %	4.9 %
19	BVT	N 40° 33' 22.03" W 87° 4' 9.55"	H	Database	NO	0.609	Enabled	5.6 %	5.9 %
20	SHB	N 39° 37' 57.15" W 85° 49' 27.54"	L	Database	NO	0.609	Enabled	3.8 %	3.9 %

Flight Check DME Selection

Distance (NM)	Selected DMEs	Alternate

DME/DME (Continued.)

Return To Summary

Flight Check DME Selection (Continued.)

Distance [NM]	Selected DMEs					Alternate
0.0						
0.0						
1.8						
2.9	STL	FTZ	CSX	TOY		
6.7	TOY	FTZ	CSX			
10.0	TOY	FTZ	CSX	STL		
13.5	TOY	FTZ	CSX	STL		
18.0	TOY	FTZ	CSX	STL		
28.1	TOY	VLA	CSX	STL	ENL	
51.7	TOY	VLA	CSX	STL	ENL	VNN
70.8	SPI	TTH	CSX	STL	AXC	ENL
90.6	SPI	SAM	ENL	BIB	AXC	STL
100.7	PXV	SAM	TTH	BIB	AXC	MTO
111.7	ENL	MTO	TTH	BIB	AXC	SPI
12[illegible].8	ENL	MTO	TTH	BIB	VHP	PXV
136.2	ENL	MTO	TTH	PXV	AXC	VHP
146.3	OOM	OKK	TTH	PXV	AXC	VHP
178.8	OOM	OKK	TTH	PXV	VHP	BVT
189.9	OOM	OKK	TTH	BVT	SHB	VHP
200.0	VHP	OKK	TTH	BVT	SHB	FWA

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 38° 44' 17.08" W 90° 20' 49.42"	N 38° 46' 5.15" W 90° 24' 16.02"	3.3
	VOR: CSX	Available from N 38° 44' 17.08" W 90° 20' 49.42" to N 38° 46' 5.15" W 90° 24' 16.02"	
	VOR: FTZ	Available from N 38° 44' 17.08" W 90° 20' 49.42" to N 38° 46' 5.15" W 90° 24' 16.02"	
	VOR: STL	Available from N 38° 44' 17.08" W 90° 20' 49.42" to N 38° 46' 5.15" W 90° 24' 16.02"	
	VOR: TOY	Available from N 38° 44' 17.08" W 90° 20' 49.42" to N 38° 46' 5.15" W 90° 24' 16.02"	

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments (Continued.)

#	Start Location	End Location	Length [NM]
2	N 38° 52' 44.37" W 90° 8' 44.76"	N 38° 52' 20.17" W 90° 5' 43.85"	2.4
	VOR: CSX	Available from N 38° 52' 44.37" W 90° 8' 44.76" to N 38° 52' 20.17" W 90° 5' 43.85"	
	VOR: STL	Available from N 38° 52' 44.37" W 90° 8' 44.76" to N 38° 52' 20.17" W 90° 5' 43.85"	
	VOR: TOY	Available from N 38° 52' 44.37" W 90° 8' 44.76" to N 38° 52' 20.17" W 90° 5' 43.85"	
3	N 38° 51' 38.36" W 90° 0' 32.59"	N 38° 51' 20.22" W 89° 58' 18.02"	1.8
	VOR: CSX	Available from N 38° 51' 38.36" W 90° 0' 32.59" to N 38° 51' 20.22" W 89° 58' 18.02"	
	VOR: STL	Available from N 38° 51' 38.36" W 90° 0' 32.59" to N 38° 51' 20.22" W 89° 58' 18.02"	
	VOR: TOY	Available from N 38° 51' 38.36" W 90° 0' 32.59" to N 38° 51' 20.22" W 89° 58' 18.02"	
4	N 38° 51' 0.32" W 89° 55' 50.86"	N 38° 50' 25.53" W 89° 51' 34.43"	3.4
	VOR: CSX	Available from N 38° 51' 0.32" W 89° 55' 50.86" to N 38° 50' 25.53" W 89° 51' 34.43"	
	VOR: STL	Available from N 38° 51' 0.32" W 89° 55' 50.86" to N 38° 50' 25.53" W 89° 51' 34.43"	
	VOR: TOY	Available from N 38° 51' 0.32" W 89° 55' 50.86" to N 38° 50' 25.53" W 89° 51' 34.43"	
	VOR: VLA	Available from N 38° 51' 0.32" W 89° 55' 50.86" to N 38° 50' 25.53" W 89° 51' 34.43"	

User DMEs

#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H	449.5	117.40	STL	Used

ESV: Bearing [True]: 91.0° to 114.0° Arc Distance: Out to 35.0 NM
Bearing [Mag]: 90.0° to 113.0° Altitude: 4000.0 to 10000.0 Ft.

DME/DME (Continued.)

Return To Summary

User DMEs (Continued.)

#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
2	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H	1220.0	115.70	FAM	Used

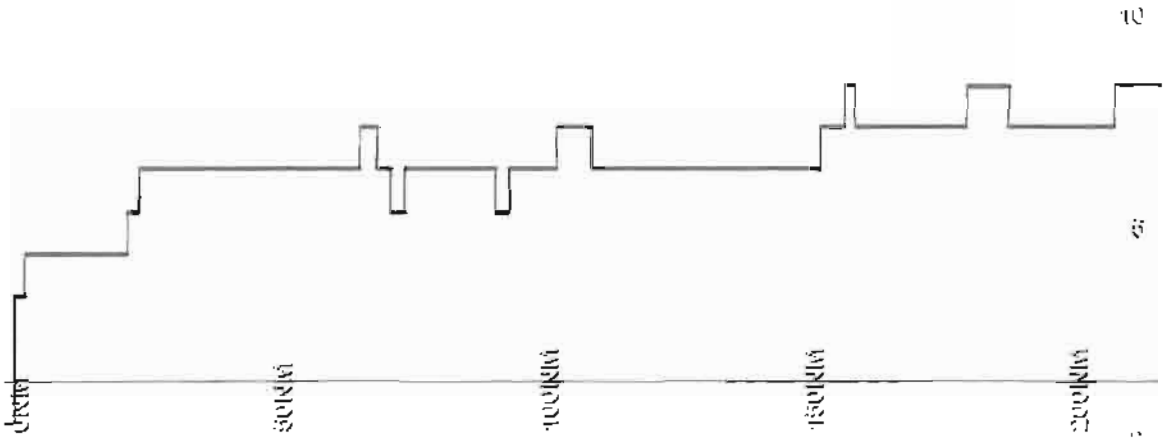
ESV: Bearing [True]: 3.0° to 20.0°
Bearing [Mag]: 2.0° to 19.0°

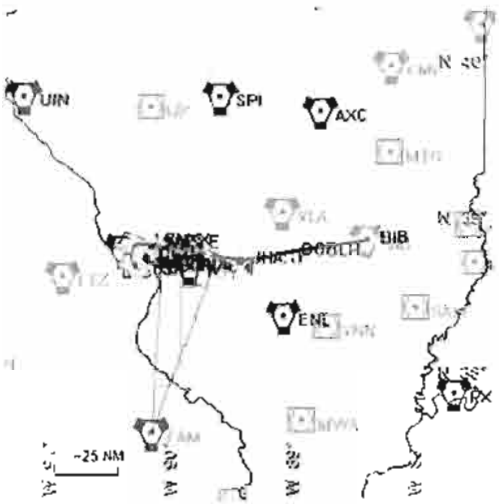
Arc Distance: Out to 74.0 NM
Altitude: 4000.0 to 10000.0 Ft

Radar Analysis

Return To Summary

Settings: **Radar Types:** ARSR and ASR





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Project Name:	
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	2/16/2012 11:37:08 AM
Input File:	JHART RW30R BIB 2012 .
Databases:	AVNIS Date. 08/26/2011
	NFD Date. 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✓ Please Check Flyability Results
DME/DME	✓
Radars	✓
Comms	
TERPS	

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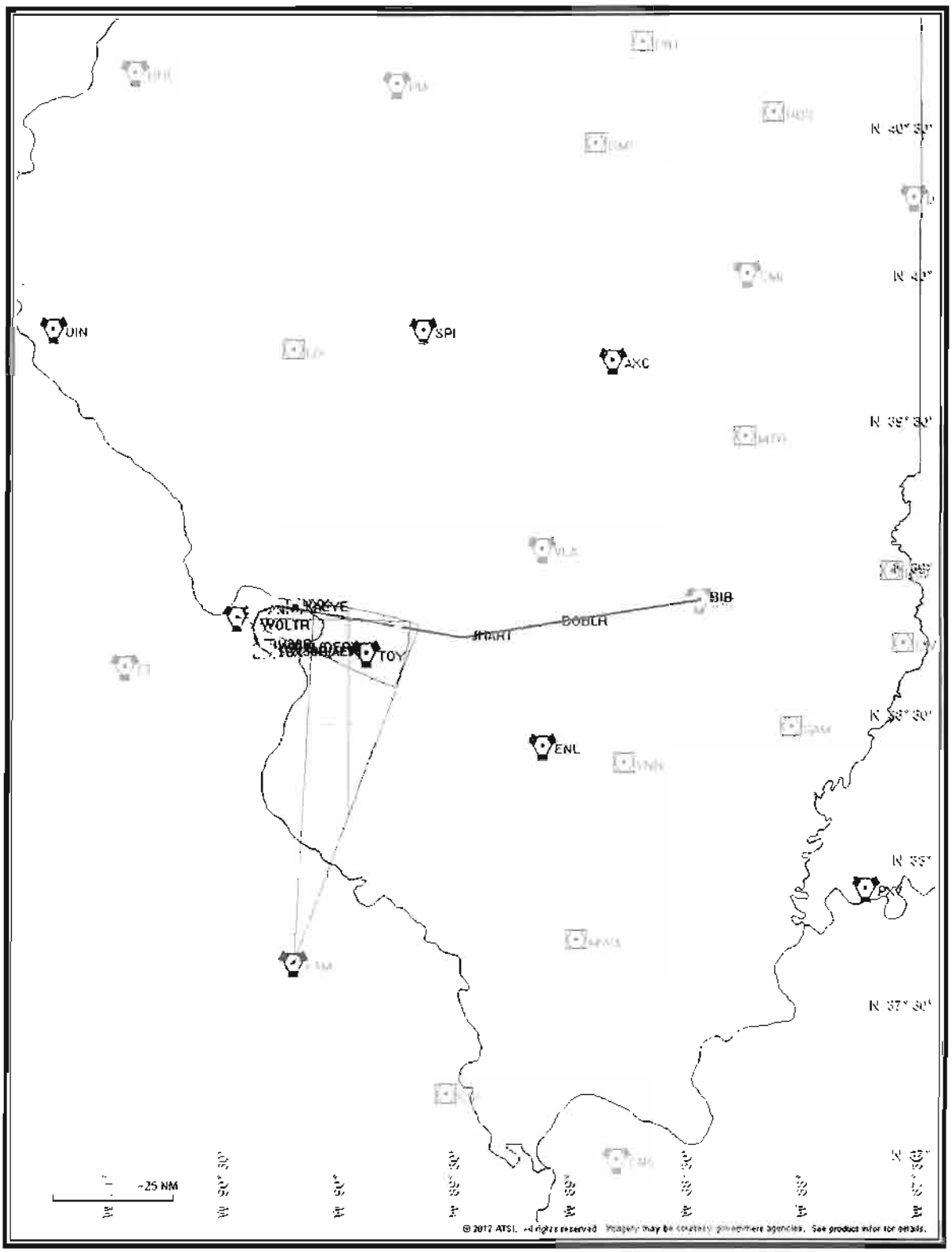
UIN
SPI
AXC
BIB
WOLTR
JHART
DOBLR
TOY
ENL
~25 NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW30R(...	WP	N 38° 44' 18.99" W 90° 20' 22.51"	604.5	VNAV	0.0	Fly Over	TF
RW12L(...	WP	N 38° 45' 6.41" W 90° 21' 58.66"	563.3	VNAV	130.0	Fly Over	VA
GH30R	WP	N 38° 45' 44.26" W 90° 23' 15.48"	1120.0	VNAV	145.0	Fly Over	DF
WOLTR	WP	N 38° 49' 41.32" W 90° 25' 3.02"	2500.0	VNAV	180.0	Fly By	TF
ANNII	WP	N 38° 52' 52.69" W 90° 23' 22.37"	3189.1	VNAV	180.0	Fly By	TF
LENXX	WP	N 38° 54' 4.00" W 90° 18' 46.99"	3944.1	VNAV	180.0	Fly By	TF
KAEYE	WP	N 38° 53' 23.93" W 90° 13' 43.89"	4744.1	VNAV	180.0	Fly By	TF
JHART	WP	N 38° 47' 32.80" W 89° 30' 39.12"	11576.6	VNAV	210.0	Fly By	TF
DOBLR	WP	N 38° 50' 31.91" W 89° 7' 10.92"	15293.5	VNAV	210.0	Fly By	TF
BIB	WP	N 38° 55' 13.24" W 88° 28' 54.50"	18000.0	VNAV	240.0	Fly Over	TF

Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL

Climb Gradient: 200 Ft/NM after next to last waypoint up to 18000.0 Ft

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KSTL
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1120 0 Ft MSL
Ground Speeds:
Departure. **120.0 Kts** out to **10.0 NM**
Table:
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Required IAS at Fly-By WP LENXX could not be reached with given A/C acceleration performance

Flight Track comes into contact with terrain. Minimum AGL along route was -19.95 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

DME/DME

Return To Summary

Settings:

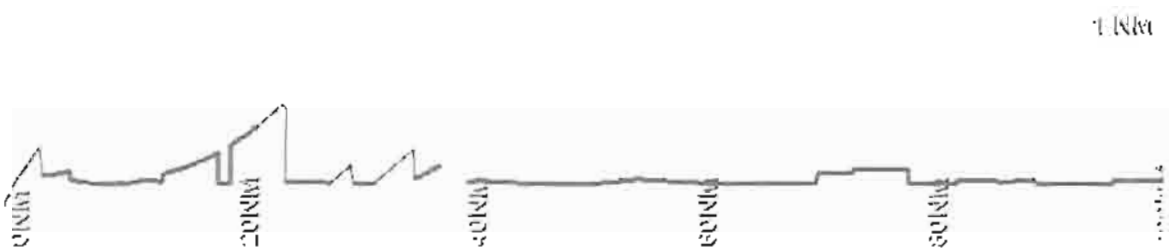
RNP: 2 0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.165 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4 0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
Minimum MSL DMEs Avail: 1773 Ft.

Total Number of DMEs Used: 15

Maximum DME Error: 0.610 NM

No Critical DMEs were found

Available DMEs: STL, FTZ, TOY, CSX, VLA, ENL, VNN, BIB, PXV, SPI, TTH, AXC, FAM, SAM, MTO



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H + ESV	User	NO	0 598	Enabled	21 3 %	20.5 %
2	FTZ	N 38° 41' 39 58" W 90° 58' 16.17"	L	Database	NO	0 610	Enabled	10.6 %	7 0 %
3	CSX	N 38° 45' 9.88" W 90° 21' 39 46"	H	Database	NO	0 792	Enabled	28 7 %	26.9 %
4	TOY	N 38° 44' 20 97" W 89° 55' 7.06"	L	Database	NO	1.223	Enabled	25 6 %	27.9 %
5	VLA	N 39° 5' 37 26" W 89° 9' 44.87"	L	Database	NO	0.610	Enabled	13 7 %	15.1 %
6	ENL	N 38° 25' 12.00" W 89° 9' 32.39"	H	Database	NO	0 863	Enabled	32.6 %	35 9 %
7	BIB	N 38° 55' 13 26" W 88° 28' 54 47"	L	Database	NO	0.610	Enabled	6 8 %	7 4 %
8	SPI	N 39° 50' 23.04" W 89° 40' 39 83"	H	Database	NO	0 610	Enabled	4 0 %	4.3 %
9	TTH	N 39° 29' 20.19" W 87° 14' 56.47"	H	Database	NO	0.610	Enabled	2.8 %	3 0 %
10	VNN	N 38° 21' 43.03" W 88° 48' 26.41"	L	Database	NO	0.610	Enabled	7.9 %	8 6 %
11	FAM	N 37° 40' 24.39" W 90° 14' 2 53"	H + ESV	User	NO	0 610	Enabled	4 5 %	4 9 %
12	PXV	N 37° 55' 41.95" W 87° 45' 44.56"	H	Database	NO	0 610	Enabled	4.5 %	4 9 %
13	AXC	N 39° 44' 15.08" W 88° 51' 23.15"	H	Database	NO	0.610	Enabled	9.0 %	9.9 %
14	SAM	N 38° 29' 6.68" W 88° 5' 8.93"	L	Database	NO	0.610	Enabled	2.0 %	2.2 %
15	MTO	N 39° 28' 40 42" W 88° 17' 10.44"	L	Database	NO	0 610	Enabled	0 0 %	0.0 %

Flight Check DME Selection

Distance [NM]	Selected DMEs				Alternate
0.0					
1.5					
2.6	STL	FTZ	CSX	TOY	
6.6	STL	FTZ	CSX	TOY	
10.0	STL	FTZ	CSX	TOY	
13.5	STL	FTZ	CSX	TOY	
18.0	STL	FTZ	CSX	TOY	

DME/DME (Continued.)

Return To Summary

Flight Check DME Selection (Continued.)

Distance [NM]	Selected DMEs					Alternate
28.0	STL	VLA	CSX	TOY	ENL	
51.7	STL	VLA	CSX	TOY	ENL	VNN
70.8	BIB	VNN	FAM	PXV	TTH	ENL
80.8	BIB	VNN	STL	AXC	CSX	VLA
90.9	BIB	SAM	SPI	AXC	LNL	STL

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 38° 44' 18.99" W 90° 20' 22.51"	N 38° 46' 2.45" W 90° 23' 33.64"	3.1
	VOR: CSX	Available from N 38° 44' 18.99" W 90° 20' 22.51" to N 38° 46' 2.45" W 90° 23' 33.64"	
	VOR: FTZ	Available from N 38° 44' 18.99" W 90° 20' 22.51" to N 38° 46' 2.45" W 90° 23' 33.64"	
	VOR: STL	Available from N 38° 44' 18.99" W 90° 20' 22.51" to N 38° 46' 2.45" W 90° 23' 33.64"	
	VOR: TOY	Available from N 38° 44' 18.99" W 90° 20' 22.51" to N 38° 46' 2.45" W 90° 23' 33.64"	
2	N 38° 52' 44.81" W 90° 8' 48.16"	N 38° 52' 20.05" W 90° 5' 43.04"	2.4
	VOR: CSX	Available from N 38° 52' 44.81" W 90° 8' 48.16" to N 38° 52' 20.05" W 90° 5' 43.04"	
	VOR: STL	Available from N 38° 52' 44.81" W 90° 8' 48.16" to N 38° 52' 20.05" W 90° 5' 43.04"	
	VOR: TOY	Available from N 38° 52' 44.81" W 90° 8' 48.16" to N 38° 52' 20.05" W 90° 5' 43.04"	
3	N 38° 51' 38.81" W 90° 0' 35.98"	N 38° 51' 20.10" W 89° 58' 17.21"	1.8
	VOR: CSX	Available from N 38° 51' 38.81" W 90° 0' 35.98" to N 38° 51' 20.10" W 89° 58' 17.21"	
	VOR: STL	Available from N 38° 51' 38.81" W 90° 0' 35.98" to N 38° 51' 20.10" W 89° 58' 17.21"	
	VOR: TOY	Available from N 38° 51' 38.81" W 90° 0' 35.98" to N 38° 51' 20.10" W 89° 58' 17.21"	

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments (Continued.)

#	Start Location	End Location	Length [NM]
4	N 38° 51' 0 21" W 89° 55' 50 04"	N 38° 50' 25 42" W 89° 51' 33 61"	3.4
	VOR: CSX	Available from N 38° 51' 0 21" W 89° 55' 50 04" to N 38° 50' 25.42" W 89° 51' 33.61"	
	VOR: STL	Available from N 38° 51' 0.21" W 89° 55' 50 04" to N 38° 50' 25 42" W 89° 51' 33.61"	
	VOR: TOY	Available from N 38° 51' 0.21" W 89° 55' 50 04" to N 38° 50' 25 42" W 89° 51' 33 61"	
	VOR: VLA	Available from N 38° 51' 0 21" W 89° 55' 50.04" to N 38° 50' 25.42" W 89° 51' 33.61"	

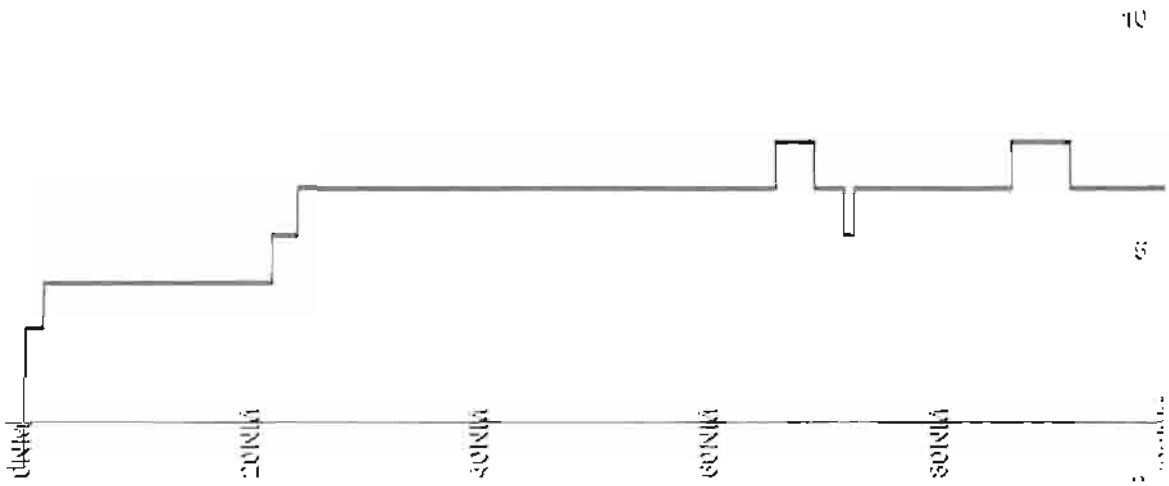
User DMEs

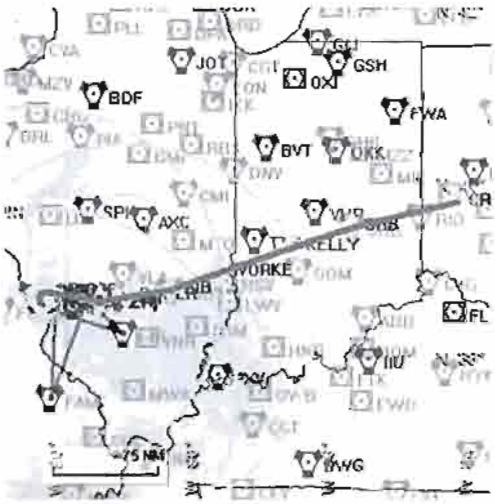
#	Name	Lat/Lon	Range	Elevation (Ft)	Frequency	Replaces:	Status
1	STL	N 38° 51' 38 48" W 90° 28' 56.52"	H	449.5	117 40	STL	Used
		ESV: Bearing [True] 91 0° to 114 0° Bearing [Mag]: 90 0° to 113 0°			Arc Distance. Out to 35.0 NM Altitude 4000.0 to 10000 0 Ft		
2	FAM	N 37° 40' 24.39" W 90° 14' 2 53"	H	1220.0	115 70	FAM	Used
		ESV: Bearing [True]. 3 0° to 20 0° Bearing [Mag]. 2 0° to 19.0°			Arc Distance: Out to 74.0 NM Altitude: 4000 0 to 10000.0 Ft		

Radar Analysis

Return To Summary

Settings: Radar Types: ARSR and ASR





Name:	enanders
Project Name:	
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	4/9/2012 4:37:04 PM
Input File:	JHART RW30R CREEP_ 2.
Databases:	AVNIS Date: 02/07/2012
	NFD Date 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✓ **Please Check Flyability Results**
DME/DME	✓
Radars	✓
Comms	
TERPS	

