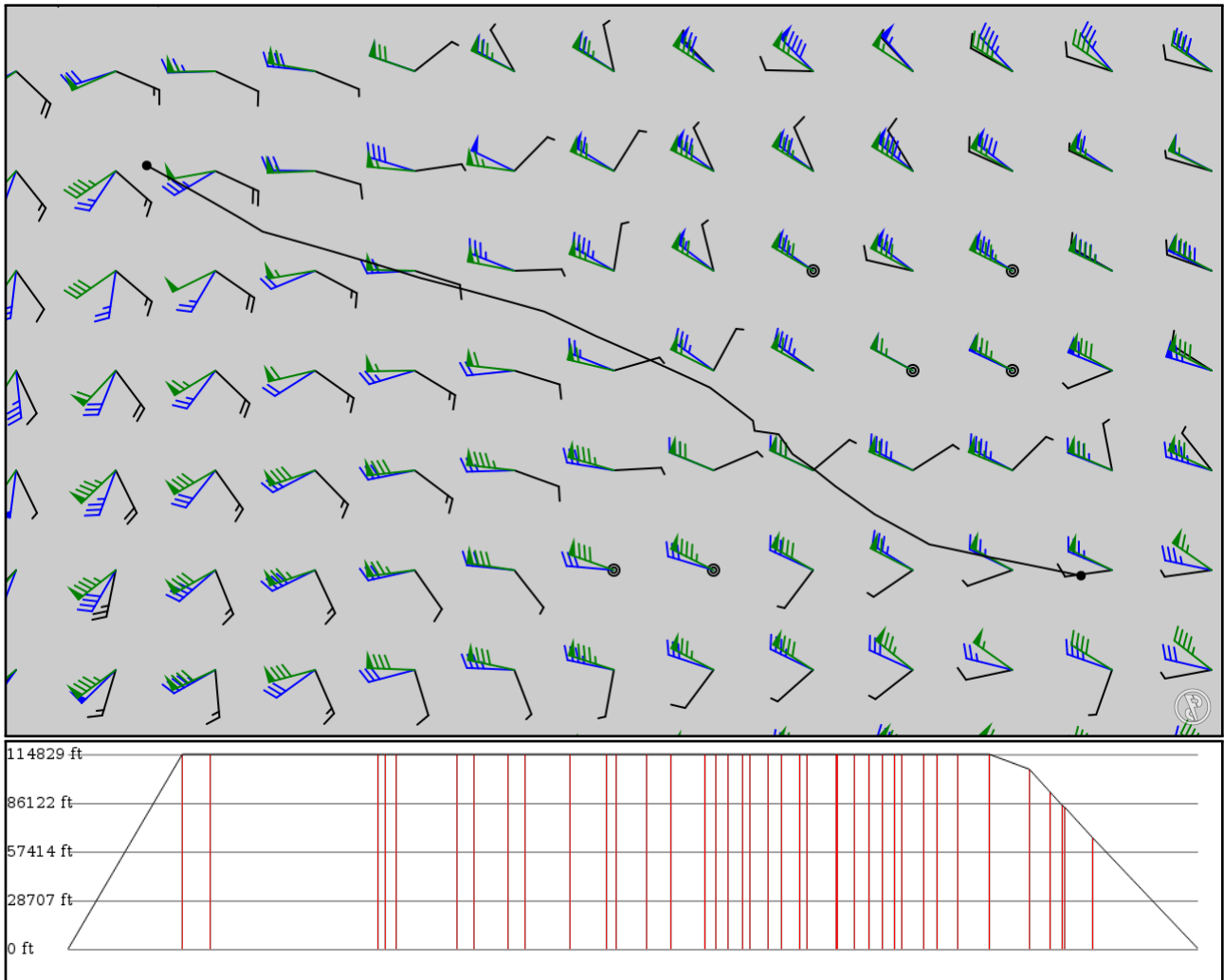


2024/05/04 0820Z

KBIS MUNEF V15 ABR J90 RWF V24 RST V398 UKN V218 RFD V171 EON V24 KENLA V128 YIXCI V399 BVT V51  
SHB V97 CVG V128 RHOMM KCRW

1010.90 nm / 1872.18 km



## Notes

Basic altitude profile:

