# OBSTRUCTION DATA SHEET

ODS 51
BISMARCK MUNICIPAL AIRPORT
BISMARCK, NORTH DAKOTA

DIGITIZED FROM

OC 51
SURVEYED SEPTEMBER 1993
10TH EDITION

HORIZONTAL DATUM NAD 83
VERTICAL DATUM NGVD 29

PREPARED AND DISTRIBUTED BY
THE NATIONAL OCEAN SERVICE
U.S. DEPARTMENT OF COMMERCE
FOR THE FEDERAL AVIATION ADMINISTRATION

# ATTENTION

See SPECIAL NOTICES in "Dates of Latest Editions, Airport Obstruction Charts - Obstruction Data Sheets," for possible corrections. National Oceanic and Atmospheric Administration (NOAA) publications are available through NOAA Distribution Branch (N/CG33), National Ocean Service, Riverdale, MD 20737. Telephone: 301-436-6990

## OBSTRUCTION DATA SHEET

The Obstruction Data Sheet (ODS) provides digital obstruction and runway data for use in aircraft arrival and departure planning. This information has been obtained using field survey and photogrammetric methods by the Photogrammetry Branch of the National Ocean Service in accordance with Federal Aviation Regulations Part 77 (FAR-77), "Objects Affecting Navigable Airspace" and FAA No. 405, "Specifications - Airport Obstruction Chart and Related Products."

The ODS is a derivative of the Airport Obstruction Chart (OC). The source OC is indicated on the ODS cover. All objects, both obstructing and nonobstructing, that carry an elevation on the OC are listed in the ODS. The ODS and the OC depict a representation of objects that existed at the time of the OC field survey.

ODS information is arranged as follows:

1. Objects located in an FAR-77 approach or primary and listed with the associated runway (reference runway).

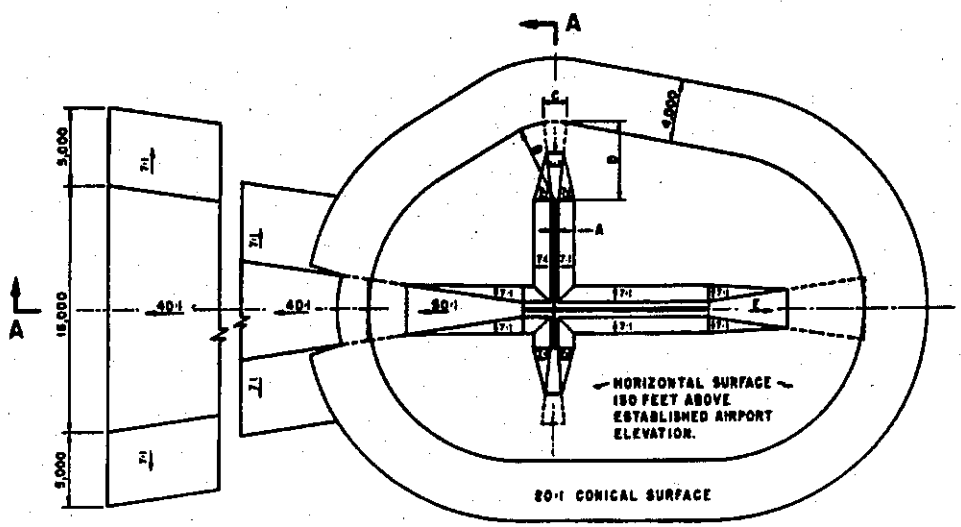
2. All objects not included in "1" above are listed with the Airport Reference Point (ARP).

