

OBSTRUCTION DATA SHEET

**ODS 5481
LAWRENCE MUNICIPAL AIRPORT
LAWRENCE, KANSAS**

DIGITIZED FROM

**OC 5481
SURVEYED MAY 1991
1ST EDITION**



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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 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:

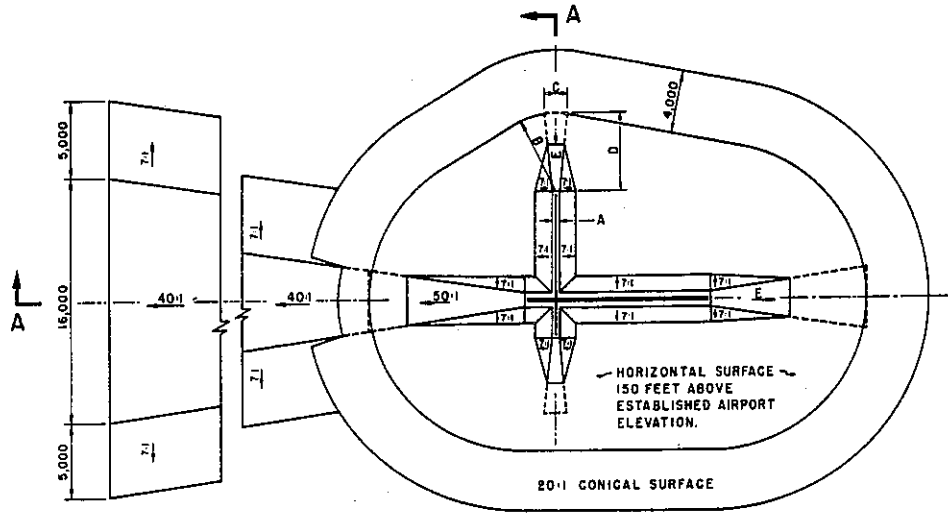
1. Objects located in FAR-77 approach (including supplemental approaches if present) or primary areas are listed with the associated runway (reference runway). For example, all objects in the Runway 9R approach or primary are listed with Runway 9R. Distances to these objects are computed from both the 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)

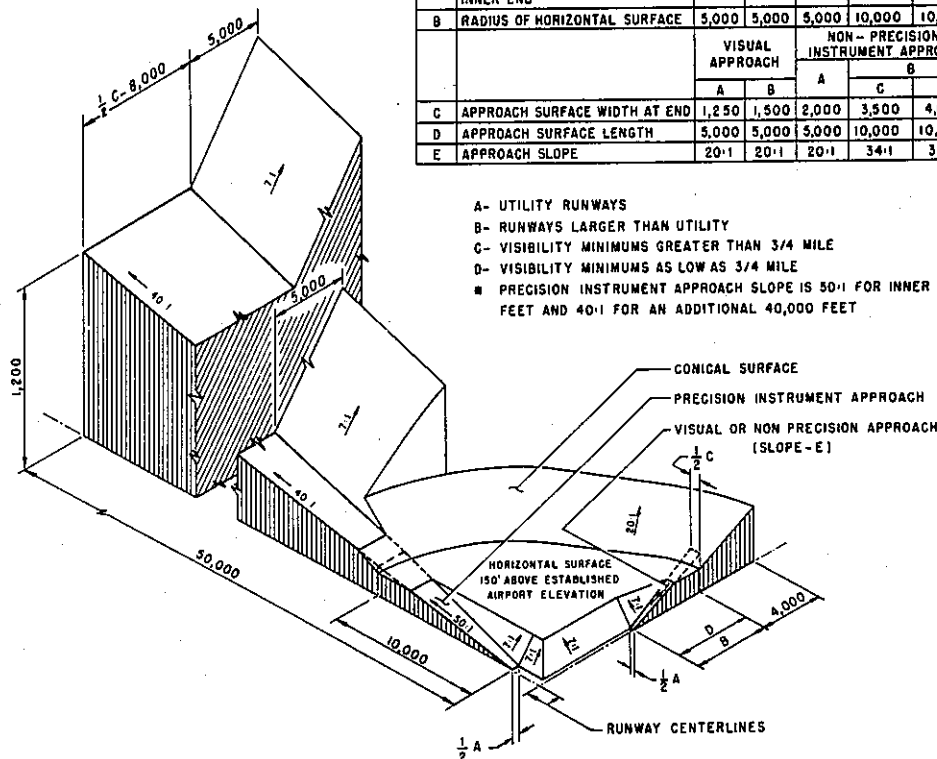
FAR-77 imaginary surface dimensions are defined on page 2 of this report.

