OBSTRUCTION DATA SHEET

ODS 432
TULSA INTERNATIONAL AIRPORT
TULSA, OKLAHOMA

DIGITIZED FROM

OC 432
SURVEYED 28 APRIL 1992
13TH EDITION

HORIZONTAL DATUM NAD83
VERTICAL DATUM NGVD29

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

ATTENTION

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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).

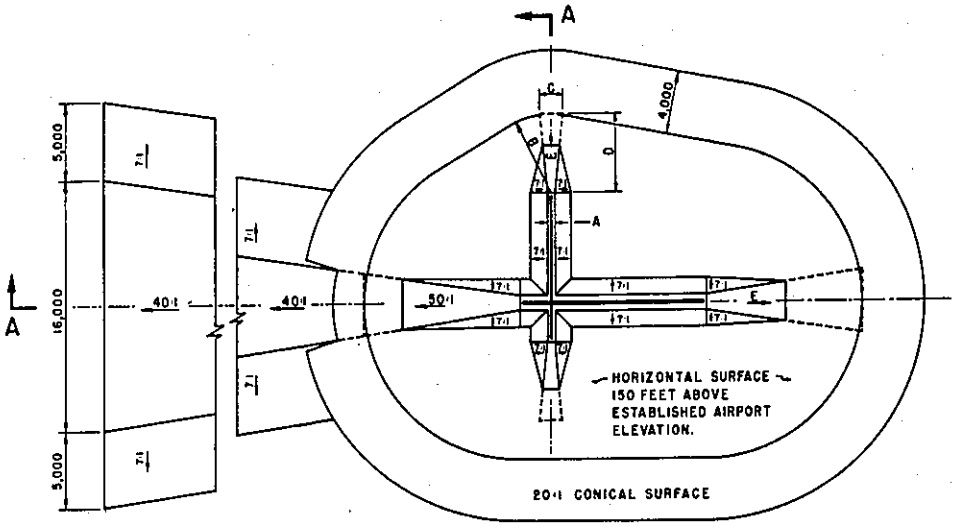
2. All objects not included in "1" above are listed with the Airport Reference Point (ARP).

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:

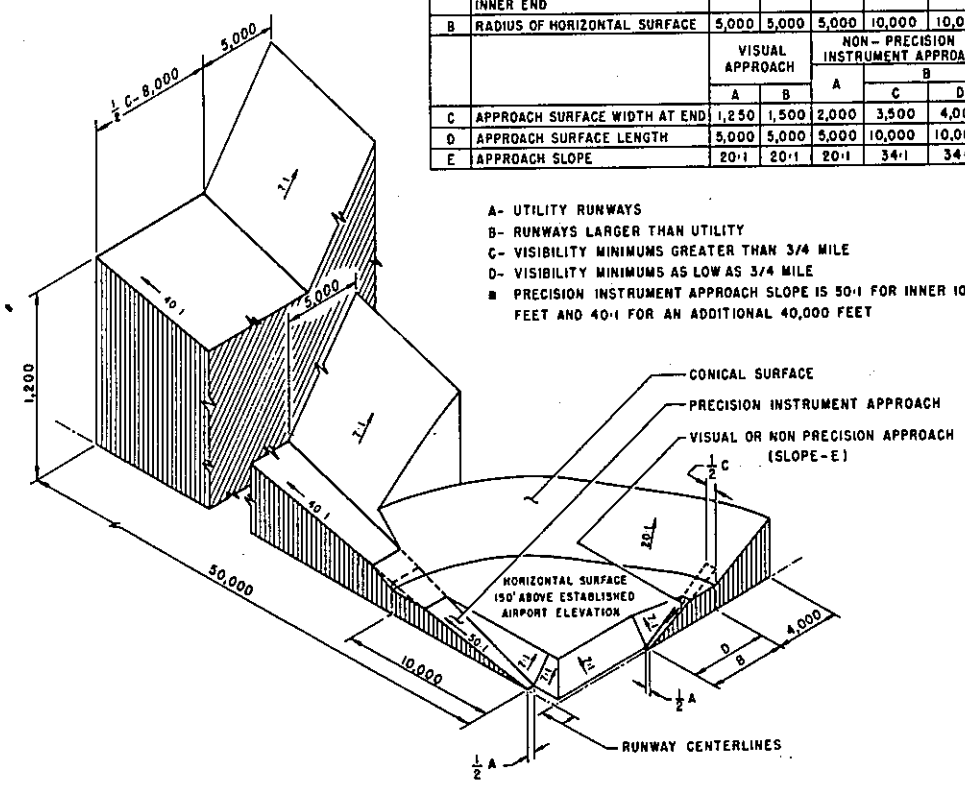
A(V) ..... Utility runway - visual approach only
A(NP) .... Utility runway - nonprecision instrument approach
B(V) ..... Nonutility runway - visual approach only
C ..... Nonutility runway - nonprecision instrument approach with visibility minimums greater than 3/4 mile
D ..... Nonutility runway- nonprecision 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		
					C	D	
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	D	
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[1] X[2] XXXX/XXXX[3] XXXXXX.XXX[4] XXXXXXX.XXX[4] XXXXXXX[5] XXXX/XXXX[6] XXXXXX.XXX[7] XXXXXXX.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]
XXXXXXXXXXX	XXXXXX.XXX	XXXXXXX.XXX	XX	XXXX	XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX
XXXXXXXXXXX	XXXXXX.XXX	XXXXXXX.XXX	XX	XXXX	XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX

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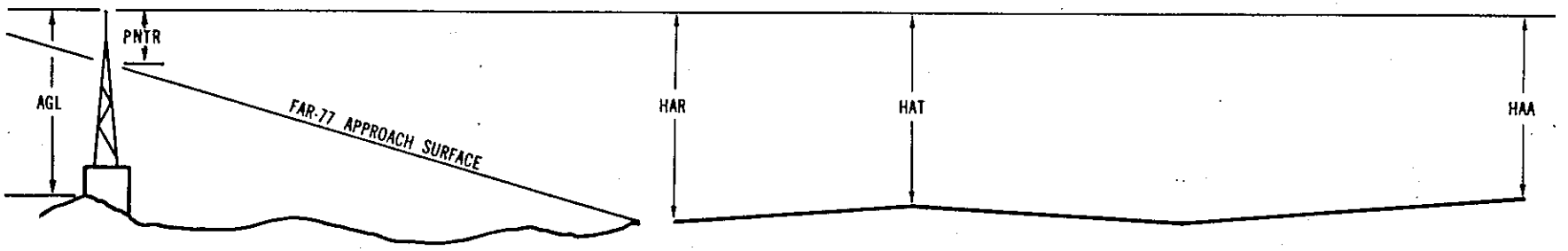
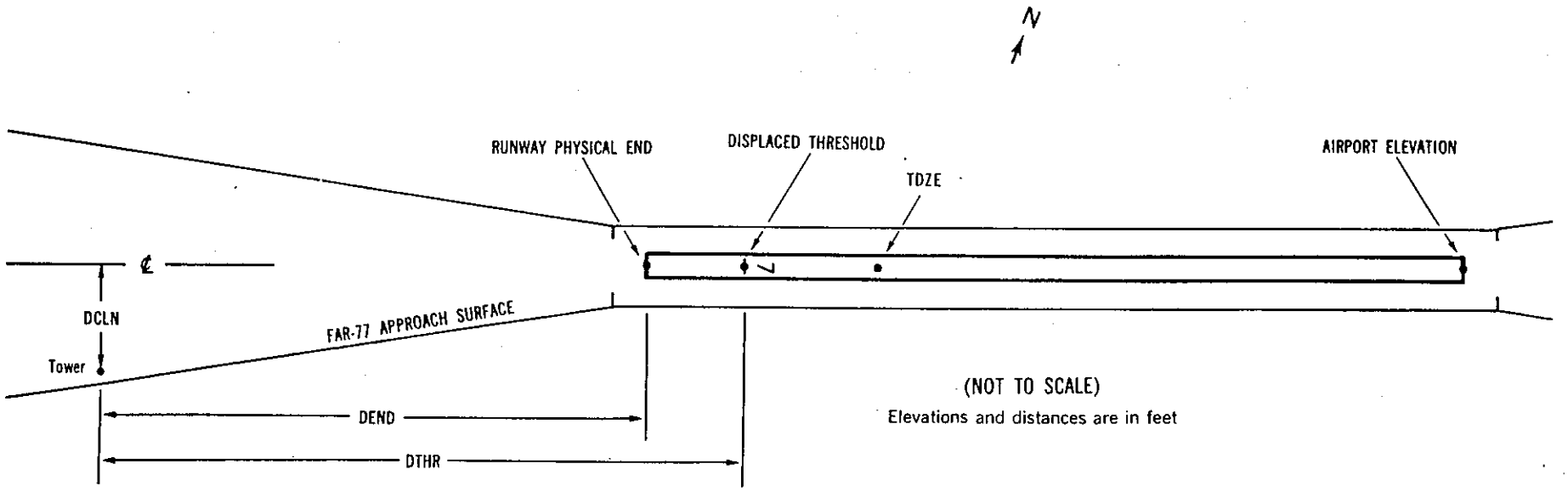




(NOT TO SCALE)

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 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 displace 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 <u>appearing on the OC</u> 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 displace 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).

