OBSTRUCTION DATA SHEET

ODS 246
MANCHESTER AIRPORT
MANCHESTER, NEW HAMPSHIRE

DIGITIZED FROM

OC 246
SURVEYED 31 JULY 1992
9TH EDITION

HORIZONTAL DATUM NAD83
VERTICAL DATUM NGVD29

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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).

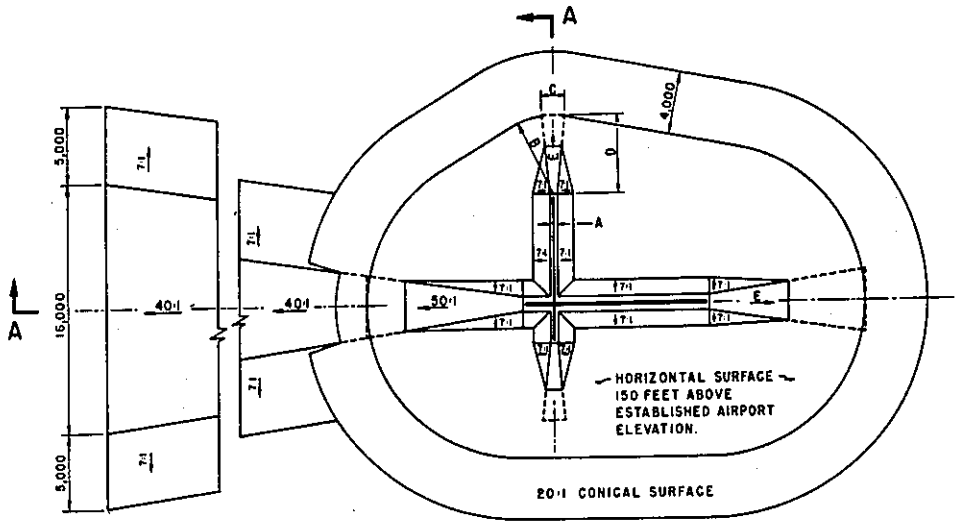
2. All objects not included in "1" above are listed with the Airport Reference Point (ARP).

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:

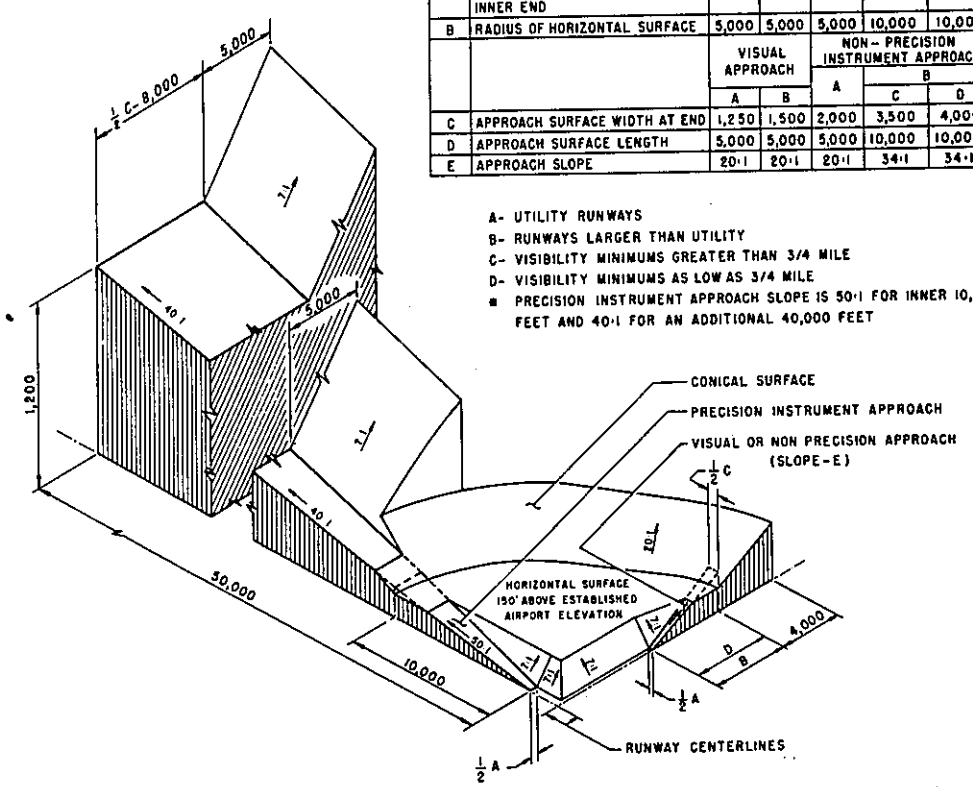
A(V) ..... Utility runway - visual approach only
A(NP) .... Utility runway - nonprecision instrument approach
B(V) ..... Nonutility runway - visual approach only
C ..... Nonutility runway - nonprecision instrument approach with visibility minimums greater than 3/4 mile
D ..... Nonutility runway- nonprecision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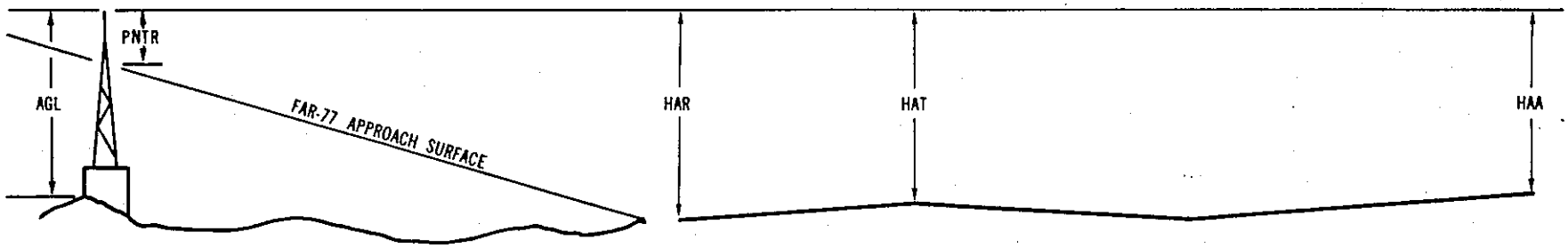
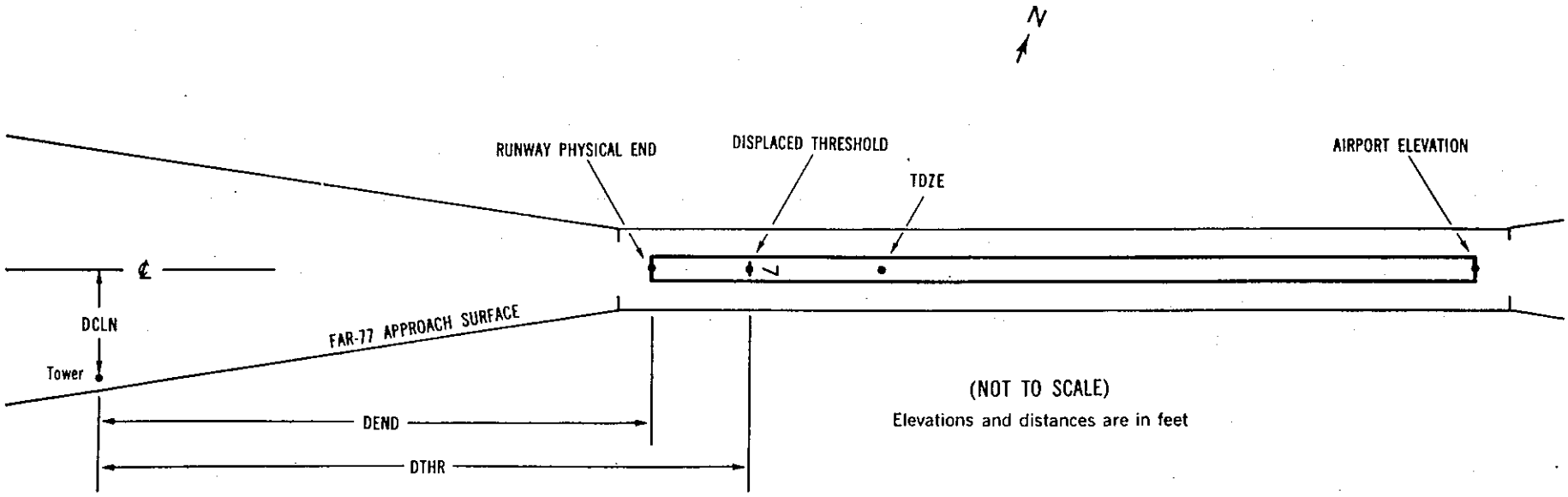




