

OBSTRUCTION DATA SHEET

**ODS 5222
MARTIN STATE AIRPORT
BALTIMORE, MARYLAND**

DIGITIZED FROM

**OC 5222
SURVEYED SEPTEMBER 1989
1ST EDITION**



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

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 Nr. 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 OC) depict a representation of objects that existed at the time of the OC field survey.

ODS information is arranged as follows:

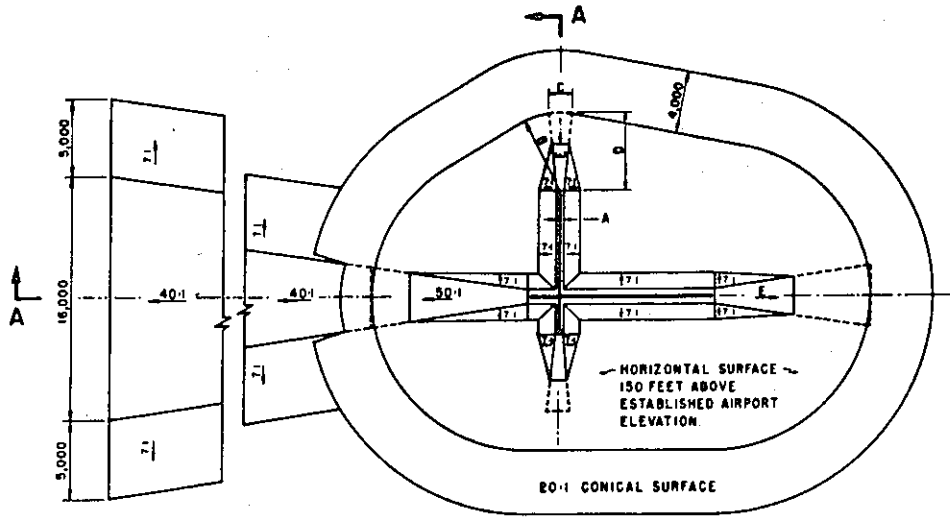
1. Objects located in FAR-77 approach (including supplemental approaches if present) or primary areas are listed with the associated runway (reference runway). For example, all objects in the Runway 9R approach or primary are listed with Runway 9R. Distances to these objects are computed from both the physical end and threshold of Runway 9R. Objects in the Runway 27L approach or primary are listed with Runway 27L. (Objects in the common 9R/27L primary area are listed with both runways.)
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 (see footnote 2 on page 3):

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)

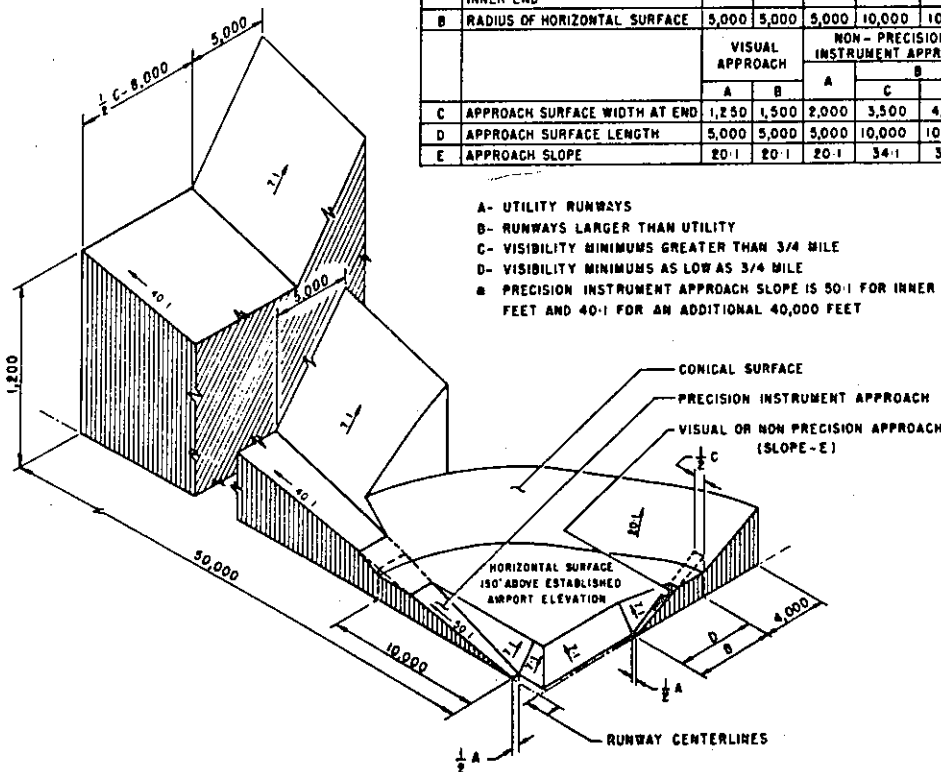
FAR-77 imaginary surface dimensions are defined on page 2 of this report.