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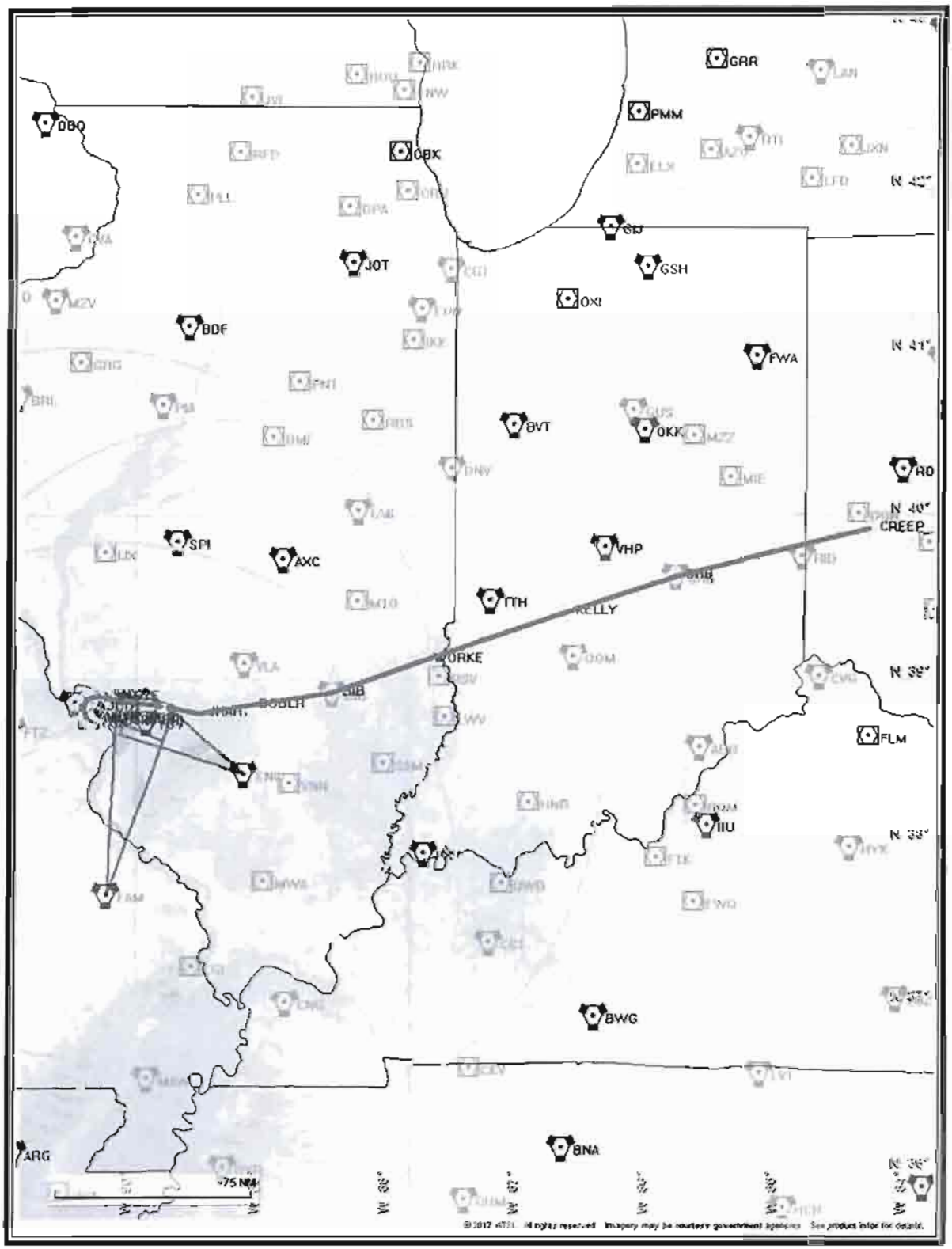

GRR
PMM
DBQ
OBK
GJ
GSH
JOT
OXI
BDF
FWA
BVT
OKK
RD
CREEP
SPI
AXC
VHP
ITH
KELLY
ORKE
BOBLR
FLM
IIU
BWG
BNA
ARG
75 NM

Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW30R(...	WP	N 38° 44' 18.99" W 90° 20' 22.51"	604 5	VNAV	0 0	Fly Over	TF
RW12L(...	WP	N 38° 45' 6.41" W 90° 21' 58.66"	563.3	VNAV	130 0	Fly Over	VA
GH30R	WP	N 38° 45' 44 28" W 90° 23' 15.46"	1120 0	VNAV	145.0	Fly Over	DF
WOLTR	WP	N 38° 49' 41 32" W 90° 25' 3.02"	2500.0	VNAV	180.0	Fly By	TF
ANNII	WP	N 38° 52' 52 69" W 90° 23' 22 37"	3189.1	VNAV	180 0	Fly By	TF
LENXX	WP	N 38° 54' 4 00" W 90° 18' 46.99"	3944 1	VNAV	180.0	Fly By	TF
KAEYE	WP	N 38° 53' 23.93" W 90° 13' 43.89"	4744 1	VNAV	180.0	Fly By	TF
JHART	WP	N 38° 47' 32.80" W 89° 30' 39.12"	11576 6	VNAV	210.0	Fly By	TF
DOBLR	WP	N 38° 50' 31.91" W 89° 7' 10.92"	15293.5	VNAV	210.0	Fly By	TF
BIB	WP	N 38° 55' 13.24" W 88° 28' 54 50"	18000 0	VNAV	240.0	Fly By	TF
WORKE	WP	N 39° 7' 2.95" W 87° 46' 25.21"	18000 0	VNAV	240 0	Fly By	TF
KELLY	WP	N 39° 24' 49.15" W 86° 40' 17.29"	18000 0	VNAV	240.0	Fly By	TF
SHB	WP	N 39° 37' 57 15" W 85° 49' 27 54"	18000.0	VNAV	240.0	Fly By	TF
CREEP_	WP	N 39° 55' 15.28" W 84° 18' 31.41"	18000.0	VNAV	240.0	Fly Over	TF

Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL

Climb Gradient: 200 Ft/NM after next to last waypoint up to 18000 0 Ft

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KSTL
Aircraft Category: Cat D
Climb Gradient: 500 0 Ft/NM up to 1120.0 Ft MSL
Ground Speeds:
Departure **120.0 Kts** out to **10.0 NM**
Table
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Required IAS at Fly-By WP LENXX could not be reached with given A/C acceleration performance.

Flight Track comes into contact with terrain. Minimum AGL along route was -19.95 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER

DME/DME

Return To Summary

Settings:

RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.165 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4 0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
Minimum MSL DMEs Avail: 1773 Ft.

Total Number of DMEs Used: 28

Maximum DME Error: 0.610 NM

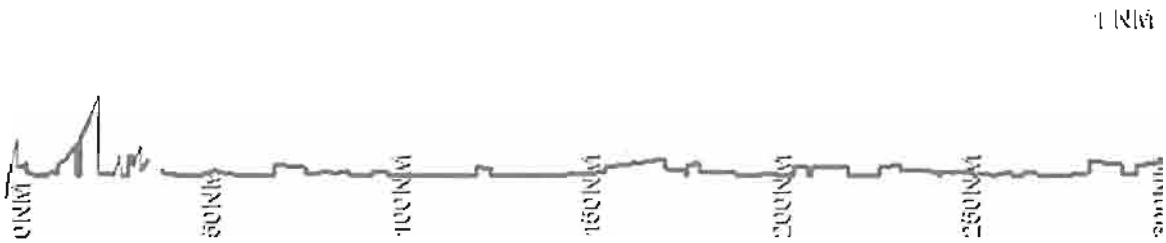
No Critical DMEs were found

Available DMEs: STL, FTZ, TOY, CSX, ENL, VLA, VNN, BIB, PXV, SPI, TTH, AXC, FAM, SAM, MTO, VHP, BVT, OKK, OOM, IIU, SHB, FWA, ROD, FLM, RID, MIE, DQN, APE

Foreign DMEs within range: YQG, YQO, YXU

DME/DME (Continued.)

Return To Summary



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H + ESV	User	NO	0.598	Enabled	8.6 %	7.9 %
2	FTZ	N 38° 41' 39.58" W 90° 58' 16.17"	L	Database	NO	0.610	Enabled	3.7 %	2.3 %
3	CSX	N 38° 45' 9.88" W 90° 21' 39.46"	H	Database	NO	0.792	Enabled	10.6 %	9.4 %
4	TOY	N 38° 44' 20.97" W 89° 55' 7.06"	L	Database	NO	0.848	Enabled	9.1 %	9.3 %
5	ENL	N 38° 25' 12.00" W 89° 9' 32.39"	H + ESV	User	NO	0.863	Enabled	13.5 %	14.0 %
6	VLA	N 39° 5' 37.82" W 89° 9' 44.08"	L	Database	NO	0.610	Enabled	4.8 %	5.0 %
7	BIB	N 38° 55' 13.24" W 88° 28' 54.50"	L	Database	NO	0.610	Enabled	4.4 %	4.6 %
8	SPI	N 39° 50' 23.04" W 89° 40' 39.83"	H	Database	NO	0.610	Enabled	3.9 %	4.1 %
9	TTH	N 39° 29' 20.19" W 87° 14' 56.47"	H	Database	NO	0.610	Enabled	25.7 %	26.6 %
10	VNN	N 38° 21' 43.03" W 88° 48' 26.41"	L	Database	NO	0.610	Enabled	0.0 %	0.0 %
11	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H + ESV	User	NO	0.610	Enabled	0.0 %	0.0 %
12	PXV	N 37° 55' 41.95" W 87° 45' 44.56"	H	Database	NO	0.610	Enabled	6.9 %	7.1 %
13	AXC	N 39° 44' 15.08" W 88° 51' 23.15"	H	Database	NO	1.038	Enabled	16.7 %	17.2 %
14	SAM	N 38° 29' 6.68" W 88° 5' 8.93"	L	Database	NO	0.610	Enabled	3.1 %	3.2 %
15	MTO	N 39° 28' 40.42" W 88° 17' 10.44"	L	Database	NO	0.853	Enabled	7.9 %	8.2 %
16	VHP	N 39° 48' 53.02" W 86° 22' 2.88"	H	Database	NO	0.610	Enabled	12.4 %	12.8 %
17	OKK	N 40° 31' 40.00" W 86° 3' 28.81"	H	Database	NO	0.610	Enabled	8.6 %	8.8 %
18	OOM	N 39° 8' 37.76" W 86° 36' 46.87"	L	Database	NO	0.610	Enabled	1.2 %	1.2 %
19	BVT	N 40° 33' 22.03" W 87° 4' 9.55"	H	Database	NO	0.610	Enabled	3.4 %	3.5 %
20	SHB	N 39° 37' 57.15" W 85° 49' 27.54"	L	Database	NO	0.610	Enabled	8.6 %	8.8 %

DME/DME (Continued.)

Return To Summary

DMEs Used (Continued.)

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
21	IIU	N 38° 6' 12.47" W 85° 34' 38.77"	H	Database	NO	0.610	Enabled	5.8 %	6.0 %
22	FWA	N 40° 58' 44.63" W 85° 11' 17.01"	H	Database	NO	0.610	Enabled	8.7 %	9.0 %
23	MIE	N 40° 14' 14.25" W 85° 23' 38.53"	L	Database	NO	0.610	Enabled	5.4 %	5.6 %
24	ROD	N 40° 17' 16.08" W 84° 2' 35.28"	H	Database	NO	0.610	Enabled	3.6 %	3.7 %
25	RID	N 39° 45' 18.08" W 84° 50' 19.85"	L	Database	NO	0.610	Enabled	3.3 %	3.4 %
26	FLM	N 38° 38' 58.16" W 84° 18' 38.27"	H	Database	NO	0.610	Enabled	6.7 %	6.9 %
27	DQN	N 40° 0' 59.19" W 84° 23' 48.83"	L	Database	NO	0.610	Enabled	2.3 %	2.4 %
28	APE	N 40° 9' 3.82" W 82° 35' 17.88"	H	Database	NO	0.610	Enabled	2.8 %	2.9 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0						
1.5						
2.6	STL	FTZ	CSX	TOY		
6.6	STL	FTZ	CSX	TOY		
10.0	STL	FTZ	CSX	TOY		
13.5	STL	FTZ	CSX	TOY		
18.0	STL	FTZ	CSX	TOY		
28.0	STL	ENL	CSX	TOY	VLA	
51.7	STL	ENL	CSX	TOY	VLA	VNN
70.8	STL	TTH	CSX	AXC	SPI	ENL
90.5	ENL	SAM	BIB	AXC	SPI	STL
100.7	PXV	SAM	BIB	AXC	TTH	MTO
111.7	ENL	MTO	BIB	AXC	TTH	SPI
121.8	ENL	MTO	BIB	VHP	TTH	PXV
136.2	ENL	MTO	AXC	PXV	TTH	VHP
146.3	OKK	OOM	AXC	PXV	TTH	VHP
178.8	OKK	OOM	VHP	PXV	TTH	BVT

DME/DME (Continued.)

