OBSTRUCTION DATA SHEET

ODS 294
METROPOLITAN OAKLAND INTERNATIONAL AIRPORT
OAKLAND, CALIFORNIA

DIGITIZED FROM

OC 294
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THE NATIONAL OCEAN SERVICE
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FOR THE FEDERAL AVIATION ADMINISTRATION

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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).

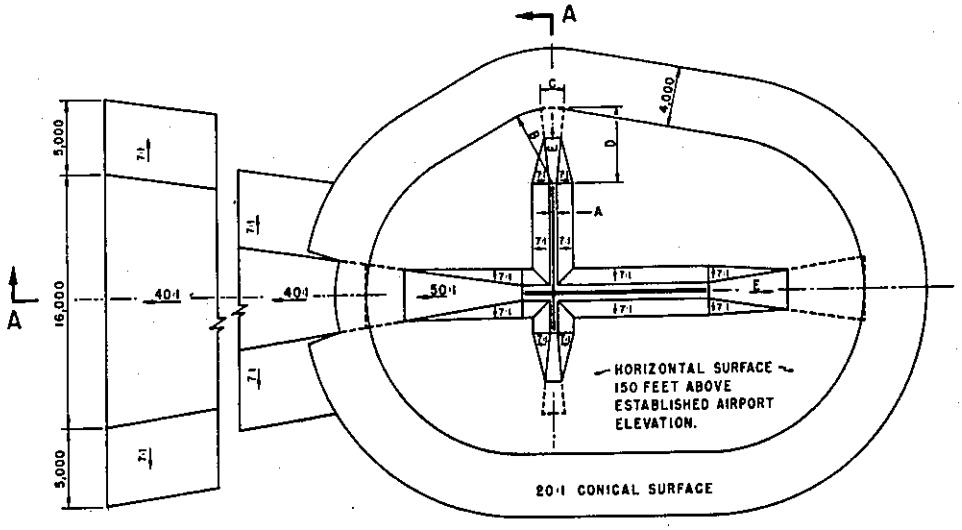
2. All objects not included in "1" above are listed with the Airport Reference Point (ARP).

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:

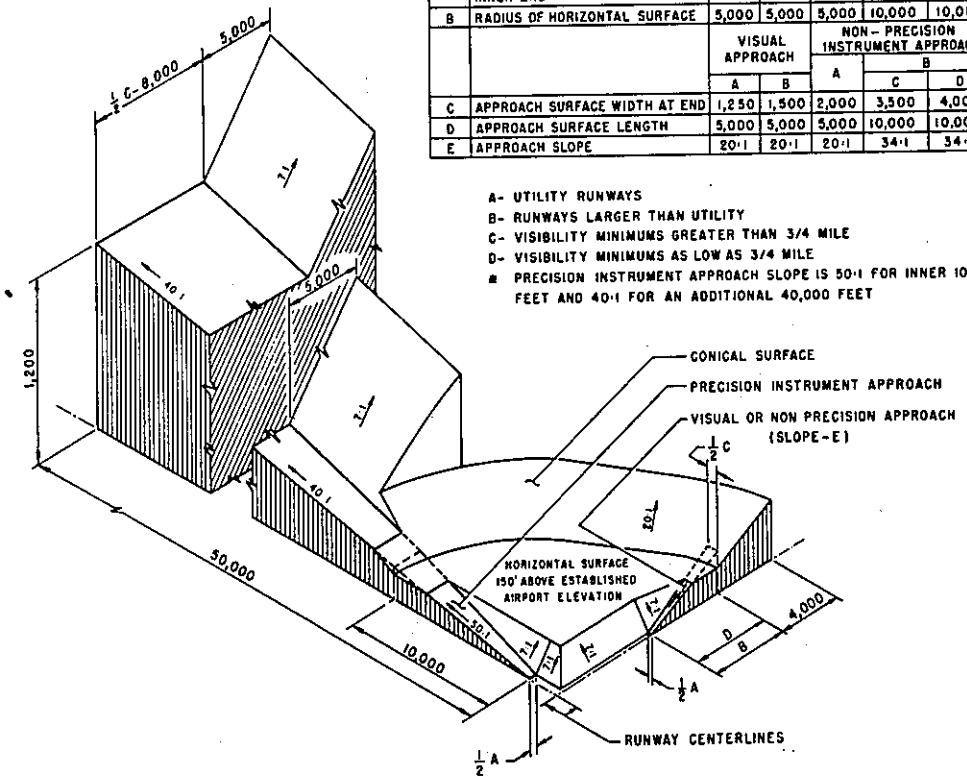
A(V) ..... Utility runway - visual approach only
A(NP) .... Utility runway - nonprecision instrument approach
B(V) ..... Nonutility runway - visual approach only
C ..... Nonutility runway - nonprecision instrument approach with visibility minimums greater than 3/4 mile
D ..... Nonutility runway- nonprecision 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]
XXXXXXXXXX	XXXXXX.XXX	XXXXXXX.XXX	XX	XXXX	XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX
XXXXXXXXXX	XXXXXX.XXX	XXXXXXX.XXX	XX	XXXX	XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX

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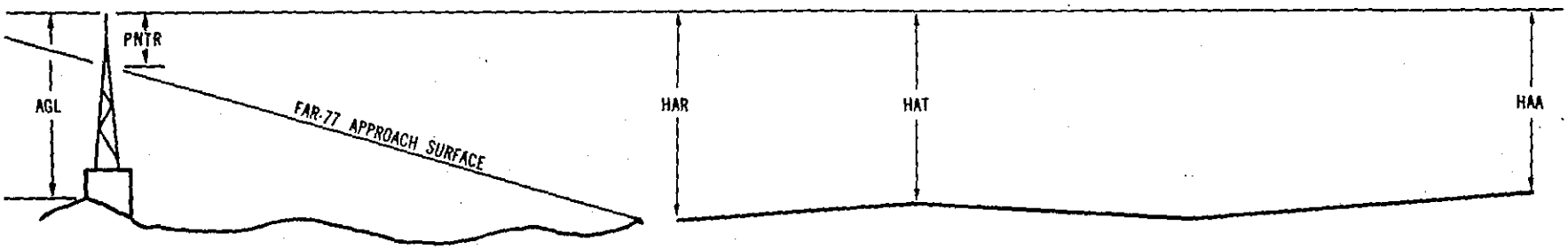

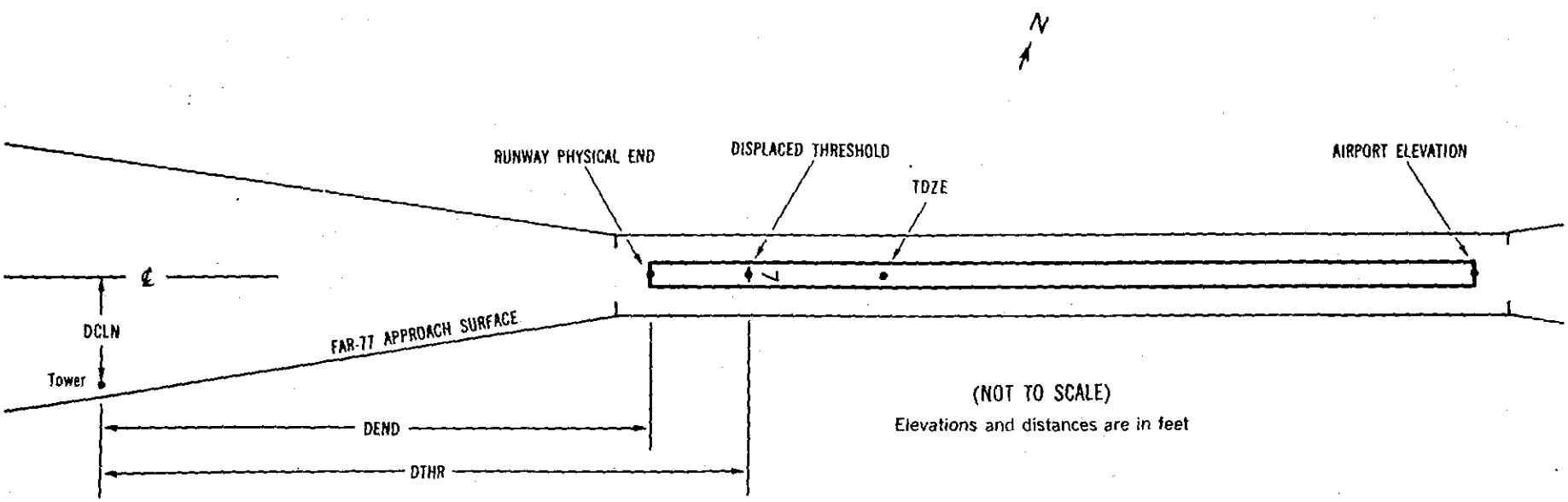

(NOT TO SCALE)

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).