3. Runway configuration and runway lengths, widths, and elevations are presented on the ODS last page.

The FAR-77 imaginary approach surfaces for which the obstruction surveys were performed are coded in the ODS as follows:

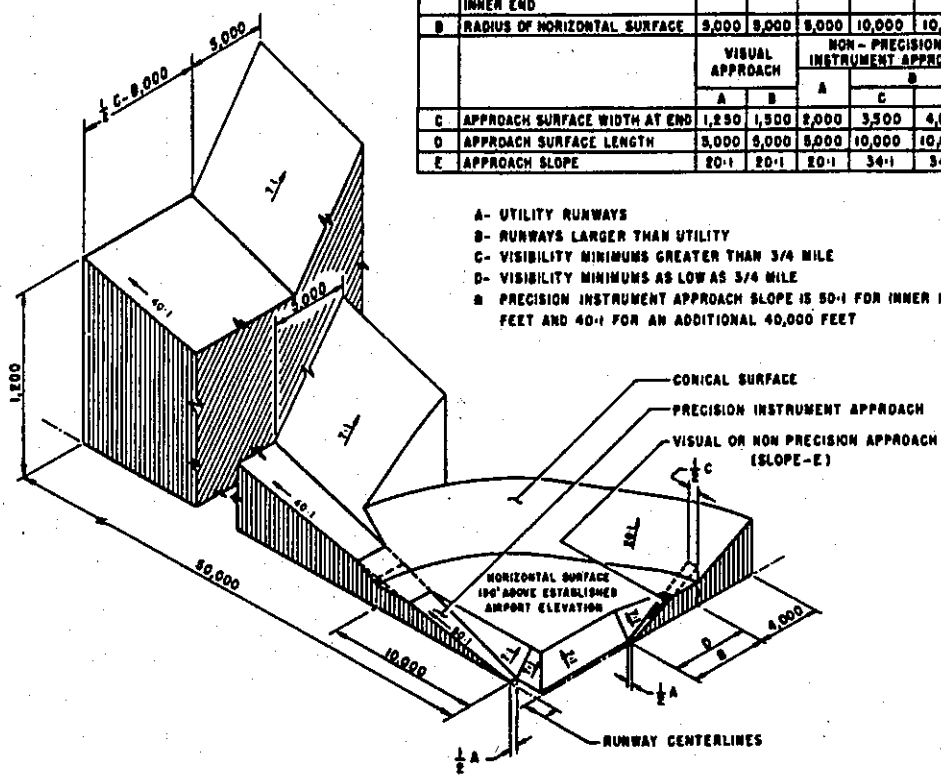
A(V) ..... Utility runway - visual approach only
A(NP) .... Utility runway - nonprecision instrument approach
B(V) ..... Nonutility runway - visual approach only
C ..... Nonutility runway - nonprecision instrument approach with visibility minimums greater than 3/4 mile
D ..... Nonutility runway- nonprecision instrument approach with visibility minimums as low as 3/4 mile
PIR ..... Precision instrument runway
SUPLC .... Supplemental C underlying a B(V)

FAR-77 imaginary surface dimensions are defined on page 2 of this report.




| DIM | ITEM | DIMENSIONAL STANDARDS (FEET) | | | | | |
|---|---|---|---|---|---|---|---|
| | | VISUAL RUNWAY | | NON-PRECISION INSTRUMENT RUNWAY | | | PRECISION INSTRUMENT RUNWAY |
| | | A | B | A | B | | |
| | | | | | C | D | |
| A | WIDTH OF PRIMARY SURFACE AND APPROACH SURFACE WIDTH AT INNER END | 250 | 500 | 500 | 500 | 1,000 | 1,000 |
| B | RADIUS OF HORIZONTAL SURFACE | 5,000 | 5,000 | 5,000 | 10,000 | 10,000 | 10,000 |
| | | VISUAL APPROACH | | NON-PRECISION INSTRUMENT APPROACH | | | PRECISION INSTRUMENT APPROACH |
| | | A | B | A | B | | |
| | | | | | C | D | |
| C | APPROACH SURFACE WIDTH AT END | 1,250 | 1,500 | 2,000 | 3,500 | 4,000 | 16,000 |
| D | APPROACH SURFACE LENGTH | 5,000 | 5,000 | 5,000 | 10,000 | 10,000 | * |
| E | APPROACH SLOPE | 20:1 | 20:1 | 20:1 | 34:1 | 34:1 | * |