Return To Summary

Flight Check DME Selection (Continued.)

Distance [NM]	Selected DMEs					Alternate
190.5	OKK	OOM	SHB	BVT	TTH	IIU
200.6	VHP	IIU	SHB	BVT	TTH	OKK
220.8	VHP	IIU	SHB	OKK	TTH	FWA
231.8	VHP	IIU	FWA	FLM	TTH	ROD
242.3	VHP	MIE	FWA	OKK	ROD	FLM
252.8	VHP	MIE	FWA	SHB	RID	FLM
262.9	VHP	MIE	DQN	FLM	ROD	FWA
280.8	OKK	RID	DQN	FLM	APE	VHP
292.5	FWA	RID	VHP	FLM	APE	OKK

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 38° 44' 18.99" W 90° 20' 22.51"	N 38° 46' 2.47" W 90° 23' 33.63"	3.1
	VOR: CSX	Available from N 38° 44' 18.99" W 90° 20' 22.51" to N 38° 46' 2.47" W 90° 23' 33.63"	
	VOR: FTZ	Available from N 38° 44' 18.99" W 90° 20' 22.51" to N 38° 46' 2.47" W 90° 23' 33.63"	
	VOR: STL	Available from N 38° 44' 18.99" W 90° 20' 22.51" to N 38° 46' 2.47" W 90° 23' 33.63"	
	VOR: TOY	Available from N 38° 44' 18.99" W 90° 20' 22.51" to N 38° 46' 2.47" W 90° 23' 33.63"	
2	N 38° 52' 44.80" W 90° 8' 48.13"	N 38° 52' 20.05" W 90° 5' 43.01"	2.4
	VOR: CSX	Available from N 38° 52' 44.80" W 90° 8' 48.13" to N 38° 52' 20.05" W 90° 5' 43.01"	
	VOR: STL	Available from N 38° 52' 44.80" W 90° 8' 48.13" to N 38° 52' 20.05" W 90° 5' 43.01"	
	VOR: TOY	Available from N 38° 52' 44.80" W 90° 8' 48.13" to N 38° 52' 20.05" W 90° 5' 43.01"	
3	N 38° 51' 38.81" W 90° 0' 35.95"	N 38° 51' 20.10" W 89° 58' 17.18"	1.8
	VOR: CSX	Available from N 38° 51' 38.81" W 90° 0' 35.95" to N 38° 51' 20.10" W 89° 58' 17.18"	
	VOR: STL	Available from N 38° 51' 38.81" W 90° 0' 35.95" to N 38° 51' 20.10" W 89° 58' 17.18"	
	VOR: TOY	Available from N 38° 51' 38.81" W 90° 0' 35.95" to N 38° 51' 20.10" W 89° 58' 17.18"	

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments (Continued.)

#	Start Location	End Location	Length [NM]
4	N 38° 50' 45.39" W 89° 54' 0.71"	N 38° 50' 25.41" W 89° 51' 33.58"	1.9
	VOR. CSX	Available from N 38° 50' 45.39" W 89° 54' 0.71" to N 38° 50' 25.41" W 89° 51' 33.58"	
	VOR. STL	Available from N 38° 50' 45.39" W 89° 54' 0.71" to N 38° 50' 25.41" W 89° 51' 33.58"	
	VOR. TOY	Available from N 38° 50' 45.39" W 89° 54' 0.71" to N 38° 50' 25.41" W 89° 51' 33.58"	
	VOR. VLA	Available from N 38° 50' 45.39" W 89° 54' 0.71" to N 38° 50' 25.41" W 89° 51' 33.58"	

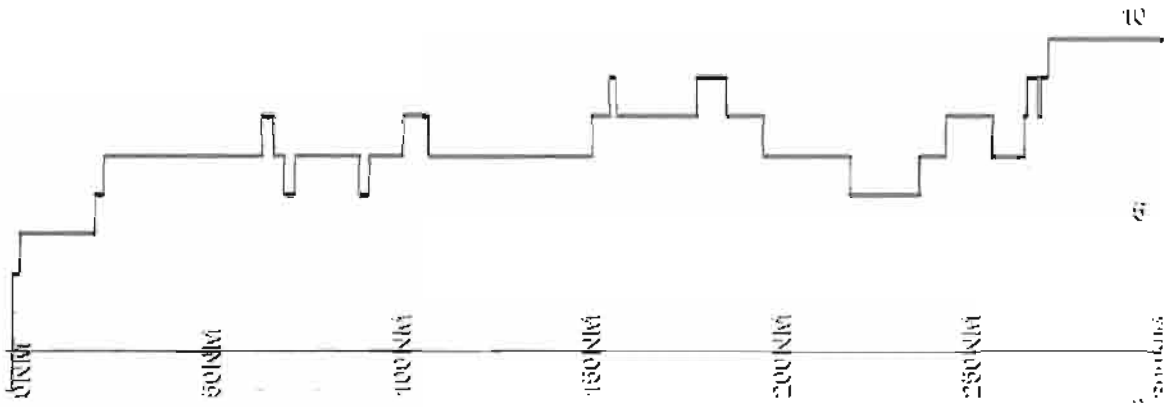
User DMEs

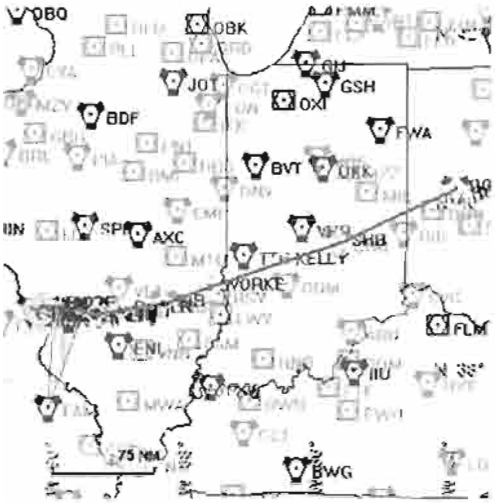
#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H	449.5	117.40	STL	Used
		ESV: Bearing [True]: 91.0° to 114.0° Bearing [Mag]: 90.0° to 113.0°			Arc Distance: Out to 35.0 NM Altitude: 4000.0 to 10000.0 Ft.		
2	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H	1220.0	115.70	FAM	Used
		ESV: Bearing [True]: 3.0° to 20.0° Bearing [Mag]: 2.0° to 19.0°			Arc Distance: Out to 74.0 NM Altitude: 4000.0 to 10000.0 Ft.		
3	ENL	N 38° 25' 12.00" W 89° 9' 32.39"	H	545.8	115.00	ENL	Used
		ESV: Bearing [True]: 288.0° to 311.0° Bearing [Mag]: 284.0° to 307.0°			Arc Distance: Out to 48.0 NM Altitude: 3000.0 to 9000.0 Ft.		

Radar Analysis

Return To Summary

Settings: Radar Types: ARSR and ASR





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Project Name:	
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	2/27/2012 9:40:19 AM
Input File:	JHART RW30R ROD 2012..
Databases:	AVNIS Date: 08/26/2011
	NFD Date: 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✓ Please Check Flyability Results
DME/DME	✓
Radars	✓
Comms	
TERPS	

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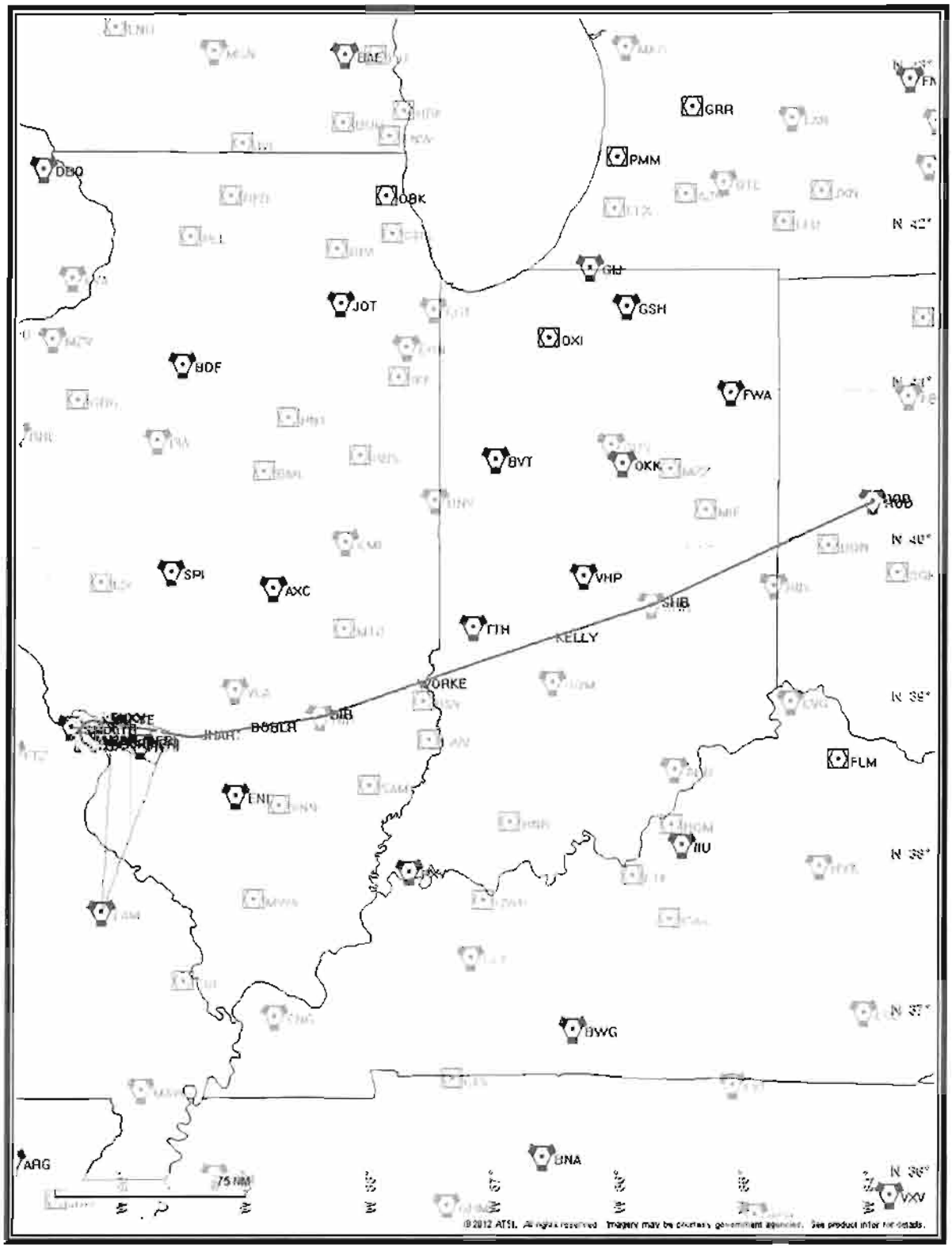

GRR
PMM
DBQ
OBK
JOT
GSH
OXI
BDF
FWA
BVT
OKK
SPI
AXC
VHP
TTH
KELLY
FLM
ENI
IIU
BWG
ARG
BNA
VXV
N 42°
N 41°
N 40°
N 39°
N 38°
N 37°
N 36°
75 NM

Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW30R(...	WP	N 38° 44' 18.99" W 90° 20' 22.51"	604.5	VNAV	0.0	Fly Over	TF
RW12L(...	WP	N 38° 45' 6.41" W 90° 21' 58.66"	563.3	VNAV	130.0	Fly Over	VA
GH30R	WP	N 38° 45' 44.26" W 90° 23' 15.48"	1120.0	VNAV	145.0	Fly Over	DF
WOLTR	WP	N 38° 49' 41.32" W 90° 25' 3.02"	2500.0	VNAV	180.0	Fly By	TF
ANNII	WP	N 38° 52' 52.69" W 90° 23' 22.37"	3189.1	VNAV	180.0	Fly By	TF
LENXX	WP	N 38° 54' 4.00" W 90° 18' 46.99"	3944.1	VNAV	180.0	Fly By	TF
KAEYE	WP	N 38° 53' 23.93" W 90° 13' 43.89"	4744.1	VNAV	180.0	Fly By	TF
JHART	WP	N 38° 47' 32.80" W 89° 30' 39.12"	11576.6	VNAV	210.0	Fly By	TF
DOBLR	WP	N 38° 50' 31.91" W 89° 7' 10.92"	15293.5	VNAV	210.0	Fly By	TF
BIB	WP	N 38° 55' 13.24" W 88° 28' 54.50"	18000.0	VNAV	240.0	Fly By	TF
WORKE	WP	N 39° 7' 2.95" W 87° 46' 25.21"	18000.0	VNAV	240.0	Fly By	TF
KELLY	WP	N 39° 24' 49.15" W 86° 40' 17.29"	18000.0	VNAV	240.0	Fly By	TF
SHB	WP	N 39° 37' 57.15" W 85° 49' 27.54"	18000.0	VNAV	240.0	Fly By	TF
ROD	WP	N 40° 17' 16.08" W 84° 2' 35.28"	18000.0	VNAV	240.0	Fly Over	TF

Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL

Climb Gradient: 200 Ft/NM after next to last waypoint up to 18000.0 Ft

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KSTL
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL
Ground Speeds:
Departure. **120.0 Kts** out to **10.0 NM**
Table:
200.0 Kts up to **11000.0 Ft.**
240.0 Kts up to **18000.0 Ft.**
260.0 Kts up to **24000.0 Ft.**
340.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Required IAS at Fly-By WP LENXX could not be reached with given A/C acceleration performance.

