KSFO
San Francisco Intl

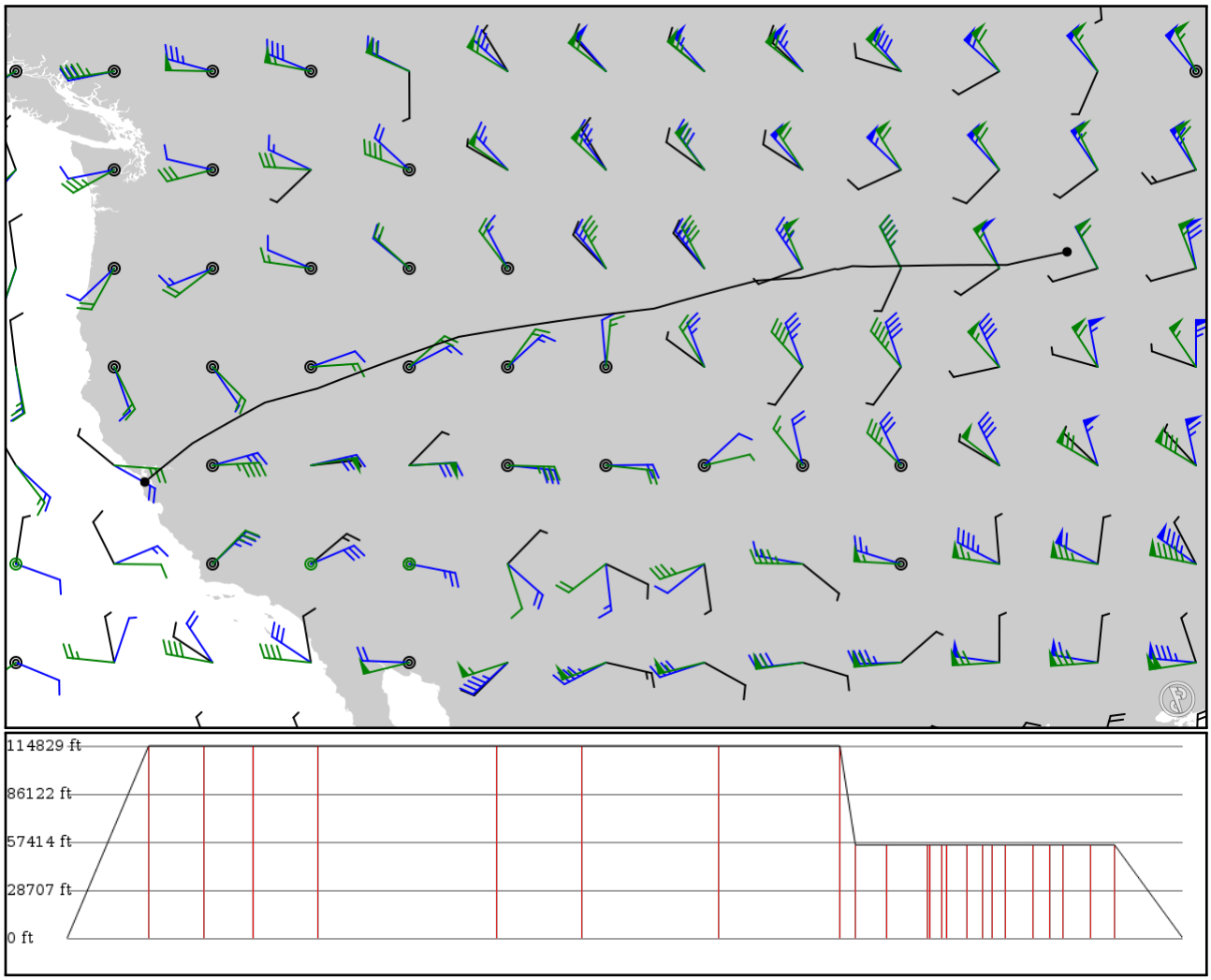
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KMSP
Minneapolis St Paul Intl

2024/03/19 0217Z

KSFO COLOM **J32** MLD **J158** RAP **V26** RWF KMSP

1395.49 nm / 2584.45 km



Notes

Basic altitude profile:
- Ascent Rate: 2500ft/min
- Ascent Speed: 250kts
- Cruise Altitude: 360ft
- Cruise Speed: 420kts
- Descent Rate: 1500ft/min
- Descent Speed: 250kts

