PROJECT 10073 RECORD CARD

1. DATE	2. LOCATION	12. CONCLUSIONS
30 Jun, 1 Jul 62	Richmond, Virginia	☐ Was Balloon ☐ Probably Balloon ☐ Possibly Balloon
3. DATE-TIME GROUP Local 0900 GMT 01/0200Z Jul	4. TYPE OF OBSERVATION ☒ Ground-Visual ☐ Ground-Radar ☐ Air-Visual ☐ Air-Intercept Radar	☐ Was Aircraft ☐ Probably Aircraft ☐ Possibly Aircraft
5. PHOTOS ☐ Yes ☒ No	6. SOURCE Civilian	☐ Was Astronomical ☐ Probably Astronomical ☐ Possibly Astronomical
7. LENGTH OF OBSERVATION 10-20 mins	8. NUMBER OF OBJECTS one obj ~~one~~ two rpts	9. COURSE East descending 2. Echo I
		☐ Other 1 UNIDENTIFIED ☐ Insufficient Data for Evaluation ☐ Unknown

10. BRIEF SUMMARY OF SIGHTING

Two rpts. Second rpt of 1 Jul identified as Echo I. The 1st rpt of obj follows: one red obj (& white) circular observed at 20dgr elev 169 dgr azimuth. In ten mins obj descended to 13½ dgr elev 132dgr azimuth. No sound trail or exhaust. Flight steady. No unusual features noted. Speed constant.

11. COMMENTS

2d obj Echo I. Firs obj remains as unidentified.

ATIC FORM 329 (REV 26 SEP 52)

149TH TACTICAL FIGHTER SQUADRON (TAC)

UNITED STATES AIR FORCE
BYRD FIELD, SANDSTON, VIRGINIA

REPLY TO
ATTN OF: OIT

20 July 1962

SUBJECT: Report of UFO Sightings

TO: Air Technical Intelligence Center
Wright-Patterson AFB, Ohio

1. On 6 July 1962, this squadron was notified that two local Richmond residents of the same family had made UFO sightings on 30 June 62 and 1 July 62.

2. The family was on vacation on 6 July and was contacted by the squadron Intelligence Officer on 9 July for more details.

3. The 30 June sighting was not resolved as to its possible identity and information is forwarded in attachments in accordance with AFR 200-2.

4. The 1 July sighting was obviously an observation of ECHO I when compared to information received from the National Aeronautics and Space Administration.

5. All additional information is contained in attachment form.

James P. Whitman

JAMES P. WHITMAN
Captain USAF
Intelligence Officer

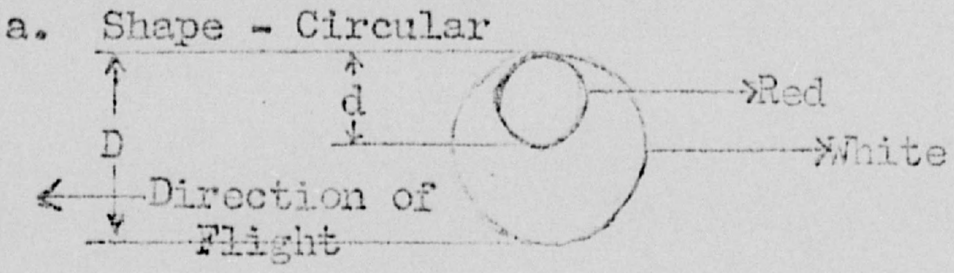
4 atchs
1. 30 June Sighting
2. 1 July Sighting
3. 30 June Local Weather Observations
4. Norfolk Section with Observers Location and Sight Bearings Plotted

Copy to:
108 TFW (DI)
9th AF (DI)
TAC (DI)

Summary of 30 June Sighting

1. Description of object

a. Shape - Circular



$\frac{D}{d}$ equals appr. 2 to 3

b. Size

(1) The individual observed Echo I the following night. If the size of Echo I was assumed to be that of a fifty cent piece, the size of this object would be that of a dime or slightly smaller.

c. Color

(1) As indicated above.

d. Number - One only.

e. Details or features

(1) As indicated above. Two solid circular areas of white and red light source. No other details visible to the observer.

f. No tail, trail, or exhaust were visible to the observer.

g. No sound was heard in connection with the object.

h. No other pertinent or unusual features were apparent to the observer.

2. Description of Course

a. The observer stated that his attention was first called to the object because of the source of red light involved. At the time he stated he was sitting on a porch of his residence looking at the stars. The observer wears glasses to correct for lack of detail of distant objects. He does not require glasses for reading purposes. He was wearing his glasses at the time of initial observation.

b. Location of object at initial observation

Angle of elevation - 20° plus or minus 1°
True bearing - 169° plus or minus 5°

c. Location of object as it disappeared behind trees

Angle of elevation: $13\frac{1}{2}$° plus or minus 1°
True bearing - 132° plus or minus 5°

D. Flight path

(1) Appeared straight and at constant speed between the two points to the observer.

e. Disappearance of object.

(1) Observation was discontinued when vision was blocked by a tree.

f. Duration of observation was estimated by the observer to be at least ten minutes but not more than twenty minutes. No elapsed time check was made.

3. Manner of Observation

a. The observer first sighted the object by naked eye (with normal glasses being worn) and then observed it with binoculars. The investigating officer examined them and estimated the following capability. Objects could be observed with sharp detail with a magnification of three times linear dimensions. The binoculars appeared to be relatively inexpensive and no name or identification existed on the instrument itself.

b. The angles of elevations and bearings were determined by the investigating officer as follows:

(1) The angle of elevation was determined by the observer sighting down the straight edge of an aircraft navigation plotter type B-2A USAF Stock No. 6217-FAA-58A at the points at which the observer remembered sightings which were referenced very closely to physical features on the ground such as telephone poles and trees. Vertical reference was established by a plumb bob on a string through the hole in the plotter.

(2) The bearings were established on a map of the city of Richmond (scale 1 inch equals 2,000 feet) by orienting it and sighting to the observers remembered points of observation. A pocket compass was utilized in a similar manner and corrected for local magnetic variation. These two values were then averaged. The average difference between the bearings taken by the two methods described was 9 1/2 degrees.

(3) The tolerances given in the elevations and bearings of sightings apply only to the observers described points of sightings and are not intended to indicate the observers accuracy of memory.

4. Time and Date of Sighting

a. Initial Sighting

1. 9:00 PM EDT, 30 June 1962 0100 Z 1 July 1962

b. Time observation terminated

Between 10 and 20 minutes later

c. Light conditions - Dark

d. Official Sunset - 1936 EST, 2036 EDT, 0036Z

5. Location of Observer

a. [redacted] Richmond, Virginia

b. Geographical coordinates - 37 32 1/2 N, 77 2¼ 1/2 W

6. Observer's Identification

a. Civilian

[redacted]
Richmond, Virginia

(1) The investigating officer consider[redacted] to be sincere and consistent in his report and based on his interview only, that lasted approximately an hour and a half, found no reason to believe that the information he gave was other than what he observed. Locally reported weather observations possibly conflict with [redacted] report, but observing conditions as described were not impossible. A check with the employer of the observer's father indicated that [redacted] father has no reputation of exageration.

7. Weather and Winds

a. The observer definitely stated that he saw no clouds or obstruction to vision. The local weather bureau observed extensive sky coverage at this time. This makes the observer's weather statements questionable, but due to the fluctuating sky coverage, proximity of weather station to the UFO observer (the weather station is four nautical miles on a true bearing of 120 degrees from the UFO observer), and the relatively small area of sky involved with the sighting, weather conditions could have permitted the sighting.

b. Winds: Surfact wind at time of observation was NE at 6 knots at Byrd Field (Richmond Airport). See attachment 3. The most applicable winds aloft locally available are all for 0600Z, 0200 EDT, and 0100 EST for 1 July 62.

Elevation, 000's of ft. (MSL)	Richmond (RIC)	Washington (DCA)	Norfolk (ORF)
1	030/14	---	---
2	030/17	---	---
3	020/22	---	---
4	020/25	---	---
5	020/36	---	---
6	---	010/22	030/27
10	---	360/26	030/34
16	---	360/13	040/32
20	---	350/20	030/34

Elevation, 000's of ft. (MSL)	Richmond (RIC)	Washington (DCA)	Norfolk (ORF)
30	---	340/39	360/33
50	---	310/15	300/07
80	---	---	080/25

c. Ceiling:

Time Local EDT	Time Local EST	Z	Sky Coverage 1st Layer 4,500 ft.	2nd Layer 10,000 ft.	3rd Layer above 10M ft.
2030	1930	0030	5/10to9/10	10/10	unobserved
2054	1954	0054	5/10to9/10	5/10to9/10	5/10to9/10
2136	2036	0136	1/10to5/10	5/10to9/10	5/10to9/10
2158	2058	0158	1/10to5/10	5/10to9/10	5/10to9/10
2232	2132	0232	1/10to5/10	5/10to9/10	5/10to9/10

At the observer's location, sky coverage was probably between 5/10's and complete. See attachment 3.

d. Visibility

(1) 15 Nautical miles at Byrd Field. See attachment 3.

e. Cloud Coverage

(1) See cailing data.

f. Thunderstorms

(1) No thunderstorms reported in area.

g. Temperature

(1) Surface temperature 66 degrees F. No other data locally available. See attachment 3.

8. No unusual activities were determined by the investigating officer that would coincide with this sighting. Inquiries were made of NASA of the possibility of any artificial satellites fitting this description. There were none to their knowledge. The local weather bureau has no knowledge of any meteorological explanation.

9. There was no known interception action taken.

10. There were no weather balloon releases at the Richmond weather bureau that would provide these sightings. Air traffic approaching Byrd Field could provide the path observed, but not the duration described.

11. The investigating officer is the squadron intelligence officer, and although not currently on flying status is rated both pilot and navigator. The following comments are provided as pertinent to the situation:

a. At the time that the observer reported clear skies, the local weather bureau reported sky coverage as indicated in paragraph 7c. Although the sighting may have not been probable, it certainly was not impossible.

b. The observer described the light conditions as dark at 24 minutes after sundown.

c. The area in which the object was sighted is aligned with that of air traffic approaching Byrd Field, but the object's description and duration of observation does not suit air traffic identification.

d. Byrd Field Control tower operators were questioned concerning unusual observations during the subject reported sighting, but with negative results.

e. Parachute flares from the Camp Picket area (37 02N/77 53 W) were considered, but not deemed possible because of Camp Picket location and their schedule of operations and parachute flare limitations.

f. The only obvious possible discrepancies of the observer's statements are those of:

(1) Sky coverage

(2) Description dark of light conditions at 24 minutes after sundown.

g. The investigating officer has checked local sources for information and has not been able to identify the sighting.

Summary of 1 July Sighting

1. The sighting described below is forwarded with limited detail as the sighting was so positively identified as ECHO I.

2. Mr. [redacted], age 44, [redacted], City of Richmond, Va. made the following sighting. He observed a steady light source for approximately ten minutes starting at 2300 EDT, 2200 EST, 1 July 62 at the same location in Richmond described in attachment 1. It first came into sight on a magnetic bearing of approximately 190 and went out of sight on a magnetic bearing of 065.

3. An initial check with NASA was made and this sighting coincided with the passing of ECHO I.

4. As this sighting is considered obviously resolved, no further information is included.

Attch 3.

WBAN 10-B (10-1-58)

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

SURFACE WEATHER OBSERVATIONS

STATION W.B.A.V., Richmond, Va. DATE JUN 30 1962

TIME (L.S.T.) 16	STATION PRESSURE (INS.) 17	DRY BULB (°F) 18	WET BULB (°F.) 19	REL. HUMIDITY (%) 20	TOTAL SKY COVER 21	CLOUDS AND OBSCURING PHENOMENA: LOWEST LAYER AMT. 22	LOWEST LAYER TYPE & DIR. 23	LOWEST LAYER HEIGHT 24	SECOND LAYER AMT. 25	SECOND LAYER TYPE & DIR. 26	SECOND LAYER HEIGHT 27	SUMMATION TOTAL 28	THIRD LAYER AMT. 29	THIRD LAYER TYPE & DIR. 30	THIRD LAYER HEIGHT 31	SUMMATION TOTAL 32	FOURTH LAYER AMT. 33	FOURTH LAYER TYPE & DIR. 34	FOURTH LAYER HEIGHT 35	TOTAL OPAQUE SKY COVER 36
00 57	29.760			81	10	10	AC	E120	1				1				1			10
01 58	29.760			81	10	10	AC	E120	10				10				10			10
02 56	29.760			81	10	10	AC	E120	10				10				10			10
03 57	29.790			81	10	10	AC	E100	10				10				10			10
04 56	29.790			73	10	10	AC	E100	10				10				10			10
05 57	29.770			76	10	8	AC	E80	2	CS	/	10	10				10			10
06 58	29.790			76	10	1	Sc	30	6	AC	E60	7	3	CS	/	10	10			10
07 57	29.780			84	10	3	Sc	30	5	AC	E60	8	2	CS	/	10	10			10
08 56	29.760			81	10	4	Sc	30	5	Ac	E60	9	1	Cu	/	10	10			10
09 59	29.750			71	9	[redacted]			1	Sc	30	1	6	Ac	E60	7	2	Cu	/	9
10 57	29.720			66	10	7	Sc	A30	2	Ac	60	9	1	Cu	/	10	4			10
11 58	29.740			60	9	7	Sc	E30	1	Ac	60	8	1	Cu	/	9	0			8
12 58	29.730			54	10	3	Sc	40	5	Sc	E55	8	2	Ac	120	10	4			10
13 59	29.710			58	10	8	Sc	E55	2	Ac	120	10	4				4			10
14 58	29.710			77	10	9	Sc	A70	1	Ac	120	10	4				4			10
15 58	29.705			71	10	8	Sc	E45	2	Ac	120	10	4				4			10
16 58	29.695			62	8	3	Sc	45	3	Ac	E120	6	2	CS	/	8	0			7
17 58	29.[illegible]			65	10	7	Sc	E45	3	Ac	120	10	4				4			1
18 58	29.700			69	10	7	Sc	E45	3	AC	100	10	4				4			10
19 59	29670			75	9	6	Sc	E45	3	Ac	100	9	0			9	0			9
20 20	29.710			79	8	4	Sc	35	2	Ac	E100	6	2	Cu	/	8	0			7
21 57	29.720			87	7	3	Ac	100	4	CS	U	7	0			7	0			6
22 57	29.720			87	7	3	Ac	100	4	CS	U	7	0			7	0			6
23 58	29.720			90	7	2	Ac	100	5	CS	/	7	0			7	0			3

SYNOPTIC OBSERVATIONS

TIME (G.C.T.) 41	TIME (L.S.T.) 42	NO. 43	PRECIP. (INS.) 44	SNOW FALL (INS.) 45	SNOW DEPTH (INS.) 46	MAX. TEMP. (°F.) 47	MIN. TEMP. (°F.) 48	HGT. 850 MB. SURFACE 49	STATE OF GRND. 50	SEA STATE & DIR. 51	SWELL HGT. & DIR. 52	SWELL PERIOD 53	SURF H, H, M, P, D, 54	WATER TEMP. 55	SOIL TEMP. 56	57	58
	MID. TO 0052	X	0	0	X	[illegible]	66	X	X	X	X	X	X	X	X		
	0052	1	0	0	0	[illegible]	66			0							
	0652	2	T	0	0	68	66			1							
	1250	3	20	0	0	80	66			1							
	1753	4	T	0	0	81	73			1							
	MID.	X	0	0	0	77	68	X	X	X	X	X	X	X	X		

STATIO

TIME (L.S.T.) 59	00
ATT. THERM. 60	
OBSRVD. BAR. 61	
TOTAL CORR 62	
STA. PRESS. 63	29.
BAROGRAPH 64	29.6
BAR. CORR 65	0

SUMMARY OF DAY (MIDNIGHT TO MIDNIGHT)

24-HR. MAX. TEMP. (°F.) 66	24-HR. MIN. TEMP. (°F.) 67	24-HR. PRECIP. WATER EQUIV. (INS.) 68	24-HR. SNOWFALL UNMLTD. (INS.) 69	SNOW DEPTH (INS.) 70	PEAK GUST SPEED (KNOTS) 71	PEAK GUST DIRECTION 72	PEAK GUST TIME L.S.T. 73	THICKNESS OF ICE ON WATER (INS.) 74	FROZEN GRND LAYER (INS.) TOP 75	FROZEN GRND LAYER (INS.) BASE 76	RIVER GAGE 77	24-HR. MAX. R. H. 78	24-HR. MIN. R. H. 79	WATER EQUIV. (INS.) 80	81
81	66	.06	0	0							10				10

PRECIP. & THDRSTM. 82	BEGAN 83	ENDED 84	DUR. 85 Hrs. Mins.
R-	0625	0703	
R-	0703	0720	
R-	0730	0737	
R-	0737	0742	
R	0743	2351	
R-	0001	0820	
RW-	1420	1545	

90 REMARKS, NOTES AND MISCELLANEOUS PHENOMENA

Total sunshine 4:59 Sunrise Cloudy Sunset Cloudy

Fastest observed 1-minute wind speed _____ m.p.h. or

Fastest mile 25 m.p.h.; associated direction NE and time 1227 E

Excessive precipitation:

Δt (MINUTES)	5	10	15	20	30	45	60	80	100	120	150	180
PRECIPITATION (INCHES)												

BAROGRAPH CHECK 1132E

3.

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

SURFACE WEATHER OBSERVATIONS

STATION WBAN, Richmond, Va. DATE JUN 30 1962

WET BULB (°F) 19	REL. HUMIDITY (%) 20	TOTAL SKY COVER 21	CLOUDS AND OBSCURING PHENOMENA — LOWEST LAYER AMT. 22	LOWEST LAYER TYPE & DIR. 23	LOWEST LAYER HEIGHT 24	SECOND LAYER AMT. 25	SECOND LAYER TYPE & DIR. 26	SECOND LAYER HEIGHT 27	SUMMATION TOTAL 28	THIRD LAYER AMT. 29	THIRD LAYER TYPE & DIR. 30	THIRD LAYER HEIGHT 31	SUMMATION TOTAL 32	FOURTH LAYER AMT. 33	FOURTH LAYER TYPE & DIR. 34	FOURTH LAYER HEIGHT 35	TOTAL OPAQUE SKY COVER 36	PRESSURE TENDENCY 37	NET 3-HR CHANGE 38	SUNSHINE MINUTES 39	PRECIPITATION (INCHES) 40
	81	10	10	AC	F12	U				U				U			10	6	.070		
	81	10	10	AC	E12	10				10				10			10				
	81	10	10	AC	E120	10				10				10			10				
	81	10	10	AC	E100	10				10				10			10	7	070		
	73	10	10	AC	E100	10				10				10			10			0	
	76	10	8	AC	E80	2	CS	/	10	10				10			10			0	
	76	10	1	Sc	30	6	AC	E60	7	3	CS	/	10	10			10	5	.000	0	T
	84	10	3	Sc	30	5	AC	E60	8	2	CS	/	10	10			10			0	.06
	81	10	1	Sc	30	5	AC	060	9	1	Cu	/	10	4			10			0	T
	71	9	[redacted]			1	Sc	30	1	6	AC	060	7	2	Cu	/	9	6	.040	26	
	66	10	7	Sc	A30	2	AC	60	9	1	Cu	/	10	4			10			60	
	60	9	7	Sc	E30	1	AC	60	8	1	Cu	/	9	0			8			60	
	54	10	3	Sc	40	5	Sc	E55	5	2	AC	120	10	4			10	5	.020	31	
	58	10	8	Sc	E55	8	AC	120	10	4				4			10			48	
	79	10	9	Sc	A40	1	AC	120	10	4				4			10			1	T
	71	10	8	Sc	E45	2	AC	120	10	4				4			10	7	025	15	T
	62	8	3	Sc	45	3	AC	E120	6	2	CS	/	8	0			7			17	
	65	10	7	Sc	E45	3	AC	120	10	4				4			10			41	
	67	10	7	Sc	E45	3	AC	100	10	4				4			10	5	.005	0	
	75	8	6	Sc	E45	3	AC	100	9	0			9	0			9			0	
	79	8	4	Sc	45	2	AC	E100	6	2	Ci	/	8	0			7				
	87	7	3	AC	100	4	CS	4	7	0			7	0			6	3	020		
	87	7	3	AC	100	4	CS	4	7	0			7	0			6				
	90	7	2	AC	100	5	CS	/	7	0			5	0			3			.	

SYNOPTIC OBSERVATIONS

PRECIP. (INS.) 44	SNOW FALL (INS.) 45	SNOW DEPTH (INS.) 46	MAX. TEMP. (°F.) 47	MIN. TEMP. (°F.) 48	HGT. 850 MB. SURFACE 49	STATE OF GRND. 50	SEA STATE & DIR. 51	SWELL HGT. & DIR. 52	SWELL PERIOD 53	SURF H, H, M, P, D. 54	WATER TEMP. 55	SOIL TEMP 56	57	58
0	0	X	[redacted]	66	X	X	X	X	X	X	X	X		
0	0	0	71	66			0							
T	0	0	68	66			1							
do	0	0	80	66			1							
T	0	0	81	73			1							
0	0	0	77	68	X	X	X	X	X	X	X	X		

STATION PRESSURE COMPUTATIONS

TIME (L.S.T.) 59	0056	0656	1253	1857
ATT. THERM. 60				
OBSRVD. BAR. 61				
TOTAL CORR. 62				
STA. PRESS. 63	29.860	29.774	29.720	29.760
BAROGRAPH 64	29.860	29.770	29.730	29.760
BAR. CORR. 65	0	0	0	0

SUMMARY OF DAY (MIDNIGHT TO MIDNIGHT)

24-HR. PRECIP. WATER EQUIV. (INS.) 68	24-HR. SNOWFALL UNMLTD. (INS.) 69	SNOW DEPTH (INS.) 70	PEAK GUST SPEED (KNOTS) 71	PEAK GUST DIRECTION 72	PEAK GUST TIME L.S.T. 73	THICKNESS OF ICE ON WATER (INS.) 74	FROZEN GRND. LAYER (INS.) TOP 75	FROZEN GRND. LAYER (INS.) BASE 76	RIVER GAGE 77	24-HR. MAX. R. H. 78	24-HR. MIN. R. H. 79	WATER EQUIV. (INS.) 80	81
.06	0	0							1.0				10

PRECIP. & THDRSTM. 82	BEGAN 83	ENDED 84	DUR. 85 Hrs.	DUR. 85 Mins.	OBSTR. TO VIS. 86	BEGAN 87	ENDED 88	DUR. 89 Hrs.	DUR. 89 Mins.
R--	0625	0703							
R-	0703	0720							
R--	0720	0737							
R-	0737	0742							
R	0743	2301							
R-	0301	2320							
RW-	1420	1545							

REMARKS AND MISCELLANEOUS PHENOMENA

Sunrise 4:52 Cloudy Sunset Cloudy

Observed 1-minute wind speed 25 m.p.h., or ___ m.p.h., associated direction NE and time 1227E

Record of precipitation:

5	10	15	20	30	45	60	80	100	120	150	180

RW CHGD 1137E

AT 01.17 AM JUNE.27 NORTH OF CITY, 57 DEGREES ABOVE HORIZON MOVING NE
AT 00.17 AM JUNE.27 SOUTH OF CITY, 79 DEGREES ABOVE HORIZON MOVING NE
AT 02.27 AM JUNE.28 NORTH OF CITY, 60 DEGREES ABOVE HORIZON MOVING NE
AT 11.20 PM JUNE.28 SOUTH OF CITY, 58 DEGREES ABOVE HORIZON MOVING NE
AT 01.12 AM JUNE.29 NORTH OF CITY, 65 DEGREES ABOVE HORIZON MOVING NE
AT 11.37 PM JUNE.29 SOUTH OF CITY, 37 DEGREES ABOVE HORIZON MOVING NE
AT 00.31 AM JULY.30 NORTH OF CITY, 74 DEGREES ABOVE HORIZON MOVING NE
AT 02.42 AM JULY.30 NORTH OF CITY, 57 DEGREES ABOVE HORIZON MOVING NE
AT 00.47 PM JULY.30 SOUTH OF CITY, 28 DEGREES ABOVE HORIZON MOVING
AT 11.51 PM JUNE.31 NORTH OF CITY, 81 DEGREES ABOVE HORIZON MOVING NE
AT 01.51 AM JULY.01 NORTH OF CITY, 57 DEGREES ABOVE HORIZON MOVING NE
AT 02.51 PM JULY.01 SOUTH OF CITY, 06 DEGREES ABOVE HORIZON MOVING NE
AT 11.05 PM JULY.1 SOUTH OF CITY, 73 DEGREES ABOVE HORIZON MOVING NE
AT 01.45 AM JULY.2 NORTH OF CITY, 61 DEGREES ABOVE HORIZON MOVING NE
AT 01.07 PM JULY.2 NORTH OF CITY, 60 DEGREES ABOVE HORIZON MOVING