Flight Track comes into contact with terrain. Minimum AGL along route was -19.95 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER

DME/DME

Return To Summary

Settings:

RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.165 NM
INS Drift Rate: 8 000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
Minimum MSL DMEs Avail: 1773 Ft.

Total Number of DMEs Used: 28

Maximum DME Error: 0.610 NM

No Critical DMEs were found

Available DMEs: STL, FTZ, TOY, CSX, VLA, ENL, VNN, BIB, PXV, SPI, TTH, AXC, FAM, SAM, MTO, VHP, BVT, OKK, OOM, IIU, SHB, FWA, FLM, ROD, MIE, RID, DQN, APE

Foreign DMEs within range: YQG, YQO, YXU

DME/DME (Continued.)

Return To Summary

DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H + ESV	User	NO	0.598	Enabled	9.3 %	7.3 %
2	FTZ	N 38° 41' 39.58" W 90° 58' 16.17"	L	Database	NO	0.610	Enabled	4.3 %	2.2 %
3	CSX	N 38° 45' 9.88" W 90° 21' 39.46"	H	Database	NO	0.792	Enabled	11.3 %	8.4 %
4	TOY	N 38° 44' 20.97" W 89° 55' 7.06"	L	Database	NO	1.223	Enabled	9.6 %	8.7 %
5	VLA	N 39° 5' 37.26" W 89° 9' 44.87"	L	Database	NO	0.610	Enabled	5.2 %	4.7 %
6	ENL	N 38° 25' 12.00" W 89° 9' 32.39"	H	Database	NO	0.858	Enabled	12.9 %	12.6 %
7	BIB	N 38° 55' 13.26" W 88° 28' 54.47"	L	Database	NO	0.610	Enabled	4.1 %	4.4 %
8	SPI	N 39° 50' 23.04" W 89° 40' 39.83"	H	Database	NO	0.610	Enabled	3.7 %	3.8 %
9	TTH	N 39° 29' 20.19" W 87° 14' 56.47"	H	Database	NO	0.610	Enabled	23.9 %	26.0 %
10	VNN	N 38° 21' 43.03" W 88° 48' 26.41"	L	Database	NO	0.610	Enabled	0.0 %	0.0 %
11	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H + ESV	User	NO	0.610	Enabled	0.0 %	0.0 %
12	PXV	N 37° 55' 41.95" W 87° 45' 44.56"	H	Database	NO	0.610	Enabled	6.1 %	6.7 %
13	AXC	N 39° 44' 15.08" W 88° 51' 23.15"	H	Database	NO	0.894	Enabled	15.1 %	16.3 %
14	SAM	N 38° 29' 6.68" W 88° 5' 8.93"	L	Database	NO	0.610	Enabled	2.8 %	3.0 %
15	MTO	N 39° 28' 40.42" W 88° 17' 10.44"	L	Database	NO	0.720	Enabled	7.0 %	7.7 %
16	VHP	N 39° 48' 53.02" W 86° 22' 2.88"	H	Database	NO	0.610	Enabled	12.6 %	13.8 %
17	OKK	N 40° 31' 40.00" W 86° 3' 28.81"	H	Database	NO	0.610	Enabled	8.4 %	9.2 %
18	OOM	N 39° 8' 37.76" W 86° 36' 46.87"	L	Database	NO	0.610	Enabled	1.0 %	1.1 %
19	BVT	N 40° 33' 22.03" W 87° 4' 9.55"	H	Database	NO	0.610	Enabled	2.9 %	3.2 %
20	SHB	N 39° 37' 57.15" W 85° 49' 27.54"	L	Database	NO	0.610	Enabled	9.6 %	10.6 %

DME/DME (Continued.)

Return To Summary

DMEs Used (Continued.)

#	Name	Lat/Lon	Range	Source	Critical	Err. (NM)	Status	Time	Distance
21	I.U	N 38° 6' 12.47" W 85° 34' 38.77"	H	Database	NO	0.610	Enabled	5.3 %	5.8 %
22	FWA	N 40° 58' 44.63" W 85° 11' 17.01"	H	Database	NO	0.610	Enabled	7.5 %	8.2 %
23	RID	N 39° 45' 18.08" W 84° 50' 19.85"	L	Database	NO	0.610	Enabled	3.2 %	3.5 %
24	ROD	N 40° 17' 16.08" W 84° 2' 35.28"	H	Database	NO	0.610	Enabled	1.2 %	1.3 %
25	MIE	N 40° 14' 14.25" W 85° 23' 38.53"	L	Database	NO	0.610	Enabled	3.2 %	3.6 %
26	FLM	N 38° 38' 58.16" W 84° 18' 38.27"	H	Database	NO	0.610	Enabled	9.5 %	10.4 %
27	DQN	N 40° 0' 59.19" W 84° 23' 48.83"	L	Database	NO	0.610	Enabled	4.5 %	4.9 %
28	APE	N 40° 9' 3.82" W 82° 35' 17.88"	H	Database	NO	0.610	Enabled	5.1 %	5.6 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0						
1.5						
2.6	STL	FTZ	CSX	TOY		
6.6	STL	FTZ	CSX	TOY		
10.0	STL	FTZ	CSX	TOY		
13.5	STL	FTZ	CSX	TOY		
18.0	STL	FTZ	CSX	TOY		
28.0	STL	VLA	CSX	TOY	ENL	
51.5	STL	VLA	CSX	TOY	ENL	VNN
70.7	STL	TTH	CSX	AXC	SPI	ENL
90.3	ENL	SAM	BIB	AXC	SPI	STL
100.5	PXV	SAM	BIB	AXC	TTH	MTO
111.7	ENL	MTO	BIB	AXC	TTH	SPI
121.9	ENL	MTO	BIB	VHP	TTH	PXV
136.2	ENL	MTO	AXC	PXV	TTH	VHP
146.3	OKK	OOM	AXC	PXV	TTH	VHP
178.8	OKK	OOM	VHP	PXV	TTH	BVT

DME/DME (Continued.)

Return To Summary

Flight Check DME Selection (Continued.)

Distance [NM]	Selected DMEs					Alternate
190.5	OKK	OOM	SHB	BVT	TTH	IIU
200.6	VHP	IIU	SHB	BVT	TTH	OKK
220.8	VHP	IIU	SHB	OKK	TTH	FWA
231.5	VHP	IIU	FWA	RID	TTH	FLM
242.8	VHP	MIE	OKK	ROD	SHB	FWA
253.0	VHP	MIE	FWA	RID	TTH	OKK
263.2	VHP	MIE	FWA	SHB	FLM	RID
273.3	VHP	DQN	FWA	RID	FLM	OKK
288.5	VHP	DQN	APE	RID	FLM	FWA
298.6	VHP	DQN	APE	ROD	FLM	FWA
312.9	FWA	DQN	APE	OKK	FLM	ROD

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 38° 44' 18.99" W 90° 20' 22.51"	N 38° 46' 2.45" W 90° 23' 33.64"	3.1
	VOR: CSX	Available from N 38° 44' 18.99" W 90° 20' 22.51" to N 38° 46' 2.45" W 90° 23' 33.64"	
	VOR: FTZ	Available from N 38° 44' 18.99" W 90° 20' 22.51" to N 38° 46' 2.45" W 90° 23' 33.64"	
	VOR: STL	Available from N 38° 44' 18.99" W 90° 20' 22.51" to N 38° 46' 2.45" W 90° 23' 33.64"	
	VOR: TOY	Available from N 38° 44' 18.99" W 90° 20' 22.51" to N 38° 46' 2.45" W 90° 23' 33.64"	
2	N 38° 52' 44.81" W 90° 8' 48.16"	N 38° 52' 20.05" W 90° 5' 43.04"	2.4
	VOR: CSX	Available from N 38° 52' 44.81" W 90° 8' 48.16" to N 38° 52' 20.05" W 90° 5' 43.04"	
	VOR: STL	Available from N 38° 52' 44.81" W 90° 8' 48.16" to N 38° 52' 20.05" W 90° 5' 43.04"	
	VOR: TOY	Available from N 38° 52' 44.81" W 90° 8' 48.16" to N 38° 52' 20.05" W 90° 5' 43.04"	
3	N 38° 51' 38.81" W 90° 0' 35.98"	N 38° 51' 20.10" W 89° 58' 17.21"	1.8
	VOR: CSX	Available from N 38° 51' 38.81" W 90° 0' 35.98" to N 38° 51' 20.10" W 89° 58' 17.21"	
	VOR: STL	Available from N 38° 51' 38.81" W 90° 0' 35.98" to N 38° 51' 20.10" W 89° 58' 17.21"	
	VOR: TOY	Available from N 38° 51' 38.81" W 90° 0' 35.98" to N 38° 51' 20.10" W 89° 58' 17.21"	

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments (Continued.)

#	Start Location	End Location	Length [NM]
4	N 38° 51' 0.21" W 89° 55' 50 04"	N 38° 50' 25.42" W 89° 51' 33.61"	3.4
	VOR: CSX	Available from N 38° 51' 0.21" W 89° 55' 50 04" to N 38° 50' 25.42" W 89° 51' 33 61"	
	VOR STL	Available from N 38° 51' 0 21" W 89° 55 50.04" to N 38° 50' 25 42" W 89° 51' 33.61"	
	VOR TOY	Available from N 38° 51' 0.21" W 89° 55' 50 04" to N 38° 50' 25.42" W 89° 51' 33 61"	
	VOR: VLA	Available from N 38° 51' 0.21" W 89° 55' 50 04" to N 38° 50' 25 42" W 89° 51' 33 61"	

