FEDERAL AVIATION ADMINISTRATION

OBSTRUCTION DATA FOR ARRIVAL/DEPARTURE OF AIRCRAFT

WINONA MUNICIPAL-MAX CONRAD FIELD

WINONA, MINNESOTA

ODS 5087

1st EDITION

OC 5087
SURVEYED SEPTEMBER 1985
6th EDITION

PREPARED AND DISTRIBUTED BY
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

OBSTRUCTION DATA SHEET

A new computer generated data run, called the Obstruction Data Sheet (ODS), has been developed to permit dissemination of airport obstruction survey data in a more timely manner following completion of surveys at airports. The ODS will be published as soon as possible after the survey and prior to the printing and distribution of the Airport Obstruction Chart. Thus, we expect that important survey data will be made available to users 3 or 4 months prior to the publication of the Airport Obstruction Chart.

The ODS will carry the same name and number as the corresponding Airport Obstruction Chart and will be made available to users on a one copy ODS for one copy Airport Obstruction Chart basis.

We plan to evaluate the ODS concept and format after users have gained some experience with the product.

FEDERAL AVIATION ADMINISTRATION

OBSTRUCTION DATA FOR ARRIVAL/DEPARTURE OF AIRCRAFT

THE ENCLOSED OBSTRUCTION INFORMATION IS THE RESULT OF THE FIELD SURVEY PERFORMED BY THE NATIONAL OCEAN SERVICE (NOS) FOR THE FEDERAL AVIATION ADMINISTRATION (FAA) IN ACCORDANCE WITH FAA FEDERAL AIR REGULATIONS (FAR) PART 77. THESE DATA ARE FURNISHED IN ADVANCE OF THE PUBLISHED AIRPORT OBSTRUCTION CHART (OC) OF THE CORRESPONDING AIRPORT.

THIS REPORT LISTS THE OBSTRUCTIONS EXISTING AT THE TIME OF THE SURVEY.

A DIAGRAM SHOWING RUNWAY ORIENTATION AND RELATED RUNWAY DATA IS INCLUDED.

OBSTRUCTION DATA IS LISTED WITH REFERENCE TO THE ARP OR THE RUNWAY END.

OBSTRUCTIONS IN THE PRIMARY, APPROACH/DEPARTURE SURFACES ARE REFERENCED TO THE APPROPRIATE PHYSICAL CENTERLINE END OF THE RUNWAY.

OBSTRUCTIONS IN THE TRANSITIONAL, HORIZONTAL AND CONICAL SURFACES ARE REFERENCED TO THE AIRPORT REFERENCE POINT (ARP).

POSITIONS AND ELEVATIONS HAVE BEEN TIED TO THE NATIONAL NETWORK OF GEODETIC CONTROL.

RUNWAY	SURVEYING CRITERIA.
PIR	Precision Instrument Runway. 50:1 Slope first 10,000 FT 40:1 for the next 40,000 FT
D	Nonprecision Instrument Runway with visibility minimums as low as ¾ mile. 34:1 Slope
C	Nonprecision Instrument Runway with visibility minimums greater than ¾ mile. 34:1 Slope
B(V)	Visual runway with visual approach only. 20:1 Slope
A(NP)	Utility runway with nonprecision instrument approach. 20:1 Slope
A(V)	Utility runway with visual approach only. 20:1 Slope

ANNOTATION OF SAMPLE OBSTRUCTION DATA

THE DISTANCES AND MAGNETIC BEARINGS COMPUTED FOR THE OBSTRUCTIONS THAT FOLLOW ARE REFERENCED TO THIS POINT

FAA PART 77 APPROACH CATEGORY FOR WHICH OBSTRUCTION SURVEY WAS PERFORMED

MEASURED FROM SOUTH

PHYS END RWY 34 D LAT 38 30 22.066N LONG 121 29 34.116W GEODETIC AZIMUTH 168 05 12

ELEV*	A**	OBJECT***	LAT	LONG	M BRG	DIST	OUTCL	OFFCL
0048	1A	WDI	38 31 04.201	121 29 40.588	354 7	4293	4277	377R
0092	1A	TREE	38 31 33.811	121 30 02.190	343 55	7593	7562	685L