LOCAL STANDARD TIME

AT 01.01 PM JUNE.26 SOUTH OF CITY, 87 DEGREES ABOVE HORIZON MOVING NE
AT 03.06 AM JUNE.27 NORTH OF CITY, 53 DEGREES ABOVE HORIZON MOVING NE
AT 00.10 AM JUNE.27 SOUTH OF CITY, 65 DEGREES ABOVE HORIZON MOVING NE
AT 02.12 AM JUNE.27 NORTH OF CITY, 58 DEGREES ABOVE HORIZON MOVING NE
AT 11.12 PM JUNE.27 SOUTH OF CITY, 42 DEGREES ABOVE HORIZON MOVING NE
AT 01.25 AM JUNE.28 NORTH OF CITY, 66 DEGREES ABOVE HORIZON MOVING NE
AT 03.20 AM JUNE.28 NORTH OF CITY, 50 DEGREES ABOVE HORIZON MOVING NE
AT 00.25 AM JUNE.27 NORTH OF CITY, 79 DEGREES ABOVE HORIZON MOVING NE
AT 02.39 AM JUNE.2 NORTH OF CITY, 51 DEGREES ABOVE HORIZON MOVING NE
AT 11.49 PM JUNE.27 SOUTH OF CITY, 51 DEGREES ABOVE HORIZON MOVING NE
AT 01.40 AM JUNE.30 NORTH OF CITY, 54 DEGREES ABOVE HORIZON MOVING NE
AT 10.53 PM JUNE.30 SOUTH OF CITY, 57 DEGREES ABOVE HORIZON MOVING NE
AT 00.54 AM JULY.01 NORTH OF CITY, 60 DEGREES ABOVE HORIZON MOVING NE
AT 03.02 AM JULY.01 NORTH OF CITY, 50 DEGREES ABOVE HORIZON MOVING NE
AT 10.01 PM JULY.01 SOUTH OF CITY, 35 DEGREES ABOVE HORIZON MOVING NE
AT 00.08 AM JULY.02 NORTH OF CITY, 69 DEGREES ABOVE HORIZON MOVING NE
AT 02.12 AM JULY.2 NORTH OF CITY, 50 DEGREES ABOVE HORIZON MOVING NE

LOCAL STANDARD TIME

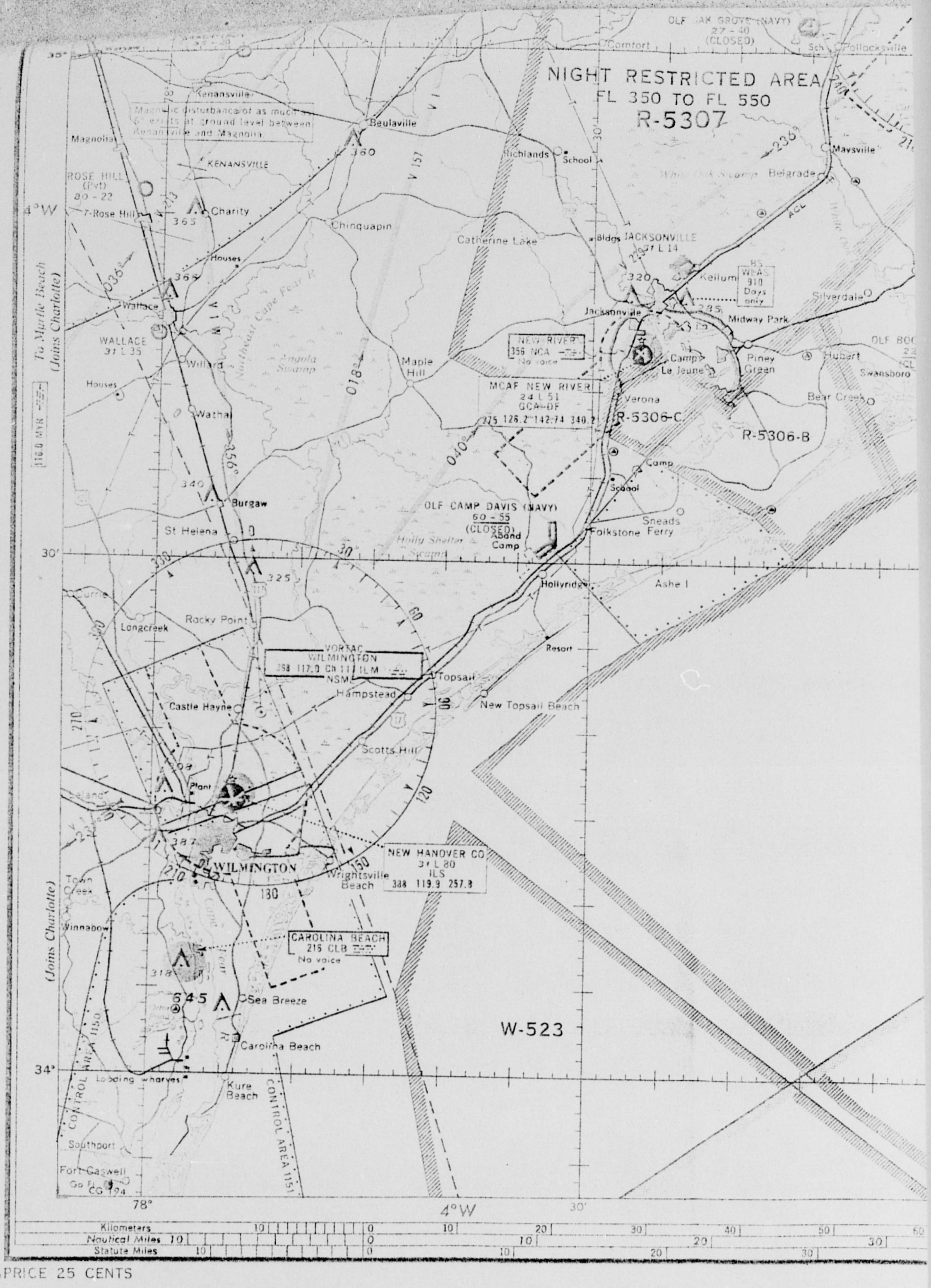
AT 01.57 AM JUNE.26 NORTH OF CITY, 68 DEGREES ABOVE HORIZON MOVING NE
AT 01.07 AM JUNE.27 NORTH OF CITY, 81 DEGREES ABOVE HORIZON MOVING NE
AT 03.11 AM JUNE.27 NORTH OF CITY, 52 DEGREES ABOVE HORIZON MOVING NE
AT 00.14 AM JUNE.28 SOUTH OF CITY, 80 DEGREES ABOVE HORIZON MOVING NE
AT 02.21 AM JUNE.28 NORTH OF CITY, 55 DEGREES ABOVE HORIZON MOVING NE
AT 11.2 PM JUNE.27 SOUTH OF CITY, 57 DEGREES ABOVE HORIZON MOVING NE
AT 01.31 AM JUNE.29 NORTH OF CITY, 61 DEGREES ABOVE HORIZON MOVING NE
AT 10.35 PM JUNE.29 SOUTH OF CITY, 35 DEGREES ABOVE HORIZON MOVING NE
AT 00.41 AM JULY.30 NORTH OF CITY, 71 DEGREES ABOVE HORIZON MOVING NE
AT 02.46 AM JUNE.30 NORTH OF CITY, 51 DEGREES ABOVE HORIZON MOVING NE
AT 02.46 PM JUNE.30 SOUTH OF CITY, 19 DEGREES ABOVE HORIZON MOVING NE
AT 11.58 PM JUNE.30 NORTH OF CITY, 85 DEGREES ABOVE HORIZON MOVING NE

Attch 3 (cont'd)

SURFACE WEATHER OBSERVATIONS

WEATHER OBSERVATIONS

		Sea level press. (mbs)	Temp. °F	Dew Pt. °F	Wind Direction	Wind Speed Knots	Wind Remarks and shifts	Sky obscured Code			
					22	5		007			
		111	61	60	21	1		003			
12022		110	61	60	23	6	6 CB 57	6 CB 17	4 71 57		
					21	2		001			
		113	61	60	22	2		004			
					21	2		002			
		112	61	60	21	8		138			
					21	12		141			
		116	61	60	21	14		146	1 47 1 C 5 X		
					21	12		111			
		114	62	58	21	11		116			
					21	10		115			
		111	61	58	21	12		117			
					22	10		105	31 05		
R--											
R--		116	61	60	21	9		106	K0 25		
12012	11668	65 5		60 500				30010	47166		
					21	14		144			
R--											
R		112	67	62	21	12		125			
					21	12		124			
R--											
		13568		62	21	12		133/RE 20			
					21	15		132			
		133	72	63	21	20		132/FEW CB 10/ 614	1878		
					21	15		132			
		120	76	64	21	12		112/E INVC			
					21	14		131			
		130	79	64	21	15		131			
					21	13		130			
		126	78	60	21	12		130			
12678		65 7		60	21	07	706 30	30006	48066		
					21	11		136	BINOVC		
		119	77	63	21	9		112	BINOVC		
					21	10		128	VARA NE-E		
RW-											
RW-		119	73	66	21	15		128	RB20		
RW-					21	12		128			
		117	74	64	21	11		127	RE45	709	1571
					21	10		126			
		114	70	66	21	14		126			
					21	12		126	BINOVC	RW 4	F-SE
		114	79	66	21	12		126	BINOVC	RW 5	
					21	11		126			
		115	77	64	21	11		126	BINOVC		
12032	11577	6	76	58	6 CB	2		71 CB 26		3 CU	4 1 1 6
					21	9		116	BINOVC		
		115	75	67	21	6		126			
					21	6		127			
		119	73	66	21	6		126			
					21	6		125			
		122	70	66	21	5		127		307	1038
					21	6		129			
		122	70	66	21	6		129			
					21	6		129			
		122	69	65	21	6		129			



PRICE 25 CENTS

NORFOLK

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BASE: Edition of July 1957 Revised Dec. 1961

Detailed airport data and other useful information are printed on the back of this chart.

See Norfolk Local Aeronautical Chart, scale 1:250,000, for additional information.

R-5306-A

ESTRICTED AREA
50 TO FL 550
R-5307

OLF JAX GROVE (NAVY)
27 - 40
(CLOSED)

Pollocksville

Riverdale

Croatan

Arapahoe

Oriental

West Bay

MCAS-CHERRY POINT
29 L 91
(CA DF
323 142.74 340.2

Merrimon

Cedar

OLF ATLANTIC (NAVY)
24 - 35
(CLOSED)

Atlantic

Sealevel

Stacy

Maysville

Belgrade

Cherry Point

MARINE CHERRY POINT
116.1 NKT

North Harlowe

Harlowe

MARINE CHERRY POINT
245 NKT

Church

Newport

Bettie

Williston

Davis

Kellum

BS
WBAS
910
Days
only

Kunos

Silverdale

Wildwood

BEAUFORT MOREHEAD CITY
31 - 42

Smyrna

Midway Park

Straits

Beaufort

Marshallberg

OLF BOGUE (NAVY)
22 - 40
(CLOSED)

Bogue

Ocean

Broad Creek

Hotel

Morehead City

CG 191

Camp Le Jeune

Piney Green

Hubert

Swansboro

WMBL 740
Days only

Salter Path

Harkers Island

Bear Creek

Shackleford Banks

CG 192
Bogue Inlet

Gp Fl

R-5306-C

R-5306-B

CG 190

RBn
CAPE LOOKOUT
312 →···
Carrier
on 1m & off 2m

CAPE LOOKOUT

Camp

Sneads Ferry

New River Inlet

ONSLOW BAY

Ashe I

5°W

ATLANTI

WARNI

W

Warning. Nationa
Operations hazard
conducted within

77°

5° W

30°

30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130

20 | 30 | 40 | 50 | 60 | 70 | 80

etailed airport and other useful information
are printed on the back of this chart.

See the Aeronautical Chart,
scale 1:[illegible] for additional information.

Low Altitude Federal Airways are indicated by center line.

(Enroute) (Alternate)
RED 1 VOR V 3 092° → V 3 E

(Limits are not shown on chart, but are generally five statute miles on either side of line)
(Brackets indicate width and length of non-standard segments.)

Class E airspace airways and controlled airspace which are effective below 14,500 feet MSL are shown on this chart. See legend on back of chart for further details.

Control Area Extension — Underlining indicates aerodrome outside
Control Transition Area — horizontal limits of controlled areas: 1540 L 37

Name of aerodrome may be omitted when same as nearest charted town name.

Aerodrome with hard-surfaced runway at least 1500 feet long is shown by runway pattern.

SOMERSET

COLOR REGISTRATION GUIDE

D
C
R
A1
A2

R-5306-A

West Bay

Swash Inlet

Settlement

Cedar

CLF ATLANTIC (NAVY)
24 - 35
(CLOSED)

Atlantic

Sealevel

Stacy

Davis

Williston

Marshallberg

Gp Fl

CG 190

LOOKOUT

RBn
CAPE LOOKOUT
312 — ·—
Carrier
on 1m & off 2m

ATLANTIC COASTAL AIR DEFENSE IDENTIFICATION ZONE

WARNING AREA
W-122

Warning. National Defense Operating Area
Operations hazardous to the flight of aircraft
conducted within this area

CAR 60.18 as amended effective December 26, 1951, e
from the center of any airport having an operative c
2000 feet above the surface. Unless authorized by air t
area except for landing and taking off at airports wit
control tower operated by the Federal Government, t
during its hours of operation. The same requirement a
Government, if the aircraft has two-way radio capabil
maintained on the appropriate tower frequency. Limit
airports having traffic areas are shown in blue, all oth

Federally operated control tower

DAYTON
1008 L 70
119.5 126.2 257.8

Hours of operation of tower, if not continuous, are

AIRPOR

Non-F

30'

76°

6°W

110 120 130 140 150 160 170 180 190 200 210
60 70 80 90 100 110 120 130
70 80 90 100

COLOR REGISTRATION GUIDE

NOTICE TO USERS OF THIS CHART

You are urgently requested to inform us of corrections and additions that come to your attention while using this chart. When practicable, such information should be indicated clearly and accurately on the chart (a replacement copy will be returned). Mail to: THE DIRECTOR, U.S. COAST AND GEODETIC SURVEY, WASHINGTON 25, D.C.

50TH EDITION Aer
information on t
includes data receiv
FEB. 5, 19
Consult appropriate NO
Flight Information Public
supplemental data and c
formation. Next edition is
in approximately six mon

FICATION ZONE

T L

A

35°

30'

75°

70°W

30'

AIRPORT TRAFFIC AREAS

CAR 60.18 as amended effective December 26, 1961, establishes an airport traffic area within a radius of 5 statute miles from the center of any airport having an operative control tower and extending from the surface to but not including 2000 feet above the surface. Unless authorized by air traffic control, aircraft may not be operated within an airport traffic area except for landing and taking off at airports within that area. While operating in an airport traffic area having a control tower operated by the Federal Government, two way radio communication must be maintained with that tower, during its hours of operation. The same requirement applies where the control tower is operated by other than the Federal Government, if the aircraft has two-way radio capability; if equipment permits reception only, a listening watch must be maintained on the appropriate tower frequency. Limits of airport traffic areas are not shown on this chart. However, all airports having traffic areas are shown in blue, all other airports in magenta, thus:

Federally operated control tower

DAYTON
1008 L 70
119.5 126.2 257.8

Non-Federal control tower

NF
MARTINSBURG
556 L 70
120.6 126.2 236.6

Other Airport (no traffic area)

SOMERSET
1540 L 37

Hours of operation of tower, if not continuous, are included under Remarks in aerodrome directory on back of chart.

7°W

34°

30'

75°

HIGHEST ELEVATION
1549

GROUND ELEVATIONS IN FEET
475
Sea Level

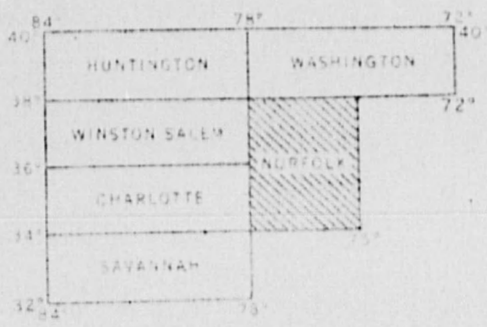
190 200 210 220 230 240 250
100 110 120 130 140
120 130 140 150 160

50TH EDITION Aeronautical information on this chart includes data received through

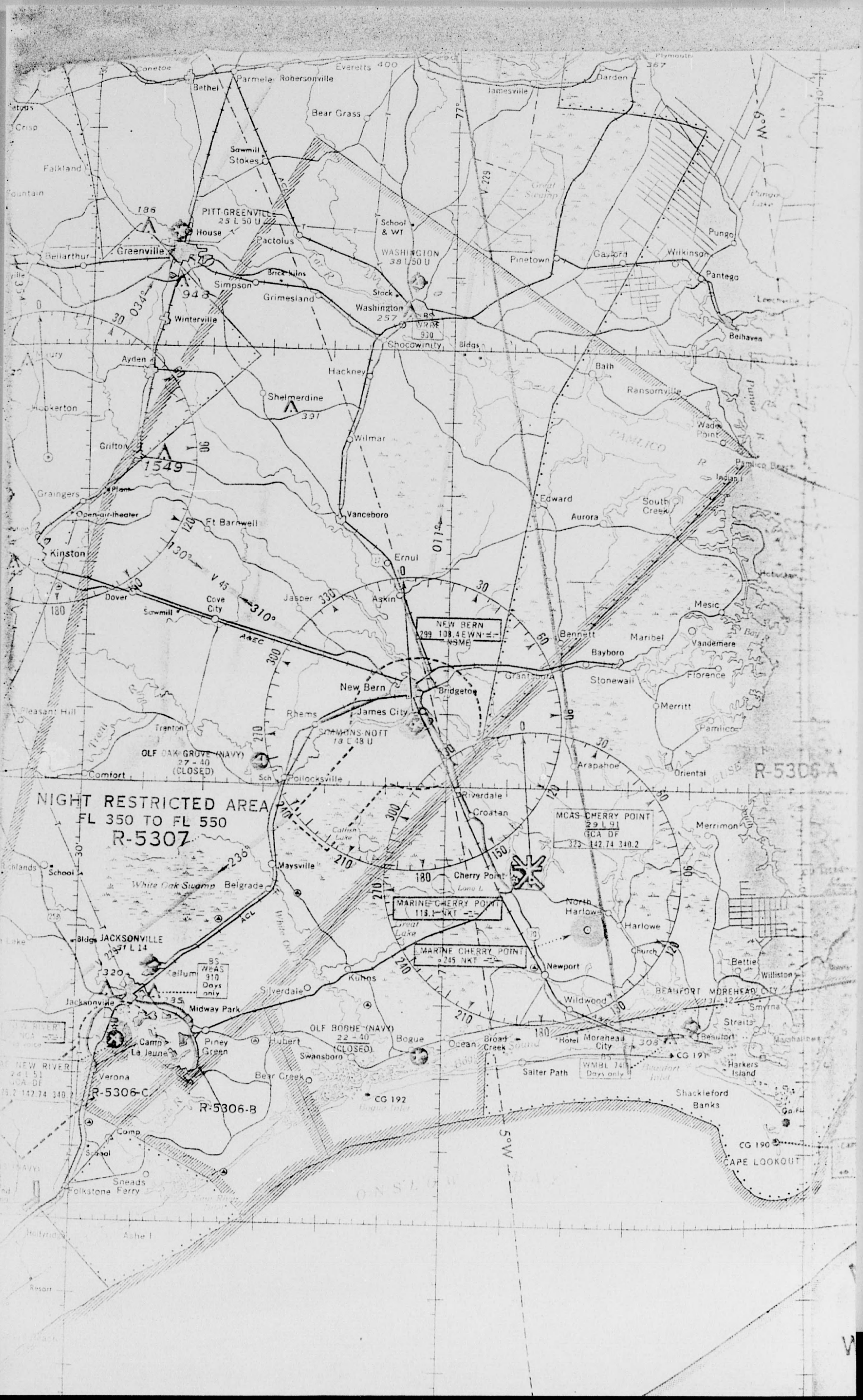
FEB. 5, 1962

Consult appropriate NOTAMS and Flight Information Publications for supplemental data and current information. Next edition is scheduled in approximately six months.

NORFOLK
SECTIONAL AERONAUTICAL CHART



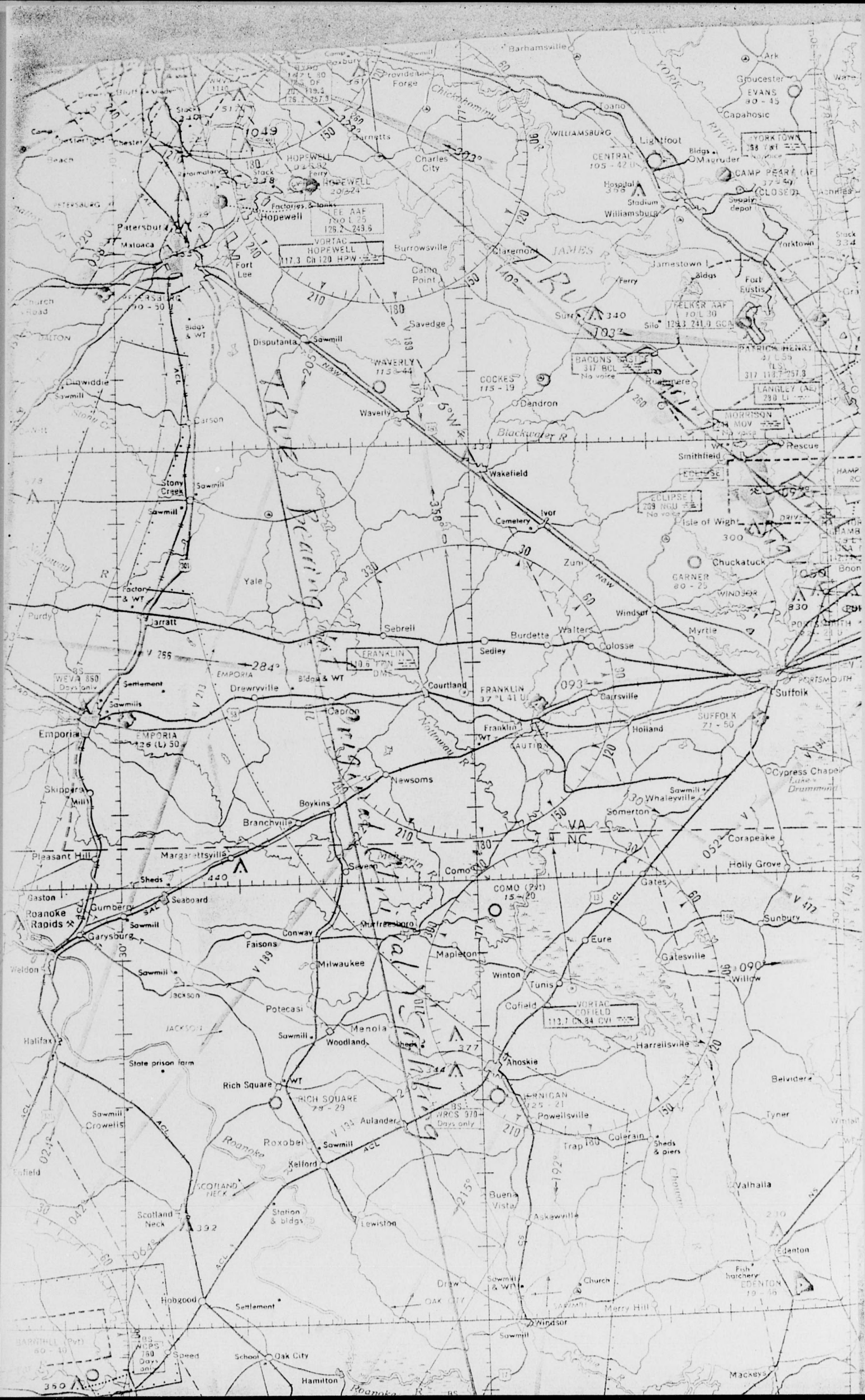
Elm City
WILSON
167 L 45
Bailey
Sims
Wilson
BS
WGTM
590
580
RT
Lucama
School
Black Creek
Stantonsburg
Kenly
Fremont
Eureka
Pikeville
GOLDSBORO
434 L 25 U
VOR
SEYMOUR JOHNSON AFB
116.5 GSB
Goldsboro
Rosewood
BS
WGBR
1150
SEYMOUR
JOHNSON
285 GSB
Newspicel
La Grange
SEYMOUR JOHNSON AFB
109 L 117
126.2 236.6 GCA DF
6100
TO
FL 270
Seven
Springs
Mt Olive
MILITARY CLIMB
CORRIDOR R-5312
Altitude limits
A - 2100 to 15,000
B - 2100 to FL 230
C - 2100 to FL 270
Seymour Johnson Tower
126.2 122.5G
See back of chart for details
Calypso
Bowdens
Pink Hill
GRADY (Pvt)
95 - 20
Warsaw
Kenansville
Magnetic disturbance of as much as 5° exists at ground level between Kenansville and Magnolia
Magnolia
KENANSVILLE
ROSE HILL
(Pvt)
80 - 22
Rose Hill
Charity
Houses
Wallace
WALLACE
37 L 35
Willard
Houses
Watha
Burgaw
St Helena
Curri
Longcreek
Rocky Point
Castle Hayne
Elm City
Pinetops
Macclesfield
Crisp
Falkland
Fountain
Saratoga
Walstonburg
Bellarthur
Farmville
Greenville
Conetoe
Bethel
Parmele
Robersonville
Everetts
Bear Grass
Sawmill
Stokes
PITT-GREENVILLE
25 L 50 U
House
Pactolus
Simpson
Brick Kilns
Grimesland
Winterville
Eureka
Maury
Snow Hill
Hookerton
Ayden
Shelmerdine
Grifton
STALLINGS
93 L 50 U
Graingers
Plant
Open-air-theater
Institution
Kinston
Ft Barnwell
Dover
Cove
City
Sawmill
Jasper
Seven Springs
Deep Run
School
Pleasant Hill
Trenton
OLF OAK GROVE (NAVY)
27 - 40
(CLOSED)
Comfort
Sch
Polloc
NIGHT RESTRICTED AREA
FL 350 TO FL 550
R-5307
Beulaville
Richlands
School
Maysville
White Oak Swamp
Belgrade
Chinquapin
Catherine Lake
Bldgs
JACKSONVILLE
229 L 14
Kellum
BS
WNAS
910
Days
only
Jacksonville
Midway Park
Silverdale
NEW RIVER
356 NCA
No voice
Camp
Le Jeune
Piney
Green
Hubert
Swansboro
OLF BOGUE
22 -
CLOSED
MCAF NEW RIVER
24 L 51
GCA-DF
375 126.2 142.74 340.2
Verona
Bear Creek
R-5306-C
R-5306-B
Camp
School
Sneads
Folkstone Ferry
OLF CAMP DAVIS (NAVY)
60 - 55
(CLOSED)
Abandoned
Camp
Hollyridge
Ashe I
Resort
Topsail
Hampstead
New Topsail Beach
VORTAC
WILMINGTON
363 112.0 Ch 117 ILM
NSM
Maple
Hill
Angola
Swamp
Northeast Cape Fear R
Trent
Neuse R
White Oak
To Raleigh-Durham
(Joins Charlotte)
To Myrtle Beach
(Joins Charlotte)
117.2 Ch 119 RDU
116.0 MYR


