

OBSTRUCTION DATA SHEET

ODS 5174
BEMIDJI - BELTRAMI COUNTY AIRPORT
BEMIDJI, MINNESOTA

DIGITIZED FROM

OC 5174
SURVEYED SEPTEMBER 1989
7TH EDITION



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

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 Nr. 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 OC) depict a representation of objects that existed at the time of the OC field survey.

ODS information is arranged as follows:

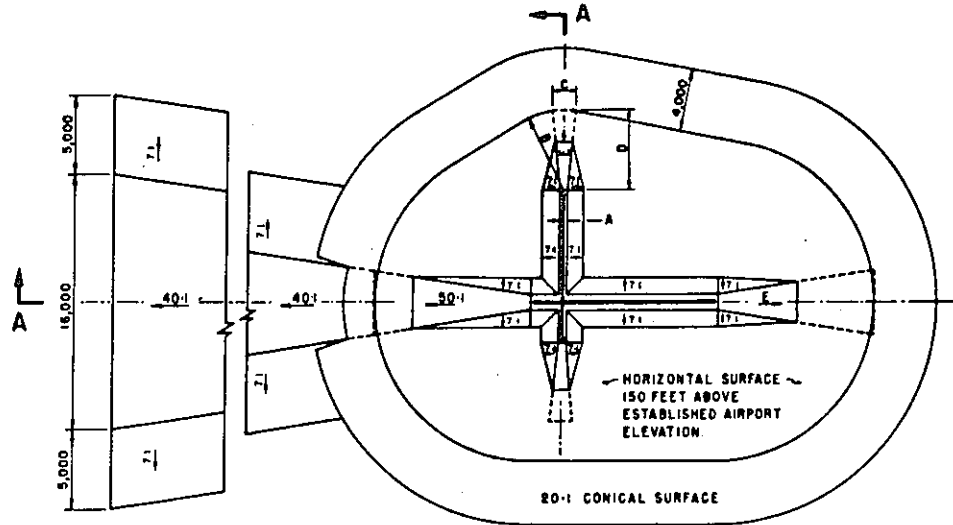
1. Objects located in FAR-77 approach (including supplemental approaches if present) or primary areas are listed with the associated runway (reference runway). For example, all objects in the Runway 9R approach or primary are listed with Runway 9R. Distances to these objects are computed from both the physical end and threshold of Runway 9R. Objects in the Runway 27L approach or primary are listed with Runway 27L. (Objects in the common 9R/27L primary area are listed with both runways.)
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 (see footnote 2 on page 3):

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)

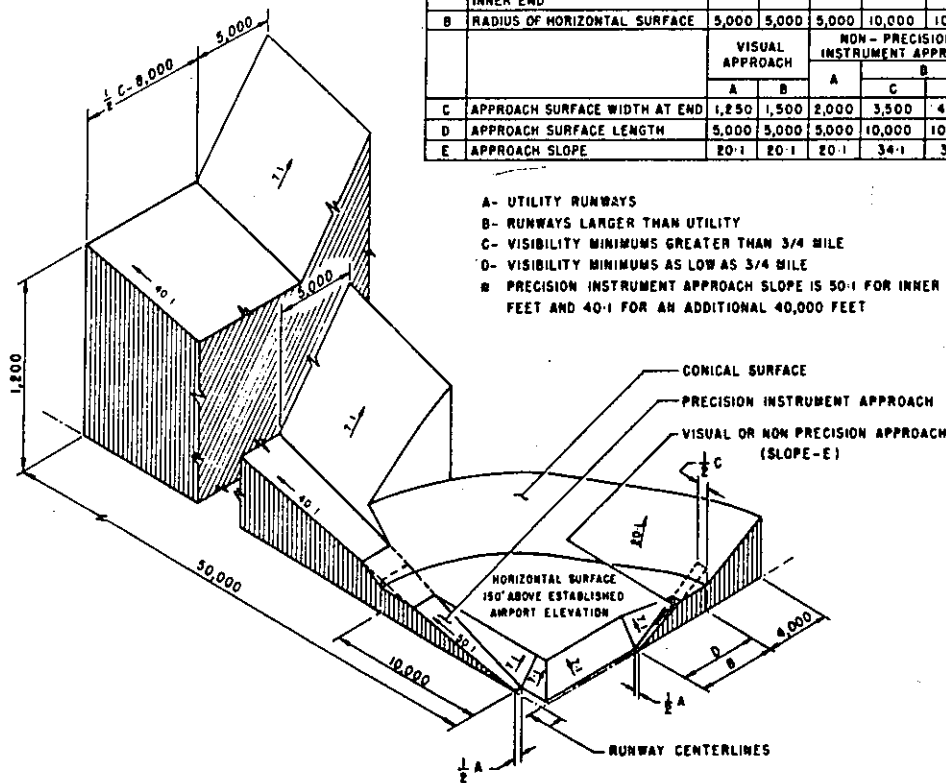
FAR-77 imaginary surface dimensions are defined on page 2 of this report.