ELEVATION — ACCURACY — DESCRIPTION

MAGNETIC BEARING — DISTANCE

DISTANCE ALONG THE RUNWAY CENTERLINE EXTENDED

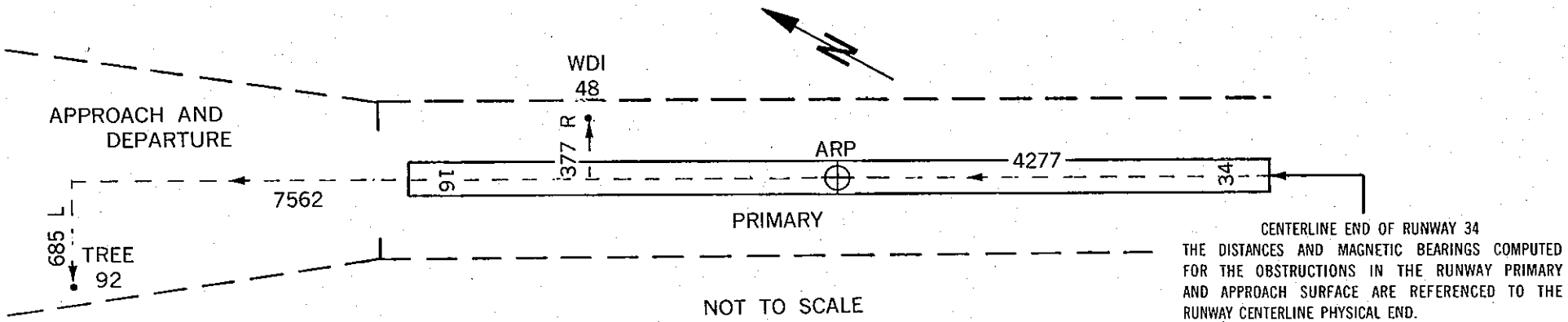
DISTANCE LEFT OR RIGHT OF CENTERLINE

*ALL DISTANCES AND ELEVATIONS ARE IN FEET

** ACCURACY IS CODED AS FOLLOWS

HORIZONTAL (FT)	VERTICAL (FT)
1 = 15	A = 2
2 = 40	B = 5
	C = 20

*** 15 FT ADDED TO NON INTERSTATE ROAD
17 FT ADDED TO INTERSTATE ROAD
23 FT ADDED TO RAILROAD



RUNWAY 11 CONDITION C LAT 44 4 58.203N LONG 91 43 9.446W GEODETIC AZIMUTH 299 23 3

ELEV	A	OBJECT	LAT	LONG	M BRG	DIST	OUTCL	OFFCL
657	1A	FENCE	44 4 32.475N	91 42 6.727W	117 32	5300	5300	5R
660	1A	TREE	44 4 31.656N	91 42 5.525W	118 2	5385	5385	52R
719	1A	TREE	44 4 29.368N	91 41 45.508W	113 34	6780	6772	463L
733	1A	TREE	44 4 24.334N	91 41 34.017W	114 18	7765	7753	431L
735	1A	TREE	44 4 23.912N	91 41 32.686W	114 16	7871	7859	441L

RUNWAY 29 CONDITION BV LAT 44 4 33.007N LONG 91 42 7.393W GEODETIC AZIMUTH 119 23 46

ELEV	A	OBJECT	LAT	LONG	M BRG	DIST	OUTCL	OFFCL
684	1A	TREE	44 5 0.205N	91 43 8.048W	299 59	5214	5209	227R
656	1A	GROUND	44 4 57.704N	91 43 13.052W	295 40	5406	5404	173L
666	1A	TREE	44 5 1.138N	91 43 10.395W	299 53	5410	5405	225R
694	1A	TREE	44 5 5.821N	91 43 18.764W	300 38	6179	6170	338R

RUNWAY 17 CONDITION AV LAT 44 4 35.385N LONG 91 42 12.449W GEODETIC AZIMUTH 355 37 26

ELEV	A	OBJECT	LAT	LONG	M BRG	DIST	OUTCL	OFFCL
662	1A	FENCE	44 4 8.578N	91 42 9.703W	173 53	2722	2722	7R
659	1A	GROUND	44 4 8.351N	91 42 9.222W	173 11	2748	2747	26L
667	1A	BUSH	44 4 7.675N	91 42 11.206W	176 15	2807	2805	124R
685	1A	RAILROAD	44 4 5.531N	91 42 11.416W	176 40	3024	3020	155R
683	1A	RAILROAD	44 4 4.765N	91 42 9.221W	173 45	3110	3110	2R
693	1A	POLE	44 4 4.216N	91 42 11.548W	176 54	3157	3152	175R
693	1A	POLE	44 4 2.792N	91 42 7.869W	172 19	3317	3316	87L
718	1A	TREE	44 4 1.797N	91 42 6.372W	170 40	3430	3425	183L
721	1A	TREE	44 3 58.921N	91 42 6.921W	171 52	3714	3712	121L
737	1A	TREE	44 3 56.042N	91 42 8.992W	174 28	3992	3992	52R