(NOT TO SCALE)

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).

AIRPORT ELEVATION 234

17 C 213/ 229 425630.359 -712622.486 1563127.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
OL ON GS	425534.81	-712554.05	1A	265		52	36	31	-6001		300R	37
OL ON AMOM	425553.39	-712604.05	1A	243		30	14	9	-3979		233R	14
OL ON WINDSOCK	425622.93	-712611.81	1A	250		37	21	16	-1006		429L	30
TREE	425628.02	-712627.28	1A	230		17	1	-4	-75		421R	15
TREE	425629.38	-712627.76	1A	219		6	-10	-15	65		399R	5
ANT ON BLDG	425634.04	-712620.84	1A	218		5	-11	-16	293		261L	2
OL ON LOC	425633.08	-712624.09	1A	213		0	-16	-21	300		0R	-3
TREE	425636.73	-712627.87	1A	238		25	9	4	751		111R	9
TREE	425636.35	-712630.34	1A	242		29	13	8	789		294R	12
TREE	425639.77	-712621.58	1A	239		26	10	5	847		441L	7
TREE	425637.36	-712633.88	1A	259		46	30	25	988		495R	23
TREE	425643.59	-712623.13	1A	254		41	25	20	1248		489L	10
TREE	425647.43	-712638.47	1A	297		84	68	63	2059		402R	29
TREE	425653.61	-712628.33	1A	284		71	55	50	2332		539L	8
TREE	425652.27	-712635.55	1A	308		95	79	74	2421		7R	30
TREE	425654.76	-712631.63	1A	297		84	68	63	2537		360L	15
STK	425700.77	-712631.52	1A	290		77	61	56	3092		610L	-8
FLAGPOLE	425711.35	-712656.43	1A	332		119	103	98	4812		662R	-17
TREE	425725.99	-712711.90	1A	391		178	162	157	6630		1126R	-11

