Flight Procedure Tracking Form

Action:	Task Type:	Date Open:	Task #:	Request #:
FLIGHT CHECK	IAP	11/30/2010	2010113022164301001	20101130221643

Procedure: ILS OR LOC RWY 9 AMDT 22 | **Airport ID:** KDLH | **Airport:** DULUTH INTL | **Reimbursable #:**

City: DULUTH **ST:** MN | **GPS #:** | **Estimated Chart Date:** 06/27/2013 | **FICO #:**

Fac ID: DLH **Fac. Type:** ILS | **Specialist:** ANKUR VERMA

Procedure Review

P3

	Rec'd	Rel'd	Full Name	Comments
Lead:	05/07/2012	03/06/2013	JILL OLSON	
QA:	03/06/2013	03/12/2013	DAVID PUGLISI	
Liaison:	03/12/2013		Spur Lin	

Procedure Comments: ENROUTE-NON | **Remark Type:** INFORMATION

pkg 1 of 1

DULUTH, MN DULUTH INTL (KDLH) ILS OR LOC RWY 9, AMDT 22 ENROUTE-NO FC: 5.14.13 PUB: 6.27.13

ATTACHED FORMS: 8260-3; 8260-10; 8260-9; 8260-2(S): CFBSJ, ORIG; CHERL-INT, REV 6; PYLKA (DL) LOM, REV 10; (INFO ONLY) DULUTH (DLH) VTAC, REV 14.
SPECIALIST REMARK: THIS PROCEDURE IS TO PROVIDE TEMPORARY CAT I ILS SERVICE WHILE THE AIRPORT WORKS ON THE PLATFORM FOR THE PERMANENT ILS FACILITY. AFTER THE PLATFORM IS COMPLETE, AJV WILL DO ANOTHER AMENDMENT TO RE-ESTABLISH CAT II MINIMA.

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

New

ILS or LOC RWY 9

DULUTH INTL (DLH)

LOC I-DLH	APP CRS	Rwy Idg	10162
110.3	092°	TDZE	1428
		Apt Elev	1428

T A ASR — ADF or Radar Required. Cat E Circling NA southeast of Rwys 3 and 27. For inop ALSF, increase S-ILS 9 Cat E visibility to RVR 4000 and S-LOC 9 Cat C/D/E visibility to 1⅜ mile.

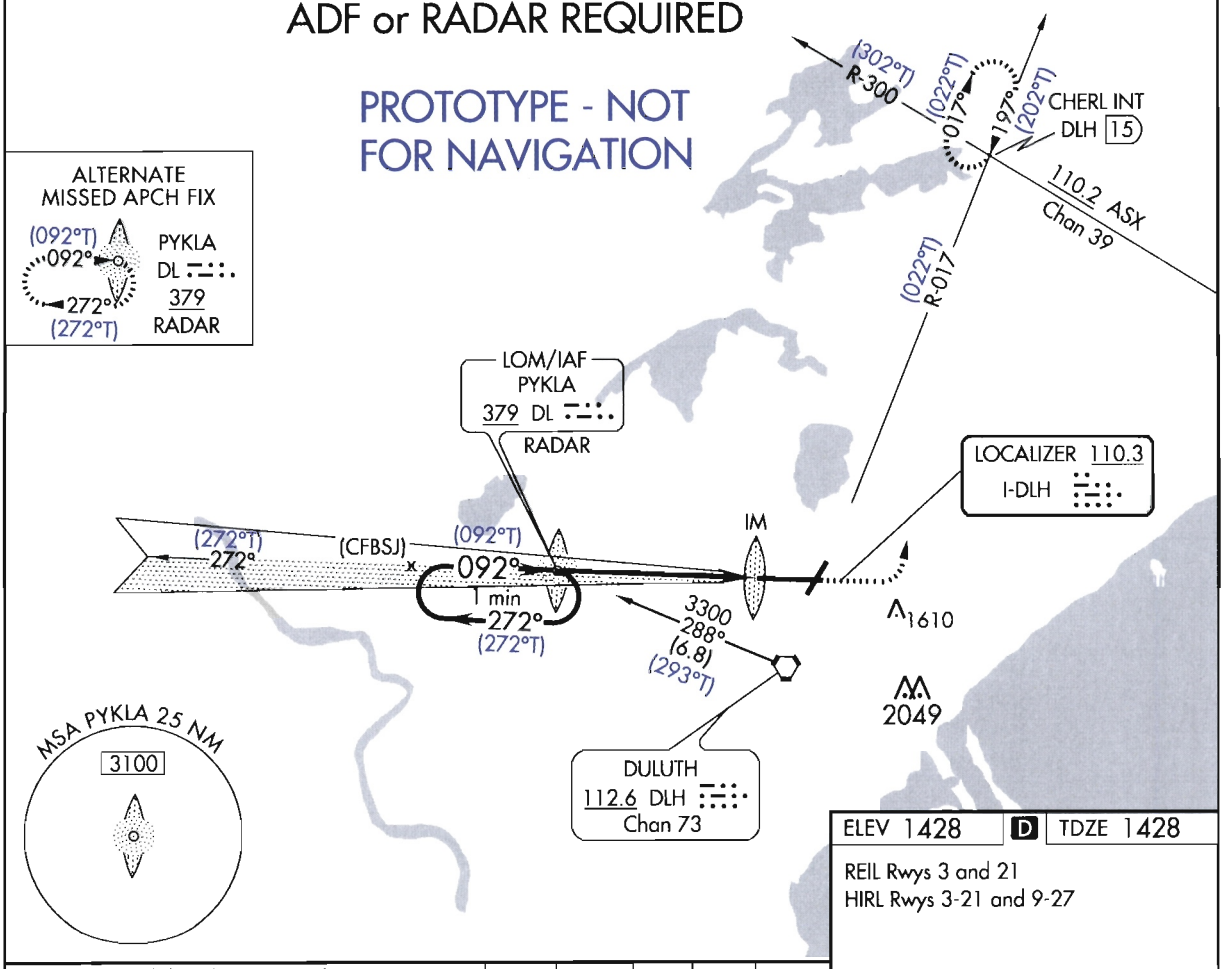
ALSF-2

MISSED APPROACH: Climb to 3000 then climbing left turn to 4500 on heading 320° and DLH VORTAC R-017 to CHERL INT/DLH 15 DME and hold.

