

DME ESVs								
#	Name	Lat/Lon	MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	CRL FAA 701373-19 CRL [IFPA]	N42° 02' 52.90", W083° 27' 27.26"	3.0 W	130	628.4	115.7	CRL FAA 701373-19	
	ESV:	Bearing [True]: 65.0° to 98.0° Bearing [Mag]: 68.0° to 101.0°				Arc Distance: Out to 64.0 NM Altitude: 4000.0 to 16000.0 ft		
2	JXN FAA 701964-16 JXN [IFPA]	N42° 15' 33.26", W084° 27' 30.78"	0.0 E	130	994	null	JXN FAA 701964-16	
	Restriction:	Bearing [True]: 180.0° to 210.0° Bearing [Mag]: 180.0° to 210.0°				Distance: Beyond 30.0 NM Altitude: Below 3500.0 ft		
	ESV:	Bearing [True]: 100.0° to 111.0° Bearing [Mag]: 100.0° to 111.0°				Arc Distance: Out to 61.0 NM Altitude: 3900.0 to 9000.0 ft		
3	LFD FAA 698114-4 LFD [IFPA]	N42° 03' 44.96", W084° 45' 54.48"	5.0 W	40	1040	111.2	LFD FAA 698114-4	
	Restriction:	Bearing [True]: 105.0° to 160.0° Bearing [Mag]: 110.0° to 165.0°				Distance: Beyond 35.0 NM Altitude: Below 3000.0 ft		
	ESV:	Bearing [True]: 92.0° to 130.0° Bearing [Mag]: 97.0° to 135.0°				Arc Distance: Out to 59.0 NM Altitude: 4000.0 to 20000.0 ft		

DME DME Assessment Results for SNDRS3 path KDTW:RW03L:DER_JWELS

Results Summary	
Flyability:	Completed
DME/DME:	Completed - No Critical DMEs
Name:	Jose G-CTR Medina
Project File:	C:\Users\Jose G-CTR Medina\OneDrive - Federal Aviation Administration\Documents\01. Projects\DME EVALUATIONS\KDTW 20230125\DME Screens\Submitted\New DMEs\Possible solutions\KDTW SNDRS DME\KDTW SNDRS3 DME(2) 20240105.tgs
Output File:	C:\Users\Jose G-CTR Medina\OneDrive - Federal Aviation Administration\Documents\01. Projects\DME EVALUATIONS\KDTW 20230125\DME Screens\Submitted\New DMEs\Possible solutions\KDTW SNDRS DME\KDTW [IFPA] SNDRS3 20240116_0709 CST\KDTW-RW03L- DER_JWELS\KDTW SNDRS3 SID RW03L JWELS 20240116_0709 CST.pdf
Procedure Name:	SNDRS3
Software: DmeDmePlugin:	7.2.1
Date/Time:	01/16/2024 07:09 CST
Databases:	DTED LEVEL 0 MAX

Failures
No Failures

Warnings
No Warnings

Informational
No Informational

Notes For Flight Check
None

Flight Plan							
Name	Type	Lat/Lon	Altitude (ft)	VNAV Mode	Ground Speed (kts)	Turn Type	Leg Type
KDTW:RW03L:DER	WP	N42° 13' 41.8586", W083° 20' 10.1070"	631.4	VNAV	130	FLY_BY	TF
BESST	WP	N42° 16' 56.6900", W083° 13' 21.0400"	2500	VNAV	230	FLY_BY	TF
SWNDL	WP	N42° 12' 55.8000", W083° 04' 22.4400"	4000	VNAV	230	FLY_BY	TF
WERKN	WP	N41° 59' 20.1300", W083° 12' 54.7500"	4000	VNAV	230	FLY_BY	TF
JWELS	WP	N41° 41' 56.6200", W083° 47' 23.0000"	3000	VNAV	230	FLY_BY	TF
Climb Gradient: 500.0 ft/NM up to 1146.0 ft MSL 200.0 ft/NM							

Flyability	
Flight Type:	SID
Selected Airport:	KDTW [IFPA]
Climb Gradient:	500.0 ft/NM up to 1146.0 ft MSL 200.0 ft/NM
Speeds:	130 at the Runway DER 145 at the end of the VA or VI leg 200 Ground Speed to 11000 FT 240 Ground Speed to 18000 FT 260 Ground Speed to 24000 FT 340 Ground Speed above 24000 FT
Descent During a Turn:	Allowed
VNAV Mode:	Flight Plan

DME DME Assessment Results for SNDRS3 path KDTW:RW03L:DER_JWELS

DME/DME	
RNP:	RNP 2
Flight Mode:	Manual
Line of Sight (DTED Level 0 Max):	Evaluated
Inertial Drift:	Enabled
Initial Drift:	0.558 NM
INS Drift Rate:	8.0 NM/Hour
Range Mode:	OSV
RNP Edges:	Evaluated
Min DME Range:	3.0 NM
DME Types:	DME, VOR-DME, VORTAC
DME Include Angles:	30 to 150
Critical DMEs:	Allowed
DoD Facilities:	Not included
Foreign Facilities:	Not included
High DMEs:	Included
Low DMEs:	Included
Terminal DMEs:	Included
Flight Check DMEs:	Not selected
Higher Altitudes:	Not Evaluated
Near Maximum Altitude:	Not Evaluated
Automatic ESVs:	Not enabled
Disabled DMEs:	None

DME/DME (Continued)										
DMEs Used										
#	Name	Lat/Lon	MAGVAR	Range	Type	Source	Critical	Status	Time	Distance
1	PSI	N42° 42' 03.0947", W083° 31' 57.9835"	-0.0 E	40	L	IFPA	NO	Enabled	21.7 %	21.6 %
2	DXO	N42° 12' 47.2904", W083° 21' 59.9878"	6.0 W	130	H	IFPA	NO	Enabled	49.8 %	50.3 %
3	CRL	N42° 02' 52.8956", W083° 27' 27.2625"	3.0 W	130	DH	IFPA	NO	Enabled	53.4 %	53.5 %
4	JXN	N42° 15' 33.2631", W084° 27' 30.7776"	0.0 E	130	DH	IFPA	NO	Enabled	0.3 %	0.3 %
5	SVM	N42° 24' 31.1055", W083° 35' 38.0455"	3.0 W	40	L	IFPA	NO	Enabled	33.7 %	33.4 %

Flight Check DME Selection						
Distance [NM]	Selected DMEs					Alternate
0.0						
1.0	CRL	SVM				
3.0	CRL	SVM	PSI	DXO		
5.9	PSI	DXO	CRL			
14.0	PSI	CRL	SVM	DXO		
16.0	CRL	SVM	DXO			
29.0	JXN	DXO	CRL	SVM		
29.2	CRL	DXO				
33.2						

Inertial Drift Segments			
#	Start Location	End Location	Length [NM]
1	N42° 13' 43.7264", W083° 20' 08.7299"	N42° 14' 36.0238", W083° 19' 30.1622"	0.9936
2	N41° 56' 57.1853", W083° 17' 40.4025"	N41° 41' 56.6200", W083° 47' 23.0000"	26.8043

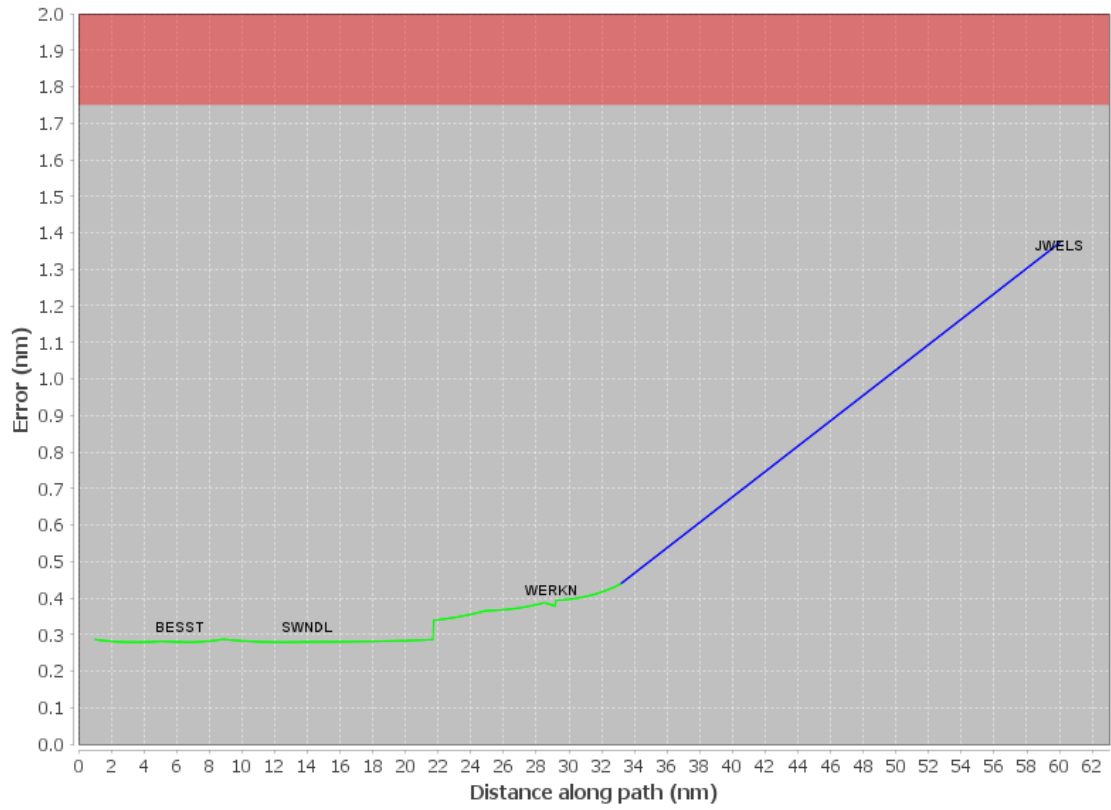
DME DME Assessment Results for SNDRS3 path KDTW:RW03L:DER_JWELS

Available DMEs by Waypoints			
Waypoint Before	Waypoint After	DME List	Suggested DMEs
KDTW:RW03L:DER	BESST	PSI, DXO, SVM, CRL	
BESST	SWNDL	PSI, DXO, CRL	
SWNDL	WERKN	PSI, DXO, SVM, CRL	
WERKN	JWELS	JXN, DXO, SVM, CRL	

User Data Files								
#	File Name							
None								
User DMEs								
#	Name	Lat/Lon	MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	LFD FAA 698114-4 LFD [IFPA]	N42° 03' 44.9620", W084° 45' 54.4770"	5.0 W	40	1040	111.2	LFD FAA 698114-4	
	ESV:	Bearing [True]: 92.0° to 130.0° Bearing [Mag]: 97.0° to 135.0°				Arc Distance: Out to 59.0 NM Altitude: 4000.0 to 20000.0 ft		
2	JXN FAA 701964-16 JXN [IFPA]	N42° 15' 33.2631", W084° 27' 30.7776"	0.0 E	130	994	null	JXN FAA 701964-16	
	ESV:	Bearing [True]: 100.0° to 111.0° Bearing [Mag]: 100.0° to 111.0°				Arc Distance: Out to 61.0 NM Altitude: 3900.0 to 9000.0 ft		

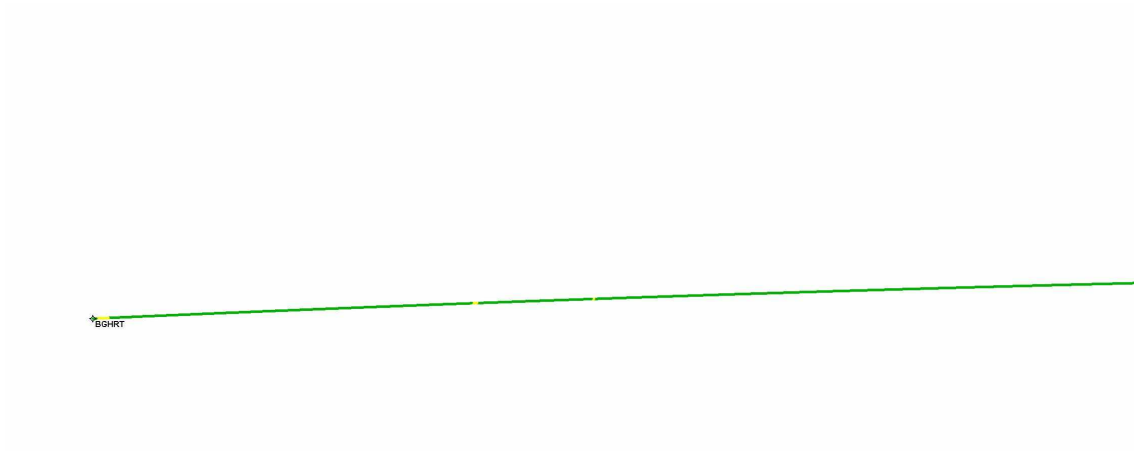
DME DME Assessment Results for SNDRS3 path KDTW:RW03L:DER_JWELS

DME Error



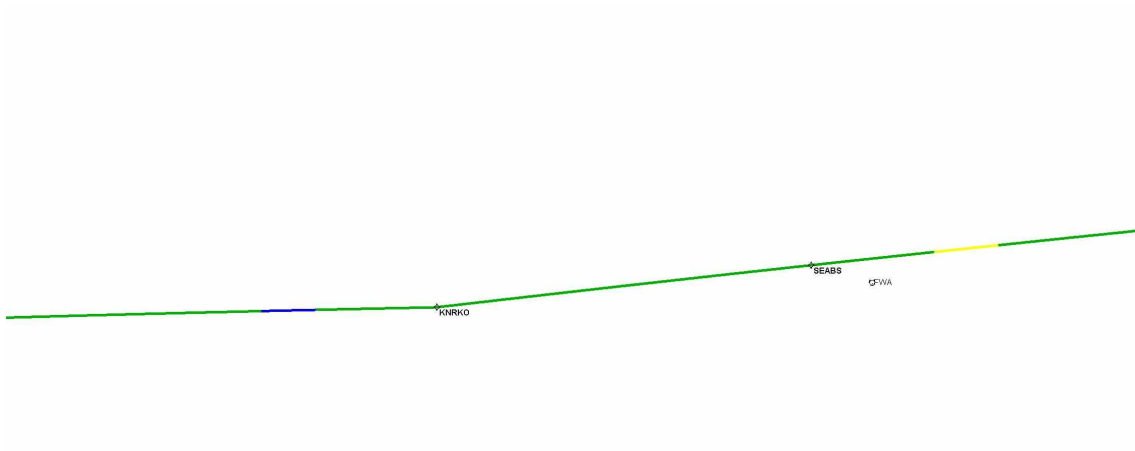
DME DME Assessment Results for SNDRS3 path KDTW:RW03L:DER_JWELS

Graphic Depiction 1



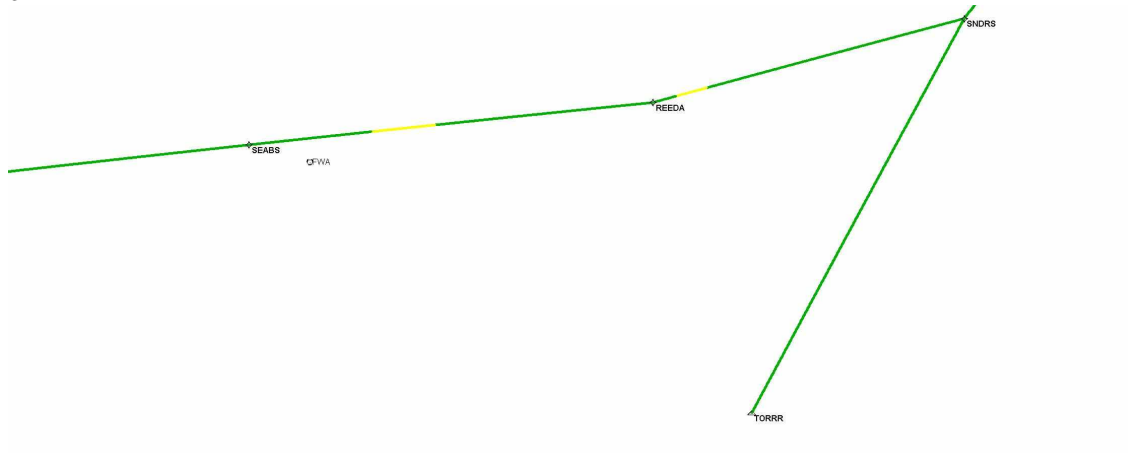
DME DME Assessment Results for SNDRS3 path KDTW:RW03L:DER_JWELS

Graphic Depiction 2



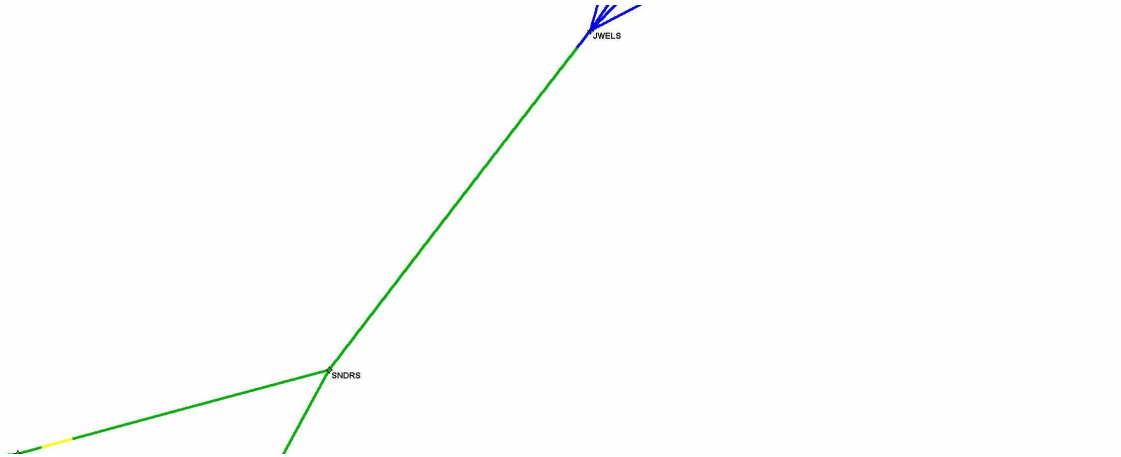
DME DME Assessment Results for SNDRS3 path KDTW:RW03L:DER_JWELS

Graphic Depiction 3



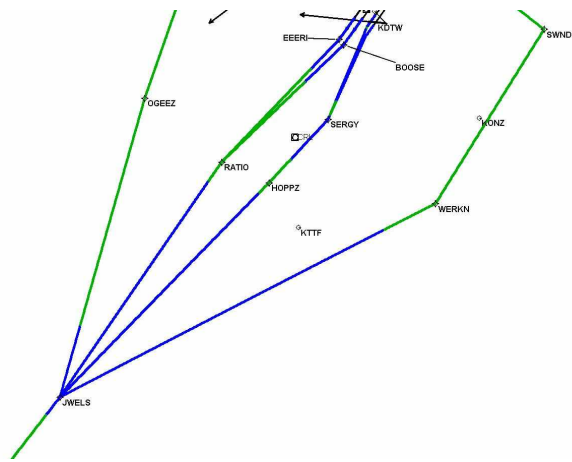
DME DME Assessment Results for SNDRS3 path KDTW:RW03L:DER_JWELS

Graphic Depiction 4



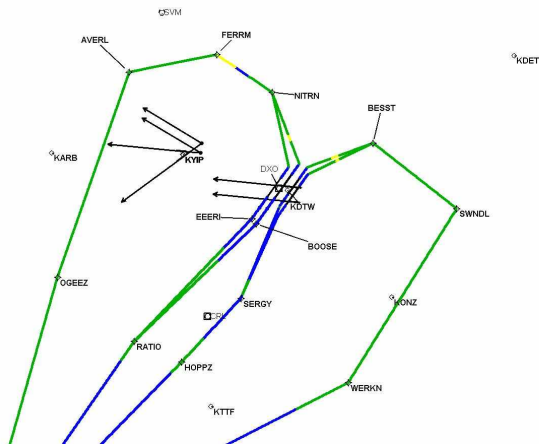
DME DME Assessment Results for SNDRS3 path KDTW:RW03L:DER_JWELS

Graphic Depiction 5



DME DME Assessment Results for SNDRS3 path KDTW:RW03L:DER_JWELS

Graphic Depiction 6



DME DME Assessment Results for SNDRS3 path KDTW:RW03R:DER_BESST

Results Summary	
Flyability:	Completed
DME/DME:	Completed - No Critical DMEs
Name:	Jose G-CTR Medina
Project File:	C:\Users\Jose G-CTR Medina\OneDrive - Federal Aviation Administration\Documents\01. Projects\DME EVALUATIONS\KDTW 20230125\DME Screens\Submitted\New DMEs\Possible solutions\KDTW SNDRS DME\KDTW SNDRS3 DME(2) 20240105.tgs
Output File:	C:\Users\Jose G-CTR Medina\OneDrive - Federal Aviation Administration\Documents\01. Projects\DME EVALUATIONS\KDTW 20230125\DME Screens\Submitted\New DMEs\Possible solutions\KDTW SNDRS DME\KDTW [IFPA] SNDRS3 20240116_0709 CST\KDTW-RW03R- DER_BESST\KDTW SNDRS3 SID RW03R BESST 20240116_0709 CST.pdf
Procedure Name:	SNDRS3
Software: DmeDmePlugin:	7.2.1
Date/Time:	01/16/2024 07:09 CST
Databases:	DTED LEVEL 0 MAX