- Ascent Rate: 2500ft/min
- Ascent Speed: 250kts
- Cruise Altitude: 35000ft
- 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<br>Type | Via    | Lat<br>Lon | Alt       | Dist<br>(nm) | Name          |
|---------------|--------|------------|-----------|--------------|---------------|
| KBIS          | -      | 46.77240   | 0 ft      | -            | Bismarck Muni |
| APT           | -      | -100.74500 | 0 m       |              |               |
| MUNEF         | -      | 45.68920   | 35,000 ft | 103          | -             |
| FIX           | -      | -98.81800  | 10,668 m  |              |               |
| ABR           | V15    | 45.41740   | 35,000 ft | 24           | ABERDEEN      |
| VOR           | AWY-LO | -98.36870  | 10,668 m  |              |               |
| RWF           | J90    | 44.46730   | 35,000 ft | 149          | REDWOOD FALLS |
| VOR           | AWY-HI | -95.12820  | 10,668 m  |              |               |
| KUKGE         | V24    | 44.42780   | 35,000 ft | 6            | -             |
| FIX           | AWY-LO | -94.97500  | 10,668 m  |              |               |
| ZELET         | V24    | 44.37500   | 35,000 ft | 9            | -             |
| FIX           | AWY-LO | -94.77110  | 10,668 m  |              |               |
| ALMAY         | V24    | 44.05860   | 35,000 ft | 54           | -             |
| FIX           | AWY-LO | -93.58500  | 10,668 m  |              |               |
| KASPR         | V24    | 43.96550   | 35,000 ft | 15           | -             |
| FIX           | AWY-LO | -93.24700  | 10,668 m  |              |               |
| RST           | V24    | 43.78290   | 35,000 ft | 30           | ROCHESTER     |
| VOR           | AWY-LO | -92.59700  | 10,668 m  |              |               |
| GABDE         | V398   | 43.64720   | 35,000 ft | 14           | -             |
| FIX           | AWY-LO | -92.30740  | 10,668 m  |              |               |
| UKN           | V398   | 43.28010   | 35,000 ft | 40           | WAUKON        |
| VOR           | AWY-LO | -91.53740  | 10,668 m  |              |               |
| FARON         | V218   | 42.99470   | 35,000 ft | 33           | -             |
| FIX           | AWY-LO | -90.88600  | 10,668 m  |              |               |
| ISINY         | V218   | 42.92510   | 35,000 ft | 8            | -             |
| FIX           | AWY-LO | -90.72940  | 10,668 m  |              |               |
| BAULK         | V218   | 42.68470   | 35,000 ft | 27           | -             |
| FIX           | AWY-LO | -90.19470  | 10,668 m  |              |               |
| MADDY         | V218   | 42.49500   | 35,000 ft | 21           | -             |
| FIX           | AWY-LO | -89.77940  | 10,668 m  |              |               |
| RFD           | V218   | 42.22560   | 35,000 ft | 30           | ROCKFORD      |
| VOR           | AWY-LO | -89.19930  | 10,668 m  |              |               |
| NOAHE         | V171   | 42.10630   | 35,000 ft | 9            | -             |
| FIX           | AWY-LO | -89.04260  | 10,668 m  |              |               |
| SIMMN         | V171   | 41.98070   | 35,000 ft | 10           | -             |
| FIX           | AWY-LO | -88.87840  | 10,668 m  |              |               |
| HINCK         | V171   | 41.82460   | 35,000 ft | 13           | -             |
| FIX           | AWY-LO | -88.67590  | 10,668 m  |              |               |
| SWETT         | V171   | 41.73870   | 35,000 ft | 7            | -             |
| FIX           | AWY-LO | -88.56500  | 10,668 m  |              |               |
| JOT           | V171   | 41.54640   | 35,000 ft | 15           | JOLIET        |
| VOR           | AWY-LO | -88.31840  | 10,668 m  |              |               |
| MEDAN         | V171   | 41.34100   | 35,000 ft | 12           | -             |
| FIX           | AWY-LO | -88.28520  | 10,668 m  |              |               |
| OCEDO         | V171   | 41.29280   | 35,000 ft | 15           | -             |
| FIX           | AWY-LO | -87.95020  | 10,668 m  |              |               |
| EON           | V171   | 41.26960   | 35,000 ft | 7            | PEOTONE       |
| VOR           | AWY-LO | -87.79110  | 10,668 m  |              |               |
| KENLA         | V24    | 40.89630   | 35,000 ft | 25           | -             |
| FIX           | AWY-LO | -87.52960  | 10,668 m  |              |               |
| YIXCI         | V128   | 40.86650   | 35,000 ft | 2            | -             |
| FIX           | AWY-LO | -87.50890  | 10,668 m  |              |               |
| ERNEY         | V399   | 40.70380   | 35,000 ft | 14           | -             |