Options:
- Use NATs: yes
- Use PACOTS: yes
- Use low airways: yes
- Use high airways: yes

Route

Ident Type	Via	Lat Lon	Alt	Dist (nm)	Name
KSFO APT	–	37.61867 -122.37501	0 ft 0 m	–	San Francisco Intl
COLOM FIX	–	38.83897 -120.87002	35,000 ft 10,668 m	102	–
FMG VOR	J32 AWY-HI	39.53128 -119.65608	35,000 ft 10,668 m	70	MUSTANG VORTAC
LLC VOR	J32 AWY-HI	40.12525 -118.57758	35,000 ft 10,668 m	61	LOVELOCK VORTAC
BAM VOR	J32 AWY-HI	40.56908 -116.92225	35,000 ft 10,668 m	80	BATTLE MOUNTAIN VORTAC
MLD DME	J32 AWY-HI	42.19990 -112.45124	35,000 ft 10,668 m	223	MALAD CITY VOR-DME
BPI VOR	J158 AWY-HI	42.57944 -110.10922	35,000 ft 10,668 m	106	BIG PINEY VOR-DME
DDY DME	J158 AWY-HI	43.09086 -106.27702	35,000 ft 10,668 m	171	MUDDY MOUNTAIN VOR-DME
RAP VOR	J158 AWY-HI	43.97603 -103.01233	35,000 ft 10,668 m	151	RAPID CITY VORTAC
CRETO FIX	V26 AWY-LO	44.00446 -102.57544	17,000 ft 5,182 m	18	–
PHP VOR	V26 AWY-LO	44.05825 -101.66419	17,000 ft 5,182 m	39	PHILIP VOR-DME
HOSTR FIX	V26 AWY-LO	44.34283 -100.55974	17,000 ft 5,182 m	50	–
CABKU FIX	V26 AWY-LO	44.32672 -100.47409	17,000 ft 5,182 m	3	–
PIR VOR	V26 AWY-LO	44.39450 -100.16286	17,000 ft 5,182 m	13	PIERRE VORTAC
HIWRE FIX	V26 AWY-LO	44.43215 -100.01285	17,000 ft 5,182 m	6	–
CHANS FIX	V26 AWY-LO	44.41640 -99.41952	17,000 ft 5,182 m	25	–
VAYLA FIX	V26 AWY-LO	44.42765 -98.95413	17,000 ft 5,182 m	19	–
DAKPE FIX	V26 AWY-LO	44.43288 -98.70640	17,000 ft 5,182 m	10	–
HON VOR	V26 AWY-LO	44.44008 -98.31108	17,000 ft 5,182 m	16	HURON VORTAC
ZOTBY FIX	V26 AWY-LO	44.45558 -97.49062	17,000 ft 5,182 m	35	–
OBITT FIX	V26 AWY-LO	44.46199 -96.99943	17,000 ft 5,182 m	21	–
ASTOE FIX	V26 AWY-LO	44.46541 -96.63804	17,000 ft 5,182 m	15	–
GHENT FIX	V26 AWY-LO	44.46887 -95.83180	17,000 ft 5,182 m	34	–
RWF DME	V26 AWY-LO	44.46728 -95.12823	17,000 ft 5,182 m	30	REDWOOD FALLS VOR-DME
KMSP APT	–	44.88195 -93.22201	0 ft 0 m	85	Minneapolis St Paul Intl

KSFO

Region: UNITED STATES
Timezone: AMERICA/LOS_ANGELES
Runways: 4

Elevation: 13 ft / 4 m
Location: 37.618500 -122.375000
Magnetic Var: 12.857 E

METAR

KSFO 190156Z 29019KT 10SM FEW010 FEW200 13/10 A3004 RMK AO2 SLP171 T01330100

TAF

TAF KSFO 182320Z 1900/2006 28011KT P6SM SKC FM190600 27006KT 3SM BR SCT002 BKN010 FM191400 28014KT P6SM SKC

Frequencies

REC - 113.70 MHz - D-ATIS
REC - 118.85 MHz - D-ATIS
CLD - 118.20 MHz -
SAN FRANCISCO CLEARANCE DELIVERY
TWR - 120.50 MHz - SAN FRANCISCO TOWER
APP - 128.32 MHz - NORCAL APPROACH
APP - 133.95 MHz - NORCAL APPROACH
DEP - 135.10 MHz - NORCAL DEPARTURE

