

**U.S. DEPARTMENT OF TRANSPORTATION -- FEDERAL AVIATION ADMINISTRATION
RADAR -- STANDARD INSTRUMENT APPROACH PROCEDURE -- FLIGHT STANDARDS SERVICE -- FAR PART 97.31**

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.

Initial approach minimum altitude(s) shall correspond with those established for enroute operation in the particular area or as set forth below. Positive identification must be established with the radar controller. From initial contact with radar to final authorized landing minimums, the instructions of the radar controller are mandatory except when; (A) Visual contact is established on final approach at or before descent to the authorized landing minimums; or (B) at pilot's discretion if it appears desirable to discontinue the approach.

Except when the radar controller may direct otherwise prior to final approach, a missed approach shall be executed as provided below when; (A) communications on final approach is lost for more than 5 seconds during a precision approach, or for more than 30 seconds during a surveillance approach; (B) directed by radar controllers; (C) visual contact is not established upon descent to authorized landing minimums; or (D) if landing is not accomplished.

RADAR TERMINAL AREA MANEUVERING SECTORS AND ALTITUDES (Sectors and distances measured from radar antenna)												MISSED APPROACH	
FROM	T O	DISTANCE	ALTITUDE	DISTANCE	ALTITUDE	DISTANCE	ALTITUDE	DISTANCE	ALTITUDE	DISTANCE	ALTITUDE	MAP:	
												RWY 3, 9, 21, 27: THLD	
												RWY 3, 9, 21, 27: CLIMB RUNWAY HEADING TO 3000 FOR RADAR VECTORS.	
As established by the current (DULUTH) ASR Minimum Vectoring Altitude Chart.													

MINIMUMS

TAKEOFF:		STANDARD	<input checked="" type="checkbox"/>	SEE FAA FORM 8260-15A FOR THIS AIRPORT						ALTERNATE: N A		STANDARD: CAT D, E 1000-3			
CATEGORY =====>	A			B			C			D			E		
	DH/ MDA	VIS	HAT/HAA	DH/MDA	V I S	HAT/HAA	DH/MDA	V I S	HAT/HAA	DH/MDA	V I S	HAT/HAA	DH/MDA	V I S	HAT/HAA
S-3	1820	1	400	1820	1	400	1820	1 1/8	400	1820	1 1/8	400	1820	1 1/8	400
S-9	1820	4000	392	1820	4000	392	1820	4000	392	1820	4000	392	1820	4000	392
S-21	1840	1	420	1840	1	420	1840	1 1/8	420	1840	1 1/8	420	1840	1 1/8	420
S-27	1880	4000	459	1880	4000	459	1880	4500	459	1880	4500	459	1800	4500	459
CIRCLING	1880	1	452	1900	1	472	1940	1 1/2	512	2400	3	972	2400	3	972

NOTES:

RWY 3: FAF 5.00 NM FROM THRESHOLD, MINIMUM ALTITUDE 3000; FINAL COURSE 032.49. RECOMMENDED ALTITUDE: 4 NM 2.700, 3 NM 2380, 2 NM 2080.
 RWY 9: FAF 5.00 NM FROM THRESHOLD, MINIMUM ALTITUDE 3000. MINIMUM ALTITUDE 2 NM FIX 2100; FINAL COURSE 093.17. RECOMMENDED ALTITUDE: 4 MILES 2700, 3 NM 2400, 2 NM 2100.
 RWY 21: FAF 5.00 NM FROM THRESHOLD, MINIMUM ALTITUDE 3000. MINIMUM ALTITUDE 2 NM FIX 2080; FINAL COURSE 212.60. RECOMMENDED ALTITUDE: 4 NM 2700. 3 NM 2380, 2 NM 2080.
 RWY 27: FAF 5.00 NM FROM THRESHOLD, MINIMUM ALTITUDE 3000. FINAL COURSE 273.38. RECOMMENDED ALTITUDE: 4 NM 2700. 3 NM 2380 2 NM 2080.

LOST COMMUNICATIONS (ALL RWYS): As directed by ATC on initial contact.

ADDITIONAL FLIGHT DATA

TDZE: 1420	RWY: 03	TDZE: 1420	RWY: 21
TDZE: 1428	RWY: 09	TDZE: 1421	RWY: 27

FAS OBS:
 RWY 3: 1570 AAO 464707N-0921336W.
 RWY 21: 1670 AAO 465326N-0920637W.
 RWY 9: 1628 TOWER 465116N-0921654W.
 RWY 27: 1612 ANTENNA 464930N-0920747W.
 CHART S-3 1581 TOWER 464525N/0921414W
 CHART CIRCLING ICON

MAG VAR: 1W EPOCH YEAR: 2020

**QUALITY
35
CHECKED**

CITY AND STATE	ELEVATION: 1428 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP
DULUTH, MN.	DULUTH INTL	DLH	RADAR-1 ORIG 20 JUNE 2019	AMDT: NONE
				DATED:

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NOTES (CONT): CHART NOTE: CIRCLING NA FOR CAT E SE OF RWYS 3 AND 27. CHART NOTE: RWY 3, 9, 21 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED. CHART NOTE: VGSI AND DESCENT ANGELS NOT COINCIDENT (VGSI ANGLE {angle}/TCH {feet}). CHART NOTE: FOR INOPERATIVE ALS, INCREASE ASR S-09 CATS A/B VISIBILITY TO RVR 5500, CATS C/D/E TO 1 1/8 SM. CHART NOTE: FOR INOPERATIVE ALS, INCREASE ASR S-27 CATS A/B VISIBILITY TO RVR 5500, CATS C/D/E TO 1 3/8 SM.								
CITY AND STATE DULUTH, MN	ELEVATION: 1428 TDZE: AIRPORT NAME: DULUTH INTL	FACILITY IDENTIFIER: DLH	<table border="1"> <tr> <td>PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:</td> <td>SUP:</td> </tr> <tr> <td rowspan="2"> RADAR-1, ORIG 20 JUNE 2019 </td> <td>AMDT: NONE</td> </tr> <tr> <td>DATED:</td> </tr> </table>	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:	RADAR-1, ORIG 20 JUNE 2019	AMDT: NONE	DATED:
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