Primary surface width is determined by the widest approach at the two approach/primary interfaces for that runway.



DIM	ITEM	DIMENSIONAL STANDARDS (FEET)					
		VISUAL RUNWAY		NON-PRECISION INSTRUMENT RUNWAY		PRECISION INSTRUMENT RUNWAY	
		A	B	A	B		
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	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
- E- 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

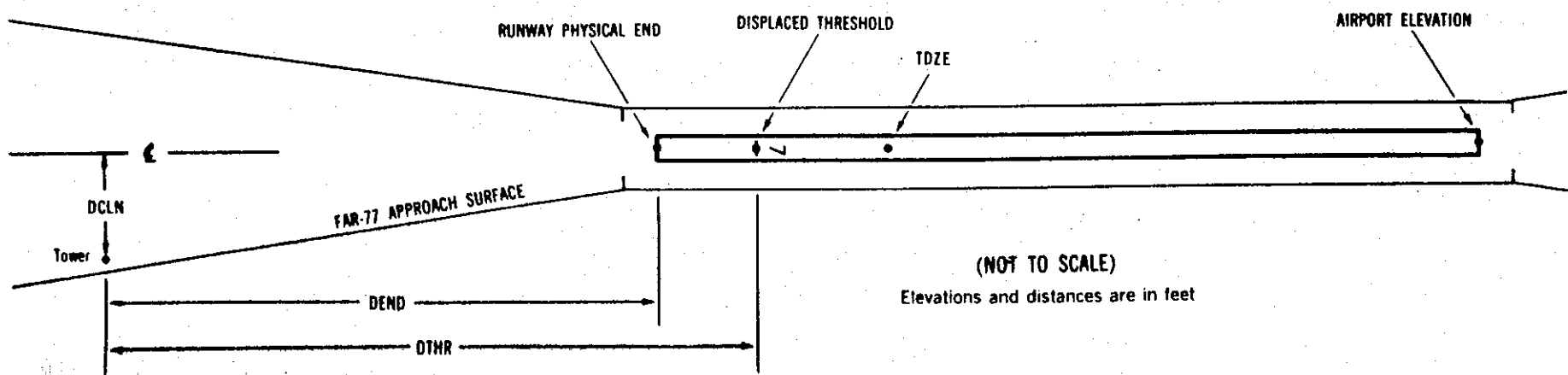
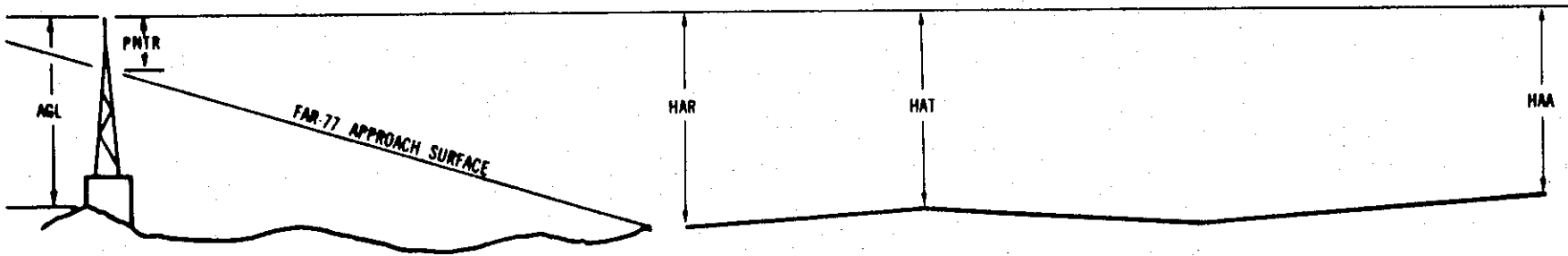
ANNOTATION OF ODS DATA FORMAT

OC XXXX

AIRPORT ELEVATION XXXX

X¹ X² XXXX/XXXX³ XXXXXX.XXX⁴ XXXXXXXX.XXX⁴ XXXXXXXX⁵ XXXX/XXXX⁶ XXXXXX.XXX⁷ XXXXXXXX.XXX⁷

OBJECT	LAT	LONG	A ⁸	ELEV ⁹	AGL ¹⁰	HAR ¹¹	HAT ¹¹	HAA ¹¹	DEND ¹²	DTHR ¹²	DCLN ¹²	PNTR ¹³
XXXXXXXXXXXX	XXXXXX.XXX	XXXXXXXX.XXX	XX	XXXX	XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX
XXXXXXXXXXXX	XXXXXX.XXX	XXXXXXXX.XXX	XX	XXXX	XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX



(NOT TO SCALE)
Elevations and distances are in feet

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 area 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 Reference runway approach physical end elevation/touchdown zone elevation
- 4 Latitude and longitude of reference runway approach physical end
- 5 Reference runway geodetic azimuth reckoned clockwise from south
- 6 Reference runway displaced threshold elevation/touchdown zone elevation
- 7 Latitude and longitude of reference runway displaced threshold
- 8 Accuracy Code:
- | | Horizontal | Vertical |
|---|------------|----------|
| 1 | = 20 | A = 2 |
| 2 | = 40 | B = 5 |
| | | C = 20 |
- 9 Mean Sea Level (MSL) elevation 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). AGLs are provided only for those objects appearing on the OC that are equal to, or greater than, 200 feet AGL. AGL accuracy is ± 10 feet.
- 11 HAA - Height above airport
 HAR - Height above reference runway approach physical end
 HAT - Height above reference runway touchdown zone elevation
- 12 DEND - Distance along reference runway centerline from point perpendicular to object to reference runway approach physical end
 DTHR - Distance along reference runway centerline from point perpendicular to object to reference runway 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 object is in primary area on roll-out side of zero distance point.
- 13 PNTR - Penetration of indicated FAR-77 approach or primary surface (see footnote 2).

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AIRPORT ELEVATION 1390

7 SUPLC 1382/ 473025.149N 0945641.380W 2535919 1383/1387 473027.053N 0945631.586W

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
OL POLE	473024.43	0945655.83	1A	1441		59	54	51	973	1673	204L	36
TREE	473024.65	0945656.21	1A	1437		55	50	47	993	1692	233L	32
TREE	473019.19	0945658.55	1A	1441		59	54	51	1299	1999	255R	27
TREE	473021.90	0945710.93	1A	1445		63	58	55	2041	2740	243L	9

25 SUPLC 1380/1387 473040.654N 0945521.595W 0740017

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
TREE	473044.82	0945513.63	1A	1395		15	8	5	642		255R	2
TREE	473041.80	0945458.32	1A	1432		52	45	42	1568		329L	12

13 C 1390/1390 473057.705N 0945633.945W 3135930

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
ROD ON OL GLIDE SLOPE	473022.16	0945531.23	1A	1417		27	27	27	-5599		400L	34
OL ON WINDSOCK	473029.44	0945557.15	1A	1407		17	17	17	-3807		306R	21
WIND VANE	473037.09	0945555.67	1A	1391		1	1	1	-3341		322L	4
OL ON LOCALIZER	473103.19	0945642.33	1A	1397		7	7	7	800		0R	-11
ANTENNA ON BUILDING	473102.06	0945646.25	1A	1404		14	14	14	914		269R	-7