Primary surface width is determined by the widest approach at the two approach/primary interfaces for that runway.



DIM	ITEM	DIMENSIONAL STANDARDS (FEET)					
		VISUAL RUNWAY		NON-PRECISION INSTRUMENT RUNWAY			PRECISION INSTRUMENT RUNWAY
		A	B	A	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	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
- E- 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

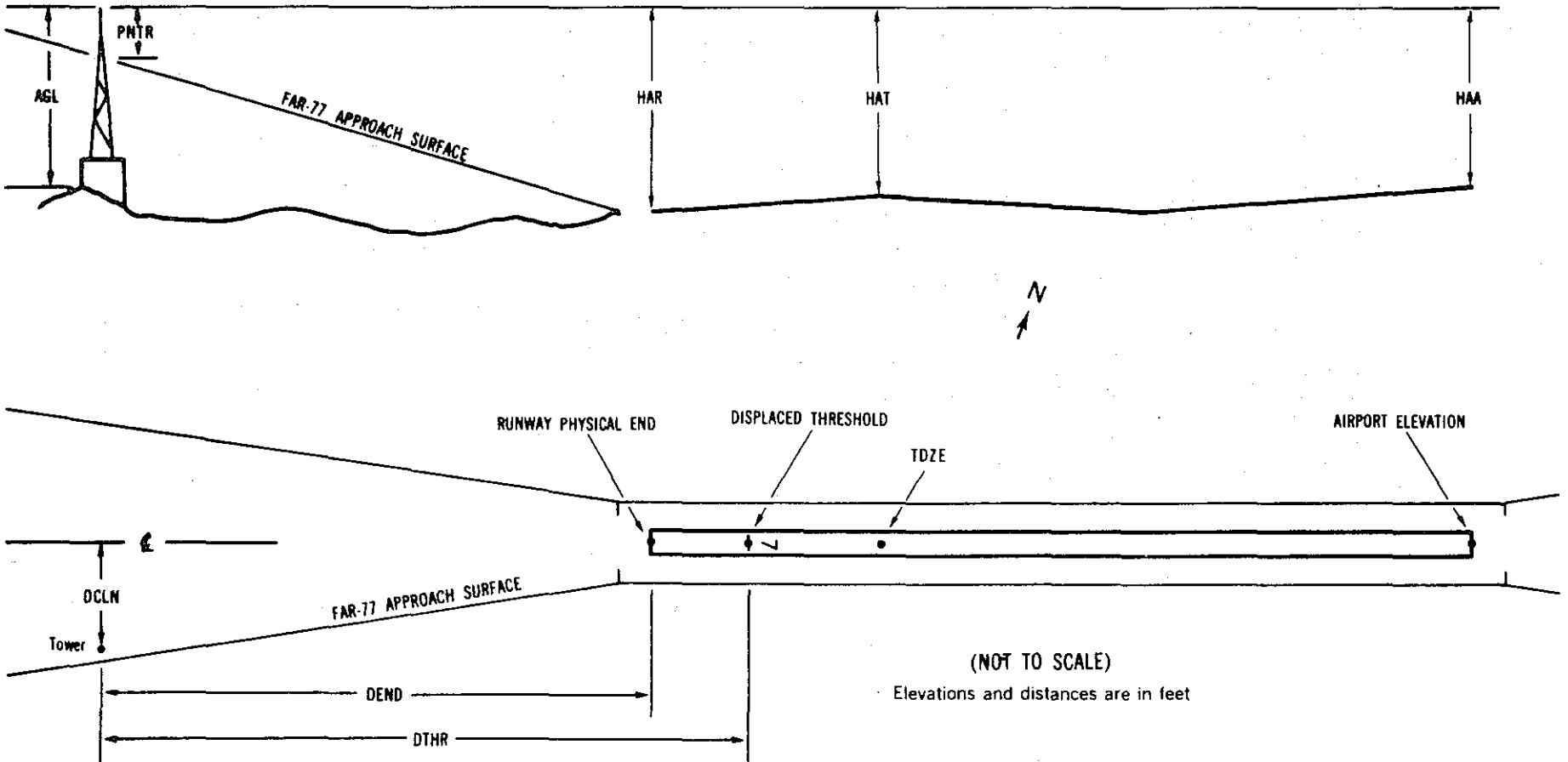
FAR-77 CIVIL AIRPORT
IMAGINARY SURFACES

ANNOTATION OF ODS DATA FORMAT

OC XXXX

AIRPORT ELEVATION XXXX

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	XXXXXXXX.XXX	XX	XXXX	XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX
XXXXXXXXXX	XXXXXX.XXX	XXXXXXXX.XXX	XX	XXXX	XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX



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 area 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 Reference runway approach physical end elevation/touchdown zone elevation
- 4 Latitude and longitude of reference runway approach physical end
- 5 Reference runway geodetic azimuth reckoned clockwise from south
- 6 Reference runway displaced threshold elevation/touchdown zone elevation
- 7 Latitude and longitude of reference runway displaced threshold
- 8 Accuracy Code: Horizontal Vertical
 1 = 20 A = 2
 2 = 40 B = 5
 C = 20
- 9 Mean Sea Level (MSL) elevation 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). AGLs are provided only for those objects appearing on the OC that are equal to, or greater than, 200 feet AGL. AGL accuracy is ± 10 feet.
- 11 HAA - Height above airport
 HAR - Height above reference runway approach physical end