Canetoe
Bethel
Parmele
Robersonville
Everetts
400
Plymouth
367
Jamesville
Darden
Bear Grass
Crisp
Falkland
Fountain
Sawmill
Stokes
186
PITT-GREENVILLE
25 L 50 U
House
School
& WT
Pactolus
Greenville
Bellarthur
WASHINGTON
38 L 50 U
Pinetown
Gaylord
Wilkinson
Pungo
Pantego
Brick Kilns
Simpson
Grimesland
Stock
Washington
257
WRNC
930
Winterville
Belhaven
Chocowinity
Bldgs
Ayden
Hackney
Bath
Ransomville
Shelmerdine
391
Wilmar
Grifton
1549
Wades Point
PAMLICO R
Pamlico Beach
Indian
Graingers
Plant
Open-air-theater
Ft Barnwell
Vanceboro
Edward
Aurora
South Creek
Kinston
Ernul
Dover
Cove City
Sawmill
Jasper
Askin
NEW BERN
299 108.4 EWN
NSME
Mesic
Maribel
Vandemere
Bennett
Bayboro
Florence
Stonewall
Grantsboro
New Bern
Bridgeton
James City
Rhems
Merritt
Pamlico
Trenton
SEYMOUR JOHNSON AFB
18 L 48 U
OLF OAK GROVE (NAVY)
27 - 40
(CLOSED)
Comfort
Pollocksville
Arapahoe
Oriental
R-5306-A
Riverdale
Croatan
NIGHT RESTRICTED AREA
FL 350 TO FL 550
R-5307
MCAS CHERRY POINT
29 L 91
GCA DF
323 142.74 340.2
Merrimon
Maysville
Belgrade
White Oak Swamp
Cherry Point
MARINE CHERRY POINT
115.1 NKT
MARINE CHERRY POINT
245 NKT
North Harlowe
Harlowe
Church
Newport
Bettie
Williston
JACKSONVILLE
31 L 14
Kellum
BS
WRAS
910
Days
only
Kuhns
Silverdale
Wildwood
BEAUFORT MOREHEAD CITY
131 - 42
Smyrna
Straits
Jacksonville
Midway Park
Camp
Le Jeune
Piney
Green
OLF BOGUE (NAVY)
22 - 40
(CLOSED)
Hubert
Bogue
Ocean
Broad
Creek
Hotel
Morehead
City
Beaufort
CG 191
Swansboro
Salter Path
WMBL 74
Days only
Harkers
Island
Verona
Bear Creek
R-5306-C
R-5306-B
CG 192
Shackleford
Banks
Camp
School
Sneads
Ferry
Folkstone
CG 190
CAPE LOOKOUT
Ashe I
Resort
77°
76°
75°
5°W
6°W

Houses
Houses
Houses

Wanchese
Go Fl
Bldgs
Oregon Inlet
CG 176
Stumpy Point
Tower
Rodanthe
Long Shoal Pt
R-5313
Waves
Salvo
Gull I
Avon
Tower
Buxton
Fl
BILLY MITCHELL
15 - 24
Frisco
CG 183
312
Hatteras
CAPE HATTERAS
CG 186
Hatteras Inlet
Occ
RBn
DIAMOND SHOAL
312 — · —
Carrier
on 1m & off 2m
CONTROL AREA 1181
IDENTIFICATION ZONE
75°
30'
35°
7°W

TRUE Bearing


Barhamsville
Camp Roxbury
Providence Forge
Chickahominy
YORK
RIVER
Ark
Gloucester
EVANS
80 - 45
Capahosic
Toano
WILLIAMSBURG
Lightfoot
CENTRAL
105 - 42 U
Bldgs
Magruder
YORKTOWN
Hospital
356
Stadium
Williamsburg
CAMP PEARY (AF)
CLOSED
Supply depot
Achilles
Yorktown
Stack
334
Charles City
Barnetts
HOPEWELL
Ferry
Factories & tanks
Hopewell
LEE AAF
Burrowsville
Claremont
JAMES R.
Jamestown I.
Ferry
Fort Eustis
Fort Lee
Cabin Point
Savedge
Disputanta
Sawmill
Bldgs & WT
Church
Road
DALTON
Petersburg
Matoaca
Chester
Beach
Stack
338
Factories
Stack
Sunoco
Silo
FELKER AAF
PATRICK HENRY
LANGLEY (AF)
MORRISON
Rescue
Smithfield
Isle of Wight
Chuckatuck
GARNER
80 - 25
WINDSOR
Windsor
Myrtle
Colosse
Walters
Burdette
Sebrell
Sedley
Courtland
Suffolk
Carrsville
Holland
SUFFOLK
71 - 50
PORTSMOUTH
Waverly
COCKES
115 - 19
Dendron
Blackwater R.
Wakefield
Ivor
Cemetery
Zuni
Dinwiddie
Sawmill
Carson
Stony Creek
Yale
Factory & WT
Purdy
Jarratt
Emporia
EMPORIA
26 (L) 50
Skippers Mill
Newsoms
Boykins
Branchville
Margarettsville
Pleasant Hill
Sheds
Seaboard
Gumberry
Garysburg
Roanoke Rapids
Gaston
Weldon
Halifax
Jackson
Potecasi
Menola
Woodland
Sawmill
Conway
Faisons
Milwaukee
Murfreesboro
Mapleton
Winton
Tunis
Cofield
VORTAC
COFIELD
113.7 CVI
Eure
Gatesville
Willow
Cypress Chapel
Lake Drummond
Whaleyville
Somerton
Corapeake
Holly Grove
Gates
Sunbury
COMO (Pvt)
15 - 20
Harrellsville
Ahoskie
Rich Square
RICH SQUARE
79 - 29
Aulander
Roxobel
Kelford
Sawmill
Crowells
Enfield
SCOTLAND NECK
Scotland Neck
Station & bldgs
Lewiston
Hobgood
Settlement
Speed
School
Oak City
Hamilton
Roanoke R.
Buena Vista
Askewville
Drew
Sawmill & WT
Church
Windsor
Merry Hill
Powellsville
Trap
Colerain
Sheds & piers
Belvidere
Tyner
Valhalla
Edenton
Fish hatchery
EDENTON
19 - 46
Mackeys
Chowan
Perquimans
Stony Creek
Nottoway R.
Meherrin R.
Blackwater R.
Roanoke
Chickahominy
Waverly
WAVERLY
115 - 44
Wakefield
Ivor
Suffolk
Franklin
FRANKLIN
37 °L 41 U
FRANKLIN
10.6 FDN
DME
Courtland
Drewryville
Capron
Sebrell
Burdette
Sedley
Colosse
Myrtle
Windsor
Zuni
Isle of Wight
Chuckatuck
Yorktown
Jamestown I.
Ferry
Fort Eustis
Williamsburg
Lightfoot
Toano
Capahosic
Gloucester
Ark
Barhamsville
Providence Forge
Charles City
Barnetts
Hopewell
Petersburg
Matoaca
Fort Lee
Burrowsville
Claremont
Savedge
Disputanta
Sawmill
Waverly
Wakefield
Ivor
Zuni
Suffolk
Holland
Carrsville
Dendron
Rescue
Smithfield
Isle of Wight
Chuckatuck
Windsor
Myrtle
Colosse
Walters
Burdette
Sebrell
Sedley
Courtland
Drewryville
Capron
Emporia
Skippers Mill
Newsoms
Boykins
Branchville
Margarettsville
Pleasant Hill
Sheds
Seaboard
Gumberry
Garysburg
Roanoke Rapids
Gaston
Weldon
Halifax
Jackson
Potecasi
Menola
Woodland
Sawmill
Conway
Faisons
Milwaukee
Murfreesboro
Mapleton
Winton
Tunis
Cofield
Eure
Gatesville
Willow
Cypress Chapel
Whaleyville
Somerton
Corapeake
Holly Grove
Gates
Sunbury
Harrellsville
Ahoskie
Rich Square
Aulander
Roxobel
Kelford
Sawmill
Crowells
Enfield
Scotland Neck
Station & bldgs
Lewiston
Hobgood
Settlement
Speed
School
Oak City
Hamilton
Roanoke R.
Buena Vista
Askewville
Drew
Sawmill & WT
Church
Windsor
Merry Hill
Powellsville
Trap
Colerain
Sheds & piers
Belvidere
Tyner
Valhalla
Edenton
Fish hatchery
Mackeys
Chowan
Perquimans
Stony Creek
Nottoway R.
Meherrin R.
Blackwater R.
Roanoke
Chickahominy
Waverly
Wakefield
Ivor
Suffolk
Holland
Carrsville
Dendron
Rescue
Smithfield
Isle of Wight
Chuckatuck
Windsor
Myrtle
Colosse
Walters
Burdette
Sebrell
Sedley
Courtland
Drewryville
Capron
Emporia
Skippers Mill
Newsoms
Boykins
Branchville
Margarettsville
Pleasant Hill
Sheds
Seaboard
Gumberry
Garysburg
Roanoke Rapids
Gaston
Weldon
Halifax
Jackson
Potecasi
Menola
Woodland
Sawmill
Conway
Faisons
Milwaukee
Murfreesboro
Mapleton
Winton
Tunis
Cofield
Eure
Gatesville
Willow
Cypress Chapel
Whaleyville
Somerton
Corapeake
Holly Grove
Gates
Sunbury
Harrellsville
Ahoskie
Rich Square
Aulander
Roxobel
Kelford
Sawmill
Crowells
Enfield
Scotland Neck
Station & bldgs
Lewiston
Hobgood
Settlement
Speed
School
Oak City
Hamilton
Roanoke R.
Buena Vista
Askewville
Drew
Sawmill & WT
Church
Windsor
Merry Hill
Powellsville
Trap
Colerain
Sheds & piers
Belvidere
Tyner
Valhalla
Edenton
Fish hatchery
Mackeys
Chowan
Perquimans
Stony Creek
Nottoway R.
Meherrin R.
Blackwater R.
Roanoke
Chickahominy

MILITARY CLIMB
CORRIDOR R-6610
Altitude limits
2000 to 15,000
2000 to FL 240
Langley A/C
26.2 122.5G 236.6
See back of chart for details

CAPE CHARLES
112.2 Ch 59 CCV

LANGLEY AFB
112.2

CAPE CHARLES
290
No voice
Gp Fl (R Sector)

NAVY NORFOLK
269 NGU

FORT STORY
AUX AAF
15 - 19

NAS OCEANA
20 L 120
GCA DF
142.74 340.2

NORFOLK
26 L 50
(ES) DF
388 121.1 257.8

NAVY FENTRESS
356 174.9 NTU
No voice on 356

ELIZABETH CITY
108.4 CG

CGAS ELIZABETH CITY
109.2 L S 160

ELIZABETH CITY (NAVY)
07 - 12
(CLOSED)

WOODVILLE (Pvt)
15 - 18

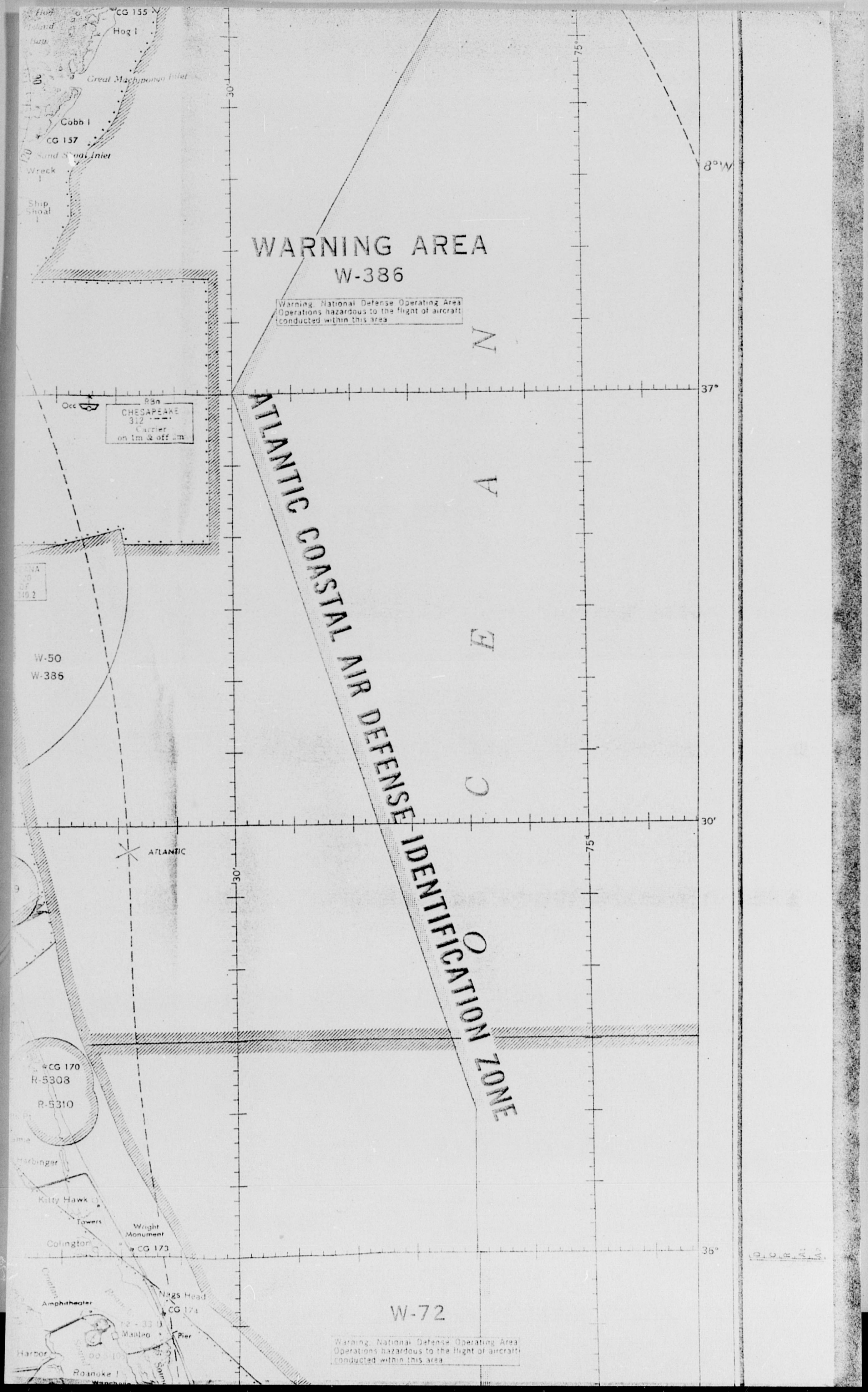
NAS NORFOLK
(BREEZY POINT)
00 L 123
3053 142.74

NORFOLK
(CHAMBERS)
15 L 63
DF

CAPE CHARLES
Cape Charles A
GOFFIGON (Pvt)
35 - 73

NEWPORT NEWS
HAMPTON ROADS
PORTSMOUTH
SOUTH NORFOLK
20 - 32
VIRGINIA BEACH
CAPE HENRY
NORFOLK
CHESAPEAKE
SUFFOLK
DISMAL SWAMP
CURRITUCK
ELIZABETH CITY
CAMDEN
KITTY HAWK
COLINGTON
MANNS HARBOR
EAST LAKE
FORT LANDING
DURANT I

R-6606
R-5309
R-5308
R-5310
R-5301
R-5302
R-5304
R-5305
W-50
W-386



WARNING AREA
W-386
Warning, National Defense Operating Area
Operations hazardous to the flight of aircraft
conducted within this area
ATLANTIC COASTAL AIR DEFENSE IDENTIFICATION ZONE
CG 155
Hog I
Great Machipongo Inlet
Cobb I
CG 157
Sand Shoal Inlet
Wreck I
Ship Shoal I
Occ
RBn
CHESAPEAKE
312
Carrier
on 1m & off 2m
W-50
W-386
ATLANTIC
CG 170
R-5308
R-5310
Harbinger
Kitty Hawk
Towers
Wright Monument
Colington
CG 173
Nags Head
CG 174
Amphitheater
Manteo
Pier
Harbor
Roanoke I
W-72
Warning, National Defense Operating Area
Operations hazardous to the flight of aircraft
conducted within this area
8°W
37°
30'
36°
75°

NORFOLK

ELEVATIONS

(Joins Huntington)

(Joins Winston-Salem)

Statute Miles 10 0 10 20 30

Nautical Miles 10 0 10 20 30

78° 6°W

To Brooke

To Quantico (Joins Washington)

30'

38°

30'

37°

5°W

111.8 Ch 55 BRV

251 NYG

R-6601 AP HILL AAF NO 1 208 - 21

VORTAC GORDONSVILLE 115.3 Ch 100 GVE NSME

MANAKIN ANNV No voice

VORTAC FAT ROCK 112.1 Ch 59 FAK NSME

VIRGINIA STATE POLICE 300 - 18

RICHMOND 430 650 1049

PLAINVIEW 400 - 16 U

DALTON 400 - 22

PETERSBURG 150 - 50 U

HILLTOP 250 - 22

TARNELL 120 - 27 U

NORTHFIELD 97 L 24 U

RICHMOND VA 160 RC 114 RIC

BYRD 167 L 80 DS DF 20 119.6 126.2 257.8

HOPEWELL 73 S 92

HOPEWELL 20/24

LEE AAF 100 L 25 126.2 249.6

VORTAC HOPEWELL 117.3 Ch 120 HPW

BLACKSTONE AAF 436 L 52

BLACKSTONE 326 BKT

LAWRENCEVILLE 112.3 LVL NSME

WEVA 360

Camp Pickett R-6602

Louisa
Mineral
Sawmills
Mill
Partlow
Ladysmith
Milford
Rowling Green
Golansville
Lauraville
Shumansville
Baggy
Point Eastern
Beulahville
Mangohick
Epworth
Midway
Manquin
Institution
Sawmill Hanover Institution
Peaks Turnout
Ashland
Elmont
Glenallen
Biltmore
Laurel
Ellerson
Mechanicsville
Highland Springs
Sandston
MEADOW
Ruther Glen
Coatsville
Jones Corner
Montpelier Sawmill
Buckner
Beaverdam
Sowmill
Hewlett
BEAVERDAM
Ferncliff
Vigor
Caledonia
Columbia
Fife
Gum Spring
Perkinsville
ROCKVILLE
Dilville
Goochland
Three Square
Crozier
WT
Bldgs
Trenholm
Mohemecco
Powhatan
Belona
Macon
Jones R
Dam
Bon Air
Moseley
Skinquarter
Chula
Amelia
Winterpock
Camp Chesterfield Beach
Chester
Drewrys Bluff
Shads
Factory & stacks
Stacks 240
Reformatory 275
Stack 318
Factories & tanks
Hopewell
Ferry
Petersburg 375
Matoaca
Fort Lee
Bldgs & WT
Disputanta
Sawmill
Jetersville
AMELIA
Appomattox R
PETERSBURG
Mannboro
Earls
Jennings Ordinary
Crewe
DALTON
Hebron
Wilsons
Ford
Church Road
Wellville
Nottoway
Blackstone
The Falls
Dinwiddie
Sawmill
McKENNEY
DeWitt
Carson
Stony Creek
Sawmill
Sawmill
McKenney
Kenbridge
Dunda
Alberta
Nottoway R
Factory & WT
Yale
Jarratt
Purdy
Edgerton
Lawrenceville
South Hill
Blackstone
Appomattox R
James R
Meherrin R
Roanoke R

ELEVATIONS IN FEET

R-6601
CAMP A.P. HILL AAF NO 1
208 - 21

Prior ATC approval required before entering controlled airspace within R-6601

RICHMOND
RICHMOND (VA)
260 RC 114 T RIC

MANAKIN
MNV
No voice

FREDERICKSBURG
275 FAT
No voice

TAPPAHANNOCK
275 TPP
No voice

NORTHFIELD
97 L 24 U

VIRGINIA STATE POLICE
300 - 18

FARNELL
135 - 27 U

BYRD
167 L 80
126.2 257.3

HOPEWELL
93.5 82

HOPEWELL
20/24

LEE AAF
130 L 25
126.2 249.6

VORTAC
HOPEWELL
117.3 Ch 120 HPW

PETERSBURG
90 - 50 U

NEW KENT CO
161 - 30

CENTRAL
105 - 42 U

YORKTOWN
388 YKT
No voice

CAMP PEARY (AF
37 - 50
(CLOSED)