OC0246

AIRPORT ELEVATION 234

35 PIR 226/ 234 425526.933 -712545.003 3363153.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
TREE	425629.38	-712627.76	1A	219		-7	-15	-15	-7066		399L	5
TREE	425628.02	-712627.28	1A	230		4	-4	-4	-6926		421L	15
OL ON WINDSOCK	425622.93	-712611.81	1A	250		24	16	16	-5995		429R	30
OL ON AMOM	425553.39	-712604.05	1A	243		17	9	9	-3021		233L	14
OL ON GS	425534.81	-712554.05	1A	265		39	31	31	-1000		300L	37
BUSH	425509.46	-712543.84	1A	263		37	29	29	1657		625L	8
BUSH	425503.64	-712536.21	1A	282		56	48	48	2423		339L	12
ANT ON BLDG AT MM	425504.38	-712531.69	1A	277		51	43	43	2489		1L	5
TREE	425505.15	-712520.90	1A	307		81	73	73	2737		767R	30
TREE	425503.04	-712521.23	1A	309		83	75	75	2923		660R	29
TREE	425453.12	-712535.28	1A	326		100	92	92	3428		700L	35
TREE	425456.62	-712521.68	1A	325		99	91	91	3506		369R	33
TREE	425450.22	-712534.37	1A	337		111	103	103	3724		755L	41
TREE	425450.86	-712530.53	1A	325		99	91	91	3779		466L	27
MONUMENT	425451.32	-712526.78	1A	315		89	81	81	3848		192L	16
POLE	425449.52	-712522.76	1A	336		110	102	102	4134		10R	31
TREE	425445.63	-712520.04	1A	360		134	126	126	4575		39R	47
POLE	425447.56	-712510.42	1A	357		131	123	123	4681		774R	41
TREE	425438.79	-712515.37	1A	390		164	156	156	5349		82R	61
TREE	425419.99	-712522.76	1A	416		190	182	182	6875		1181L	57
TREE	425420.40	-712459.31	1A	446		220	212	212	7533		436R	73
TREE	425417.31	-712504.52	1A	437		211	203	203	7665		44L	62
TREE	425420.60	-712453.30	1A	443		217	209	209	7692		855R	67
OL ON POLE	425417.86	-712458.23	1A	457		231	223	223	7800		408R	79
OL ON POLE	425416.52	-712501.99	1A	457		231	223	223	7813		98R	79
TREE	425414.15	-712459.54	1A	466		240	232	232	8106		169R	82

AIRPORT ELEVATION 234

6 C 220/ 224 425541.835 -712656.661 422423.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
TREE	425539.56	-712658.95	1A	224		4	0	-10	285		29R	1
TREE	425531.95	-712702.56	1A	247		27	23	13	1034		351R	2
TREE	425523.44	-712726.93	1A	279		59	55	45	2893		408L	-21

24 SUPLC 226/ 226 425624.473 -712603.652 2222459.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
ABANDONED RAILROAD	425626.22	-712601.28	1A	226		0	0	-8	249		11L	-2
BUSH	425626.96	-712559.78	1A	235		9	9	1	380		43L	3
BUSH	425631.41	-712559.59	1A	254		28	28	20	723		251R	12
GROUND	425631.11	-712557.64	1A	251		25	25	17	797		123R	7
FENCE	425628.74	-712552.49	1A	265		39	39	31	879		322L	19
BUSH	425633.24	-712558.97	1A	272		46	46	38	890		341R	25
GROUND	425632.96	-712558.01	1A	268		42	42	34	917		269R	20
FENCE	425629.86	-712550.80	1A	271		45	45	37	1047		338L	20
BUSH	425635.03	-712557.09	1A	280		54	54	46	1119		361R	27
TREE	425632.96	-712550.33	1A	277		51	51	43	1302		152L	18
TREE	425633.22	-712548.48	1A	284		58	58	50	1415		235L	22
TREE	425637.78	-712554.89	1A	298		72	72	64	1434		428R	35
TREE	425639.21	-712548.33	1A	281		55	55	47	1870		165R	5
TREE	425641.73	-712547.82	1A	291		65	65	57	2084		309R	9

