

# OBSTRUCTION DATA SHEET

**ODS 250  
CEDAR RAPIDS MUNICIPAL AIRPORT  
CEDAR RAPIDS, IOWA**

**DIGITIZED FROM**

**OC 250  
SURVEYED OCTOBER 1990  
10TH 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:

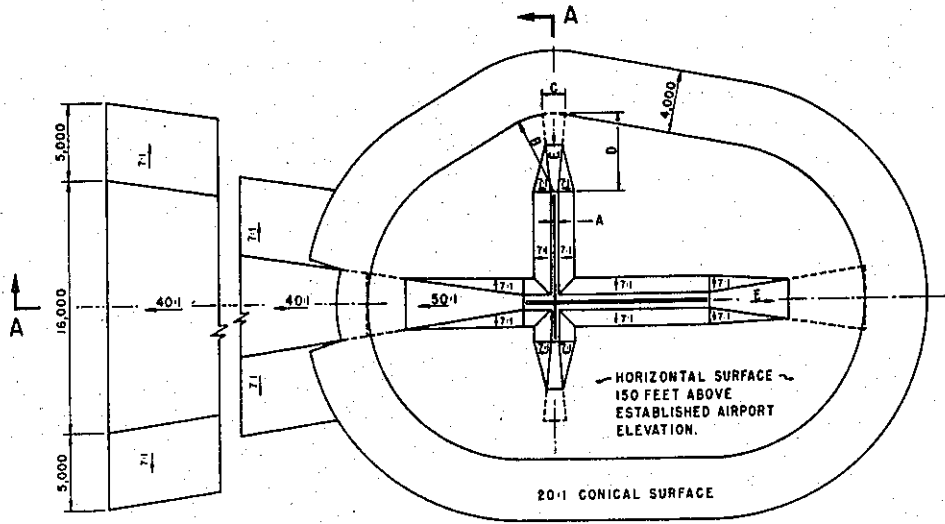
1. Objects located in FAR-77 approach (including supplemental approaches if present) or primary areas are listed with the associated runway (reference runway). For example, all objects in the Runway 9R approach or primary are listed with Runway 9R. Distances to these objects are computed from both the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

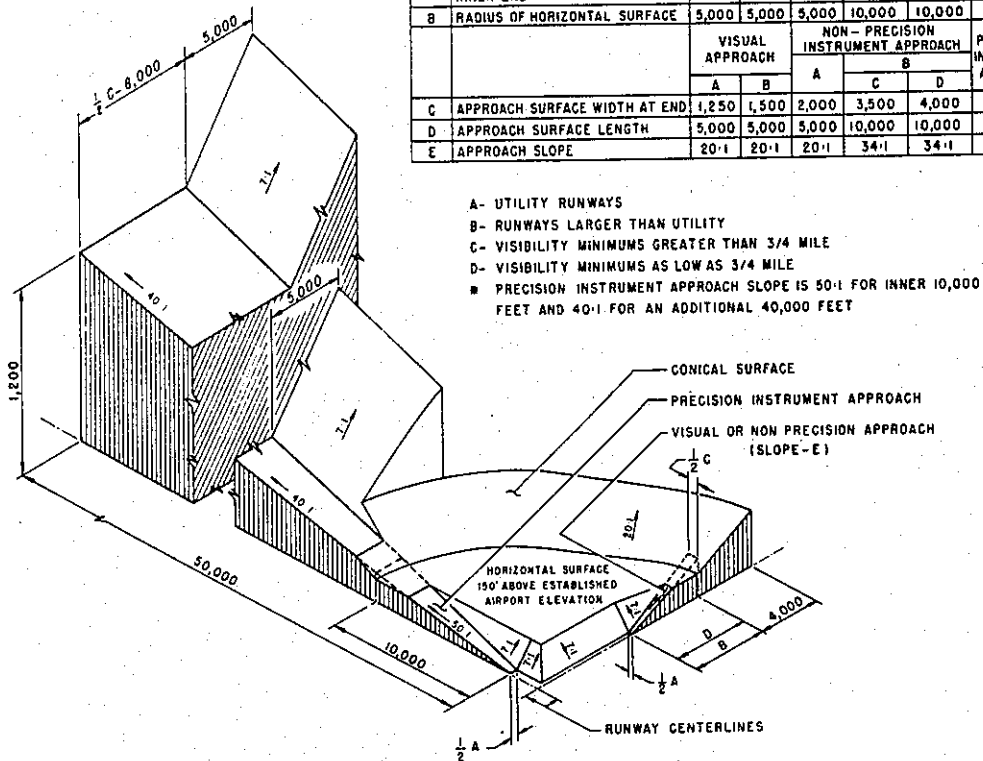
A(V) ..... Utility runway - visual approach only  
 A(NP) .... Utility runway - nonprecision instrument approach  
 B(V) ..... Nonutility runway - visual approach only  
 C ..... Nonutility runway - nonprecision instrument approach with  
 visibility minimums greater than 3/4 mile  
 D ..... Nonutility 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