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
- * 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

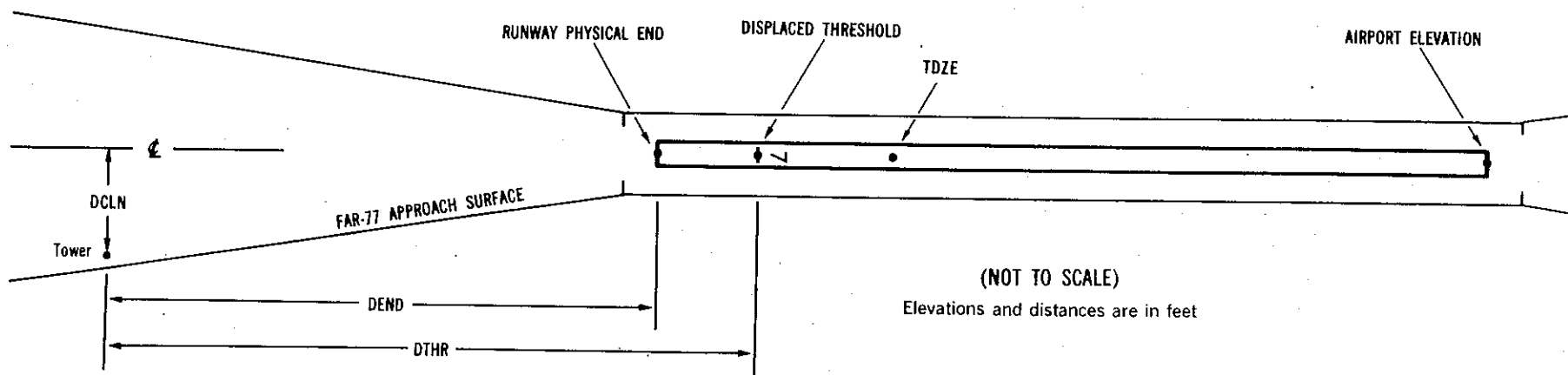
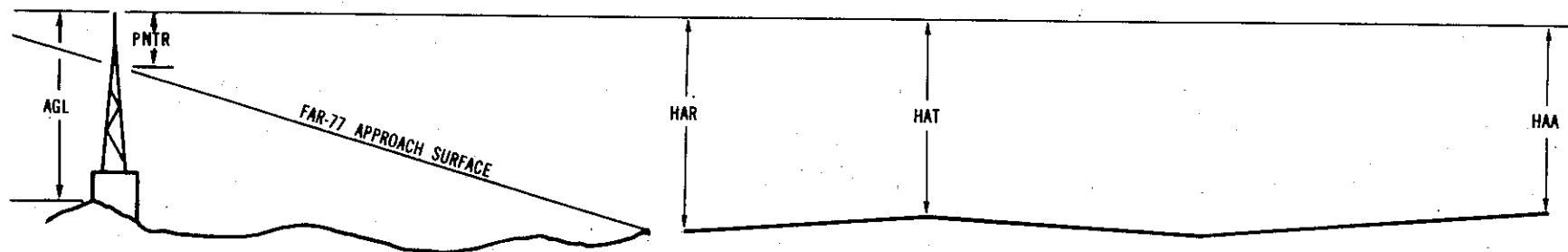
ANNOTATION OF ODS DATA FORMAT