OC0432

AIRPORT ELEVATION 677

36L PIR 677/ 677 361125.772 -955400.717 030520.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
ANT ON OL GS	361216.90	-955400.84	1A	666		-11	-11	-11	-5162		289L	17
OL ON WSK	361215.87	-955354.64	1A	656		-21	-21	-21	-5085		225R	6
OL ON WSK	361149.33	-955355.20	1A	691		14	14	14	-2403		323R	22
OL ON WSK	361138.75	-955402.61	1A	681		4	4	4	-1302		226L	8
ROAD (N)	361125.85	-955405.95	1A	686		9	9	9	15		429L	9
ROAD (N)	361124.09	-955405.97	1A	687		10	10	10	193		421L	10
ANT ON BUILDING	361120.09	-955355.65	1A	692		15	15	15	551		446R	8
OL ON LOCALIZER	361119.67	-955401.13	1A	685		8	8	8	617		0R	0
TREE	361113.37	-955402.31	1A	706		29	29	29	1259		63L	8
TREE	361111.36	-955354.95	1A	708		31	31	31	1429		551R	7
TREE	361110.32	-955402.85	1A	713		36	36	36	1569		91L	9
TREE	361106.34	-955401.91	1A	716		39	39	39	1967		8R	4
TREE	361105.85	-955355.63	1A	722		45	45	45	1989		525R	9
TREE	361059.36	-955358.85	1A	738		61	61	61	2659		297R	12
TREE	361058.01	-955400.08	1A	733		56	56	56	2801		204R	4
TREE	361056.97	-955351.71	1A	731		54	54	54	2868		894R	1
OL HOPPER	361055.18	-955405.55	1A	740		63	63	63	3110		229L	5

OC0432

AIRPORT ELEVATION 677

18R PIR 634/ 667 361226.017 -955356.705 1830523.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
ROAD (N)	361124.09	-955405.97	1A	687		53	20	10	-6294		421R	10
ROAD (N)	361125.85	-955405.95	1A	686		52	19	9	-6116		429R	9
OL ON WSK	361138.75	-955402.61	1A	681		47	14	4	-4799		226R	8
OL ON WSK	361149.33	-955355.20	1A	691		57	24	14	-3698		323L	22
OL ON WSK	361215.87	-955354.64	1A	656		22	-11	-21	-1015		225L	6
ANT ON OL GS	361216.90	-955400.84	1A	666		32	-1	-11	-939		289R	17
TREE	361229.91	-955355.12	1A	636		2	-31	-41	400		108L	-2
TREE	361230.25	-955351.27	1A	644		10	-23	-33	451		421L	5
TREE	361231.17	-955402.67	1A	647		13	-20	-30	494		516R	7
TREE	361237.24	-955355.74	1A	656		22	-11	-21	1137		18L	3
TREE	361243.56	-955346.67	1A	671		37	4	-6	1815		725L	5
TREE	361245.26	-955358.16	1A	669		35	2	-8	1936		224R	0
TREE	361245.64	-955359.90	1A	667		33	0	-10	1967		368R	-2

36R PIR 643/ 649 361111.449 -955259.263 030506.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
ROD ON OL GS	361239.55	-955248.51	1A	671		28	22	-6	-8943		400R	39
ROD ON OL TMOM	361236.07	-955247.98	1A	644		1	-5	-33	-8595		463R	10
ROD ON OL TMOM	361156.13	-955250.77	1A	663		20	14	-14	-4550		452R	15
ROD ON OL GS	361120.66	-955303.53	1A	693		50	44	16	-911		400L	45
ROD ON OL TMOM	361116.83	-955252.80	1A	662		19	13	-15	-572		499R	15
OL ON LOCALIZER	361104.81	-955259.70	1A	650		7	1	-27	672		0R	-3
FLOODLIGHT POLE	361100.62	-955253.26	1A	660		17	11	-17	1067		550R	-1
TREE	361057.44	-955259.66	1A	662		19	13	-15	1416		44R	-6
TREE	361055.21	-955259.72	1A	663		20	14	-14	1641		51R	-9