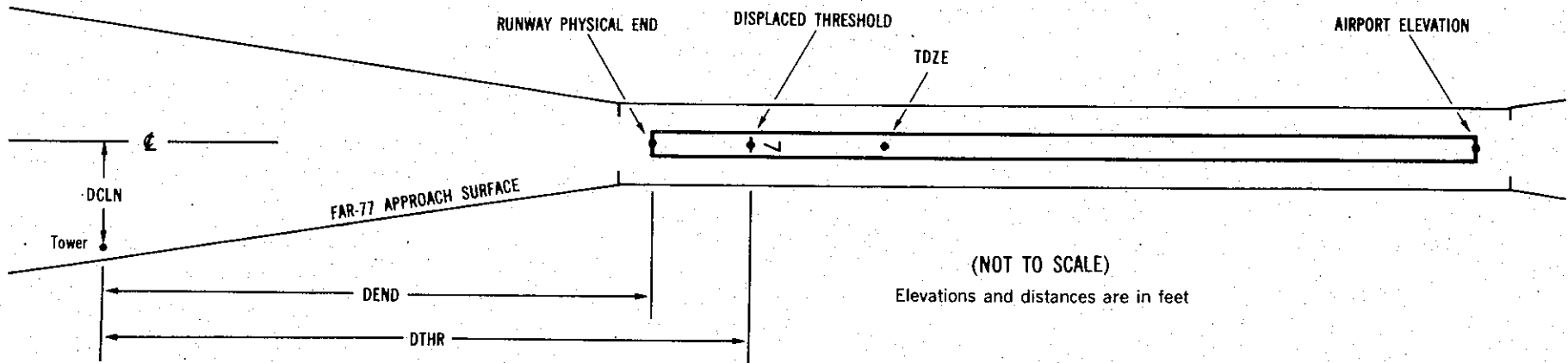
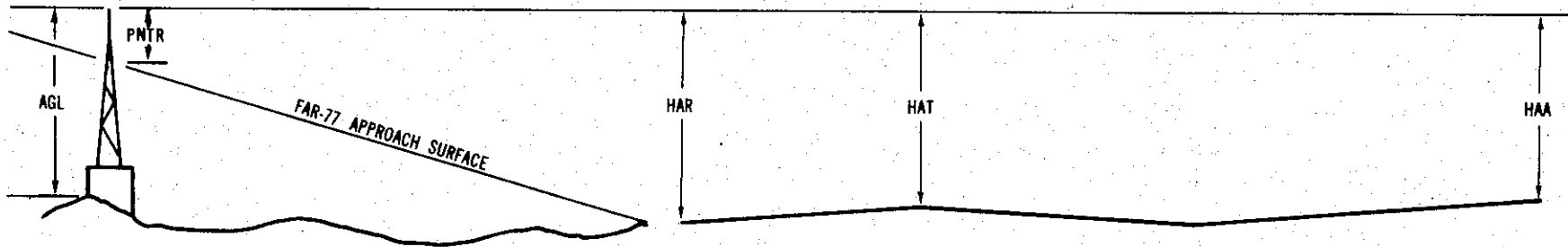
OC XXXX

AIRPORT ELEVATION XXXX

x<sup>1</sup> x<sup>2</sup> XXXX/XXXX<sup>3</sup> XXXXXX.XXX<sup>4</sup> XXXXXX.XXX<sup>4</sup> XXXXXXX<sup>5</sup> XXXX/XXXX<sup>6</sup> XXXXXX.XXX<sup>7</sup> XXXXXXX.XXX<sup>7</sup>

OBJECT	LAT	LONG	A <sup>8</sup>	ELEV <sup>9</sup>	AGL <sup>10</sup>	HAR <sup>11</sup>	HAT <sup>11</sup>	HAA <sup>11</sup>	DEND <sup>12</sup>	DTHR <sup>12</sup>	DCLN <sup>12</sup>	PNTR <sup>13</sup>
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  $\pm 10$  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).

