

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

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.  
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Arrival Name	Number	STAR Computer Code	Superseded Number	Dated	Effective Date
<b>CHOWW (RNAV)</b>	<b>THREE</b>	<b>CHOWW.CHOWW3</b>	<b>TWO</b>	<b>01/27/2022</b>	<b>31OCT2024</b>

TRANSITION ROUTES:

Transition Name	Transition Computer Codes	From FIX/NAVAID	To FIX/NAVAID	Course	Distance	MEA	MOCA	MAA	Crossing Altitudes / Fixes
GGAPP	GGAPP.CHOWW3	GGAPP	GGAPP						
			MNCIN	226.06	33.00	FL240	11500		
			PHHIL	225.71	45.65	FL240	9400		AT/ABOVE FL240
			AALAN	225.34	24.02	17000	9400		BETWEEN 17000 AND FL230
STEWV	STEWV.CHOWW3	STEWV	CHOWW	221.51	19.00	9500	9400		AT/BELOW 16000
			STEWV						
			RIGLL	194.13	19.48	FL240	10700		AT/ABOVE FL240
			AALAN	194.14	23.98	17000	10200		BETWEEN 17000 AND FL230
TYEGR	TYEGR.CHOWW3	TYEGR	CHOWW	221.51	19.00	9500	9400		AT/BELOW 16000
			TYEGR						
			WARKA	240.47	38.50	FL240	9400		
			DUUGG	240.02	19.32	FL240	9400		
			HAANG	239.79	29.48	FL240	9400		AT/ABOVE FL240
			AALAN	239.56	24.02	17000	9400		BETWEEN 17000 AND FL230
			CHOWW	221.51	19.00	9500	9400		AT/BELOW 16000

ARRIVAL ROUTE DESCRIPTION:

FROM CHOWW ON TRACK 220.80/13.57 TO WOLPH.

LANDING RWY 1L/R: FROM WOLPH ON TRACK 208.94/12.50 TO CROSS PACKK AT OR ABOVE 16000, THEN ON TRACK 208.84/8.00 TO CROSS BEEPR AT OR ABOVE 15000, THEN ON TRACK 208.61/17.14 TO CROSS JAIDE AT OR BELOW 13000, THEN ON TRACK 208.53/11.36 TO CROSS SHEEN AT OR ABOVE 12000, THEN ON TRACK 208.45/7.00 TO NEETL, THEN ON TRACK 259.17/7.75 TO CROSS CAMMP AT 10000 AND AT 210 KIAS, THEN ON TRACK 338.08/6.64 TO CROSS BUGSS AT 9000, THEN ON TRACK 001.06/5.45 TO CROSS VANDL AT 9000, THEN ON TRACK 001.06. EXPECT RADAR VECTORS TO FINAL APPROACH COURSE.

LANDING RWY 19L/R: FROM WOLPH ON TRACK 240.53/5.00 TO CROSS SACHL AT 10000 AND AT 250 KIAS, THEN ON TRACK 240.47/5.13 TO CROSS FELAA AT 9200, THEN ON TRACK 240.41/9.76 TO CROSS BOOOO AT 7000, THEN ON TRACK 240.30/3.00 TO NNEON, THEN ON TRACK 262.58/1.79 TO CROSS PPENN AT 6000 AND AT 190 KIAS, THEN ON TRACK 262.58. EXPECT RADAR VECTORS TO FINAL APPROACH COURSE.

LANDING RWY 26L: FROM WOLPH ON TRACK 220.20/6.20 TO CROSS TATUU BETWEEN 9500 AND 10500, THEN ON TRACK 220.15/3.46 TO CROSS KRLOZ AT OR BELOW 9000, THEN ON TRACK 220.10/7.69 TO CROSS PRINO AT 8000 AND AT 210 KIAS. EXPECT ILS OR LOC RWY 26L APPROACH.

LANDING RWY 26R: FROM WOLPH ON TRACK 220.20/6.20 TO CROSS TATUU BETWEEN 9500 AND 10500, THEN ON TRACK 220.15/3.46 TO CROSS KRLOZ AT OR BELOW 9000, THEN ON TRACK 221.45/7.65 TO CROSS FLYES AT 8000 AND AT 210 KIAS. EXPECT ILS OR LOC RWY 26R APPROACH.