ATIS	DULUTH APP CON	DULUTH TOWER	GND CON
124.1 270.1	125.45 255.9	118.3 257.8	121.9 348.6

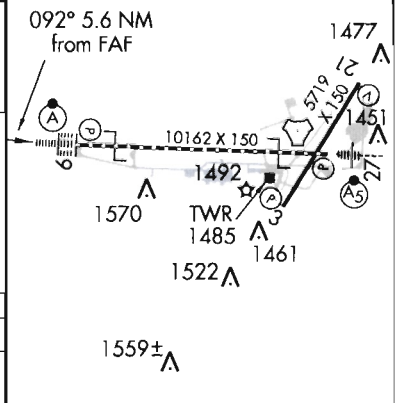
ADF or RADAR REQUIRED

PROTOTYPE - NOT FOR NAVIGATION



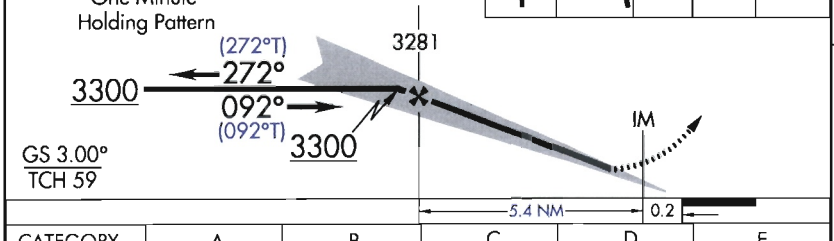
ELEV 1428 D TDZE 1428

REIL Rwys 3 and 21
HIRL Rwys 3-21 and 9-27



VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 70).

3000	4500	hdg 320°	DLH R-017	CHERL INT



CATEGORY	A	B	C	D	E
S-ILS 9	1628/18 200 (200-½)				
S-LOC 9	1960/24 532 (600-1/2)		1960/55 532 (600-1)		
CIRCLING	1960-1 532 (600-1)		1960-1 1/2 532 (600-1 1/2)	1980-2 552 (600-2)	2060-2¼ 632 (700-2¼)

FAF to MAP 5.6 NM					
Knots	60	90	120	150	180
Min:Sec	5:36	3:44	2:48	2:14	1:52

US DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

ILS - STANDARD INSTRUMENT APPROACH PROCEDURE TITLE 14 CFR PART 97.29

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

FROM	TO	COURSE AND DISTANCE	ALTITUDE
DLH VORTAC	PYKLA LOM/RADAR	287.72 / 6.80	3300

MISSED APPROACH

ILS: DA
LOC: 5.56 MILES AFTER PYKLA LOM RADAR

CLIMB TO 3000 THEN CLIMBING LEFT TURN TO 4500 ON HEADING 320 AND DLH VORTAC R-017 TO CHERL INT/DLH 15.00 DME AND HOLD, OR AS DIRECTED BY ATC.

ALTERNATE MA: CLIMB TO 2700 THEN CLIMBING LEFT TURN TO 3300 DIRECT PYKLA LOM/RADAR AND HOLD.

ADDITIONAL FLIGHT DATA:
HOLD N, RT, 197.00 INBOUND.
CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD W PYKLA LOM/RADAR, RT, 092.26 INBOUND.
FAS OBST: 1699 AAO 465057N/0921801W
CHART: ASR
CHART IN PLANVIEW: (CFBSJ) AT 465054.60N-0922708.08W

1. PT ____ SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)
2. HOLD W PYKLA LOM, RT, 092.26 INBOUND, 3300 FT. IN LIEU OF PT (IAF)
3. FAC: 092.26 FAF: PYKLA LOM/RADAR DIST FAF TO MAP: 5.56 THLD: 5.56
4. MIN. ALT: PYKLA LOM 3300
5. DIST TO THLD FROM OM: 5.56 MM: - IM: 1060 150 HAT: - 100 HAT: - GS ANT: 1154
6. MIN GS INCPT: 3300 GS ALT AT: - OM: 3281 MM: - IM: 1538
7. GS ANGLE: 3.00 TCH: 59.0
8. MSA FROM: PYKLA LOM 3100

MAG VAR: 0E EPOCH YEAR: 2015

MINIMUMS

TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT | ALTERNATE: N A | ILS: STANDARD # LOC: 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
S-ILS 9	1628	1800	200	1628	1800	200	1628	1800	200	1628	1800	200	1628	1800	200
S-LOC 9	1960	2400	532	1960	2400	532	1960	5500	532	1960	5500	532	1960	5500	532
CIRCLING	1960	1	532	1960	1	532	1960	1 1/2	532	1980	2	552	2060	2 1/4	632

NOTES:
CHART NOTE: ADF OR RADAR REQUIRED.
CHART PLANVIEW NOTE: ADF OR RADAR REQUIRED.
CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT.
CHART NOTE: CAT E CIRCLING NA SE OF RWYS 3 AND 27.
(SEE FORM 8260-10)