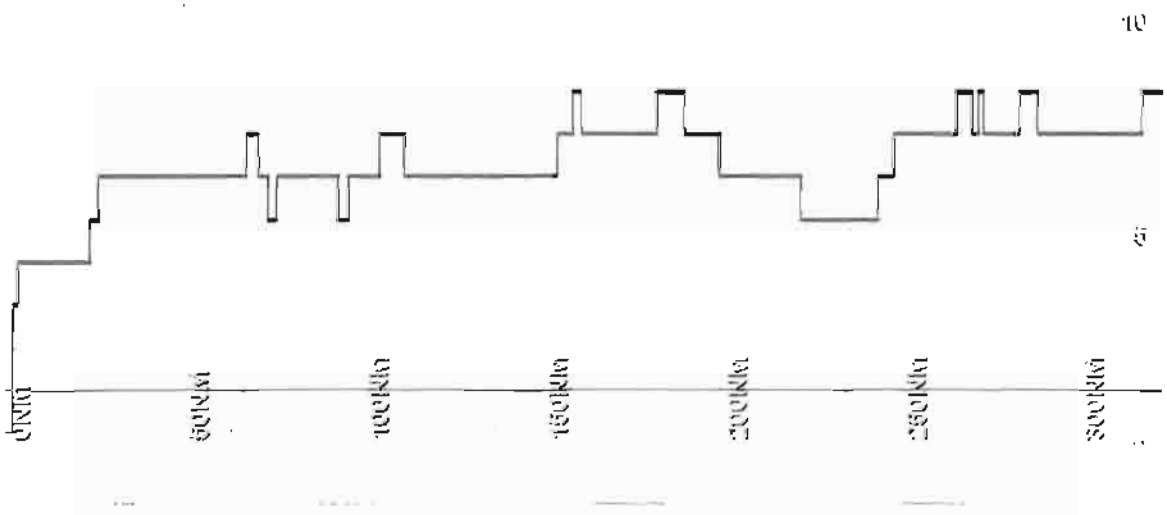
User DMEs

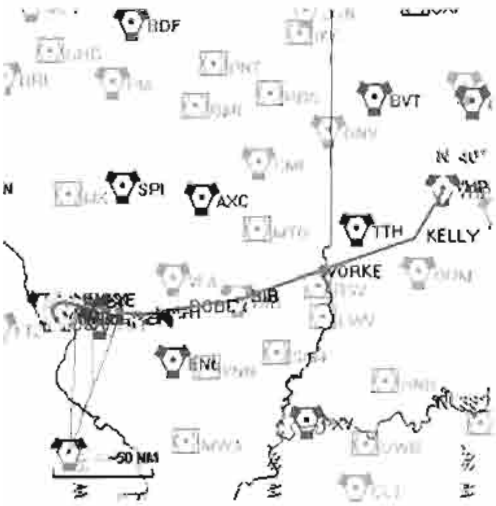
#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H	449.5	117 40	STL	Used
		ESV: Bearing [True]: 91.0° to 114.0° Bearing [Mag]: 90.0° to 113.0°			Arc Distance: Out to 35.0 NM Altitude: 4000.0 to 10000.0 Ft.		
2	FAM	N 37° 40' 24 39" W 90° 14' 2 53"	H	1220.0	115 70	FAM	Used
		ESV: Bearing [True]: 3.0° to 20.0° Bearing [Mag]: 2 0° to 19.0°			Arc Distance: Out to 74 0 NM Altitude: 4000.0 to 10000.0 Ft.		

Radar Analysis

Return To Summary

Settings: Radar Types: ARSR and ASR





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Version:	2 35
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Input File:	JHART RW30R VHP 2012 .
Databases:	AVNIS Date 08/26/2011
	NFD Date: 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔ Please Check Flyability Results
DME/DME	✔
Radars	✔
Comms	
TERPS	

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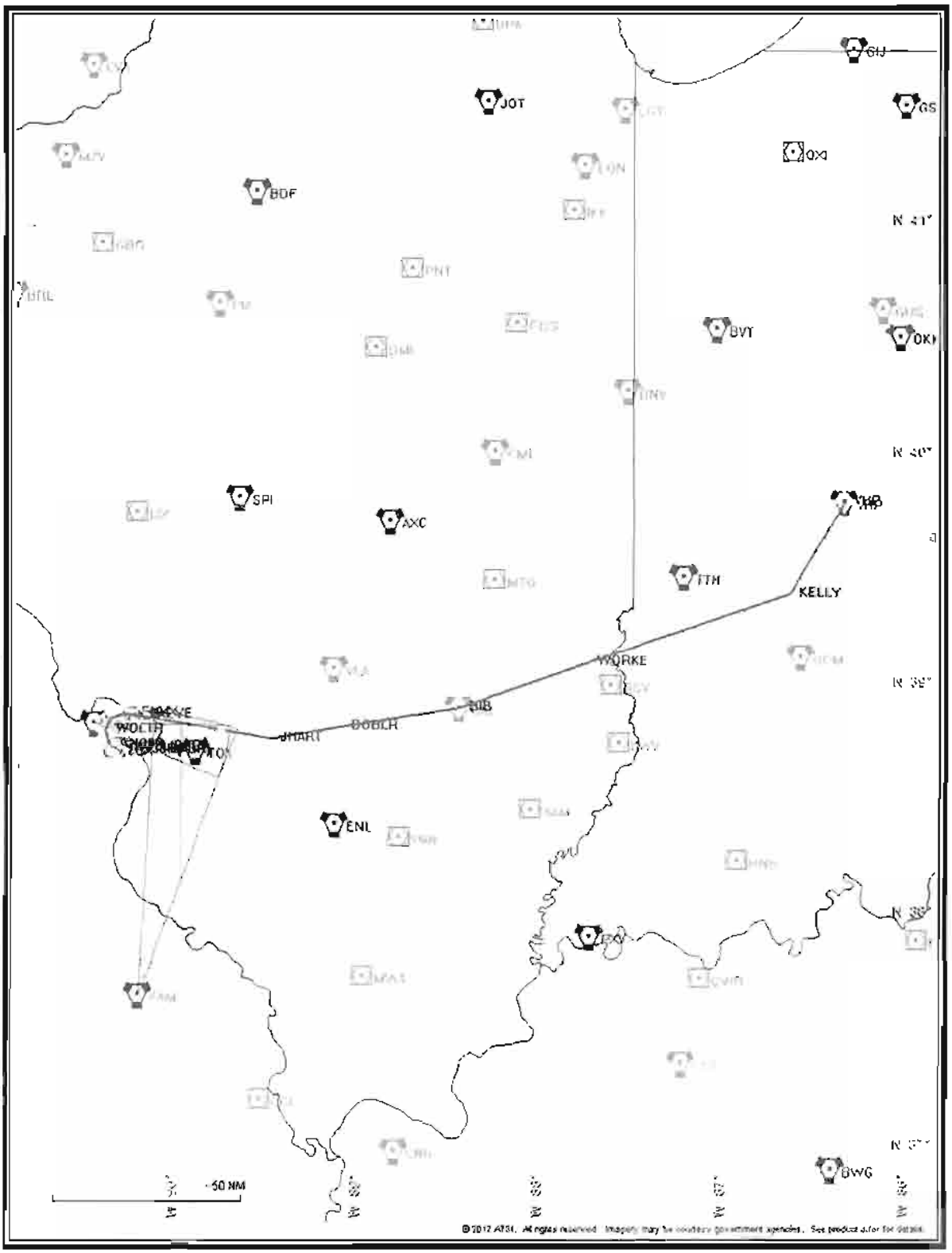

JOT
GS
BDF
BVY
SPI
AXC
ITH
KELLY
WORKE
JHART
DOBLR
ENL
50 NM

Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW30R(.	WP	N 38° 44' 18.99" W 90° 20' 22 51"	604.5	VNAV	0.0	Fly Over	TF
RW12L(...	WP	N 38° 45' 6 41" W 90° 21' 58.66	563 3	VNAV	130 0	Fly Over	VA
GH30R	WP	N 38° 45' 44 26" W 90° 23' 15 48"	1120.0	VNAV	145 0	Fly Over	DF
WOLTR	WP	N 38° 49' 41.32" W 90° 25' 3 02"	2500 0	VNAV	180.0	Fly By	TF
ANNII	WP	N 38° 52' 52.69" W 90° 23' 22.37"	3189.1	VNAV	180.0	Fly By	TF
LENXX	WP	N 38° 54' 4 00" W 90° 18' 46.99"	3944.1	VNAV	180.0	Fly By	TF
KAEYE	WP	N 38° 53' 23 93" W 90° 13' 43.89"	4744 1	VNAV	180.0	Fly By	TF
JHART	WP	N 38° 47' 32.80" W 89° 30' 39.12"	11576.6	VNAV	210.0	Fly By	TF
DOBLR	WP	N 38° 50' 31.91" W 89° 7' 10 92"	15293.5	VNAV	210 0	Fly By	TF
BIB	WP	N 38° 55' 13.24" W 88° 28' 54 50"	18000.0	VNAV	240.0	Fly By	TF
WORKE	WP	N 39° 7 2.95" W 87° 46' 25.21"	18000.0	VNAV	240 0	Fly By	TF
KELLY	WP	N 39° 24' 49.15" W 86° 40' 17.29"	18000.0	VNAV	240 0	Fly By	TF
VHP	WP	N 39° 48' 53 02" W 86° 22' 2.88"	18000.0	VNAV	240 0	Fly Over	TF

Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL

Climb Gradient: 200 Ft/NM after next to last waypoint up to 18000.0 Ft

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KSTL
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1120.0 Ft MSL
Ground Speeds:
Departure: **120.0 Kts** out to **10.0 NM**
Table
200.0 Kts up to **11000.0 Ft.**
240.0 Kts up to **18000.0 Ft.**
260.0 Kts up to **24000.0 Ft.**
340.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Required IAS at Fly-By WP LENXX could not be reached with given A/C acceleration performance.

Flight Track comes into contact with terrain. Minimum AGL along route was -19.95 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

DME/DME

Return To Summary

Settings:

RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
  Initial Drift: 0.165 NM
  INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
Minimum MSL DMEs Avail: 1773 Ft

Total Number of DMEs Used: 20

Maximum DME Error: 0.610 NM

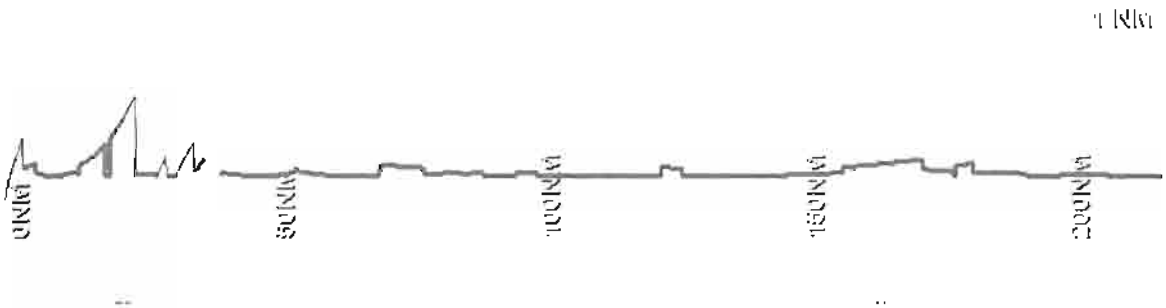
No Critical DMEs were found

Available DMEs: STL, FTZ, TOY, CSX, VLA, ENL, VNN, BIB, PXV, SPI, TTH, AXC, FAM, SAM, MTO, VHP, BVT, OKK, OOM, IIU, SHB, FWA, OXI

Foreign DMEs within range: YQG

DME/DME (Continued.)

Return To Summary



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	STL	N 38° 51' 38.48" W 90° 28' 56.52"	H + ESV	User	NO	0.598	Enabled	13.2 %	10.9 %
2	FTZ	N 38° 41' 39.58" W 90° 58' 16.17"	L	Database	NO	0.610	Enabled	6.1 %	3.2 %
3	CSX	N 38° 45' 9.88" W 90° 21' 39.46"	H	Database	NO	0.792	Enabled	16.0 %	12.4 %
4	TOY	N 38° 44' 20.97" W 89° 55' 7.06"	L	Database	NO	1.223	Enabled	13.5 %	12.9 %
5	VLA	N 39° 5' 37.26" W 89° 9' 44.87"	L	Database	NO	0.610	Enabled	7.4 %	7.0 %
6	ENL	N 38° 25' 12.00" W 89° 9' 32.39"	H	Database	NO	0.858	Enabled	18.3 %	18.6 %
7	BIB	N 38° 55' 13.26" W 88° 28' 54.47"	L	Database	NO	0.610	Enabled	5.8 %	6.5 %
8	SPI	N 39° 50' 23.04" W 89° 40' 39.83"	L	Database	NO	0.610	Enabled	5.3 %	5.6 %
9	TTH	N 39° 29' 20.19" W 87° 14' 56.47"	H	Database	NO	0.610	Enabled	32.2 %	36.6 %
10	VNN	N 38° 21' 43.03" W 88° 48' 26.41"	L	Database	NO	0.610	Enabled	0.0 %	0.0 %
11	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H + ESV	User	NO	0.610	Enabled	0.0 %	0.0 %
12	PXV	N 37° 55' 41.95" W 87° 45' 44.56"	H	Database	NO	0.610	Enabled	8.7 %	9.9 %
13	AXC	N 39° 44' 15.08" W 88° 51' 23.15"	H	Database	NO	0.894	Enabled	21.5 %	24.1 %
14	SAM	N 38° 29' 6.68" W 88° 5' 8.93"	L	Database	NO	0.610	Enabled	3.9 %	4.5 %
15	MTO	N 39° 28' 40.42" W 88° 17' 10.44"	L	Database	NO	0.720	Enabled	9.9 %	11.4 %
16	VHP	N 39° 48' 53.02" W 86° 22' 2.88"	H	Database	NO	0.610	Enabled	1.7 %	2.0 %
17	OKK	N 40° 31' 40.00" W 86° 3' 28.81"	H	Database	NO	0.610	Enabled	8.5 %	9.8 %
18	OOM	N 39° 8' 37.76" W 86° 36' 46.87"	L	Database	NO	0.610	Enabled	4.2 %	4.8 %
19	BVT	N 40° 33' 22.03" W 87° 4' 9.55"	H	Database	NO	0.610	Enabled	5.1 %	5.9 %
20	SHB	N 39° 37' 57.15" W 85° 49' 27.54"	L	Database	NO	0.610	Enabled	3.4 %	3.9 %

Flight Check DME Selection

Distance [NM]	Selected DMEs	Alternate

DME/DME (Continued.)

