OBSTRUCTION DATA SHEET

ODS 618
BISHOP INTERNATIONAL AIRPORT
FLINT, MICHIGAN

DIGITIZED FROM

OC 618
SURVEYED 22 SEPTEMBER 1992
10TH 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

See SPECIAL NOTICES in "Dates of Latest Editions, Airport Obstruction Charts - Obstruction Data Sheets," for possible corrections. National Oceanic and Atmospheric Administration (NOAA) publications are available through NOAA Distribution Branch (N/CG33), National Ocean Service, Riverdale, MD 20737. Telephone: 301-436-6990

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).

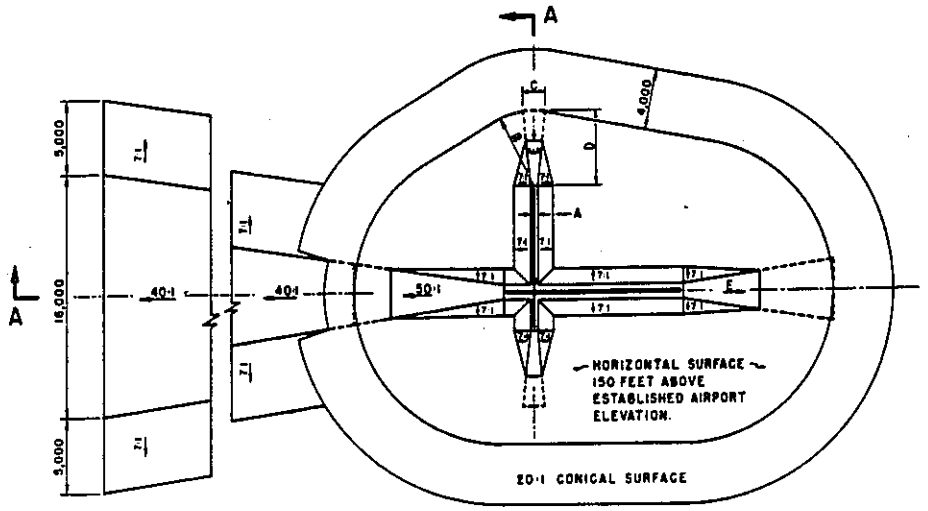
2. All objects not included in "1" above are listed with the Airport Reference Point (ARP).

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:

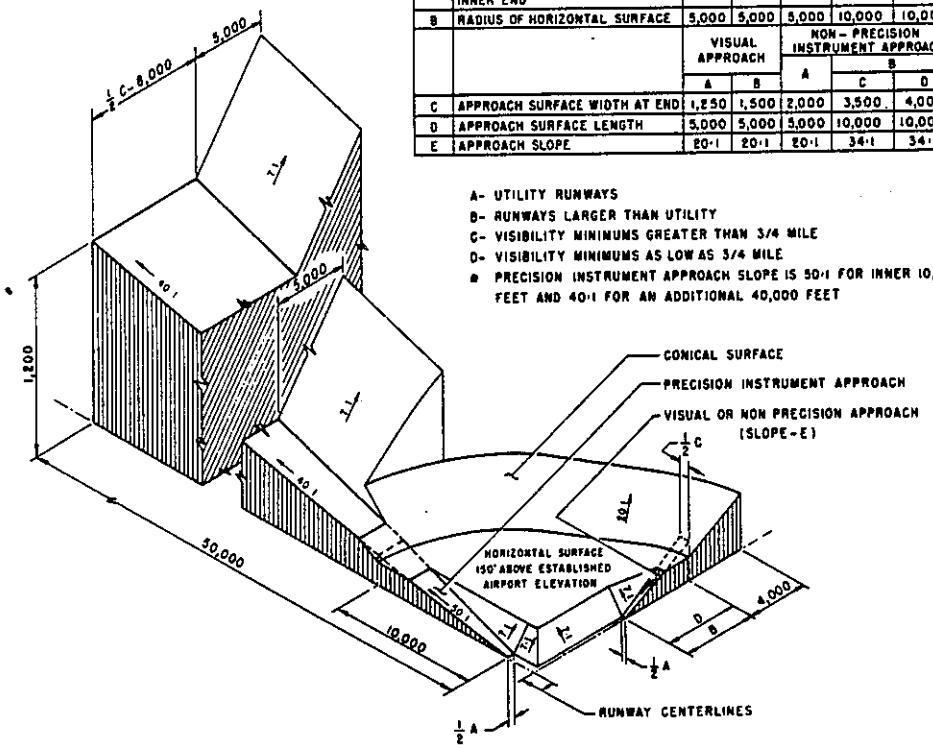
A(V) ..... Utility runway - visual approach only
A(NP) .... Utility runway - nonprecision instrument approach
B(V) ..... Nonutility runway - visual approach only
C ..... Nonutility runway - nonprecision instrument approach with visibility minimums greater than 3/4 mile
D ..... Nonutility runway- nonprecision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