 HAT - Height above reference runway touchdown zone elevation
- 12 DEND - Distance along reference runway centerline from point perpendicular to object to reference runway approach physical end
 DTHR - Distance along reference runway centerline from point perpendicular to object to reference runway 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 object is in primary area on roll-out side of zero distance point.
- 13 PNTR - Penetration of indicated FAR-77 approach or primary surface (see footnote 2).

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AIRPORT ELEVATION 22

14 C 22/22 391956.506N 0762522.092W 3151002

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
OL ON LIGHTED WINDSOCK	391911.71	0762429.06	1A	33		11	11	11	-6153		240R	22
ROD ON OL GLIDE SLOPE	391916.26	0762424.30	1A	59		37	37	37	-6090		350L	48
OL ON LIGHTED WINDSOCK	391957.76	0762519.40	1A	45		23	23	23	-59		240L	23
OL ON LOCALIZER	392007.10	0762535.66	1A	40		18	18	18	1512		OR	-21
OL ON POLE	392009.14	0762533.78	1A	90		68	68	68	1554		250L	28
POLE	392011.31	0762532.97	1A	90		68	68	68	1665		450L	25
OL ON POLE	392007.25	0762540.15	1A	88		66	66	66	1771		240R	20
TREE	392014.77	0762534.00	1A	114		92	92	92	1970		640L	40
POLE	392007.27	0762546.52	1A	89		67	67	67	2126		593R	10
TREE	392012.13	0762544.15	1A	100		78	78	78	2343		114R	15
TREE	392011.02	0762548.89	1A	105		83	83	83	2526		458R	15
TREE	392015.39	0762544.12	1A	108		86	86	86	2576		120L	16
TREE	392014.60	0762551.84	1A	110		88	88	88	2946		367R	7
TREE	392026.84	0762602.33	1A	135		113	113	113	4405		78R	-11
TREE	392035.81	0762600.11	1A	151		129	129	129	4927		686L	-10
TREE	392025.70	0762615.77	1A	140		118	118	118	5068		908R	-25