OC0294

AIRPORT ELEVATION 6

11 PIR 5/ 6 374308.895 -1221426.626 1295926.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
OL ON WINDSOCK	374214.21	-1221254.95	1A	23		18	17	17	-9198		498L	17
ROD ON OL GLIDE SLOPE	374209.03	-1221304.56	1A	49		44	43	43	-8944		400R	43
OL ON AMOM	374210.99	-1221307.37	1A	24		19	18	18	-8643		393R	18
ROD ON OL TMOM	374211.94	-1221310.13	1A	22		17	16	16	-8411		462R	16
ROD ON OL TMOM	374245.35	-1221343.32	1A	20		15	14	14	-4197		412L	14
ROD ON OL TMOM	374302.34	-1221408.93	1A	17		12	11	11	-1515		406L	11
ROD ON OL TMOM	374303.94	-1221411.30	1A	19		14	13	13	-1265		408L	13
OL ON GLIDE SLOPE	374304.88	-1221413.82	1A	39		34	33	33	-1050		350L	33
OL ON WINDSOCK	374300.72	-1221422.49	1A	20		15	14	14	-786		420R	14
ROCK	374309.37	-1221438.59	1A	14		9	8	8	767		581R	-2
BLDG	374311.96	-1221441.16	1A	17		12	11	11	1094		513R	-6
RADAR REFLECTOR	374316.39	-1221438.08	1A	16		11	10	10	1192		10R	-9

29 PIR 5/ 5 374205.348 -1221251.295 3100024.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
OL ON WINDSOCK	374300.72	-1221422.49	1A	20		15	15	14	-9213		420L	14
OL ON GLIDE SLOPE	374304.88	-1221413.82	1A	39		34	34	33	-8950		350R	33
ROD ON OL TMOM	374303.94	-1221411.30	1A	19		14	14	13	-8734		408R	13
ROD ON OL TMOM	374302.34	-1221408.93	1A	17		12	12	11	-8484		406R	11
ROD ON OL TMOM	374245.35	-1221343.32	1A	20		15	15	14	-5803		412R	14
ROD ON OL TMOM	374211.94	-1221310.13	1A	22		17	17	16	-1588		462L	16
OL ON AMOM	374210.99	-1221307.37	1A	24		19	19	18	-1356		393L	18
ROD ON OL GLIDE SLOPE	374209.03	-1221304.56	1A	49		44	44	43	-1056		400L	43
OL ON WINDSOCK	374214.21	-1221254.95	1A	23		18	18	17	-801		498R	17
OL ON LOCALIZER	374202.24	-1221246.63	1A	11		6	6	5	489		0R	0
ANT ON BLDG	374204.36	-1221243.75	1A	15		10	10	9	529		313R	3
POST	374157.85	-1221250.16	1A	17		12	12	11	557		522L	4

AIRPORT ELEVATION 6

15 SUPLC -1/ 1 374424.943 -1221322.023 1642824.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
OL ON WINDSOCK	374421.30	-1221318.70	1A	14		15	13	8	-426		159L	15
RADAR REFLECTOR	374422.10	-1221322.85	1A	8		9	7	2	-260		141R	9
POLE	374433.16	-1221320.84	1A	24		25	23	18	775		314L	8
FENCE	374433.84	-1221325.15	1A	14		15	13	8	934		1R	-6
VENT ON BLDG	374438.51	-1221323.38	1A	45		46	44	39	1351		262L	12

33 SUPLC 1/ 1 374352.883 -1221310.809 3442831.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
RADAR REFLECTOR	374422.10	-1221322.85	1A	8		7	7	2	-3106		141L	9
OL ON WINDSOCK	374421.30	-1221318.70	1A	14		13	13	8	-2939		159R	15
OL ON WINDSOCK	374330.25	-1221259.05	1A	18		17	17	12	2458		298R	-50
ANT ON OL ATCT (SOUTH)	374244.95	-1221251.93	1A	158		157	157	152	7027		377L	-44
OL ON WINDSOCK	374214.21	-1221254.95	1A	23		22	22	17	9957		1443L	-265

