FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
STANDARD TERMINAL ARRIVAL (STAR)

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PINNR (RNAV)	FOUR	PINNR.PINNR4	THREE	12/31/2020	3 SEP 26

TRANSITION ROUTES:

Transition Name	Transition Computer Codes	From FIX/NAVAID	To FIX/NAVAID	Course	Distance	MEA	MOCA	MAA	Crossing Altitudes / Fixes
BANNA	BANNA.PINNR4	BANNA	BANNA						AT/ABOVE FL270
			CHOTS	112.70	31.35	17000	12900		BETWEEN 17000 AND FL230
			FFEST	113.21	14.48	14000	12500		AT/ABOVE 14000
			PINNR	113.37	07.90	12000	12000		AT 12000
ESTES	ESTES.PINNR4	ESTES	ESTES						AT/ABOVE 16000
			HUBIE	056.29	07.91	14300	14300		AT/ABOVE 15000
			FFEST	056.39	04.11	14000	12000		AT/ABOVE 14000
			PINNR	113.37	07.90	12000	12000		AT 12000

ARRIVAL ROUTE DESCRIPTION:

LANDING APA RWY 17L: FROM PINNR ON TRACK 163.70/13.87 TO EUROO, THEN ON TRACK 188.82/24.95 TO NAPPR, THEN ON TRACK 166.33/18.12 TO WOTTR, THEN ON TRACK 150.63/16.24 TO CROSS SLOPR AT 12000 AND AT 250 KIAS, THEN ON TRACK 131.73/8.31 TO CROSS DEETU AT 11000 AND AT 210 KIAS, THEN ON TRACK 079.10/5.01 TO CROSS XHOME AT 11000, THEN ON TRACK 350.00/8.04 TO CROSS NSYNC AT 10000 AND AT 210 KIAS. EXPECT RNAV (RNP) Z RWY 17L APPROACH.

LANDING APA RWY 35R: FROM PINNR ON TRACK 163.70/13.87 TO EUROO, THEN ON TRACK 188.82/24.95 TO NAPPR, THEN ON TRACK 166.33/18.12 TO WOTTR, THEN ON TRACK 150.63/16.24 TO CROSS SLOPR AT 12000 AND AT 250 KIAS, THEN ON TRACK 155.11/17.78 TO XBOXX, THEN ON TRACK 093.67/6.00 TO CROSS XJOIN AT 12000 AND AT 240 KIAS, THEN ON TRACK 056.61/4.97 TO CROSS XPATH AT 10500, THEN ON TRACK 350.45/4.32 TO CROSS XBEEE AT 9000 AND AT 240 KIAS. EXPECT ILS OR RNAV RWY 35R APPROACH.

LANDING BJC: FROM PINNR ON TRACK 113.42/4.00 TO CROSS MAUDI AT OR ABOVE 11000, THEN ON TRACK 113.47/6.39 TO CROSS TINGE BETWEEN 10000 AND 11000, THEN ON TRACK 171.75/7.35 TO CROSS WHOAA AT 10000, THEN ON TRACK 171.61/8.03 TO CROSS TUBBR AT 10000 AND AT 250 KIAS, THEN ON TRACK 171.61/5.04 TO CROSS REDZN AT 10000 AND AT 200 KIAS, THEN ON TRACK 177.15/5.33 TO CROSS PYDRT AT 9000 AND AT 200 KIAS. EXPECT RNAV (GPS) RWY 12L APPROACH OR VISUAL APPROACH AS ASSIGNED BY ATC.

LANDING CFO/FNL/GXY: FROM PINNR ON TRACK 113.42/4.00 TO CROSS MAUDI AT OR ABOVE 11000, THEN ON TRACK 113.47/6.39 TO CROSS TINGE BETWEEN 10000 AND 11000, THEN ON TRACK 113.49/4.10 TO CROSS BDOWN AT 9000, THEN ON TRACK 113.49. EXPECT RADAR VECTORS TO FINAL APPROACH COURSE.