PBN REQUIREMENT NOTES:

RNAV 1 - DME/DME/IRU OR GPS

EQUIPMENT REQUIREMENT NOTES:

RADAR REQUIRED

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**PROCEDURAL DATA NOTES:**

NOTE: JET AIRCRAFT ONLY

**FIXES AND/OR HOLDING PATTERNS:**

CHART HOLDING AT TYEGR: HOLD NE, RT, 240.47 INBOUND, 10 NM LEGS.

CHART HOLDING AT AALAN: HOLD NE, RT, 225.34 INBOUND, 10 NM LEGS.

CHART HOLDING AT DUUGG: HOLD NE, RT, 240.02 INBOUND, 12 NM LEGS.

CHART HOLDING AT PHHIL: HOLD NE, RT, 225.71 INBOUND, 12 NM LEGS.

**COMMUNICATIONS:**

CHART LAS APP CON.

CHART: LAS TOWER.

**AIRPORTS SERVED:**

<u>AIRPORT ID</u>	<u>CITY</u>	<u>STATE</u>
LAS	LAS VEGAS	NV

**LOST COMMUNICATIONS PREFERENCES:**

LANDING RUNWAY 1L: AT VANDL, PROCEED TO TRREY, THEN ON THE ILS OR LOC RWY 1L APPROACH.

LANDING RUNWAY 1R: AT VANDL PROCEED ON THE RNAV (GPS) RWY 1R APPROACH.

LANDING RUNWAY 19L: AT PPENN PROCEED ON THE RNAV (RNP) RWY 19L APPROACH. IF INABLE, PROCEED VISUALLY VIA LAST TRACK TO INTERCEPT THE FINAL APPROACH COURSE. IF UNALBE, MAINTAIN 7000 PROCEED DIRECT LAS VORTAC THEN DIRECT BLD VORTAC AND THEN ON THE ILS OR LOC RWY 26L APPROACH.

LANDING RUNWAY 26L: AT PRINO PROCEED ON THE ILS OR LOC RWY 26L APPROACH.

LANDING RUNWAY 26R: AT FLYES PROCEED ON THE ILS OR LOC RWY 26R APPROACH.

**REMARKS:**

MEAs ABOVE FL180 NEEDED TO MITIGATE CRITICAL DMEs AND INSURE ADEQUATE SIGNAL COVERAGE FOR DME/DME/IRU NAVIGATION.

**ADDITIONAL FLIGHT DATA:**

DME/DME ASSESSMENT: SAT (RNP 2.0)

MAG VAR: KLAS 11E/2020

CHART AT PPENN TERMINUS: KLAS LDG RWY 19L/R

CHART AT PRINO TERMINUS: KLAS LDG RWY 26L

CHART AT VANDL TERMINUS: KLAS LDG RWY 1L/R

CHART AT FLYES TERMINUS: KLAS LDG RWY 26R

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CHOWW (RNAV)	THREE	CHOWW.CHOWW3	TWO	01/27/2022	31OCT2024

FLIGHT INSPECTED BY:ORGANIZATION: DATE:

Flight Inspected Signature:

Digitally signed by

**ROBERT G HAMILTON**

Aug 29, 2024

DEVELOPED BY:

Fernando Salizar, Support Manager for Airspace &amp; Procedures

Los Angeles  
ARTCC

03/21/2024

Developed By Signature:

Digitally signed by

**ROBERT G HAMILTON**

Aug 29, 2024

APPROVED BY:

BEV BORDY

AJV-A430

Approved By Signature:

Digitally signed by

**ROBERT G HAMILTON**

Aug 29, 2024

CHANGES:

1. ADDED HOLDING PATTERN AT TYEGR.
2. MOCA RIGLL TO AALAN CHANGED FROM 10100 TO 10200.
3. CHOWW RESTRICTION CHANGED FROM AOB FL190 AT 250K TO AOB 16000 AND AT 250K.
4. FOOF WP RENAMED TO BOOOO, RESTRICTION CHANGED FROM BETWEEN 7000 AND 8000 AND AT 2200K TO AT 7000 AND NO SPEED.
5. CHANGED RESTRICTION AT SACHL FROM BETWEEN 10000 AND 13000 TO AT 10000 AND AT 250K.
6. CHANGED RESTRICTION AT FELAA FROM BETWEEN 8500 AND 11000 TO AT 9200.
7. PPENN SPEED RESTRICTION CHANGED FROM AT 210K TO AT 190K.
8. UPDATED/COMBINED RWY 1L/R TRANSITIONS.
9. PACKK CHANGD FROM AT/ABOVE 17000 TO AT/ABOVE 16000.
10. DELETED RFUSE AND DNZIG WPs.
11. JAIDE RESTRICTION CHANGED FROM BETWEEN 10000 AND 13000 TO AT/BELOW 13000.
12. NEW SHEEN WP WITH RESTRICTION AT/ABOVE 12000.
13. NEW CAMMP WP WITH RESTRICTIONS AT 10000 and AT 210 KTS.
14. NEW BUGSS WP WITH RESTRICTION AT 9000.
15. NEW VANDL WP (STAR TERMINUS) WITH RESTRICTION AT 9000.
16. TATUU WP MOVED 1.20 NM SW.
17. DELETED TRREY AND BUHLL WAYPOINTS FROM STAR.
18. CHANGED TURBOJET TO JET.
19. REMOVED K IDENT AND AIRPORT NAME FROM AIRPORTS SERVED.
20. REVISED ALL LOST COMMUNICATIONS PREFERENCES.
21. REVISED EXISTING MEA REMARK.
22. ADDED MOCA REMARK.
23. REVISED ALL OTHER ARRIVAL DESCRIPTIONS WITH NEW/ REMOVED WP'S/CROSSING RESTRICTIONS.

REASONS:

1. ATC REQUEST TO FACILITATE ARRIVAL METERING.
2. UPDATED OBSTACLE/TERRAIN EVALUATION.
3. ATC REQUEST TO FACILITATE ARRIVAL SEQUENCING.

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4. RESOLVES DECELERATION LEG LENGTH FAILURE AND SPEED RESTRICTION NO LONGER NEEDED.
- 5-6. ATC REQUEST. FACILITATES ARRIVAL SEQUENCING.
7. ATC REQUEST. MITIGATES GO-AROUNDS DUE TO COMPRESSION ON FINAL.
8. ATC REQUEST. FACILITATES BLENDING RWY 1L/R ARRIVALS FROM DIFFERENT DIRECTIONS.
9. MITIGATES DESCENT GRADIENT CRITERIA FAILURE.
10. NO LONGER USED ON RWY 1L/R RUNWAY TRANSITION.
11. ATC REQUEST. LOWERE RESTRICTION NO LONGER NEEDED.
- 12-15. NEW WAYPOINTS USED ON NEW RWY 1L/R TRANSITION.
16. RESOLVES LEG LENGTH CRITERIA FAILURE FOR DG.
17. NO LONGER USED FOR RWY 1L/R TRANSITION.
- 18-19. CURRENT DOCUMENTATION STANDARDS.
20. LANGUAGE UPDATED TO CURRENT DOCUMENTATION STANDARDS.
21. EXISTING REMARK REVISED TO MORE ACCURATELY EXPLAIN MEA VALUES ABOVE FL180.
22. DO NOT PUBLISH MOCAs LESS THAN 500 FEET BELOW MEA.
23. UPDATED WPs AND CROSSING RESTRICTIONS INCORPORATED INTO ARRIVAL DESCRIPTIONS.