PELKER AAF
10 L 30
126.3 241.0 GCA

BACONS CASTLE
347 BCL
No voice

PATRICK HENRY
47 L 56
ILS
317 118.7 257.8

LANGLEY (AF
280 LF

MORRISON
278 MOV
No voice

ECLIPSE
209 NGU
No voice

WEST POINT
24 *L 50

FRANKLIN
110.6 FAN

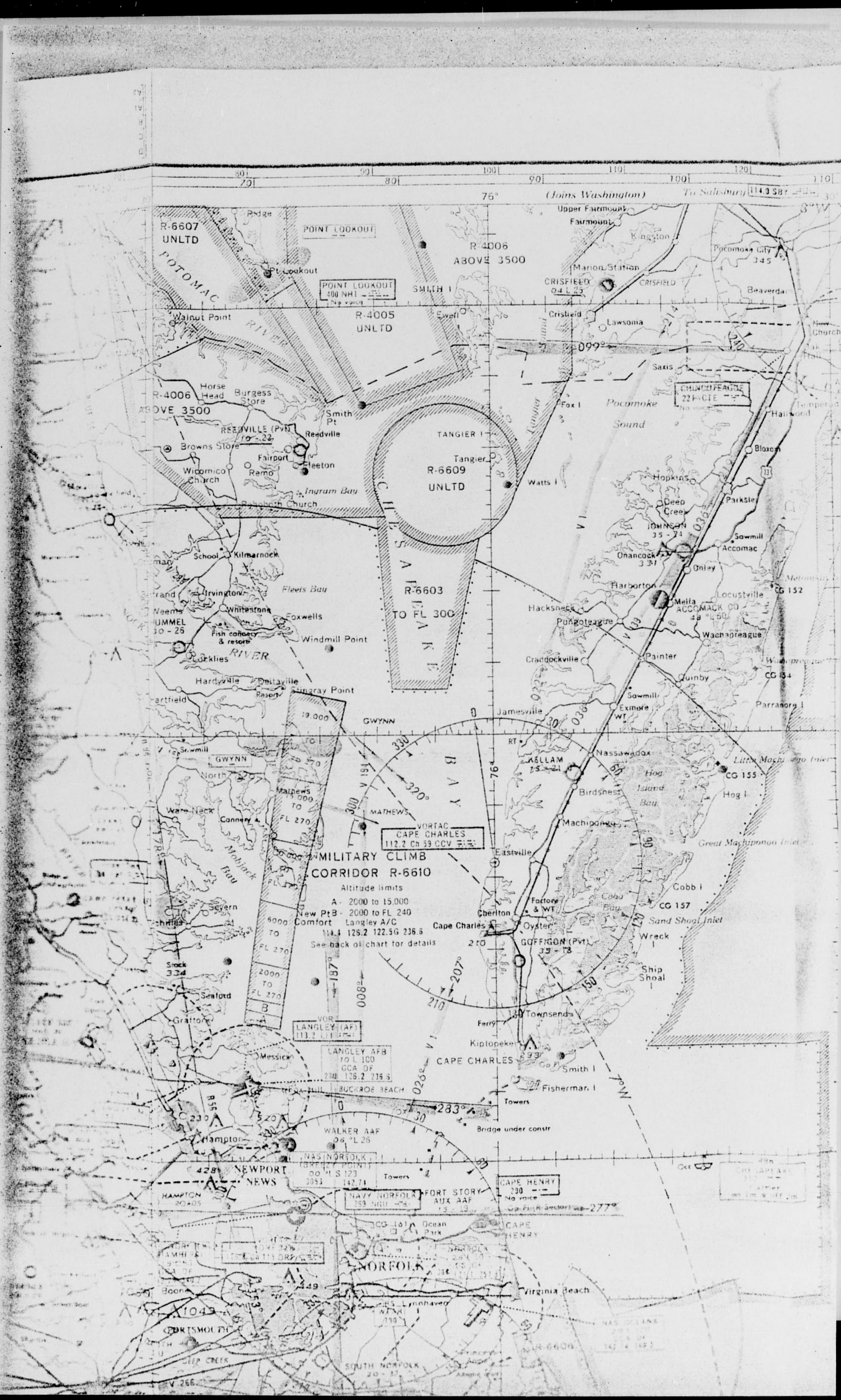
WAVERLY
115 - 44

COCKES
115 - 19

GARNER
80 - 25

EVANS
80 - 45

Leedstown
Montross
Mt Holly
Sawmill
Templeman
Hague
Westmoreland
Oldhams
Kinsale
Hustle
Bowling Green
Milford
Port Royal
Golansville
Central Point
Lauraville
Snumanville
Bagby
Newtown
Owenton
Ruther Glen
Point Eastern
Beulahville
Mangohick
Epworth
Sawmill
Hanover
Institution
Ashland
Peaks Turnout
Midway
Rumford
Manquin
Elmont
Glen Allen
Biltmore
Laurel
Ellerson
Mechanicsville
Hazeland Springs
Sandston
MEADOW
Bon Air
Dam
Coatsville
Beaverdam
Sawmill
Tappahannock
Abond arpt
Warsaw
440
Haynesville
Callao
Village
Lottsburg
Wellford
Farnham
Dunnsville
Millers Tavern
Center Cross
Montague
314
Ino
Fish hatchery
Stevensville
Dragonville
Waterview
Church View
Truhart
Warner
Urbanna
Mascot
Saluda
Sweet Hall
Romancoke
Elsom
Port Richmond
West Point
Oak
Cologne
Plain View
Gressitt
Barhamsville
Ark
Gloucester
Capahosic
Toano
Lightfoot
Bldgs
Magruder
Hospitol
366
Stadium
Williamsburg
Supply depot
Yorktown
Jamestown I
Ferry
Fort Eustis
Silo
Providence Forge
Barnetts
Charles City
Burrowsville
Cabin Point
Savedge
Disputanta
Sawmill
Camp Roxbury
Sawmill
Chesterfield
Chester
Beach
Reformatory
Stack
Ferry
Factories & tanks
Hopewell
Petersburg
Matoaca
Fort Lee
Church Road
DALTON
Bldgs & WT
Drewry Bluff
Shads
Stacks
Factory & stacks
Camp
Dinwiddie
Sawmill
DeWitt
Carson
Stony Creek
Sawmill
Sawmill
Yale
Factory & WT
Jarratt
Sebrell
Waverly
Sedley
Burdette
Walters
Colosse
Myrtle
Windsor
Zuni
Chuckatuck
Isle of Wight
Cemetery
Ivor
Wakefield
Rescue
Smithfield
Dendron
Rustemere
Blackwater R
Nottoway R
Meherrin R
Appomattox R
Chickahominy R
York River
James R
Pamunkey R
Mattaponi R
Rappahannock
SOU RR
NAW RR
ACL
SAL
RF&P
BAGBY
BEAVERDAM
PETERSBURG
DALTON
WHITEHOUSE
JAMES R
Sunken
Silo
Saluda
Urbanna
Mascot
Warner
Truhart
Church View
Waterview
Dragonville
Stevensville
Rumford
Manquin
Midway
Sawmill
Epworth
Mangohick
Beulahville
Point Eastern
Owenton
Newtown
Bagby
Snumanville
Lauraville
Central Point
Golansville
Milford
Bowling Green
Hustle
Leedstown
Montross
Sawmill
Templeman
Hague
Westmoreland
Oldhams
Kinsale
Mt Holly
Parrish
Coatsville
Sawmill
Ruther Glen
Ashland
Elmont
Peaks Turnout
Institution
Glen Allen
Biltmore
Laurel
Ellerson
Mechanicsville
Hazeland Springs
Sandston
MEADOW
Bon Air
Dam
Beaverdam
Sawmill
Tappahannock
Abond arpt
Warsaw
440
Haynesville
Callao
Village
Lottsburg
Wellford
Farnham
Dunnsville
Millers Tavern
Center Cross
Montague
314
Ino
Fish hatchery
Stevensville
Dragonville
Waterview
Church View
Truhart
Warner
Urbanna
Mascot
Saluda
Sweet Hall
Romancoke
Elsom
Port Richmond
West Point
Oak
Cologne
Plain View
Gressitt
Barhamsville
Ark
Gloucester
Capahosic
Toano
Lightfoot
Bldgs
Magruder
Hospitol
366
Stadium
Williamsburg
Supply depot
Yorktown
Jamestown I
Ferry
Fort Eustis
Silo
Providence Forge
Barnetts
Charles City
Burrowsville
Cabin Point
Savedge
Disputanta
Sawmill
Camp Roxbury
Sawmill
Chesterfield
Chester
Beach
Reformatory
Stack
Ferry
Factories & tanks
Hopewell
Petersburg
Matoaca
Fort Lee
Church Road
DALTON
Bldgs & WT
Drewry Bluff
Shads
Stacks
Factory & stacks
Camp
Dinwiddie
Sawmill
DeWitt
Carson
Stony Creek
Sawmill
Sawmill
Yale
Factory & WT
Jarratt
Sebrell
Waverly
Sedley
Burdette
Walters
Colosse
Myrtle
Windsor
Zuni
Chuckatuck
Isle of Wight
Cemetery
Ivor
Wakefield
Rescue
Smithfield
Dendron
Rustemere
Blackwater R
Nottoway R
Meherrin R
Appomattox R
Chickahominy R
York River
James R
Pamunkey R
Mattaponi R
Rappahannock
SOU RR
NAW RR
ACL
SAL
RF&P
BAGBY
BEAVERDAM
PETERSBURG
DALTON
WHITEHOUSE
JAMES R
Sunken
Silo


R-6607
UNLTD
POINT LOOKOUT
POTOMAC
RIVER
Pt Lookout
POINT LOOKOUT
400 NHI
SMITH I
R-4006
ABOVE 3500
R-4005
UNLTD
Walnut Point
Everl
Cristield
Lawsonia
Upper Fairmount
Fairmount
Kingston
Marion Station
CRISFIELD
CRISFIELD
04 L 25
Pocomoke City
345
Beaverdam
New Church
To Salisbury
114.0 SBY
(Joins Washington)
076°
099°
214
240
Saxis
CHINCOTEAGUE
229 CTE
No voice
Fox I
Pocomoke
Sound
Hallwood
Temperanceville
Horse
Head
R-4006
ABOVE 3500
Burgess
Store
Smith
Pt
REEDVILLE (Pvt)
10 - 22
Reedville
Browns Store
Fairport
Fleeton
Wicomico
Church
Remo
Ingram Bay
Pungoteague Church
TANGIER I
Tangier
R-6609
UNLTD
Watts I
Langley
Sound
Bloxom
Hopkins
Deep
Creek
JOHNSON
35 - 24
Parksley
Sawmill
Accomac
Onancock
331
Onley
Harborton
Melfa
ACCOMACK CO
48 °L 50
Locustville
CG 152
Hacksneck
Pungoteague
Wachapreague
Painter
Craddockville
Quinby
CG 154
Parramore I
Sawmill
Eximore
WT
Jamesville
Nassawadox
Little Machipongo Inlet
CG 155
Hog I
Hog
Island
Bay
Birdsnest
Machipongo
Great Machipongo Inlet
Eastville
MELLAM
25 - 21
Cobb I
CG 157
Sand Shoal Inlet
Wreck
I
Ship
Shoal
Factory
& WT
Cherlton
Oyster
Cape Charles
GOFFIGON (Pvt)
35 - 18
Townsend
Ferry
Kiptopeke
CAPE CHARLES
Smith I
Fisherman I
Towers
Bridge under constr
283°
277°
Schools
Irvington
Kilmarnock
Fleets Bay
Whitestone
Foxwells
Windmill Point
Fish canning
& resort
RIVER
Hardyville
Deltaville
Stingray Point
Rasco
Sawmill
GWYNN
North
Ware Neck
Cannery
Mobjack
Bay
Severn
Stock
334
Seaford
Gratton
Messick
Mathews
MATHEWS
VORTAC
CAPE CHARLES
112.2 Ch 59 CCV
MILITARY CLIMB
CORRIDOR R-6610
Altitude limits
A - 2000 to 15,000
B - 2000 to FL 240
Langley A/C
126.2 122.5G 236.6
See back of chart for details
New Pt Comfort
VOR
LANGLEY (AF)
113.2
LANGLEY AFB
10 L 100
GCA OF
126.2 236.6
BUCKROE BEACH
WALKER AAF
06 °L 26
NAS NORFOLK
(BREEZY POINT)
00 °L S 123
3053
142.7
NAVY NORFOLK
269 NGU
FORT STORY
AUX AAF
15 - 19
CAPE HENRY
230
No voice
CG 161
Ocean
Park
CAPE
HENRY
NEWPORT
NEWS
HAMPTON
ROADS
NORFOLK
Virginia Beach
PORTSMOUTH
DEEP CREEK
SOUTH NORFOLK
Boone
Hampton
Chesapeake Bay
Cape Henry
Cape Charles
Cobb Bay
Machipongo
Hog Island Bay
Pocomoke Sound
Tangier Sound
Fleets Bay
Ingram Bay
Mobjack Bay
Great Machipongo Inlet
Little Machipongo Inlet
Sand Shoal Inlet
Wreck I
Ship Shoal
Cobb I
Hog I
Parramore I
Fisherman I
Smith I
Watts I
Fox I
TANGIER I
SMITH I
Walnut Point
Pt Lookout
Ridge
Everl
Cristield
Lawsonia
Saxis
Fairmount
Kingston
Marion Station
Pocomoke City
Beaverdam
New Church
Hallwood
Bloxom
Parksley
Onancock
Onley
Accomac
Sawmill
Harborton
Melfa
Locustville
Hacksneck
Pungoteague
Wachapreague
Painter
Craddockville
Quinby
Sawmill
Eximore
Jamesville
Nassawadox
Birdsnest
Machipongo
Eastville
Cherlton
Oyster
Factory
Cape Charles
Townsend
Ferry
Kiptopeke
Towers
Bridge under constr
Irvington
Kilmarnock
Whitestone
Foxwells
Windmill Point
Fish canning
& resort
Hardyville
Deltaville
Stingray Point
Rasco
Sawmill
GWYNN
North
Ware Neck
Cannery
Severn
Stock
Seaford
Gratton
Messick
Mathews
Horse
Head
Burgess
Store
Smith
Pt
Reedville
Browns Store
Fairport
Fleeton
Wicomico
Church
Remo
Pungoteague Church
Deep
Creek
Schools
Hampton
Boone
PORTSMOUTH
DEEP CREEK
SOUTH NORFOLK
NEWPORT
NEWS
HAMPTON
ROADS
NORFOLK
Virginia Beach
Ocean
Park
CAPE
HENRY
Cape Henry
Cape Charles
Chesapeake Bay
Cobb Bay
Machipongo
Hog Island Bay
Pocomoke Sound
Tangier Sound
Fleets Bay
Ingram Bay
Mobjack Bay
Great Machipongo Inlet
Little Machipongo Inlet
Sand Shoal Inlet
Wreck I
Ship Shoal
Cobb I
Hog I
Parramore I
Fisherman I
Smith I
Watts I
Fox I
TANGIER I
SMITH I
Walnut Point
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Ridge
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Cristield
Lawsonia
Saxis
Fairmount
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New Church
Hallwood
Bloxom
Parksley
Onancock
Onley
Accomac
Sawmill
Harborton
Melfa
Locustville
Hacksneck
Pungoteague
Wachapreague
Painter
Craddockville
Quinby
Sawmill
Eximore
Jamesville
Nassawadox
Birdsnest
Machipongo
Eastville
Cherlton
Oyster
Factory
Cape Charles
Townsend
Ferry
Kiptopeke
Towers
Bridge under constr
Irvington
Kilmarnock
Whitestone
Foxwells
Windmill Point
Fish canning
& resort
Hardyville
Deltaville
Stingray Point
Rasco
Sawmill
GWYNN
North
Ware Neck
Cannery
Severn
Stock
Seaford
Gratton
Messick
Mathews
Horse
Head
Burgess
Store
Smith
Pt
Reedville
Browns Store
Fairport
Fleeton
Wicomico
Church
Remo
Pungoteague Church
Deep
Creek
Schools
Hampton
Boone
PORTSMOUTH
DEEP CREEK
SOUTH NORFOLK
NEWPORT
NEWS
HAMPTON
ROADS
NORFOLK
Virginia Beach
Ocean
Park
CAPE
HENRY
Cape Henry
Cape Charles
Chesapeake Bay
Cobb Bay
Machipongo
Hog Island Bay
Pocomoke Sound
Tangier Sound
Fleets Bay
Ingram Bay
Mobjack Bay
Great Machipongo Inlet
Little Machipongo Inlet
Sand Shoal Inlet
Wreck I
Ship Shoal
Cobb I
Hog I
Parramore I
Fisherman I
Smith I
Watts I
Fox I
TANGIER I
SMITH I

NORFOLK

Lambert Conformal Conic Projection Standard Parallels 33° and 45° Scale 1:500,000

(Joins Washington)

To Salisbury 114.0 SBY

Girdletree

SNOW HILL 116.8 SHL

Pocomoke City 345

Stockton

Greenbackville

MD / VA

Beaverdam

Kingston

CRISFIELD

New Church

Oak Hall

NASA WALLOPS STATION
38 L 80
Prior approval required

279°

Saxis

CHINCOTEAGUE 22 ICE
No voice

Chincoteague

Gp Fl

Atlantic

Temperanceville

Hallwood

CG 150

R-6604

264

Bloxom

Wallops I

Hopkins

Deep Creek

Parksley

JOHNSON 35 - 24

Sawmill

Accomac

Onley

Onancock 331

Metomkin Inlet

CG 152

Locustville

Melfa

ACCOMACK CO 48 L 50

Wachapreague

Painter

Wachapreague Inlet

CG 154

Quinby

Sawmill

Exmore

Parramore I

Little Machipongo Inlet

CG 155

Hog I

Great Machipongo Inlet

Cobb I

CG 157

Sand Shoal Inlet

Wreck I

Ship Shoal I

W-108

Warning. National Defense Operating Area
Operations hazardous to the flight of aircraft
conducted within this area

WARNING AREA
W-386

Warning. National Defense Operating Area
Operations hazardous to the flight of aircraft
conducted within this area

RBn
CHESAPEAKE
312
Carrier
on 1m & off 2m

ATLANTIC COASTAL

100 120 110 130 120 140 130 150 140 160

75° 30' 38° 30' 75° 8°W 37°

AERODROMES - NORFOLK SECTIONAL CHART

NAME	LAT. LONG.	ELEV.	RUNWAYS			FACILITIES			REMARKS
			NO.	LONGEST	SURFACE	FUEL	REPAIRS	LIGHTING	
Accomack Co. Municipal	37°39'-75°46'	48	1	5000	Concrete			2000' N end on prior request	5000' of runway available. 2000' of S end closed
OLF Atlantic (Navy)	34°53'-76°21'	24	3	3500	Asphalt				Closed. OLF to MCAS Cherry Point
Barnhill	35°57'-77°33'	60	1	4000	Turf				Private. Pole line W. Trees E
Beaufort-Morehead City	34°44'-76°40'	13	3	4252	Bituminous	80,91			
Billy Mitchell (Hatteras)	35°14'-75°37'	15	1	2400	Asphalt				
Blackstone AAF	37°04'-77°57'	436	4	5240	Concrete			Beacon & rnwy. on prior request	Attd. 24 hrs. Caution: Freq. parachuting & sky diving. Rnwys. 3/21, 8/26, 12/30 closed
OLF Bogue (Navy)	34°41'-77°01'	22	3	4000	Asphalt				Closed; OLF to MCAS Cherry Point
Byrd	37°30'-77°19'	167	3	8000	Concrete	80,91, 100,J, A,B,C, 115/145	Major	Runway, hi-intens. appr., & runway on request	Attd. 24 hrs. 2-way radio req'd. Use paved areas only. Landing fee for executive & non-schedule air carrier. Rt. tfc. rnwys. 6/24 & 33. ‡ 123.0 mc. A.N.G. use
OLF Camp Davis (Navy)	34°30'-77°34'	60	2	5500	Concrete				Closed
Camp Peary (AF)	37°19'-76°38'	37	1	5000	Asphalt				
Central	37°19'-76°43'	105	2	4200	Turf	80/87	Major		SW, E blocked trees. NE blocked pole line
MCAS Cherry Point	34°54'-76°53'	29	8	9100	Asphalt	A+B,J	Major	Rnwy., flood, hi-intens. rnwy. & approach	Official business only
Cockes	37°04'-76°53'	115	1	1900	Turf				
Como	36°28'-76°59'	15	1	2000	Turf				Private
Dalton	37°08'-77°54'	490	1	2200	Turf				
Edenton	36°01'-76°34'	19	3	4600	Asphalt				
CGAS Elizabeth City	36°16'-76°11'	10	5	7219	Concrete	A+,B		Runway, hi-intens. rnwy.	Runway 5/23 & 14/32 closed. Rnwy. 7/25 emerg. use only. Official business only. Operates on prior notice
CGAS Elizabeth City	36°16'-76°10'	00	2	16000	Pasquotank River		Minor	Seadrome lights on 1 hr. prior request, flood	Tower operates 0800-1600 Mon.-Fri. 0800-2200 Sat., Sun.
Elizabeth City Municipal	36°15'-76°15'	15	3	2800	Turf	80/87	Major		Landing strips rough
Elizabeth City (Navy)	36°14'-76°08'	07	2	3200	Asphalt				Closed
Emporia Mun.	36°41'-77°29'	126	3	5044	Asphalt & Concrete	80/87	Minor	Rnwy., dusk to 2300	W & NE bkd trees
Engelhard	35°30'-76°00'	01	1	3000	Turf				
Evans	37°24'-76°32'	80	1	4500	Turf				
Felker AAF	37°08'-76°37'	10	1	3020	Asphalt	A	Major	Runway	Attended 24 hours
ALF Fentress (Navy)	36°42'-76°08'	16	5	8000	Concrete			Rnwy., prior req.	ALF to NAS Oceana
Fort Story Aux AAF	36°55'-76°01'	15	1	1959	Steel mat				
Franklin Mun.	36°42'-76°54'	37	3	4100	Concrete	80,100	Minor	Bndy. & ben. on prior req. by phone	Use paved areas only
Garner	36°51'-76°41'	80	1	2500	Turf				Not attended. Fuel available
Goffigon	37°14'-75°58'	35	1	1800	Turf				Private
Grady Field	35°00'-77°55'	95	1	2000	Turf				Private
Halifax County	36°26'-77°43'	250	3	3200	Turf	80,91		Strip on req. after 2300	Field rough
Hilltop	37°25'-77°57'	250	1	2200	Turf	80			Pole line W
Hopewell	37°18'-77°13'	20	3	2413	Asphalt	80,100	Major		SW bkd. trees
Hopewell Seapl. Base	37°18'-77°13'	03	1	9240	James River	80, 100/130	Major		Ramp, float, dock
Hummel	37°36'-76°27'	30	2	2600	Turf				
Jacksonville	34°47'-77°23'	51	1	2800	Turf, W half paved				Private
Jernigan	36°15'-76°59'	125	1	2100	Turf	80			Strip rough
Johnson Field	37°42'-75°43'	35	1	2450	Turf	80/87			Pole line NW
Kellam	37°27'-75°53'	15	2	2100	Turf	80/87	Major		
Lawrenceville Municipal	36°46'-77°47'	317	2	2400	Turf				Irreg. attd. Fuel, repairs avail. N blocked trees
Lee AAF	37°17'-77°23'	150	1	2500	Asphalt	A,C	Minor	Runway	Twr. opers. 0700-1600 Mon.-Fri.
Lively	37°45'-76°34'	15	2	3400	Turf			Bndy., rnwy. on request	Not attended. Fuel available
Manteo	35°55'-75°42'	12	3	3300	Asphalt	80,91, 100	Major		Attd. 24 hrs. NE bkd. trees. E/W runway rough
Manteo Seaplane	35°55'-75°43'	00		10,560	Croatan Sound	80,91	Major		Ramp dock, combined oper. with airport. Unsafe for light aircraft-rough water
New Hanover County	34°16'-77°54'	31	3	8000	Asphalt & Conc.	80,91, 100,J	Major	Rnwy. appr. & hi-intens. runway	Attd. 24 hrs. 55' unlighted overhead hi-voltage pole line running W from Cont. twr. to airport boundary. Radar tower NW
New Kent Co.	37°31'-77°08'	161	1	3000	Turf	80/87	Minor		
MCAF New River	34°42'-77°26'	24	3	1125	Asphalt	A+B	Minor	Runway	Attd. wk. days, Sat. on 2 hr. prior notice. Off. business only. Rnwy. 14/32 clsd. Twr. oper. 0700-sunset Mon.-Fri.
NAS Norfolk (Chambers Fld.)	36°56'-76°17'	15	3	6320	Concrete	A+BC, J	Major	Rnwy., bndy., fld. and hi-intens. rnwy.	Restricted
NAS Norfolk (Breezy Point SPB)	36°57'-76°17'	00		12,300	Willoughby Bay	A+B, J	Major	Lighted buoys, Hi-intens. appr. on 6 hrs. prior request	Ramps, buoys, haulout

12-23-61

NAME	LAT.
Norfolk Mun.	36°54'
Northfield	37°38'
NAS Oceana	36°50'
OLF Oak Grove (Navy)	35°02'
Parnell	37°25'
Patrick Henry	37°08'
Petersburg Mun.	37°11'
Pitt-Greenville	35°38'
Portsmouth	36°47'
Plainview	37°32'
Reedville	37°50'
Rich Square	36°15'
Rocky Mount Muncipal	35°58'
Simmons-Nott	35°04'
South Norfolk	36°46'
Stallings Field	35°26'
Suffolk Mun.	36°40'
Virginia State Police	37°30'
Walker AAF	37°01'
NASA Wallops Station	37°56'
Washington Municipal (Warren Field)	35°34'
Waverly Mun.	37°04'
West Point Municipal	37°31'
Weyerhaeuser Company	35°51'
Wilson Mun.	35°46'
Woodville	36°14'

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Military fuel is
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*Joint civil and
‡ Aeronautical
SPB: Indicat
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AERODROMES - NORFOLK SECTIONAL CHART

NAME	LAT. LONG.	ELEV.	RUNWAYS			FACILITIES			REMARKS
			NO.	LONGEST	SURFACE	FUEL	REPAIRS	LIGHTING	
Norfolk Mun.	36°54'-76°12'	26	3	5002	Concrete	80/87, 91/96, 100/130	Major	Rnwy., hi-intens. appr. & runway	Attd. 24 hrs. S, SE blkd., trees. Landing fee in lieu of gas purchase. ‡ 123.0 mc.
Northfield	37°38'-77°26'	197	2	2400	Bituminous on 3000' strip	80/87, 100	Major	Runway	
NAS Oceana	36°50'-76°02'	20	4	12,000	Concrete	A+,J	Minor	Rnwy., bndy. hi-intens. rnwy. & appr.	
OLF Oak Grove (Navy)	35°02'-77°15'	27	3	4000	Asphalt				Clsd.; OLF to MCAS Cherry Pt.
Parnell	37°28'-77°27'	120	2	2750	Turf	80	Major		
Patrick Henry	37°08'-76°30'	41	2	5600	Concrete	80/87, 100/130	Minor	Rnwy. & hi-intens. rnwy. & appr. on req.	Attd. 24 hrs. Major airframe repairs avail. Landing fee in lieu of gas purchase. ‡ 123.0 mc.
Petersburg Mun.	37°11'-77°31'	190	3	5000	Asphalt & concrete	80/87, 100/130	Minor		
Pitt-Greenville	35°38'-77°23'	25	3	5000	Asphalt	80,91		Rnwy. on req.	Rt. tfc. rnwys 19,25 & 32
Portsmouth	36°47'-76°27'	22	2	2150	Asphalt on 3500' Turf	80,91	Major		S blkd. pole line
Plainview	37°32'-77°53'	400	1	1600	Turf	80			
Reedville	37°50'-76°16'	10	1	2200	Turf				Private. Pole line NE
Rich Square	36°15'-77°17'	78	1	2900	Turf				Pole line NW
Rocky Mount Muncipal	35°58'-77°48'	97	2	4005	Asphalt	80,100	Major	Runway	Attd. 24 hrs. Contact Rocky Mount Radio for airport info. service prior to landing. Pole line SE
Simmons-Nott	35°04'-77°30'	18	2	4807	Bituminous	80,91, 100	Major	Runway	Attended 24 hours
South Norfolk	36°46'-76°15'	20	2	3250	Turf	80/87, 91/96	Major		Pole line W
Stallings Field	35°20'-77°37'	93	3	5000	Asphalt	80,100		Rnwy. on req.	
Suffolk Mun.	36°40'-76°36'	71	3	5000	Concrete	80			
Virginia State Police	37°30'-77°32'	300	1	1800	Turf	80			SE blkd. trees. 420' twr. on NE side of field
Walker AAF	37°01'-76°18'	06	1	2600	Asphalt	A,C	Minor	Runway on prior request	Official business only
NASA Wallops Station	37°56'-75°28'	38	3	8000	Concrete			Hi-int. rnwy. on request	Prior approval required. Rnwy. 04/22 clsd. UFN - construction
Washington Municipal (Warren Field)	35°34'-77°03'	38	3	5000	Concrete	80,100	Major	Runway	Attended 24 hours. Right traffic NE, ESE VSSE
Waverly Mun.	37°04'-77°08'	115	2	4400	Turf				
West Point Municipal	37°31'-76°45'	24	3	5000	Concrete			Rnwy. on prior request	Unattended, fuel in emergency only
Weyerhaeuser Company	35°51'-76°47'	10	2	2900	Turf				Private
Wilson Mun.	35°46'-77°58'	161	3	4500	Asphalt	80,100	Major	Runway	
Woodville	36°14'-76°21'	15	1	1800	Turf				Private. Pole line SSE, S

Fuel octane ratings listed by number are those available to civil aircraft, unless otherwise noted. 12-28-61

Military fuel is listed by letter code indicating octane ratings as follows: A+: 115/145, A: 100/130, B: 91/96, C: 73 or 80, J: Jet Fuel.

