

OBSTRUCTION DATA SHEET

**ODS 5362
KIRSCH MUNICIPAL AIRPORT
STURGIS, MICHIGAN**

DIGITIZED FROM

**OC 5362
SURVEYED 9 SEPTEMBER 1992
2ND EDITION**

**HORIZONTAL DATUM NAD83
VERTICAL DATUM NGVD29**



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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.

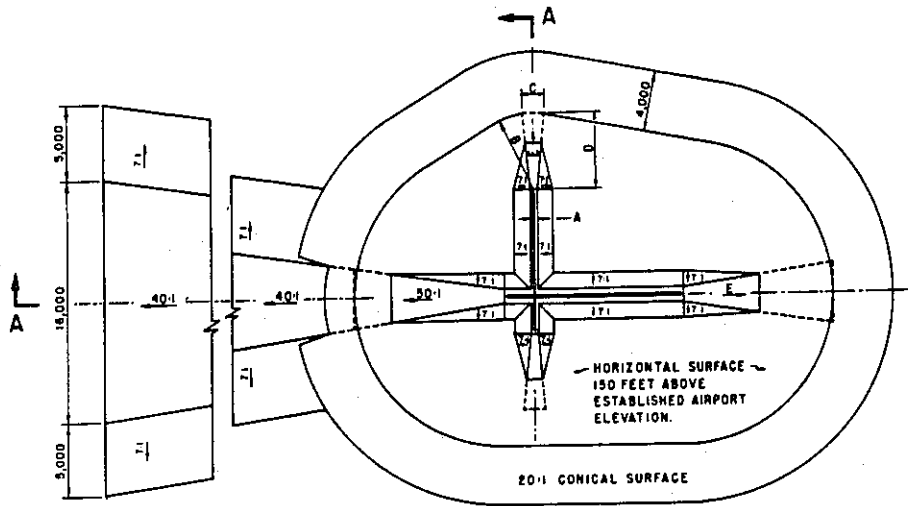
ODS information is arranged as follows:

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.

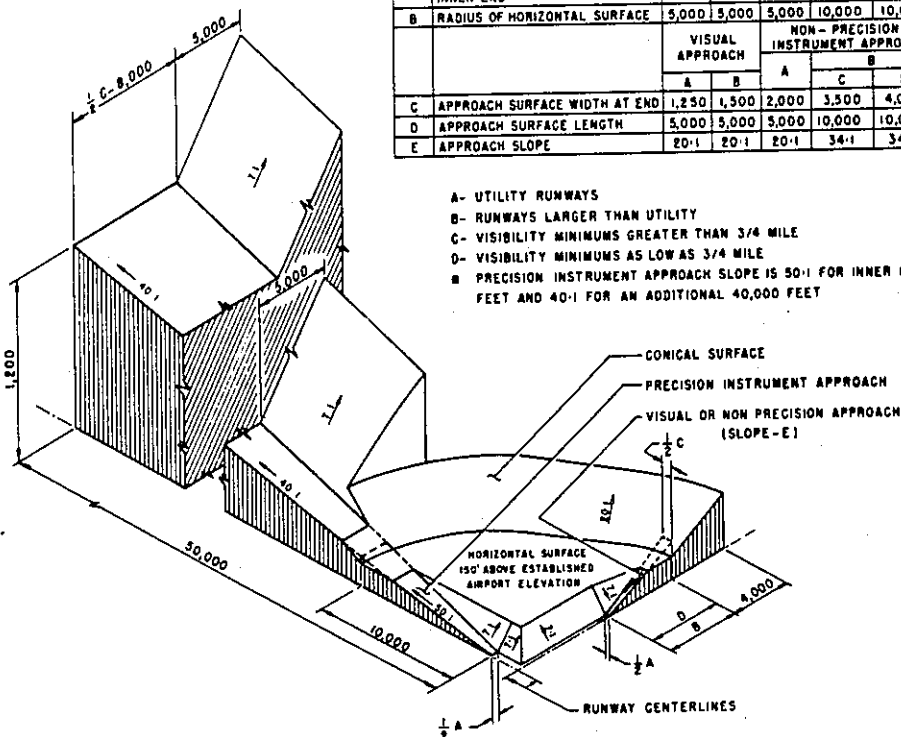
The FAR-77 imaginary approach surfaces for which the obstruction surveys were performed are coded in the ODS as follows:

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		
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
C	APPROACH SURFACE WIDTH AT END	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

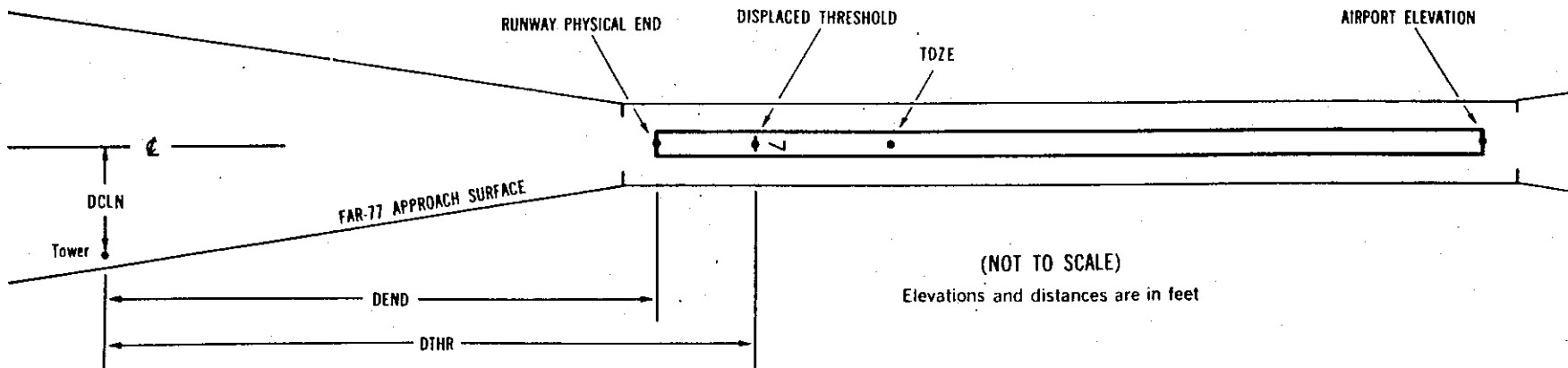
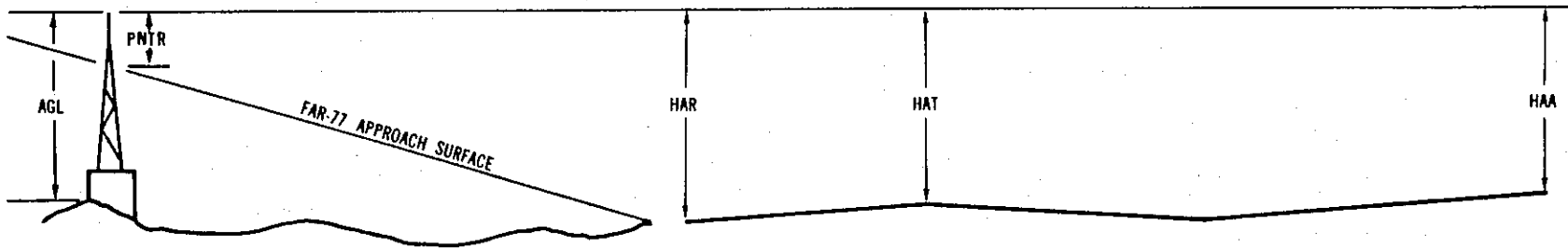
FAR-77 CIVIL AIRPORT
IMAGINARY SURFACES

ANNOTATION OF ODS DATA FORMAT

OC XXXX

AIRPORT ELEVATION XXXX

X ¹	X ²	XXXX/XXXX ³	XXXXXX.XXX ⁴	XXXXXX.XXX ⁴	XXXXXX ⁵	XXXX/XXXX ⁶	XXXXXX.XXX ⁷	XXXXXX.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
XXXXXXXXXXXX	XXXXXX.XXX	XXXXXX.XXX	XX	XXXX	XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX
XXXXXXXXXXXX	XXXXXX.XXX	XXXXXX.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 Vertical
 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 appearing on the OC 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 PTNR - Penetration of indicated FAR-77 approach or primary surface (See footnote 2).