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AIRPORT ELEVATION 22

32 PIR 10/15 391907.462N 0762419.328W 1351042

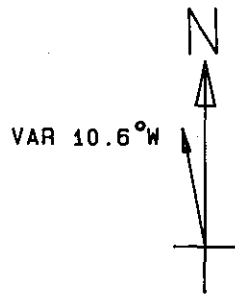
OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
OL ON LIGHTED WINDSOCK	391957.76	0762519.40	1A	45		35	30	23	-6937		240R	23
ROD ON OL GLIDE SLOPE	391916.26	0762424.30	1A	59		49	44	37	-907		350R	48
OL ON LIGHTED WINDSOCK	391911.71	0762429.06	1A	33		23	18	11	-844		240L	22
TREE	391907.28	0762413.24	1A	19		9	4	-3	351		326R	6
TREE	391902.34	0762415.72	1A	20		10	5	-2	568		164L	3
TREE	391858.64	0762417.74	1A	19		9	4	-3	721		541L	-1
BOAT MAST (DRYDOCKED)	391859.67	0762358.92	1A	54		44	39	32	1690		582R	14
TREE	391858.49	0762355.58	1A	88		78	73	66	1959		684R	43
TREE	391842.45	0762357.23	1A	88		78	73	66	3019		552L	22
TREE	391848.77	0762348.97	1A	84		74	69	62	3023		359R	18
TREE	391845.25	0762352.91	1A	75		65	60	53	3057		111L	8
TREE	391847.74	0762343.60	1A	102		92	87	80	3394		586R	28