The above listing does not include Air Force aerodromes.

*Joint civil and military operations; Air Force facilities at these fields are not listed.

‡ Aeronautical advisory station operating on 123.0 mc.

SPB: Indicates seaplane base or anchorage.

Private aerodromes: Indicated by (Pvt) on face of chart and "Private" in Remarks column. Use only in emergency or by specific authorization. General use by other than owner may be prohibited by State law or restricted by owner.

Military aerodromes: Army, Navy, AF, AFB, AB, AAF, NG, NAS, MCAS, OLF, ALF. For use of Armed Services. Civil use only by prior permission of the Commanding Officer.

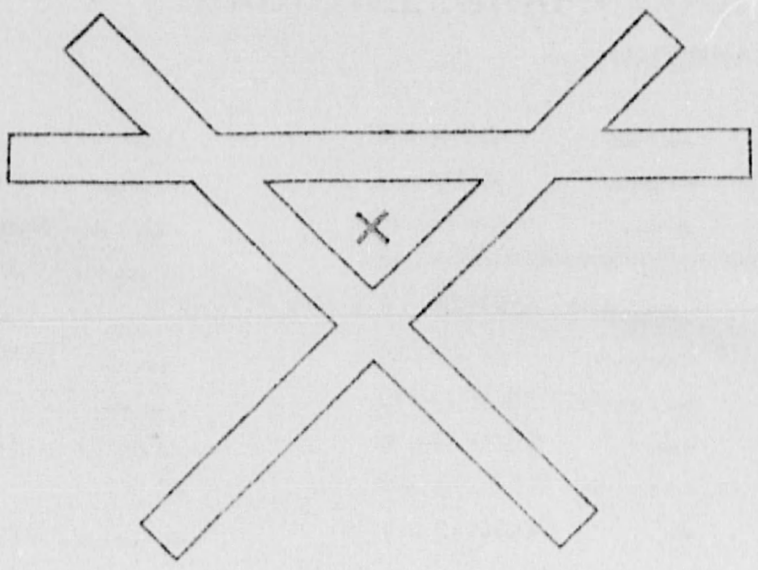
NOTE: Aerodrome information tabulated above was abstracted from the latest available reports and may not reflect existing conditions as of date of issue of this chart. Consult the Airman's Guide and NOTAMS for changes in aerodrome data.

CLOSED AIRPORT AND RUNWAY MARKER

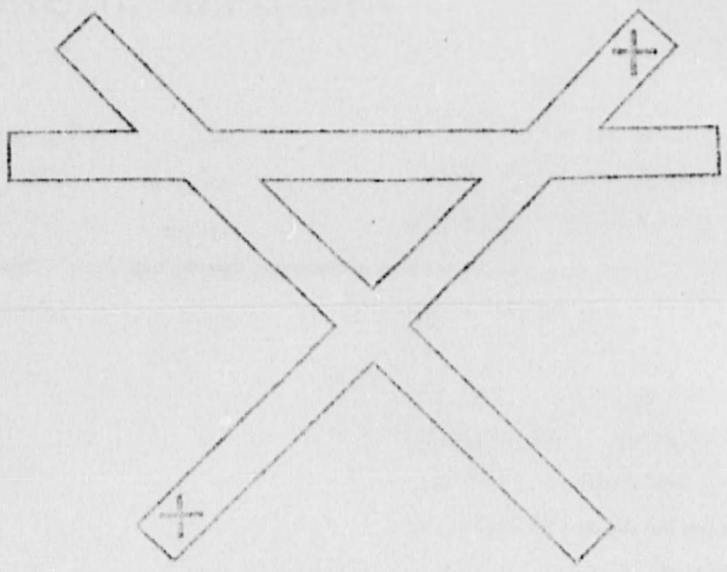
When you see a large "×" in the center of the airport, that airport is closed. Do not attempt a landing!

When you see an "×" on a runway, that runway is closed and hazardous for use. Do not use it!

TYPICAL INSTALLATIONS



ENTIRE AIRPORT CLOSED



ONE RUNWAY CLOSED

PROHIBITED, RESTRICTED, WARNING, AND CAUTION AREAS ON NORFOLK SECTIONAL CHART

NO.	NAME	ALTITUDE	TIME	APPROPRIATE AUTHORITY
R-4005	Patuxent, Md.	Unlimited	Continuous	C.O., NAS, Patuxent River, Md.
R-4006	Patuxent, Md..	Above 3500	Continuous	C.O., NAS, Patuxent River, Md.
R-4007	Patuxent, Md.	To 5000	Continuous	C.O., NAS, Patuxent River, Md.
R-5301	Albemarle Sound, N.C.	To 20,000	Sunrise to sunset	Comdr., Fleet Air, NAS, Norfolk, Va.
R-5302	Albemarle Sound, N.C.	To 20,000	Sunrise to sunset	Comdr., Fleet Air, NAS, Norfolk, Va.
R-5303	Albemarle Sound, N.C.	To 20,000	Sunrise to sunset	Comdr., Fleet Air, NAS, Norfolk, Va.
R-5304	Albemarle Sound, N.C.	To 20,000	Sunrise to sunset	Comdr., Fleet Air, NAS, Norfolk, Va.
R-5305	Albemarle Sound, N.C.	To 20,000	Sunrise to sunset	Comdr., Fleet Air, NAS, Norfolk, Va.
R-5306-A	Cherry Point, N.C.	To FL 350	Continuous	C.G. Marine Corps Air Station, Cherry Point, N. C.
R-5306-B	Cherry Point, N.C.	To FL 290	Continuous	C.G. Marine Corps Air Station, Cherry Point, N.C.
R-5306-C	Cherry Point, N.C.	To 20,000	Continuous	C.G. Marine Corps Air Station, Cherry Point, N.C.
R-5307	Cherry Point, N.C.	FL 350 to FL 550	Sunset to sunrise	C.G. Marine Corps Air Station, Cherry Point, N.C.
R-5308	Currituck Sound, N.C.	To 10,000	Continuous	Comdr., Fleet Air Norfolk, NAS, Norfolk, Va.
R-5309	Currituck Sound, N.C.	To 10,000	Sunrise to sunset	Comdr., Fleet Air Norfolk, NAS, Norfolk, Va.
R-5310	Currituck Sound, N.C.	To 10,000	Continuous	Comdr., Fleet Air Norfolk, NAS, Norfolk, Va.
R-5313	Long Shoal Point, N.C.	Unlimited	Continuous	Comdr., Fleet Air Norfolk, NAS, Norfolk, Va.
R-6601	Camp A.P. Hill, Va.	To 22,000	Continuous	† FAA Washington ARTC Center or area FSS C.G. Second U.S. Army, Fort Meade, Md.
R-6602	Camp Pickett, Va.	To 22,000	Continuous	C.G. Second U.S. Army, Fort Meade, Md.
R-6603	Chesapeake Bay, Va.	To FL 300	Continuous	Coordinator, Virginia Capes operating area, Naval Base, Norfolk, Virginia
R-6604	Chincoteague Inlet, Va.	Unlimited	Continuous	Chief, Wallops Station, National Aeronautics & Space Administration, Wallops Island, Va.
R-6606	Pendleton, Va.	Unlimited	0800 to 1700 EST Mondays through Fridays	C.O., U.S. Fleet Air Defense Training Center, Dam Neck, Va.
R-6607	Potomac River, Va.	Unlimited	Continuous	C. O., Naval Air Test Center, Patuxent River, Md.
R-6609	Tangier Island, Va.	Umlimited	Continuous	Comdr., Fleet Air Norfolk, NAS, Norfolk, Va.
W-50	Pendleton, Va.	To FL 750	0730-1630 Monday through Friday	VACAPES OPARECORD, NAVB, Norfolk, Va. C.O., FADTC, Dam Neck, Va.
W-72	North Carolina	Unlimited	Continuous	COMFAIR, Norfolk, Va.
W-108	Chincoteague/Va. Capes	To FL 750	Continuous	VACAPES OPARECORD, NAVB Norfolk, Va. C.O., NAS Patuxent River, Md. COMOPTEVFOR NAVB, Norfolk, Va.
W-122	Cherry Point, N.C.	To FL 550	Continuous	MCAS Cherry Point, N.C.
W-386	Virginia Capes	Unlimited	Continuous	VACAPES OPARECORD, NAVB, Norfolk, Va. Comdr., 836 ADIV, Langley AFB, Va.
W-523	Wilmington, N. C.	To FL 600	Sunrise to sunset	Comdr., Seymour-Johnson AFB, Goldsboro, N.C.

MILITARY CLIMB CORRIDOR

NOTE: All flights through these areas must obtain prior approval from the appropriate authority on frequencies listed.

R-5312	Goldsboro, N.C. (Seymour-Johnson AFB)	* See below	Continuous	† FAA, Raleigh-Durham, N.C. Approach,Control: 126.2 122.5G Comdr., Seymour-Johnson AFB, N.C.
* A - 2100-15,000; B - 2100-FL 240; C - 2100-FL 270; D - 6100-FL 270; E - 10,100-FL 270; F - 15,100-FL 270; G - 19,100-FL 270.				
R-6610	Hampton Roads, Va. (Langley AFB)	* See below	Continuous	Langley AFB Approach Control: 111.4 126.2 122.5G 236.6
*A - 2000-15,000; B - 2000-FL 240; C - 2000-FL 270; D - 6000-FL 270; E - 10,000-FL 270; F - 15,000-FL 270; G - 19,000-FL 270.				

P - Prohibited R - Restricted W - Warning C - Caution † - Controlling Agency

Altitudes are in feet. Local time is shown unless otherwise noted.

No person shall operate an aircraft within a Prohibited Area, or within a Restricted Area between the designated altitudes during the time of designation unless prior permission has been issued by the appropriate authority as listed above. The appropriate authority is defined as either the controlling agency (†) or the using agency.

Flight within Caution Areas is not restricted, but pilots are advised to exercise extreme caution.

NOTE: Consult NOTAMS and Flight Information Publications for changes in data subsequent to JAN. 2, 1962.

RADIOTELEGRAPH CODE AND PHONETIC ALPHABET

INTERNATIONAL (ICAO)

A—ALFA ·—	K—KILO —·—	U—UNIFORM ··—	0—ZE-RO —————
B—BRAVO —···	L—LIMA ·—··	V—VICTOR ···—	1—WUN ·————
C—CHARLIE —·—·	M—MIKE ——	W—WHISKEY ·——	2—TOO ··———
D—DELTA —··	N—NOVEMBER —·	X—XRAY —··—	3—TREE ···——
E—ECHO ·	O—OSCAR ———	Y—YANKEE —·——	4—FOW-er ····—
F—FOXTROT ··—·	P—PAPA ·——·	Z—ZULU ——··	5—FIFE ·····
G—GOLF ——·	Q—QUEBEC ——·—		6—SIX —····
H—HOTEL ····	R—ROMEO ·—·		7—SEV-en ——···
I—INDIA ··	S—SIERRA ···		8—AIT ———··
J—JULIETT ·———	T—TANGO —		9—NIN-er ————·

5-1-56

MILITARY CLIMB CORRIDORS

GOLDSBORO, N.C. (SEYMOUR JOHNSON AFB) RESTRICTED AREA R-5312

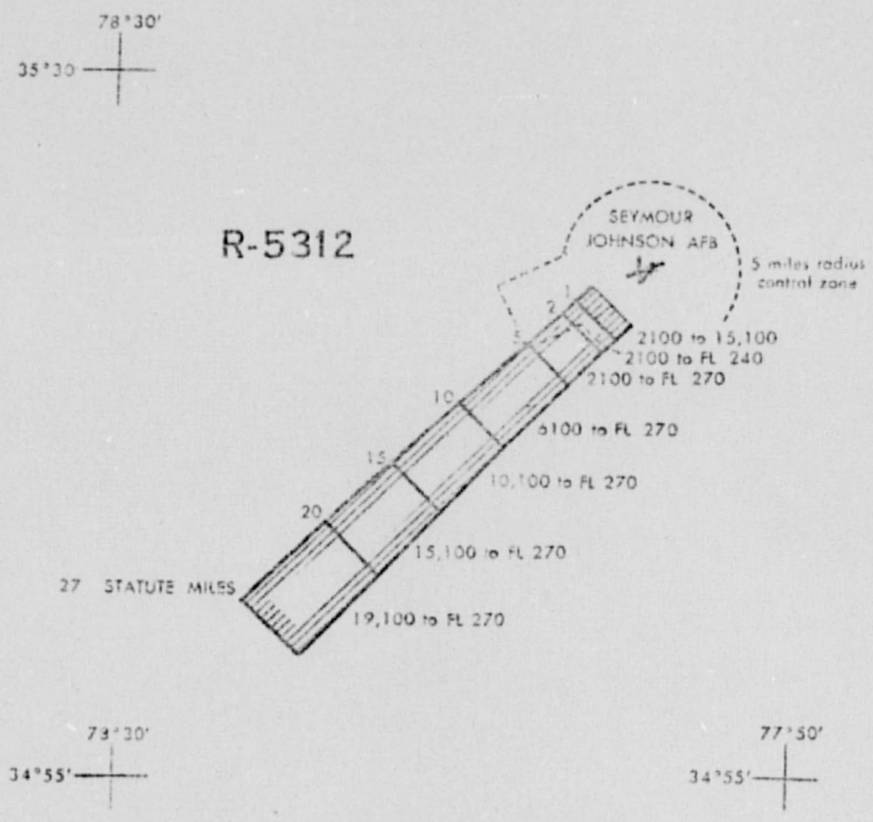
HAMPTON ROADS, VA. (LANGLEY AFB) RESTRICTED AREA R-6610

The Military Climb Corridors illustrated below have been designated as Restricted Areas.

Pilots of Century Series aircraft on active air defense missions are unable to see and safely avoid other aircraft during the climb phase of a scramble. In the interest of safety, the Dept. of Defense and the FAA have agreed to establish restricted corridors to segregate such operations from other air traffic. ALL FLIGHTS through these areas must obtain prior approval from the Appropriate Authority.

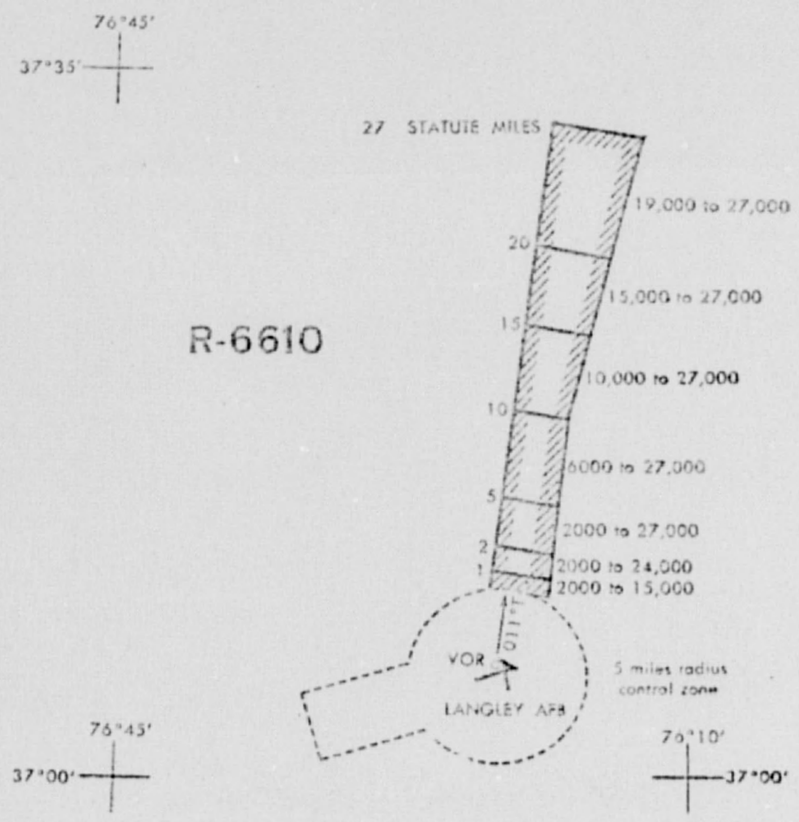
The lateral and vertical limits of the Military Climb Corridors are indicated below. The relation of these corridors to the terrain and aeronautical facilities can be seen on the face of this chart, where the lateral limits are also shown.

LATERAL LIMITS OF MILITARY CLIMB CORRIDORS



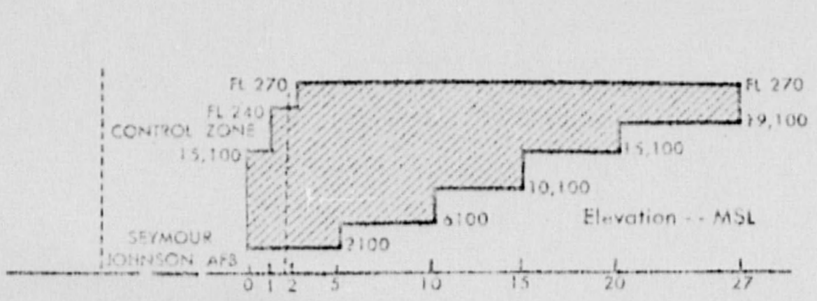
Controlling Agency
FAA, Raleigh-Durham, N.C. Approach Control

Using Agency
Commander, Seymour-Johnson AFB, N.C.

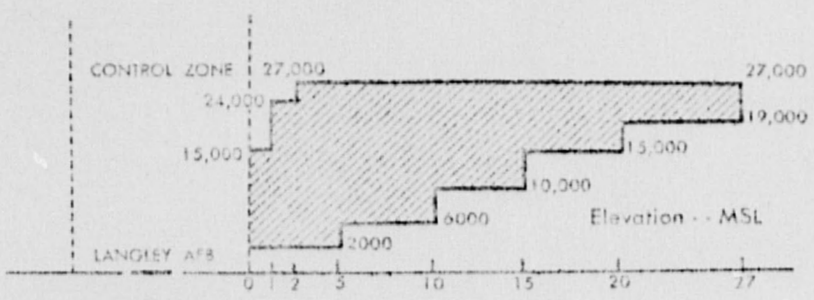


Using Agency
Langley AFB Approach Control

PROFILE SHOWING UPPER AND LOWER LEVEL OF MILITARY CLIMB CORRIDORS



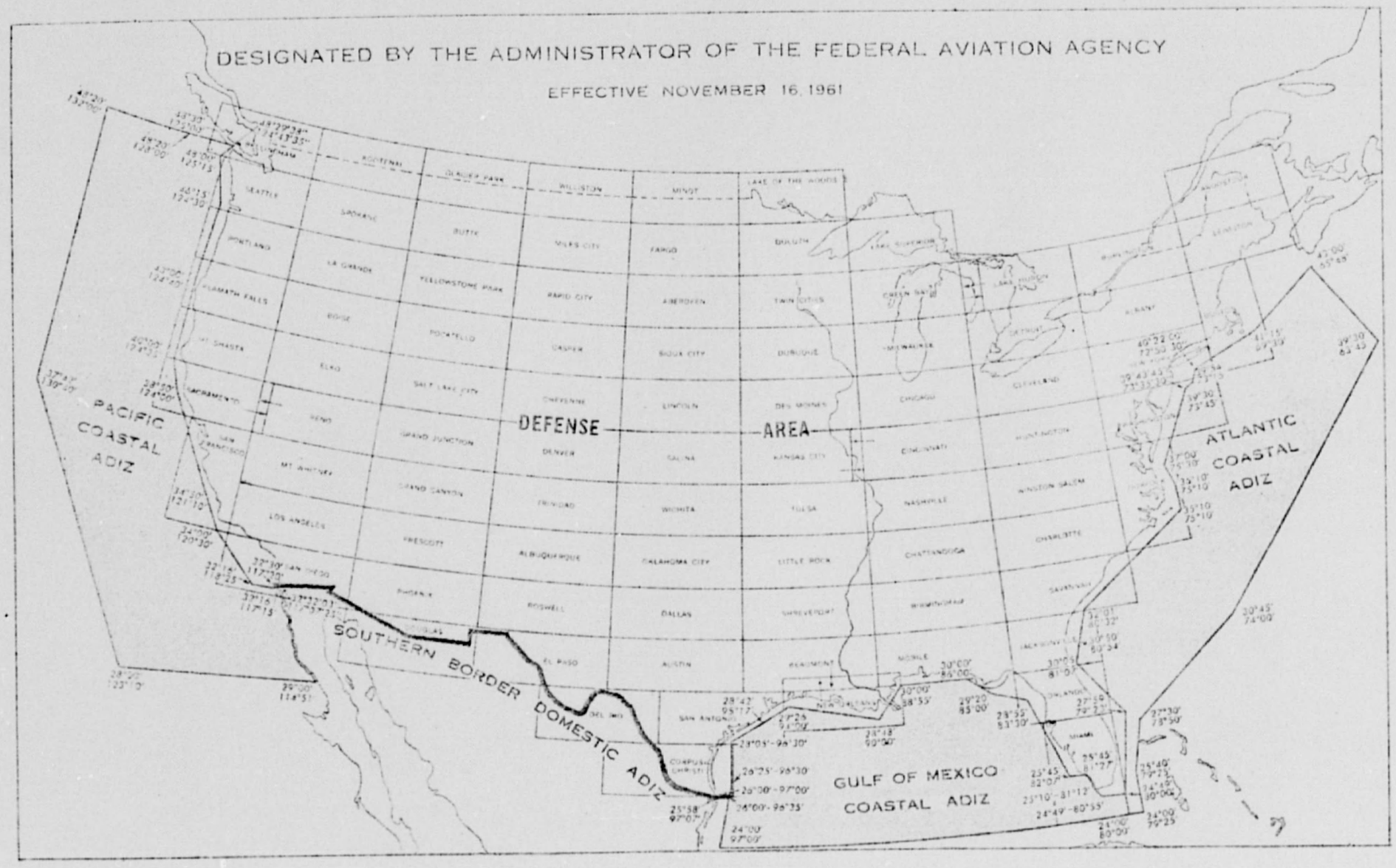
Distance in Statute Miles from Control Zone



Distance in Statute Miles from Control Zone

NOTE: Consult NOTAMS and Flight Information Publication for changes in data subsequent to date of chart.

U.S. AIR DEFENSE IDENTIFICATION ZONES AND DEFENSE AREA



CIVIL AIR REGULATIONS - PART 620 - SECURITY CONTROL OF AIR TRAFFIC

Operational Requirements, Abbreviated Form

	Southern Border Domestic ADIZ.	Alaskan Domestic ADIZ	Coastal ADIZs	DEWIZ
Flight Plan.	Required for northbound aircraft.	Required.	Required.	Required before take-off; ETDP required. Exception permitted in §620.14(c).
Functioning Two-way Radio.	Required except as stated in §620.13(b) (1) (iii).	Required except as stated in §620.13(b) (1) (iii)	Required except as stated in §620.13(b) (1) (iii).	Required.
ADIZ Tolerances in Note following §620.14(c).	Within 5 minutes of estimate and 10 nautical miles of course centerline.	Within 5 minutes of estimate and 10 nautical miles of course centerline.	Within 5 minutes of estimate and 20 nautical miles of course centerline.	Within 5 minutes of estimate and 20 nautical miles of course centerline.
Position Reports.	Normal IFR reports or - VFR give ETP at least 15 minutes before penetration.	Normal IFR reports or - VFR give ETP at least 15 minutes before penetration.	Same as Domestic ADIZ or - inbound foreign aircraft initial report at least one hour from U.S.	Normal IFR reports or - VFR report prior to penetration. Correlation of ground filed data may be requested.
Air Defense Emergencies §620.17.	ALL AUTHORIZED EXCEPTIONS WILL BE SUSPENDED AND ADDITIONAL SPECIAL SECURITY INSTRUCTIONS MAY BE ISSUED DURING DEFENSE EMERGENCY OR AIR DEFENSE EMERGENCY CONDITIONS.			
Aircraft excepted from compliance to the provisions of Part 620 other than §620.17.	Local exemptions granted by FAA ARTCC.	Local exemptions granted by FAA ARTCC.	Local exemptions granted by FAA ARTCC.	Local exemptions granted by FAA ARTCC.
	Aircraft remaining within 10 nautical miles of departure point within the Continental U.S.	Aircraft remaining within 10 nautical miles of departure point within the Continental U.S.	Aircraft remaining within 10 nautical miles of departure point within the Continental U.S.	Aircraft remaining within 10 nautical miles of departure point within the Continental U.S.
	Aircraft with T.A.S. less than 180 knots.	Aircraft with T.A.S. less than 180 knots.	Aircraft with T.A.S. less than 180 knots, north of 28°N. or west of 85°W.	Aircraft with T.A.S. less than 180 knots - listening watch required.
	Aircraft from U.S. southbound through Southern Border ADIZ not entering Coastal ADIZ.		Flight over or within 3 nautical miles of any island in Hawaiian Coastal ADIZ.	