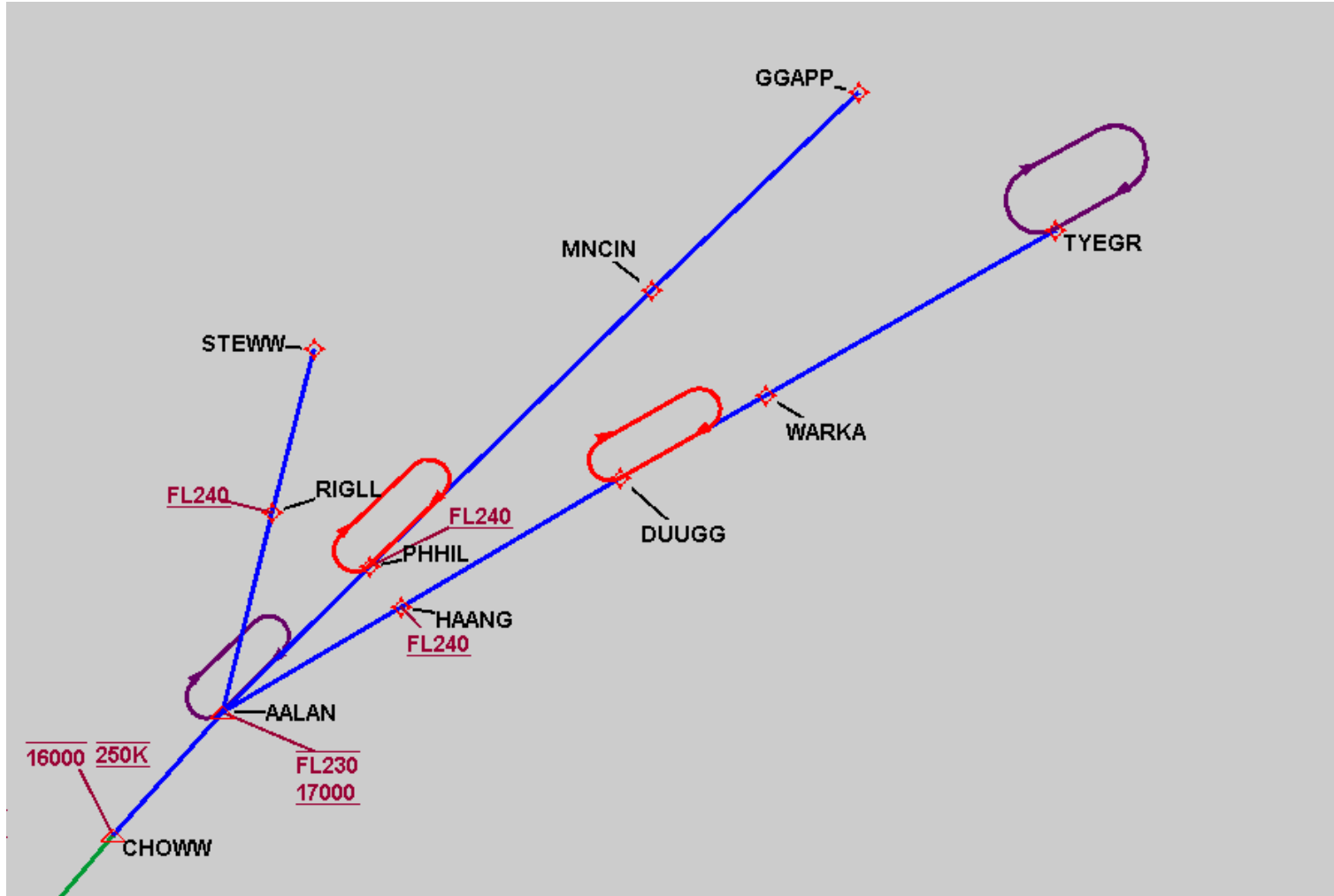
THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 03/21/2024:

1. RWY 19L/R ARRIVAL ROUTE DESCRIPTION CORRECTED TO READ CROSS SACHL AT 10000 AND AT 250 KIAS. SPEED RESTRICTION PREVIOUSLY NOT IN DESCRIPTION.
2. GRAPHIC DEPICTION ON 17.1 PREVIOUSLY INCORRECT, NEW GRAPHIC MATCHES THE EXISTING DATA.
3. REMOVED REMARK DO NOT CHART MOCA AT CHOWW, NOR ANY OTHER FIX RESIDING ABOVE FL180.