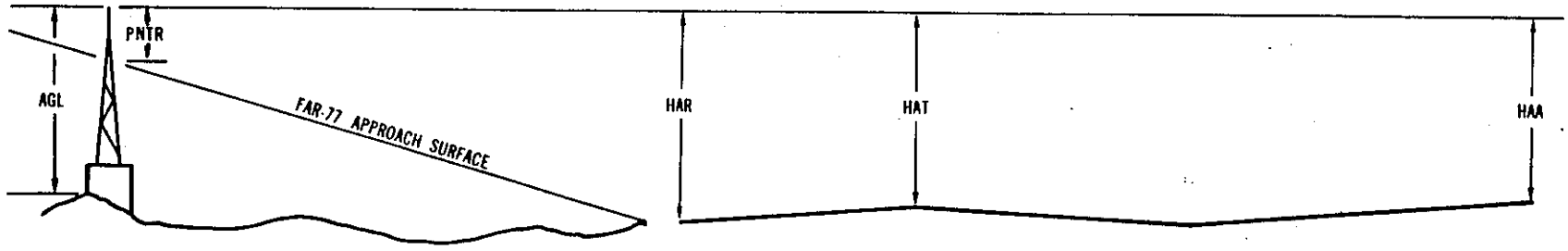
OC XXXX

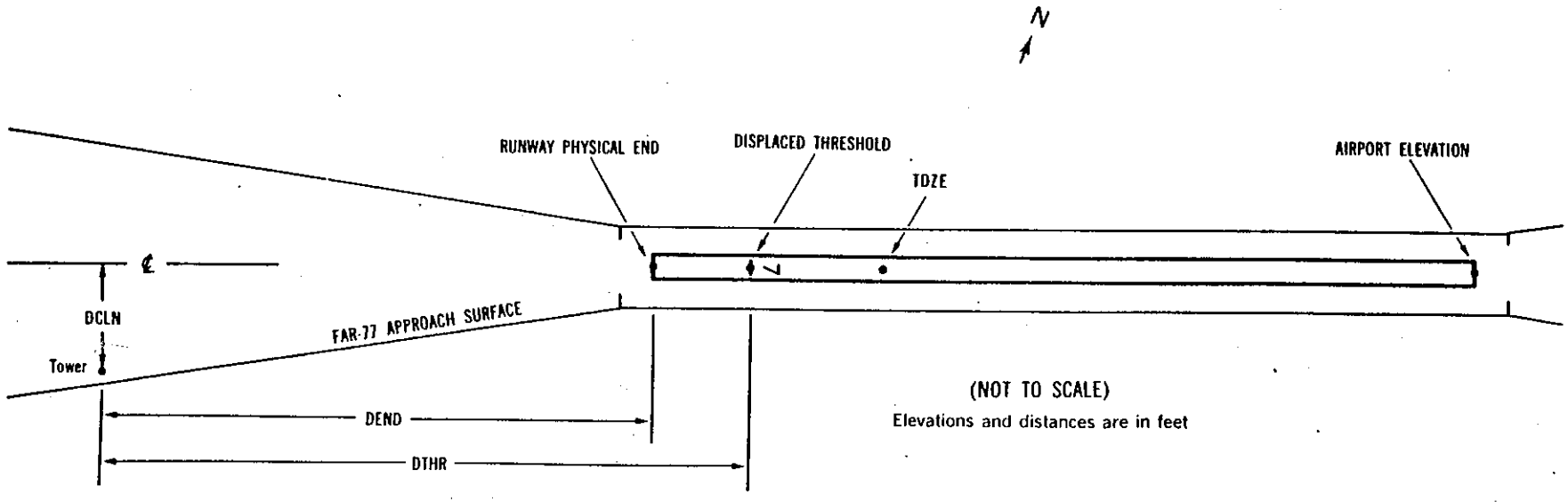
AIRPORT ELEVATION XXXX

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

****





(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).