NOTE: Detailed procedures to be followed by the pilot are contained in Part 620, for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.

216/11-24-61

SEARCH AND RESCUE

Search and Rescue Service is a life saving service provided through the combined efforts of the FAA, Air Force, Coast Guard, and Civil Air Patrol in cooperation with other organizations such as State Aeronautics Authorities, Sheriffs Air Patrol, State Police, and Local Search and Rescue Units. It provides search, survival aid, and rescue of personnel of missing or crashed aircraft.

All you need to remember to obtain this valuable protection is:

1. File a Flight Plan with a FAA Flight Service Station (FSS) in person or by telephone or radio.
2. File an Arrival Report.
3. If you land at a location other than intended destination, report the landing to the nearest FAA Service Station.
4. If you land enroute and are delayed more than an hour, report this information to the nearest service station.
5. Remember that if you fail to report within one hour after your E.T.A., a search will be started to locate you. If you fail to report within three hours after your E.T.A., the full facilities of the Search and Rescue Service will be activated.

Searches are expensive, they inconvenience other people, and on numerous occasions the lives of other pilots are sacrificed when searching for lost or overdue pilots. SO, FILE AN ARRIVAL REPORT IMMEDIATELY!

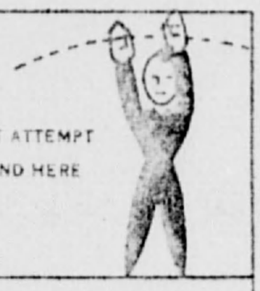
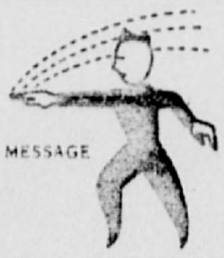
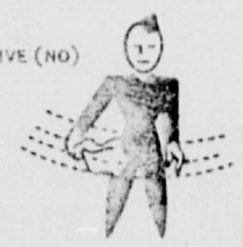
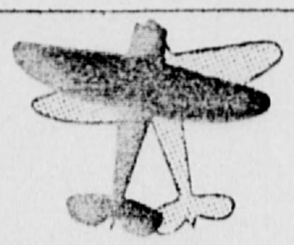
GROUND TO AIR EMERGENCY CODE DISTRESS SIGNALS

REQUIRE DOCTOR, SERIOUS INJURIES — I	REQUIRE SIGNAL LAMP WITH BATTERY, AND RADIO — I	REQUIRE FUEL AND OIL — L
REQUIRE MEDICAL SUPPLIES — II	INDICATE DIRECTION TO PROCEED — K	ALL WELL — LL
UNABLE TO PROCEED — X	AM PROCEEDING IN THIS DIRECTION — ↑	NO — N
REQUIRE FOOD AND WATER — F	WILL ATTEMPT TAKE-OFF — |>	YES — Y
REQUIRE FIREARMS AND AMMUNITION — V	AIRCRAFT SERIOUSLY DAMAGED — L7	NOT UNDERSTOOD — JL
REQUIRE MAP AND COMPASS — □	PROBABLY SAFE TO LAND HERE — △	REQUIRE MECHANIC — W
	IF IN DOUBT, USE INTERNATIONAL SYMBOL — SOS	

INSTRUCTIONS:

1. Lay out symbols by using strips of fabric or parachutes, pieces of wood, stones, or any available material.
2. Provide as much color contrast as possible between material used for symbols and background against which symbols are exposed.
3. Symbols should be at least 10 feet high or larger, if possible. Care should be taken to lay out symbols exactly as shown to avoid confusion with other symbols.
4. In addition to using symbols, every effort is to be made to attract attention by means of radio, flares, smoke, or other available means.
5. When ground is covered with snow, signals can be made by dragging, shoveling or tramping the snow. The depressed areas forming the symbols will appear to be black from the air.
6. Pilot should acknowledge message by rocking wings from side to side.

VISUAL EMERGENCY SIGNALS

NEED MEDICAL ASSISTANCE - URGENT USED ONLY WHEN LIFE IS AT STAKE 	ALL OK - DO NOT WAIT 	CAN PROCEED SHORTLY - WAIT IF PRACTICAL 	NEED MECHANICAL HELP OR PARTS - LONG DELAY 	DO NOT ATTEMPT TO LAND HERE 
LIE SUPINE	WAVE ONE ARM OVERHEAD	ONE ARM HORIZONTAL	BOTH ARMS HORIZONTAL	BOTH ARMS WAVED ACROSS FACE
LAND HERE 	USE DROP MESSAGE 	OUR RECEIVER IS OPERATING 	NEGATIVE (NO) 	AFFIRMATIVE (YES) 
BOTH ARMS FORWARD HORIZONTALLY, SQUATTING AND POINTING IN DIRECTION OF LANDING - REPEAT	MAKE THROWING MOTION	CUP HANDS OVER EARS	CLOTH WAVED HORIZONTALLY	CLOTH WAVED VERTICALLY
PICK US UP PLANE ABANDONED 	AFFIRMATIVE (YES) 	NEGATIVE (NO) 	**HOW TO USE THEM** IF YOU ARE FORCED DOWN AND ARE ABLE TO ATTRACT THE ATTENTION OF THE PILOT OF A RESCUE AIRPLANE, THE BODY SIGNALS ILLUSTRATED ON THIS PAGE CAN BE USED TO TRANSMIT MESSAGES TO HIM AS HE CIRCLES OVER YOUR LOCATION. STAND IN THE OPEN WHEN YOU MAKE THE SIGNALS. BE SURE THAT THE BACKGROUND, AS SEEN FROM THE AIR, IS NOT CONFUSING. GO THROUGH THE MOTIONS SLOWLY AND REPEAT EACH SIGNAL UNTIL YOU ARE POSITIVE THAT THE PILOT UNDERSTANDS YOU.	
BOTH ARMS VERTICAL	DIP NOSE OF PLANE SEVERAL TIMES	FISHTAIL PLANE		

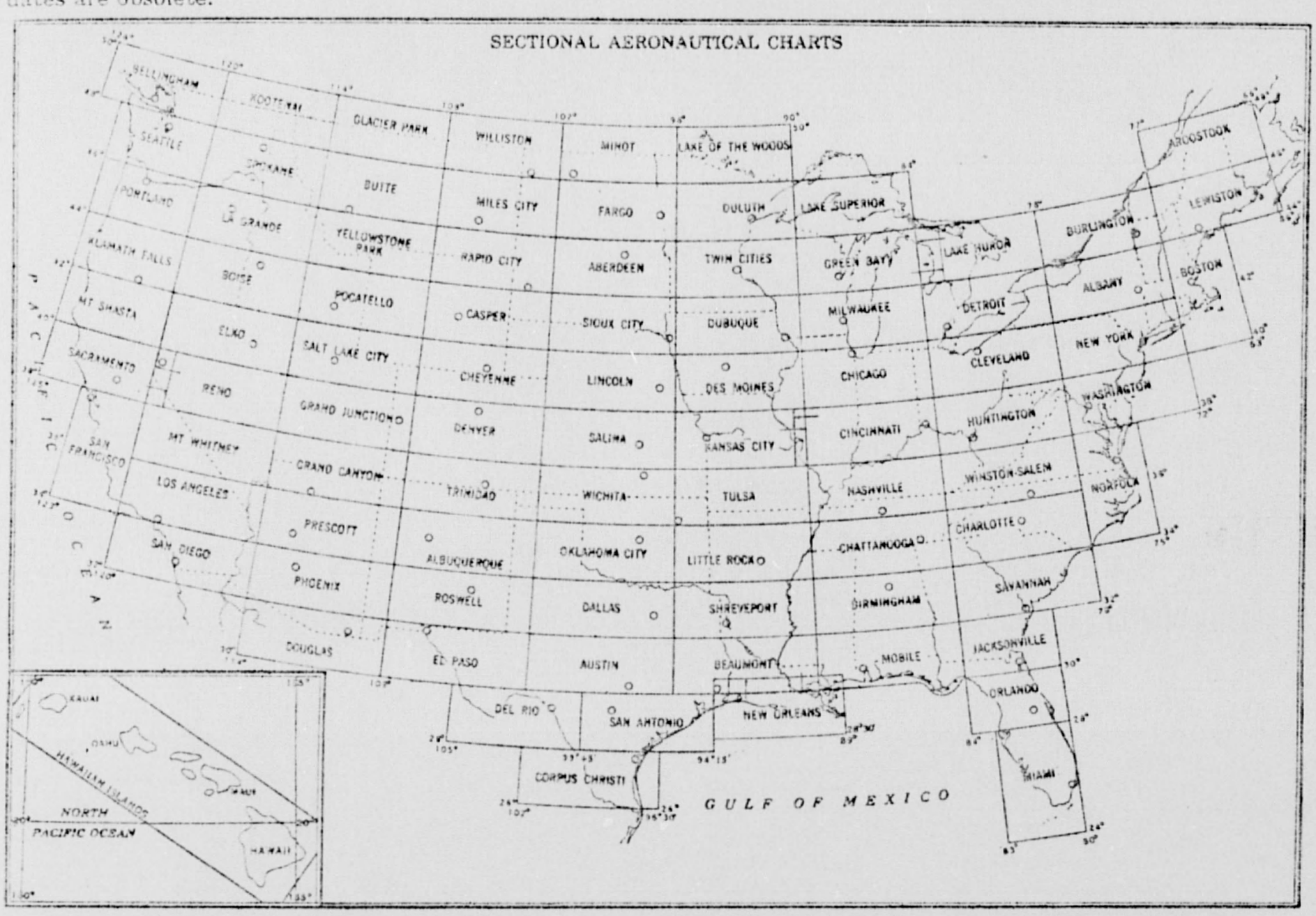
7A/3.25-60

SECTIONAL CHARTS

The Sectional Aeronautical Chart series provides complete coverage of the United States except Alaska and is designed primarily for contact flying. The charts portray detailed cultural and topographic features including important landmarks and selected aeronautical information required for visual navigation supplemented by instruments.

Because of frequent changes, most Sectional Charts are scheduled for printing every six months to provide the airman with the latest charted information possible. Others are scheduled annually. Aeronautical Charts are sold through authorized agents located at airports and principal cities throughout the United States. They may also be obtained by writing to the Director, Coast and Geodetic Survey, U. S. Department of Commerce, Washingon 25, D. C.

In the lower right hand corner is printed the date of the chart. The scheduled time for the next edition is indicated under the date. After the expiration of this time from the date of the chart, users are advised to check with notices (Dates of Latest Prints) on file with authorized agents. Charts that carry older dates than those shown on this list of dates are obsolete.



ADDITIONAL AERONAUTICAL CHARTS PUBLISHED AND PRINTED BY THE U. S. COAST AND GEODETIC SURVEY

World Aeronautical Charts	Provides world coverage at a size and scale convenient for navigation by moderate speed aircraft. Topographic and aeronautical information is similar to the Sectional Chart except as limited by the smaller scale. Sixty-two charts cover the continental United States.	1:1,000,000
Local Charts	Designed to provide additional landmark information and topographic detail in the vicinity of important air terminals.	1:250,000
Instrument Enroute Charts	Provides the necessary aeronautical information for enroute instrument navigation (IFR) in the established low and intermediate altitude levels.	1:729,132 to 1:2,041,570
Planning Charts	AP-9 Conterminous United States.	1:5,000,000
Jet Navigation Charts	Designed for long range navigation by high speed aircraft operating at high altitudes. Selected topographic data is over-printed by major aeronautical information including aerodromes, LM/F and VOR navigation facilities, ADIZ limits, restricted areas and other pertinent data. Four charts cover the conterminous United States.	1:2,000,000
Route Charts	Show limited topographic information, selected aerodromes, major radio data. Strip charts aligned with principal air routes using same format as Jet Navigation Charts.	1:2,000,000
Aircraft Position Charts	3071 North Atlantic; 3073 Caribbean Sea; 3094 North Pacific; 3095 Shannon-Cairo-Bombay; 3096 Pacific Ocean; 3097 Subpolar Route, N. America-Europe	1:5,000,000 or 1:6,250,000
Instrument Approach Procedure Charts	More than 1300 charts provide data for instrument approach procedures to airports.	1:500,000
Airport Obstruction Plans	Show runways and selected aerodrome information and objects in the vicinity that may be hazardous to air traffic.	1:12,000

A catalog giving a complete list and description of the various series is available upon request.

AERO
LAN
Civil
Mili

WINSTON
2427 L 48
Airport of entry
GCA ILS DF
278 119.5 126.2
257.8 122.7G

† L-
LF/MF rower frequer

ALBERT
1750 - 36 U

Rotating light
Rotating light (With H
Rotating light (With cc
Flashing light
F-fixed F
M

Facili

Radio range (Without v
(Two letter id
range when

Marine radiobeacon
(All are without voice)

Radar beacon

Outer marker radiob
(Shown when componen

Arrows are
which estab
090°
MESA GRA
Named intersection used

VHF OMNI-

0
330
300
270
240
210
180
CHICAGO
114.2 CGT
NSME

Bearings are magnetic c
NSME where shown indic
Non-Standard Measuring
DME where shown indic
Distance Measuring Equi
Airspace between enrout
is controlled unless other

Prominent transmis
or T-line cro

Rotating light (On top

Obstruction,
(Numerals indicate elevo
(UC: Under construction,

SECTIONAL CHARTS

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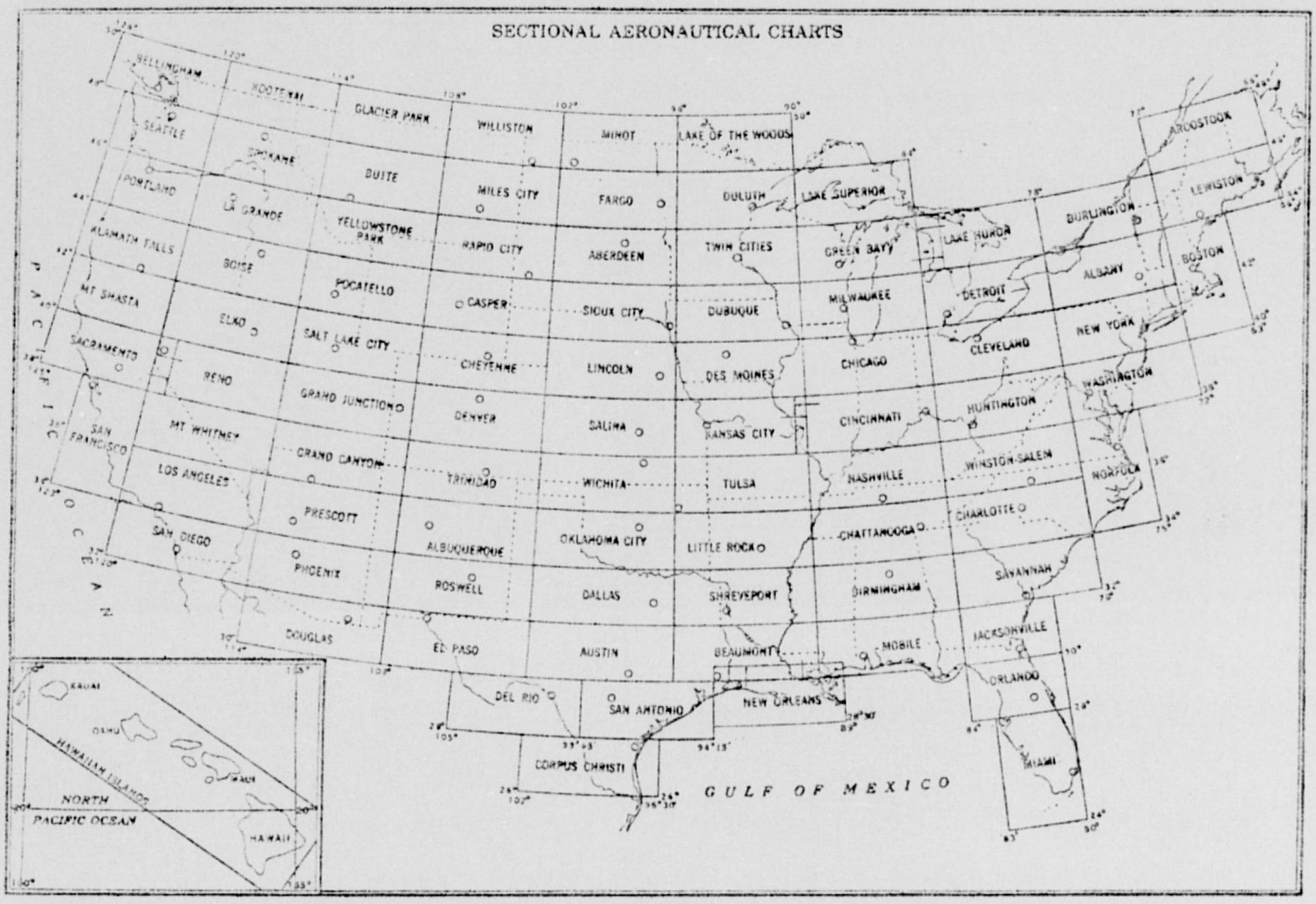

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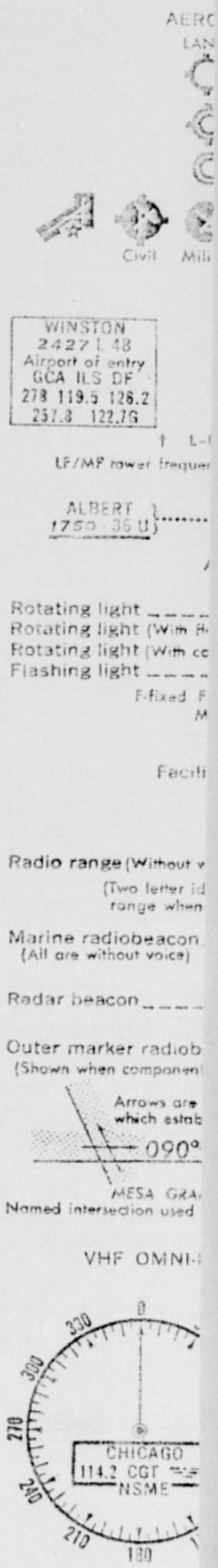


AERONAUTICAL SYMBOLS

AERODROMES

AERODROMES WITH FACILITIES

LAND WATER

Civil

Joint civil and military

Military

Aerodromes with hard-surfaced runways at least 1500 feet long

Civil Military

AERODROMES WITH EMERGENCY OR NO FACILITIES

LAND WATER

Landing area

Anchorage

Heliport (Selected)

Aerodromes with hard-surfaced runways at least 1500 feet long

AERODROME DATA

LAND		WATER	
2427	Elevation in feet	00	Elevation in feet
L	Lighting (See below)†	L	Lighting (See below)†
48	Length of longest runway in hundreds of feet	S	Normally sheltered take-off area
		250	Length of longest runway in hundreds of feet

WINSTON
2427 L 48
Point of entry
VOR ILS DF
278 119.5 126.2
257.8 122.7G

NAS NORFOLK
00 L S 250
3053

Control tower transmitting frequencies.
278 119.5 126.2 257.8 3053 122.7G guard

† L-lighting available Sunset to Sunrise *L- Lighting available Sunset to Sunrise on prior request (L)- Lighting available part of night only.

LF/MF tower frequency shown first, followed in order by primary VHF local control, primary military VHF and UHF, and non-standard guarding frequencies.
When facility or information is lacking, the respective character is omitted or replaced by a dash.

ALBERT
1750 35 U

Aerodrome name may be omitted when same as nearest town name
Aerodromes outside horizontal limits of controlled areas are indicated by underlining aerodrome data.

U: Indicates aeronautical advisory station licensed to operate on 122.3 mc.
Aeronautical advisory stations operating on 123.0 mc are shown in the Remarks column of the aerodrome tabulation.

AIR NAVIGATION LIGHTS

Rotating light

Rotating light (With flashing code)

Rotating light (With course lights) 17

Flashing light Fl

Flashing light (With code) Fl

Marine light

Lightship

F-Fixed Fl-flashing Occ-occulting Alt-alternating Gp-group R-red W-white G-green B-blue (U)-unwatched SEC-sector sec-second
Marine alternating lights are red and white unless otherwise indicated. Marine lights are white unless colors are stated.

RADIO FACILITIES

Facilities have voice unless indicated "No voice." All Marine Radiobeacons and Racons are without voice.
All radio facilities are printed in blue with the exception of certain LF/MF facilities such as tower frequencies, radio ranges and radiobeacons, which are printed in magenta.

Radio range (Without voice)
SPRAGUEVILLE
371 SPR
No voice
(Two letter identification assigned Radio range when associated with VOR)

Marine radiobeacon
RBn
EVERETT
233
10m-20m & 30m-40m
(All are without voice)

Radar beacon
RACON
9310 1-2-2-1

Outer marker radiobeacon LOM or
LOM
359 EW
No voice
(Shown when component of airway system)

Radio broadcasting station
BS
KGAF
1580

Radiobeacon, nondirectional (homing) (With voice)
WICHITA FALLS
287 WWA

Radio communication station
CS
FORT WORTH
365

Localizer LCZR or LOCALIZER
109.5 I BED
(Shown when component of airway system)

Arrows are directed toward facilities which establish intersection

090°

MESA GRANDE
Named intersection used as reporting point

LF/MF 5 watts
AURAL RANGE

100 watts
Fan marker beacons
(75 mc.)

270°

Bearings are magnetic at the station.
The heavy line indicates the "N" quadrant.

ERIE AVON HILLIARD

VHF OMNI-DIRECTIONAL RADIO RANGE (VOR)

Combined Data
LF/MF Range or Radiobeacon and VHF Omnirange

MANSFIELD
259 113.9 MFD
DME

VORTAC
DICKINSON
308 DK 112.9 Ch 76 DIK
NSME

CHICAGO
114.2 CGT
NSME

0 30 60 90 120 150 180 210 240 270 300 330

110° ENROUTE AIRWAY RADIAL V 4

125° ALTERNATE AIRWAY RADIAL V 4 S

Bearings are magnetic at the station.

NSME where shown indicates Non-Standard Measuring Equipment

DME where shown indicates Distance Measuring Equipment.

Airspace between enroute and alternate airways is controlled unless otherwise indicated.

AIR TRAFFIC CONTROL

Control area extension

Control zone

RED 1
(LF/MF airway designation)

Limits of Low Altitude Federal Airways are not shown on charts, but are generally 5 statute miles on either side of the center line, unless otherwise indicated.

Low Altitude Federal Airways within continental U.S. except Alaska are effective only below 14,500 feet MSL.

Canadian airways and air routes extend to 23,000 feet ASL.

(Within continental U.S. except Alaska all airspace at and above 14,500 feet, excluding airspace less then 1500 feet above terrain, prohibited areas, and certain restricted areas, is included within the Continental Control Area, and symbol shown above therefore indicates only control area extensions below 14,500 feet MSL).

MISCELLANEOUS

Prominent transmission line

or T-line crossing CAUTION

Rotating light (On top of high structure) 1504

Obstruction 2150 UC
(Numerals indicate elevation above sea level of top)
(UC: Under construction, position and elevation unverified.)