LANDING LMO: FROM PINNR ON TRACK 113.42/4.00 TO CROSS MAUDI AT OR ABOVE 11000, THEN ON TRACK 113.47/6.39 TO CROSS TINGE BETWEEN 10000 AND 11000, THEN ON TRACK 171.75/7.35 TO CROSS WHOAA AT 10000, THEN ON TRACK 171.61/8.03 TO CROSS TUBBR AT 10000 AND AT 250 KIAS, THEN ON TRACK 171.61/5.04 TO CROSS REDZN AT 10000 AND AT 200 KIAS, THEN ON TRACK 177.15/5.00 TO CROSS HBALL AT 9000, THEN ON TRACK 177.15. EXPECT RADAR VECTORS TO FINAL APPROACH COURSE.

PBN REQUIREMENT NOTES:

RNAV 1 - DME/DME/IRU OR GPS

EQUIPMENT REQUIREMENT NOTES:

RADAR REQUIRED

PROCEDURAL DATA NOTES:

NOTE: JET AIRCRAFT ONLY

FIXES AND/OR HOLDING PATTERNS:

CHART HOLDING AT BANNA: HOLD NW, LT, 112.70 INBOUND, 12 NM LEGS.

CHART HOLDING AT CHOTS: HOLD NW, LT, 113.21 INBOUND, 10 NM LEGS.

CHART HOLDING AT ESTES: HOLD SW, LT, 056.29 INBOUND, 10 NM LEGS.

QUALITY 14 CHECKED

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COMMUNICATIONS:

CHART: DEN ARTCC
CHART: APA TOWER
CHART: BJC TOWER
CHART: CFO TOWER

AIRPORTS SERVED:

AIRPORT ID	CITY	STATE
APA	DENVER	CO
CFO	DENVER	CO
GXY	GREELEY	CO
FNL	FORT COLLINS/LOVELAND	CO
BJC	DENVER	CO
LMO	LONGMONT	CO

LOST COMMUNICATIONS PREFERENCES:

LANDING BJC: FROM PYDRT PROCEED ON RNAV (GPS) RWY 12L APPROACH.
LANDING CFO: FROM BDOWN DIRECT SKIPI AND PROCEED ON ILS OR LOC RWY 26 APPROACH.
LANDING LMO: FROM HBALL DIRECT KAYOO DIRECT WOLTS AND PROCEED ON RNAV (GPS) RWY 29 APPROACH.

REMARKS:

WAIVER FOR AIRSPEED AT DEETU, REDZN, AND XJOIN.
WAIVER FOR REDUCED OBSTACLE CLEARANCE BETWEEN XPATH AND XBEEE.
APPROVAL FOR 347 FT/NM DESCENT GRADIENT BETWEEN XPATH AND XBEEE.
USED 16 FT MOUNTAINOUS ROC REDUCTION ON SEGMENT XJOIN TO XPATH. PRECIPITOUS TERRAIN EXISTS IN SEGMENT. CONSULTED WITH FPT, THE CONTROLLING OBSTACLE IS ALREADY BEHIND AIRCRAFT AT XJOIN, WHICH THEY MUST CROSS FIX AT 12000, IT WAS CONCLUDED THE ROC REDUCTION IS SAFE.
12000 FT MEA/MOCA USED AT COMMON FIX PINNR DUE TO RISING TERRAIN LOCATED DOWNSTREAM IN APA RWY TRANSITION.
DO NOT CHART MOCA VALUES: ESTES - HUBIE, FFEST - PINNR. MEA/MOCA VALUES WITHIN 500 FT.

ADDITIONAL FLIGHT DATA:

DME/DME ASSESSMENT: SAT (RNP 2.0)
REFERENCE MAG VAR: APA 08E/2015
CHART AT NSYNC TERMINUS: APA LDG RWY 17L
CHART AT XBEEE TERMINUS: APA LDG RWY 35R
CHART AT PYDRT TERMINUS: LDG BJC
CHART AT BDOWN TERMINUS: LDG CFO/FNL/GXY
CHART AT HBALL TERMINUS: LDG LMO

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		ORGANIZATION:	DATE:		
FLIGHT INSPECTED BY: CRAIG LARSON	Digitally signed by CASEY D HILL May 28, 2026	AJF	05/08/2026	Flight Inspected Signature:	Digitally signed by ALLAN WILL May 11, 2026
DEVELOPED BY: DAVID SAUER	Digitally signed by CASEY D HILL May 28, 2026	AJV-A33	01/13/2026	Developed By Signature:	Digitally signed by ALLAN WILL May 11, 2026
APPROVED BY: KYLE THOMPSON	Digitally signed by CASEY D HILL May 28, 2026	AJV-A33		Approved By Signature:	Digitally signed by ALLAN WILL May 11, 2026