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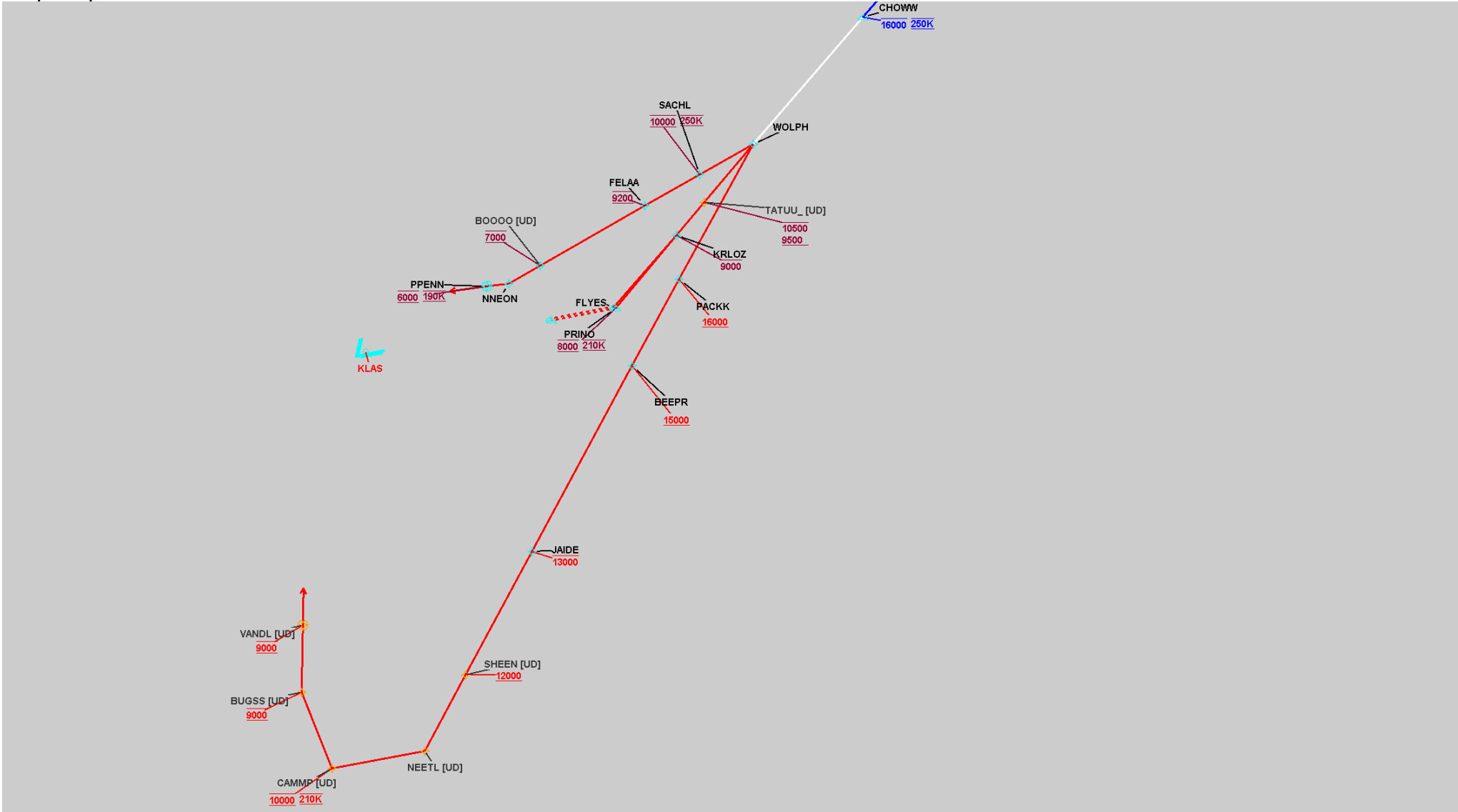
Arrival Name	Number	STAR Computer Code	Superseded Number	Dated	Effective Date
CHOWW (RNAV)	THREE	CHOWW.CHOWW3	TWO	01/27/2022	31OCT2024
Graphic Depiction 1					