OC5174

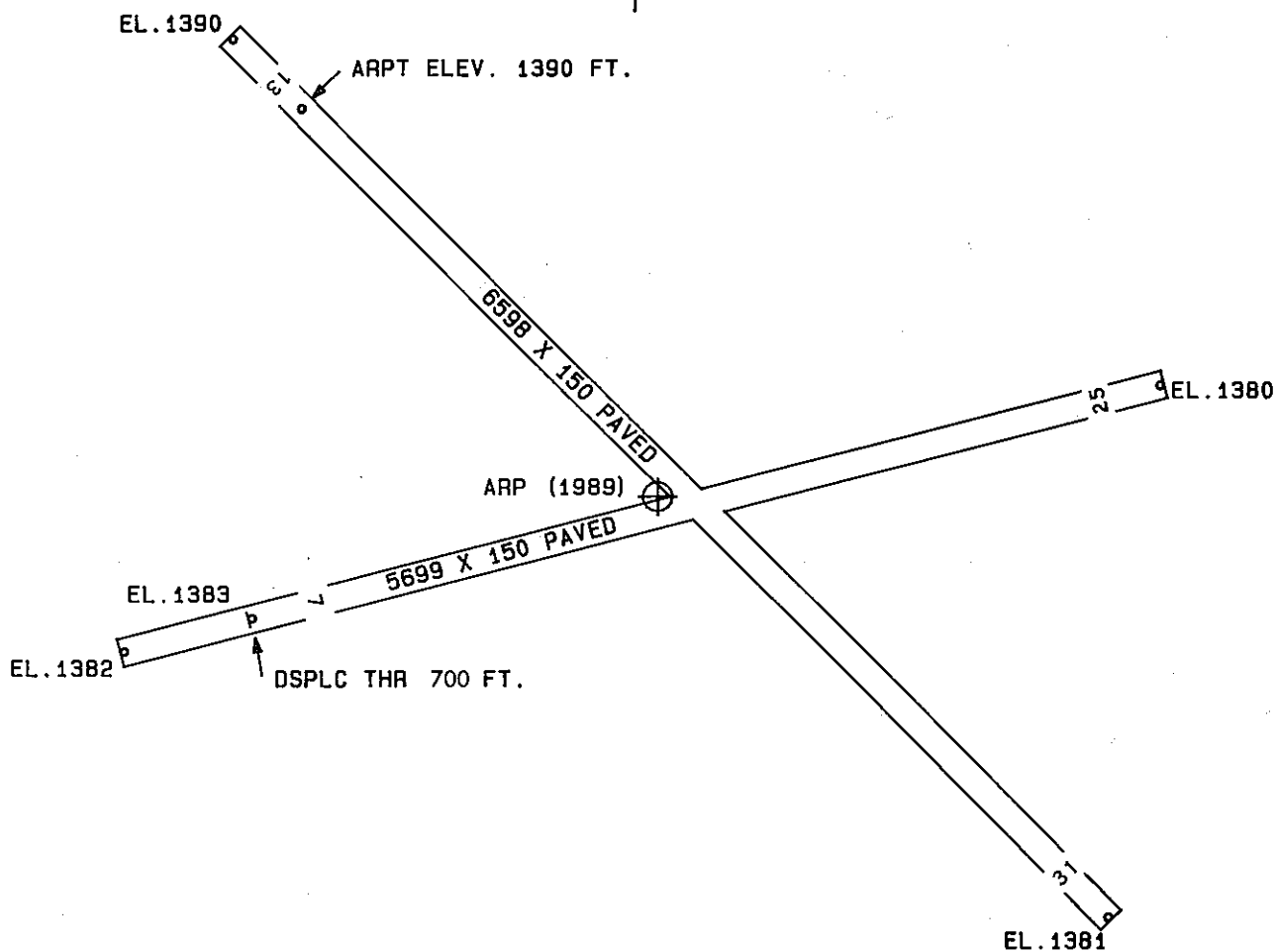
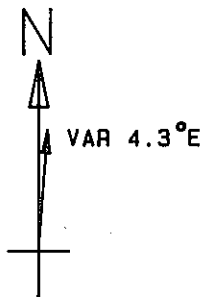
AIRPORT ELEVATION 1390

31 PIR 1381/1387 473012.472N 0945524.811W 1340021

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
WIND VANE	473037.09	0945555.67	1A	1391		10	4	1	-3257		322R	4
OL ON WINDSOCK	473029.44	0945557.15	1A	1407		26	20	17	-2791		306L	21
ROD ON OL GLIDE SLOPE	473022.16	0945531.23	1A	1417		36	30	27	-999		400R	34
ROAD (N)	472958.64	0945517.50	1A	1397		16	10	7	1335		659L	-7
ANTENNA ON OL BUILDING	473000.88	0945508.42	1A	1389		8	2	-1	1626		63L	-21
TREE	472950.70	0945443.46	1A	1454		73	67	64	3575		386R	6
OL ON TRANSMISSION TOWER	472947.65	0945441.64	1A	1453		72	66	63	3880		250R	-2
OL ON TRANSMISSION TOWER	472943.40	0945441.55	1A	1458		77	71	68	4183		55L	-3
OL ON TRANSMISSION TOWER	472940.79	0945441.55	1A	1458		77	71	68	4367		245L	-6
OL ON WATER TANK	472857.44	0945337.04	1A	1517		136	130	127	10605		325L	-74
OL ON CABLE TV MAST	472653.25	0944931.06	2A	1859	441	478	472	469	31501		2384R	-254

ARP 473034.076N 0945600.354W

OBJECT	LAT	LONG	A	ELEV	AGL	HAA	MAG	BEARING	DISTANCE
OL ON FLOODLIGHT	473024.51	0945601.24	1A	1452		62	179	16	972
ANTENNA ON HANGAR	473023.72	0945606.81	1A	1425		35	198	37	1139
OL ON AIRPORT BEACON	473020.85	0945600.73	1A	1442		52	176	48	1340
OL DIRECTION FINDER ANT	473029.54	0945537.77	1A	1397		7	102	12	1617
TREE	473044.08	0945630.99	1A	1435		45	291	26	2335
TREE	473010.43	0945541.25	1A	1444		54	147	0	2732
OL POLE	473026.39	0945655.91	1A	1445		55	254	10	3893
TREE	473018.03	0945653.53	1A	1441		51	241	42	3996
TREE	473039.19	0945502.38	1A	1437		47	78	16	4014
TREE	473008.83	0945501.93	1A	1431		41	118	13	4757



TOUCHDOWN ZONE RUNWAY ELEVATION	
7	1387
25	1387
13	1390
31	1387

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 (NOT TO SCALE)