CHANGES:

1. ADDED HOLDING PATTERN AT BANNA WP.
2. ADDED SPEED RESTRICTION AT BANNA WP, AT 280 KIAS.
3. ADDED HOLDING PATTERN AT CHOTS WP.
4. CHANGED ALTITUDE RESTRICTION AT CHOTS WP FROM AT/ABOVE 17000 TO AT/ABOVE 17000 AND AT/BELOW FL230.
5. ADDED SPEED RESTRICTION AT CHOTS WP, AT 270 KIAS.
6. UPDATED SEGMENT BANNA - CHOTS COURSE/DISTANCE FROM 111.69/30.50 TO 112.70/31.35.
7. ADDED ESTES EN ROUTE TRANSITION.
8. ADDED HOLDING AT ESTES WP.
9. CHANGED PRIMARY AIRPORT AND REFERENCE MAGNETIC VARIATION FROM KBJC 9E/2015 TO APA 8E/2015.
10. REMOVED APA COMMON ROUTE, ADDED APA RWY 17L/35R RUNWAY TRANSITIONS.
11. CHANGED ALTITUDE RESTRICTION AT PINNR WP FROM AT/ABOVE 12000 TO AT 12000.
12. ADDED MAUDI WP WITH ALTITUDE RESTRICTION AT/ABOVE 11000 FOR CFO, GXY, FNL, LMO, AND BJC COMMON ROUTES.
13. ADDED TUBBR WP WITH ALTITUDE RESTRICTION AT 10000 AND SPEED RESTRICTION AT 250 KIAS FOR LMO AND BJC COMMON ROUTES.
14. ADDED SPEED RESTRICTION AT REDZN WP, AT 200 KIAS.
15. ADDED SPEED RESTRICTION AT PYDRT WP, AT 200 KIAS.
16. REMOVED APA LOST COMMUNICATIONS PROCEDURE AND UPDATED "EXECUTE" TO "PROCEED ON".
17. REMOVED APA TERMINUS AAYES WP, ADDED APA TERMINUS AT NSYNC: APA LDG RWY 17L AND AT XBEEE: APA LDG RWY 35R.
18. REMOVED AIRPORT NAMES FROM AIRPORTS SERVED.
19. MOVED PROCEDURAL DATA NOTES, RNAV-1-DME/DME/IRU OR GPS, TO PBN REQUIREMENT NOTES.
20. MOVED PROCEDURAL DATA NOTE, RADAR REQUIRED, TO EQUIPMENT REQUIREMENT NOTES.
21. REMOVED ATIS AND APCH/DEP CON FROM COMMUNICATIONS.
22. UPDATED "DO NOT CHART MOCAS" TO "DO NOT CHART MOCA VALUES: ESTES - HUBIE, FFEST - PINNR. MEA/MOCA VALUES WITHIN 500 FT".
23. ADDED REMARK, "12000 FT MEA/MOCA USED AT COMMON FIX PINNR DUE TO RISING TERRAIN LOCATED DOWNSTREAM IN APA RWY TRANSITION".
24. UPDATED NOTE "TURBOJET AIRCRAFT ONLY" TO "JET AIRCRAFT ONLY".

REASONS:

1-5. ATC REQUEST FOR PREDICTABILITY AND CONSISTENCY.
6. MOVED CHOTS WP 5165 FT SOUTHEAST DUE TO LEG LENGTH CRITERIA.

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7-8. ATC REQUEST FOR ARRIVALS FROM EGE AND ASE.

9-10. ATC REQUEST FOR RUNWAY TRANSTIONS AT APA.

11. ATC REQUEST TO MITIGATE SEPARATION ISSUES FROM DENVER DEPARTURES.

12-13. ATC REQUEST.

14-15. TO ENSURE COMPLIANCE WITH 14 CFR § 91.117

16. ATC REQUEST AND FLIGHT STANDARDS GUIDANCE ON LOST COMM WORDING.

17. ATC REQUEST.

18-22. IAW 8260.19K DOCUMENTATION STANDARDS.

23. AVOID AIRCRAFT FROM ENTERING SEGMENT WITH LESS THAN REQUIRED OBSTACLE CLEARANCE.

24.IAW 8260.19K, PARA 4-5-12D(3).

3/16/26: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 1/13/26.