OC0618

AIRPORT ELEVATION 782

18 C 764/ 425821.831 -834436.472 1790719. 767/ 779 425815.696 -834436.344

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
OL ON BLAST FENCE	425822.72	-834436.53	1A	777		13	-2	-5	90	711	3R	13
ROAD(N)	425823.46	-834436.54	1A	780		16	1	-2	165	786	3R	16
TREE	425827.21	-834433.87	1A	792		28	13	10	541	1163	201L	18
TREE	425830.30	-834439.40	1A	797		33	18	15	861	1482	204R	14
TREE	425840.88	-834442.81	1A	815		51	36	33	1935	2556	441R	0
TREE	425843.64	-834432.97	1A	834		70	55	52	2203	2825	294L	11
TREE	425844.38	-834437.18	1A	831		67	52	49	2284	2905	18R	6
TREE	425858.14	-834445.74	1A	850		86	71	68	3686	4307	632R	-16

36 C 779/ 782 425704.326 -834434.855 3590720.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
ROAD(N)	425823.46	-834436.54	1A	780		1	-2	-2	-8012		3L	16
OL ON BLAST FENCE	425822.72	-834436.53	1A	777		-2	-5	-5	-7937		3L	13
TREE	425656.22	-834438.85	1A	805		26	23	23	816		310L	8
TREE	425654.72	-834430.81	1A	816		37	34	34	977		286R	14
TREE	425653.81	-834438.20	1A	816		37	34	34	1061		265L	12
TREE	425649.94	-834430.30	1A	827		48	45	45	1461		316R	11
TREE	425642.91	-834438.19	1A	846		67	64	64	2164		281L	9
TREE	425640.03	-834435.82	1A	847		68	65	65	2458		110L	1
TREE	425639.61	-834442.29	1A	851		72	69	69	2494		591L	4
TREE	425636.09	-834429.07	1A	856		77	74	74	2864		386R	-2

OC0618

AIRPORT ELEVATION 782

5 SUPLC 779/ 779 425741.719 -834441.123 462831.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
TREE	425733.28	-834457.43	1A	813		34	34	31	1468		215L	-3
TREE	425732.23	-834458.14	1A	817		38	38	35	1579		175L	-2
TREE	425729.38	-834501.84	1A	835		56	56	53	1977		155L	4
TREE	425725.44	-834501.77	1A	842		63	63	60	2248		138R	3
TREE	425725.90	-834504.42	1A	846		67	67	64	2359		32L	4
TREE	425724.55	-834509.57	1A	856		77	77	74	2730		197L	3

23 SUPLC 762/ 425810.905 -834359.276 2262900. 763/ 778 425808.321 -834402.982

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
TREE	425820.33	-834341.40	1A	827		65	49	45	1620	2000	223L	23
TREE	425823.12	-834344.03	1A	813		51	35	31	1673	2053	116R	7
VENT ON OL BLDG	425834.14	-834321.78	1A	855		93	77	73	3641	4021	213L	-8

OC0618

AIRPORT ELEVATION 782

9 PIR 764/ 771 425808.309 -834535.364 881429.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
GROUND	425805.63	-834355.76	1A	763		-1	-8	-19	-7393		497R	1
OL ON GS	425806.24	-834411.86	1A	807		43	36	25	-6199		399R	41
OL ON GS	425804.70	-834519.77	1A	799		35	28	17	-1148		400R	33
ROD ON OL LOC	425807.84	-834556.07	1A	778		14	7	-4	1540		0R	-13
RAILROAD	425814.83	-834557.71	1A	792		28	21	10	1640		711L	-1
TREE	425801.10	-834601.20	1A	802		38	31	20	1942		670R	3
TREE	425804.36	-834604.35	1A	810		46	39	28	2166		333R	7
TREE	425811.26	-834605.94	1A	816		52	45	34	2263		369L	11
TREE	425808.64	-834606.79	1A	816		52	45	34	2334		105L	10
POLE	425809.46	-834617.85	1A	823		59	52	41	3153		214L	0
TREE	425803.75	-834621.08	1A	833		69	62	51	3412		357R	5
POLE	425808.36	-834622.27	1A	826		62	55	44	3486		112L	-4
TREE	425800.49	-834629.21	1A	847		83	76	65	4026		668R	7
TREE	425815.84	-834630.23	1A	840		76	69	58	4053		888L	-1
TREE	425804.36	-834635.22	1A	844		80	73	62	4460		263R	-5
TREE	425808.44	-834655.88	1A	857		93	86	75	5983		198L	-22

