

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

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Arrival Name	Number	STAR Computer Code	Superseded Number	Dated	Effective Date
OAKES (RNAV)	THREE	OAKES.OAKES3	TWO	10/15/2015	

TRANSITION ROUTES:

Transition Name	Transition Computer Codes	From FIX/NAVAID	To FIX/NAVAID	Course	Distance	MEA	MOCA	MAA	Crossing Altitudes / Fixes
MRLET	MRLET.OAKES3	MRLET	MRLET						
			POYSN	178.91	51.55	FL200	13100		
			OAKES	194.75	27.80	16000	9400		BETWEEN FL240 AND FL320
RPARK	RPARK.OAKES3	RPARK	RPARK						
			MOLLA	245.74	46.50	FL200	14700		
			OAKES	245.02	30.92	16000	11400		BETWEEN FL240 AND FL320
RUSME	RUSME.OAKES3	RUSME	RUSME						
			OAKES	266.63	136.79	FL200	16500		BETWEEN FL240 AND FL320

ARRIVAL ROUTE DESCRIPTION:

OAK: FROM OAKES ON TRACK 244.10/24.66 TO CROSS GRUDG BETWEEN FL200 AND FL230 AND AT 260 KIAS, THEN ON TRACK 243.68/9.93 TO CROSS BANND BETWEEN 17000 AND FL190.

LANDING OAK RWY 12: FROM BANND ON TRACK 277.38/16.54 TO CROSS SULRR BETWEEN 12000 AND 13000 AND AT 250 KIAS, THEN ON TRACK 263.76/16.78 TO CROSS KEENR AT 7000, THEN ON TRACK 261.83/10.66 TO CROSS LOHGN AT 6000 AND AT 200 KIAS, THEN ON TRACK 260.76/4.00 TO CROSS WHYEE AT OR ABOVE 5000, THEN ON TRACK 260.79/5.00 TO CROSS HIRMO AT 4000, THEN ON TRACK 260.79. EXPECT RNAV (RNP) Z RWY 12 APPROACH OR RADAR VECTORS TO FINAL APPROACH COURSE.

LANDING OAK RWY 28L/R, 30: FROM BANND ON TRACK 243.67/12.94 TO TOOOL, THEN ON TRACK 237.20/18.10 TO CROSS FFIST BETWEEN 7000 AND 9000 AND AT 200 KIAS. EXPECT ILS OR RNAV APPROACH RWY 28L/R, 30 APPROACH.

LANDING HWD: FROM OAKES ON TRACK 244.10/24.66 TO CROSS GRUDG BETWEEN FL200 AND FL230 AND AT 260 KIAS. THEN ON TRACK 243.68/9.93 TO CROSS BANND BETWEEN 17000 AND FL190, THEN ON TRACK 243.67/12.94 TO TOOOL, THEN ON TRACK 237.20/18.10 TO CROSS FFIST BETWEEN 7000 AND 9000 AND AT 200 KIAS, THEN ON TRACK 180.91/6.09 TO CROSS NORCL AT 7000, THEN ON TRACK 237.00. 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: EXPECT WEST TRANSITION UNLESS OTHERWISE INDICATED.

FIXES AND/OR HOLDING PATTERNS:

CHART HOLDING AT RPARK: HOLD NE, RT, 245.74 INBOUND, 10 NM LEGS.

CHART HOLDING AT GRUDG: HOLD NE, RT, 244.10 INBOUND, 10 NM LEGS.

CHART: TATOO

COMMUNICATIONS:

CHART: ZOA, OAKLAND GND CON, OAKLAND ATCT, HAYWARD GND CON, HAYWARD ATCT.

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AIRPORTS SERVED:

<u>AIRPORT ID</u>	<u>CITY</u>	<u>STATE</u>
OAK	OAKLAND	CA
HWD	HAYWARD	CA

LOST COMMUNICATIONS PREFERENCES:

REMARKS:

ROC REDUCTION TAKEN FOR RWY 12 TRANSITION SEGMENT KEENR-LOHGN SEGMENT.

ADDITIONAL FLIGHT DATA:

DME/DME ASSESSMENT: SAT (RNP 2.0)
MAG VAR: OAK 14E/2015.
CHART AT HIRMO TERMINUS: OAK LDG RWY 12
CHART AT FFIST TERMINUS: OAK LDG RWY 28L/R, 30
CHART AT NORCL TERMINUS: LDG HWD

FLIGHT INSPECTED BY:

JOSEPH R JAQUISH

ORGANIZATION: DATE:

AJF

01/22/2025

Flight Inspected Signature:

Digitally signed by

ALLAN WILL

Apr 11, 2025

DEVELOPED BY:

TODD DAMRON

AJV-A423

10/02/2024

Developed By Signature:

Digitally signed by

TODD V DAMRON

Feb 10, 2025

APPROVED BY:

ALLAN WILL (MANAGER)

AJV-A423

Approved By Signature:

Digitally signed by

ALLAN WILL

Apr 11, 2025

CHANGES:

1. CHANGED SPEED RESTRICTION AT GRUDG FROM 280 KIAS TO 260 KIAS.
2. CHANGED ALTITUDE RESTRICTION AT BANND FROM AT OR BELOW FL190 TO 17000BFL190.
3. REMOVED ALTITUDE AND SPEED RESTRICTIONS FROM TOOOL.
4. MOVED TOOOL 2.7 NM SOUTHWEST.
5. ADDED SPEED RESTRICTION AT FFIST AT 210 KIAS.
6. REMOVED EVOLV AND BBUBB FROM RWY 28L/R TRANSITION.
7. REMOVED PRFCT AND PARBB FROM RWY 30 TRANSITION.
8. ADDED CHART NOTE TO EXPECT WEST TRANSITION UNLESS OTHERWISE INDICATED.
9. ADDED HOLDING AT RPARK AND GRUDG.

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- 10. DELETED INSLO.
- 11. DELETED MONOH TRANSITION AND ADDED RPARK TRANSITION.
- 12. ADDED HWD SATELLITE AIRPORT WITH ASSOCIATED TRANSITION DATA TO STAR.
- 13. COMBINED AND REVISED RWY 28L/R, 30 FIXES AND TRANSITIONS.
- 14. ADDED ROC REDUCTION REMARK.
- 15. UPDATED ENROUTE MOCA VALUES.
- 16. REMOVED MEA/MOCA VALUES FROM ARRIVAL ROUTE DESCRIPTION.
- 17. AIRPORTS SERVED: REMOVED NAME AND ADDED IDENT.

REASONS:

- 1-2: ATC AND INDUSTRY REQUEST.
- 3: TOOOL RESTRICTIONS NO LONGER NEEDED TO PASS REFERENCE SOFTWARE.
- 4: TOOOL MOVED TO AVOID CA-74 SKYDIVING JUMP AIRSPACE.
- 5-13. ATC AND INDUSTRY REQUESTED.
- 14. ROC REDUCTION TAKEN TO MAINTAIN CARDINAL ALTITUDE.
- 15. MOCA VALUES UPDATED WITH NEW REFERENCE SOFTWARE AND AT ATC REQUEST.
- 16. REMOVED TO MEET CRITERIA.
- 17. IAW 8260.19J, 4-5-12G.

01/14/25: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 10/2/24.

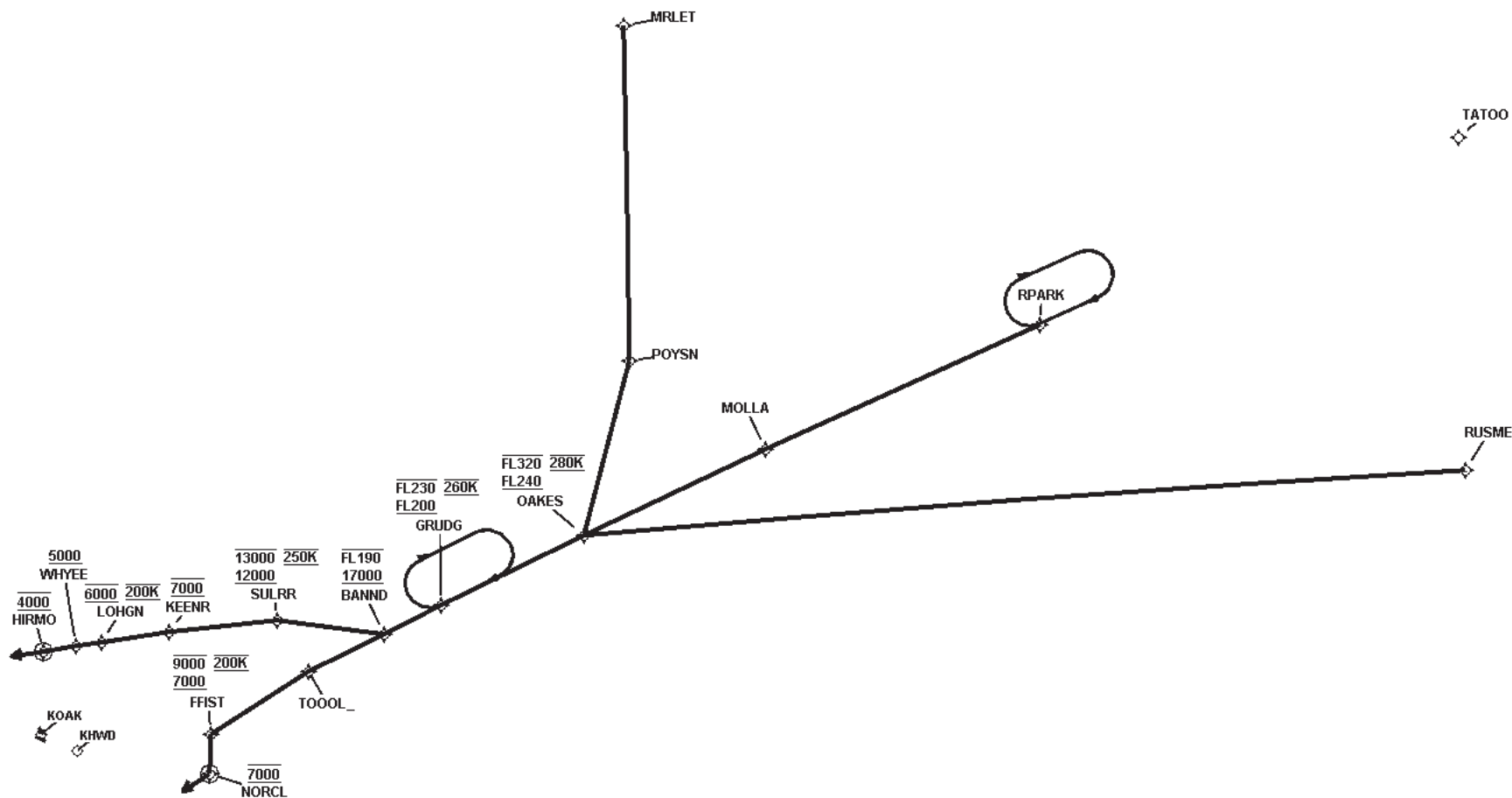
- 1. SPEED REESTRICTION 210 CHANGED TO 200 KIAS AT FIX FFIST/LOHGN.