CAT E 700-2 1/4
@ CAT E 800-2 1/4

QUALITY 9 CHECKED

CITY AND STATE	ELEVATION: 1428 THRE: 1428 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO./AMDT NO./EFFECTIVE DATE:	SUP:
DULUTH, MN	DULUTH INTL	I-DLH	ILS OR LOC RWY 9, AMDT 22	AMDT: 21A
				DATED 04/05/2012

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
[X] YES [ ] NO		ROUTINE

COORDINATED WITH:

ATA	AAT	ALPA	APA	AOPA	NBAA	OTHER (specify)
[X]	[ ]	[X]	[X]	[X]	[X]	[X] ZMP ARTCC, DLH APP CON, DLH AMGR

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:

DEVELOPED BY		
NAME:	FIFO	DATE:
JILL OLSON (ANKUR VERMA)	AJV-353	02/21/2013

APPROVED BY		
NAME:	FIFO	DATE:
LARRY H STROUT MANAGER	AJV-353	

CHANGES:

1. TRML ROUTES DLH TO PYKLA CRS/DIST CHANGED FROM 287.71/6.79 TO 287.72/6.80.
2. PROFILE SECTION LINE 2 CHANGED HIL CRS FROM 090.25 TO 092.26 INBOUND.
3. PROFILE SECTION LINE 3 CHANGED FAC FROM 090.25 TO 092.26 AND DIST FAF TO MAP/THLD FROM 5.55 TO 5.56.
4. PROFILE SECTION LINE 5 CHANGED DIST TO THLD FROM OM/5.55 AND GS ANT/1155 TO OM/5.56 AND GS ANT/1154.
5. PROFILE SECTION LINE 5 DELETED 100 HAT.
6. PROFILE SECTION LINE 6 CHANGED GS ALT AT IM FROM 1542 TO 1538.
7. MINIMUMS SECTION CHANGED S-ILS 9 CAT E VIS FROM 2400 TO 1800 RVR.
8. MINIMUMS SECTION CHANGED S-LOC 9 CAT C/D/E VIS FROM 4000/5000/5000 TO 5500/5500/5500 RESPECTIVELY. ALSO RAISED MDA TO 1960.
9. MINIMUMS SECTION CHANGED CIRCLING CAT E VIS FROM 2 1/2 TO 2 1/4.
10. NOTES SECTION DELETED NOTE CATEGORY II ILS SPECIAL AIRCREW AND CERTIFICATION REQUIRED. S-ILS 9: CAT A, B, C, D, RA 101, RVR 1200, HAT 100, DA 1528 MSL.
11. NOTES SECTION CHANGED ALTERNATE MINS FROM *CAT E 700-2 1/2 TO 700-2 1/4 AND @CAT E 800-2 1/2 TO 800-2 1/4.
12. MISSED APPROACH SECTION CHANGED LOC MAP FROM 5.55 MILES AFTER PYKLA LOM RADAR TO 5.56 MILES AFTER PYKLA LOM RADAR.
13. ADDTL FLT DATA SECTION CHANGED ALTERNATE MISSED COURSE FROM 090.25 TO 092.26.

SEE 8260-10

REASONS:

1, 12. PYKLA LOM/RADAR FIX MOVED TO NEW C/L LOCATION DUE TO TEMPORARY DLH LOC FACILITY RELOCATION.
2, 13. HOLDING COURSES MOVED ONTO TEMPORARY LOC FAC.
3. CURRENT EVALUATION USING TEMPORARY FACILITY RELOCATION DATA FOR DLH LOC; AIRPORT IS WORKING ON THE PERMANENT ILS PLATFORM.
4, 6. PER CURRENT EVALUATION USING TEMPORARY CAT I DLH FACILITY DATA.
5, 10. CAT II WILL BE REMOVED ON TEMPORARY ILS PROCEDURE PER CEN FPT CHECKLIST.
7, 8. IAW 8260.3B TABLE 3-5A.
9, 11. IAW 8260.3B TABLE 3-10. VIS UPDATED IAW CURRENT CRITERIA; HOWEVER NEW CIRCLING AREAS NOT USED PER AJV-353 MGR/LEAD INSTRUCTION.
14. IAW MEMO DTD JULY 10 2007 SBJ FAA ORDER 8260.19, PARAGRAPH 857 CLARIFICATION OF DOCUMENTATION POLICY REGARDING APPLICATION OF ADVERSE ASSUMPTION OBSTACLES.
15. IAW ARINC 424-18 SUPPLEMENTAL GUIDANCE MEMO 6.4.1.2.
16. DOCUMENTING CHANGE FROM FDC 2/6423 FI/P ILS OR LOC RWY 9 AMDT 21A IAW 8260.19E 8-13B.

QUALITY 9 CHECKED

US DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

ILS - STANDARD

INSTRUMENT APPROACH PROCEDURE - TITLE 14 CFR PART 97.29

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NOTES, (CONT.):

CHART NOTE: FOR INOPERATIVE ALSF, INCREASE S-ILS 9 CAT E VISIBILITY TO RVR 4000 AND S-LOC 9 CAT C/D/E VISIBILITY TO 1 1/2 MILE.