| Ident<br>Type | Via    | Lat<br>Lon | Alt       | Dist<br>(nm) | Name               |
|---------------|--------|------------|-----------|--------------|--------------------|
| FIX           | AWY-LO | -87.27770  | 10,668 m  |              |                    |
| BVT           | V399   | 40.55620   | 35,000 ft | 12           | BOILER (LAFAYETTE) |
| VOR           | AWY-LO | -87.06940  | 10,668 m  |              |                    |
| ZOFRI         | V51    | 40.41200   | 35,000 ft | 12           | -                  |
| FIX           | AWY-LO | -86.88740  | 10,668 m  |              |                    |
| OCKEL         | V51    | 40.27860   | 35,000 ft | 11           | -                  |
| FIX           | AWY-LO | -86.72010  | 10,668 m  |              |                    |
| AZHUP         | V51    | 40.20160   | 35,000 ft | 6            | -                  |
| FIX           | AWY-LO | -86.62400  | 10,668 m  |              |                    |
| ZIPPY         | V51    | 39.97260   | 35,000 ft | 20           | -                  |
| FIX           | AWY-LO | -86.29960  | 10,668 m  |              |                    |
| ZAVNE         | V51    | 39.84230   | 35,000 ft | 11           | -                  |
| FIX           | AWY-LO | -86.11670  | 10,668 m  |              |                    |
| SHB           | V51    | 39.63250   | 35,000 ft | 18           | SHELBYVILLE        |
| VOR           | AWY-LO | -85.82430  | 10,668 m  |              |                    |
| MILAN         | V97    | 39.35610   | 35,000 ft | 28           | -                  |
| FIX           | AWY-LO | -85.31680  | 10,668 m  |              |                    |
| CVG           | V97    | 39.01600   | 32,300 ft | 35           | CINCINNATI         |
| VOR           | AWY-LO | -84.70330  | 9,845 m   |              |                    |
| CALIF         | V128   | 38.93390   | 28,200 ft | 18           | -                  |
| FIX           | AWY-LO | -84.31060  | 8,595 m   |              |                    |
| BOSTR         | V128   | 38.88560   | 25,800 ft | 11           | -                  |
| FIX           | AWY-LO | -84.08280  | 7,864 m   |              |                    |
| GIPL          | V128   | 38.87800   | 25,500 ft | 1            | -                  |
| FIX           | AWY-LO | -84.04720  | 7,772 m   |              |                    |
| RHOMM         | V128   | 38.76460   | 20,000 ft | 25           | -                  |
| FIX           | AWY-LO | -83.52250  | 6,096 m   |              |                    |
| KCRW          | -      | 38.37590   | 0 ft      | 93           | Charleston Yeager  |
| APT           | -      | -81.59300  | 0 m       |              |                    |

## KBIS

Region: UNITED STATES  
Timezone: AMERICA/CHICAGO  
Runways: 2

Elevation: 1,661 ft / 506 m  
Location: 46.772400 -100.745000  
Magnetic Var: 5.338 E

## METAR

KBIS 040752Z AUTO 29003KT 10SM CLR 03/01 A3004 RMK A02 SLP184 T00330006

## TAF

KBIS 040521Z 0406/0506 27005KT P6SM FEW110 FM041400 29009KT P6SM BKN110 FM041700 31009KT P6SM BKN035 FM042200 330

## Frequencies

TWR - 118.30 MHz - TOWER  
APP - 126.30 MHz - APPROACH/DEPARTURE  
GND - 121.90 MHz - GROUND

## Runways

| Ident | Width  | Length   | Bearing (true)<br>(mag) | Surface  | Threshold<br>Offset | Overrun<br>Length |
|-------|--------|----------|-------------------------|----------|---------------------|-------------------|
| 03    | 102 ft | 6,592 ft | 38.97                   | CONCRETE | 0 ft                | 203 ft            |
|       | 31 m   | 2,009 m  | 33.63                   |          | 0 m                 | 62 m              |
| 21    | 102 ft | 6,592 ft | 218.98                  | CONCRETE | 0 ft                | 200 ft            |
|       | 31 m   | 2,009 m  | 213.64                  |          | 0 m                 | 61 m              |
| 13    | 151 ft | 8,783 ft | 137.66                  | CONCRETE | 0 ft                | 200 ft            |
|       | 46 m   | 2,677 m  | 132.33                  |          | 0 m                 | 61 m              |
| 31    | 151 ft | 8,783 ft | 317.68                  | CONCRETE | 0 ft                | 200 ft            |
|       | 46 m   | 2,677 m  | 312.34                  |          | 0 m                 | 61 m              |