Isogonic line 8°E
(Values for 1960)

Mooring mast

Abandoned airport Abandoned airport

Reserved Airspaces are numbered, and are indicated on the charts as follows:

Prohibited Area P-78 C6P9

Restricted or Danger Area R-2802 C5D20

Warning Area W-20

Caution Area C-10

214/12-15-61

Metropolitan

Large Cities

Cities

Small Cities

Towns

Small Towns

Contours

Levees or E

Peaks or Bu

Bluffs, Cliff

Swamps &

Tidal Flats
(Exposed at l

Danger Lin

Rocks Awa

Shoals
(Exposed at l

Springs

Wells & W

Reefs, Cor
(Awash at lo

Landmarks
(Numerals in

Oil Tanks

Oil Fields

Dams

Rapids an

Elevations
(In feet)

Mines and

Mountain

Lookout S

Ranger St

Coast Gu

Pipe Line

Race Tra

Open-Air

2,000,000

1,000,000

500,000

250,000

129,132
to
141,570

100,000

50,000

1:12,000

TOPOGRAPHICAL SYMBOLS

CITIES AND TOWNS

Metropolitan Areas — NEW YORK

Large Cities — RICHMOND

Cities — Arlington

Small Cities & Large Towns — Freehold □

Towns — Corville ○

Small Towns & Villages — Arcola ○

HIGHWAYS AND ROADS

Dual Lane and Super Highways

Primary Roads

Secondary Roads

Trails

U. S. Road Markers — 60

National, State or Provincial Road Markers — 37

Road Names — ALASKA HIGHWAY

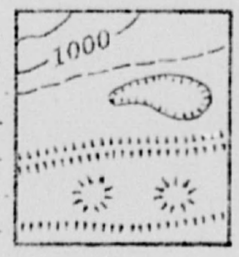
RELIEF FEATURES

Contours { Reliable; Approximate; Depression }

Levees or Eskers

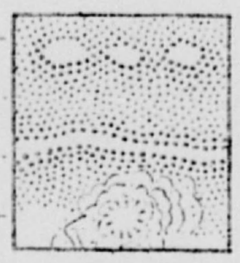
Peaks or Buttes, isolated

Bluffs, Cliffs & Escarpments



Sand { Dunes; Areas; Ridges }

Lava Flow



HYDROGRAPHIC FEATURES

Swamps & Marshes

Tidal Flats (Exposed at low tide)

Danger Line

Rocks Awash

Shoals (Exposed at low tide)

Springs

Wells & Water Holes

Reefs, Coral & Rocky Ledges (Awash at low tide)



Streams & Rivers { Perennial; Intermittent; Probable or Unsurveyed; Braided }

Intermittent Lakes (blue stipple)

Drainage Ditches

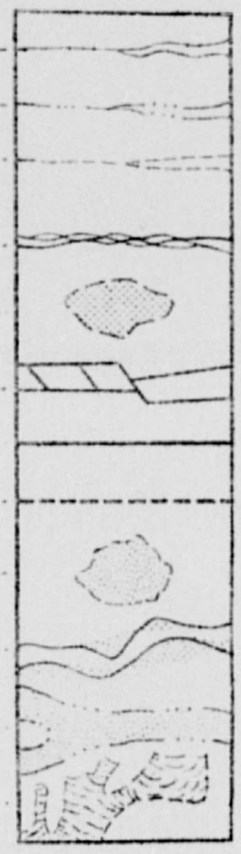
Canals { In use; Abandoned }

Dry Lake Beds (brown stipple)

Sand Deposits in river bed

Dry Washes (brown stipple)

Glaciers and Ice Caps



CULTURAL AND MISCELLANEOUS

Landmarks (with appropriate note)

(Numerals indicate elevation above sea level of top)

Oil Tanks

Oil Fields

Dams

Rapids and Falls

Elevations (In feet) { Highest on chart (devoid of tint); Highest in a general area; Spot }

Mines and Quarries

Mountain Passes

Lookout Stations (Elevation is base of tower)

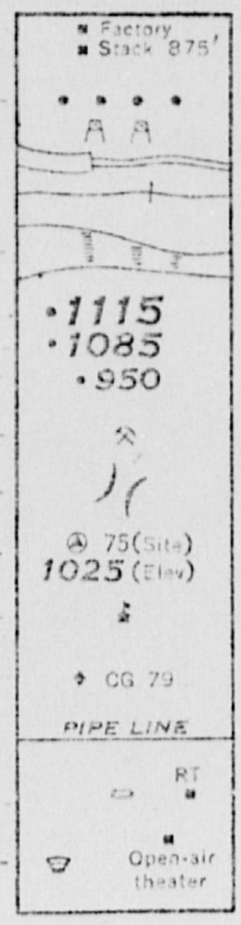
Ranger Stations

Coast Guard Stations

Pipe Lines

Race Tracks or Stadiums

Open-Air Theaters

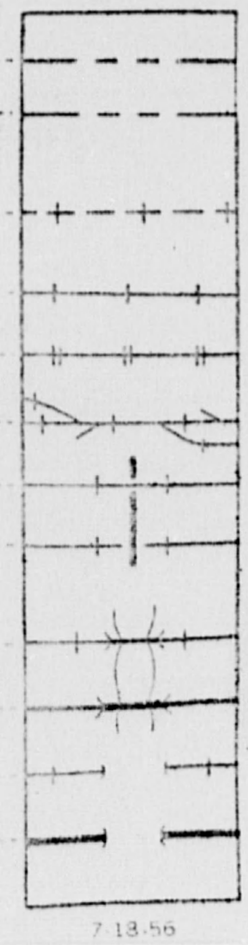


Boundaries { International; State & Provincial }

Railroads { Abandoned or Under Construction; Single Track; Multiple Track; Sidings & Spurs; Overpass; Underpass }

Bridges { Railroad; Highway }

Tunnels { Railroad; Highway }



7-18-56

CRUISING ALTITUDES – FLIGHT LEVELS

The following procedures apply to the operation of aircraft within the United States, excluding the Aleutian Islands west of 160°00′ W and the State of Hawaii. They are also applicable within the airspace between the Continental United States and the adjacent ICAO Flight Information Regions (FIRs).

ALTIMETER SETTING

The vertical displacement of an aircraft shall be determined by reference to an altimeter set:

(a) At or below 23,500 feet MSL, to the current altimeter setting reported by a station which is within 100 nautical miles, if possible. The altimeter of an aircraft without radio shall be set to the elevation of the airport of departure, or to an appropriate available setting. Vertical displacement determined by use of these settings are Cruising Altitudes and are expressed in feet above mean sea level.

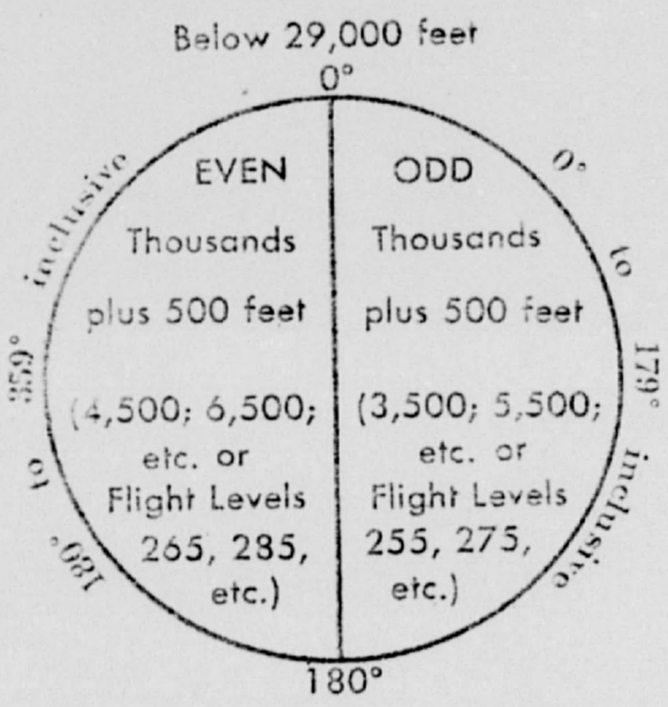
(b) At or above 24,000 feet MSL, to a standard setting of 29.92". Vertical displacements determined by that setting are Flight Levels and are expressed in 3-digit figures; for example, Flight Level 265 represents an indication of 26,500 feet on an altimeter set to 29.92". The use of Flight Levels below 24,000 feet MSL is not permissible. The lowest usable Flight Level, however, may be a figure which is numerically greater than 240, depending upon atmospheric conditions. For example, when the actual atmospheric pressure is 27.92", an aircraft at Flight Level 260 will be at an actual height of 24,000 feet MSL and, therefore, will be at the lowest usable Flight Level.

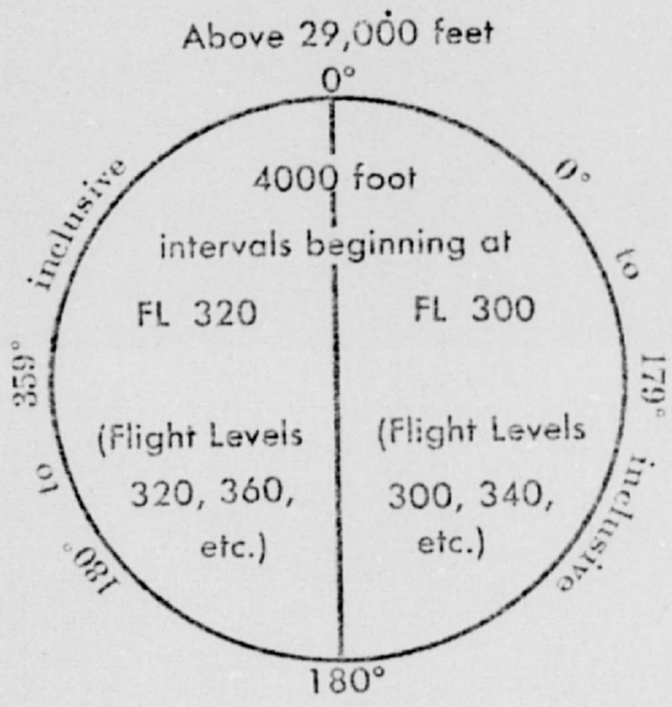
DIRECTION OF FLIGHT

When an aircraft is operated in level flight, the following Cruising Altitudes or Flight Levels, whichever is appropriate, shall be observed in accordance with the magnetic course being flown.

(a) Under Visual Flight Rules (VFR)

At 3,000 feet or more above the surface.

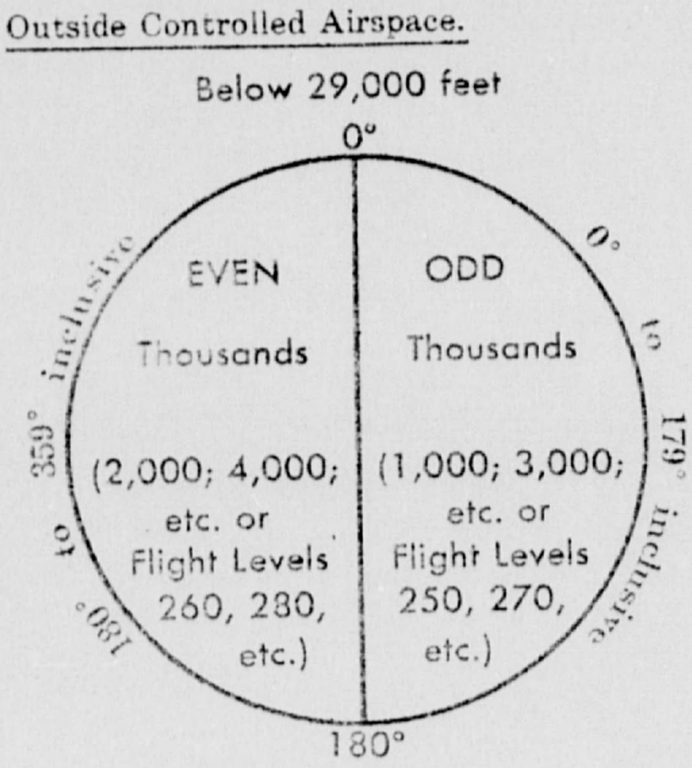


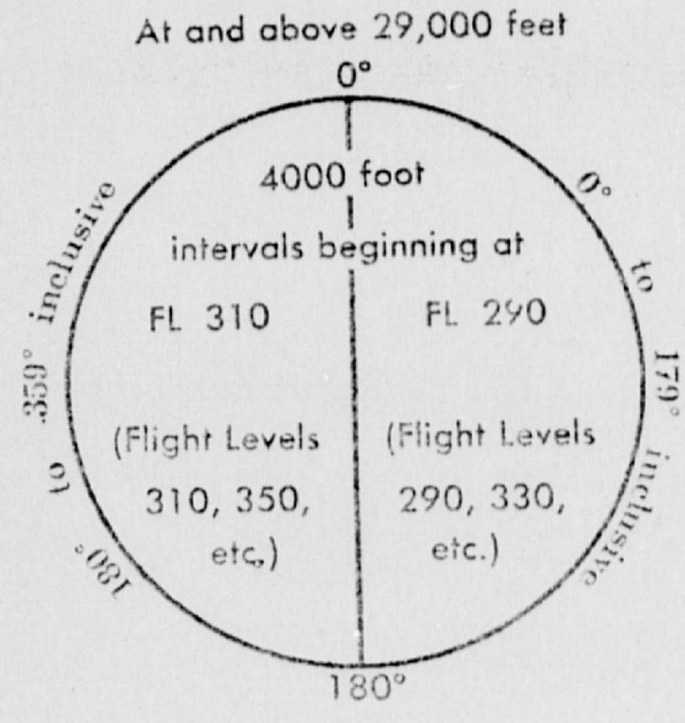


(b) Under Instrument Flight Rules (IFR)

Within Controlled Airspace, as authorized by an air traffic control facility, except that aircraft operating "on top", in the absence of an authorized specific altitude shall be flown as specified above for Visual Flight Rules.

Outside Controlled Airspace.





Within ICAO Flight Information Regions (FIRs), including the Aleutian Islands west of 160°00′W, the State of Hawaii and the United States Possessions and Territories, Cruising Altitudes and Flight Levels shall be determined and observed in accordance with the ICAO Regional Supplementary Procedures.

15/12-30-59

V.H.F. OMNI-RANGE (VOR)

The V.H.F. omni-range operates within the 108-118 megacycle band. In this band it is relatively free from atmospheric and precipitation static and interference from other radio stations. Furthermore, it is not limited to four courses as in the A-N range, but provides definite guidance on any course, to or from the station, the pilot may select. That is why it is called the Omni (Directional) Range. At minimum instrument altitudes the VOR gives reliable indications up to about 50 statute miles (43 nautical miles), depending on enroute terrain.

In flying the V.H.F. omni-range, the pilot uses three basic instruments. The first is the Flight Path Deviation Indicator (cross-pointer instrument), the same type used for the ILS localizer. The vertical needle of this instrument tells the pilot whether he is right or left of the desired course. The second is an Omni-bearing Selector, manually operated by the rotation of a small knob, by which the pilot selects the course he desires to fly. When the cross-pointer needle is centered, the omni-bearing selector indicates the magnetic bearing of the aircraft either to or from the station. The third is a "TO-FROM" indicator which shows whether the bearing indicated by the Omni-bearing Selector is from or to the station. Furthermore, the "TO-FROM" needle can tell a flier when his aircraft is too far from the VOR or is otherwise receiving a weak signal. In this case the needle points to a red sector instead of TO or FROM.

In operation, the pilot selects a course by adjusting the omni-bearing selector to the desired magnetic bearing, and then maintains it by keeping the cross-pointer needle centered. If the aircraft is correctly aligned with the TO-FROM indications, when the needle swings to the right, for example, it indicates that the course selected lies to the right.

For example, an aircraft is due south of a VOR station. If its pilot desires to fly to the station, he sets the omni-bearing selector to indicate 0°. The "TO-FROM" indicator will then point to the word "TO". As the aircraft passes over the station the "TO-FROM" indicator will point to the word "FROM". If a turn of 180° is made north of the station, although the vertical cross-pointer needle will again become centered, the "TO-FROM" indicator will still point to "FROM". The pilot, however, will now find that he must fly "Away from the needle" to stay on course. This shows him that the "TO-FROM" indicator is incorrect. So, the pilot now rotates his omni-bearing selector to 180°. After he has done this, the "TO-FROM" indicator shifts to the "TO" position, and flying "Toward the needle" will keep him on course.

TABLE OF V.H.F. RECEPTION DISTANCES

With the increasing use of VHF and UHF frequencies for communication and navigation it appears desirable to publicize the reception distances for these frequencies. They, therefore, are tabulated below:

Feet Above Ground Station*	Reception Distance**	
	Statute Miles	Nautical Miles
500	30	25
1,000	45	40
3,000	80	70
5,000	100	85
10,000	140	120
15,000	175	150
20,000	200	175

*No physical obstruction intervening.
**Based on zero elevation of the facility. (Distances to nearest even 5 miles).

If you are using a VHF transmitter, remember that its effective range increases with your altitude. Don't attempt to contact a station unless you are within "line of sight".

U.S. WEATHER BROADCASTS AND TRANSMISSIONS

All continuously operated FAA radio ranges, both Low Frequency and VOR, and radio beacon stations having voice facilities on the range or radio beacon frequencies, broadcast weather reports and airway information at 15 and 45 minutes past each hour. The 15-minute past-the-hour broadcast is an "area" broadcast consisting of weather reports from locations within approximately 150 statute miles of the broadcasting station. The 45-minutes-past-the-hour broadcast is an "airway" broadcast consisting of weather reports from important terminals located on airways within approximately 400 statute miles of the station.

The broadcast consists of available flash advisories, surface weather reports (both local and other locations), local winds aloft reports through the 16 thousand foot level when available, and special off-schedule reports which are broadcast immediately upon receipt. Reports more than one hour old are not broadcast.

Flash Advisories are broadcasts by FAA stations within 200 miles of the area affected by potentially hazardous weather conditions, such as tornadoes, thunderstorms, hail, duststorms, moderate to heavy icing, severe to extreme turbulence, and the initial onset of low ceilings and restricted visibility.

Pilots enroute are requested to avoid, if possible, calling Flight Service Stations (FSS) at or about 15 and 45 minutes past the hour (which are the scheduled broadcast times) to request weather information, as such calls may delay starting of scheduled broadcasts and cause inconvenience to other persons who are dependent on the broadcasts for weather reports.

#6—3-15-60

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#6—3-15-60

FLIGHT PLAN

The Civil Air Regulations do not require that a VFR flight plan be filed except as specified for flight in air defense identification zones. However, the FAA urges that VFR flight plans be filed whenever practicable as this materially assists search and rescue operations when such action becomes necessary. Flight plans should be submitted to the nearest Flight Service Station (FSS) in person or by telephone. They may be filed by radio if no other means are available, but this practice should be avoided whenever possible in order to reduce congestion of radio channels.

The pilot should always state the name of the FAA Flight Service Station with which he intends to close his flight plan. If the destination is not served by a FAA station or is in Canada or Mexico the method by which the arrival report will be filed must be clearly understood by all concerned.

VFR flight plans are transmitted only to the FAA station with which the pilot has stated his arrival report will be filed. If the flight plan is not closed within one hour after the estimated time of arrival, queries are sent to determine the location of the aircraft. Should the aircraft not be located after an exhaustive inquiry, search and rescue operations are inaugurated.

When a flight is terminated prior to reaching the intended destination specified in the flight plan, pilots should contact the nearest FAA station and request that an arrival report be transmitted to the FAA station of intended destination. The importance of closing the flight plan cannot be overemphasized.

Pilots of aircraft operating on VFR flight plan who desire to make flight progress reports, should include in the report the phrase: "VFR FLIGHT PLAN FROM (blank) TO (blank)," along with identification, position, time and altitude.

The flight plan should always specify "VFR" as a cruising altitude. The use of this term in lieu of an actual altitude indicates that the pilot intends to fly in accordance with Visual Flight Rules. Aircraft may be operated in accordance with VFR above a well defined cloud or other formation provided climb to and descent from such "on top" flight can also be made in accordance with VFR.

A DVFR (Defense Visual Flight Rules) flight plan is mandatory for VFR flight within an ADIZ (Air Defense Identification Zone) at a speed greater than 150 knots or an altitude over 3000 feet above the immediate terrain; except that flights in certain directions from a Defense Area, as specified in Part 620, Regulations of the Administrator, are exempted from this requirement.

For IFR flight (Instrument Flight Rules) the pilot is required to have an instrument rating and the aircraft must be properly equipped. The latter includes a properly functioning two-way radio. For details see Part 43 of the Civil Air Regulations.

Prior to departure from within, or prior to entering a control area or control zone, a pilot must submit a complete IFR flight plan and receive an air traffic clearance. Refer to Flight Information Manual published by the Federal Aviation Agency for further information.

FEDERAL AVIATION AGENCY

FLIGHT PLAN

Form Approved.
Budget Bureau No. 04-R072.

1. Type of Flight Plan	2. Aircraft Identification	3. Aircraft Type	4. Estimated True Air Speed	5. Departure Time	
☐ IFR ☐ VFR ☐ DVFR			Knots	Proposed Z	Actual Z

6. Initial Cruising Altitude	7. Point of Departure	8. Route of Flight

9. Destination (Airport & City)	10. Altitude Changes En Route	11. Estimated Time En Route		12. Fuel on Board	
		Hours	Minutes	Hours	Minutes

13. Alternate Airport	14. Remarks

15. Pilot's Name	16. Pilot's Address or Aircraft Home Base	17. No. of Persons Aboard

18. Color of Aircraft	19. Flight Watch Stations (FAA use)

SEE REVERSE SIDE

CLOSE FLIGHT PLAN UPON ARRIVAL

Form FAA-398 (2-60)

Close flight plans with nearest FAA Flight Service Station by telephone whenever possible in order to reduce congestion of radio channels. Failure to close or extend your flight plan within one hour after your ETA is a violation of Civil Air Regulations and may result in civil penalty.

212/8-15-60

ASTRONOMY

Venus, Jupiter and Saturn Shine

During June, Venus shines brilliantly in the west during twilight. Two other planets, Jupiter and Saturn, appear in the east later in the evening, James Stokley reports.

➢ WITH THE COMING of June, the planet Venus shines brilliantly in the west as the sky darkens, while two others—Jupiter and Saturn—appear in the east later in the evening. These all join the stars of the early summer sky. For it soon will be summer; the season begins officially in the Northern Hemisphere on June 21.

The accompanying maps show the evening skies as they appear about 10 p.m., your own kind of standard time, at the beginning of June; an hour earlier in the middle of the month and at 8 p.m. June 30. (Add one hour for daylight saving time.) At that hour and date, of course, it will be so soon after sunset that the sky will still be quite bright. You will not be able to see the stars, but Venus will be distinctly visible.

Venus Moving Rapidly

Venus is now moving rapidly through the sky so its positions both early in the month and at the end are shown. Actually, on June 1, it will have set by 10 p.m., the time for which the map is prepared. We have shown its June 10 position, however: in the constellation of Gemini, the twins, near the bright star Pollux. Soon after this Venus moves into the faint constellation of Cancer the crab (for which no stars are shown), then it approaches Leo, the lion. On June 30 it will be close to the sickle, a group of stars in Leo shaped like that implement.

Venus and part of the sickle are shown on our map of the northern sky, but most of Leo is on the one for the southern part. This includes Regulus, the brightest star in the constellation, which marks the end of the sickle's handle. Higher and farther south is Denebola, which marks the end of the lion's tail, as the figure was depicted on old star maps.

To the left of Leo is Virgo, the virgin, with Spica, a star of the first magnitude. Above it, in Bootes, the herdsman, is Arcturus, even more brilliant. A good way to locate this star, by the way, is to look first to the north and find the big dipper. This is part of Ursa Major, the great bear. At the bottom of the dipper, as it now stands, are the pointers. A line through them, followed to the right, brings you to Polaris, the pole star, in Ursa Minor, the little bear. But if you continue the curve of the big dipper's handle, through the stars Alioth, Mizar and Alkaid, you will come right to Arcturus. And if the curve is followed still farther, it brings you to Spica.

To the left of Spica is Libra, the scales, a group that does not boast a first magnitude star. But to the left of Libra is part of Scorpius, the scorpion, with Antares, a brilliant red star. The rest of this constellation, with a curved row of stars representing the animal's tail, comes up a little later.

High in the east stands Vega, in Lyra, the lyre. This is the brightest of the stars now visible, although it is about a twenty-fifth as bright as Venus—and about a seventh of the brilliance of Jupiter. Beneath Lyra lies Cygnus, the swan, part of which forms the northern cross. It is now seen partly inverted for Deneb, to the left, is at the top of the cross.

To the right of Cygnus (shown on the southern sky map), is Aquila, the eagle, and in this group stands the star called Altair. You may notice, by the way, that this star is shown by the second magnitude symbol, although it is actually of the first. The same is true for Antares, Regulus, Deneb and Pollux.

Being so low in the sky at this time, the light of these stars is greatly attenuated by the long path it has to travel through the earth's atmosphere; when seen higher in the sky, they shine more brightly. Capella, in Auriga, the charioteer, shown low in the north, is so near the horizon that it is as faint as the third magnitude, although it is really of the first.