A- UTILITY RUNWAYS
B- RUNWAYS LARGER THAN UTILITY
C- VISIBILITY MINIMUMS GREATER THAN 3/4 MILE
D- VISIBILITY MINIMUMS AS LOW AS 3/4 MILE
* PRECISION INSTRUMENT APPROACH SLOPE IS 50:1 FOR INNER 10,000 FEET AND 40:1 FOR AN ADDITIONAL 40,000 FEET




ISOMETRIC VIEW OF SECTION A-A

# FAR-77 CIVIL AIRPORT IMAGINARY SURFACES

# ANNOTATION OF ODS DATA FORMAT

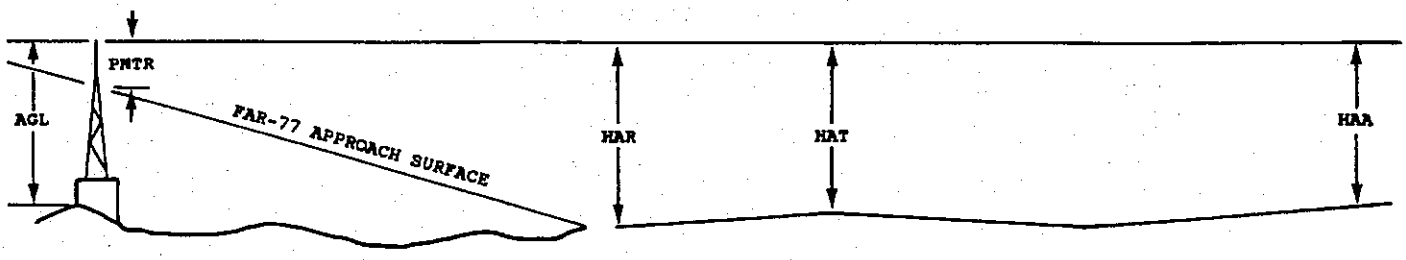
OC XXXX

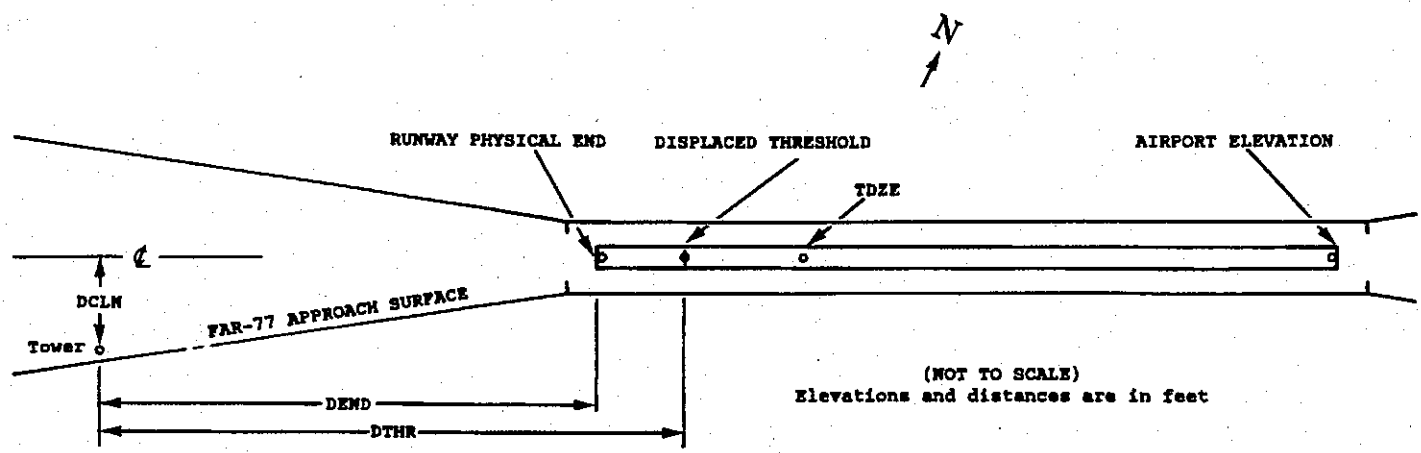
AIRPORT ELEVATION XXXX

X[1] X[2] XXXX/XXXX[3] XXXXXX.XXX[4] XXXXXXX.XXX[4] XXXXXXX[5] XXXX/XXXX[6] XXXXXX.XXX[7] XXXXXXX.XXX[7]