1. UPDATED REMARK FROM "USED 200 FT MOUNTAINOUS ROC REDUCTION ON SEGMENT AJOIN TO XPATH..." TO "USED 16 FT MOUNTAINOUS ROC REDUCTION ON SEGMENT XJOIN TO XPATH..."

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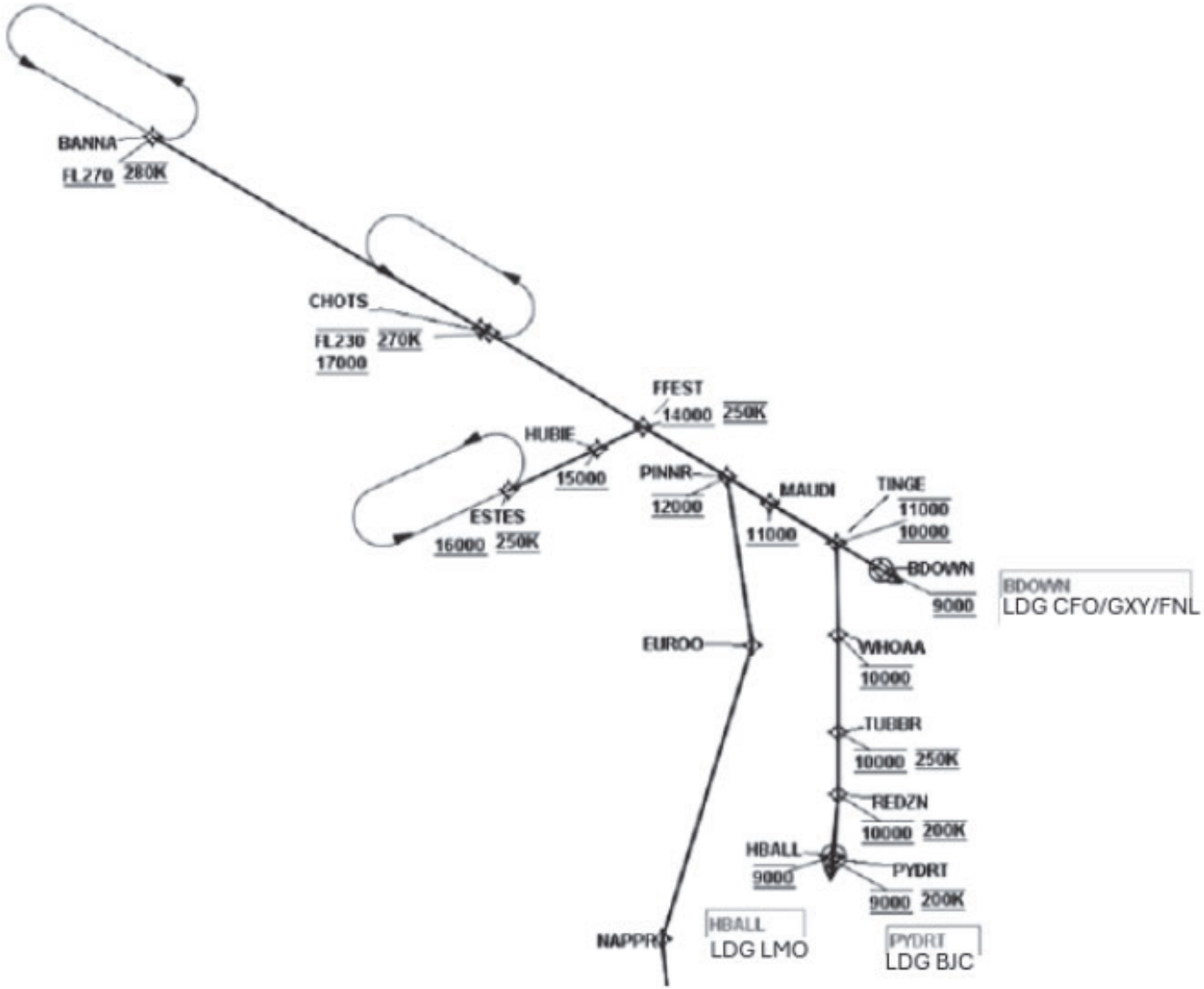
Graphic Depiction 1