OC0250

AIRPORT ELEVATION 864

9 PIR 852/855 415304.732N 0914344.393W 2705436

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
ROD ON OL GLIDE SLOPE	415259.63	0914208.18	1A	889		37	34	25	-7285		400R	29
ROD ON OL GLIDE SLOPE	415300.60	0914329.47	1A	897		45	42	33	-1136		400R	47
ANTENNA ON BUILDING	415307.45	0914401.06	1A	876		24	21	12	1265		255L	3
OL ON LOCALIZER	415304.93	0914401.22	1A	876		24	21	12	1273		OR	3
TREE	415312.54	0914437.80	1A	935		83	80	71	4052		726L	6

27 PIR 857/ 415303.367N 0914150.718W 0905552 857/861 415303.417N 0914154.880W

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
ROD ON OL GLIDE SLOPE	415300.60	0914329.47	1A	897		40	36	33	-7464	-7149	400L	47
ROD ON OL GLIDE SLOPE	415259.63	0914208.18	1A	889		32	28	25	-1315	-1000	400L	29
ANTENNA ON BUILDING	415306.38	0914144.13	1A	875		18	14	11	493	808	313R	12
OL ON LOCALIZER	415303.27	0914144.05	1A	861		4	0	-3	505	819	2L	-2
RAILROAD	415303.23	0914141.01	1A	871		14	10	7	735	1050	2L	3
OL ON BUILDING	415257.30	0914135.84	1A	890		33	29	26	1136	1450	595L	14
TREE	415303.55	0914115.10	1A	903		46	42	39	2693	3008	63R	-4

OC0250

AIRPORT ELEVATION 864

13 C 862/ 415324.445N 0914249.265W 3155529 863/864 415322.104N 0914246.231W

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
ROD ON OL GLIDE SLOPE	415259.63	0914208.18	1A	889		27	25	25	-3967	-3637	486L	35
OL ANEMOMETER	415257.93	0914224.10	1A	881		19	17	17	-3253	-2923	499R	23
OL WINDSOCK	415315.18	0914228.71	1A	889		27	25	25	-1755	-1425	465L	27
GROUND	415314.98	0914243.28	1A	868		6	4	4	-1003	-673	341R	4
ROAD (N)	415320.27	0914253.21	1A	884		22	20	20	-96	234	508R	22
ROAD (N)	415328.42	0914247.45	1A	877		15	13	13	194	524	379L	15
ROAD (N)	415324.40	0914253.32	1A	870		8	6	6	210	540	223R	8
RADAR REFLECTOR	415327.87	0914251.36	1A	866		4	2	2	359	689	127L	-1
ROAD (N)	415327.63	0914253.43	1A	872		10	8	8	451	781	2R	3

31 D 846/861 415245.762N 0914159.154W 1355602

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
ROAD (N)	415324.40	0914253.32	1A	870		24	9	6	-5660		223L	8
ROAD (N)	415328.42	0914247.45	1A	877		31	16	13	-5644		379R	15
ROAD (N)	415320.27	0914253.21	1A	884		38	23	20	-5354		508L	22
GROUND	415314.98	0914243.28	1A	868		22	7	4	-4447		341L	4
OL WINDSOCK	415315.18	0914228.71	1A	889		43	28	25	-3695		465R	27
OL ANEMOMETER	415257.93	0914224.10	1A	881		35	20	17	-2197		499L	23
ROD ON OL GLIDE SLOPE	415259.63	0914208.18	1A	889		43	28	25	-1483		486R	35
FENCE CORNER	415244.68	0914147.20	1A	855		9	-6	-9	708		573R	-6
RAILROAD	415240.96	0914140.59	1A	873		27	12	9	1326		671R	-6
POLE	415235.42	0914139.98	1A	881		35	20	17	1761		314R	-11
RAILROAD	415231.38	0914140.55	1A	865		19	4	1	2025		1L	-35