OC0618

AIRPORT ELEVATION 782

27 PIR 762/ 770 425810.479 -834358.588 2681535.

OBJECT	LAT	LONG	A	EL	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
OL ON GS	425804.70	-834519.77	1A	799		37	29	17	-6050		400L	33
OL ON GS	425806.24	-834411.86	1A	807		45	37	25	-999		399L	41
GROUND	425805.63	-834355.76	1A	763		1	-7	-19	195		497L	1
ROD ON OL LOC	425810.78	-834345.14	1A	781		19	11	-1	1001		0R	3
TREE	425815.25	-834342.44	1A	800		38	30	18	1215		447R	17
TREE	425807.29	-834340.45	1A	803		41	33	21	1338		364L	18
TREE	425804.08	-834334.89	1A	823		61	53	41	1741		701L	30
SIGN	425811.89	-834332.09	1A	796		34	26	14	1974		83R	-2
TREE	425807.14	-834325.15	1A	822		60	52	40	2474		413L	14
TREE	425803.03	-834324.53	1A	833		71	63	51	2508		830L	25
TREE	425819.01	-834319.83	1A	839		77	69	57	2906		776R	23
TREE	425812.34	-834318.70	1A	832		70	62	50	2970		98R	14
TREE	425814.44	-834315.41	1A	825		63	55	43	3220		304R	2
TREE	425823.08	-834239.00	1A	869		107	99	87	5953		1096R	-8