## Approach Nav aids

| Runway | Type    | Ident | Frequency  | Range | Bearing (true)<br>(mag) | Slope | Elevation |
|--------|---------|-------|------------|-------|-------------------------|-------|-----------|
| 13     | LOC-ILS | IBZX  | 111.50 MHz | 18 nm | 137.69                  | -     | 1,644 ft  |
|        |         |       |            | 33 km | 132.35                  |       | 1,644 m   |
| 31     | LOC-ILS | IBIS  | 110.30 MHz | 18 nm | 317.47                  | -     | 1,650 ft  |
|        |         |       |            | 33 km | 312.13                  |       | 1,650 m   |
| 13     | GS      | IBZX  | 111.50 MHz | 10 nm | 138.36                  | 3.00  | 1,653 ft  |
|        |         |       |            | 19 km | 133.02                  |       | 1,653 m   |
| 31     | GS      | IBIS  | 110.30 MHz | 10 nm | 318.36                  | 3.00  | 1,641 ft  |
|        |         |       |            | 19 km | 313.02                  |       | 1,641 m   |

## KCRW

Region: UNITED STATES  
Timezone: AMERICA/NEW\_YORK  
Runways: 1

Elevation: 980 ft / 299 m  
Location: 38.375900 -81.593000  
Magnetic Var: 8.083 W

## METAR

KCRW 040754Z 00000KT 10SM -RA SCT055 BKN070 OVC090 18/17 A2999 RMK A02 RAB09 SLP148 P0000 T01830172

## TAF

TAF KCRW 040525Z 0406/0506 VRB03KT P6SM VCSH BKN070 FM041200 15005KT 6SM BR VCTS BKN035CB FM041600 16006KT 6SM -SH

## Frequencies

|  |   |
|--|---|
| TWR - 125.70 MHz - CHARLESTON TOWER    | GND - 121.80 MHz - CHARLESTON GROUND    |
| APP - 119.20 MHz - CHARLESTON APPROACH | DEP - 119.20 MHz - CHARLESTON DEPARTURE |
| CLD - 118.55 MHz - CLEARANCE DELIVERY  | REC - 127.60 MHz - ATIS                 |
| COM - 122.95 MHz - CHARLESTON UNICOM   |   |

## Runways

| Ident | Width  | Length   | Bearing (true)<br>(mag) | Surface  | Threshold<br>Offset | Overrun<br>Length |
|-------|--------|----------|-------------------------|----------|---------------------|-------------------|
| 05    | 151 ft | 6,808 ft | 47.00                   | CONCRETE | 0 ft                | 446 ft            |
|       | 46 m   | 2,075 m  | 55.08                   |          | 0 m                 | 136 m             |
| 23    | 151 ft | 6,808 ft | 227.01                  | CONCRETE | 499 ft              | 0 ft              |
|       | 46 m   | 2,075 m  | 235.09                  |          | 152 m               | 0 m               |

## Approach Nav aids

| Runway | Type    | Ident | Frequency  | Range | Bearing (true)<br>(mag) | Slope | Elevation |
|--------|---------|-------|------------|-------|-------------------------|-------|-----------|
| 05     | DME     | IHCV  | 110.30 MHz | 18 nm | -                       | -     | 947 ft    |
|        |         |       |            | 33 km | -                       |       | 947 m     |
| 23     | DME     | ICRW  | 110.30 MHz | 18 nm | -                       | -     | 981 ft    |
|        |         |       |            | 33 km | -                       |       | 981 m     |
| 05     | LOC-ILS | IHCV  | 110.30 MHz | 18 nm | 47.00                   | -     | 947 ft    |
|        |         |       |            | 33 km | 55.08                   |       | 947 m     |
| 23     | LOC-ILS | ICRW  | 110.30 MHz | 18 nm | 227.00                  | -     | 867 ft    |
|        |         |       |            | 33 km | 235.08                  |       | 867 m     |
| 05     | GS      | IHCV  | 110.30 MHz | 10 nm | 47.00                   | 3.00  | 947 ft    |
|        |         |       |            | 19 km | 55.08                   |       | 947 m     |
| 23     | GS      | ICRW  | 110.30 MHz | 10 nm | 227.00                  | 3.00  | 867 ft    |
|        |         |       |            | 19 km | 235.08                  |       | 867 m     |