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 832

1 A(V) 832/832 390019.012N 0951310.988W 1991042

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
POLE	390001.76	0951319.49	1A	863		31	31	31	1869		61L	-52

19 A(V) 830/832 390055.431N 0951254.751W 0191052

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
BUSH	390058.31	0951253.87	1A	836		6	4	4	298		30R	1

15 SUPLC 829/831 390104.538N 09513 9.742W 3332800

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
GROUND	390027.47	0951243.07	1A	830		1	-1	-2	-4296		208L	1
OL TOWER	390031.24	0951241.93	1A	883		54	52	51	-3995		460L	54
TREE	390047.53	0951305.76	1A	857		28	26	25	-1680		487R	26
TREE	390050.74	0951307.95	1A	842		13	11	10	-1312		497R	12
POLE	390054.15	0951306.00	1A	836		7	5	4	-1072		205R	6
GROUND	390104.33	0951312.55	1A	830		1	-1	-2	80		208R	1
POLE	390116.06	0951325.55	1A	861		32	30	29	1601		595R	-9
TREE	390121.61	0951311.86	1A	898		69	67	66	1620		622L	27
TREE	390123.07	0951316.60	1A	887		58	56	55	1919		353L	7
TREE	390123.68	0951319.14	1A	888		59	57	56	2065		202L	4
TREE	390124.29	0951322.62	1A	905		76	74	73	2242		17R	16
TREE	390129.44	0951337.81	1B	891		62	60	59	3244		856R	-28
TRANSMISSION TOWER	390159.62	0951329.49	1B	955		126	124	123	5683		1095L	-35

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AIRPORT ELEVATION 832

33 PIR 828/831 390020.304N 0951241.437W 1532818

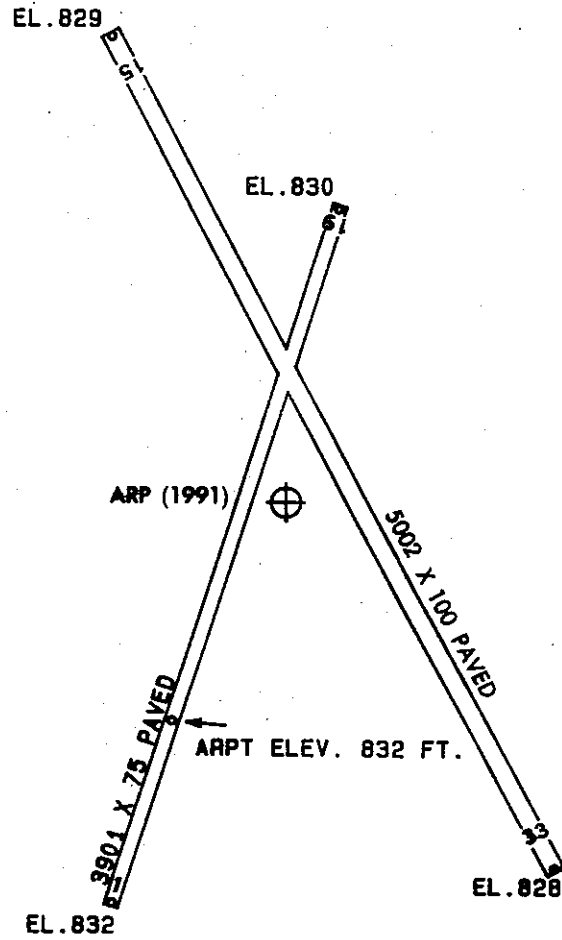
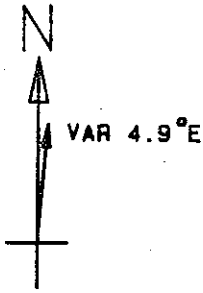
OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DIHR	DCLM	PNTR
GROUND	390104.33	0951312.55	1A	830		2	-1	-2	-5082		208L	1
POLE	390054.15	0951306.00	1A	836		8	5	4	-3930		205L	6
TREE	390050.74	0951307.95	1A	842		14	11	10	-3690		497L	12
TREE	390047.53	0951305.76	1A	857		29	26	25	-3322		487L	26
OL TOWER	390031.24	0951241.93	1A	883		55	52	51	-1007		460R	54
GROUND	390027.47	0951243.07	1A	830		2	-1	-2	-706		208R	1
GROUND	390016.39	0951244.85	1A	830		2	-1	-2	234		418L	1
TREE	390014.44	0951229.74	1A	857		29	26	25	943		561R	14
TREE	390001.58	0951239.56	1A	879		51	48	47	1761		714L	20
POLE	390001.92	0951237.42	1A	858		30	27	26	1806		547L	-2
TREE	385958.89	0951219.18	1A	885		57	54	53	2723		605R	7
TREE	385945.74	0951217.83	1A	897		69	66	65	3961		105R	-6