OC0618

AIRPORT ELEVATION 782

ARP 425755.812 -834436.443

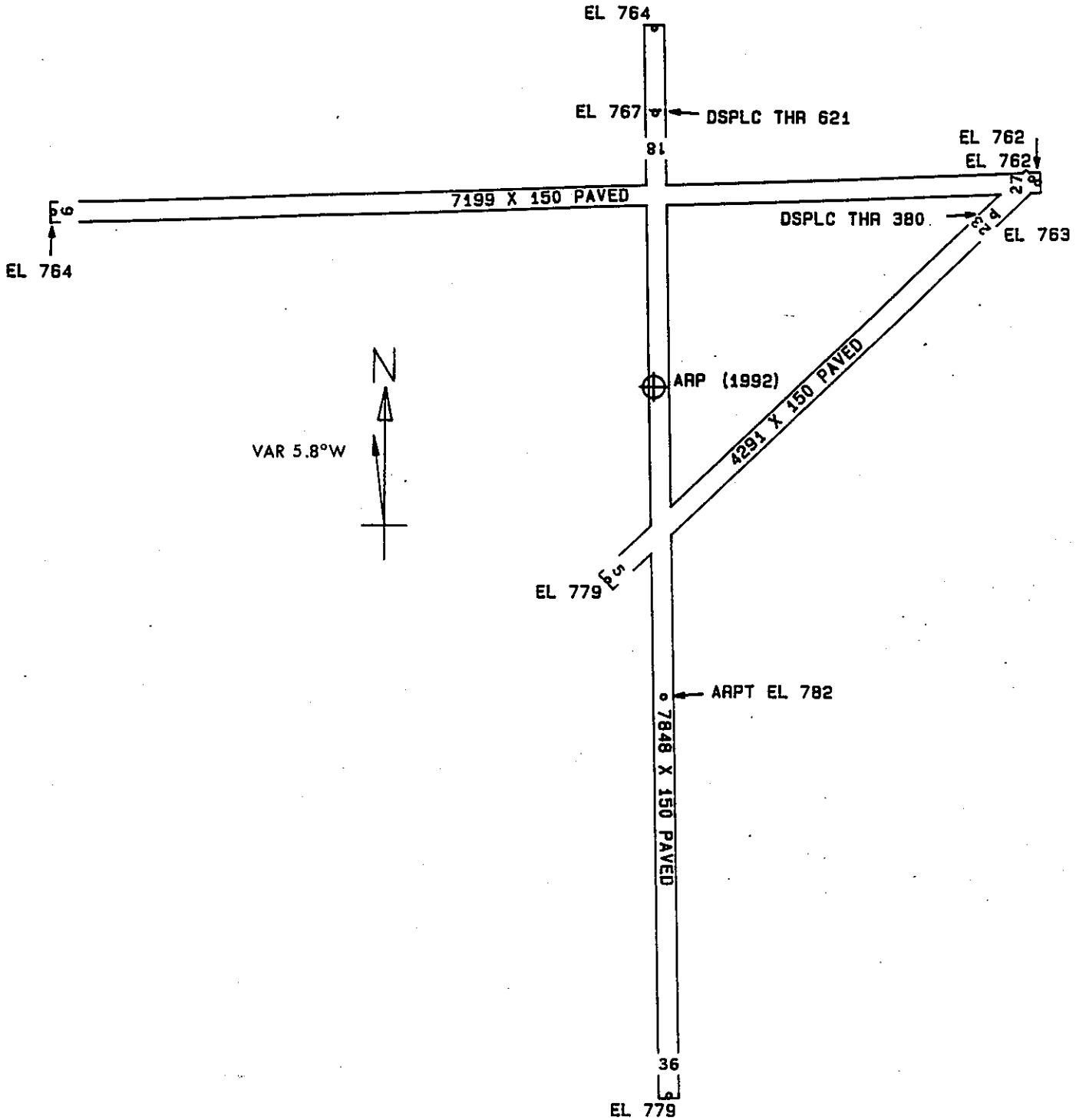
OBJECT	LAT	LONG	A	EL	AGL	HAA	MAG BEARING	DISTANCE
OL VORTAC	425757.76	-834427.90	1A	809		27	7832	665
OL ON LTD WSK	425802.50	-834426.02	1A	799		17	5440	1029
ROD ON AMOM	425803.64	-834422.27	1A	793		11	5852	1319
LIGHT POLE	425750.63	-834420.10	1A	791		9	11908	1323
TREE	425740.92	-834426.72	1A	834		52	16010	1672
ROD ON OL TWR	425800.71	-834459.87	1A	807		25	29142	1811
FLDLT	425816.94	-834444.13	1A	801		19	35050	2214
ANT ON OL ATCT	425742.10	-834503.81	1A	884		102	24130	2463
ANT ON OL BLDG	425820.28	-834426.68	1A	822		40	2207	2581
TREE	425824.77	-834432.39	1A	794		12	1140	2947
TREE	425825.52	-834432.54	1A	795		13	1118	3021
RADAR DOME	425818.69	-834506.25	1A	801		19	32204	3206
TREE	425828.05	-834429.49	1A	828		46	1448	3305
TREE	425803.95	-834351.42	1A	812		30	8158	3447
ANT ON OL ASR TWR	425722.48	-834448.90	1A	846		64	20108	3499
TREE	425722.14	-834424.39	1A	851		69	17104	3525
ANT	425820.24	-834511.14	1A	849		67	31935	3574
TREE	425815.91	-834525.40	1A	809		27	30500	4170
TREE	425802.98	-834333.24	1A	827		45	8701	4755
TREE	425827.33	-834346.25	1A	830		48	5516	4910
TREE	425703.02	-834443.70	1A	830		48	19133	5372
TREE	425703.22	-834426.16	1A	833		51	17737	5379
TREE	425702.52	-834440.21	1A	821		39	18846	5402
POLE	425817.02	-834547.72	1A	817		35	29751	5717
TREE	425657.36	-834442.02	1A	836		54	18948	5931
TREE	425652.28	-834443.75	1A	858		76	19037	6455
FLDLT	425841.69	-834331.27	1A	874		92	5200	6712
TREE	425649.31	-834443.60	1A	863		81	19019	6753
TREE	425642.26	-834444.37	1A	865		83	19019	7470
TREE	425759.19	-834254.97	1A	860		78	9311	7552
TREE	425755.39	-834636.13	1A	857		75	27532	8899

OC0618 Continued from previous page

AIRPORT ELEVATION 782

ARP 425755.812 -834436.443

OBJECT	LAT	LONG	A	EL	AGL	HAA	MAG BEARING	DISTANCE
ANT ON OL MCWV TWR	430009.31	-834503.90	2C	912		130	35712	13667
OL ON W TANK	425838.58	-834746.19	2C	956		174	29252	14755



TOUCHDOWN ZONE RUNWAY	ELEVATION
18	779
36	782
5	779
23	778
9	771
27	770

BISHOP INTERNATIONAL AIRPORT

FLINT, MICHIGAN

(NOT TO SCALE)

(ALL ELEVATIONS IN FEET)