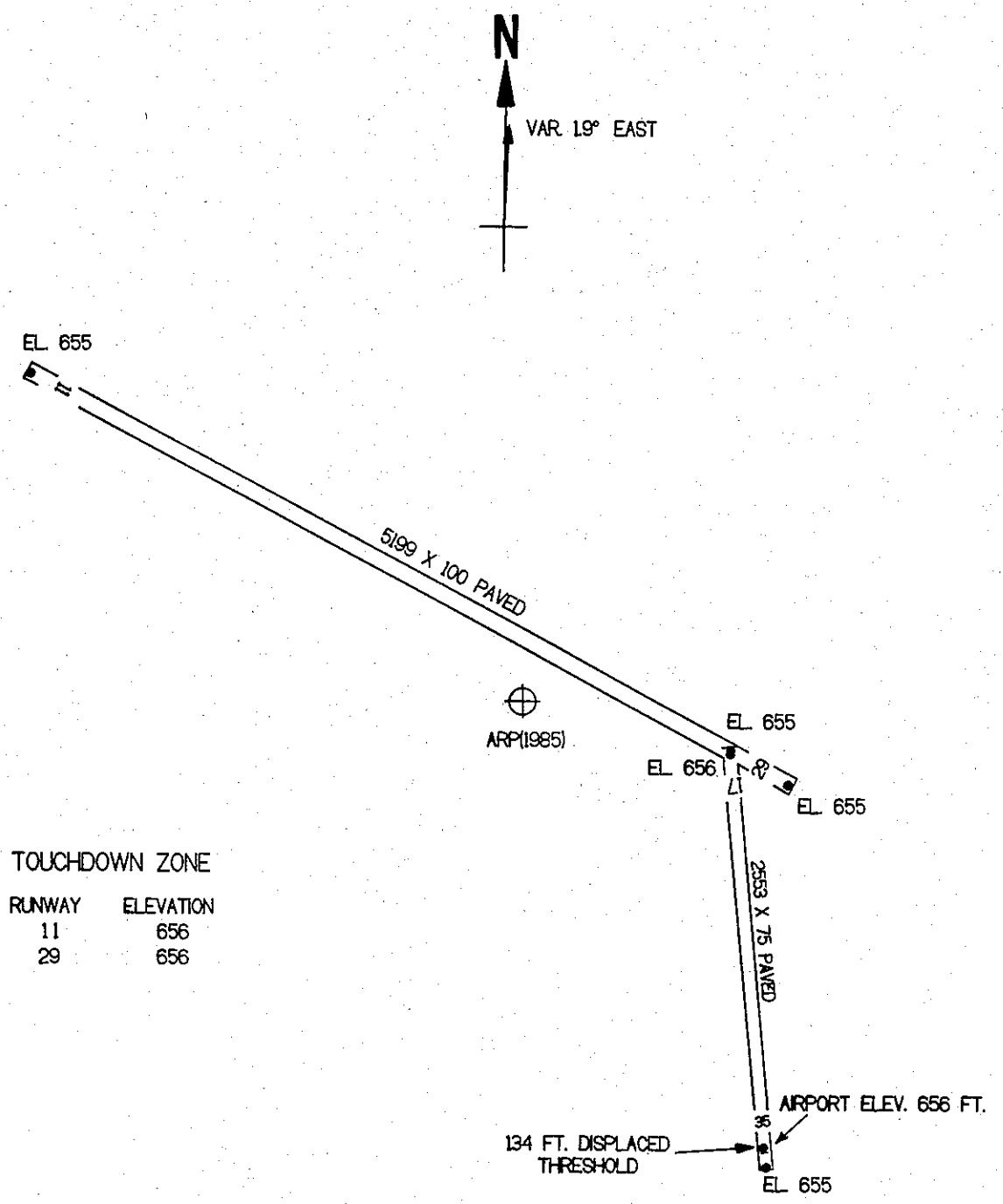
RUNWAY 35 CONDITION AV LAT 44 4 10.252N LONG 91 42 9.782W GEODETIC AZIMUTH 175 37 28

ELEV	A	OBJECT	LAT	LONG	M	BRG	DIST	OUTCL	OFFCL
698	1A	TREE	44 4 41.771N	91 42 10.762W	356	49	3192	3188	172R
720	1A	TREE	44 4 46.402N	91 42 16.496W	350	28	3693	3687	209L