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AIRPORT ELEVATION 6

9L SUPLC 2/ 3 374349.653 -1221319.783 1120937.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
OL ON LIGHTED WSK	374326.79	-1221220.67	1A	26		24	23	20	-5270		350R	23
OL GLIDE SLOPE	374328.58	-1221230.60	1A	35		33	32	29	-4463		484R	31
ROD ON OL TMOM	374329.79	-1221234.26	1A	20		18	17	14	-4145		481R	16
OL ON WINDSOCK	374343.62	-1221315.03	1A	24		22	21	18	-584		421R	21
BUILDING	374357.63	-1221328.18	1A	17		15	14	11	929		493L	-7
OL ON LOC	374354.32	-1221334.23	1A	10		8	7	4	1253		0R	-23
TREE	374359.91	-1221337.95	1A	55		53	52	49	1743		411L	7
TREE	374351.91	-1221344.92	1A	59		57	56	53	1956		550R	5
TREE	374359.98	-1221341.04	1A	66		64	63	60	1975		323L	11
TREE	374400.09	-1221344.00	1A	68		66	65	62	2200		244L	7
TREE	374356.72	-1221351.62	1A	72		70	69	66	2638		302R	-2
TREE	374354.04	-1221358.44	1A	81		79	78	75	3043		761R	-5

AIRPORT ELEVATION 6

27R PIR 3/ 4 374329.314 -1221216.927 2921016.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
OL ON WINDSOCK	374343.62	-1221315.03	1A	24		21	20	18	-4868		421L	21
ROD ON OL TMOM	374329.79	-1221234.26	1A	20		17	16	14	-1308		481L	16
OL GLIDE SLOPE	374328.58	-1221230.60	1A	35		32	31	29	-989		484L	31
OL ON LIGHTED WSK	374326.79	-1221220.67	1A	26		23	22	20	-182		350L	23
OL BUILDING	374331.34	-1221208.48	1A	14		11	10	8	551		446R	4
ROAD (N)	374325.00	-1221203.77	1A	21		18	17	15	1144		5L	-1
LIGHT STANDARD	374326.72	-1221202.39	1A	26		23	22	20	1180		198R	4
TREE	374326.88	-1221201.61	1A	25		22	21	19	1232		237R	2
TREE	374322.18	-1221200.63	1A	29		26	25	23	1484		174L	1
TREE	374320.05	-1221158.23	1A	38		35	34	32	1745		301L	4
TREE	374323.70	-1221148.92	1A	45		42	41	39	2298		324R	0
TREE	374318.59	-1221149.90	1A	55		52	51	49	2420		185L	8
TREE	374314.27	-1221151.83	1A	86		83	82	80	2442		648L	38
TREE	374316.38	-1221149.58	1A	68		65	64	62	2528		382L	19
TREE	374319.33	-1221144.02	1A	65		62	61	59	2829		62R	10
TREE	374312.45	-1221145.77	1A	77		74	73	71	2962		634L	19
TREE	374312.98	-1221137.78	1A	66		63	62	60	3536		343L	-4

9R C 5/ 5 374343.354 -1221333.225 1121039.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
OL ON WINDSOCK	374330.25	-1221259.05	1A	18		13	13	12	-3043		190R	13
POST	374341.26	-1221333.04	1A	7		2	2	1	-93		191R	2
ROAD (N)	374346.97	-1221344.25	1A	20		15	15	14	958		4L	-7
TREE	374343.99	-1221347.43	1A	60		55	55	54	1081		372R	29
TREE	374348.83	-1221348.35	1A	54		49	49	48	1334		54L	16
TREE	374348.75	-1221350.49	1A	52		47	47	46	1490		18R	9
TREE	374354.04	-1221358.44	1A	81		76	76	75	2284		236L	15