Return To Summary

Flight Check DME Selection (Continued.)

Distance [NM]	Selected DMEs					Alternate
0.0						
0.0						
1.5						
2.6	STL	FTZ	CSX	TOY		
6.6	STL	FTZ	CSX	TOY		
10.0	STL	FTZ	CSX	TOY		
13.5	STL	FTZ	CSX	TOY		
18.0	STL	FTZ	CSX	TOY		
28.0	STL	VLA	CSX	TOY	ENL	
51.5	STL	VLA	CSX	TOY	ENL	VNN
70.7	STL	TTH	CSX	AXC	SPI	ENL
90.3	ENL	SAM	BIB	AXC	SPI	STL
100.5	PXV	SAM	BIB	AXC	TTH	MTO
111.7	ENL	MTO	BIB	AXC	TTH	SPI
121.9	ENL	MTO	BIB	VHP	TTH	PXV
136.2	ENL	MTO	AXC	PXV	TTH	VHP
146.3	OKK	OOM	AXC	PXV	TTH	VHP
178.8	OKK	OOM	VHP	PXV	TTH	BVT
189.5	OKK	OOM	SHB	BVT	TTH	VHP
199.6	OKK	VHP	SHB	BVT	TTH	FWA

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 38° 44' 18.99" W 90° 20' 22.51"	N 38° 46' 2.45" W 90° 23' 33.64"	3.1
	VOR CSX	Available from N 38° 44' 18.99" W 90° 20' 22.51" to N 38° 46' 2.45" W 90° 23' 33.64"	
	VOR FTZ	Available from N 38° 44' 18.99" W 90° 20' 22.51" to N 38° 46' 2.45" W 90° 23' 33.64"	
	VOR STL	Available from N 38° 44' 18.99" W 90° 20' 22.51" to N 38° 46' 2.45" W 90° 23' 33.64"	
	VOR TOY	Available from N 38° 44' 18.99" W 90° 20' 22.51" to N 38° 46' 2.45" W 90° 23' 33.64"	

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments (Continued.)

#	Start Location	End Location	Length [NM]
2	N 38° 52' 44 81" W 90° 8' 48 16"	N 38° 52' 20 05" W 90° 5' 43 04"	2.4
	VOR: CSX	Available from N 38° 52' 44.81" W 90° 8' 48.16" to N 38° 52' 20.05" W 90° 5' 43.04"	
	VOR. STL	Available from N 38° 52' 44.81" W 90° 8' 48 16" to N 38° 52' 20.05" W 90° 5' 43 04"	
	VOR: TOY	Available from N 38° 52' 44.81" W 90° 8' 48.16" to N 38° 52' 20.05" W 90° 5' 43 04"	
3	N 38° 51' 38 81" W 90° 0' 35.98"	N 38° 51' 20.10" W 89° 58' 17 21"	1 8
	VOR CSX	Available from N 38° 51' 38.81" W 90° 0' 35.98" to N 38° 51' 20.10" W 89° 58' 17.21"	
	VOR: STL	Available from N 38° 51' 38.81" W 90° 0' 35.98" to N 38° 51' 20.10" W 89° 58' 17.21"	
	VOR. TOY	Available from N 38° 51' 38.81" W 90° 0' 35 98" to N 38° 51' 20.10" W 89° 58' 17.21"	
4	N 38° 51' 0 21" W 89° 55' 50.04"	N 38° 50' 25 42" W 89° 51' 33.61"	3.4
	VOR CSX	Available from N 38° 51' 0 21" W 89° 55' 50.04" to N 38° 50' 25.42" W 89° 51' 33 61"	
	VOR. STL	Available from N 38° 51' 0 21" W 89° 55' 50 04" to N 38° 50' 25 42" W 89° 51' 33.61"	
	VOR. TOY	Available from N 38° 51' 0.21" W 89° 55' 50 04" to N 38° 50' 25.42" W 89° 51' 33 61"	
	VOR. VLA	Available from N 38° 51' 0.21" W 89° 55' 50.04" to N 38° 50' 25.42" W 89° 51' 33 61"	

User DMEs

#	Name	Lat/Lon	Range	Elevation (Ft)	Frequency	Replaces.	Status
1	STL	N 38° 51' 38 48" W 90° 28' 56.52"	H	449.5	117.40	STL	Used

ESV: Bearing [True]: 91.0° to 114.0°
Bearing [Mag]: 90 0° to 113.0°
Arc Distance. Out to 35 0 NM
Altitude 4000.0 to 10000.0 Ft

DME/DME (Continued.)

Return To Summary

User DMEs (Continued.)

#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
2	FAM	N 37° 40' 24.39" W 90° 14' 2.53"	H	1220.0	115.70	FAM	Used

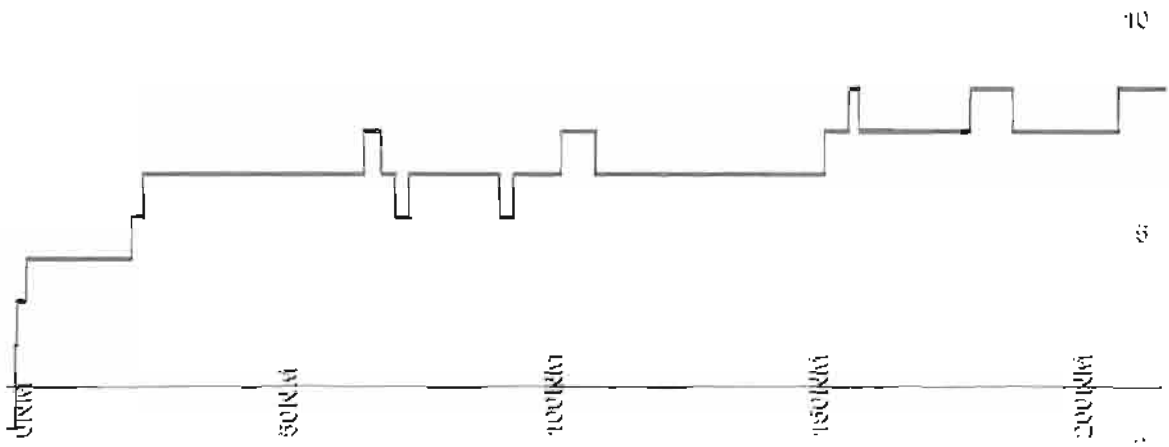
ESV: Bearing [True]: 3.0° to 20.0°
Bearing [Mag]: 2.0° to 19.0°

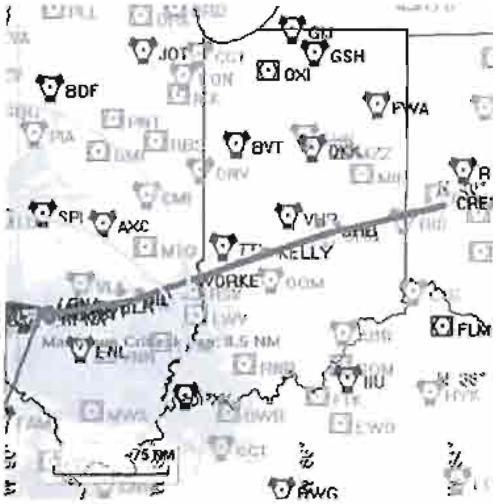
Arc Distance: Out to 74.0 NM
Altitude: 4000.0 to 10000.0 Ft.

Radar Analysis

Return To Summary

Settings: Radar Types: ARSR and ASR





Name:	enanders
Project Name:	
Output File:	KSTL SID JHART CREEP_ 20120717_1451
Software:	RNAV-Pro™
Version:	2.36
Date/Time:	7/17/2012 2:51.48 PM
Input File:	KSTL_PNA_JHART_ DOBLR_CCW.txt
Databases:	AVNIS Date. 02/07/2012
	Obstacle Date. 08/26/2011
	NFD Date: 09/30/2010
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔
DME/DME	✔
Radars	✔
Comms	
TERPS	

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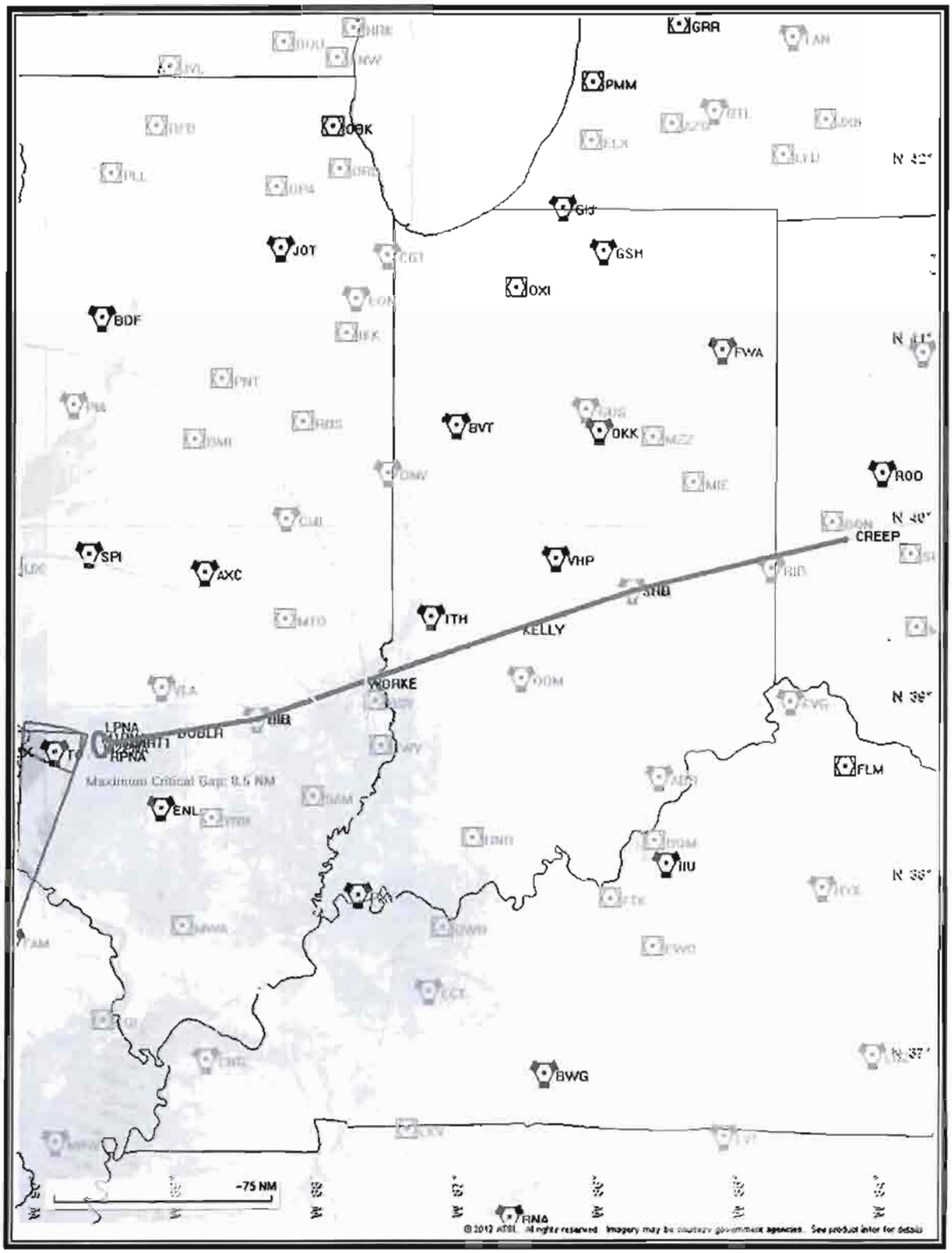