OC0246

AIRPORT ELEVATION 234

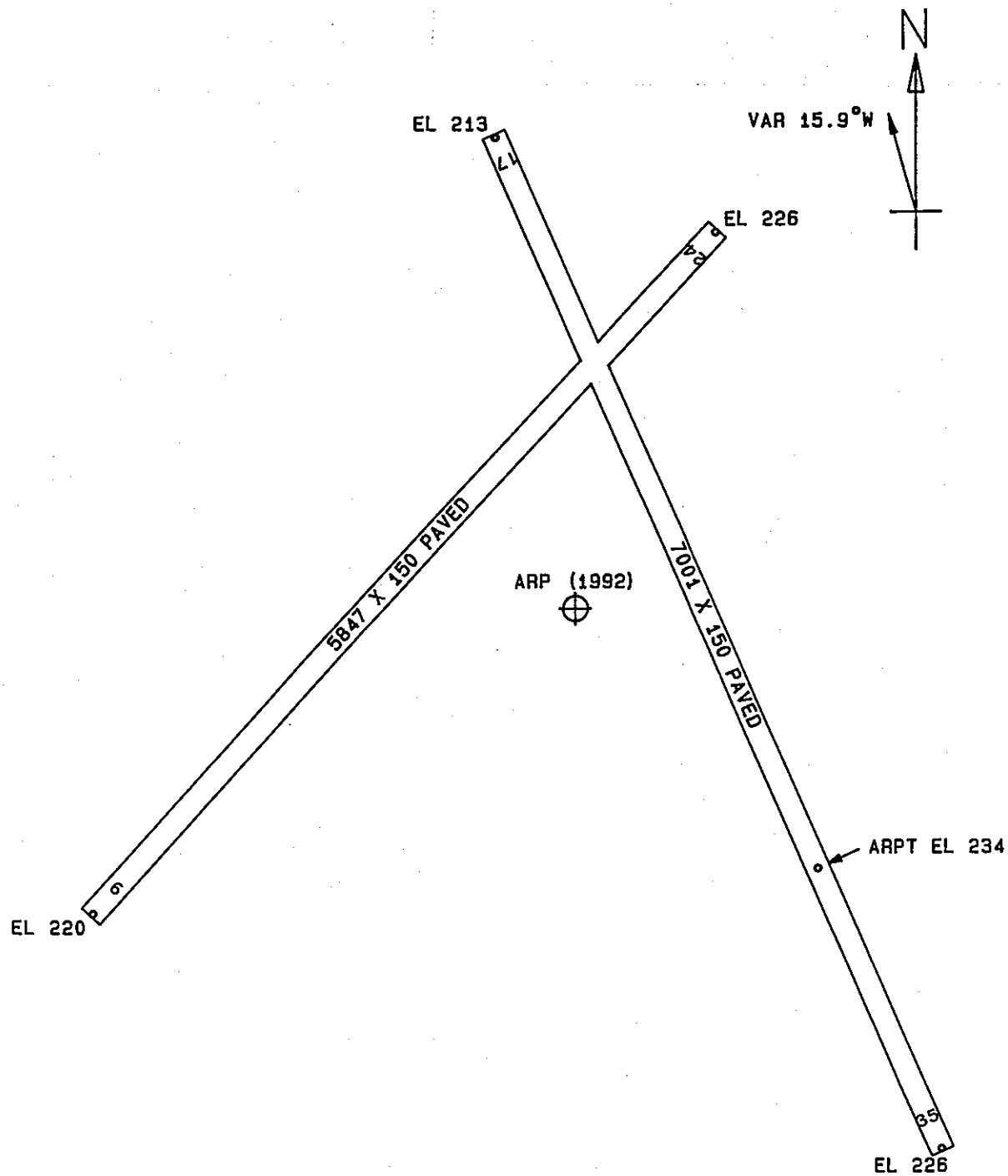
ARP 425600.698 -712615.764

OBJECT	LAT	LONG	A	EL	AGL	HAA	MAG BEARING	DISTANCE
ANT ON OL ATCT	425600.78	-712618.91	1A	321		87	28759	234
TREE	425606.71	-712600.03	1A	259		25	7826	1319
OL ON HGR	425611.10	-712626.46	1A	268		34	33849	1320
OL ON BLDG	425614.42	-712622.01	1A	250		16	35723	1465
TREE	425558.48	-712552.66	1A	293		59	11319	1733
TREE	425552.19	-712636.03	1A	266		32	25609	1737
TREE	425550.82	-712634.93	1A	281		47	25050	1742
ANT ON BLDG	425616.12	-712602.81	1A	269		35	4734	1835
CAMERA ON POLE	425622.35	-712559.05	1A	265		31	4527	2520
FENCE	425624.82	-712557.16	1A	240		6	4525	2807
TREE	425552.66	-712653.30	1A	269		35	26939	2908
LT POLE	425625.09	-712554.06	1A	271		37	4904	2950
BUSH	425626.98	-712550.31	1A	295		61	5120	3266
TREE	425531.52	-712556.85	1A	263		29	17025	3272
WSK	425535.50	-712542.42	1A	249		15	15141	3558
TREE	425628.58	-712546.36	1A	321		87	5340	3571
TREE	425528.85	-712554.39	1A	244		10	16938	3595
TREE	425634.12	-712633.04	1A	243		9	35506	3619
TREE	425604.65	-712526.17	1B	419		185	9942	3711
OL ON STK	425637.45	-712615.71	1A	270		36	1557	3721
TREE	425636.86	-712559.65	1A	310		76	3401	3852
TREE	425542.73	-712703.13	1A	240		6	25836	3966
TREE	425639.92	-712618.86	1A	247		13	1234	3977
TREE	425637.45	-712556.71	1A	306		72	3645	3981
TREE	425637.17	-712636.32	1A	263		29	35324	3997
TREE	425531.46	-712657.77	1A	286		52	24227	4304
TREE	425520.44	-712553.34	1A	269		35	17338	4404
TREE	425640.85	-712639.94	1A	284		50	35202	4445
TREE	425531.81	-712701.39	1A	264		30	24509	4480
OL ON APBN	425559.01	-712515.12	1B	489		255	10803	4514