AIRPORT ELEVATION 677

18L PIR 626/ 641 361250.187 -955252.696 1830510.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
ROD ON OL TMOM	361116.83	-955252.80	1A	662		36	21	-15	-9427		499L	15
ROD ON OL GS	361120.66	-955303.53	1A	693		67	52	16	-9088		400R	45
ROD ON OL TMOM	361156.13	-955250.77	1A	663		37	22	-14	-5449		452L	15
ROD ON OL TMOM	361236.07	-955247.98	1A	644		18	3	-33	-1404		463L	10
ROD ON OL GS	361239.55	-955248.51	1A	671		45	30	-6	-1056		400L	39
ROD ON OL DME	361257.11	-955255.22	1A	635		9	-6	-42	688		244R	-1
TREE	361307.86	-955258.69	1A	655		29	14	-22	1758		586R	-2
TREE	361316.15	-955241.93	1A	657		31	16	-20	2669		740L	-18
TREE	361325.32	-955245.32	1A	683		57	42	6	3581		412L	-11

8 C 671/ 361143.543 -955400.391 892513. 671/ 671 361143.574 -955356.596

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
OL ON WINDSOCK	361142.21	-955232.08	1A	655		-16	-16	-22	-7237	-6926	207R	20
OL ON HANGAR	361145.35	-955413.91	1A	690		19	19	13	1106	1417	194L	-7
HANGAR	361139.65	-955414.12	1A	698		27	27	21	1129	1440	383R	0
TREE	361140.19	-955415.80	1A	697		26	26	20	1266	1577	326R	-5
TREE	361144.69	-955417.43	1A	704		33	33	27	1396	1707	130L	-2

26 C 633/ 651 361144.303 -955226.513 2692608.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
OL ON WINDSOCK	361142.21	-955232.08	1A	655		22	4	-22	-458		207L	20
TREE	361142.14	-955222.04	1A	643		10	-8	-34	364		222L	6
TREE	361143.00	-955217.59	1A	652		19	1	-25	730		139L	4
TREE	361143.80	-955212.24	1A	660		27	9	-17	1170		63L	-1