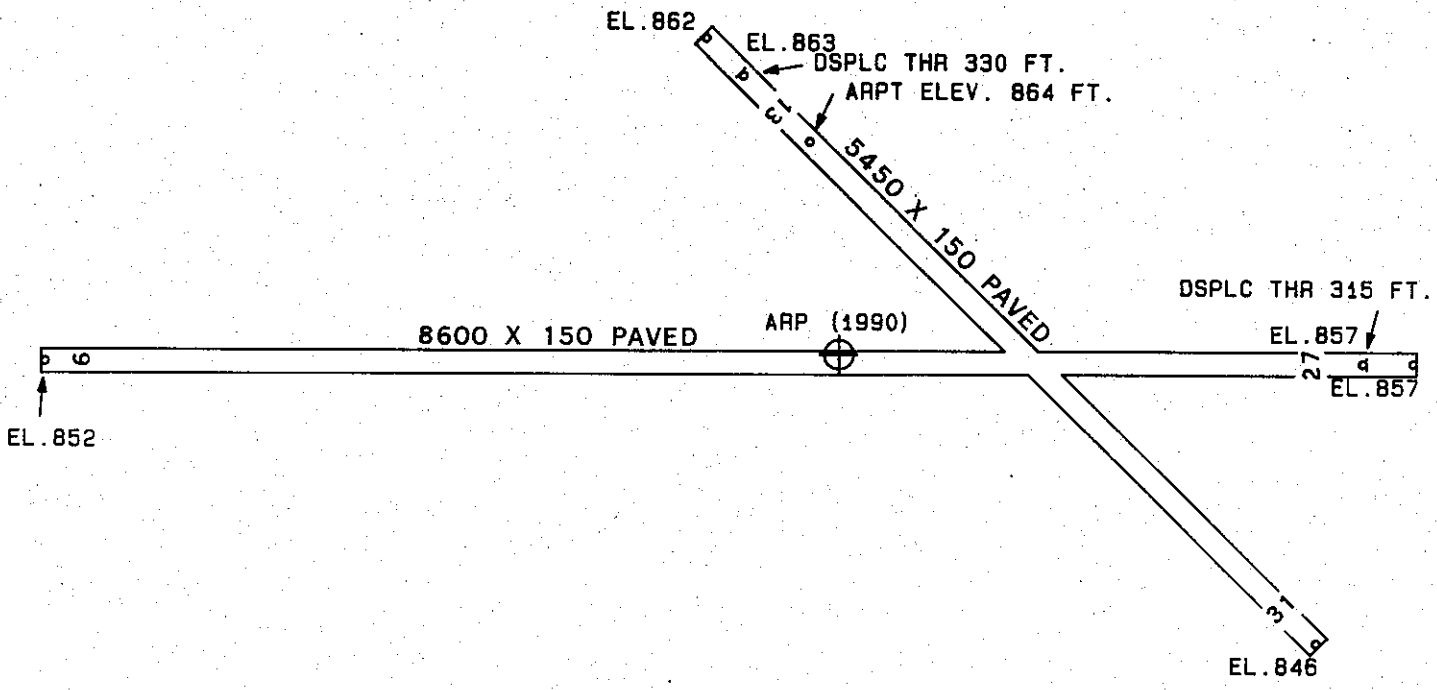
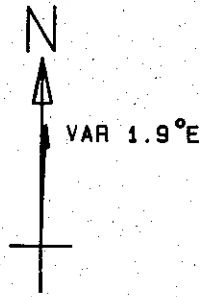


OC0250

AIRPORT ELEVATION 864

ARP 415304.461N 0914238.499W

OBJECT	LAT	LONG	A	ELEV	AGL	HAA	MAG BEARING	DISTANCE
ROD ON OL TOWER	415256.62	0914227.10	1A	892		28	130 43	1172
ROD ON OL ASR	415251.28	0914221.93	1A	890		26	134 53	1831
ANTENNA ON OL ATCT	415317.53	0914220.58	1A	971		107	43 48	1894
OL TOWER	415325.58	0914229.13	1A	925		61	16 27	2252
BUILDING	415257.74	0914146.13	1A	873		9	97 51	4019
TREE	415310.25	0914145.91	1A	898		34	79 43	4021
ROD ON OL TRANSMISSOMETER	415259.37	0914331.98	1A	865		1	260 51	4078
POLE	415256.91	0914141.87	1A	884		20	98 13	4351
GROUND	415259.34	0914347.68	1A	860		-4	262 27	5259
POLE	415311.86	0914401.92	1A	895		31	274 53	6354



TOUCHDOWN ZONE RUNWAY ELEVATION	
9	855
27	861
13	864
31	861

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 CEDAR RAPIDS, IOWA  
 (NOT TO SCALE)