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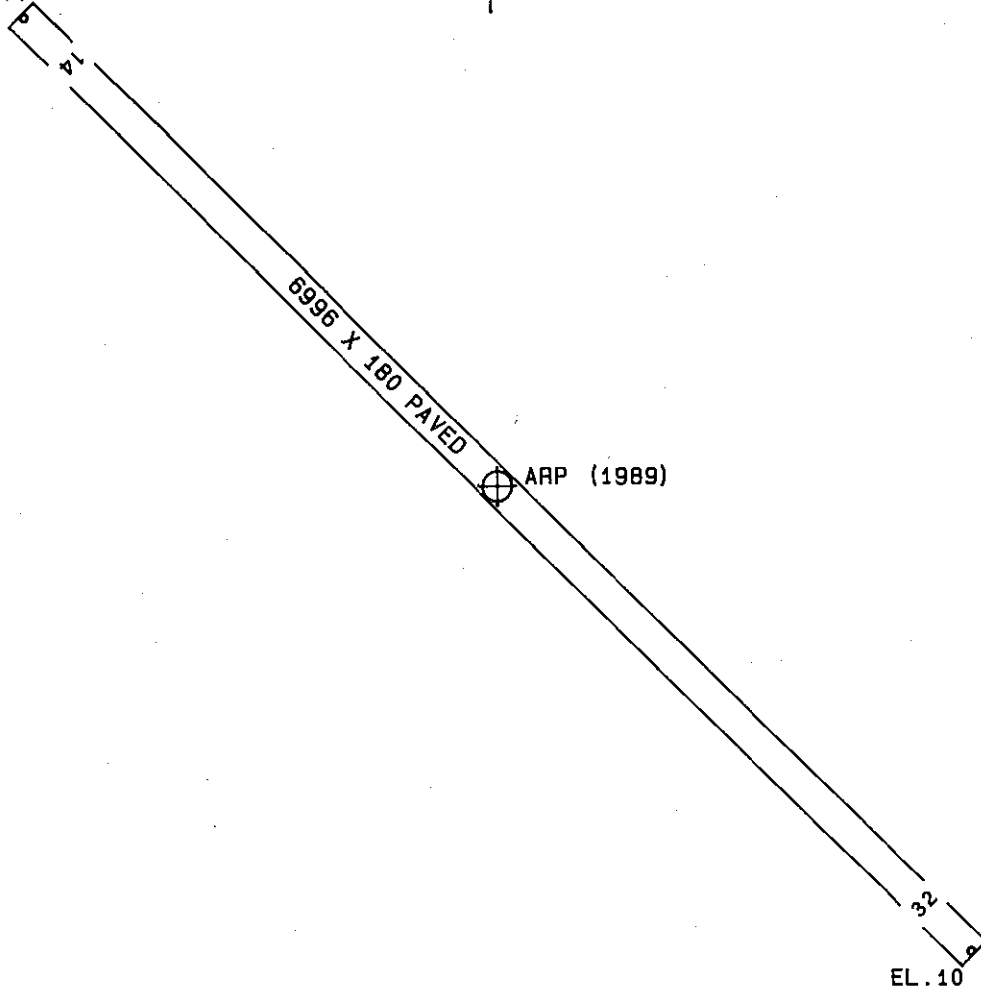
AIRPORT ELEVATION 22

ARP 391931.985N 0762450.707W

OBJECT	LAT	LONG	A	ELEV	AGL	HAA	MAG BEARING	DISTANCE
TREE	391937.36	0762440.78	1A	88		66	65 42	951
TREE	391939.55	0762438.96	1A	107		85	60 56	1199
TREE	391919.44	0762447.22	1A	82		60	178 24	1298
ANT & APT BN ON OL CTL TR	391944.70	0762517.02	1A	88		66	312 30	2436
ANTENNA ON OL HANGAR	391903.94	0762428.41	1A	113		91	158 54	3335
ROD ON HANGAR	391949.65	0762528.39	1A	61		39	311 43	3459
OL ON FLOODLIGHT POLE	392004.32	0762507.89	1A	129		107	348 10	3540
TREE	391912.88	0762411.85	1A	57		35	132 56	3615
POLE	392009.59	0762526.37	1A	68		46	334 14	4726
TREE	391838.97	0762400.37	1A	89		67	154 11	6665
TREE	392112.51	0762435.75	1B	189		167	17 11	10239
TREE	392104.38	0762551.53	1B	217		195	343 32	10499
TREE	392129.42	0762535.25	1B	202		180	354 11	12386
TREE	392133.09	0762552.16	1B	189		167	349 6	13170
TRANSMISSION TOWER	392142.32	0762509.43	2C	212		190	4 14	13269
TREE	392138.19	0762549.35	2C	198		176	350 46	13575
ANTENNA ON OL STACK	391924.71	0762155.78	2A	371	359	349	103 39	13767
TRANSMISSION POLE	392113.41	0762649.77	2C	226		204	328 16	13886
TRANSMISSION POLE	392100.08	0762707.18	2C	219		197	320 21	13943
TRANSMISSION TOWER	392148.08	0762526.76	2C	209		187	358 59	14058
TREE	392108.72	0762706.77	2C	209		187	323 5	14494



ARPT ELEV. 22 FT.



TOUCHDOWN ZONE RUNWAY ELEVATION	
14	22
32	15

MARTIN STATE AIRPORT
BALTIMORE, MARYLAND
(NOT TO SCALE)