GRR
PMM
OBK
GID
J0T
GSH
OXI
BDF
FWA
BVT
OKK
ROO
CREEP
SPI
AXC
VHP
SHB
ITH
KELLY
WORKE
LPNA
DOBLR
RPNA
Maximum Critical Gap: 8.6 NM
ENL
FLM
IIU
BWG
~75 NM
RNO

Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
JHART	WP	N 38° 47' 32.80" W 89° 30' 39.12"	9578.6	VNAV	180 0	Fly Over	TF
LPNA	WP	N 38° 51' 39.02" W 89° 37' 54.75"	9578.6	VNAV	180.0	Fly By	TF
M1PNA	WP	N 38° 48' 15 59" W 89° 39' 33.56"	9578.6	VNAV	180.0	Fly By	TF
M2PNA	WP	N 38° 44' 40.77" W 89° 38' 49.11"	9578 6	VNAV	180 0	Fly By	TF
RPNA	WP	N 38° 41' 52.08" W 89° 35' 53 61"	9578 6	VNAV	180 0	Fly By	TF
JHART1	WP	N 38° 47' 32.80" W 89° 30' 39.12"	9578.6	VNAV	180.0	Fly By	TF
DOBLR	WP	N 38° 50' 31 91" W 89° 7' 10 92"	13295 5	VNAV	210.0	Fly By	TF
BIB	WP	N 38° 55' 13.24" W 88° 28' 54.50"	18000 0	VNAV	240.0	Fly By	TF
WORKE	WP	N 39° 7' 2 95" W 87° 46' 25.21"	18000 0	VNAV	240 0	Fly By	TF
KELLY	WP	N 39° 24' 49.15" W 86° 40' 17.29"	18000.0	VNAV	240.0	Fly By	TF
SH8	WP	N 39° 37' 57.15" W 85° 49' 27 54"	18000.0	VNAV	240.0	Fly By	TF
CREEP_	WP	N 39° 55' 15.28" W 84° 18' 31.41"	18000.0	VNAV	240.0	Fly Over	TF

Flyability

Return To Summary

Settings:

Flight Type: Departure with PNA
Selected Airport: KSTL
Aircraft Category: Cat D
Climb Gradient: *None assigned*
Ground Speeds:

Table:

200.0 Kts up to **11000.0 Ft.**
240.0 Kts up to **18000.0 Ft.**
260.0 Kts up to **24000.0 Ft.**
340.0 Kts up to **99900.0 Ft.**

Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Entire track is fly-able

DME/DME

Return To Summary

Settings:

RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0 558 NM
INS Drift Rate: 8 000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4 0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated
PNA Import from RDVA-Pro: KSTL PNA JHART DOBLR

Total Number of DMEs Used: 24

Maximum DME Error: 0.348 NM

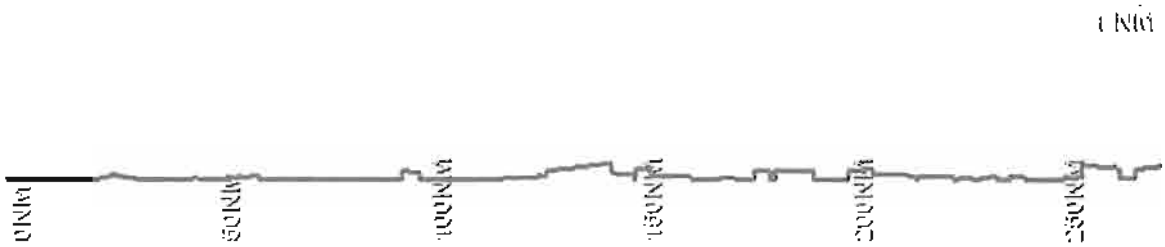
No Critical DMEs were found

Available DMEs: ENL, TOY, VLA, CSX, VNN, BIB, PXV, STL, SPI, TTH, AXC, SAM, MTO, VHP, BVT, OKK, OOM, IIU, SHB, FWA, ROD, FLM, RID, MIE, DQN, APE

Foreign DMEs within range: YQG, YQO, YXU

DME/DME (Continued.)

Return To Summary



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. (NM)	Status	Time	Distance
1	ENL	N 38° 25' 12.00" W 89° 9' 32.39" E 4	H	Database	NO	0.844	Enabled	18.9 %	16.1 %
2	VLA	N 39° 5' 37.82" W 89° 9' 44.08" E 4	L	Database	NO	0.574	Enabled	15.4 %	13.0 %
3	TOY	N 38° 44' 20.97" W 89° 55' 7.06" E 4	L	Database	NO	0.406	Enabled	4.2 %	3.7 %
4	BIB	N 38° 55' 13.24" W 88° 28' 54.50" E 3	L	Database	NO	0.513	Enabled	12.2 %	12.0 %
5	VNN	N 38° 21' 43.03" W 88° 48' 26.41" E 2	L	Database	NO	0.359	Enabled	5.6 %	5.4 %
6	CSX	N 38° 45' 9.88" W 90° 21' 39.46" E 0	H	Database	NO	0.348	Enabled	2.9 %	2.8 %
7	AXC	N 39° 44' 15.08" W 88° 51' 23.15" E 3	H	Database	NO	0.894	Enabled	17.1 %	17.6 %
8	PXV	N 37° 55' 41.95" W 87° 45' 44.56" E 3	H	Database	NO	0.350	Enabled	7.6 %	7.9 %
9	TTH	N 39° 29' 20.19" W 87° 14' 56.47" E 2	H	Database	NO	0.476	Enabled	25.3 %	26.5 %
10	SAM	N 38° 29' 6.68" W 88° 5' 8.93" E 3	L	Database	NO	0.348	Enabled	2.6 %	2.8 %
11	MTO	N 39° 28' 40.42" W 88° 17' 10.44" E 3	L	Database	NO	0.720	Enabled	8.7 %	9.1 %
12	VHP	N 39° 48' 53.02" W 86° 22' 2.88" E 1	H	Database	NO	0.348	Enabled	13.6 %	14.2 %
13	OKK	N 40° 31' 40.00" W 86° 3' 28.81" E 0	H	Database	NO	0.359	Enabled	9.3 %	9.8 %
14	OOM	N 39° 8' 37.76" W 86° 36' 46.87" W 2	L	Database	NO	0.354	Enabled	1.3 %	1.3 %
15	BVT	N 40° 33' 22.03" W 87° 4' 9.55" E 1	H	Database	NO	0.348	Enabled	3.7 %	3.9 %

DME/DME (Continued.)

Return To Summary

DMEs Used (Continued.)

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. (NM)	Status	Time	Distance
16	SHB	N 39° 37' 57.15" W 85° 49' 27 54" E 1	L	Database	NO	0 348	Enabled	9.4 %	9 8 %
17	IIU	N 38° 6' 12.47" W 85° 34' 38 77" E 1	H	Database	NO	0 348	Enabled	6 4 %	6 7 %
18	FWA	N 40° 58' 44 63" W 85° 11' 17.01" E 0	H	Database	NO	0.348	Enabled	9 5 %	9 9 %
19	MIE	N 40° 14' 14.25" W 85° 23' 38.53" W 3	L	Database	NO	0 348	Enabled	5.9 %	6.2 %
20	ROD	N 40° 17' 16 08" W 84° 2' 35 28" W 5	H	Database	NO	0 348	Enabled	3.9 %	4 1 %
21	RID	N 39° 45' 18 08" W 84° 50' 19.85" W 3	L	Database	NO	0.348	Enabled	3.6 %	3.8 %
22	FLM	N 38° 38' 58.16" W 84° 18' 38 27" W 4	H	Database	NO	0.348	Enabled	7.3 %	7.7 %
23	DQN	N 40° 0' 59 19 W 84° 23' 43 83" W 1	L	Database	NO	0.504	Enabled	2 5 %	2.6 %
24	APE	N 40° 9' 3 82" W 82° 35' 17.88" W 6	H	Database	NO	0 348	Enabled	3 1 %	3 3 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0 0	ENL	VLA	TOY	CSX		
5.1	ENL	VLA	TOY	CSX		
8 9	ENL	VLA	TOY	CSX		
12.6	ENL	VLA	TOY	CSX		
14.8	ENL	VLA	TOY	CSX		
21 9	ENL	VLA	TOY	VNN	BIB	
41 2	ENL	VLA	TOY	VNN	BIB	
51 2	CSX	VLA	AXC	VNN	BIB	ENL
70 9	TTH	PXV	AXC	SAM	BIB	MTO
82 1	TTH	MTO	AXC	ENL	BIB	SPI
92.2	TTH	MTO	VHP	ENL	BIB	PXV
106 5	TTH	MTO	AXC	ENL	PXV	VHP
116.7	TTH	OOM	AXC	OKK	PXV	VHP
149.2	TTH	OOM	VHP	OKK	PXV	BVT
160.9	TTH	OOM	BVT	OKK	SHB	IIU
171 0	TTH	VHP	BVT	IIU	SHB	OKK

DME/DME (Continued.)

Return To Summary

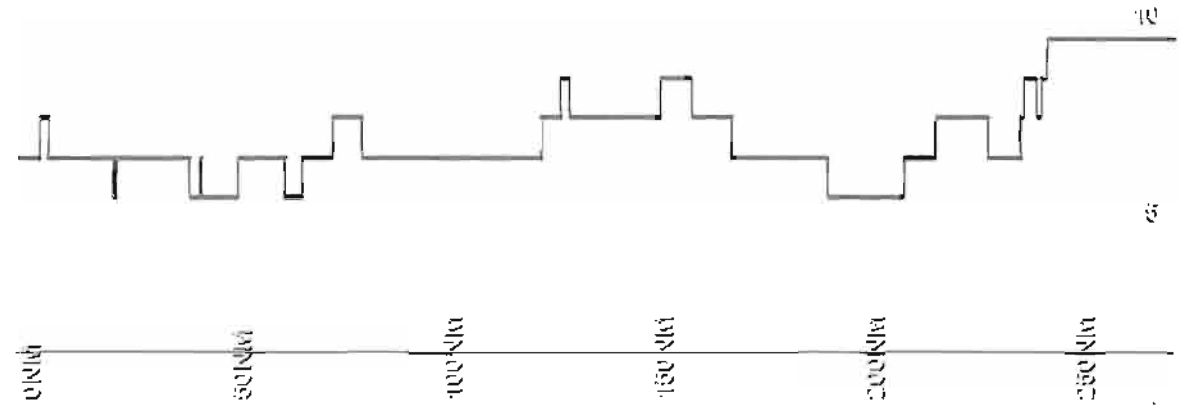
Flight Check DME Selection (Continued.)

Distance (NM)	Selected DMEs					Alternate
191.3	TTH	VHP	OKK	IIU	SHB	FWA
202.1	TTH	VHP	FWA	IIU	FLM	ROD
212.6	MIE	VHP	FWA	OKK	ROD	FLM
223.2	MIE	VHP	FWA	SHB	RID	FLM
233.4	MIE	VHP	DQN	FLM	ROD	FWA
251.2	OKK	RID	DQN	FLM	APE	VHP
262.9	FWA	RID	VHP	FLM	APE	OKK

User DMEs

#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	STL	N 38° 51' 38.48" W 90° 28' 56.52" E 1	H	449.5	117.40	STL	Not Used
		ESV: Bearing [True] 91.0° to 114.0° Bearing [Mag] 90.0° to 113.0°			Arc Distance: Out to 35.0 NM Altitude: 4000.0 to 10000.0 Ft.		
2	FAM	N 37° 40' 24.39" W 90° 14' 2.53" E 1	H	220.0	115.70	FAM	Not Used
		ESV: Bearing [True] 3.0° to 20.0° Bearing [Mag] 2.0° to 19.0°			Arc Distance: Out to 74.0 NM Altitude: 4000.0 to 10000.0 Ft.		

Radar Analysis

Return To Summary

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