QUALITY 9 CHECKED

CITY AND STATE		FACILITY IDENTIFIER:	PROCEDURE NO./ AMDT NO./EFFECTIVE DATE:	SUP:
DULUTH, MN	**ELEVATION: 1428 THRE: 1428** AIRPORT NAME: **DULUTH INTL**	**I-DLH**	**ILS OR LOC RWY 9, AMDT 22**	AMDT: **21A**
				DATED: **04/05/2012**

ALL AFFECTED PROCEDURES REVIEWED? ☐ YES ☐ NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	FIFO	DATE:
APPROVED BY		
NAME:	FIFO	DATE:

CHANGES:

CHANGES CONT.
14. ADDTL FLT DATA SECTION CHANGED FAS OBST FROM 1619 TREE 465045N/0921734W TO 1699 AAO 465057N/0921801W. 15. ADDTL FLT DATA SECTION ADDED CHART IN PLANVIEW: (CFBSJ) AT 465054.60N-0922708.08W. 16. ADDTL FLT DATA SECTION UPDATED MAG VAR FROM 2E 1985 TO 0E 2015.

REASONS:

QUALITY CHECKED

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

ILS STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICES - **FAR PART 97.29**

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ARINC PACKET - 424-18 - ILS

```
                 1         2         3         4         5         6         7         8         9         0         1         2         3
NAVAID  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAD        DLH   K3011260VTHW N46480779W092121033    N46480779W092121033E0050014282     NARDULUTH
        SUSADB       DL    K3003790HOMW N46504459W092211777                        E0000           NARPYKLA

                 1         2         3         4         5         6         7         8         9         0         1         2         3
WP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   CFBSJ K30    W     N46505460W092270808                        W0005     NAR           CNF(CFBSJ)
        SUSAEAENRT   CHERL K30    R     N47020157W092035739                        W0009     NAR           CHERL
        SUSAEAENRT   PYKLA K30    R   L N46504569W092211827                        W0006     NAR           PYKLA LOM

                 1         2         3         4         5         6         7         8         9         0         1         2         3
AIRPORT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KDLHK3ADLH     0     101YHN46503150W092113710E002001428         1800018000C    MNAR    DULUTH INTL

                 1         2         3         4         5         6         7         8         9         0         1         2         3
SEGMENT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KDLHK3FI09   ADLH   010DLH  K3D 0V       IF                                          18000                  0 NS
        SUSAP KDLHK3FI09   ADLH   020DL   K3DB0NY      TF                                    + 03300                          0 NS
        SUSAP KDLHK3FI09   ADLH   030DL   K3DB0NE AR   HF IDLHK3      272200740923T010PI  + 03300                          0 NS
        SUSAP KDLHK3FI09   I      010CFBSJK3EA0E  I    IF IDLHK3      27230114        PI  J 033000330018000                 0 NS
        SUSAP KDLHK3FI09   I      020PYKLAK3EA0E  F    CF IDLHK3      2723007409200040PI  H 0330003281        -300DL    K3DB0 NS
        SUSAP KDLHK3FI09   I      030RW09 K3PG0GY M    CF IDLHK3      2723001809200056PI    01487             -300          0 NS
        SUSAP KDLHK3FI09   I      040         0  M     CA                     0923        + 03000                          0 NS
        SUSAP KDLHK3FI09   I      050         0    L   VIY                    3200                                         0 NS
        SUSAP KDLHK3FI09   I      060CHERLK3EA0EY      CF DLH K3      0170015001700090D   + 04500                          0 NS
        SUSAP KDLHK3FI09   I      070CHERLK3EA0EE  R   HM                     1970T010    + 04500                          0 NS

                 1         2         3         4         5         6         7         8         9         0         1         2         3
RUNWAY  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KDLHK3GRW09    0101620903 N46503284W092131304-0100    +0406901428000059150IIDLH2

                 1         2         3         4         5         6         7         8         9         0         1         2         3
ILS     123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KDLHK3IIDLH2   011030RW09 N46502841W0921032510923N46503634W0921256221008 11540359300E00005901415

                 1         2         3         4         5         6         7         8         9         0         1         2         3
MSA     123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
```

QUALITY 1 CHECKED

CITY AND STATE	ELEVATION: 1428 THRE: 1428	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
DULUTH, MN	AIRPORT NAME: DULUTH INTL	I-DLH	ILS OR LOC RWY 9, AMDT 22	AMDT: 21A
				DATED: 04/05/2012

ALL AFFECTED PROCEDURES REVIEWED? ☐ YES ☐ NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

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SUSAP KDLHK3SDL K3DB 0 18018003125 M

QUALITY 1 CHECKED

CITY AND STATE	ELEVATION: 1428 THRE: 1428	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
DULUTH, MN	AIRPORT NAME: DULUTH INTL	I-DLH	ILS OR LOC RWY 9, AMDT 22	AMDT: 21A
				DATED: 04/05/2012

ALL AFFECTED PROCEDURES REVIEWED? ☐ YES ☐ NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

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.

ARINC SUMMARY - 424-18 - ILS

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	DLH	DLH	010		IF		FB					
	DLH	DL	020		TF		FO				AA 03300	
	DLH	DL	030	IAF	HF	R	FO		092.3()	T01.0	AA 03300	
		CFBSJ	010	FACF	IF		FB				AA 03300 GI 03300	
		PYKLA	020	FAF	CF		FB		092.0()	004.0	GI 03300 GS 03281	
		RW09	030	MAP	CF		FO		092.0()	005.6	AT 01487	

MISSED APPROACH	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
		040		CA		FB		092.3()		AA 03000	
		050		VI	L	FB		320.0()			
	CHERL	060		CF		FO		017.0()	009.0	AA 04500	
	CHERL	070		HM	R	FO		197.0()	T01.0	AA 04500	