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Graphic Depiction 1					



FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
STAR (DATA RECORD)

Arrival Name OAKES (RNAV)	Number THREE	STAR Computer Code OAKES.OAKES3			Superseded Number TWO		Dated 10/15/2015	Effective Date	
FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
En Route Transition									
MRLET	390737.20N / 1194931.20W	Y		IF					MRLET.OAKES3
POYSN	381718.33N / 1200409.08W	Y	FB	TF	192.91	51.55			
OAKES	375252.93N / 1202102.50W	Y	FB	TF	208.75	27.80	FL240BFL320	AT 280K	
En Route Transition									
RPARK	380724.91N / 1184449.79W	Y		IF					RPARK.OAKES3
MOLLA	375852.98N / 1194242.06W	Y	FB	TF	259.74	46.50			
OAKES	375252.93N / 1202102.50W	Y	FB	TF	259.02	30.92	FL240BFL320	AT 280K	
En Route Transition									
RUSME	372939.00N / 1173112.00W	Y		IF					RUSME.OAKES3
OAKES	375252.93N / 1202102.50W	Y	FB	TF	280.63	136.79	FL240BFL320	AT 280K	
Common Route									
OAKES	375252.93N / 1202102.50W	Y		IF			FL240BFL320	AT 280K	OAKES.OAKES3
GRUDG	374743.55N / 1205128.85W	Y	FB	TF	258.10	24.66	FL200BFL230	AT 260K	
BANND	374535.69N / 1210342.58W	Y	FB	TF	257.68	09.93	17000BFL190		
Common Route									
OAKES	375252.93N / 1202102.50W	Y		IF			FL240BFL320	AT 280K	OAKES.OAKES3
GRUDG	374743.55N / 1205128.85W	Y	FB	TF	258.10	24.66	FL200BFL230	AT 260K	
BANND	374535.69N / 1210342.58W	Y	FB	TF	257.68	09.93	17000BFL190		
TOOOL	374248.74N / 1211938.18W	Y	FB	TF	257.67	12.94			
FFIST	373656.40N / 1214112.38W	Y	FB	TF	251.20	18.10	7000B9000	AT 200K	
NORCL	373102.66N / 1214310.60W	Y	FO	TF	194.91	06.09	AT 7000		
KHWD				FM	251.00				
Runway Transition									
BANND	374535.69N / 1210342.58W	Y		IF			17000BFL190		

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Arrival Name OAKES (RNAV)		Number THREE		STAR Computer Code OAKES.OAKES3		Superseded Number TWO		Dated 10/15/2015	Effective Date
<u>FIX/NAVAID</u>	<u>LAT/LONG</u>	<u>C</u>	<u>FO/FB</u>	<u>LEG TYPE</u>	<u>TC</u>	<u>DIST (NM)</u>	<u>ALTITUDE</u>	<u>SPEED</u>	<u>REMARKS</u>
SULRR	375136.32N / 1212309.33W	Y	FB	TF	291.38	16.54	12000B13000	AT 250K	
KEENR	375350.51N / 1214409.87W	Y	FB	TF	277.76	16.78	AT 7000		
LOHGN	375454.79N / 1215733.96W	Y	FB	TF	275.83	10.66	AT 6000	AT 200K	
WHYEE	375514.63N / 1220236.22W	Y	FB	TF	274.76	04.00	AT/ABOVE 5000		
HIRMO	375539.54N / 1220854.06W	Y	FO	TF	274.79	05.00	AT 4000		
KOAK:RWY 12				FM	274.79				
Runway Transition									
BANND	374535.69N / 1210342.58W	Y		IF			17000BFL190		
TOOOL	374248.74N / 1211938.18W	Y	FB	TF	257.67	12.94			
FFIST	373656.40N / 1214112.38W	Y	FB	TF	251.20	18.10	7000B9000	AT 200K	
KOAK:RWY 28L,RWY 28R,RWY 30									