OC0294

AIRPORT ELEVATION 6

27L C 5/ 5 374320.166 -1221221.629 2921123.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
POST	374341.26	-1221333.04	1A	7		2	2	1	-6118		191L	2
OL ON WINDSOCK	374330.25	-1221259.05	1A	18		13	13	12	-3169		190L	13
POST	374316.28	-1221218.40	1A	10		5	5	4	389		266L	-1
ROAD (N)	374314.67	-1221205.31	1A	22		17	17	16	1424		19L	-19
TREE	374311.42	-1221203.74	1A	43		38	38	37	1665		276L	-5
TREE	374312.60	-1221156.44	1A	62		57	57	56	2163		56R	-1
TREE	374307.62	-1221156.57	1A	70		65	65	64	2343		415L	2
TREE	374314.27	-1221151.83	1A	86		81	81	80	2442		352R	15
TREE	374312.45	-1221145.77	1A	77		72	72	71	2963		366R	-9
TREE	374312.98	-1221137.78	1A	66		61	61	60	3536		657R	-37

OC0294

AIRPORT ELEVATION 6

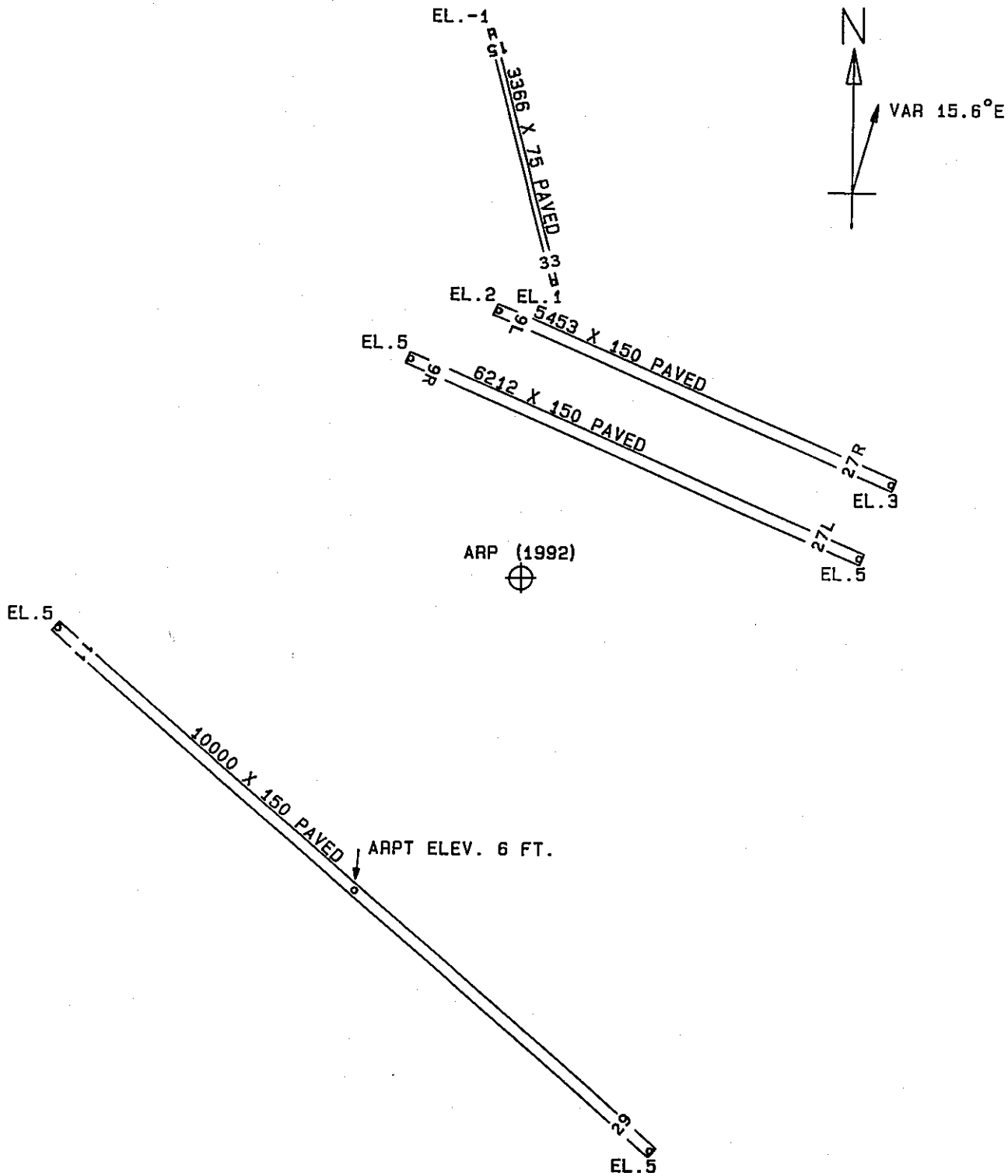
ARP 374316.611 -1221314.596

OBJECT	LAT	LONG	A	EL	AGL	HAA	MAG BEARING	DISTANCE
OL VORTAC	374333.30	-1221324.91	1A	49		43	31815	1880
ANT ON OL ATCT (NORTH)	374321.19	-1221246.56	1A	98		92	6246	2300
TREE	374340.49	-1221336.59	1A	24		18	30812	2992
FENCE	374341.58	-1221336.15	1A	12		6	30957	3062
OL ON MCWV TWR	374334.09	-1221347.97	1A	140		134	28747	3211
TREE	374340.95	-1221343.85	1A	59		53	30043	3404
OL POLE ON HGR	374306.83	-1221233.68	1A	127		121	9109	3433
OL ON FLDLT POLE	374311.84	-1221229.56	1A	74		68	8200	3650
OL ON FLDLT POLE	374344.16	-1221236.31	1A	47		41	3213	4151
OL ANT ON HGR	374354.70	-1221252.32	1A	97		91	918	4248
OL ON APBN	374349.51	-1221240.37	1A	67		61	2358	4316
ANT ON OL HANGAR	374341.20	-1221224.89	1A	60		54	4229	4704
OL ON HANGAR	374339.30	-1221221.73	1A	53		47	4600	4827
BUILDING	374336.72	-1221217.64	1A	37		31	5025	5008