0C5481

AIRPORT ELEVATION 832

ARP 390040.143N 0951258.779W

OBJECT	LAT	LONG	A	ELEV	AGL	HAA	MAG BEARING	DISTANCE
TREE	390043.73	0951305.62	1A	872		40	299 2	651
OL ON LIGHTED WINDSOCK	390031.38	0951259.33	1A	853		21	177 55	888
TREE	390029.96	0951311.30	1A	869		37	218 54	1428
TREE	390054.11	0951312.24	1A	866		34	318 10	1768
BUSH	390057.59	0951251.21	1A	842		10	13 48	1863
POLE	390025.49	0951314.39	1A	874		42	214 50	1928
ANTENNA ON OL AIRPORT BCN	390019.15	0951254.71	1A	886		54	166 30	2148
TREE	390028.71	0951218.18	1B	901		69	104 57	3407
TREE	390107.55	0951324.64	1A	902		70	318 44	3443
TREE	390014.39	0951225.63	1A	857		25	129 59	3693
TREE	390000.89	0951243.38	1A	905		73	158 5	4153
TREE	390004.06	0951325.14	1A	918		86	204 47	4202
TREE	390002.35	0951322.67	1A	910		78	201 22	4264
TREE	390119.70	0951233.76	1B	969		137	21 22	4463
TREE	390138.95	0951255.02	1B	958		126	357 57	5957
TREE	390003.36	0951158.44	1B	904		72	123 6	6045
TRANSMISSION TOWER	390159.61	0951320.80	1B	951		119	342 54	8226
TREE	390153.93	0951159.43	1B	1104		272	27 12	8813
OL ON HOPPER	390137.93	0951422.36	1B	947		115	306 39	8815
TREE	390203.43	0951219.74	1B	1088		256	15 11	8972
TREE	390137.82	0951118.59	1B	1118		286	48 40	9828
TREE	390201.44	0951150.25	1B	1105		273	28 25	9844
TREE	390239.01	0951242.64	1B	1108		276	1 9	12093
TREE	390145.79	0951050.54	2C	1124		292	51 49	12106
TREE	390239.93	0951303.51	1B	1106		274	353 20	12125
TREE	390241.82	0951253.36	1B	1123		291	357 5	12318
TREE	390223.07	0951123.06	2C	1119		287	31 3	12865
TREE	390249.27	0951229.02	2C	1129		297	5 17	13273
TREE	390222.11	0951450.20	2C	1087		255	314 40	13555
TREE	390224.84	0951449.07	2C	1076		244	315 42	13710
TRANSMISSION TOWER	390125.61	0951011.20	2C	1121		289	65 55	14004
TREE	390131.22	0951009.81	2C	1135		303	63 54	14302
ANTENNA ON WATER TANK	390259.77	0951135.66	2C	1203		371	20 0	15575



TOUCHDOWN ZONE RUNWAY ELEVATION	
1	832
19	832
15	831
33	831

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 (NOT TO SCALE)