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Graphic Depiction 2					



**FEDERAL AVIATION ADMINISTRATION  
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STAR (DATA RECORD)**

Arrival Name CHOWW (RNAV)		Number THREE		STAR Computer Code CHOWW.CHOWW3		Superseded Number TWO		Dated 01/27/2022	Effective Date 31OCT2024
FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
En Route Transition									
GGAPP	373159.60N / 1120804.63W	Y		IF					GGAPP.CHOWW3
MNCIN	371356.59N / 1124245.44W	Y	FB	TF	237.06	33.00			
PHHIL	364841.74N / 1133016.71W	Y	FB	TF	236.71	45.65	AT/ABOVE FL240		
AALAN	363519.39N / 1135506.09W	Y	FB	TF	236.34	24.02	17000BFL230		
CHOWW	362343.14N / 1141346.48W	Y	FB	TF	232.51	19.00	AT/BELOW 16000	AT 250K	
En Route Transition									
STEWV	371443.87N / 1133208.16W	Y		IF					STEWV.CHOWW3
RIGLL	365704.14N / 1134227.32W	Y	FB	TF	205.13	19.48	AT/ABOVE FL240		
AALAN	363519.39N / 1135506.09W	Y	FB	TF	205.14	23.98	17000BFL230		
CHOWW	362343.14N / 1141346.48W	Y	FB	TF	232.51	19.00	AT/BELOW 16000	AT 250K	
En Route Transition									
TYEGR	371154.33N / 1114400.97W	Y		IF					TYEGR.CHOWW3
WARKA	365930.63N / 1122935.00W	Y	FB	TF	251.47	38.50			
DUUGG	365310.85N / 1125221.37W	Y	FB	TF	251.02	19.32			
HAANG	364323.00N / 1132658.89W	Y	FB	TF	250.79	29.48	AT/ABOVE FL240		
AALAN	363519.39N / 1135506.09W	Y	FB	TF	250.56	24.02	17000BFL230		
CHOWW	362343.14N / 1141346.48W	Y	FB	TF	232.51	19.00	AT/BELOW 16000	AT 250K	
Common Route									
CHOWW	362343.14N / 1141346.48W	Y		IF			AT/BELOW 16000	AT 250K	CHOWW.CHOWW3
WOLPH	361518.22N / 1142657.69W	Y	FB	TF	231.80	13.57			
Runway Transition									
WOLPH	361518.22N / 1142657.69W	Y		IF					
PACKK	360542.05N / 1143651.60W	Y	FB	TF	219.94	12.50	AT/ABOVE 16000		
BEEPR	355932.77N / 1144310.52W	Y	FB	TF	219.84	08.00	AT/ABOVE 15000		
JAIDE	354618.84N / 1145636.11W	Y	FB	TF	219.61	17.14	AT/BELOW 13000		

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STAR (DATA RECORD)

Arrival Name CHOWW (RNAV)		Number THREE		STAR Computer Code CHOWW.CHOWW3			Superseded Number TWO			Dated 01/27/2022	Effective Date 31OCT2024
FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS		
SHEEN	353731.82N / 1150528.53W	Y	FB	TF	219.53	11.36	AT/ABOVE 12000				
NEETL	353206.88N / 1151055.51W	Y	FB	TF	219.45	07.00					
CAMMP	353207.87N / 1152025.26W	Y	FB	TF	270.17	07.75	AT 10000	AT 210K			
BUGSS	353839.82N / 1152157.93W	Y	FB	TF	349.08	06.64	AT 9000				
VANDL	354400.03N / 1152033.99W	Y	FO	TF	012.06	05.45	AT 9000				
KLAS:RWY 1L,RWY 1R				FM	012.06						
Runway Transition											
WOLPH	361518.22N / 1142657.69W	Y		IF							
SACHL	361342.90N / 1143249.39W	Y	FB	TF	251.53	05.00	AT 10000	AT 250K			
FELAA	361204.87N / 1143849.75W	Y	FB	TF	251.47	05.13	AT 9200				
BOOOO	360857.34N / 1145015.37W	Y	FB	TF	251.41	09.76	AT 7000				
NNEON	360759.50N / 1145345.85W	Y	FB	TF	251.30	03.00					
PPENN	360806.18N / 1145557.97W	Y	FO	TF	273.58	01.79	AT 6000	AT 190K			
KLAS:RWY 19L,RWY 19R				FM	273.58						
Runway Transition											
WOLPH	361518.22N / 1142657.69W	Y		IF							
TATUU	361124.68N / 1143255.85W	Y	FB	TF	231.20	06.20	9500B10500				
KRLOZ	360914.10N / 1143615.66W	Y	FB	TF	231.15	03.46	AT/BELOW 9000				
PRINO	360423.60N / 1144338.86W	Y	FB	TF	231.10	07.69	AT 8000	AT 210K			
KLAS:RWY 26L											
Runway Transition											
WOLPH	361518.22N / 1142657.69W	Y		IF							
TATUU	361124.68N / 1143255.85W	Y	FB	TF	231.20	06.20	9500B10500				
KRLOZ	360914.10N / 1143615.66W	Y	FB	TF	231.15	03.46	AT/BELOW 9000				
FLYES	360433.54N / 1144344.83W	Y	FB	TF	232.45	07.65	AT 8000	AT 210K			
KLAS:RWY 26R											