| OBJECT | LAT | LONG | A[8] | ELEV[9] | AGL[10] | HAR[11] | HAT[11] | HAA[11] | DEND[12] | DTHR[12] | DCLN[12] | PNTR[13] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XXXXXXXXXXX | XXXXXX.XXX | XXXXXXX.XXX | XX | XXXX | XXXX | XXX | XXX | XXX | XXXXX | XXXXX | XXXX | XXXX |
| XXXXXXXXXXX | XXXXXX.XXX | XXXXXXX.XXX | XX | XXXX | XXXX | XXX | XXX | XXX | XXXXX | XXXXX | XXXX | XXXX |

**********



## EXPLANATION OF FOOTNOTES

1 Data block identifier. If a runway number is entered (reference runway), this data block will contain data pertinent to the reference runway and to objects in the FAR-77 approach and primary areas of the reference runway. If ARP is entered, this data block will contain the ARP position and data relative to all objects not in an FAR-77 approach or primary area.

2 For the reference runway, the lowest FAR-77 approach surface for which an obstruction survey was performed. (More than one surface may be surveyed).

3 Elevation at approach end of reference runway/touchdown zone elevation

4 Latitude and longitude at approach end of reference runway

5 Geodetic azimuth of reference runway reckoned from north

6 Elevation at reference runway displaced threshold/touchdown zone elevation

7 Latitude and longitude at reference runway displaced threshold

8 Accuracy codes:

| Horizontal (Ft.) | Vertical (Ft.) |
|---|---|
| 1 = 20 | A = 2 |
| 2 = 40 | B = 5 |
| | C = 20 |

9 Elevation above mean sea level (MSL) at top of object. This value includes 15 feet added to noninterstate roads, 17 feet added to interstate roads, and 23 feet added to railroad tracks.

10 Height above ground level (AGL). AGL's are provided only for manmade objects <u>appearing on the OC</u> and equal to or greater than 200 feet AGL. AGL accuracy is 10 feet.

11 HAA - Height above airport
HAR - Height above approach end of reference runway
HAT - Height above reference runway touchdown zone elevation

12 DEND - Distance along reference runway centerline from point nearest to object (perpendicular) to approach end of runway
DTHR - Distance along reference runway centerline from point nearest to object (perpendicular) to displaced threshold
DCLN - Distance left (L) or right (R) of reference runway centerline as observed facing forward in a landing aircraft

A negative value for DEND or DTHR indicates that object is in primary on roll-out side of zero distance point.