Failures
No Failures

Warnings
No Warnings

Informational
No Informational

Notes For Flight Check
None

Flight Plan							
Name	Type	Lat/Lon	Altitude (ft)	VNAV Mode	Ground Speed (kts)	Turn Type	Leg Type
KDTW:RW03R:DER	WP	N42° 13' 10.8552", W083° 20' 02.6517"	631.8	VNAV	130	FLY_BY	TF
BESST	WP	N42° 16' 56.6900", W083° 13' 21.0400"	2500	VNAV	230	FLY_BY	TF
Climb Gradient: 500.0 ft/NM up to 1146.0 ft MSL 200.0 ft/NM							

Flyability	
Flight Type:	SID
Selected Airport:	KDTW [IFPA]
Climb Gradient:	500.0 ft/NM up to 1146.0 ft MSL 200.0 ft/NM
Speeds:	130 at the Runway DER 145 at the end of the VA or VI leg 200 Ground Speed to 11000 FT 240 Ground Speed to 18000 FT 260 Ground Speed to 24000 FT 340 Ground Speed above 24000 FT
Descent During a Turn:	Allowed
VNAV Mode:	Flight Plan

DME DME Assessment Results for SNDRS3 path KDTW:RW03R:DER_BESST

DME/DME	
RNP:	RNP 2
Flight Mode:	Manual
Line of Sight (DTED Level 0 Max):	Evaluated
Inertial Drift:	Enabled
Initial Drift:	0.558 NM
INS Drift Rate:	8.0 NM/Hour
Range Mode:	OSV
RNP Edges:	Evaluated
Min DME Range:	3.0 NM
DME Types:	DME, VOR-DME, VORTAC
DME Include Angles:	30 to 150
Critical DMEs:	Allowed
DoD Facilities:	Not included
Foreign Facilities:	Not included
High DMEs:	Included
Low DMEs:	Included
Terminal DMEs:	Included
Flight Check DMEs:	Not selected
Higher Altitudes:	Not Evaluated
Near Maximum Altitude:	Not Evaluated
Automatic ESVs:	Not enabled
Disabled DMEs:	None

DME/DME (Continued)										
DMEs Used										
#	Name	Lat/Lon	MAGVAR	Range	Type	Source	Critical	Status	Time	Distance
1	PSI	N42° 42' 03.0947", W083° 31' 57.9835"	-0.0 E	40	L	IFPA	NO	Enabled	42.9 %	47.1 %
2	DXO	N42° 12' 47.2904", W083° 21' 59.9878"	6.0 W	130	H	IFPA	NO	Enabled	42.9 %	47.1 %
3	CRL	N42° 02' 52.8956", W083° 27' 27.2625"	3.0 W	130	DH	IFPA	NO	Enabled	77.4 %	83.8 %
4	SVM	N42° 24' 31.1055", W083° 35' 38.0455"	3.0 W	40	L	IFPA	NO	Enabled	77.4 %	83.8 %

Flight Check DME Selection						
Distance [NM]	Selected DMEs					Alternate
0.0						
1.0	CRL	SVM				
3.4	CRL	SVM	PSI	DXO		

Inertial Drift Segments			
#	Start Location	End Location	Length [NM]
1	N42° 13' 12.7219", W083° 20' 01.2758"	N42° 14' 04.9862", W083° 19' 22.7426"	0.9929

Available DMEs by Waypoints			
Waypoint Before	Waypoint After	DME List	Suggested DMEs
KDTW:RW03R:DER	BESST	PSI, DXO, SVM, CRL	

DME DME Assessment Results for SNDRS3 path KDTW:RW03R:DER_BESST

User Data Files

#	File Name
None	

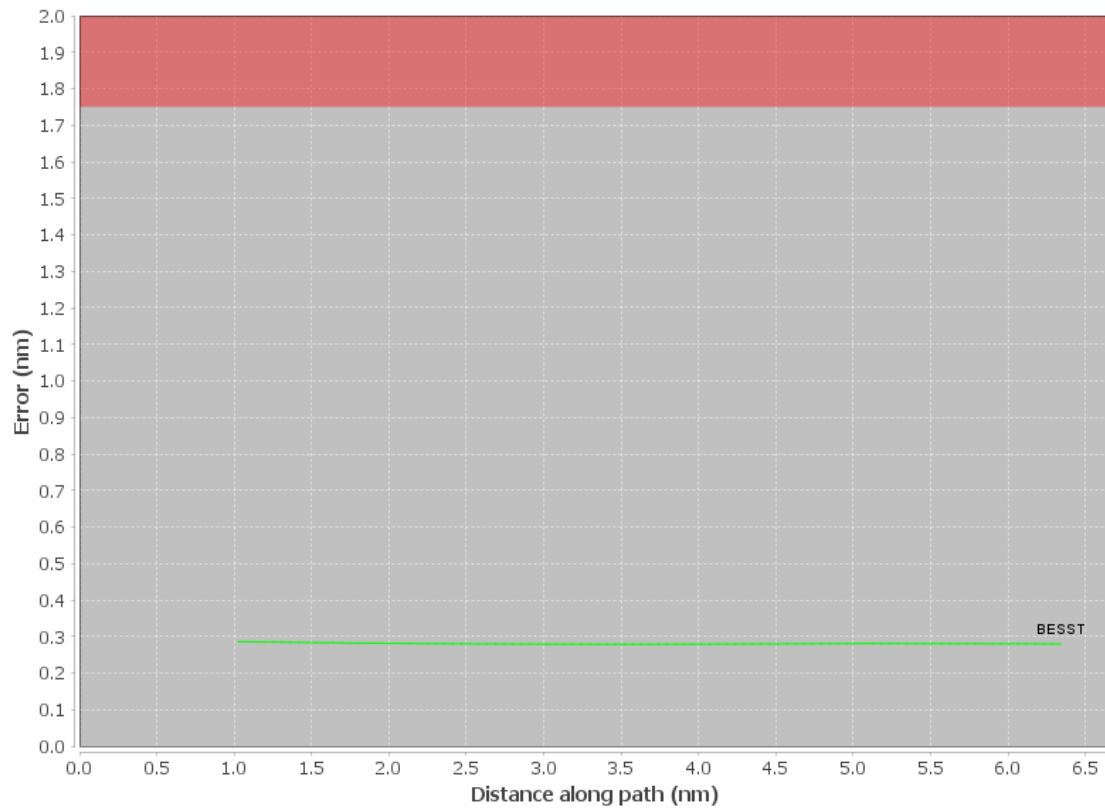
None

User DMEs

#	Name	Lat/Lon	MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	LFD FAA 698114-4 LFD [IFPA]	N42° 03' 44.9620", W084° 45' 54.4770"	5.0 W	40	1040	111.2	LFD FAA 698114-4	
ESV:		Bearing [True]: 92.0° to 130.0° Bearing [Mag]: 97.0° to 135.0°				Arc Distance: Out to 59.0 NM Altitude: 4000.0 to 20000.0 ft		
2	JXN FAA 701964-16 JXN [IFPA]	N42° 15' 33.2631", W084° 27' 30.7776"	0.0 E	130	994	null	JXN FAA 701964-16	
ESV:		Bearing [True]: 100.0° to 111.0° Bearing [Mag]: 100.0° to 111.0°				Arc Distance: Out to 61.0 NM Altitude: 3900.0 to 9000.0 ft		

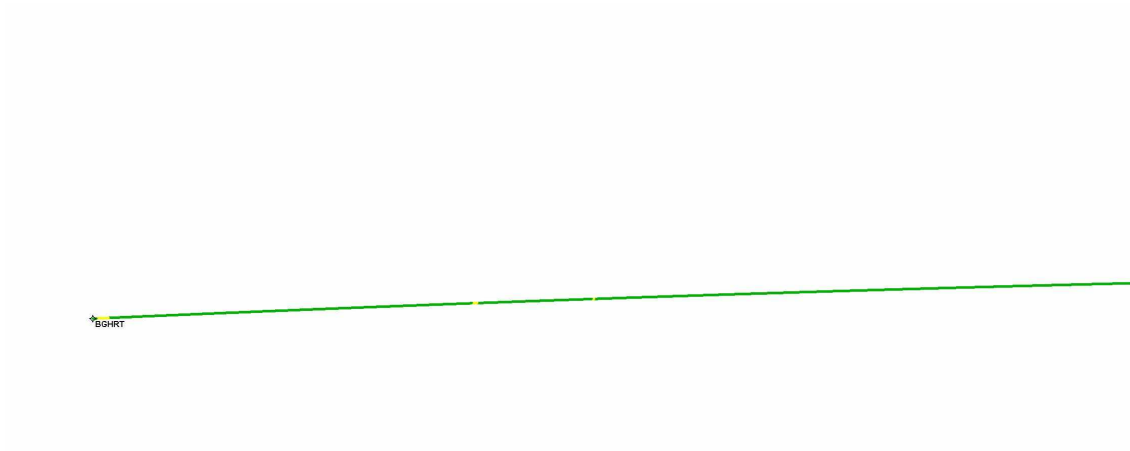
DME DME Assessment Results for SNDRS3 path KDTW:RW03R:DER_BESST

DME Error



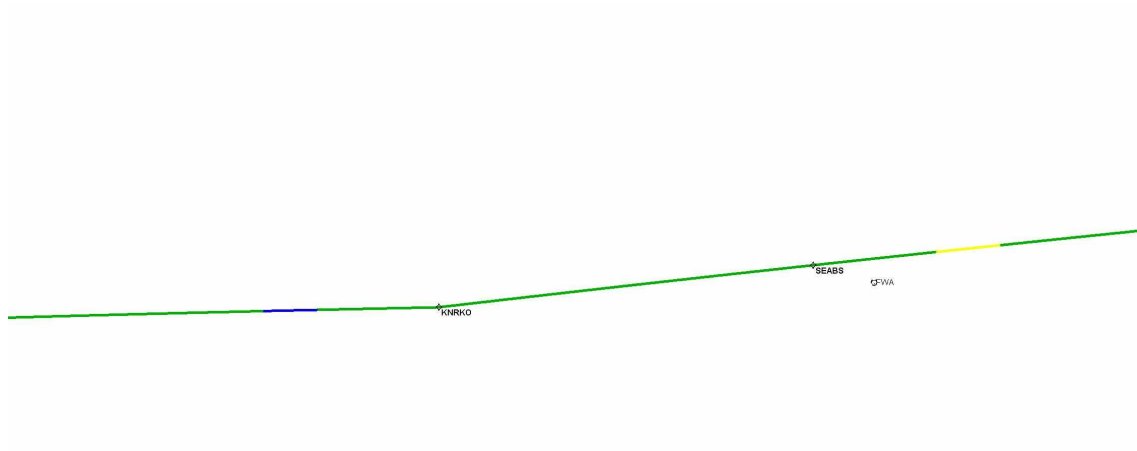
DME DME Assessment Results for SNDRS3 path KDTW:RW03R:DER_BESST

Graphic Depiction 1



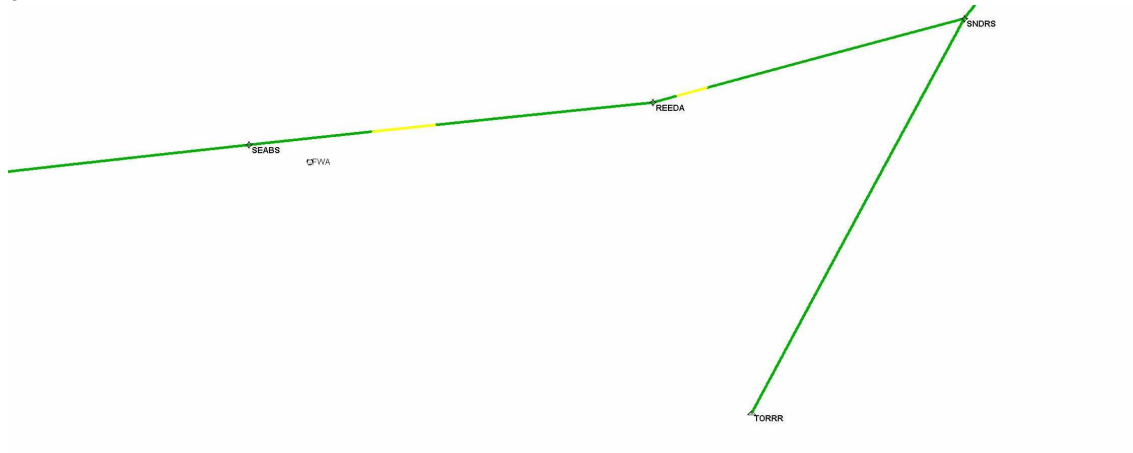
DME DME Assessment Results for SNDRS3 path KDTW:RW03R:DER_BESST

Graphic Depiction 2



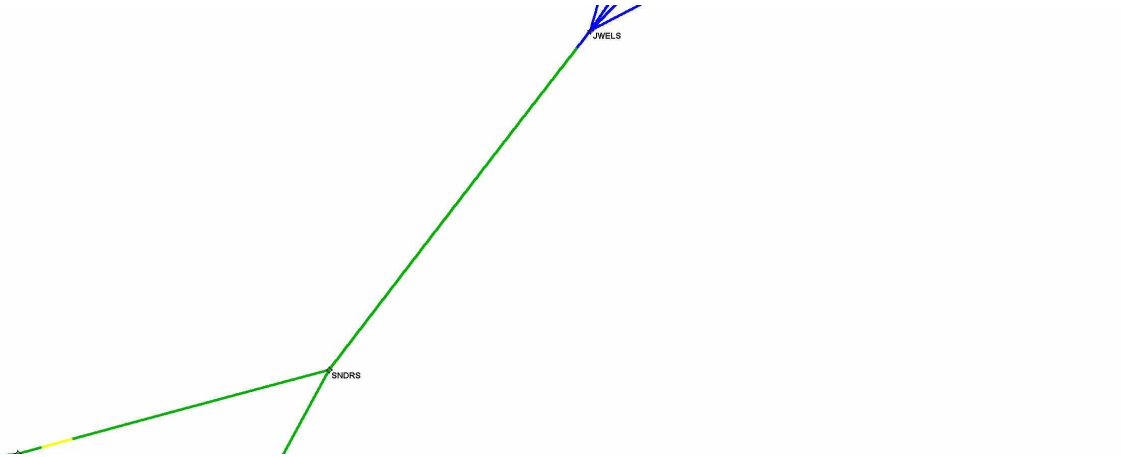
DME DME Assessment Results for SNDRS3 path KDTW:RW03R:DER_BESST

Graphic Depiction 3



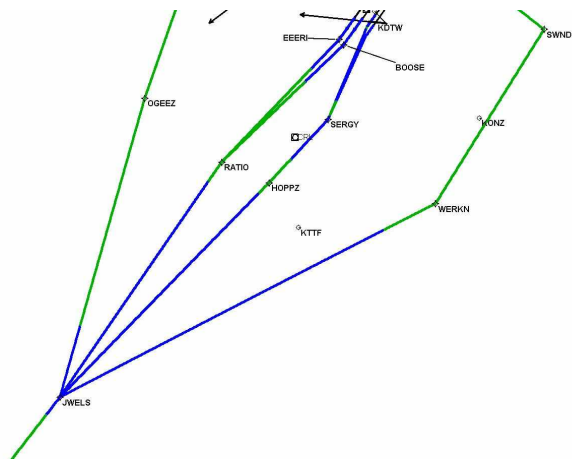
DME DME Assessment Results for SNDRS3 path KDTW:RW03R:DER_BESST

Graphic Depiction 4



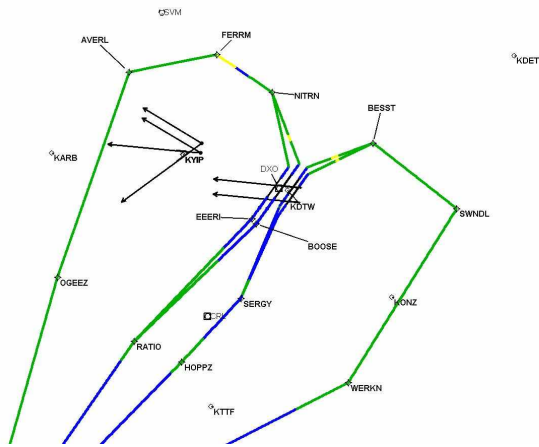
DME DME Assessment Results for SNDRS3 path KDTW:RW03R:DER_BESST

Graphic Depiction 5



DME DME Assessment Results for SNDRS3 path KDTW:RW03R:DER_BESST

Graphic Depiction 6



DME DME Assessment Results for SNDRS3 path KDTW:RW04L:DER_BGHRT

Results Summary	
Flyability:	Completed
DME/DME:	Completed - No Critical DMEs
Name:	Jose G-CTR Medina
Project File:	C:\Users\Jose G-CTR Medina\OneDrive - Federal Aviation Administration\Documents\01. Projects\DME EVALUATIONS\KDTW 20230125\DME Screens\Submitted\New DMEs\Possible solutions\KDTW SNDRS DME\KDTW SNDRS3 DME(2) 20240105.tgs
Output File:	C:\Users\Jose G-CTR Medina\OneDrive - Federal Aviation Administration\Documents\01. Projects\DME EVALUATIONS\KDTW 20230125\DME Screens\Submitted\New DMEs\Possible solutions\KDTW SNDRS DME\KDTW [IFPA] SNDRS3 20240116_0709 CST\KDTW-RW04L- DER_BGHRT\KDTW SNDRS3 SID RW04L BGHRT 20240116_0709 CST.pdf
Procedure Name:	SNDRS3
Software: DmeDmePlugin:	7.2.1
Date/Time:	01/16/2024 07:09 CST
Databases:	DTED LEVEL 0 MAX

Failures
No Failures

Warnings
No Warnings

Informational
No Informational

Notes For Flight Check
None

Flight Plan							
Name	Type	Lat/Lon	Altitude (ft)	VNAV Mode	Ground Speed (kts)	Turn Type	Leg Type
KDTW:RW04L:DER	WP	N42° 13' 34.4821", W083° 21' 58.6115"	642.1	VNAV	130	FLY_BY	TF
NITRN	WP	N42° 19' 43.9500", W083° 23' 52.2800"	2500	VNAV	230	FLY_BY	TF
FERRM	WP	N42° 21' 58.0900", W083° 29' 45.6200"	3481.1	VNAV	230	FLY_BY	TF
AVERL	WP	N42° 19' 55.5400", W083° 38' 05.4800"	4000	VNAV	230	FLY_BY	TF
OGEEZ	WP	N42° 04' 23.5500", W083° 42' 40.0400"	4000	VNAV	230	FLY_BY	TF
JWELS	WP	N41° 41' 56.6200", W083° 47' 23.0000"	3000	VNAV	230	FLY_BY	TF
SNDRS	WP	N41° 14' 59.9600", W084° 08' 54.4400"	8000	VNAV	230	FLY_BY	TF
REEDA	WP	N41° 06' 08.5700", W084° 38' 22.8300"	8000	VNAV	230	FLY_BY	TF
SEABS	WP	N40° 59' 28.3000", W085° 17' 27.2800"	8000	VNAV	230	FLY_BY	TF
KNRKO	WP	N40° 53' 05.2200", W085° 53' 36.9500"	8000	VNAV	230	FLY_BY	TF
BGHRT	WP	N40° 39' 00.0000", W087° 56' 00.0000"	8000	VNAV	230	FLY_BY	TF
Climb Gradient: 500.0 ft/NM up to 1146.0 ft MSL 200.0 ft/NM							

DME DME Assessment Results for SNDRS3 path KDTW:RW04L:DER_BGHRT

Flyability	
Flight Type:	SID
Selected Airport:	KDTW [IFPA]
Climb Gradient:	500.0 ft/NM up to 1146.0 ft MSL 200.0 ft/NM
Speeds:	130 at the Runway DER
	145 at the end of the VA or VI leg
	200 Ground Speed to 11000 FT
	240 Ground Speed to 18000 FT
	260 Ground Speed to 24000 FT
	340 Ground Speed above 24000 FT
Descent During a Turn:	Allowed
VNAV Mode:	Flight Plan

DME/DME	
RNP:	RNP 2
Flight Mode:	Manual
Line of Sight (DTED Level 0 Max):	Evaluated
Inertial Drift:	Enabled
Initial Drift:	0.558 NM
INS Drift Rate:	8.0 NM/Hour
Range Mode:	OSV
RNP Edges:	Evaluated
Min DME Range:	3.0 NM
DME Types:	DME, VOR-DME, VORTAC
DME Include Angles:	30 to 150
Critical DMEs:	Allowed
DoD Facilities:	Not included
Foreign Facilities:	Not included
High DMEs:	Included
Low DMEs:	Included
Terminal DMEs:	Included
Flight Check DMEs:	Not selected
Higher Altitudes:	Not Evaluated
Near Maximum Altitude:	Not Evaluated
Automatic ESVs:	Not enabled
Disabled DMEs:	None

DME DME Assessment Results for SNDRS3 path KDTW:RW04L:DER_BGHRT

DME/DME (Continued)										
DMEs Used										
#	Name	Lat/Lon	MAGVAR	Range	Type	Source	Critical	Status	Time	Distance
1	OBK	N42° 13' 16.9555", W087° 57' 06.0134"	2.0 W	130	DH	IFPA	NO	Enabled	0.5 %	0.5 %
2	PSI	N42° 42' 03.0947", W083° 31' 57.9835"	-0.0 E	40	L	IFPA	NO	Enabled	10.3 %	10.3 %
3	DXO	N42° 12' 47.2904", W083° 21' 59.9878"	6.0 W	130	H	IFPA	NO	Enabled	16.4 %	16.5 %
4	MZZ	N40° 29' 35.9904", W085° 40' 45.3000"	3.0 W	40	L	IFPA	NO	Enabled	17.7 %	17.8 %
5	LFD	N42° 03' 44.9620", W084° 45' 54.4770"	5.0 W	40	L	IFPA	NO	Enabled	2.3 %	2.3 %
6	CRL	N42° 02' 52.8956", W083° 27' 27.2625"	3.0 W	130	DH	IFPA	NO	Enabled	46.8 %	46.8 %
7	JXN	N42° 15' 33.2631", W084° 27' 30.7776"	0.0 E	130	DH	IFPA	NO	Enabled	50.2 %	50.5 %
8	IKK	N41° 04' 27.7626", W087° 51' 00.5883"	0.0 E	40	L	IFPA	NO	Enabled	13.6 %	13.6 %
9	EON	N41° 16' 10.6765", W087° 47' 27.7925"	2.0 E	40	L	IFPA	NO	Enabled	4.3 %	4.4 %
10	FNT	N42° 58' 00.3594", W083° 44' 49.1561"	6.0 W	130	H	IFPA	NO	Enabled	0.6 %	0.7 %
11	OXI	N41° 19' 19.4116", W086° 38' 57.4387"	0.0 E	130	DH	IFPA	NO	Enabled	55.1 %	55.4 %
12	BVT	N40° 33' 22.2178", W087° 04' 09.7481"	1.0 E	130	H	IFPA	NO	Enabled	28 %	28.2 %
13	FBC	N40° 57' 19.2018", W083° 45' 21.6886"	2.0 W	40	L	IFPA	NO	Enabled	16.6 %	16.7 %
14	RBS	N40° 34' 54.1250", W088° 09' 51.3640"	2.0 E	40	L	IFPA	NO	Enabled	10.9 %	10.9 %
15	DJB	N41° 21' 29.0339", W082° 09' 43.0873"	5.0 W	130	DH	IFPA	NO	Enabled	5.7 %	5.7 %
16	SHB	N39° 37' 57.1525", W085° 49' 27.5388"	1.0 E	130	DH	IFPA	NO	Enabled	36.6 %	36.8 %
17	SVM	N42° 24' 31.1055", W083° 35' 38.0455"	3.0 W	40	L	IFPA	NO	Enabled	16.4 %	16.3 %
18	PNT	N40° 49' 16.3220", W088° 44' 00.6330"	3.0 E	40	L	IFPA	NO	Enabled	0.5 %	0.5 %
19	FWA	N40° 58' 44.6315", W085° 11' 17.0092"	6.0 W	130	H	IFPA	NO	Enabled	26 %	26.1 %

DME DME Assessment Results for SNDRS3 path KDTW:RW04L:DER_BGHRT

Flight Check DME Selection						
Distance [NM]	Selected DMEs					Alternate
0.0						
1.0	CRL	SVM				
2.4	CRL	SVM	DXO			
2.8	CRL	SVM				
5.3	CRL	SVM	PSI			
7.4	CRL	SVM				
8.7						
9.9	PSI	JXN	CRL	FNT	DXO	SVM
11.6	CRL	JXN	PSI	DXO	SVM	
11.9	CRL	JXN	PSI	DXO		
17.9	SVM	DXO	CRL	JXN	PSI	
35.1	JXN	SVM	CRL	DXO		
51.2						
58.2	CRL	JXN	DXO			
60.3	CRL	JXN				
61.7	LFD	CRL	JXN			
65.9	LFD	CRL	JXN	FBC		
67.8	CRL	JXN	FBC			
76.7	DJB	JXN	CRL	FBC		
91.9	CRL	FBC	JXN			
98.3	CRL	FBC	JXN	FWA		
107.7	JXN	FWA	CRL			
107.8	JXN	FBC	FWA	CRL	OXI	
110.2	JXN	FWA	OXI	CRL		
127.2	JXN	OXI	CRL			
128.3	JXN	OXI	SHB	FWA	CRL	
133.1	JXN	OXI	SHB			
138.9	MZZ	OXI	JXN	SHB		
142.0	MZZ	OXI	SHB	JXN	FWA	
150.5	MZZ	OXI	SHB	FWA		
177.7	SHB	OXI				
179.5						
183.6	MZZ	SHB				
189.5	BVT	OXI	SHB	MZZ		
192.1	BVT	OXI	SHB			
226.8	IKK	OXI	SHB	BVT		
227.0	SHB	OXI	BVT			
228.5	IKK	OXI	SHB	BVT		
229.9	IKK	OXI	BVT			
235.6	IKK	OXI	BVT	EON	RBS	OBK
236.0	IKK	OXI	BVT	RBS		
246.9	RBS	EON	IKK	OXI	BVT	
257.3	RBS	IKK	BVT	OXI		
263.3	EON	BVT	IKK	PNT	RBS	OBK
264.2	IKK	PNT	RBS	OXI		

Inertial Drift Segments			
#	Start Location	End Location	Length [NM]
1	N42° 13' 36.3771", W083° 21' 57.2160"	N42° 14' 25.6460", W083° 21' 20.9240"	0.9358
2	N42° 20' 41.4757", W083° 26' 23.6603"	N42° 21' 12.8299", W083° 27' 46.2637"	1.1467
3	N41° 47' 18.2440", W083° 46' 15.7387"	N41° 40' 34.6763", W083° 48' 28.9707"	7.0203
4	N40° 51' 49.4050", W086° 05' 27.0432"	N40° 51' 14.8380", W086° 10' 46.9374"	4.0862

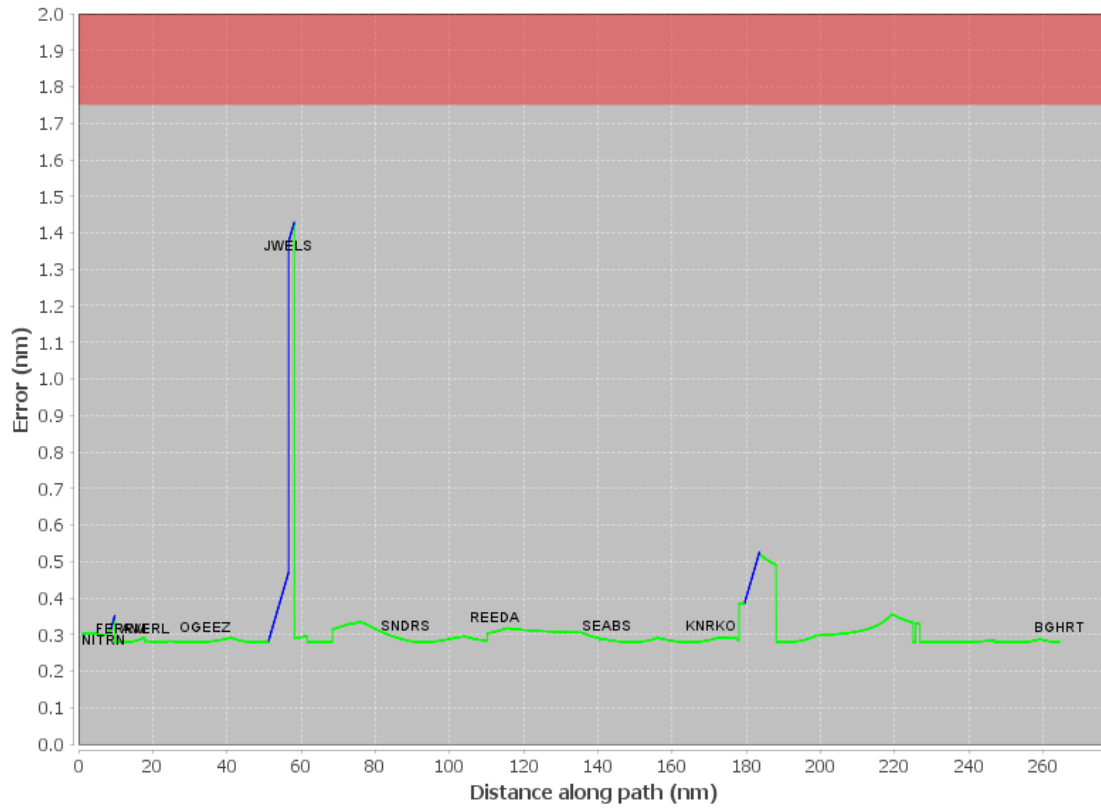
DME DME Assessment Results for SNDRS3 path KDTW:RW04L:DER_BGHRT

Available DMEs by Waypoints			
Waypoint Before	Waypoint After	DME List	Suggested DMEs
KDTW:RW04L:DER	NITRN	PSI, DXO, SVM, CRL	
NITRN	FERRM	JXN, PSI, DXO, SVM, CRL, FNT	
FERRM	AVERL	JXN, PSI, DXO, SVM, CRL	
AVERL	OGEEZ	JXN, PSI, DXO, SVM, CRL, FNT	
OGEEZ	JWELS	JXN, PSI, DXO, SVM, CRL	
JWELS	SNDRS	JXN, FBC, DXO, LFD, CRL, DJB	
SNDRS	REEDA	JXN, FWA, OXI, FBC, CRL, DJB	
REEDA	SEABS	JXN, OXI, FWA, CRL, SHB, MZZ	
SEABS	KNRKO	OXI, FWA, JXN, MZZ, SHB	
KNRKO	BGHRT	FWA, OXI, BVT, RBS, EON, PNT, IKK, OBK, MZZ, SHB	

User Data Files								
#	File Name							
None								
User DMEs								
#	Name	Lat/Lon	MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	LFD FAA 698114-4 LFD [IFPA]	N42° 03' 44.9620", W084° 45' 54.4770"	5.0 W	40	1040	111.2	LFD FAA 698114-4	
ESV:		Bearing [True]: 92.0° to 130.0° Bearing [Mag]: 97.0° to 135.0°				Arc Distance: Out to 59.0 NM Altitude: 4000.0 to 20000.0 ft		
2	JXN FAA 701964-16 JXN [IFPA]	N42° 15' 33.2631", W084° 27' 30.7776"	0.0 E	130	994	null	JXN FAA 701964-16	
ESV:		Bearing [True]: 100.0° to 111.0° Bearing [Mag]: 100.0° to 111.0°				Arc Distance: Out to 61.0 NM Altitude: 3900.0 to 9000.0 ft		

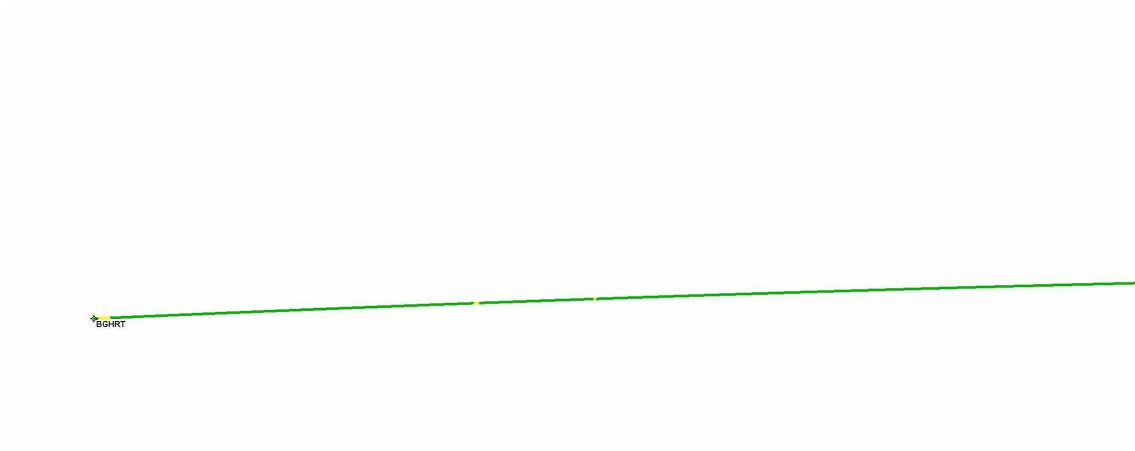
DME DME Assessment Results for SNDRS3 path KDTW:RW04L:DER_BGHRT

DME Error



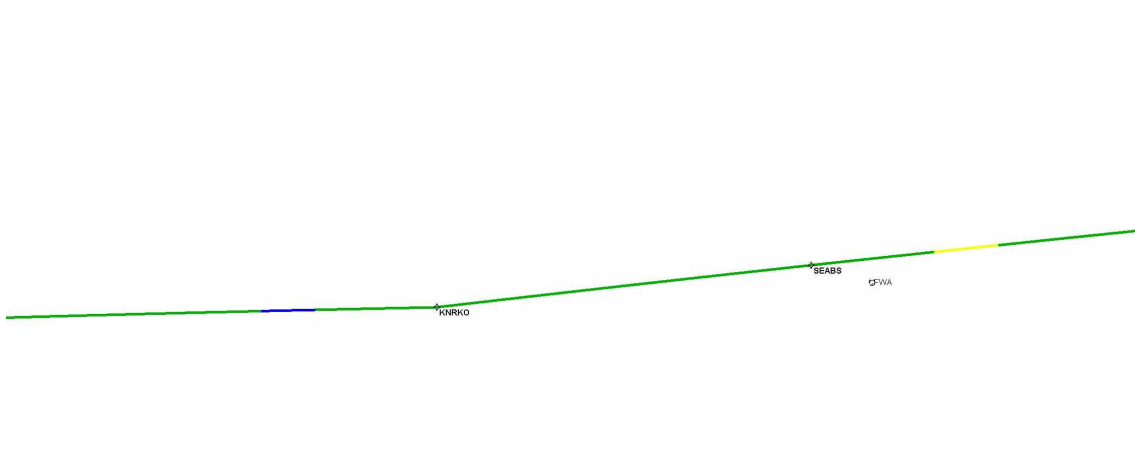
DME DME Assessment Results for SNDRS3 path KDTW:RW04L:DER_BGHRT

Graphic Depiction 1



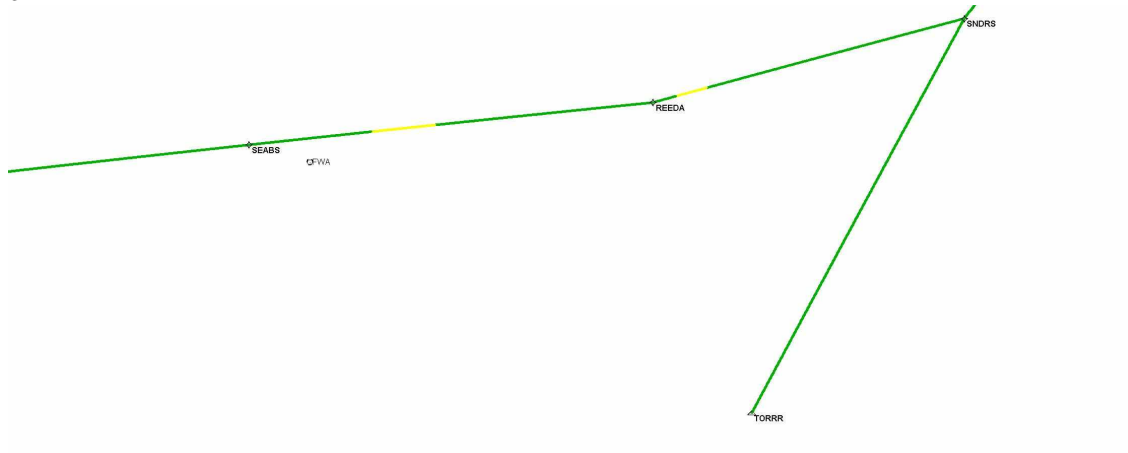
DME DME Assessment Results for SNDRS3 path KDTW:RW04L:DER_BGHRT

Graphic Depiction 2



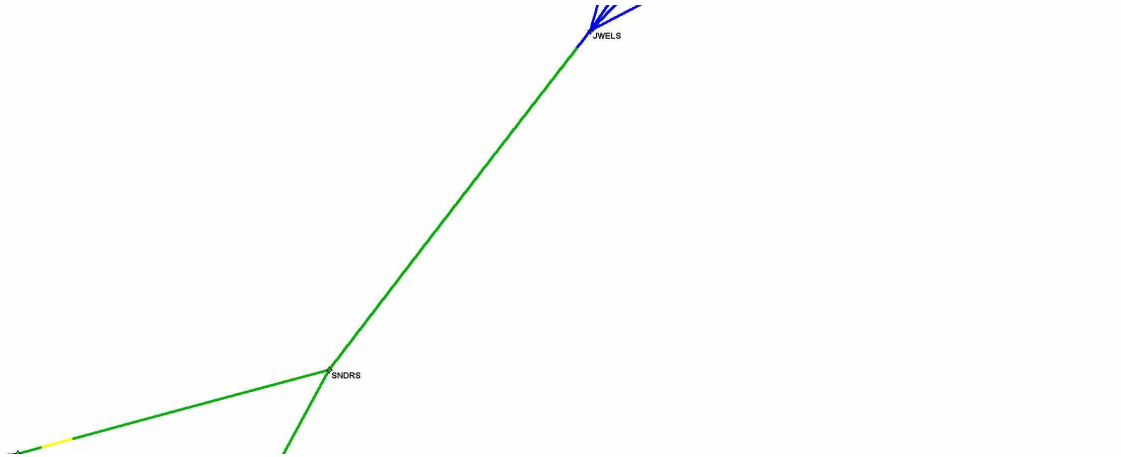
DME DME Assessment Results for SNDRS3 path KDTW:RW04L:DER_BGHRT

Graphic Depiction 3



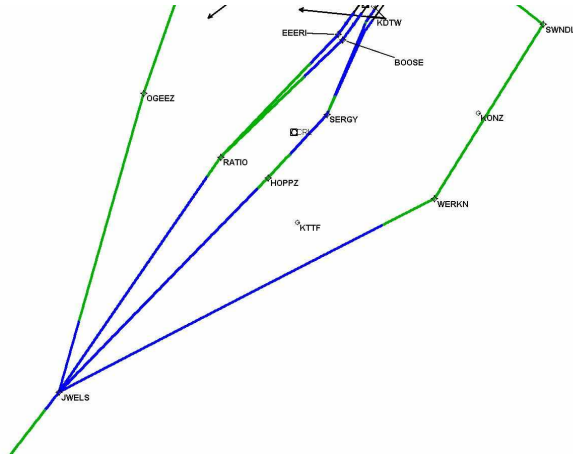
DME DME Assessment Results for SNDRS3 path KDTW:RW04L:DER_BGHRT

Graphic Depiction 4



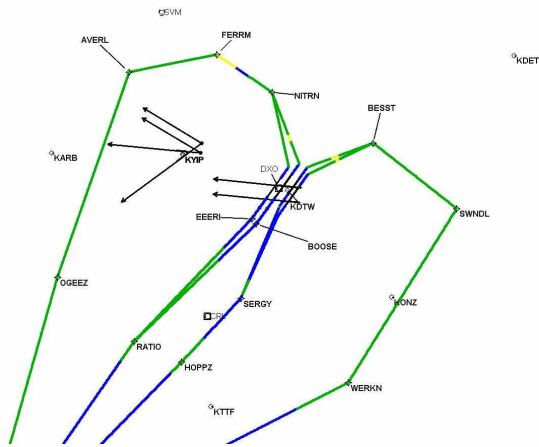
DME DME Assessment Results for SNDRS3 path KDTW:RW04L:DER_BGHRT

Graphic Depiction 5



DME DME Assessment Results for SNDRS3 path KDTW:RW04L:DER_BGHRT

Graphic Depiction 6



DME DME Assessment Results for SNDRS3 path KDTW:RW04R:DER_NITRN

Results Summary

Flyability:	Completed
DME/DME:	Completed - No Critical DMEs
Name:	Jose G-CTR Medina
Project File:	C:\Users\Jose G-CTR Medina\OneDrive - Federal Aviation Administration\Documents\01. Projects\DME EVALUATIONS\KDTW 20230125\DME Screens\Submitted\New DMEs\Possible solutions\KDTW SNDRS DME\KDTW SNDRS3 DME(2) 20240105.tgs
Output File:	C:\Users\Jose G-CTR Medina\OneDrive - Federal Aviation Administration\Documents\01. Projects\DME EVALUATIONS\KDTW 20230125\DME Screens\Submitted\New DMEs\Possible solutions\KDTW SNDRS DME\KDTW [IFPA] SNDRS3 20240116_0709 CST\KDTW-RW04R- DER_NITRN\KDTW SNDRS3 SID RW04R NITRN 20240116_0709 CST.pdf
Procedure Name:	SNDRS3
Software: DmeDmePlugin:	7.2.1
Date/Time:	01/16/2024 07:09 CST
Databases:	DTED LEVEL 0 MAX

Failures

No Failures

Warnings

No Warnings

Informational

No Informational

Notes For Flight Check

None

Flight Plan

Name	Type	Lat/Lon	Altitude (ft)	VNAV Mode	Ground Speed (kts)	Turn Type	Leg Type
KDTW:RW04R:DER	WP	N42° 13' 52.3644", W083° 20' 59.9655"	635.8	VNAV	130	FLY_BY	TF
NITRN	WP	N42° 19' 43.9500", W083° 23' 52.2800"	2500	VNAV	230	FLY_BY	TF

Climb Gradient:
500.0 ft/NM up to 1146.0 ft MSL
200.0 ft/NM

Flyability

Flight Type:	SID
Selected Airport:	KDTW [IFPA]
Climb Gradient:	500.0 ft/NM up to 1146.0 ft MSL 200.0 ft/NM
Speeds:	130 at the Runway DER 145 at the end of the VA or VI leg 200 Ground Speed to 11000 FT 240 Ground Speed to 18000 FT 260 Ground Speed to 24000 FT 340 Ground Speed above 24000 FT
Descent During a Turn:	Allowed
VNAV Mode:	Flight Plan

DME DME Assessment Results for SNDRS3 path KDTW:RW04R:DER_NITRN

DME/DME	
RNP:	RNP 2
Flight Mode:	Manual
Line of Sight (DTED Level 0 Max):	Evaluated
Inertial Drift:	Enabled
Initial Drift:	0.558 NM
INS Drift Rate:	8.0 NM/Hour
Range Mode:	OSV
RNP Edges:	Evaluated
Min DME Range:	3.0 NM
DME Types:	DME, VOR-DME, VORTAC
DME Include Angles:	30 to 150
Critical DMEs:	Allowed
DoD Facilities:	Not included
Foreign Facilities:	Not included
High DMEs:	Included
Low DMEs:	Included
Terminal DMEs:	Included
Flight Check DMEs:	Not selected
Higher Altitudes:	Not Evaluated
Near Maximum Altitude:	Not Evaluated
Automatic ESVs:	Not enabled
Disabled DMEs:	None

DME/DME (Continued)										
DMEs Used										
#	Name	Lat/Lon	MAGVAR	Range	Type	Source	Critical	Status	Time	Distance
1	PSI	N42° 42' 03.0947", W083° 31' 57.9835"	-0.0 E	40	L	IFPA	NO	Enabled	19.9 %	22.4 %
2	DXO	N42° 12' 47.2904", W083° 21' 59.9878"	6.0 W	130	H	IFPA	NO	Enabled	11.7 %	12.4 %
3	CRL	N42° 02' 52.8956", W083° 27' 27.2625"	3.0 W	130	DH	IFPA	NO	Enabled	79.2 %	85.1 %
4	SVM	N42° 24' 31.1055", W083° 35' 38.0455"	3.0 W	40	L	IFPA	NO	Enabled	79.2 %	85.1 %

Flight Check DME Selection						
Distance [NM]	Selected DMEs					Alternate
0.0						
1.0	CRL	SVM				
2.1	CRL	SVM	DXO			
2.6	CRL	SVM				
2.8	CRL	SVM	DXO	PSI		
3.3	CRL	SVM				
5.6	CRL	SVM	PSI			

Inertial Drift Segments			
#	Start Location	End Location	Length [NM]
1	N42° 13' 54.2167", W083° 20' 58.6004"	N42° 14' 44.2257", W083° 20' 21.7343"	0.95

Available DMEs by Waypoints			
Waypoint Before	Waypoint After	DME List	Suggested DMEs
KDTW:RW04R:DER	NITRN	PSI, DXO, SVM, CRL	

DME DME Assessment Results for SNDRS3 path KDTW:RW04R:DER_NITRN

User Data Files

#	File Name
None	

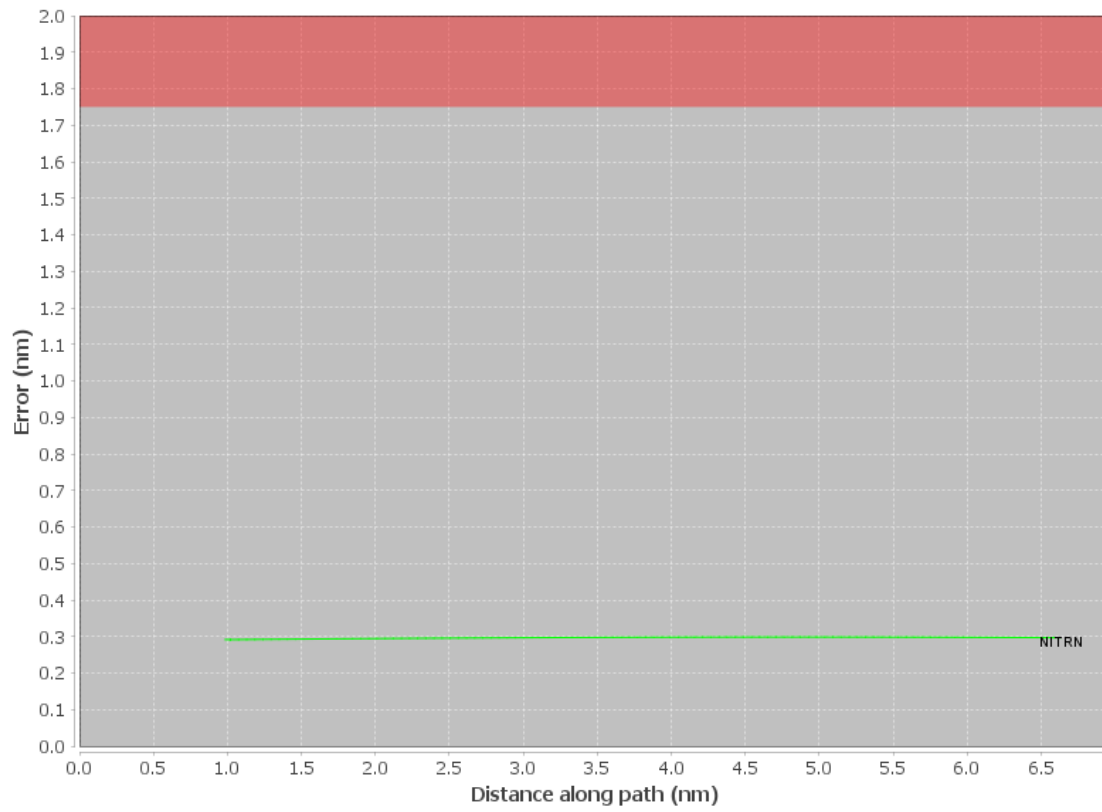
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User DMEs

#	Name	Lat/Lon	MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	LFD FAA 698114-4 LFD [IFPA]	N42° 03' 44.9620", W084° 45' 54.4770"	5.0 W	40	1040	111.2	LFD FAA 698114-4	
ESV:		Bearing [True]: 92.0° to 130.0° Bearing [Mag]: 97.0° to 135.0°				Arc Distance: Out to 59.0 NM Altitude: 4000.0 to 20000.0 ft		
2	JXN FAA 701964-16 JXN [IFPA]	N42° 15' 33.2631", W084° 27' 30.7776"	0.0 E	130	994	null	JXN FAA 701964-16	
ESV:		Bearing [True]: 100.0° to 111.0° Bearing [Mag]: 100.0° to 111.0°				Arc Distance: Out to 61.0 NM Altitude: 3900.0 to 9000.0 ft		

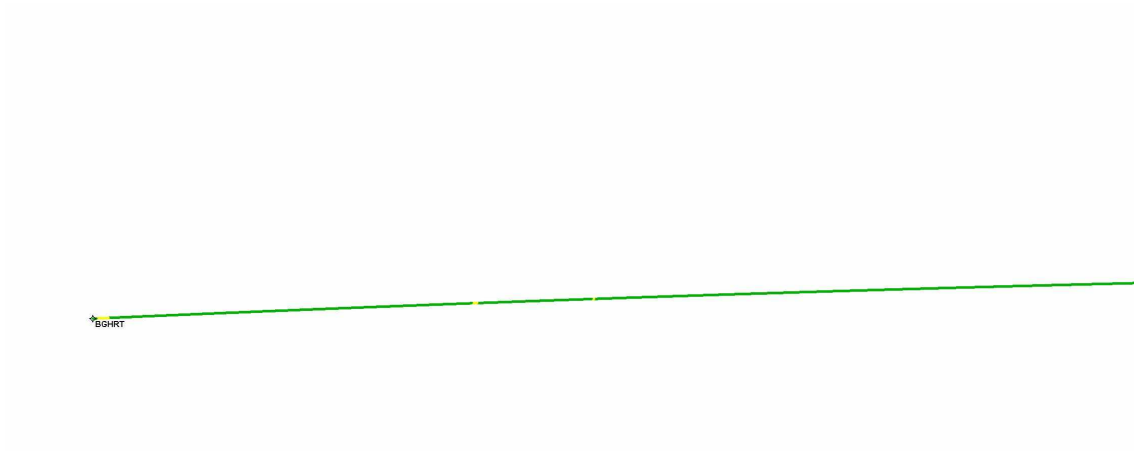
DME DME Assessment Results for SNDRS3 path KDTW:RW04R:DER_NITRN

DME Error



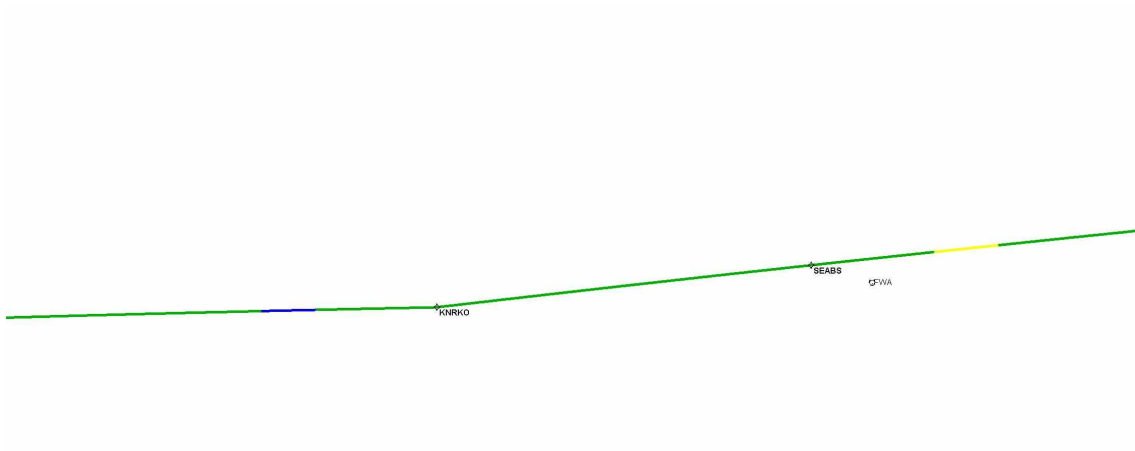
DME DME Assessment Results for SNDRS3 path KDTW:RW04R:DER_NITRN

Graphic Depiction 1



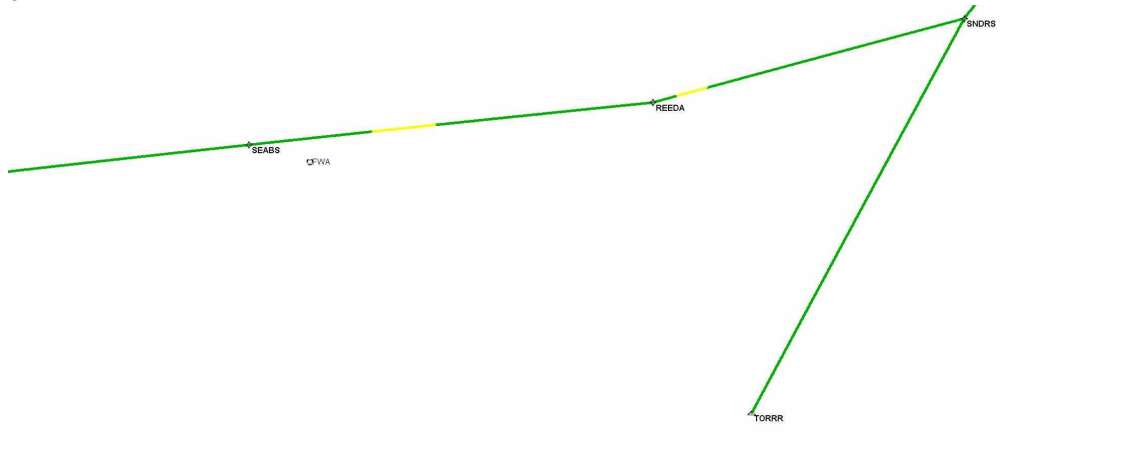
DME DME Assessment Results for SNDRS3 path KDTW:RW04R:DER_NITRN

Graphic Depiction 2



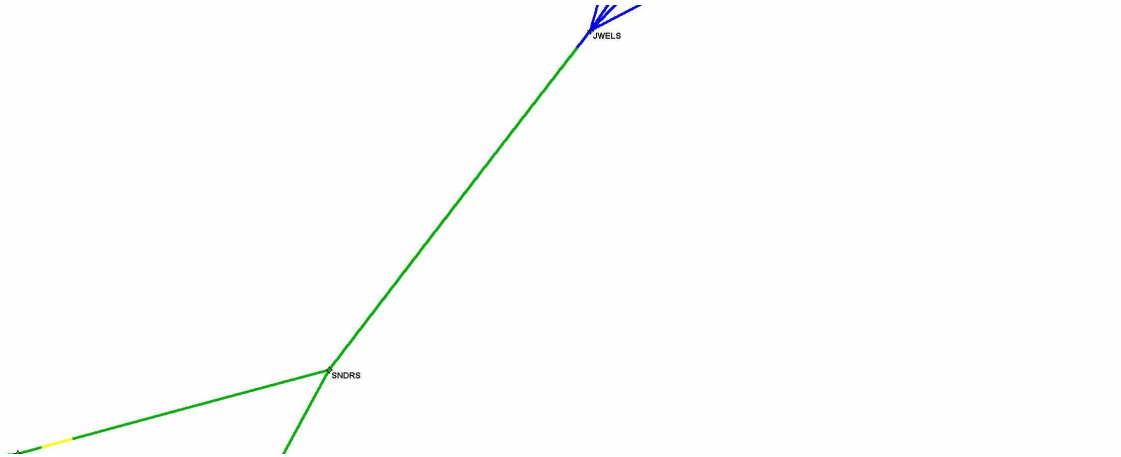
DME DME Assessment Results for SNDRS3 path KDTW:RW04R:DER_NITRN

Graphic Depiction 3



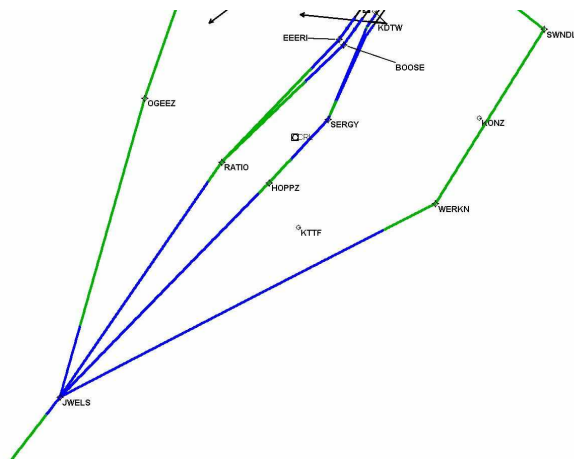
DME DME Assessment Results for SNDRS3 path KDTW:RW04R:DER_NITRN

Graphic Depiction 4



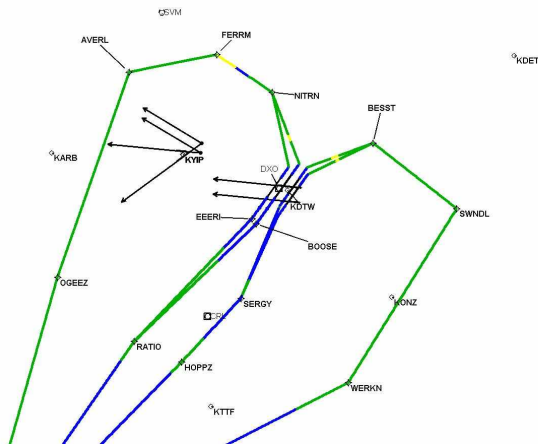
DME DME Assessment Results for SNDRS3 path KDTW:RW04R:DER_NITRN

Graphic Depiction 5



DME DME Assessment Results for SNDRS3 path KDTW:RW04R:DER_NITRN

Graphic Depiction 6



DME DME Assessment Results for SNDRS3 path KDTW:RW21L:DER_JWELS

Results Summary	
Flyability:	Completed
DME/DME:	Completed - No Critical DMEs
Name:	Jose G-CTR Medina
Project File:	C:\Users\Jose G-CTR Medina\OneDrive - Federal Aviation Administration\Documents\01. Projects\DME EVALUATIONS\KDTW 20230125\DME Screens\Submitted\New DMEs\Possible solutions\KDTW SNDRS DME\KDTW SNDRS3 DME(2) 20240105.tgs
Output File:	C:\Users\Jose G-CTR Medina\OneDrive - Federal Aviation Administration\Documents\01. Projects\DME EVALUATIONS\KDTW 20230125\DME Screens\Submitted\New DMEs\Possible solutions\KDTW SNDRS DME\KDTW [IFPA] SNDRS3 20240116_0709 CST\KDTW-RW21L- DER_JWELS\KDTW SNDRS3 SID RW21L JWELS 20240116_0709 CST.pdf
Procedure Name:	SNDRS3
Software: DmeDmePlugin:	7.2.1
Date/Time:	01/16/2024 07:09 CST
Databases:	DTED LEVEL 0 MAX

Failures
No Failures

Warnings
No Warnings

Informational
No Informational

Notes For Flight Check
None

Flight Plan							
Name	Type	Lat/Lon	Altitude (ft)	VNAV Mode	Ground Speed (kts)	Turn Type	Leg Type
KDTW:RW21L:DER	WP	N42° 11' 44.2115", W083° 21' 06.4868"	632.8	VNAV	130	FLY_BY	TF
SERGY	WP	N42° 04' 29.1700", W083° 24' 27.2900"	2620.6	VNAV	200	FLY_BY	TF
HOPPZ	WP	N41° 59' 21.2800", W083° 29' 28.9200"	3891	VNAV	200	FLY_BY	TF
JWELS	WP	N41° 41' 56.6200", W083° 47' 23.0000"	3000	VNAV	230	FLY_BY	TF
Climb Gradient: 500.0 ft/NM up to 1146.0 ft MSL 200.0 ft/NM							

Flyability	
Flight Type:	SID
Selected Airport:	KDTW [IFPA]
Climb Gradient:	500.0 ft/NM up to 1146.0 ft MSL 200.0 ft/NM
Speeds:	130 at the Runway DER 145 at the end of the VA or VI leg 200 Ground Speed to 11000 FT 240 Ground Speed to 18000 FT 260 Ground Speed to 24000 FT 340 Ground Speed above 24000 FT
Descent During a Turn:	Allowed
VNAV Mode:	Flight Plan

DME DME Assessment Results for SNDRS3 path KDTW:RW21L:DER_JWELS

DME/DME	
RNP:	RNP 2
Flight Mode:	Manual
Line of Sight (DTED Level 0 Max):	Evaluated
Inertial Drift:	Enabled
Initial Drift:	0.558 NM
INS Drift Rate:	8.0 NM/Hour
Range Mode:	OSV
RNP Edges:	Evaluated
Min DME Range:	3.0 NM
DME Types:	DME, VOR-DME, VORTAC
DME Include Angles:	30 to 150
Critical DMEs:	Allowed
DoD Facilities:	Not included
Foreign Facilities:	Not included
High DMEs:	Included
Low DMEs:	Included
Terminal DMEs:	Included
Flight Check DMEs:	Not selected
Higher Altitudes:	Not Evaluated
Near Maximum Altitude:	Not Evaluated
Automatic ESVs:	Not enabled
Disabled DMEs:	None

DME/DME (Continued)										
DMEs Used										
#	Name	Lat/Lon	MAGVAR	Range	Type	Source	Critical	Status	Time	Distance
1	DXO	N42° 12' 47.2904", W083° 21' 59.9878"	6.0 W	130	H	IFPA	NO	Enabled	12.6 %	12.8 %
2	CRL	N42° 02' 52.8956", W083° 27' 27.2625"	3.0 W	130	DH	IFPA	NO	Enabled	6.9 %	6.9 %
3	JXN	N42° 15' 33.2631", W084° 27' 30.7776"	0.0 E	130	DH	IFPA	NO	Enabled	9.4 %	9.5 %
4	SVM	N42° 24' 31.1055", W083° 35' 38.0455"	3.0 W	40	L	IFPA	NO	Enabled	9.4 %	9.5 %

Flight Check DME Selection						
Distance [NM]	Selected DMEs					Alternate
0.0						
6.2	CRL	DXO				
7.4						
11.7	JXN	DXO	SVM			
13.8	CRL	JXN	DXO	SVM		
15.1						

Inertial Drift Segments			
#	Start Location	End Location	Length [NM]
1	N42° 11' 42.3483", W083° 21' 07.8589"	N42° 05' 54.9017", W083° 23' 51.1072"	6.1477
2	N42° 04' 45.0465", W083° 24' 20.5915"	N42° 01' 16.4304", W083° 27' 36.2312"	4.2541
3	N41° 58' 28.5878", W083° 30' 23.3998"	N41° 41' 56.6200", W083° 47' 23.0000"	20.8432

Available DMEs by Waypoints			
Waypoint Before	Waypoint After	DME List	Suggested DMEs
KDTW:RW21L:DER	SERGY	DXO, CRL	
SERGY	HOPPZ	JXN, DXO, SVM, CRL	
HOPPZ	JWELS	JXN, DXO, SVM, CRL	

DME DME Assessment Results for SNDRS3 path KDTW:RW21L:DER_JWELS

User Data Files

#	File Name
None	

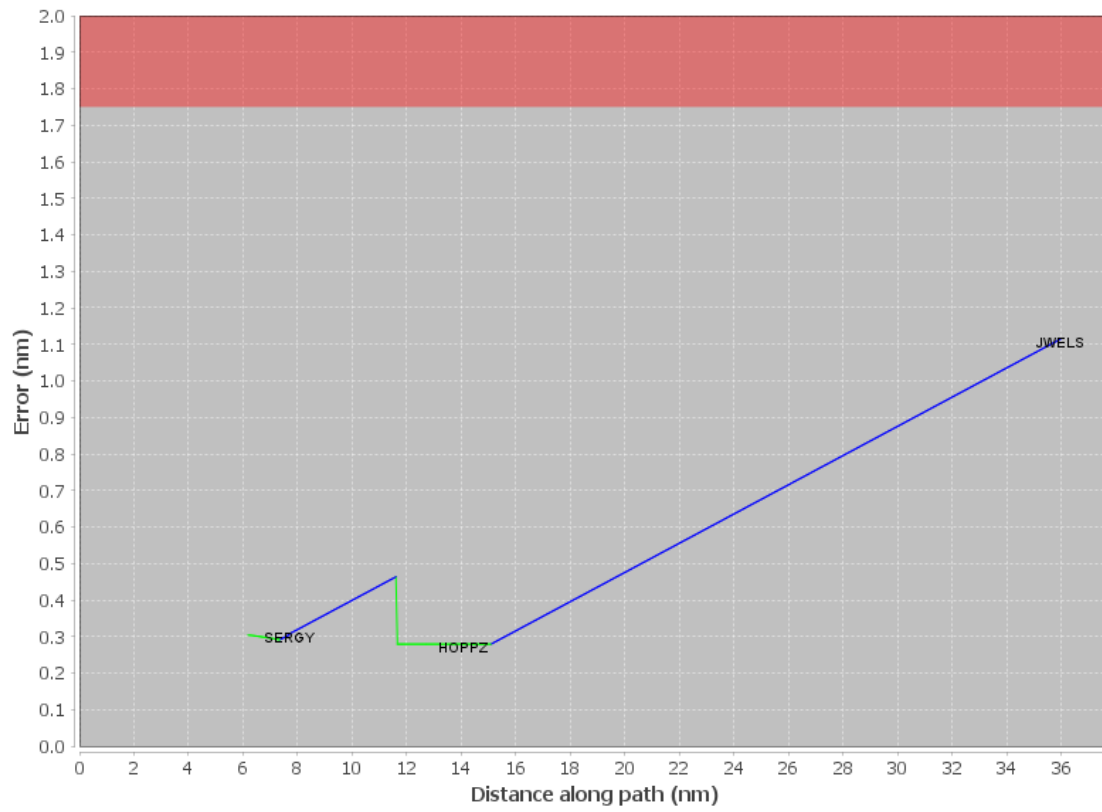
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User DMEs

#	Name	Lat/Lon	MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	LFD FAA 698114-4 LFD [IFPA]	N42° 03' 44.9620", W084° 45' 54.4770"	5.0 W	40	1040	111.2	LFD FAA 698114-4	
ESV:		Bearing [True]: 92.0° to 130.0° Bearing [Mag]: 97.0° to 135.0°				Arc Distance: Out to 59.0 NM Altitude: 4000.0 to 20000.0 ft		
2	JXN FAA 701964-16 JXN [IFPA]	N42° 15' 33.2631", W084° 27' 30.7776"	0.0 E	130	994	null	JXN FAA 701964-16	
ESV:		Bearing [True]: 100.0° to 111.0° Bearing [Mag]: 100.0° to 111.0°				Arc Distance: Out to 61.0 NM Altitude: 3900.0 to 9000.0 ft		

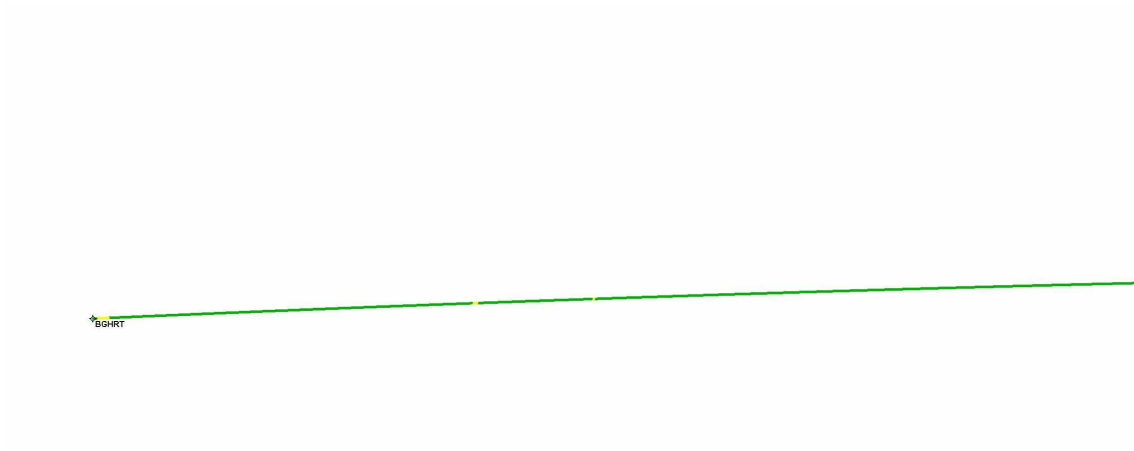
DME DME Assessment Results for SNDRS3 path KDTW:RW21L:DER_JWELS

DME Error



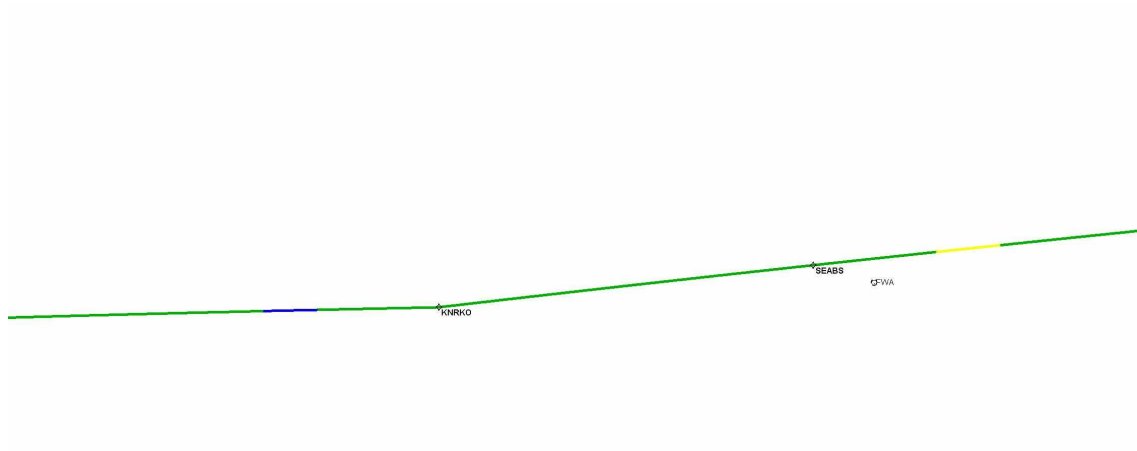
DME DME Assessment Results for SNDRS3 path KDTW:RW21L:DER_JWELS

Graphic Depiction 1



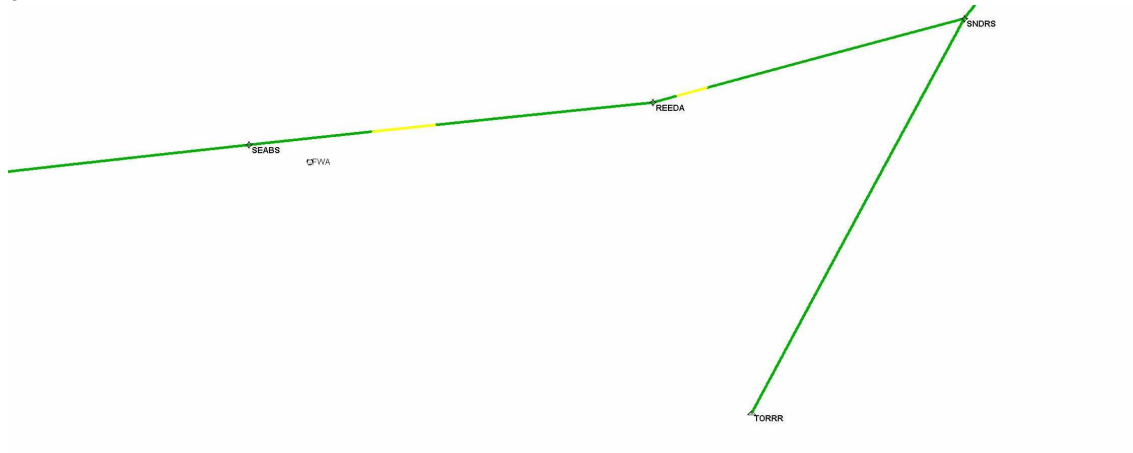
DME DME Assessment Results for SNDRS3 path KDTW:RW21L:DER_JWELS

Graphic Depiction 2



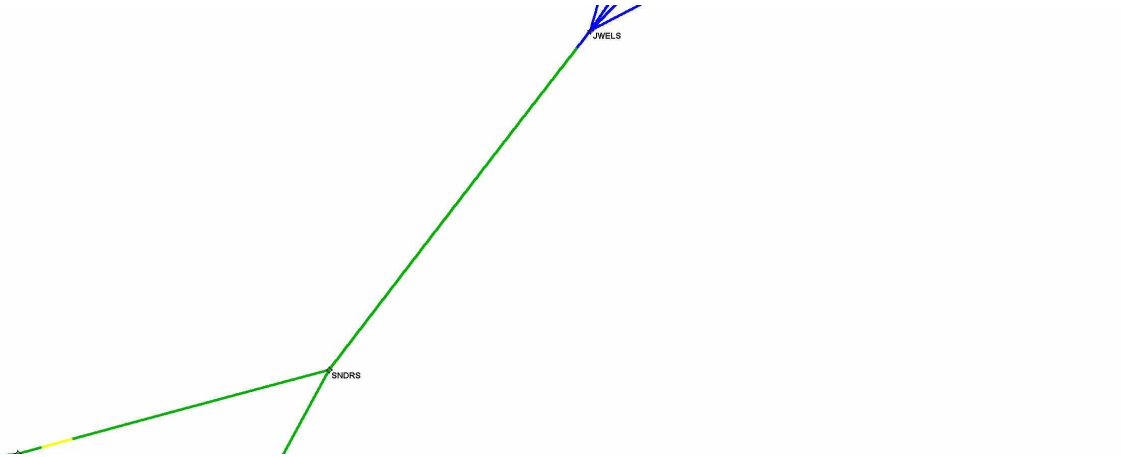
DME DME Assessment Results for SNDRS3 path KDTW:RW21L:DER_JWELS

Graphic Depiction 3



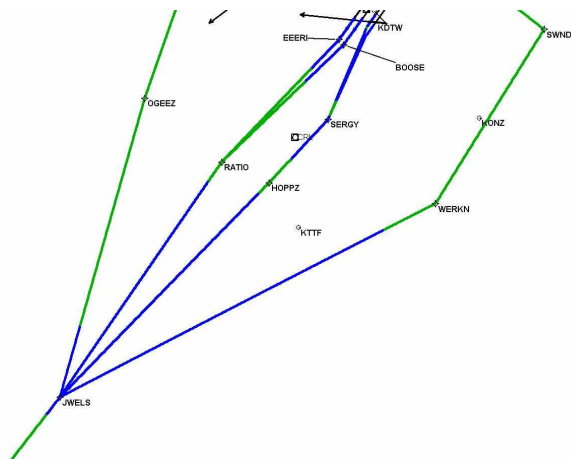
DME DME Assessment Results for SNDRS3 path KDTW:RW21L:DER_JWELS

Graphic Depiction 4



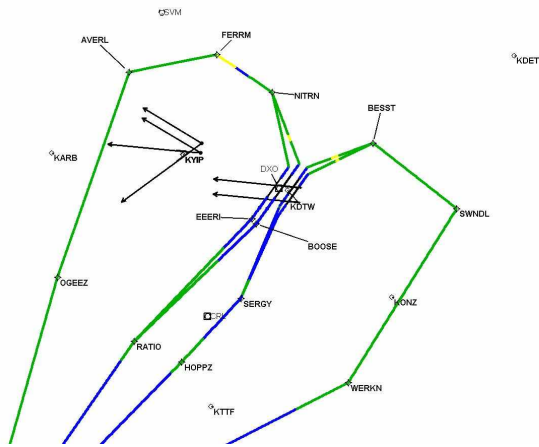
DME DME Assessment Results for SNDRS3 path KDTW:RW21L:DER_JWELS

Graphic Depiction 5



DME DME Assessment Results for SNDRS3 path KDTW:RW21L:DER_JWELS

Graphic Depiction 6



DME DME Assessment Results for SNDRS3 path KDTW:RW21R:DER_SERGY

Results Summary	
Flyability:	Completed
DME/DME:	Completed - No Critical DMEs
Name:	Jose G-CTR Medina
Project File:	C:\Users\Jose G-CTR Medina\OneDrive - Federal Aviation Administration\Documents\01. Projects\DME EVALUATIONS\KDTW 20230125\DME Screens\Submitted\New DMEs\Possible solutions\KDTW SNDRS DME\KDTW SNDRS3 DME(2) 20240105.tgs
Output File:	C:\Users\Jose G-CTR Medina\OneDrive - Federal Aviation Administration\Documents\01. Projects\DME EVALUATIONS\KDTW 20230125\DME Screens\Submitted\New DMEs\Possible solutions\KDTW SNDRS DME\KDTW [IFPA] SNDRS3 20240116_0709 CST\KDTW-RW21R-DER_SERGY\KDTW SNDRS3 SID RW21R SERGY 20240116_0709 CST.pdf
Procedure Name:	SNDRS3
Software: DmeDmePlugin:	7.2.1
Date/Time:	01/16/2024 07:09 CST
Databases:	DTED LEVEL 0 MAX

Failures
No Failures

Warnings
No Warnings

Informational
No Informational

Notes For Flight Check
None

Flight Plan							
Name	Type	Lat/Lon	Altitude (ft)	VNAV Mode	Ground Speed (kts)	Turn Type	Leg Type
KDTW:RW21R:DER	WP	N42° 12' 28.2081", W083° 21' 04.3881"	636.5	VNAV	130	FLY_BY	TF
SERGY	WP	N42° 04' 29.1700", W083° 24' 27.2900"	2620.6	VNAV	200	FLY_BY	TF
Climb Gradient: 500.0 ft/NM up to 1146.0 ft MSL 200.0 ft/NM							

Flyability	
Flight Type:	SID
Selected Airport:	KDTW [IFPA]
Climb Gradient:	500.0 ft/NM up to 1146.0 ft MSL 200.0 ft/NM
Speeds:	130 at the Runway DER
	145 at the end of the VA or VI leg
	200 Ground Speed to 11000 FT
	240 Ground Speed to 18000 FT
	260 Ground Speed to 24000 FT
	340 Ground Speed above 24000 FT
Descent During a Turn:	Allowed
VNAV Mode:	Flight Plan

DME DME Assessment Results for SNDRS3 path KDTW:RW21R:DER_SERGY

DME/DME	
RNP:	RNP 2
Flight Mode:	Manual
Line of Sight (DTED Level 0 Max):	Evaluated
Inertial Drift:	Enabled
Initial Drift:	0.558 NM
INS Drift Rate:	8.0 NM/Hour
Range Mode:	OSV
RNP Edges:	Evaluated
Min DME Range:	3.0 NM
DME Types:	DME, VOR-DME, VORTAC
DME Include Angles:	30 to 150
Critical DMEs:	Allowed
DoD Facilities:	Not included
Foreign Facilities:	Not included
High DMEs:	Included
Low DMEs:	Included
Terminal DMEs:	Included
Flight Check DMEs:	Not selected
Higher Altitudes:	Not Evaluated
Near Maximum Altitude:	Not Evaluated
Automatic ESVs:	Not enabled
Disabled DMEs:	None

DME/DME (Continued)										
DMEs Used										
#	Name	Lat/Lon	MAGVAR	Range	Type	Source	Critical	Status	Time	Distance
1	DXO	N42° 12' 47.2904", W083° 21' 59.9878"	6.0 W	130	H	IFPA	NO	Enabled	9.9 %	12 %
2	CRL	N42° 02' 52.8956", W083° 27' 27.2625"	3.0 W	130	DH	IFPA	NO	Enabled	11.9 %	13.9 %
3	SVM	N42° 24' 31.1055", W083° 35' 38.0455"	3.0 W	40	L	IFPA	NO	Enabled	2 %	1.9 %

Flight Check DME Selection						
Distance [NM]	Selected DMEs					Alternate
0.0						
1.1	CRL	SVM				
1.2						
7.1	CRL	DXO				
8.1						

Inertial Drift Segments			
#	Start Location	End Location	Length [NM]
1	N42° 12' 26.3583", W083° 21' 05.7509"	N42° 11' 34.4846", W083° 21' 43.9562"	0.985
2	N42° 11' 22.8650", W083° 21' 48.4269"	N42° 05' 45.8715", W083° 23' 57.8812"	5.8393
3	N42° 04' 45.4402", W083° 24' 21.0534"	N42° 04' 29.1700", W083° 24' 27.2900"	0.2819

Available DMEs by Waypoints			
Waypoint Before	Waypoint After	DME List	Suggested DMEs
KDTW:RW21R:DER	SERGY	DXO, SVM, CRL	

DME DME Assessment Results for SNDRS3 path KDTW:RW21R:DER_SERGY

User Data Files

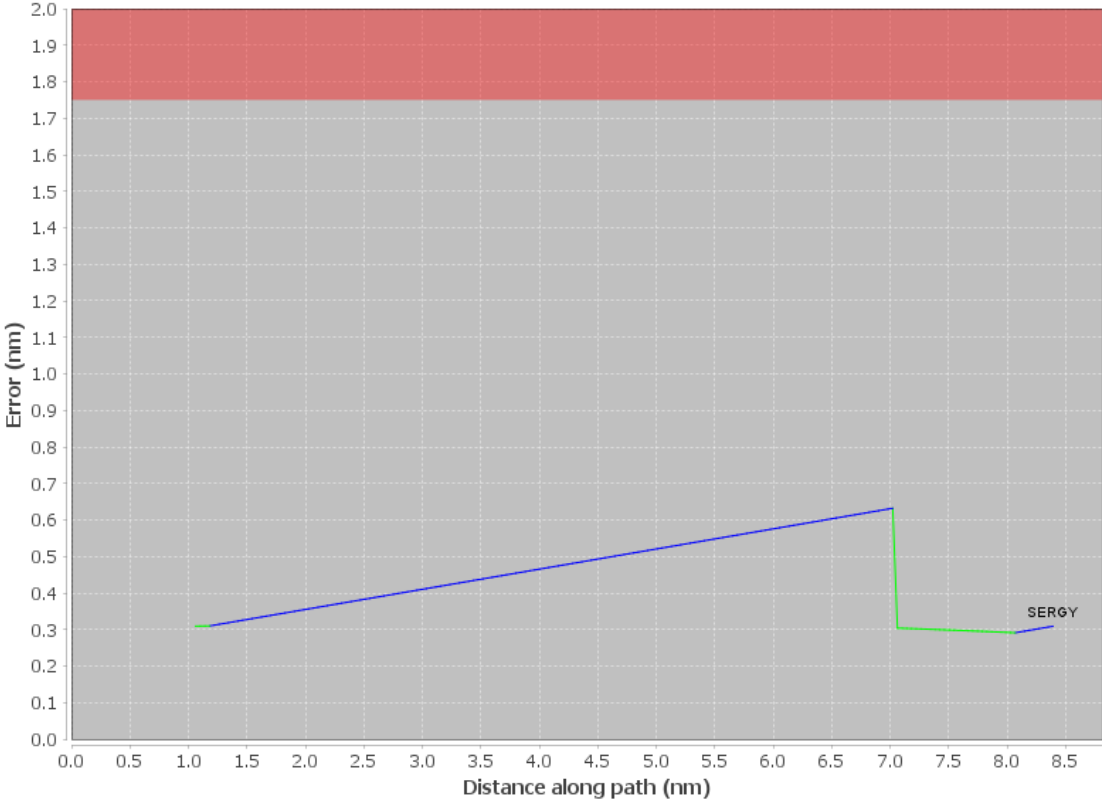
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None

User DMEs

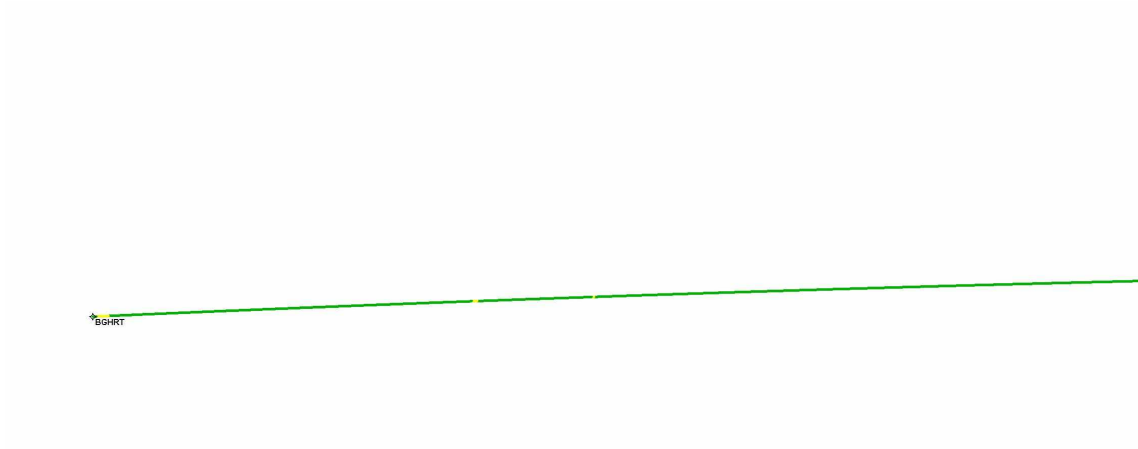
#	Name	Lat/Lon	MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	LFD FAA 698114-4 LFD [IFPA]	N42° 03' 44.9620", W084° 45' 54.4770"	5.0 W	40	1040	111.2	LFD FAA 698114-4	
ESV:		Bearing [True]: 92.0° to 130.0° Bearing [Mag]: 97.0° to 135.0°				Arc Distance: Out to 59.0 NM Altitude: 4000.0 to 20000.0 ft		
2	JXN FAA 701964-16 JXN [IFPA]	N42° 15' 33.2631", W084° 27' 30.7776"	0.0 E	130	994	null	JXN FAA 701964-16	
ESV:		Bearing [True]: 100.0° to 111.0° Bearing [Mag]: 100.0° to 111.0°				Arc Distance: Out to 61.0 NM Altitude: 3900.0 to 9000.0 ft		

DME Error



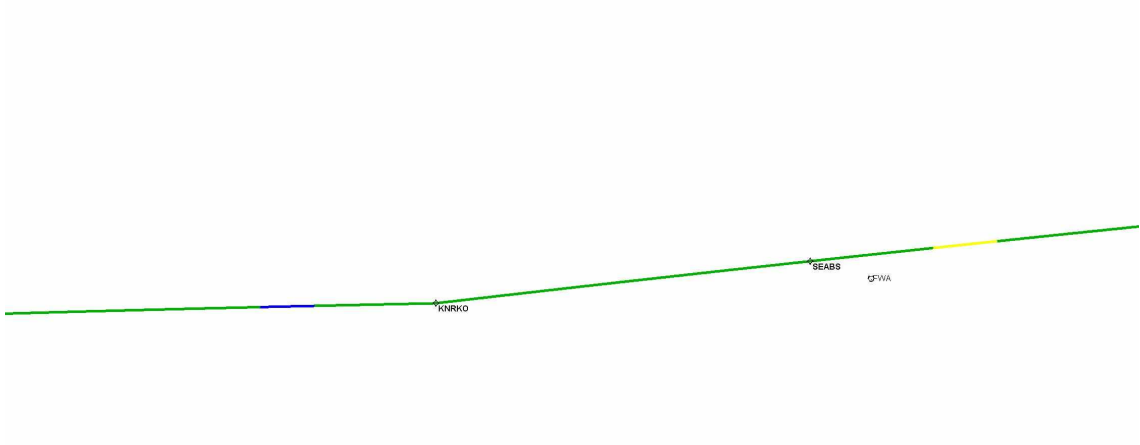
DME DME Assessment Results for SNDRS3 path KDTW:RW21R:DER_SERGY

Graphic Depiction 1



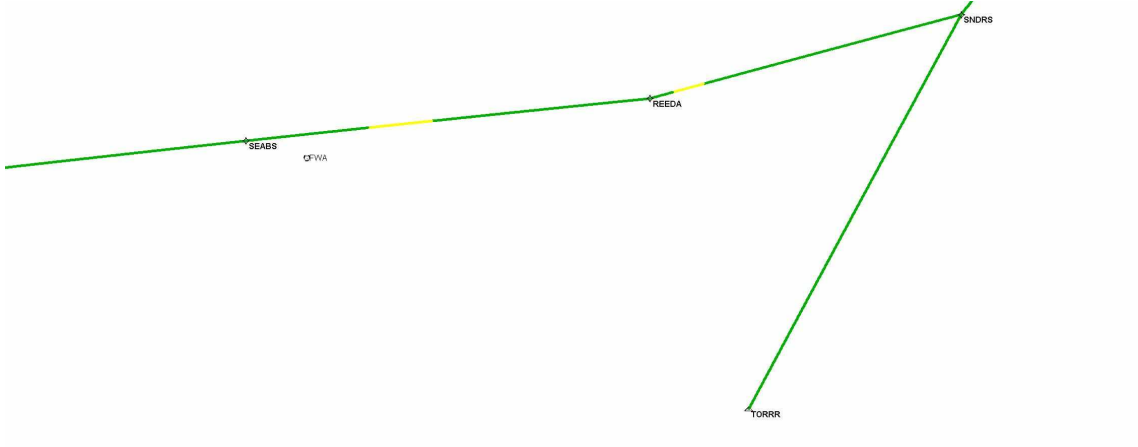
DME DME Assessment Results for SNDRS3 path KDTW:RW21R:DER_SERGY

Graphic Depiction 2



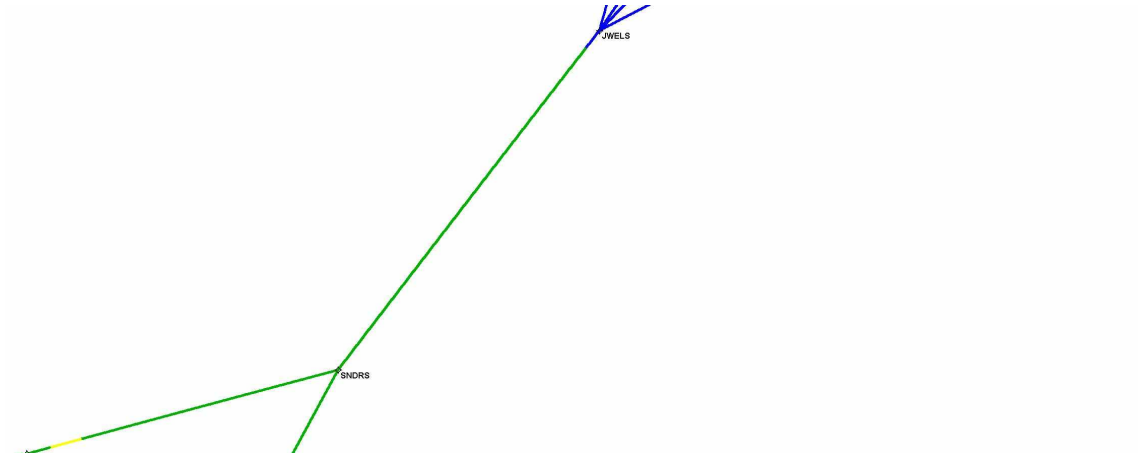
DME DME Assessment Results for SNDRS3 path KDTW:RW21R:DER_SERGY

Graphic Depiction 3



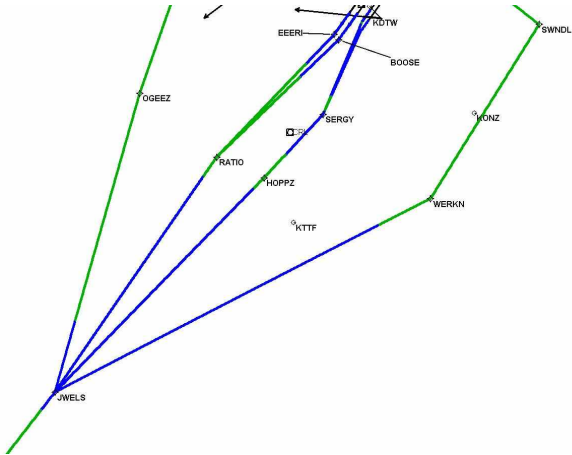
DME DME Assessment Results for SNDRS3 path KDTW:RW21R:DER_SERGY

Graphic Depiction 4



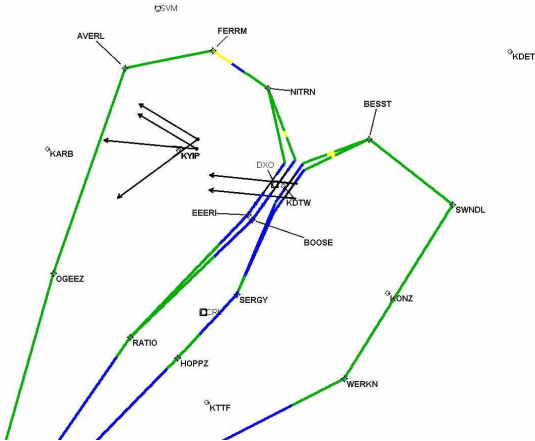
DME DME Assessment Results for SNDRS3 path KDTW:RW21R:DER_SERGY

Graphic Depiction 5



DME DME Assessment Results for SNDRS3 path KDTW:RW21R:DER_SERGY

Graphic Depiction 6



DME DME Assessment Results for SNDRS3 path KDTW:RW22L:DER_JWELS

Results Summary	
Flyability:	Completed
DME/DME:	Completed - No Critical DMEs
Name:	Jose G-CTR Medina
Project File:	C:\Users\Jose G-CTR Medina\OneDrive - Federal Aviation Administration\Documents\01. Projects\DME EVALUATIONS\KDTW 20230125\DME Screens\Submitted\New DMEs\Possible solutions\KDTW SNDRS DME\KDTW SNDRS3 DME(2) 20240105.tgs
Output File:	C:\Users\Jose G-CTR Medina\OneDrive - Federal Aviation Administration\Documents\01. Projects\DME EVALUATIONS\KDTW 20230125\DME Screens\Submitted\New DMEs\Possible solutions\KDTW SNDRS DME\KDTW [IFPA] SNDRS3 20240116_0709 CST\KDTW-RW22L- DER_JWELS\KDTW SNDRS3 SID RW22L JWELS 20240116_0709 CST.pdf
Procedure Name:	SNDRS3
Software: DmeDmePlugin:	7.2.1
Date/Time:	01/16/2024 07:09 CST
Databases:	DTED LEVEL 0 MAX

Failures
No Failures

Warnings
No Warnings

Informational
No Informational

Notes For Flight Check
None

Flight Plan							
Name	Type	Lat/Lon	Altitude (ft)	VNAV Mode	Ground Speed (kts)	Turn Type	Leg Type
KDTW:RW22L:DER	WP	N42° 12' 08.3656", W083° 22' 16.5697"	637.5	VNAV	130	FLY_OVER	TF
BOOSE	WP	N42° 10' 02.0000", W083° 23' 49.5600"	1422.6	VNAV	200	FLY_BY	TF
RATIO	WP	N42° 00' 25.8400", W083° 34' 22.4500"	3833.5	VNAV	200	FLY_BY	TF
JWELS	WP	N41° 41' 56.6200", W083° 47' 23.0000"	3000	VNAV	230	FLY_BY	TF
Climb Gradient: 500.0 ft/NM up to 1146.0 ft MSL 200.0 ft/NM							

Flyability	
Flight Type:	SID
Selected Airport:	KDTW [IFPA]
Climb Gradient:	500.0 ft/NM up to 1146.0 ft MSL 200.0 ft/NM
Speeds:	130 at the Runway DER 145 at the end of the VA or VI leg 200 Ground Speed to 11000 FT 240 Ground Speed to 18000 FT 260 Ground Speed to 24000 FT 340 Ground Speed above 24000 FT
Descent During a Turn:	Allowed
VNAV Mode:	Flight Plan

DME DME Assessment Results for SNDRS3 path KDTW:RW22L:DER_JWELS

DME/DME	
RNP:	RNP 2
Flight Mode:	Manual
Line of Sight (DTED Level 0 Max):	Evaluated
Inertial Drift:	Enabled
Initial Drift:	0.558 NM
INS Drift Rate:	8.0 NM/Hour
Range Mode:	OSV
RNP Edges:	Evaluated
Min DME Range:	3.0 NM
DME Types:	DME, VOR-DME, VORTAC
DME Include Angles:	30 to 150
Critical DMEs:	Allowed
DoD Facilities:	Not included
Foreign Facilities:	Not included
High DMEs:	Included
Low DMEs:	Included
Terminal DMEs:	Included
Flight Check DMEs:	Not selected
Higher Altitudes:	Not Evaluated
Near Maximum Altitude:	Not Evaluated
Automatic ESVs:	Not enabled
Disabled DMEs:	None

DME/DME (Continued)										
DMEs Used										
#	Name	Lat/Lon	MAGVAR	Range	Type	Source	Critical	Status	Time	Distance
1	DXO	N42° 12' 47.2904", W083° 21' 59.9878"	6.0 W	130	H	IFPA	NO	Enabled	27.8 %	28.2 %
2	CRL	N42° 02' 52.8956", W083° 27' 27.2625"	3.0 W	130	DH	IFPA	NO	Enabled	8.1 %	8.2 %
3	JXN	N42° 15' 33.2631", W084° 27' 30.7776"	0.0 E	130	DH	IFPA	NO	Enabled	13.7 %	14 %
4	SVM	N42° 24' 31.1055", W083° 35' 38.0455"	3.0 W	40	L	IFPA	NO	Enabled	28.1 %	28.6 %

Flight Check DME Selection					
Distance [NM]	Selected DMEs				Alternate
0.0					
6.3	SVM	DXO	CRL		
7.1	SVM	DXO			
11.3	JXN	DXO	SVM		
14.3	JXN	DXO	CRL	SVM	
16.4	CRL	SVM	DXO		
16.4	CRL	SVM			
16.5					

Inertial Drift Segments			
#	Start Location	End Location	Length [NM]
1	N42° 12' 06.5193", W083° 22' 17.9290"	N42° 07' 02.0559", W083° 27' 07.6801"	6.2398
2	N41° 58' 54.4465", W083° 35' 27.0880"	N41° 41' 56.6200", W083° 47' 23.0000"	19.1586

Available DMEs by Waypoints			
Waypoint Before	Waypoint After	DME List	Suggested DMEs
KDTW:RW22L:DER	BOOSE		
BOOSE	RATIO	JXN, DXO, SVM, CRL	
RATIO	JWELS	JXN, DXO, SVM, CRL	

DME DME Assessment Results for SNDRS3 path KDTW:RW22L:DER_JWELS

User Data Files

#	File Name
None	

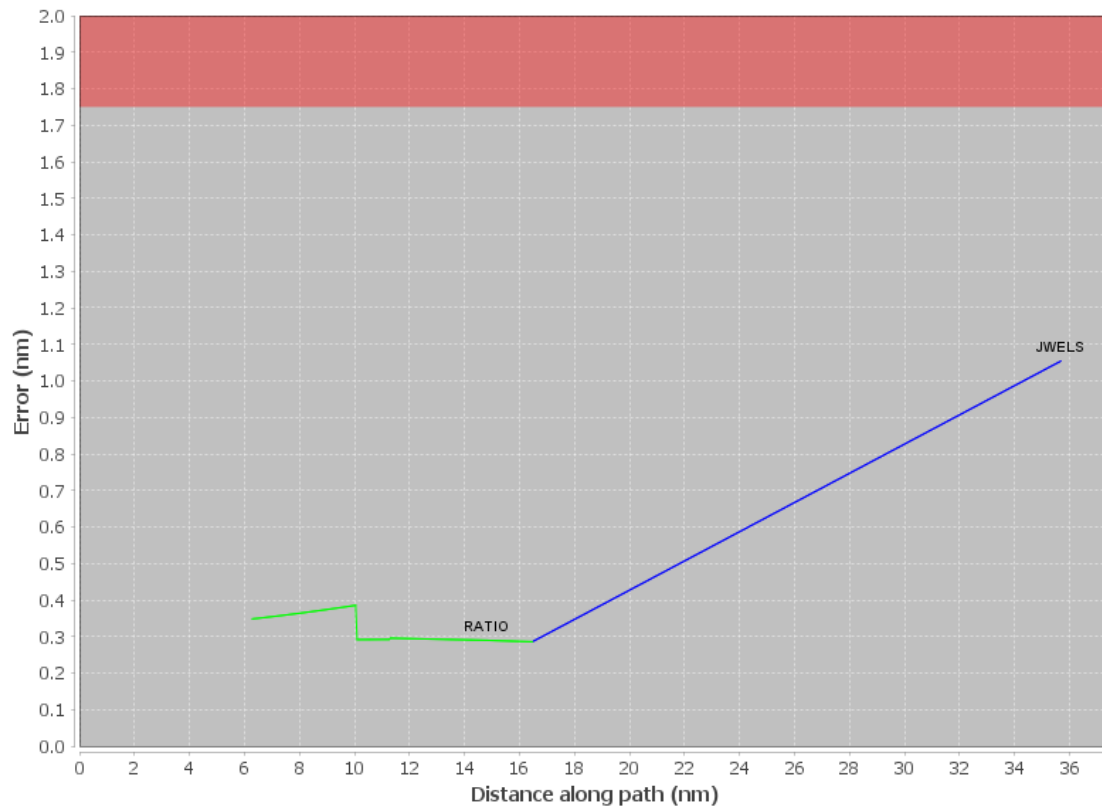
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User DMEs

#	Name	Lat/Lon	MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	LFD FAA 698114-4 LFD [IFPA]	N42° 03' 44.9620", W084° 45' 54.4770"	5.0 W	40	1040	111.2	LFD FAA 698114-4	
ESV:		Bearing [True]: 92.0° to 130.0° Bearing [Mag]: 97.0° to 135.0°				Arc Distance: Out to 59.0 NM Altitude: 4000.0 to 20000.0 ft		
2	JXN FAA 701964-16 JXN [IFPA]	N42° 15' 33.2631", W084° 27' 30.7776"	0.0 E	130	994	null	JXN FAA 701964-16	
ESV:		Bearing [True]: 100.0° to 111.0° Bearing [Mag]: 100.0° to 111.0°				Arc Distance: Out to 61.0 NM Altitude: 3900.0 to 9000.0 ft		

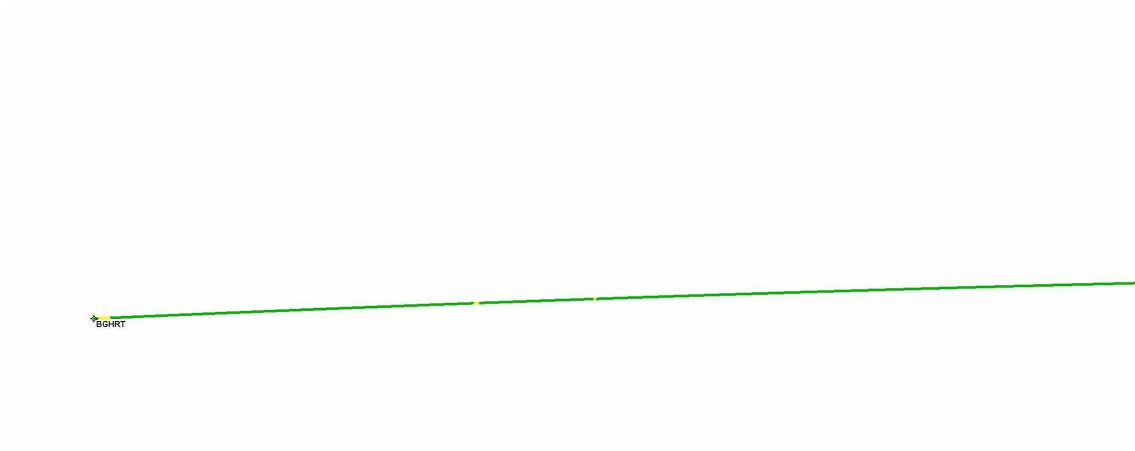
DME DME Assessment Results for SNDRS3 path KDTW:RW22L:DER_JWELS

DME Error



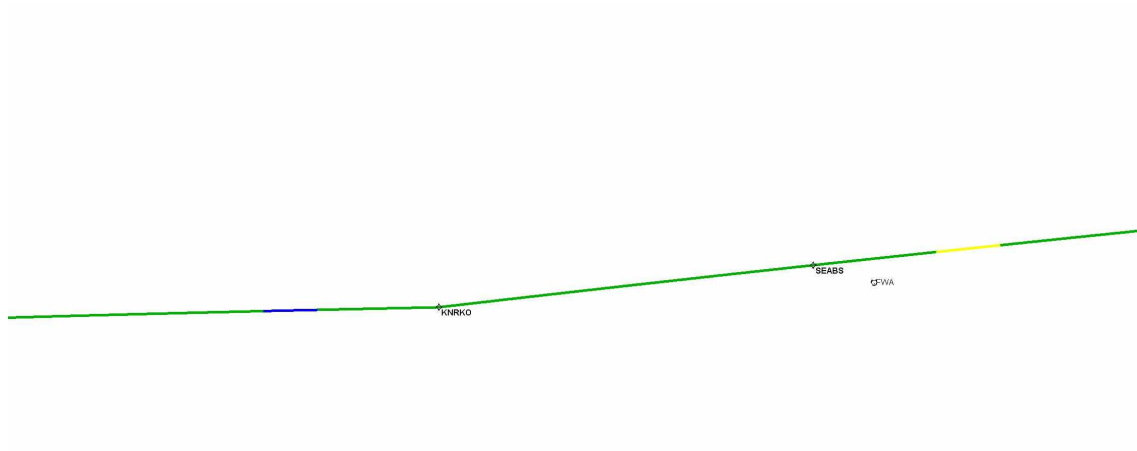
DME DME Assessment Results for SNDRS3 path KDTW:RW22L:DER_JWELS

Graphic Depiction 1



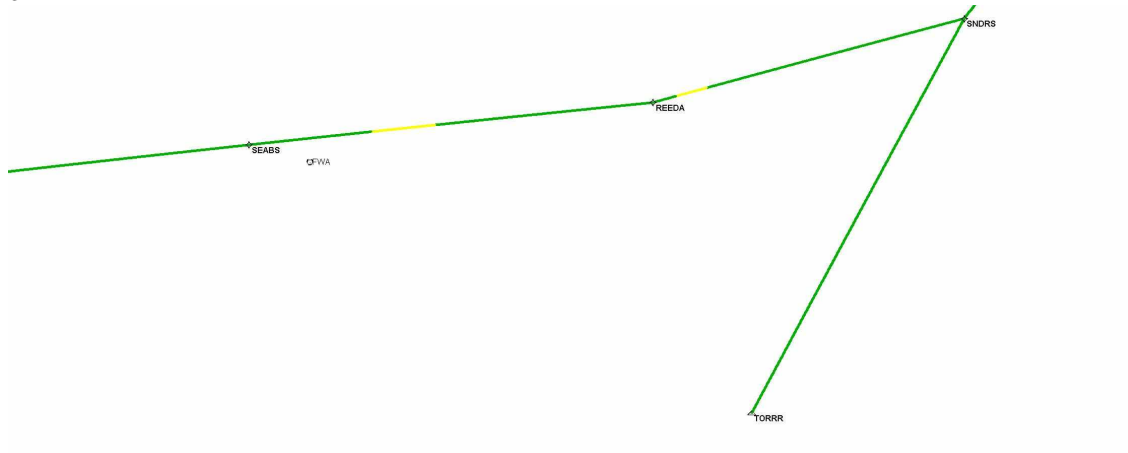
DME DME Assessment Results for SNDRS3 path KDTW:RW22L:DER_JWELS

Graphic Depiction 2



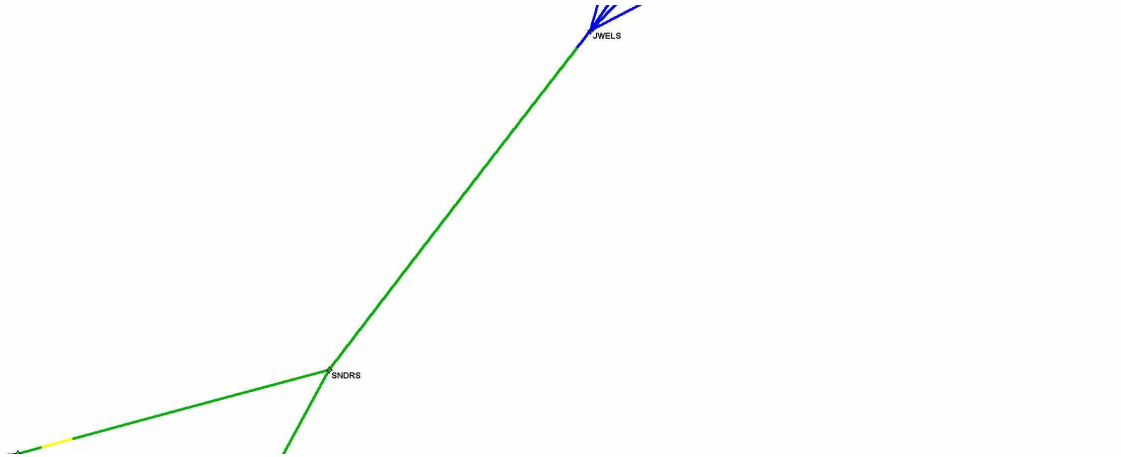
DME DME Assessment Results for SNDRS3 path KDTW:RW22L:DER_JWELS

Graphic Depiction 3



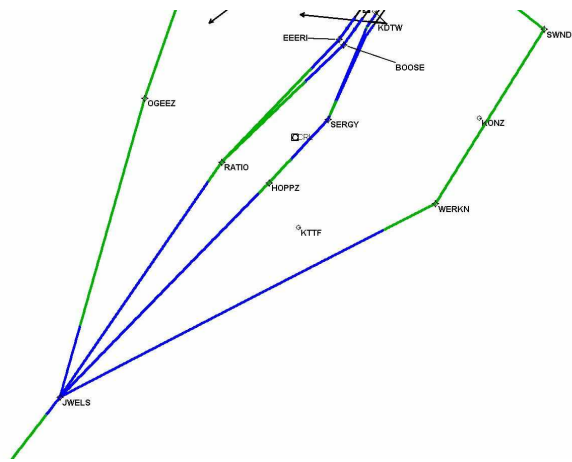
DME DME Assessment Results for SNDRS3 path KDTW:RW22L:DER_JWELS

Graphic Depiction 4



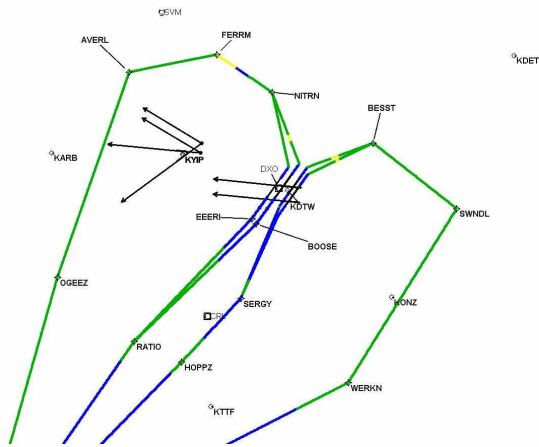
DME DME Assessment Results for SNDRS3 path KDTW:RW22L:DER_JWELS

Graphic Depiction 5



DME DME Assessment Results for SNDRS3 path KDTW:RW22L:DER_JWELS

Graphic Depiction 6



DME DME Assessment Results for SNDRS3 path KDTW:RW22R:DER_RATIO

Results Summary	
Flyability:	Completed
DME/DME:	Completed - No Critical DMEs
Name:	Jose G-CTR Medina
Project File:	C:\Users\Jose G-CTR Medina\OneDrive - Federal Aviation Administration\Documents\01. Projects\DME EVALUATIONS\KDTW 20230125\DME Screens\Submitted\New DMEs\Possible solutions\KDTW SNDRS DME\KDTW SNDRS3 DME(2) 20240105.tgs
Output File:	C:\Users\Jose G-CTR Medina\OneDrive - Federal Aviation Administration\Documents\01. Projects\DME EVALUATIONS\KDTW 20230125\DME Screens\Submitted\New DMEs\Possible solutions\KDTW SNDRS DME\KDTW [IFPA] SNDRS3 20240116_0709 CST\KDTW-RW22R- DER_RATIO\KDTW SNDRS3 SID RW22R RATIO 20240116_0709 CST.pdf
Procedure Name:	SNDRS3
Software: DmeDmePlugin:	7.2.1
Date/Time:	01/16/2024 07:09 CST
Databases:	DTED LEVEL 0 MAX

Failures
No Failures

Warnings
No Warnings

Informational
No Informational

Notes For Flight Check
None

Flight Plan							
Name	Type	Lat/Lon	Altitude (ft)	VNAV Mode	Ground Speed (kts)	Turn Type	Leg Type
KDTW:RW22R:DER	WP	N42° 12' 07.8216", W083° 23' 02.4003"	645.2	VNAV	130	FLY_OVER	TF
EEERI	WP	N42° 10' 22.3900", W083° 24' 19.9400"	1346.1	VNAV	200	FLY_BY	TF
RATIO	WP	N42° 00' 25.8400", W083° 34' 22.4500"	3833.5	VNAV	200	FLY_BY	TF
Climb Gradient: 500.0 ft/NM up to 1146.0 ft MSL 200.0 ft/NM							

Flyability	
Flight Type:	SID
Selected Airport:	KDTW [IFPA]
Climb Gradient:	500.0 ft/NM up to 1146.0 ft MSL 200.0 ft/NM
Speeds:	130 at the Runway DER 145 at the end of the VA or VI leg 200 Ground Speed to 11000 FT 240 Ground Speed to 18000 FT 260 Ground Speed to 24000 FT 340 Ground Speed above 24000 FT
Descent During a Turn:	Allowed
VNAV Mode:	Flight Plan

DME DME Assessment Results for SNDRS3 path KDTW:RW22R:DER_RATIO

DME/DME	
RNP:	RNP 2
Flight Mode:	Manual
Line of Sight (DTED Level 0 Max):	Evaluated
Inertial Drift:	Enabled
Initial Drift:	0.558 NM
INS Drift Rate:	8.0 NM/Hour
Range Mode:	OSV
RNP Edges:	Evaluated
Min DME Range:	3.0 NM
DME Types:	DME, VOR-DME, VORTAC
DME Include Angles:	30 to 150
Critical DMEs:	Allowed
DoD Facilities:	Not included
Foreign Facilities:	Not included
High DMEs:	Included
Low DMEs:	Included
Terminal DMEs:	Included
Flight Check DMEs:	Not selected
Higher Altitudes:	Not Evaluated
Near Maximum Altitude:	Not Evaluated
Automatic ESVs:	Not enabled
Disabled DMEs:	None

DME/DME (Continued)										
DMEs Used										
#	Name	Lat/Lon	MAGVAR	Range	Type	Source	Critical	Status	Time	Distance
1	DXO	N42° 12' 47.2904", W083° 21' 59.9878"	6.0 W	130	H	IFPA	NO	Enabled	62.9 %	65.8 %
2	CRL	N42° 02' 52.8956", W083° 27' 27.2625"	3.0 W	130	DH	IFPA	NO	Enabled	14 %	14.6 %
3	JXN	N42° 15' 33.2631", W084° 27' 30.7776"	0.0 E	130	DH	IFPA	NO	Enabled	22.4 %	23.5 %
4	SVM	N42° 24' 31.1055", W083° 35' 38.0455"	3.0 W	40	L	IFPA	NO	Enabled	62.2 %	65 %

Flight Check DME Selection						
Distance [NM]	Selected DMEs					Alternate
0.0						
4.9	CRL	DXO				
5.1	SVM	DXO	CRL			
6.7	SVM	DXO				
11.1	JXN	DXO	SVM			
14.1	JXN	DXO	CRL	SVM		

Inertial Drift Segments			
#	Start Location	End Location	Length [NM]
1	N42° 12' 05.9380", W083° 23' 03.7862"	N42° 08' 01.3230", W083° 26' 42.7817"	4.9083

Available DMEs by Waypoints			
Waypoint Before	Waypoint After	DME List	Suggested DMEs
KDTW:RW22R:DER	EEERI		
EEERI	RATIO	JXN, DXO, SVM, CRL	

DME DME Assessment Results for SNDRS3 path KDTW:RW22R:DER_RATIO

User Data Files

#	File Name
None	

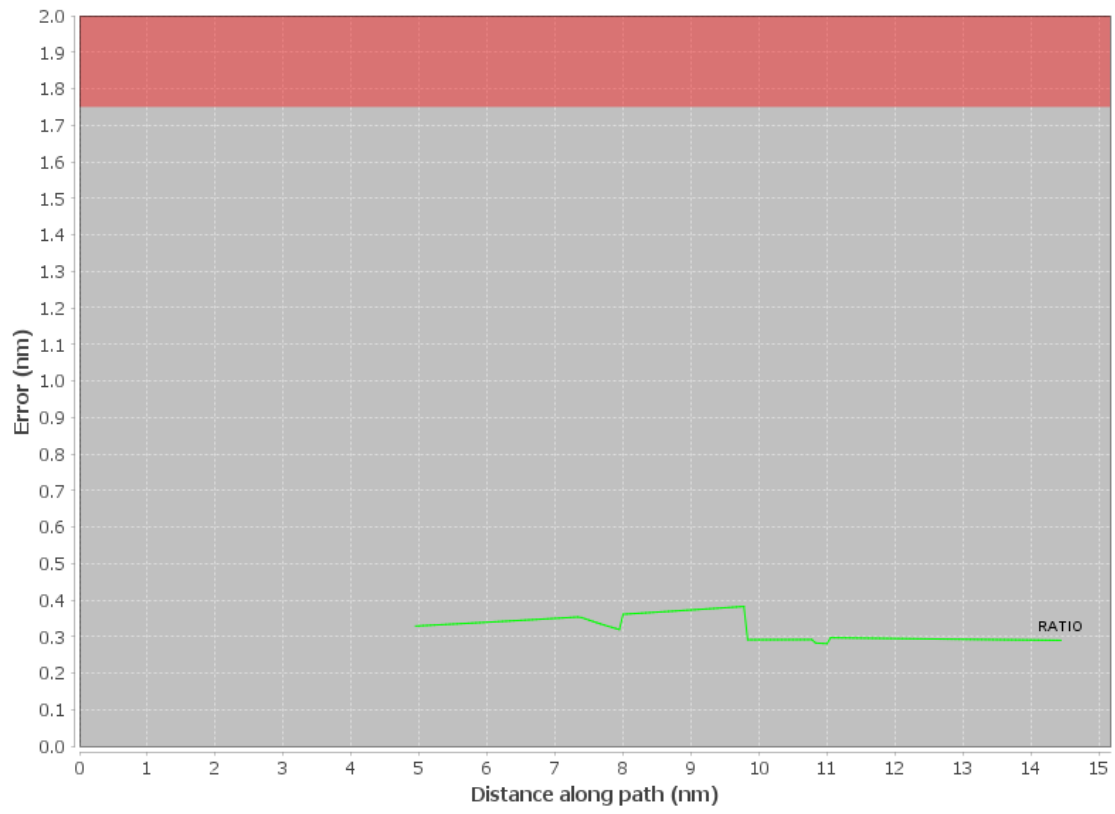
None

User DMEs

#	Name	Lat/Lon	MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	LFD FAA 698114-4 LFD [IFPA]	N42° 03' 44.9620", W084° 45' 54.4770"	5.0 W	40	1040	111.2	LFD FAA 698114-4	
ESV:		Bearing [True]: 92.0° to 130.0° Bearing [Mag]: 97.0° to 135.0°				Arc Distance: Out to 59.0 NM Altitude: 4000.0 to 20000.0 ft		
2	JXN FAA 701964-16 JXN [IFPA]	N42° 15' 33.2631", W084° 27' 30.7776"	0.0 E	130	994	null	JXN FAA 701964-16	
ESV:		Bearing [True]: 100.0° to 111.0° Bearing [Mag]: 100.0° to 111.0°				Arc Distance: Out to 61.0 NM Altitude: 3900.0 to 9000.0 ft		

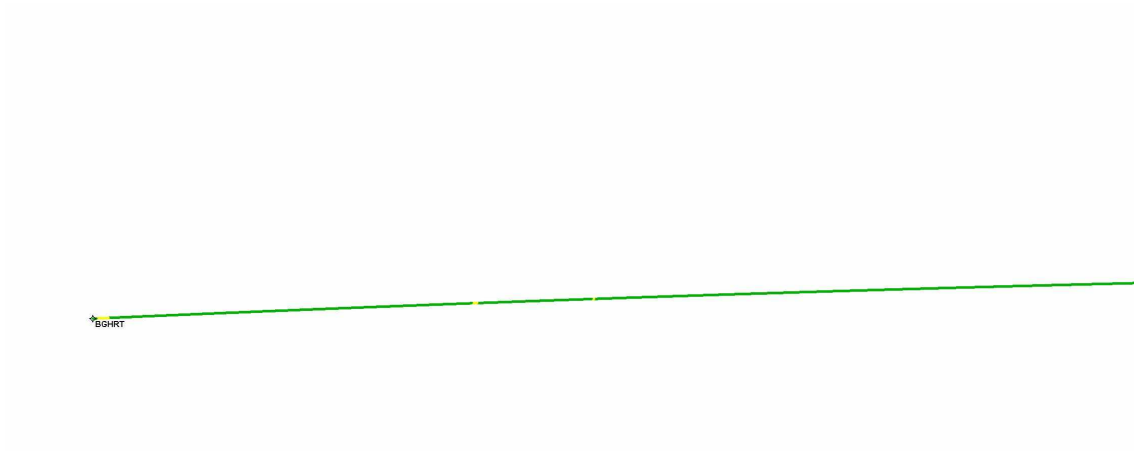
DME DME Assessment Results for SNDRS3 path KDTW:RW22R:DER_RATIO

DME Error



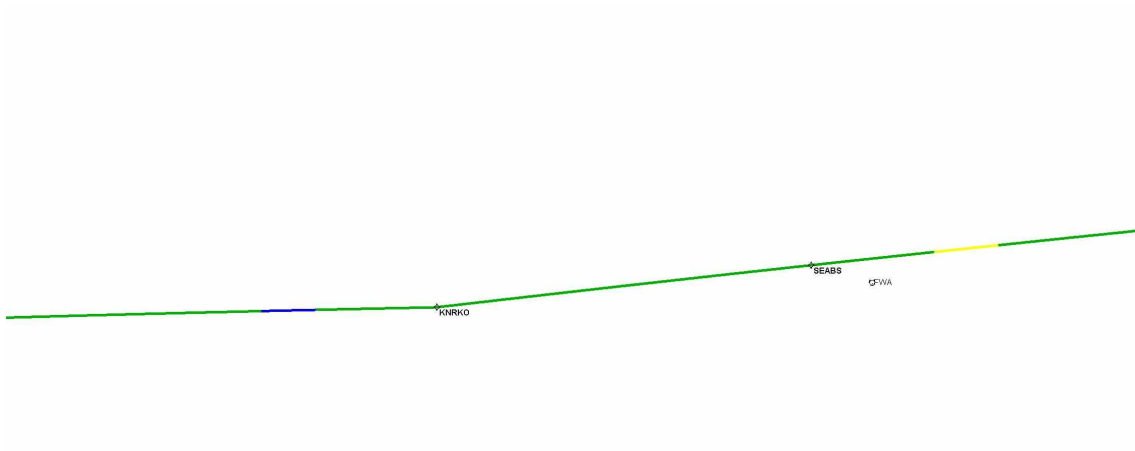
DME DME Assessment Results for SNDRS3 path KDTW:RW22R:DER_RATIO

Graphic Depiction 1



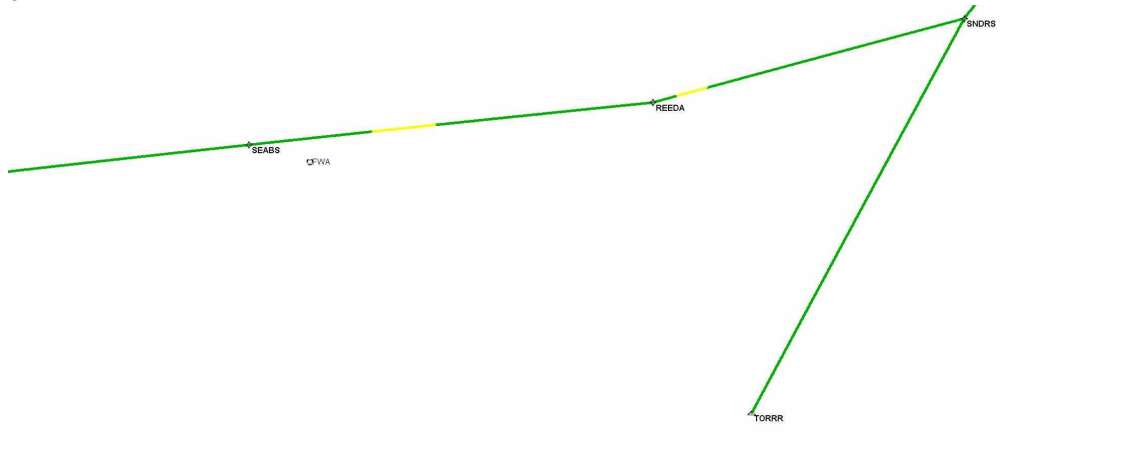
DME DME Assessment Results for SNDRS3 path KDTW:RW22R:DER_RATIO