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AIRPORT ELEVATION 925

18 C 909/ 915 414912.815 -852627.363 1794147.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
TREE	414916.11	-852628.78	1A	916		7	1	-9	334		106R	3
TREE	414916.43	-852627.73	1A	917		8	2	-8	366		25R	3
TREE	414925.32	-852632.70	1A	941		32	26	16	1268		397R	1
TREE	414929.97	-852621.89	1A	942		33	27	17	1734		423L	-12
TREE	414945.97	-852630.23	1A	1002		93	87	77	3357		199R	1
TREE	414947.22	-852629.60	1A	1008		99	93	83	3484		151R	3
TREE	414949.03	-852628.12	1A	1014		105	99	89	3666		38R	3

36 SUPLC 912/ 915 414816.516 -852626.964 3594147.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
POLE	414804.65	-852626.08	1A	939		27	24	14	1202		61R	-2
POLE	414804.07	-852631.29	1A	941		29	26	16	1258		334L	-2

6 AV 913/ 924 414840.359 -852629.011 584059.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
GROUND	414857.92	-852546.90	1A	927		14	3	2	-3648		139R	2
GROUND	414858.95	-852552.15	1A	926		13	2	1	-3363		157L	2
GROUND	414848.19	-852606.80	1A	922		9	-2	-3	-1849		197R	1
POLE	414837.38	-852642.93	1A	938		25	14	13	1057		291L	-18
TREE	414833.40	-852651.70	1A	969		56	45	44	1834		292L	-26