13 PNTR - Penetration of indicated FAR-77 approach or primary surface (See footnote 2).

OC0051

AIRPORT ELEVATION 1677

13 PIR 1652/1654 464702.217 -1004542.415 1373434.

| OBJECT | LAT | LONG | A | EL | AGL | HAR | HAT | HAA | DEND | DTHR | DCLN | PNTR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OL GS | 464607.61 | -1004422.02 | 1A | 1671 | | 19 | 17 | -6 | -7858 | | 400L | 28 |
| LTD WSK | 464603.99 | -1004429.32 | 1A | 1650 | | -2 | -4 | -27 | -7786 | | 223R | 7 |
| OL GS | 464656.67 | -1004527.74 | 1A | 1701 | | 49 | 47 | 24 | -1104 | | 375L | 48 |
| FENCE | 464656.99 | -1004544.73 | 1A | 1654 | | 2 | 0 | -23 | -282 | | 476R | 1 |
| BUSH | 464703.75 | -1004550.46 | 1A | 1655 | | 3 | 1 | -22 | 492 | | 308R | -3 |
| ANT ON BLDG | 464710.95 | -1004548.78 | 1A | 1663 | | 11 | 9 | -14 | 951 | | 270L | -4 |
| OL LOC | 464709.47 | -1004552.06 | 1A | 1657 | | 5 | 3 | -20 | 995 | | OR | -11 |
| ROAD (N) | 464713.75 | -1004545.81 | 1A | 1673 | | 21 | 19 | -4 | 1022 | | 614L | 5 |
| LT POLE | 464715.27 | -1004547.89 | 1A | 1673 | | 21 | 19 | -4 | 1233 | | 611L | 1 |
| LT POLE | 464712.68 | -1004553.53 | 1A | 1673 | | 21 | 19 | -4 | 1304 | | 144L | -1 |
| TREE | 464708.85 | -1004601.69 | 1A | 1678 | | 26 | 24 | 1 | 1401 | | 537R | 2 |
| VENT ON BLDG | 464717.42 | -1004549.53 | 1A | 1685 | | 33 | 31 | 8 | 1471 | | 674L | 8 |
| OL POLE | 464718.91 | -1004551.23 | 1A | 1695 | | 43 | 41 | 18 | 1662 | | 688L | 14 |
| ANT ON TWR | 464837.63 | -1004746.33 | 1A | 1882 | | 230 | 228 | 205 | 12951 | | 159L | -38 |

31 PIR 1644/1644 464558.139 -1004417.205 3173537.

| OBJECT | LAT | LONG | A | EL | AGL | HAR | HAT | HAA | DEND | DTHR | DCLN | PNTR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FENCE | 464656.99 | -1004544.73 | 1A | 1654 | | 10 | 10 | -23 | -8511 | | 476L | 1 |
| OL GS | 464656.67 | -1004527.74 | 1A | 1701 | | 57 | 57 | 24 | -7688 | | 375R | 48 |
| LTD WSK | 464603.99 | -1004429.32 | 1A | 1650 | | 6 | 6 | -27 | -1006 | | 223L | 7 |
| OL GS | 464607.61 | -1004422.02 | 1A | 1671 | | 27 | 27 | -6 | -935 | | 400R | 28 |
| ANT ON BLDG | 464553.15 | -1004405.43 | 1A | 1665 | | 21 | 21 | -12 | 926 | | 264R | 7 |
| OL LOC | 464551.20 | -1004407.99 | 1A | 1655 | | 11 | 11 | -22 | 952 | | OR | -4 |
| TREE | 464550.31 | -1004352.68 | 1A | 1685 | | 41 | 41 | 8 | 1737 | | 726R | 10 |
| TREE | 464544.80 | -1004352.64 | 1A | 1684 | | 40 | 40 | 7 | 2151 | | 351R | 1 |
| TREE | 464536.71 | -1004345.13 | 1A | 1700 | | 56 | 56 | 23 | 3108 | | 185R | -2 |

3 AV 1659/1659 464545.404 -1004454.274 390120.

| OBJECT | LAT | LONG | A | EL | AGL | HAR | HAT | HAA | DEND | DTHR | DCLN | PNTR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|

*** N O O B S T R U C T I O N S ***

OC0051

AIRPORT ELEVATION 1677

21 AV 1648/1648 464624.562 -1004408.081 2190153.

| OBJECT | LAT | LONG | A | EL | AGL | HAR | HAT | HAA | DEND | DTHR | DCLN | PNTR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| POLE | 464634.06 | -1004353.85 | 1A | 1690 | | 42 | 42 | 13 | 1371 | | 164L | -16 |
| TREE | 464638.15 | -1004351.33 | 1A | 1707 | | 59 | 59 | 30 | 1804 | | 39L | -21 |