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	DLH	N464807.79	W0921210.33	N4648.130	W09212.172
	DL	N465044.59	W0922117.77	N4650.743	W09221.296
	CFBSJ	N465054.60	W0922708.08	N4650.910	W09227.135
	CHERL	N470201.57	W0920357.39	N4702.026	W09203.957
	PYKLA	N465045.69	W0922118.27	N4650.762	W09221.305
	RW09	N465032.84	W0921313.04	N4650.547	W09213.217
	IDLH (LOC)	N465028.41	W0921032.51	N4650.474	W09210.542

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW09	01428	59

QUALITY CHECKED

CITY AND STATE	ELEVATION: 1428	THRE: 1428	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:	
DULUTH, MN	AIRPORT NAME: DULUTH INTL		I-DLH	ILS OR LOC RWY 9, AMDT 22	AMDT:	21A
					DATED:	04/05/2012

ALL AFFECTED PROCEDURES REVIEWED? ☐ YES ☐ NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
LOC STANDARD INSTRUMENT APPROACH PROCEDURE
FLIGHT STANDARDS SERVICES - FAR PART 97.25

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ARINC PACKET - 424-18 - LOC

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                 1         2         3         4         5         6         7         8         9         0         1         2         3
NAVAID  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAD        DLH   K3011260VTHW N46480779W092121033    N46480779W092121033E0050014282     NARDULUTH
        SUSADB       DL    K3003790HOMW N46504459W092211777                        E0000           NARPYKLA

                 1         2         3         4         5         6         7         8         9         0         1         2         3
WP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   CFBSJ K30    W     N46505460W092270808                        W0005     NAR           CNF(CFBSJ)
        SUSAEAENRT   CHERL K30    R     N47020157W092035739                        W0009     NAR           CHERL
        SUSAEAENRT   PYKLA K30    R   L N46504569W092211827                        W0006     NAR           PYKLA LOM

                 1         2         3         4         5         6         7         8         9         0         1         2         3
AIRPORT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KDLHK3ADLH     0     101YHN46503150W092113710E002001428         1800018000C    MNAR    DULUTH INTL

                 1         2         3         4         5         6         7         8         9         0         1         2         3
SEGMENT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KDLHK3FL09   ADLH   010DLH  K3D 0V       IF                                                18000                  0 NS
        SUSAP KDLHK3FL09   ADLH   020DL   K3DB0NY      TF                                     + 03300                           0 NS
        SUSAP KDLHK3FL09   ADLH   030DL   K3DB0NE AR   HF IDLHK3      272200740923T010PI  + 03300                           0 NS
        SUSAP KDLHK3FL09   L      010CFBSJK3EA0E  I    IF IDLHK3      27230114        PI  + 03300     18000                  0 NS
        SUSAP KDLHK3FL09   L      020PYKLAK3EA0E  F    CF IDLHK3      2723007409200040PI  + 03300                  DL    K3DB0 NS
        SUSAP KDLHK3FL09   L      030RW09 K3PG0GY M    CF IDLHK3      2723001809200056PI    01487             -308          0 NS
        SUSAP KDLHK3FL09   L      040         0  M     CA                     0923        + 03000                           0 NS
        SUSAP KDLHK3FL09   L      050         0    L   VIY                    3200                                          0 NS
        SUSAP KDLHK3FL09   L      060CHERLK3EA0EY      CF DLH K3      0170015001700090D   + 04500                           0 NS
        SUSAP KDLHK3FL09   L      070CHERLK3EA0EE  R   HM                     1970T010    + 04500                           0 NS

                 1         2         3         4         5         6         7         8         9         0         1         2         3
RUNWAY  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KDLHK3GRW09    0101620903 N46503284W092131304-0100    +0406901428000059150IIDLH2

                 1         2         3         4         5         6         7         8         9         0         1         2         3
ILS     123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KDLHK3IIDLH2   011030RW09 N46502841W0921032510923N46503634W0921256221008 11540359300E00005901415

                 1         2         3         4         5         6         7         8         9         0         1         2         3
MSA     123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
```

CITY AND STATE	ELEVATION: 1428 THRE: 1428	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
DULUTH, MN	AIRPORT NAME: DULUTH INTL	I-DLH	ILS OR LOC RWY 9, AMDT 22	AMDT: 21A
				DATED: 04/05/2012

ALL AFFECTED PROCEDURES REVIEWED? ☐ YES ☐ NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

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.