REC - 115.80 MHz - D-ATIS
COM - 122.95 MHz - UNICOM
GND - 121.80 MHz - SAN FRANCISCO GROUND
APP - 134.50 MHz - NORCAL APPROACH
APP - 128.57 MHz - NORCAL APPROACH
DEP - 120.90 MHz - NORCAL DEPARTURE

Runways

Ident	Width	Length	Bearing (true) (mag)	Surface	Threshold Offset	Overrun Length
10L	200 ft 61 m	11,859 ft 3,615 m	117.90 105.04	ASPHALT	0 ft 0 m	876 ft 267 m
28R	200 ft 61 m	11,859 ft 3,615 m	297.92 285.06	ASPHALT	302 ft 92 m	318 ft 97 m
10R	200 ft 61 m	11,371 ft 3,466 m	117.90 105.04	ASPHALT	0 ft 0 m	748 ft 228 m
28L	200 ft 61 m	11,371 ft 3,466 m	297.92 285.06	ASPHALT	305 ft 93 m	322 ft 98 m
01R	200 ft 61 m	8,665 ft 2,641 m	27.71 14.85	ASPHALT	564 ft 172 m	404 ft 123 m
19L	200 ft 61 m	8,665 ft 2,641 m	207.72 194.86	ASPHALT	0 ft 0 m	443 ft 135 m
01L	200 ft 61 m	7,664 ft 2,336 m	27.71 14.85	ASPHALT	643 ft 196 m	469 ft 143 m
19R	200 ft 61 m	7,664 ft 2,336 m	207.72 194.86	ASPHALT	0 ft 0 m	446 ft 136 m

Approach Navaids

Runway	Type	Ident	Frequency	Range	Bearing (true) (mag)	Slope	Elevation
19L	DME	ISIA	108.90 MHz	18 nm 33 km	- -	-	24 ft 24 m
28L	DME	ISFO	109.55 MHz	18 nm 33 km	- -	-	22 ft 22 m
28R	DME	IGWQ	111.70 MHz	18 nm 33 km	- -	-	17 ft 17 m
28R	DME	IFNP	110.75 MHz	18 nm 33 km	- -	-	13 ft 13 m
19L	LOC-ILS	ISIA	108.90 MHz	18 nm 33 km	207.72 194.86	-	13 ft 13 m

Runway	Type	Ident	Frequency	Range	Bearing (true) (mag)	Slope	Elevation
28L	LOC-ILS	ISFO	109.55 MHz	18 nm 33 km	297.91 285.05	-	13 ft 13 m
28R	LOC-ILS	IGWQ	111.70 MHz	18 nm 33 km	297.91 285.05	-	13 ft 13 m
19L	GS	ISIA	108.90 MHz	10 nm 19 km	207.72 194.86	3.00	13 ft 13 m
28L	GS	ISFO	109.55 MHz	10 nm 19 km	297.91 285.05	2.85	13 ft 13 m
28R	GS	IGWQ	111.70 MHz	10 nm 19 km	297.91 285.05	3.00	13 ft 13 m

KMSP

Region: UNITED STATES
Timezone: AMERICA/CHICAGO
Runways: 4
Elevation: 841 ft / 256 m
Location: 44.881900 -93.222000
Magnetic Var: 0.266 W

METAR

KMSP 190153Z 21009G16KT 10SM FEW100 SCT160 02/M13 A2992 RMK AO2 SLP141 T00221133

TAF

KMSP 182321Z 1900/2006 25011KT P6SM SCT150 FM190400 23016G26KT P6SM SCT250 WS020/27050KT FM190800 29012G20KT P6SM

Frequencies

DEP - 132.97 MHz - MINNEAPOLIS DEPARTURE
DEP - 125.75 MHz - MINNEAPOLIS DEPARTURE
DEP - 124.70 MHz - MINNEAPOLIS DEPARTURE
APP - 126.95 MHz - MINNEAPOLIS APPROACH
APP - 119.30 MHz - MINNEAPOLIS APPROACH
APP - 118.72 MHz - MINNEAPOLIS APPROACH
TWR - 126.70 MHz - MINNEAPOLIS TOWER
TWR - 123.95 MHz - MINNEAPOLIS TOWER
TWR - 123.67 MHz - MINNEAPOLIS TOWER
GND - 133.57 MHz - MINNEAPOLIS GROUND
GND - 127.92 MHz - MINNEAPOLIS GROUND
GND - 121.90 MHz - MINNEAPOLIS GROUND
GND - 121.80 MHz - MINNEAPOLIS GROUND
REC - 120.80 MHz - MINNEAPOLIS D-ATIS
REC - 135.35 MHz - MINNEAPOLIS D-ATIS
COM - 122.95 MHz - MINNEAPOLIS UNICOM
CLD - 133.20 MHz - MINNEAPOLIS CLEARANCE DELIVERY