35 SUPLC 1648/1662 464625.853 -1004502.088 3006.

| OBJECT | LAT | LONG | A | EL | AGL | HAR | HAT | HAA | DEND | DTHR | DCLN | PNTR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WSK | 464621.55 | -1004505.03 | 1A | 1656 | | 8 | -6 | -21 | 438 | | 201L | 1 |
| ANT ON BLDG | 464619.33 | -1004506.72 | 1A | 1673 | | 25 | 11 | -4 | 664 | | 317L | 12 |
| LT POLE | 464610.68 | -1004505.81 | 1A | 1676 | | 28 | 14 | -1 | 1539 | | 246L | -11 |

17 SUPLC 1677/1677 464705.415 -1004501.583 1803006.

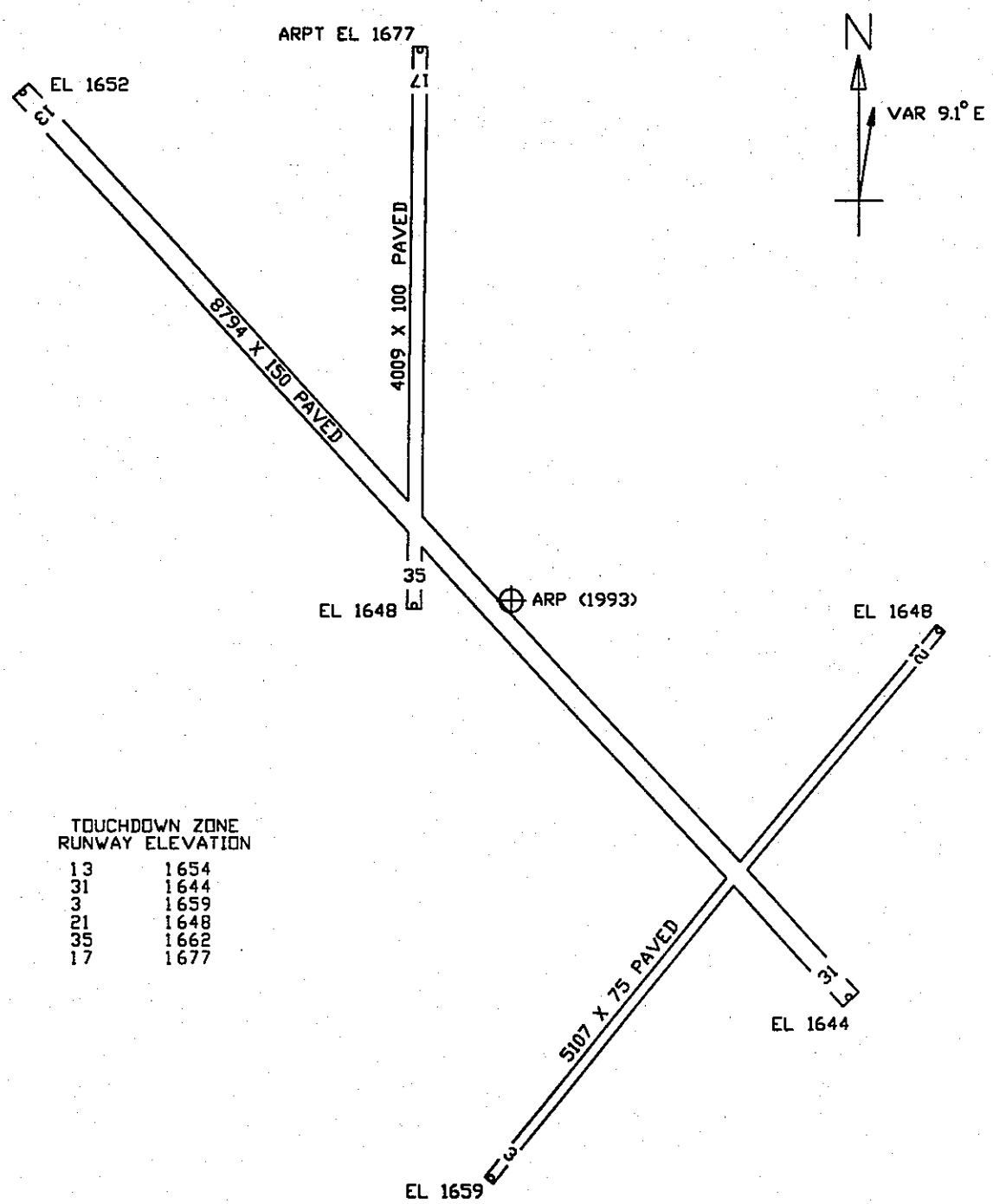
| OBJECT | LAT | LONG | A | EL | AGL | HAR | HAT | HAA | DEND | DTHR | DCLN | PNTR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROAD (N) | 464714.43 | -1004501.43 | 1A | 1684 | | 7 | 7 | 7 | 914 | | 3L | -14 |