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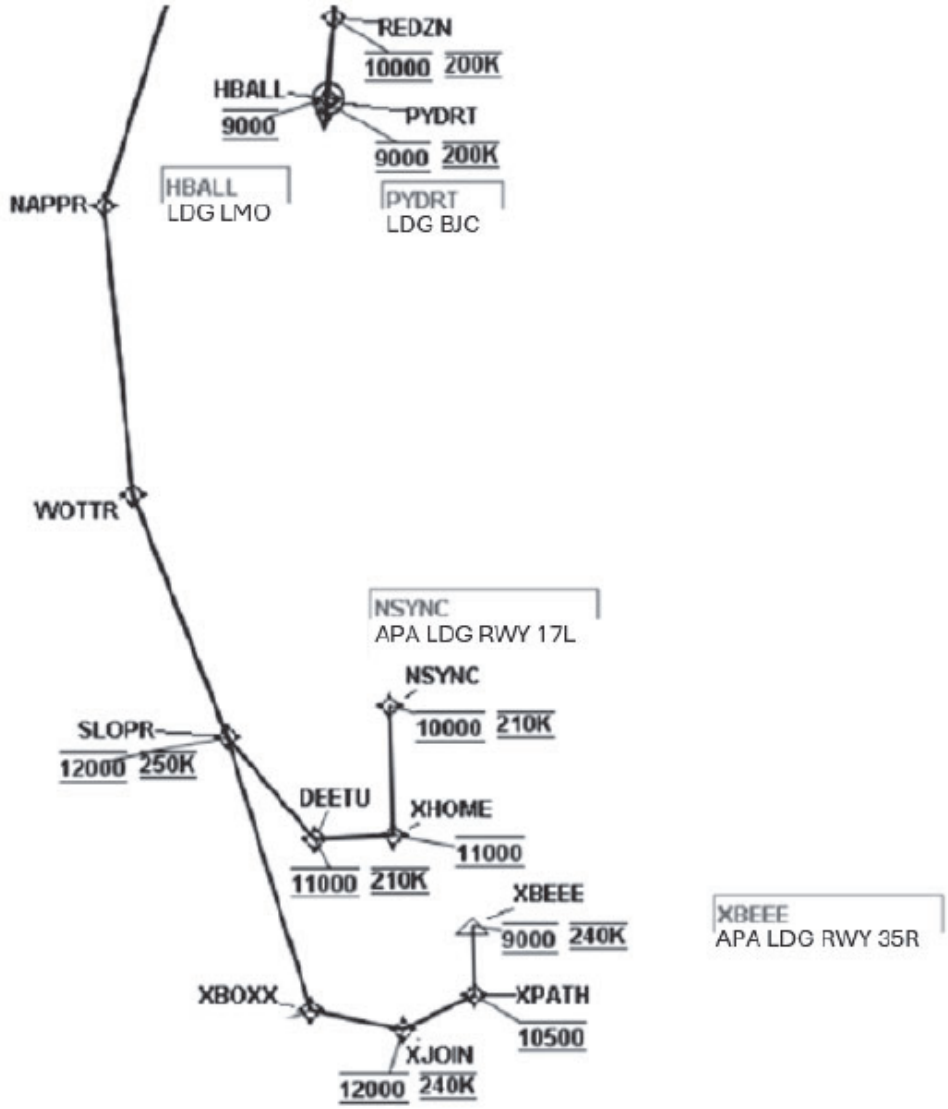
Graphic Depiction 2



FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
STAR (DATA RECORD)