TREE	425525.55	-712533.02	1A	260		26	15406	4772

AIRPORT ELEVATION 234

ARP 425600.698 -712615.764

OBJECT	LAT	LONG	A	EL	AGL	HAA	MAG BEARING	DISTANCE
TREE	425524.11	-712524.06	1A	349		115	14948	5340
TREE	425534.15	-712512.55	1B	449		215	13538	5416
TREE	425521.47	-712523.67	1A	331		97	15135	5549
POLE	425510.27	-712546.17	1A	271		37	17234	5560
TREE	425553.08	-712452.83	1B	521		287	11301	6217
POLE	425510.02	-712521.34	1A	299		65	15736	6536
BUSH	425508.14	-712521.44	1A	290		56	15840	6682
TREE	425535.83	-712452.30	1B	482		248	12757	6700
BUILDING	425506.90	-712518.84	1A	309		75	15801	6899
TREE	425523.10	-712739.41	1A	311		77	25427	7295
TREE	425459.92	-712509.71	1A	362		128	15716	7875
TREE	425455.76	-712507.38	1A	370		136	15809	8313
TREE	425532.13	-712426.09	1B	420		186	12524	8656
TREE	425717.17	-712713.21	1B	404		170	34700	8843
TREE	425436.64	-712539.74	1B	401		167	17824	8922
TREE	425716.44	-712718.29	1B	410		176	34440	8968
TREE	425548.46	-712415.96	1B	455		221	11348	8998
TREE	425434.00	-712541.41	1B	408		174	17939	9142
ROD ON OL ASR	425430.47	-712555.99	1B	415		181	18645	9252
TREE	425633.88	-712414.65	1B	487		253	8526	9615
TREE	425531.26	-712356.71	1B	455		221	12157	10765
OL ON TOWER	425426.98	-712740.95	1A	548	364	314	22939	11411
ANTENNA	425754.69	-712647.94	1B	339		105	411	11786
TREE	425753.00	-712532.47	1B	396		162	3142	11817
TREE	425617.25	-712336.15	2C	440		206	9751	11991
TREE	425805.00	-712624.18	1B	445		211	1303	12599
TREE	425808.36	-712547.09	2C	402		168	2515	13099



TOUCHDOWN ZONE RUNWAY	ELEVATION
17	229
35	234
6	224
24	226

MANCHESTER AIRPORT

MANCHESTER, NEW HAMPSHIRE

(NOT TO SCALE)

(ALL ELEVATIONS IN FEET)