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AIRPORT ELEVATION 925

24 ANP 925/ 925 414858.107 -852550.014 2384125.

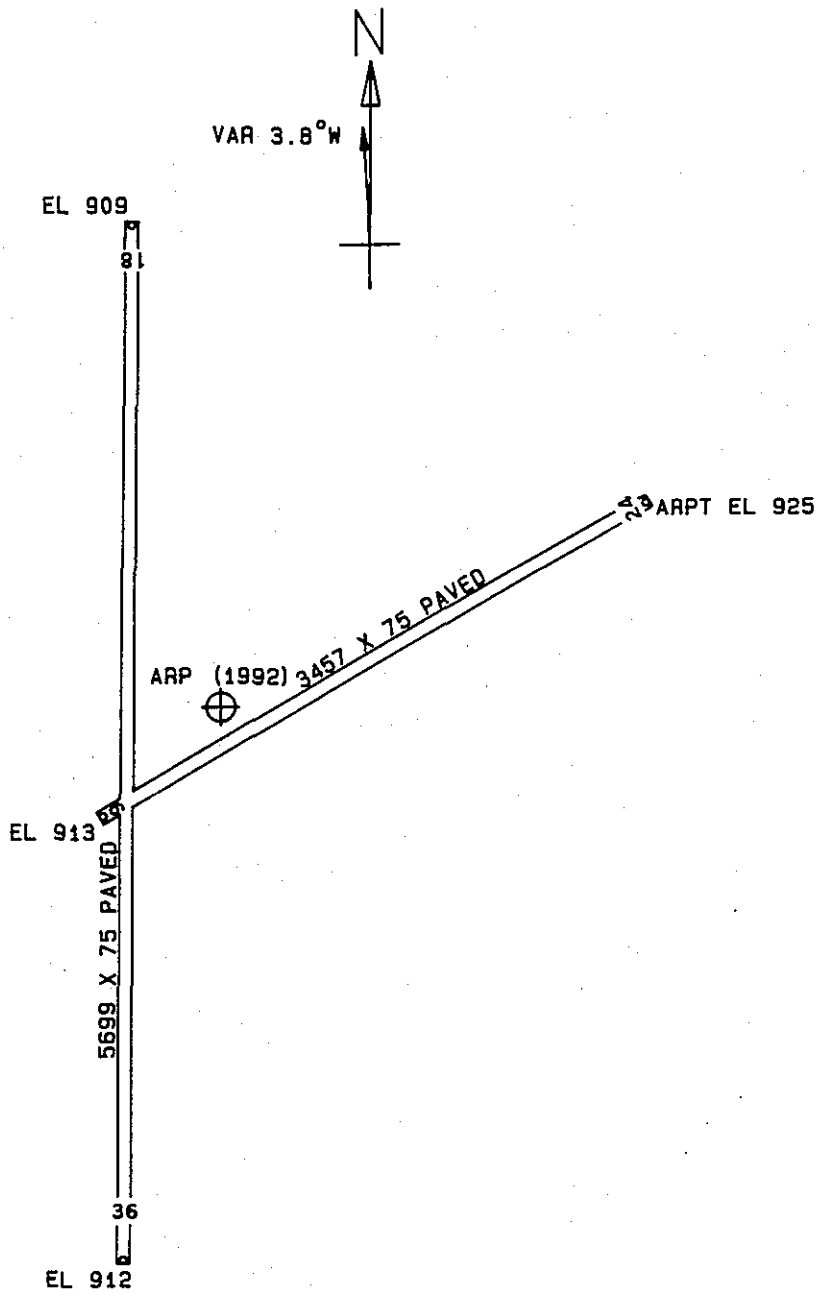
OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
GROUND	414848.19	-852606.80	1A	922		-3	-3	-3	-1608		197L	1
GROUND	414858.95	-852552.15	1A	926		1	1	1	-94		157R	2
GROUND	414857.92	-852546.90	1A	927		2	2	2	191		139L	2
ROAD (N)	414858.27	-852542.33	1A	938		13	13	13	506		289L	-2
OL ON POLE	414902.25	-852534.91	1A	957		32	32	32	1195		236L	-18
TREE	414906.85	-852534.28	1A	980		55	55	55	1478		137R	-9
TREE	414906.80	-852526.98	1A	984		59	59	59	1947		155L	-28

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AIRPORT ELEVATION 925

ARP 414846.390 -852620.500

OBJECT	LAT	LONG	A	EL	AGL	HAA	MAG BEARING	DISTANCE
OL ON POLE	414846.64	-852603.18	1A	958		33	9240	1312
OL ON POLE	414848.16	-852559.81	1A	959		34	8717	1577
ROD ON OL APBN	414844.61	-852558.37	1A	982		57	9955	1685
TREE	414900.12	-852636.86	1A	967		42	32204	1862
TREE	414837.51	-852645.12	1A	974		49	24803	2070
TREE	414836.91	-852648.18	1A	982		57	24912	2306
TREE	414910.97	-852639.30	1A	1005		80	33401	2867
TREE	414912.98	-852638.06	1A	988		63	33730	3003
ANT ON OL BLDG	414835.26	-852537.48	1A	1054		129	11252	3448
OL ON POLE	414900.48	-852534.61	1A	957		32	7128	3757
TREE	414804.75	-852634.75	1A	960		35	19809	4352
ANT ON W TANK	414756.44	-852532.14	1A	1089		164	14752	6244
TREE	414937.17	-852450.23	1A	1091		166	5651	8553
TANK	414949.37	-852500.35	1B	1066		141	4722	8802
TREE	415050.58	-852658.50	1B	1110		185	35054	12897
ANT ON OL RADIO MAST	414641.01	-852435.90	2A	1301	407	376	15148	14962
OL ON RADIO MAST	414611.02	-852509.60	2A	1277	405	352	16456	16620



TOUCHDOWN ZONE RUNWAY ELEVATION	
18	915
36	915
6	924
24	925

KIRSCH MUNICIPAL AIRPORT
 STURGIS, MICHIGAN
 (NOT TO SCALE)
 (ALL ELEVATIONS IN FEET)