STEEL TOWER	374239.75	-1221356.82	1A	25		19	20642	5041
TREE	374335.23	-1221214.80	1A	55		49	5259	5160
OL ON HANGAR	374333.54	-1221211.51	1A	34		28	5543	5350
TREE	374309.53	-1221206.55	1A	51		45	8151	5514
ROAD (N)	374332.31	-1221207.32	1A	21		15	5801	5633
ANT ON OL ASR	374222.09	-1221331.15	1A	49		43	17757	5673
TREE	374333.16	-1221206.91	1A	58		52	5716	5689
TREE	374305.79	-1221201.62	1A	78		72	8457	5964
FLDLT ON SIGN	374330.40	-1221155.83	1A	41		35	6157	6480
OL ON FLDLT POLE	374420.39	-1221325.77	1A	41		35	33628	6513
OL ON LIGHT STANDARD	374422.68	-1221316.56	1A	26		20	34303	6684
SIGN	374308.66	-1221437.58	1A	18		12	24731	6716
WINDSOCK ON BLDG	374426.17	-1221328.92	1A	29		23	33506	7129
OL ON TOWER	374436.04	-1221312.89	1A	141		135	34522	8034
DOME	374435.94	-1221332.30	1A	52		46	33421	8149
POLE	374437.80	-1221320.87	1A	45		39	34053	8227
VENT ON BLDG	374408.25	-1221154.21	1B	134		128	3525	8305

AIRPORT ELEVATION 6

ARP 374316.611 -1221314.596

OBJECT	LAT	LONG	A	EL	AGL	HAA	MAG BEARING	DISTANCE
ANT ON OL BLDG	374414.70	-1221146.67	1B	145		139	3438	9188
ANT ON OL BLDG	374449.50	-1221211.60	1A	208	200	202	1242	10671
OL FLDLT POLE	374501.95	-1221203.24	1B	177		171	1240	12099
OL FLDLT POLE	374509.09	-1221200.03	1B	187		181	1209	12857
TRANSMISSION TWR	374229.69	-1221042.01	1A	153		147	9532	13147
OL POLE ON BLDG	374444.65	-1221108.47	1B	199		193	3304	13489
STACK	374447.74	-1221109.94	1B	192		186	3145	13610
ROD ON STACK	374426.74	-1221049.69	1A	226	211	220	4301	13631



TOUCHDOWN ZONE RUNWAY	ELEVATION
11	6
29	5
15	1
33	1
9L	3
27R	4
9R	5
27L	5

METROPOLITAN OAKLAND INTERNATIONAL AIRPORT

OAKLAND, CALIFORNIA

(NOT TO SCALE)