Arrival Name	Number	STAR Computer Code	Superseded Number	Dated	Effective Date
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FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
En Route Transition									
BANNA	410703.13N / 1061356.27W	Y		IF			AT/ABOVE FL270	AT 280K	BANNA.PINNR4
CHOTS	405056.82N / 1053824.92W	Y	FB	TF	120.70	31.35	17000BFL230	AT 270K	
FFEST	404325.24N / 1052207.68W	Y	FB	TF	121.21	14.48	AT/ABOVE 14000	AT 250K	
PINNR	403918.00N / 1051315.92W	Y	FB	TF	121.37	07.90	AT 12000		
En Route Transition									
ESTES	403813.08N / 1053622.17W	Y		IF			AT/ABOVE 16000	AT 250K	ESTES.PINNR4
HUBIE	404138.68N / 1052700.16W	Y	FB	TF	064.29	07.91	AT/ABOVE 15000		
FFEST	404325.24N / 1052207.68W	Y	FB	TF	064.39	04.11	AT/ABOVE 14000	AT 250K	
PINNR	403918.00N / 1051315.92W	Y	FB	TF	121.37	07.90	AT 12000		
Common Route									
PINNR	403918.00N / 1051315.92W	Y		IF			AT 12000		PINNR.PINNR4
MAUDI	403712.71N / 1050846.97W	Y	FB	TF	121.42	04.00	AT/ABOVE 11000		
TINGE	403352.10N / 1050137.69W	Y	FB	TF	121.47	06.39	10000B11000		
WHOAA	402631.10N / 1050135.18W	Y	FB	TF	179.75	07.35	AT 10000		
TUBBR	401829.03N / 1050130.92W	Y	FB	TF	179.61	08.03	AT 10000	AT 250K	
REDZN	401326.13N / 1050128.25W	Y	FB	TF	179.61	05.04	AT 10000	AT 200K	
PYDRT	400807.62N / 1050205.63W	Y	FB	TF	185.15	05.33	AT 9000	AT 200K	LANDING KBJC
Common Route									
PINNR	403918.00N / 1051315.92W	Y		IF			AT 12000		PINNR.PINNR4
MAUDI	403712.71N / 1050846.97W	Y	FB	TF	121.42	04.00	AT/ABOVE 11000		
TINGE	403352.10N / 1050137.69W	Y	FB	TF	121.47	06.39	10000B11000		
BDOWN	403143.42N / 1045702.59W	Y	FO	TF	121.49	04.10	AT 9000		
KCFO,KFNL,KGXY				FM	121.49				
Common Route									
PINNR	403918.00N / 1051315.92W	Y		IF			AT 12000		PINNR.PINNR4

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FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
MAUDI	403712.71N / 1050846.97W	Y	FB	TF	121.42	04.00	AT/ABOVE 11000		
TINGE	403352.10N / 1050137.69W	Y	FB	TF	121.47	06.39	10000B11000		
WHOAA	402631.10N / 1050135.18W	Y	FB	TF	179.75	07.35	AT 10000		
TUBBR	401829.03N / 1050130.92W	Y	FB	TF	179.61	08.03	AT 10000	AT 250K	
REDZN	401326.13N / 1050128.25W	Y	FB	TF	179.61	05.04	AT 10000	AT 200K	
HBALL	400827.12N / 1050203.34W	Y	FO	TF	185.15	05.00	AT 9000		
KLMO				FM	185.15				
Runway Transition									
PINNR	403918.00N / 1051315.92W	Y		IF			AT 12000		
EUROO	402533.79N / 1051038.55W	Y	FB	TF	171.70	13.87			
NAPPR	400139.63N / 1052002.42W	Y	FB	TF	196.82	24.95			
WOTTR	394336.98N / 1051743.15W	Y	FB	TF	174.33	18.12			
SLOPR	392828.35N / 1051004.43W	Y	FB	TF	158.63	16.24	AT 12000	AT 250K	
DEETU	392207.37N / 1050308.90W	Y	FB	TF	139.73	08.31	AT 11000	AT 210K	
XHOME	392222.42N / 1045641.38W	Y	FB	TF	087.10	05.01	AT 11000		
NSYNC	393024.66N / 1045703.12W	Y	FB	TF	358.00	08.04	AT 10000	AT 210K	
KAPA:RWY 17L									
Runway Transition									
PINNR	403918.00N / 1051315.92W	Y		IF			AT 12000		
EUROO	402533.79N / 1051038.55W	Y	FB	TF	171.70	13.87			
NAPPR	400139.63N / 1052002.42W	Y	FB	TF	196.82	24.95			
WOTTR	394336.98N / 1051743.15W	Y	FB	TF	174.33	18.12			
SLOPR	392828.35N / 1051004.43W	Y	FB	TF	158.63	16.24	AT 12000	AT 250K	
XBOXX	391126.37N / 1050325.66W	Y	FB	TF	163.11	17.78			
XJOIN	391013.22N / 1045552.33W	Y	FB	TF	101.67	06.00	AT 12000	AT 240K	
XPATH	391221.19N / 1045005.46W	Y	FB	TF	064.61	04.97	AT 10500		
XBEEE	391640.75N / 1045014.49W	Y	FB	TF	358.45	04.32	AT 9000	AT 240K	
KAPA:RWY 35R									

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