```
SUSAP KDLHK3SDL   K3DB              0   18018003125                                                                M
```

QUALITY 1 CHECKED

CITY AND STATE	ELEVATION: 1428 THRE: 1428	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
DULUTH, MN	AIRPORT NAME: DULUTH INTL	I-DLH	ILS OR LOC RWY 9, AMDT 22	AMDT: 21A
				DATED: 04/05/2012

ALL AFFECTED PROCEDURES REVIEWED? ☐ YES ☐ NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

LOC STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICES - **FAR PART 97.25**

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.

ARINC SUMMARY - 424-18 - LOC

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	DLH	DLH	010		IF		FB					
	DLH	DL	020		TF		FO				AA 03300	
	DLH	DL	030	IAF	HF	R	FO		092.3()	T01.0	AA 03300	
		CFBSJ	010	FACF	IF		FB				AA 03300	
		PYKLA	020	FAF	CF		FB		092.0()	004.0	AA 03300	
		RW09	030	MAP	CF		FO		092.0()	005.6	AT 01487	

MISSED APPROACH	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
		040		CA		FB		092.3()		AA 03000	
		050		VI	L	FB		320.0()			
	CHERL	060		CF		FO		017.0()	009.0	AA 04500	
	CHERL	070		HM	R	FO		197.0()	T01.0	AA 04500	

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	DLH	N464807.79	W0921210.33	N4648.130	W09212.172
	DL	N465044.59	W0922117.77	N4650.743	W09221.296
	CFBSJ	N465054.60	W0922708.08	N4650.910	W09227.135
	CHERL	N470201.57	W0920357.39	N4702.026	W09203.957
	PYKLA	N465045.69	W0922118.27	N4650.762	W09221.305
	RW09	N465032.84	W0921313.04	N4650.547	W09213.217
	IDLH (LOC)	N465028.41	W0921032.51	N4650.474	W09210.542

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW09	01428	59

QUALITY CHECKED

CITY AND STATE	ELEVATION: 1428 THRE: 1428	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
DULUTH, MN	AIRPORT NAME: **DULUTH INTL**	**I-DLH**	**ILS OR LOC RWY 9, AMDT 22**	AMDT: **21A**
				DATED: **04/05/2012**

ALL AFFECTED PROCEDURES REVIEWED? ☐ YES ☐ NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

PART - A OBSTRUCTION DATA

1. APP SEGMENT	FROM	TO	OBSTRUCTION	COORDINATES	ELEV. MSL	ROC	ALT. ADJUSTMENTS	MIN. ALT.
FEEDER	DLH VORTAC	PYKLA LOM/RADAR	1. AAO	464827.00N/0922012.00W	1729 (2C)	1000	AT571	3300
			2. TERRAIN	464827.00N/0922012.00W	1529 (1500)		AS1500	3000
FINAL: ILS	GS INTCP	RW09				ASC		1628/200
FINAL: LOC	PYKLA LOM/RADAR	5.56 MILES AFTER PYKLA LOM RADAR	3. AAO	465057.23N/0921800.93W	1699 (2C)	250		1960
2. HOLD-IN-LIEU-OF-PT	PYKLA LOM		4. TOWER (27-002098)	465010.00N/0924209.00W	1828 (4D)	1000	AT472	3300
			5. TERRAIN	465000.00N/0924257.00W	1595 (1600)		AS1500	3100
3. MISSED APPROACH MAP:	DA / 5.56 MILES AFTER PYKLA LOM	CHERL/DLH 15.00 DME				ASC		4500
ELEV:	1458/1690		6. AAO	465953.90N/0915650.51W	1799 (2C)	1000		2800
			7. TERRAIN	465953.90N/0915650.51W	1599 (1600)		AS1500	3100

4. CIRCLING AREA	DISTANCE	HT. ABV. ARPT. REQUIRED	HT. ABV. ARPT. ACTUAL		OBSTRUCTION	COORDINATES	ELEV. MSL	ROC	ALT. ADJUSTMENTS	MIN. ALT.
CATEGORY A	1.3 NM	350	532		10. TREE	465127.00N/0920854.00W	1609 (2C)	300	SI	1960
CATEGORY B	1.5 NM	450	532		10. TREE	465127.00N/0920854.00W	1609 (2C)	300	SI	1960
CATEGORY C	1.7 NM	450	532		10. TREE	465127.00N/0920854.00W	1609 (2C)	300	SI	1960
CATEGORY D	2.3 NM	550	552		10. TREE	465127.00N/0920854.00W	1609 (2C)	300	HAA	1980
CATEGORY E	4.5 NM	550	632		11. AAO	465256.00N/0920535.00W	1750 (2C)	300		2060

5. MINIMUM SAFE ALTITUDES — PRIMARY NAVAID: PYKLA LOM

SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A	SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A
360-360	TWR (27-000141)	110/ 10.3	2049 (5D)	3100					

QUALITY 9

CHECKED

CITY AND STATE	ELEVATION: 1428 / AIRPORT NAME:	FACILITY	PROCEDURE AND AMENDMENT NO:	REGION
DULUTH, MN	DULUTH INTL	I-DLH	ILS OR LOC RWY 9, AMDT 22	AGL

PART B - SUPPLEMENTAL DATA

1. COMMUNICATIONS WITH:	2. WEATHER SERVICE	3. ALTIMETER SETTING
DLH APP CON ZMP ARTCC SATISFACTORY ON:	[ ] NWS OTHER: ASOS [ ] FAA [ ] A/C	SOURCE: KDLH DISTANCE: HOURS REMOTE OPERATION:
[X] VHF [X] UHF [ ] HF	LOCATION: KDLH	ADJUSTMENT: 0

4. MONITOR STATUS	PRIMARY NAVAID:	I-DLH
	MONITOR POINT:	MOCC
	HRS OPTN: CAT 1	24
	HRS OPTN: CAT 3	

5. APPROACH & RUNWAY LIGHTING	
X	ALSF-2 09
	(S) SALS
X	MALSR 27
X	HIRL 27, 21, 09, 03
	MIRL
X	REIL 21, 03
X	TDZ 09
X	C/L 27, 09