ARP 1985 LAT 44 4 38.103N LONG 91 42 29.427W GEODETIC AZIMUTH 0 0 0

ELEV	A	OBJECT	LAT	LONG	M BRG	DIST
679	1A	TREE	44 4 44.106N	91 42 26.970W	14 32	634
670	1A	OL VOR	44 4 34.558N	91 42 20.060W	115 47	772
681	1A	TREE	44 4 40.100N	91 42 16.113W	76 21	993
712	1A	TREE	44 4 40.099N	91 42 7.644W	80 51	1603
713	1A	TREE	44 4 45.438N	91 42 49.562W	294 55	1647
732	1A	TREE	44 4 22.931N	91 42 6.146W	130 13	2291
681	1A	TREE	44 4 54.648N	91 42 52.919W	312 24	2398
719	1A	TREE	44 4 49.126N	91 43 1.323W	293 43	2582
732	1A	TREE	44 4 33.918N	91 41 52.009W	96 55	2764
741	1A	TREE	44 4 18.567N	91 42 0.098W	130 50	2915
712	1A	TREE	44 4 53.234N	91 43 10.552W	295 9	3371
670	1A	TREE	44 4 7.172N	91 42 12.273W	156 18	3373
747	1A	ANT ON ELEVATR	44 4 4.739N	91 42 16.469W	162 27	3508
727	1A	TREE	44 4 2.641N	91 42 13.569W	160 14	3773
704	1A	TREE	44 4 4.358N	91 42 5.793W	151 18	3828
727	1A	TREE	44 4 0.694N	91 42 4.764W	152 40	4194
733	1A	TREE	44 5 5.724N	91 43 13.884W	308 52	4284
1163	1B	TREE	44 4 8.294N	91 43 46.262W	239 49	6370
1149	1B	TREE	44 3 37.957N	91 43 7.553W	202 40	6696
1179	1B	TREE	44 4 30.615N	91 44 5.210W	261 55	7033
1221	1B	TREE	44 3 25.314N	91 43 10.153W	200 5	7948
1173	1B	TREE	44 3 46.670N	91 43 53.079W	227 39	8027
1122	1B	TREE	44 3 15.950N	91 42 22.192W	174 28	8336
1235	1B	ANTENNA	44 3 39.868N	91 43 55.006W	224 46	8592
1233	1B	TREE	44 4 17.839N	91 44 25.621W	254 31	8728
806	1B	OL WATER TANK	44 3 22.778N	91 41 26.972W	147 13	8887
1212	1B	TREE	44 3 41.278N	91 44 4.275W	228 23	9004
1229	1B	TREE	44 3 5.947N	91 42 41.738W	183 36	9375
1169	1B	TREE	44 4 55.969N	91 44 35.551W	279 14	9383
1224	1B	TREE	44 4 47.343N	91 44 40.004W	273 43	9578
1044	1B	TREE	44 2 54.737N	91 42 13.718W	171 51	10530
1134	1B	TREE	44 5 8.152N	91 44 50.579W	284 34	10744
1130	2C	TREE	44 3 18.497N	91 44 7.193W	219 38	10767
1061	1B	TREE	44 5 14.242N	91 44 56.736W	286 55	11359
1240	2C	TREE	44 2 55.827N	91 43 33.416W	202 23	11362
1203	2C	TREE	44 5 56.483N	91 40 31.179W	45 29	11725

1208	2C	TREE		44	5	53.260N	91	40	27.068W	47	39	11734
1220	2C	TREE		44	2	44.712N	91	43	8.627W	192	6	11834
1265	2C	TREE		44	6	18.899N	91	40	54.396W	31	43	12759
1257	2C	TREE		44	6	18.194N	91	40	53.418W	32	45	12822
1249	2C	TREE		44	6	22.940N	91	41	1.169W	29	20	12417
1228	2C	TREE		44	6	7.108N	91	40	23.788W	43	35	12858
1226	2C	TREE		44	5	27.892N	91	39	43.492W	65	29	13120
1229	2C	TREE		44	5	30.962N	91	39	45.052W	64	2	13138
1137	2C	TREE		44	5	17.076N	91	39	36.902W	70	41	13197
1232	2C	TREE		44	2	40.710N	91	40	53.080W	147	28	13813
1281	2C	TREE		44	6	38.819N	91	41	0.381W	24	5	13844
1144	2C	TREE		44	2	31.138N	91	41	11.807W	154	18	14051
1228	2C	TREE		44	5	48.781N	91	39	42.004W	57	44	14162
1237	2C	TREE		44	5	46.851N	91	39	32.908W	59	42	14645
1270	2C	TREE		44	2	31.047N	91	40	53.476W	149	30	14652
1477	2A	OL	RADIO MAST	44	2	31.030N	91	40	47.112W	147	57	14879
1215	2C	TREE		44	2	16.157N	91	41	32.208W	161	53	14969
1209	2C	TREE		44	5	3.452N	91	38	58.327W	78	37	15622
1083	2C	TREE		44	5	1.913N	91	46	23.405W	276	9	17249
1114	2C	TREE		44	6	21.285N	91	45	45.185W	304	18	17700



TOUCHDOWN ZONE

RUNWAY	ELEVATION
11	656
29	656

WINONA MUNICIPAL-MAX CONRAD FIELD

WINONA, MINNESOTA

(NOT TO SCALE)