OC0051

AIRPORT ELEVATION 1677

ARP 464626.454 -1004452.096

| OBJECT | LAT | LONG | A | EL | AGL | HAA | MAG BEARING | DISTANCE |
|---|---|---|---|---|---|---|---|---|
| ROD ON OL AMOM | 464635.11 | -1004456.55 | 1A | 1672 | | -5 | 33124 | 930 |
| ANT ON OL ATCT | 464617.70 | -1004510.75 | 1A | 1731 | | 54 | 22633 | 1572 |
| ROD ON ASR | 464642.24 | -1004427.88 | 1A | 1716 | | 39 | 3724 | 2323 |
| OL POLE | 464634.31 | -1004524.88 | 1A | 1712 | | 35 | 28007 | 2417 |
| OL WSK | 464650.61 | -1004512.59 | 1A | 1671 | | -6 | 32039 | 2832 |
| ANT ON OL DOME | 464615.28 | -1004545.31 | 1A | 1742 | | 65 | 24354 | 3873 |
| ANT ON OL RTR TWR | 464705.10 | -1004453.03 | 1A | 1742 | | 65 | 34957 | 3915 |
| TREE | 464549.30 | -1004436.12 | 1A | 1714 | | 37 | 15426 | 3925 |
| ANT ON OL RTR TWR | 464705.96 | -1004452.97 | 1A | 1728 | | 51 | 35001 | 4002 |
| ROD ON OL APBN | 464645.28 | -1004545.92 | 1A | 1728 | | 51 | 28752 | 4203 |
| ANT ON BLDG | 464651.82 | -1004544.41 | 1A | 1696 | | 19 | 29607 | 4457 |
| POLE | 464556.76 | -1004401.10 | 1A | 1672 | | -5 | 12110 | 4653 |
| TREE | 464655.39 | -1004546.27 | 1A | 1686 | | 9 | 29846 | 4776 |
| POLE | 464554.48 | -1004354.12 | 1A | 1692 | | 15 | 11939 | 5175 |
| TREE | 464657.85 | -1004553.96 | 1A | 1702 | | 25 | 29721 | 5353 |
| TREE | 464714.48 | -1004543.49 | 1A | 1699 | | 22 | 31434 | 6038 |
| TREE | 464533.23 | -1004401.37 | 1A | 1689 | | 12 | 13740 | 6445 |
| POLE | 464717.85 | -1004547.18 | 1A | 1700 | | 23 | 31432 | 6465 |
| GROUND | 464429.19 | -1004350.86 | 1A | 1830 | | 153 | 15109 | 12621 |
| TREE | 464853.00 | -1004520.38 | 1A | 1894 | | 217 | 34321 | 14976 |




| TOUCHDOWN ZONE RUNWAY | ELEVATION |
|---|---|
| 13 | 1654 |
| 31 | 1644 |
| 3 | 1659 |
| 21 | 1648 |
| 35 | 1662 |
| 17 | 1677 |

BISMARCK MUNICIPAL AIRPORT

BISMARCK, NORTH DAKOTA

(NOT TO SCALE)

(ELEVATIONS AND DISTANCES IN FEET)