X	OTHER (SPECIFY) VASI-2L 21 PAPI-4L 27, 09, 03

6. RUNWAY MARKINGS	BASIC	
	ALL WEATHER	PIR-G 27, 09
	INSTRUMENT	NPI-F 21, 03
7. RUNWAY VISUAL RANGE	APPROACH	27, 09
	MIDFIELD	
	ROLL OUT	
8. GLIDE PATH	GP ANGLE: 3.00	ELEV RWY THRESHOLD: 1427.6
	DISTANCE FROM RWY: 1154	ELEV GP ANTENNA: 1422.7
		THRESHOLD CROSSING HEIGHT: 59.0

9. FINAL APPROACH COURSE AIMING			
	X	RUNWAY THRESHOLD	FT. FROM THRESHOLD
	X	ON CENTERLINE	FT. FROM CENTERLINE

10. WAIVERS: **NONE**

PART D - PREPARED BY: JILL OLSON (ANKUR VERMA)	DATE: 02/21/2013
TITLE: AERONAUTICAL INFORMATION SPECIALIST	OFFICE: AJV-353

PART C - REMARKS:

VDP NOT ESTABLISHED - FINAL FACILITY DOES NOT HAVE DME.

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

100 FT VEGETATION HEIGHT USED PER CEN FPT.

KDLH ASOS ON SERVICE A; AIRPORT HAS REDUNDANT WEATHER.

DLH TEMPORARY ILS FACILITY: RDH 59 FT.

VGSI: 3.00/73

THIS PROCEDURE IS TO PROVIDE TEMPORARY CAT I ILS SERVICE TO KDLH RWY 09 WHILE THE AIRPORT WORKS ON THE PLATFORM FOR THE PERMANENT ILS FACILITY. AFTER THE PLATFORM IS COMPLETE, AJV WILL DO ANOTHER AMENDMENT TO RE-ESTABLISH CAT II MINIMA AND LOWER MINIMA IF POSSIBLE.

AMDT 21 VEGETATION AND AAO WAS USED IN THE EVALUATION OF AMDT 22 PER AJV-353 MANAGER. WE WILL NOT BE LOWERING ANY MINIMA UNTIL THE THE PERMANENT LOCALIZER FACILITY IS IN PLACE.

PREVIOUS FINAL CONTROLLING OBSTACLE FOR THE LOC WAS A TREE; HOWEVER, TREE LOCATION IS NOW IN A VG SURVEY AREA; PREVIOUS CONTROLLER NOT USED.

OLD CIRCLING RADIUS PRE 8260.3B CHG 21-25 USED PER AJV-353 MGR. CIRCLING WILL NOT BE UPDATED OR LOWERED UNTIL THE PERMANENT ILS FACILITY IS IN PLACE. PREVIOUS CIRCLING CONTROLLING OBSTACLES KEPT FOR SAFETY AS THEY ARE HIGHER THAN NEW EVALUATION FINDINGS. PREVIOUS CAT D TOWER 27-000558 REPLACED BY 1609 TREE DUE TO MISTAKE ON AMDT 21 FORMS DOCUMENTING AN OBSTACLE THAT RESIDES IN THE CIRCLING EXCLUSION AREA.

NO ADDITIONAL AIRSPACE REQUIRED.

MISSED APPROACH OBSTACLES CONT.
ALTERNATE:
8. TOWER (27-001743) 464739.00N/0920705.00W 2049 (4D)
1000 3100
9. TERRAIN 465618.00N/0921500.00W 1536 (1500) AS1500
3000

QUALITY 9 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: CFBSJ **STATE:** MN **COUNTRY:** US

LATITUDE/LONGITUDE: 465054.60N/0922708.08W **TYPE:** CNF

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

REMARKS:
CNF USED TO IDENTIFY FACF FOR ARINC CODING.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 9			KDLH	DULUTH	MN (US

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 06/27/2013

DEVELOPED BY: **DATE:** 02/26/2013 **OFFICE:** AJV-353 **NAME:** JILL OLSON (ANKUR VERMA)

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: DLH APP CON
OTHER:

QUALITY 9 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: CHERL **STATE:** MN **COUNTRY:** US

LATITUDE/LONGITUDE: 470201.57N/0920357.39W **TYPE:** 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	DULUTH	DLH	VORTAC	H	017.00	022.00	15.00	15.00		4000	17500
2	ASHLAND	ASX	VOR/DME	T	299.96	301.96	55.57	55.57		4500	17500

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
ASX	VOR/DME	R-300	56	4500	17500

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	N	DLH	VORTAC	017.00	197.00	R	1		4500	14000	8	19

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	230	AAO	471706.00N/0920024.00W	1949	4E
1	310	AAO	470824.00N/0914836.00W	2038	4E

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERNS.

REMARKS:
DULUTH (FAC 1) AND ASHLAND (FAC 2) USED TO ESTABLISH FIX COORDINATES
PRECIPITIOUS TERRAIN EVALUATION COMPLTED.
310 HOLDING EVALUATED FOR MILITARY.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	COPTER ILS OR LOC RWY 27	1, 2	1	KDLH	DULUTH	MN (US)
IAP	COPTER ILS RWY 9	1, 2	1	KDLH	DULUTH	MN (US)
IAP	ILS OR LOC RWY 27	1, 2	1	KDLH	DULUTH	MN (US)
IAP	ILS OR LOC RWY 9	1, 2	1	KDLH	DULUTH	MN (US)
IAP	VOR OR TACAN RWY 3	1, 2	1	KDLH	DULUTH	MN (US)
IAP	VOR/DME OR TACAN RWY 21	1, 2	1	KDLH	DULUTH	MN (US)

REQUIRED CHARTING: MILITARY IAP, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 6 **DATE OF REVISION:** 06/27/2013

REASON FOR REVISION:
WP DELETED FROM FIX TYPE.
FAC 1/2 BROUGHT OUT OF HISTORY.
FAC 2 CHANGED MAA FROM 10000 TO 17500.
PAT 2 DELETED.
PAT 1 CTRL OBSTRUCTION ADDED FOR 310 AIRSPEED.