Runways

Ident	Width	Length	Bearing (true) (mag)	Surface	Threshold Offset	Overrun Length
17	150 ft 46 m	8,008 ft 2,441 m	169.56 169.82	CONCRETE	0 ft 0 m	397 ft 121 m
35	150 ft 46 m	8,008 ft 2,441 m	349.56 349.83	CONCRETE	0 ft 0 m	394 ft 120 m
12L	150 ft 46 m	8,190 ft 2,496 m	121.42 121.68	CONCRETE	0 ft 0 m	397 ft 121 m
30R	150 ft 46 m	8,190 ft 2,496 m	301.44 301.70	CONCRETE	203 ft 62 m	394 ft 120 m
12R	200 ft 61 m	9,985 ft 3,043 m	121.42 121.69	CONCRETE	0 ft 0 m	1,194 ft 364 m
30L	200 ft 61 m	9,985 ft 3,043 m	301.44 301.71	CONCRETE	0 ft 0 m	781 ft 238 m
04	150 ft 46 m	11,118 ft 3,389 m	44.90 45.17	CONCRETE	1,660 ft 506 m	0 ft 0 m
22	150 ft 46 m	11,118 ft 3,389 m	224.92 225.19	CONCRETE	0 ft 0 m	410 ft 125 m

Approach Navaids

Runway	Type	Ident	Frequency	Range	Bearing (true) (mag)	Slope	Elevation
12L	DME	IPJL	110.70 MHz	18 nm 33 km	- -	-	813 ft 813 m
12R	DME	IHKZ	110.30 MHz	18 nm 33 km	- -	-	841 ft 841 m
17	DME	ITJZ	110.95 MHz	18 nm 33 km	- -	-	822 ft 822 m
30L	DME	IMSP	110.30 MHz	18 nm 33 km	- -	-	841 ft 841 m

Runway	Type	Ident	Frequency	Range	Bearing (true) (mag)	Slope	Elevation
30R	DME	IINN	110.70 MHz	18 nm 33 km	– –	–	813 ft 813 m
35	DME	IBMA	110.95 MHz	18 nm 33 km	– –	–	822 ft 822 m
12L	LOC-ILS	IPJL	110.70 MHz	18 nm 33 km	121.43 121.70	–	841 ft 841 m
12R	LOC-ILS	IHKZ	110.30 MHz	18 nm 33 km	121.44 121.71	–	841 ft 841 m
30L	LOC-ILS	IMSP	110.30 MHz	18 nm 33 km	301.44 301.71	–	841 ft 841 m
30R	LOC-ILS	IINN	110.70 MHz	18 nm 33 km	301.43 301.70	–	841 ft 841 m
35	LOC-ILS	IBMA	110.95 MHz	18 nm 33 km	349.56 349.83	–	841 ft 841 m
04	LOC-LOC	IAPL	109.30 MHz	18 nm 33 km	44.92 45.19	–	841 ft 841 m
17	LOC-LOC	ITJZ	110.95 MHz	18 nm 33 km	169.56 169.83	–	841 ft 841 m
22	LOC-LOC	ISIJ	110.50 MHz	18 nm 33 km	224.92 225.19	–	841 ft 841 m
12L	GS	IPJL	110.70 MHz	10 nm 19 km	121.43 121.70	3.00	841 ft 841 m
12R	GS	IHKZ	110.30 MHz	10 nm 19 km	121.44 121.71	3.00	841 ft 841 m
30L	GS	IMSP	110.30 MHz	10 nm 19 km	301.44 301.71	3.00	841 ft 841 m
30R	GS	IINN	110.70 MHz	10 nm 19 km	301.43 301.70	3.00	841 ft 841 m
35	GS	IBMA	110.95 MHz	10 nm 19 km	349.56 349.83	3.00	841 ft 841 m