OC0432

AIRPORT ELEVATION 677

ARP 361154.094 -955317.714

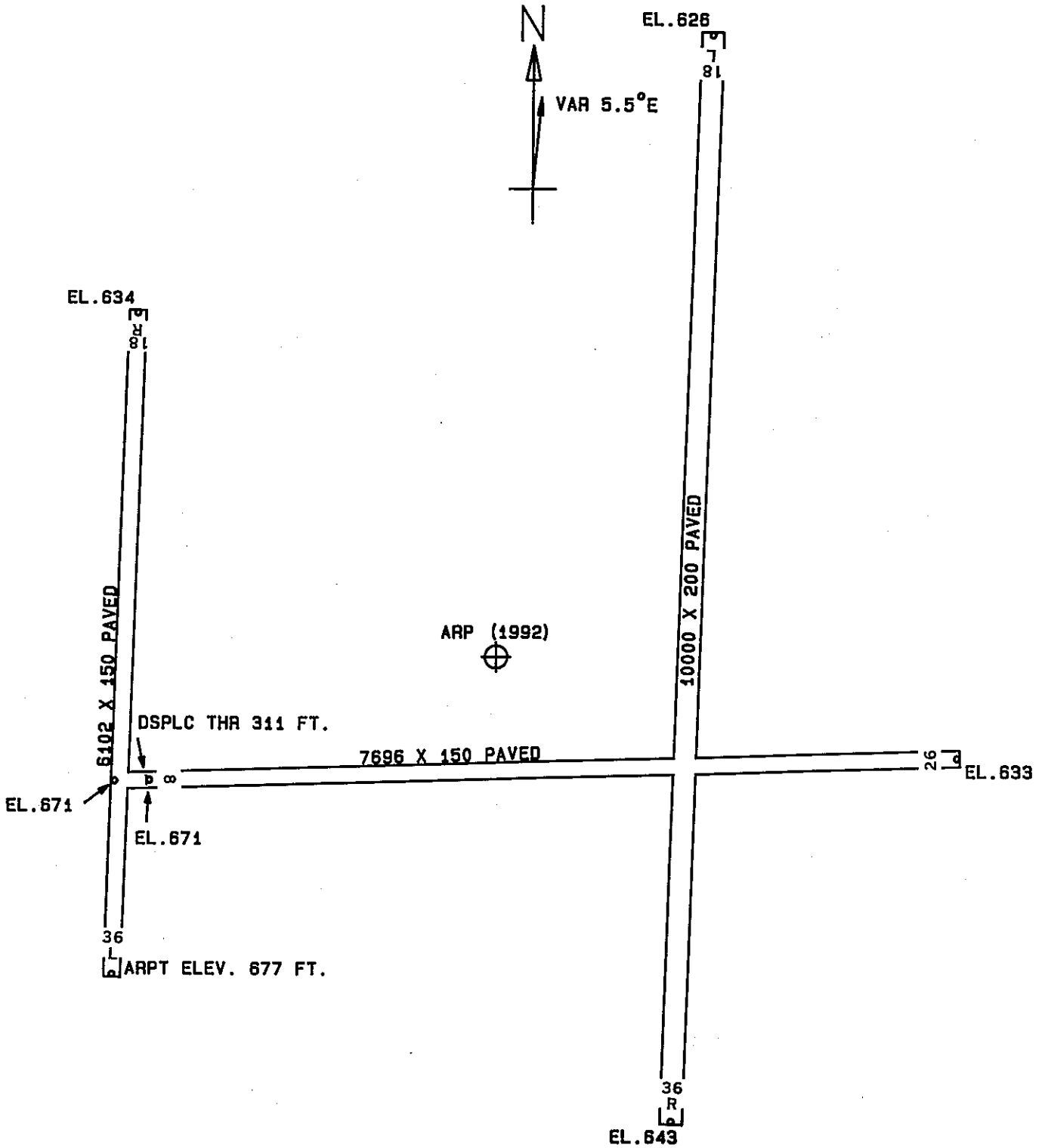
OBJECT	LAT	LONG	A	EL	AGL	HAA	MAG BEARING	DISTANCE
ANT & APBN ON OL ATCT	361158.93	-955314.63	1A	809		132	2151	551
ROD ON OL ANEMOMETER	361152.95	-955305.12	1A	689		12	9053	1039
ROD ON OL WIND INSTRUMENT	361151.96	-955305.12	1A	681		4	9618	1055
OL RTR ANTENNA	361206.84	-955305.10	1A	701		24	3313	1652
ROD ON OL TMOM	361153.65	-955250.18	1A	663		-14	8537	2257
ANT ON OL TWR	361157.29	-955246.73	1A	677		0	7715	2560
ROD ON OL ANEMOMETER	361154.84	-955241.71	1A	675		-2	8301	2952
TREE	361222.65	-955304.21	1A	689		12	1528	3093
LIGHT STANDARD	361139.25	-955240.39	1A	678		1	11037	3407
TREE	361129.62	-955350.83	1A	719		42	22208	3673
TREE	361222.27	-955349.68	1A	676		-1	31154	3870
POLE	361126.86	-955352.82	1A	697		20	22045	3983
TREE	361125.54	-955351.93	1A	716		39	21839	4025
OL ON TMOM	361119.28	-955252.49	1A	663		-14	14404	4083
TREE	361225.57	-955349.67	1A	666		-11	31503	4122
POLE	361121.47	-955351.96	1A	706		29	21453	4331
OL ON BUILDING	361135.57	-955227.30	1A	703		26	10852	4537
TREE	361140.63	-955224.54	1A	646		-31	10150	4566
ANT ON OL HANGAR	361136.08	-955409.24	1A	708		31	24110	4599
TREE	361232.85	-955348.84	1A	659		-18	32126	4676
OL ON HANGAR	361148.22	-955414.47	1A	703		26	25713	4690
LIGHT ON HANGAR	361137.85	-955414.21	1A	702		25	24458	4913
OL ON TOWER	361113.07	-955244.90	1A	722		45	14132	4944
TREE	361112.92	-955352.70	1A	710		33	20903	5055
TREE	361111.61	-955351.28	1A	721		44	20708	5101
OL ON BUILDING	361122.30	-955408.43	1A	699		22	22647	5255
TREE	361110.26	-955352.92	1A	713		36	20734	5290
TREE	361234.49	-955404.62	1A	672		-5	31114	5610
WINDSOCK ON OL BUILDING	361104.32	-955247.30	1A	716		39	14808	5616
TREE	361104.46	-955351.44	1A	724		47	20320	5730
POLE	361139.80	-955208.73	1A	666		-11	9850	5836

 Continued from previous page

AIRPORT ELEVATION 677

ARP 361154.094 -955317.714

OBJECT	LAT	LONG	A	EL	AGL	HAA	MAG BEARING	DISTANCE
TREE	361301.30	-955243.22	1A	653		-24	1705	7360
TREE	361307.09	-955300.79	1A	662		-15	508	7510



TOUCHDOWN ZONE RUNWAY	ELEVATION
36L	677
18R	667
36R	649
18L	641
8	671
26	651

TULSA INTERNATIONAL AIRPORT

TULSA, OKLAHOMA

(NOT TO SCALE)