ADDED REMARK DULUTH (FAC 1) AND ASHLAND (FAC 2) USED TO ESTABLISH FIX COORDINATES.

DEVELOPED BY: **DATE:** 03/05/2013 **OFFICE:** AJV-353 **NAME:** JILL OLSON (ANKUR VERMA)

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: DLH APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: PYKLA LOM **STATE:** MN **COUNTRY:** US

LATITUDE/LONGITUDE: 465045.69N/0922118.27W **TYPE:** RADAR

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	PYKLA	DL	LOM							3300	17500
2	DULUTH	I-DLH	LOC		272.26	272.26		7.39	44925	3300	5900

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	W	DL	LOM	272.26	092.26	R	1		3300	5900	8	9

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	265	TOWER (27-002098)	465010.00N/0924209.00W	1828	4D

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:
PYKLA (FAC 1) AND DULUTH (FAC 2) USED TO ESTABLISH FIX COORDINATES
COORDINATES REFLECT LOCATION ON LOC/AZ CENTERLINE ABEAM THE PYKLA LOM.
ACTUAL FACILITY LOCATION IS 465044.84N/0922118.32W.
PRECIPITOUS TERRAIN EVALUATION COMPLETED.
EVALUATED FOR 265K HOLDING PATTERN FOR MILITARY OPERATIONS.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	NDB RWY 17	1		KCOQ	CLOQUET	MN (US)
IAP	NDB RWY 35	1		KCOQ	CLOQUET	MN (US)
IAP	COPTER ILS OR LOC RWY 27 (ALT MA)	1	1	KDLH	DULUTH	MN (US)
IAP	ILS OR LOC RWY 27 (ALT MA)	1	1	KDLH	DULUTH	MN (US)
IAP	ILS OR LOC RWY 9 (ALT MA)	1, 2	1	KDLH	DULUTH	MN (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 10 **DATE OF REVISION:** 06/27/2013

REASON FOR REVISION:
FIX USE UPDATED.
FIX MOVED 40 FT WEST.
FAC 2 CHANGED MAG/TRUE BRG FROM 272.25 TO 272.26.
FAC 2 CHANGED DIST FROM FAC FROM 7.76/47139 TO 7.39/44925
PAT 1 CHANGED CRS INBOUND FROM 092.25 TO 092.26.
ADDED REMARK PYKLA (FAC 1) AND DULUTH (FAC 2) USED TO ESTABLISH FIX COORDINATES.
PAT 1 CHANGED ALT MAX FROM 6000 TO 5900.
DELETED DME FROM FIX TYPE.
FAC 3 DELETED.

DEVELOPED BY: **DATE:** 02/20/2013 **OFFICE:** AJV-353 **NAME:** JILL OLSON (ANKUR VERMA)

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: DLH APP CON
OTHER:

RADIO FIX AND HOLDING DATA RECORD INFO ONLY

NAME: DULUTH VORTAC **STATE:** MN **COUNTRY:** US

LATITUDE/LONGITUDE: 464807.79N/0921210.33W **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	DULUTH	DLH	VORTAC	H							45000

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

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
UPN	230	TOWER (27-000141)	464708.00N/0920712.00W	2049	5D

HOLDING RESTRICTIONS:
UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 3100.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	MEADOW LAKE ONE			KMSP	MINNEAPOLIS	MN (US)
DP	MINNEAPOLIS FIVE			KMSP	MINNEAPOLIS	MN (US)
EN ROUTE	J140					(US)
EN ROUTE	J21					(US)
EN ROUTE	J32					(US)
EN ROUTE	J38					(US)
EN ROUTE	J533					(US)
EN ROUTE	J538					(US)
EN ROUTE	J89					(US)
EN ROUTE	V129-191-217					(US)
EN ROUTE	V13					(US)
EN ROUTE	V13-505					(US)
EN ROUTE	V177					(US)
EN ROUTE	V191-430					(US)
EN ROUTE	V217					(US)
EN ROUTE	V430					(US)
EN ROUTE	V505					(US)
IAP	RNAV (GPS) RWY 17			KCOQ	CLOQUET	MN (US)
IAP	RNAV (GPS) RWY 35			KCOQ	CLOQUET	MN (US)
IAP	COPTER ILS OR LOC RWY 27			KDLH	DULUTH	MN (US)
IAP	ILS OR LOC RWY 27			KDLH	DULUTH	MN (US)
IAP	ILS OR LOC RWY 9			KDLH	DULUTH	MN (US)
IAP	VOR OR TACAN RWY 3			KDLH	DULUTH	MN (US)
IAP	VOR/DME OR TACAN RWY 21			KDLH	DULUTH	MN (US)
IAP	NDB RWY 25			KBFW	SILVER BAY	MN (US)
IAP	RNAV (GPS) RWY 13			KASX	ASHLAND	WI (US)
IAP	RNAV (GPS) RWY 22			KSUW	SUPERIOR	WI (US)
IAP	RNAV (GPS) RWY 32			KSUW	SUPERIOR	WI (US)
IAP	RNAV (GPS) RWY 4			KSUW	SUPERIOR	WI (US)
STAR	GOPHER			KFCM	MINNEAPOLIS	MN (US)
STAR	GOPHER			KLVN	MINNEAPOLIS	MN (US)
STAR	GOPHER			KMIC	MINNEAPOLIS	MN (US)
STAR	GOPHER			KMSP	MINNEAPOLIS	MN (US)
STAR	GOPHER			KSTP	ST PAUL	MN (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 14 **DATE OF REVISION:** 05/02/2013

REASON FOR REVISION:
LAT/LONG CHANGED FROM 464807.80N/0921210.32W TO 464807.79N/0921210.33W
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 12/27/2012 **OFFICE:** AJV-353 **NAME:** THOMAS KIRKPATRICK

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

SIGNATURE:

QUALITY CHECKED

DISTRIBUTION:

NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: DLH APP CON
OTHER: