

<b>RNAV - STANDARD</b> <b>INSTRUMENT APPROACH PROCEDURE</b> <b>TITLE 14 CFR PART 97.33</b>				Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.															
TERMINAL ROUTES										MISSED APPROACH									
FROM		TO			COURSE AND DISTANCE			ALTITUDE		LPV: DA LNAV/VNAV: DA LNAV: RW21  CLIMB TO 3200 DIRECT OMARY AND HOLD.  ADDITIONAL FLIGHT DATA: HOLD SW, RT, 032.46 INBOUND. CHART FAS OBST: 1579 TREE 465227N/0920853W. DISTANCE TO THLD FROM 288 HAT: 0.79 NM. CHART VDP AT 1.21 NM TO RW21* *LNAV ONLY. WAAS CHANNEL # 40114 REFERENCE PATH ID: W21A CHART CIRCLING ICON. CHART: ASR LTP HAE: 403.3 M									
JUDD (IAF)		CLIPH (NOPT) (TF) (FB) (RNP 1.00)			122.60 / 5.00			3200											
JIMKI (IAF)		CLIPH (NOPT) (TF) (FB) (RNP 1.00)			302.76 / 5.00			3200											
CLIPH (IF/IAF)		JEFWY (TF) (FB) (RNP 1.00)			212.68 / 6.10			3200											
JEFWY (FAF)		RW21 (MAP) (TF) (FO) (RNP 0.30)			212.62 / 5.40			3200											
RW21 (MAP)		1708 MSL (CA)			212.62			3200											
1708 MSL		OMARY (DF) (FO) (RNP 1.00)																	
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF) 2. HOLD NE CLIPH, RT, 212.68 INBOUND, 3200 FT. IN LIEU OF PT (IAF) 3. FAC: 212.62 FAF: JEFWY DIST FAF TO MAP: 5.40 THLD: 5.40 4. MIN. ALT: CLIPH 3200, JEFWY 3200 5. DIST TO THLD FROM OM: _____ MM: _____ IM: _____ 150 HAT: _____ 100 HAT: _____ GS ANT: _____ 6. MIN GS INCPT: 3200 GS ALT AT: JEFWY 3200 OM: _____ MM: _____ IM: _____ 7. GS ANGLE: 3.00 TCH: 40.0 34:1 IS NOT CLEAR 8. MSA FROM: _____																MAG VAR: 1W		EPOCH YEAR: 2020	
MINIMUMS																			
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT								ALTERNATE: N A		STANDARD @									
CATEGORY =====>		A			B			C			D			E					
	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA				
LPV DA	1708	1	288	1708	1	288	1708	1	288	1708	1	288							
LNAV/VNAV DA	1927	1 3/4	507	1927	1 3/4	507	1927	1 3/4	507	1927	1 3/4	507							
LNAV MDA	1840	1	420	1840	1	420	1840	1 1/4	420	1840	1 1/4	420							
CIRCLING	1880	1	452	1900	1	472	1940	1 1/2	512	2400	3	972							
NOTES: CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -17C (2F) OR ABOVE 46C (115F). @ CAT D 1000-3 CHART NOTE: DME/DME RNP-0.3 NA. CHART NOTE: RWY 21 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.																			
CITY AND STATE		ELEVATION: 1428 TDZE: 1420			FACILITY IDENTIFIER: RNAV			PROCEDURE NO./AMDT NO./EFFECTIVE DATE:			SUP:								
DULUTH, MN		AIRPORT NAME: DULUTH INTL						RNAV (GPS) RWY 21, ORIG-B			AMDT: ORIG-A								
								19 JULY 2018			DATED 12/11/2014								



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

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TAA

	FROM	TO	ALT
1.	123/30 CW 303/30 (NOPT)	123/6 CW 303/6	3400
2.	123/6 CW 303/6	CLIPH (IF/IAF) (FB)	3200
3.	303/30 CW 033/30	JIMKI (IAF) (FB)	3200
4.	033/30 CW 123/30	JUDDD (IAF) (FB)	3200

QUALITY  
16  
CHECKED

CITY AND STATE  
DULUTH, MN

ELEVATION: 1428 TDZE: 1420  
AIRPORT NAME:  
DULUTH INTL

FACILITY  
IDENTIFIER:  
RNAV

PROCEDURE NO./AMDT NO./EFFECTIVE DATE:  
RNAV (GPS) RWY 21, ORIG-B  
19 JULY 2018

SUP:  
AMDT: ORIG-A  
DATED: 12/11/2014

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

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**FAS DATA BLOCK INFORMATION**

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KDLH
RUNWAY	RW21
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W21A
LTP/FTP LATITUDE	465056.7700N
LTP/FTP LONGITUDE	0921034.7225W
LTP/FTP ELLIPSOIDAL HEIGHT	+04033
FPAP LATITUDE	464940.8725N
FPAP LONGITUDE	0921142.6310W
THRESHOLD CROSSING HEIGHT (TCH)	00040.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1008
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0

<u>CRC REMAINDER</u>	C5A881AE
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**ADDITIONAL PATH POINT RECORD INFORMATION**

ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+04316
FPAP ORTHOMETRIC HEIGHT	+04316

QUALITY  
16  
CHECKED

CITY AND STATE  DULUTH, MN	ELEVATION: 1428      TDZE: 1420 AIRPORT NAME:  DULUTH INTL	FACILITY IDENTIFIER:  RNAV	PROCEDURE NO./AMDT NO./EFFECTIVE DATE:  RNAV (GPS) RWY 21, ORIG-B 19 JULY 2018	SUP:
				AMDT:      ORIG-A
				DATED:      12/11/2014