Graphic Depiction 2



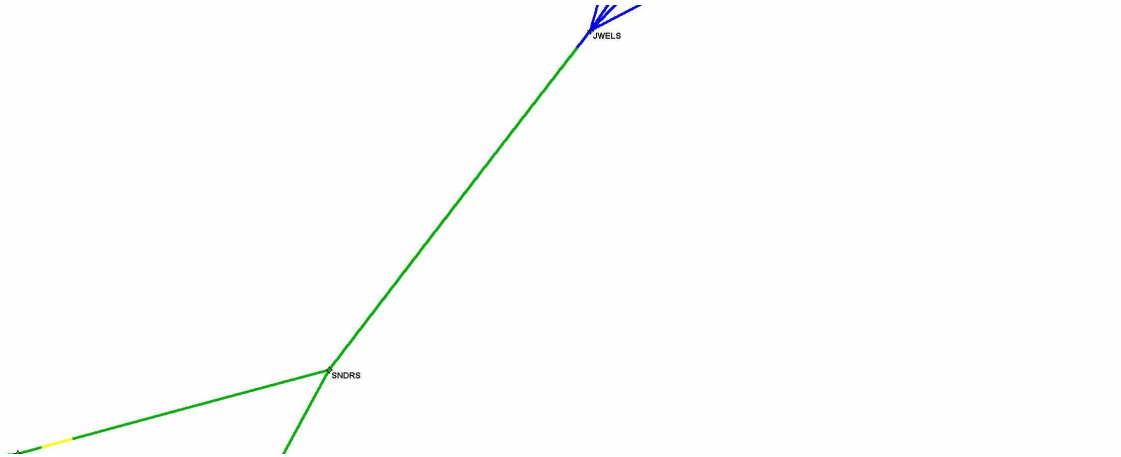
DME DME Assessment Results for SNDRS3 path KDTW:RW22R:DER_RATIO

Graphic Depiction 3



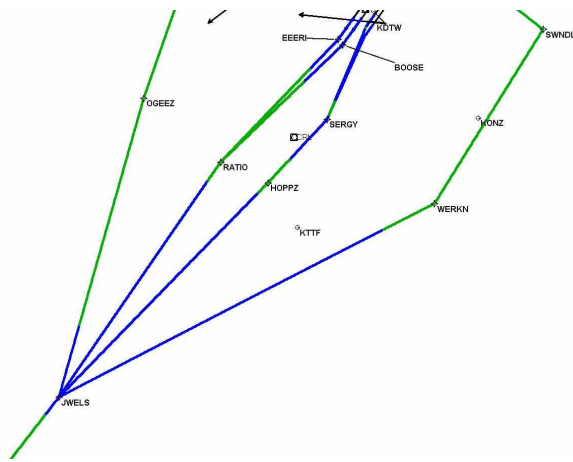
DME DME Assessment Results for SNDRS3 path KDTW:RW22R:DER_RATIO

Graphic Depiction 4



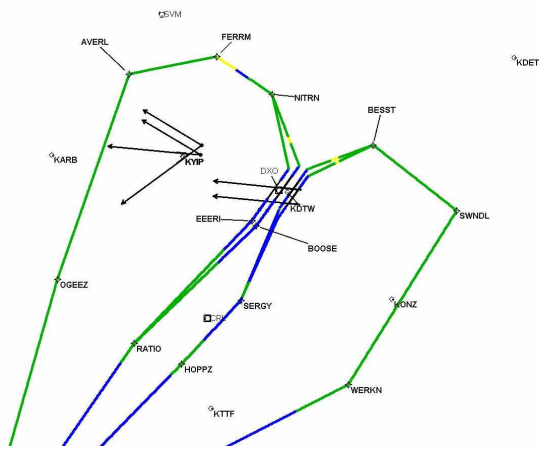
DME DME Assessment Results for SNDRS3 path KDTW:RW22R:DER_RATIO

Graphic Depiction 5



DME DME Assessment Results for SNDRS3 path KDTW:RW22R:DER_RATIO

Graphic Depiction 6



DME DME Assessment Results for SNDRS3 path SNDRS_TORRR

Results Summary

Flyability:	Completed
DME/DME:	Completed - No Critical DMEs
Name:	Jose G-CTR Medina
Project File:	C:\Users\Jose G-CTR Medina\OneDrive - Federal Aviation Administration\Documents\01. Projects\DME EVALUATIONS\KDTW 20230125\DME Screens\Submitted\New DMEs\Possible solutions\KDTW SNDRS DME\KDTW SNDRS3 DME(2) 20240105.tgs
Output File:	C:\Users\Jose G-CTR Medina\OneDrive - Federal Aviation Administration\Documents\01. Projects\DME EVALUATIONS\KDTW 20230125\DME Screens\Submitted\New DMEs\Possible solutions\KDTW SNDRS DME\KDTW [IFPA] SNDRS3 20240116_0709 CST\SNDRS_TORRR\KDTW SNDRS3 SID SNDRS TORRR 20240116_0709 CST.pdf
Procedure Name:	SNDRS3
Software: DmeDmePlugin:	7.2.1
Date/Time:	01/16/2024 07:09 CST
Databases:	DTED LEVEL 0 MAX

Failures

No Failures

Warnings

No Warnings

Informational

No Informational

Notes For Flight Check

None

Flight Plan

Name	Type	Lat/Lon	Altitude (ft)	VNAV Mode	Ground Speed (kts)	Turn Type	Leg Type
SNDRS	WP	N41° 14' 59.9600", W084° 08' 54.4400"	8000	VNAV	230	FLY_BY	TF
TORRR	WP	N40° 44' 29.7700", W084° 24' 58.8900"	8000	VNAV	230	FLY_BY	TF

Flyability

Flight Type:	SID
Selected Airport:	KDTW [IFPA]
Climb Gradient:	None assigned
Speeds:	130 at the Runway DER
	145 at the end of the VA or VI leg
	200 Ground Speed to 11000 FT
	240 Ground Speed to 18000 FT
	260 Ground Speed to 24000 FT
	340 Ground Speed above 24000 FT
Descent During a Turn:	Allowed
VNAV Mode:	Flight Plan

DME DME Assessment Results for SNDRS3 path SNDRS_TORRR

DME/DME	
RNP:	RNP 2
Flight Mode:	Manual
Line of Sight (DTED Level 0 Max):	Evaluated
Inertial Drift:	Enabled
Initial Drift:	0.558 NM
INS Drift Rate:	8.0 NM/Hour
Range Mode:	OSV
RNP Edges:	Evaluated
Min DME Range:	3.0 NM
DME Types:	DME, VOR-DME, VORTAC
DME Include Angles:	30 to 150
Critical DMEs:	Allowed
DoD Facilities:	Not included
Foreign Facilities:	Not included
High DMEs:	Included
Low DMEs:	Included
Terminal DMEs:	Included
Flight Check DMEs:	Not selected
Higher Altitudes:	Not Evaluated
Near Maximum Altitude:	Not Evaluated
Automatic ESVs:	Not enabled
Disabled DMEs:	None

DME/DME (Continued)										
DMEs Used										
#	Name	Lat/Lon	MAGVAR	Range	Type	Source	Critical	Status	Time	Distance
1	FBC	N40° 57' 19.2018", W083° 45' 21.6886"	2.0 W	40	L	IFPA	NO	Enabled	100 %	100 %
2	CRL	N42° 02' 52.8956", W083° 27' 27.2625"	3.0 W	130	DH	IFPA	NO	Enabled	100 %	100 %
3	DJB	N41° 21' 29.0339", W082° 09' 43.0873"	5.0 W	130	DH	IFPA	NO	Enabled	8.6 %	8.6 %
4	SHB	N39° 37' 57.1525", W085° 49' 27.5388"	1.0 E	130	DH	IFPA	NO	Enabled	0.2 %	0.2 %
5	JXN	N42° 15' 33.2631", W084° 27' 30.7776"	0.0 E	130	DH	IFPA	NO	Enabled	100 %	100 %
6	ROD	N40° 17' 16.0830", W084° 02' 35.1471"	5.0 W	130	H	IFPA	NO	Enabled	23 %	23 %

Flight Check DME Selection						
Distance [NM]	Selected DMEs					Alternate
0.0	CRL	FBC	DJB	JXN		
2.9	CRL	FBC	JXN			
25.3	ROD	FBC	JXN	CRL		
32.8	ROD	FBC	SHB	JXN	CRL	

Inertial Drift Segments			
#	Start Location	End Location	Length [NM]

Available DMEs by Waypoints			
Waypoint Before	Waypoint After	DME List	Suggested DMEs
SNDRS	TORRR	JXN, FBC, ROD, CRL, SHB, DJB	

DME DME Assessment Results for SNDRS3 path SNDRS_TORRR

User Data Files

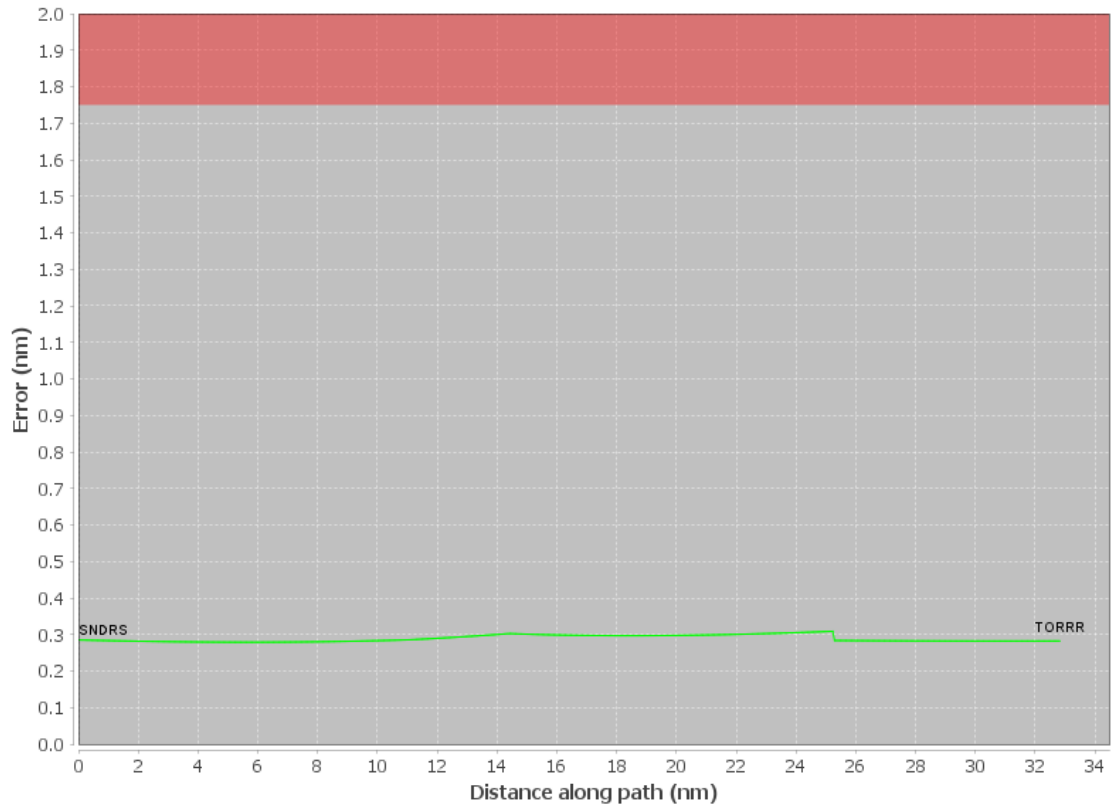
#	File Name
None	

User DMEs

#	Name	Lat/Lon	MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	LFD FAA 698114-4 LFD [IFPA]	N42° 03' 44.9620", W084° 45' 54.4770"	5.0 W	40	1040	111.2	LFD FAA 698114-4	
ESV:		Bearing [True]: 92.0° to 130.0° Bearing [Mag]: 97.0° to 135.0°				Arc Distance: Out to 59.0 NM Altitude: 4000.0 to 20000.0 ft		
2	JXN FAA 701964-16 JXN [IFPA]	N42° 15' 33.2631", W084° 27' 30.7776"	0.0 E	130	994	null	JXN FAA 701964-16	
ESV:		Bearing [True]: 100.0° to 111.0° Bearing [Mag]: 100.0° to 111.0°				Arc Distance: Out to 61.0 NM Altitude: 3900.0 to 9000.0 ft		

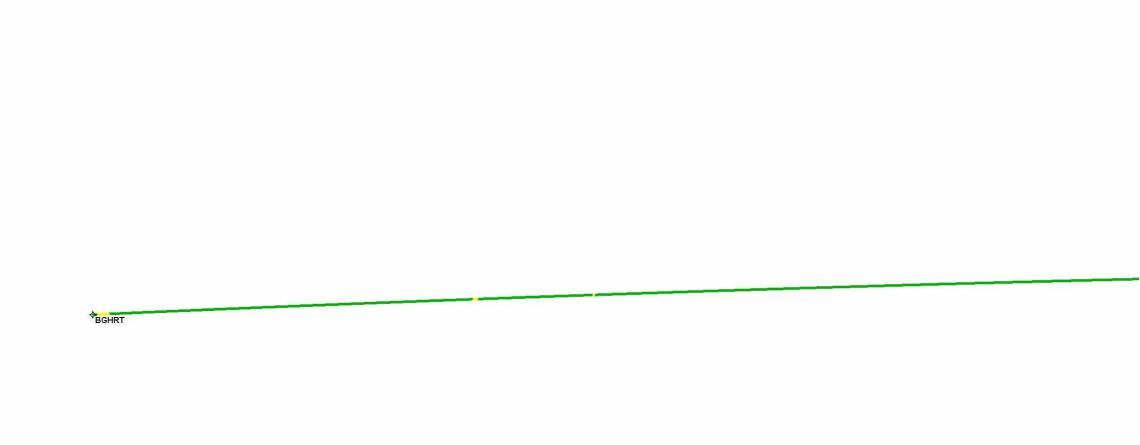
DME DME Assessment Results for SNDRS3 path SNDRS_TORRR

DME Error



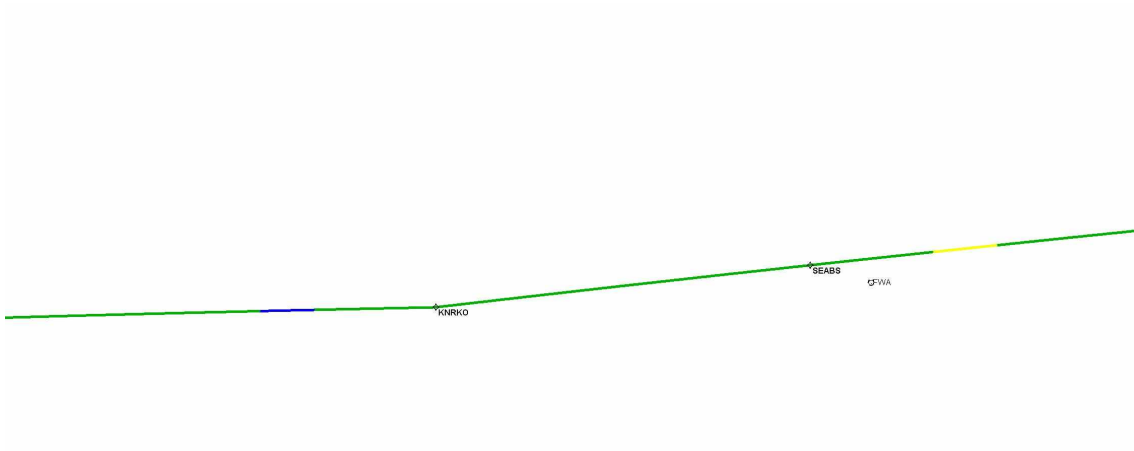
DME DME Assessment Results for SNDRS3 path SNDRS_TORRR

Graphic Depiction 1



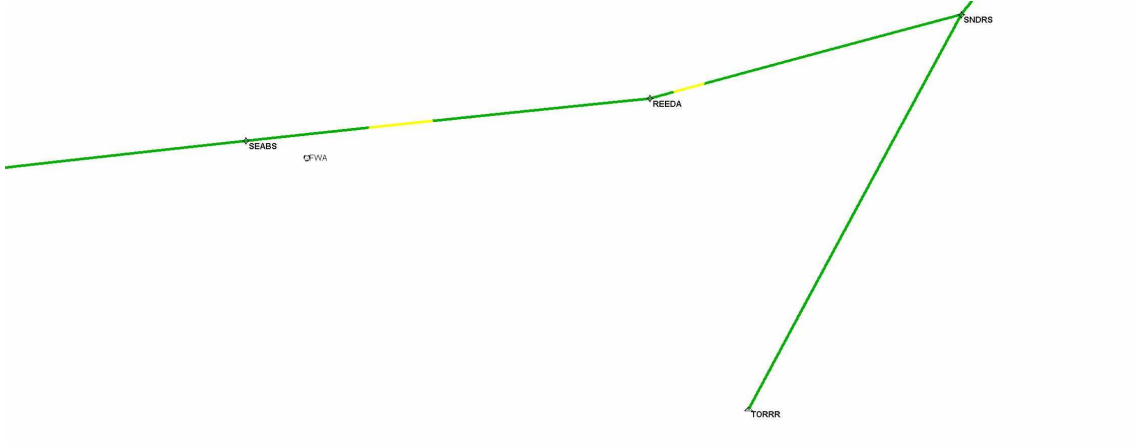
DME DME Assessment Results for SNDRS3 path SNDRS_TORRR

Graphic Depiction 2



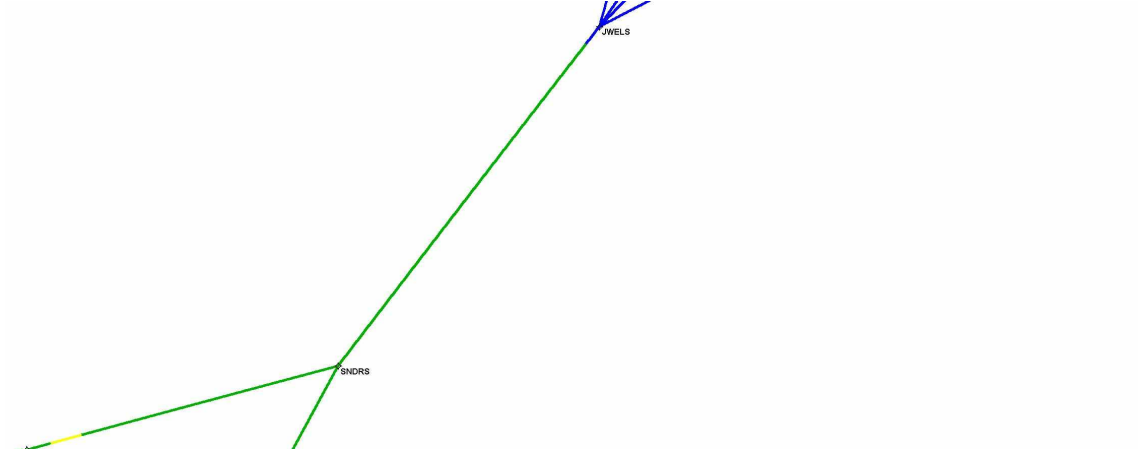
DME DME Assessment Results for SNDRS3 path SNDRS_TORRR

Graphic Depiction 3



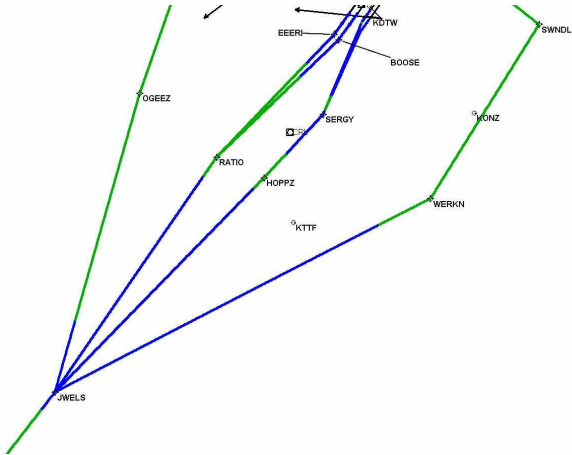
DME DME Assessment Results for SNDRS3 path SNDRS_TORRR

Graphic Depiction 4



DME DME Assessment Results for SNDRS3 path SNDRS_TORRR

Graphic Depiction 5



DME DME Assessment Results for SNDRS3 path SNDRS_TORRR

Graphic Depiction 6