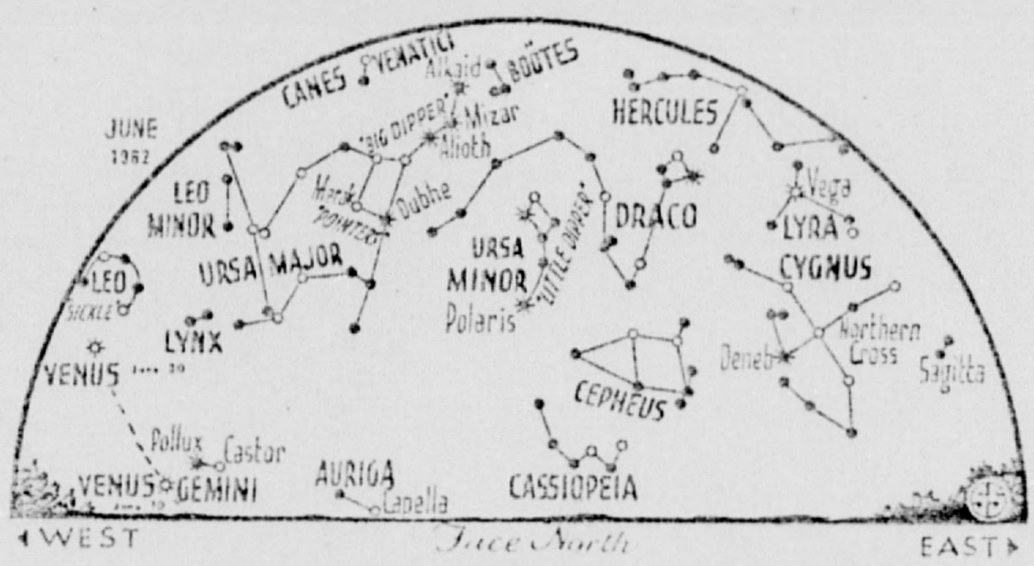
Later in the evening—around 10:30 at the first of June, and 8:30 on the 30th—Saturn rises in the east. Jupiter follows a little more than an hour later. Mars rises about two hours before sunrise. Mercury is not visible this month.

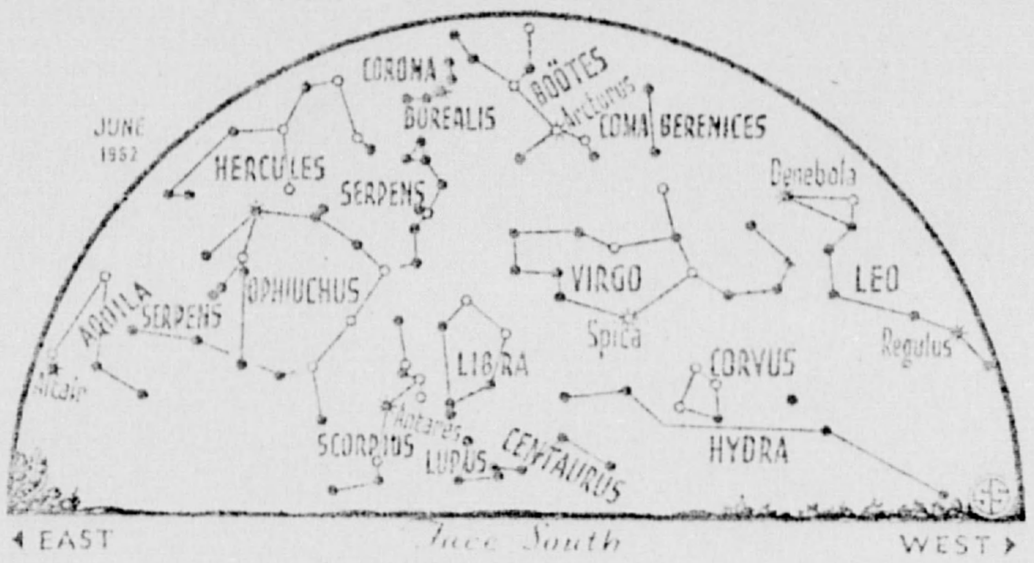
Over in the southeastern sky these evenings you can see a constellation that is unique because it is divided into two parts: Serpens, the serpent. Serpens Caput (i.e., "head of the serpent") is high toward the south, while the tail (Serpens Cauda) is lower and farther east, right next to Aquila. Between them stands Ophiuchus, which ranks eleventh in sky area among the 88 constellations. However, if Ophiuchus and Serpens are counted as one—as they were in ancient times—it is the largest of all. At present the largest is another snake, Hydra, which is not visible on June evenings.

On the old star maps, which pictured the imaginary figures around the stars, Ophiuchus was shown as a man holding a huge serpent. Sometimes it is called Serpentarius, the Latin equivalent of Ophiuchus, which is derived from the Greek and means "serpent bearer."

The constellation is an old one; it has been traced back as far as 1200 B.C. In Greek mythology it represented Aesculapius, the son of Apollo and the first physician. So skillful was he that he was even able to restore the dead to life.

This alarmed Pluto, the god of the





SYMBOLS FOR STARS IN ORDER OF BRIGHTNESS

underworld, who was afraid that he would have no business if Aesculapius continued his healing art. So Zeus removed him from earth and placed him in the sky. He was worshiped as the god of medicine, and serpents have always been associated with him. The staff of Aesculapius, a stick with a snake entwined around it, is still a medical symbol, and the insigne of the U.S. Army Medical Corps.

Stars of Ophiuchus

At present Ophiuchus contains no star as bright as the first magnitude, but in the year 1604 there flashed out within its borders one that for a time rivaled Venus in brilliance. The great German astronomer Johann Kepler observed it extensively and wrote about it. Its location is a little below the point where the serpent's tail joins Ophiuchus.

This was a fine example of a supernova —a star that, for some reason not fully understood, suddenly explodes. One may, for a while, become as much as a hundred million times brighter than the sun (in actual luminosity, or candlepower). Kepler's supernova was the last to appear in our Milky Way system—the galaxy—but many have been observed since in other galaxies, far beyond the limits of ours.

Astronomers estimate that one supernova will appear in a galaxy on the average of once in about 500 years. However, that of 1604 followed by only 32 years one that was observed in 1572. The last previous to that was in Taurus in the year 1054. There are Chinese records of its appearance, and its location is marked now by a cloud of glowing gases called the Crab nebula. Nothing remains visible of the supernovae of 1572 and 1604.

Celestial Time Table for June

June EST

2	8:27 a.m.	New moon
7	3:00 a.m.	Mercury between sun and earth
10	1:22 a.m.	Moon in first quarter
	1:00 p.m.	Moon farthest from earth; distance 251,100 miles
17	9:03 p.m.	Full moon
21	2:00 a.m.	Moon passes Saturn
	4:24 p.m.	Sun farthest north; summer commences in Northern Hemisphere
23	7:00 a.m.	Moon passes Jupiter
	3:00 p.m.	Moon nearest; distance 229,600 miles
24	6:43 p.m.	Moon in last quarter
28	5:00 p.m.	Moon passes Mars
30	1:00 a.m.	Moon passes Mercury

Subtract one hour for CST, two hours for MST, and three hours for PST.




MICROELECTROPHORESIS
A
COMPARATIVE
STUDY IN THE
SEPARATION OF SERUM
NUTRIENT PASSAGE THROUGH PLANT GRAFTS
AS TESTED WITH RADIOISOTOPES

NO CASE INFO ONLY

OFFICIAL U.S. AIR FOR

U.S. AIR FORCE TECHNICAL INFORMATION

This questionnaire has been prepared so that you can give the U.S. Air Force as much information as possible concerning the unidentified aerial phenomenon that you have observed. Please try to answer as many questions as you possibly can. The information that you give will be used for research purposes. Your name will *not* be used in connection with any statements, conclusions, or publications without your permission. We request this personal information so that if it is deemed necessary, we may contact you for further details.

1. When did you see the object?

Don't remember (Day) / Jun/Jul (Month) / 1962 (Year)

2. Time of day: 11 (?) (Hours) (?) (Minutes)

(Circle One): A.M. or (P.M.)

3. Time Zone: EUROPE

(Circle One): a. Eastern, b. Central, c. Mountain, d. Pacific, e. Other _____

(Circle One): a. Daylight Saving, b. Standard

JUGOSLAWIA

4. Where were you when you saw the object? OUTSKIRTS of

No Postal Address (Nearest Postal Address) / ZAGREB (City or Town) / JUGOSLAWIA (State or County)

5. How long was object in sight? (Total Duration) I looked at the object for about 15 minutes (Hours / Minutes / Seconds)

a. Certain
b. Fairly certain
(c.) Not very sure (time)
d. Just a guess

5.1 How was time in sight determined? _____

5.2 Was object in sight continuously? Yes _____ No No

6. What was the condition of the sky?

DAY
a. Bright
b. Cloudy

NIGHT
a. Bright
b. (Cloudy)

7. IF you saw the object during DAYLIGHT, where was the SUN located as you looked at the object?

(Circle One): a. In front of you, b. In back of you, c. To your right, d. To your left, e. Overhead, f. Don't remember

8. IF you saw the object at

8.1 STARS (Circle One):

a. (None)
b. A few
c. Many
d. Don't remem

9. What were the weathe

CLOUDS (Circle One):
a. Clear sky
b. Hazy
c. Scattered clouds
d. Thick or heavy cloud

10. The object appeared: (

a. Solid
b. Transparent
c. Vapor

11. If it appeared as a ligh

a. (Brighter)
b. Dimmer

11.1 Compare brightn

12. The edges of the object

(Circle One): a. Fu
b. Li
c. Sl
d. D

13. Did the object:

a. Appear to stand s
b. Suddenly speed u
c. Break up into par
d. Give off smoke?
e. Change brightne
f. Change shape?
g. Flash or flicker?
h. Disappear and re

AIR FORCE UFO FORM

8. IF you saw the object at NIGHT, what did you notice concerning the STARS and MOON?

8.1 STARS *(Circle One)*:

a. None
b. A few
c. Many
d. Don't remember

8.2 MOON *(Circle One)*:

a. Bright moonlight
b. Dull moonlight
c. No moonlight—pitch dark
d. Don't remember

rain

9. What were the weather conditions at the time you saw the object?

CLOUDS *(Circle One)*:

a. Clear sky
b. Hazy
c. Scattered clouds
d. Thick or heavy clouds

WEATHER *(Circle One)*:

a. Dry
b. Fog, mist, or light rain
c. Moderate or heavy rain
d. Snow
e. Don't remember

Light Rain

10. The object appeared: *(Circle One)*:

a. Solid
b. Transparent
c. Vapor
d. As a light
e. Don't remember

11. If it appeared as a light, was it brighter than the brightest stars? *(Circle One)*:

a. Brighter
b. Dimmer
c. About the same
d. Don't know

11.1 Compare brightness to some common object:

12. The edges of the object were:

(Circle One): a. Fuzzy or blurred
b. Like a bright star
c. Sharply outlined
d. Don't remember
e. Other (Blurred (?) the object was far but not sharply outlined edges.)

13. Did the object:

(Circle One for each question)

a. Appear to stand still at any time?	Yes	No	Don't know
b. Suddenly speed up and rush away at any time?	Yes	No	Don't know
c. Break up into parts or explode?	Yes	No	Don't know
d. Give off smoke?	Yes	No	Don't know
e. Change brightness?	Yes	No	Don't know
f. Change shape?	Yes	No	Don't know
g. Flash or flicker?	Yes	No	Don't know
h. Disappear and reappear?	Yes	No	Don't know

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Official U.S. Air Force UFO form

14. Did the object disappear while you were watching it? If so, how?

It just disapeear

15. Did the object move behind something at any time, particularly a cloud?

(Circle One): Yes (No) Don't know. IF you answered YES, then tell what it moved behind: _____

16. Did the object move in front of something at any time, particularly a cloud?

(Circle One): Yes (No) Don't know. IF you answered YES, then tell what in front of: _____

17. Tell in a few words the following things about the object:

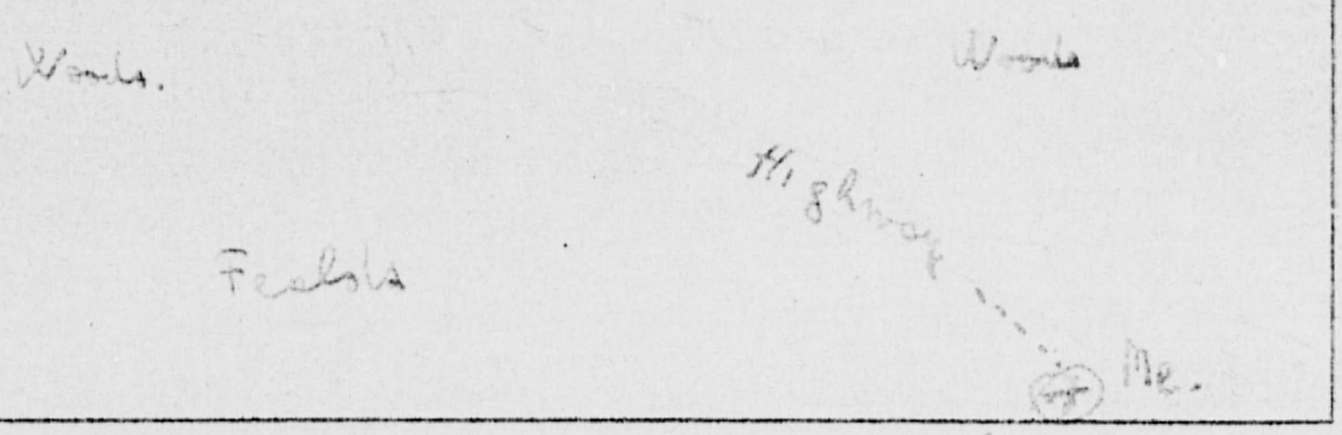
a. Sound No sound. Primarily blue, with green and white. As I remember.

b. Color

18. We wish to know the angular size. Hold a match stick at arm's length in line with a known object and note how much of the object is covered by the head of the match. If you had performed this experiment at the time of the sighting, how much of the object would have been covered by the match head?

I have not preformed this experiment at the time of sighting. But I tried now. It is about two mach head high. and about 3/2 mach head wide

19. Draw a picture that will show the shape of the object or objects. Label and include in your sketch any details of the object that you saw such as wings, protrusions, etc., and especially exhaust trails or vapor trails. Place an arrow beside the drawing to show the direction the object was moving. No →



In shape very similar to "Ella Louise Fortune UFO" but no vapor trail.

20. Do you think you co
(Circle On
IF you answered YE

21. Do you think you ca
(Circle On
IF you answered YE

22. Where were you loc
(Circle One):
a. Inside a building
b. In a car
c. Outdoors
d. In an airplane (ty
e. At sea
f. Other

24. IF you were MOVIN
24.1 What direction
a. North
b. Northeast
24.2 How fast were
24.3 Did you stop a
(Circle On

25. Did you observe the
a. Eyeglasses
b. Sun glasses
c. Windshield
d. Window glass

26. In order that you co
jects which, when pl

Air Force UFO form continued

20. Do you think you can estimate the speed of the object?

(Circle One) Yes No

IF you answered YES, then what speed would you estimate?_____

21. Do you think you can estimate how far away from you the object was? I was not able to see the location.

(Circle One) Yes (No) ?

IF you answered YES, then how far away would you say it was?_____

22. Where were you located when you saw the object?
(Circle One):

a. Inside a building
b. In a car
c. (Outdoors)
d. In an airplane (type)
e. At sea
f. Other_____

23. Were you (Circle One)

a. In the business section of a city?
b. In the residential section of a city?
c. In open countryside?
d. Near an airfield?
e. Flying over a city?
f. Flying over open country?
g. Other_____

24. IF you were MOVING IN AN AUTOMOBILE or other vehicle at the time, then complete the following questions:

24.1 What direction were you moving? (Circle One)

a. North c. East e. South g. West
b. Northeast d. Southeast f. Southwest h. Northwest

24.2 How fast were you moving?_____ miles per hour.

24.3 Did you stop at any time while you were looking at the object?

(Circle One) Yes No

25. Did you observe the object through any of the following?

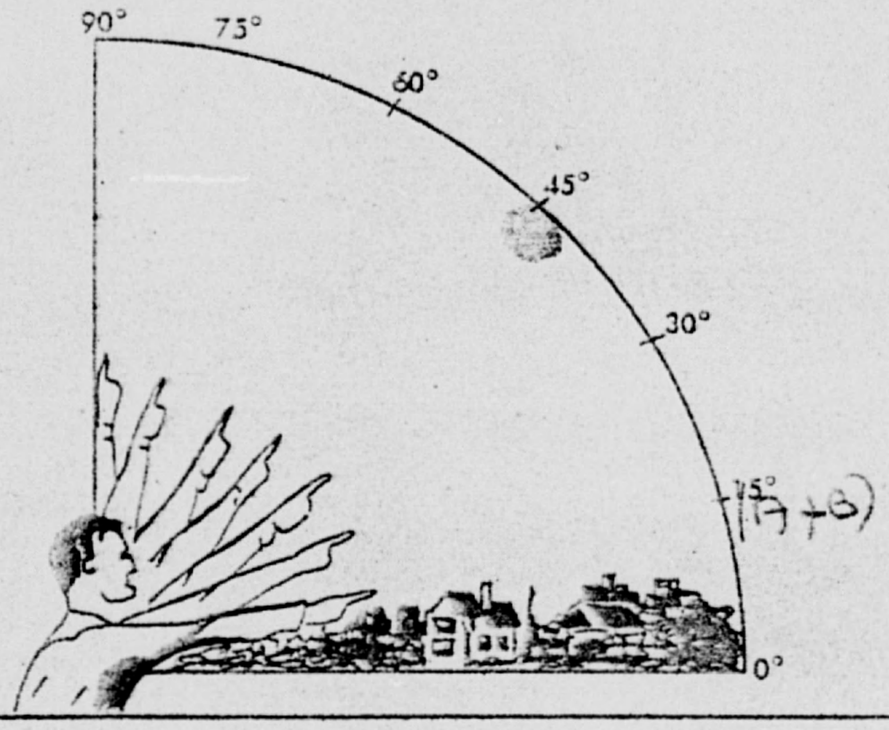
a. Eyeglasses	Yes	No ✓	e. Binoculars	Yes	No ✓
b. Sun glasses	Yes	No ✓	f. Telescope	Yes	No ✓
c. Windshield	Yes	No ✓	g. Theodolite	Yes	No ✓
d. Window glass	Yes	No ✓	h. Other_____		

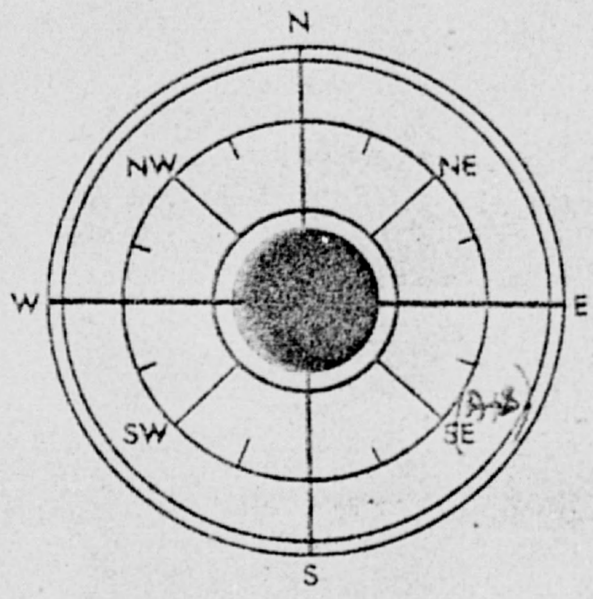
26. In order that you can give as clear a picture as possible of what you saw, describe in your own words a common object or objects which, when placed up in the sky, would give the same appearance as the object which you saw.

I can not.

Official U.S. Air Force UFO form

27. In the following sketch, imagine that you are at the point shown. Place an "A" on the curved line to show how high the object was above the horizon (skyline) when you *first* saw it. Place a "B" on the same curved line to show how high the object was above the horizon (skyline) when you *last* saw it. Place an "A" on the compass when you *first* saw it. Place a "B" on the compass when you *last* saw the object.





28. Draw a picture that will show the motion that the object or objects made. Place an "A" at the beginning of the path, a "B" at the end of the path, and show any changes in direction during the course.

29. IF there was MORE THAN ONE object, then how many were there?_____
Draw a picture of how they were arranged, and put an arrow to show the direction that they were traveling.

30. Have you ever seen this, c

31. Was anyone else with yo

31.1 IF you answered YE

31.2 Please list their nam

32. Please give the following

NAME [redacted]

ADDRESS [redacted]

TELEPHONE NUMBER

Indicate any additional i

I was examin
doctors. Two ti
C.N. Railroa
I was in the time o
I am now in
stay at this
since 1952 I
grade XII. MOST

33. When and to whom did y

Occasionally

Day

Force UFO form continued

30. Have you ever seen this, or a similar object before. If so give date or dates and location.

No

31. Was anyone else with you at the time you saw the object? *(Circle One)* Yes No ✓

31.1 IF you answered YES, did they see the object too? *(Circle One)* Yes No

31.2 Please list their names and addresses:

The Cars on the highway.

32. Please give the following information about yourself:

NAME [redacted] [redacted] [redacted]
Last Name First Name Middle Name

ADDRESS [redacted] VANCOUVER B.C CANADA
Street City Zone State

TELEPHONE NUMBER [redacted] AGE 29 SEX M

Indicate any additional information about yourself, including any special experience, which might be pertinent.

I was examined three times by the transportation business doctors. Two times in Germany and ones in Canada by C.N. Railroad doctor.
I was in the time of the incident in a unusual situation of a "refuge"
I am now immigrating from Canada to Australia and will stay at this address ca. two, three months.
Since 1962 I am a stateless person. My Education, not complicated grade 12. MUSICIAN.

33. When and to whom did you report that you had seen the object?

Occasionly I mentioned to some working companions.
Day Month Year

[redacted]

Official U.S. Air Force UFO form c

34. Date you completed this questionnaire: 13 (Day) Aug. (Month) 1967 (Year)

35. Information which you feel pertinent and which is not adequately covered in the specific points of the questionnaire or a narrative explanation of your sighting.

For me there are three posibilities:

① Somebody played a hoax, with a lighted balloon or a helicopter.

② An "after-image" because I stared in the oncoming highway traffic. But the the "after-image" supposed be white and not blue-green.

A spectrum appearance of the traffic head lights and the falling rain. (???)

③ A strange ship or a space animal.

I would like to represent the impression of [redacted] and the article recently in the "True" magazine. That the U.F.O. are living things. But (???)

I asked from my parents in Jugoslavia some maps of the area but did not recive the right ones.

I did read most of the literature "Flying saucers serious business" "Flying saucers hoax or reality" and others that came out on the market last years.

And I found some side lines with my U.F.O.

The picture of Min Elle Louise Fortune,

The immersion of Mr. Kenneth Arnold and the "Trackers"

The disapear and reapiear,

The Foxy disc shape,

Arnol

J. Arnold

like wire

everything

orce UFO form continued

And the colour.

I would like to help your organization but likewise I would not like to have more everyday trouble then I already have.

Friendly Yours

[redacted]

No Case (Information Only) " " daily June & early July 1962
Allen, Oklahoma

1962

...Mysterious lights, which may be ball lightning, UFO's, or possibly an intricate hoax of some sort, were seen almost nightly during June and early July in a field near Allen, Oklahoma. The lights, which look like "balls of colored fire," have been seen by carloads of teen-agers who go out of an evening to watch them. They have also been observed by local newspaper reporters sent out to investigate. No explanation has been found....

No Case (Information Only)

1 June 1962
Bordentown, New Jersey

According to a story published by NICAP's Seattle affiliate, a woman living in Bordentown Township, N.J., saw a weird light at close range on the night of June 1st. Mrs. Jessie Bilancio told a local newspaper that her television set was acting up that evening, and she went into her yard to investigate the cause. She saw a small bright light about 30 feet away from her. She thought at first it was a spotlight, but it moved from branch to branch of a nearby tree, and finally zoomed away into the sky..

Comparison is made to a somewhat similar sighting which appeared in the August, 1962 issue of SPACE, published by Norbert F. Garnery of Coral Gables, Florida. The incident is described under the heading "UFO THROWS TELEVISION SET OUT OF KILTER IN JERSEY."

"The TV set was acting up all night. Then about 11 p. m., it got very bad," Mrs. Jessie Bilancio of Homestead Ave., Bordentown Township explained.

Investigating the cause of the disturbance, the woman walked out into the rear yard and there "off to my right—about the size of my fist—was a very bright object." It was last Friday (June 1, 1962) evening when the UFO apparently touched off the electrical disturbance in Mrs. Bilancio's TV set.

"It didn't reflect light," the woman described the strange sighting. "It—the light—hovered in the top of a tree in my yard less than 30 feet above me. Then it moved to the lower limbs, something like a firefly. At first I thought it was a spotlight," she continued, "but then when it moved from branch to branch and finally flashed away into the sky, I realized it was something that was giving off its own light." Mrs. Bilancio said it all happened so fast she did not have time to become frightened.

"When I told my husband about it inside the house, he started kidding me," she continued.

AFFO BULLETIN July 1962

No Case (Information Only)

10 June 1962
Woburn, Massachusetts

June 10--Four Woburn, Mass. persons witnessed a white parachute shaped object as it descended in the sky over Woburn, Mass. This sighting along with the Lexington and Burlington, Mass. sightings mentioned above all indicated the same shape-"parachute shaped" objects, but none knew of the sightings and photographs of the other eyewitnesses during the 28 day period and all near the same location.

No Case (Information Only)

18 June 1962
Cuyahoga Falls, Ohio

LOCAL SIGHTINGS -
Cuyahoga Falls, O. 6/18/62 8:30 PM EDT. An UFO was seen for two minutes in the clear sky by a driver going east on Falls Ave. He stopped to observe a cigarette-shaped, bluish-green, sharply defined object that had a rounded or blunted nose. The witness said it was luminous and somewhat transparent. At the back of the object, there appeared to be a short, reddish flame or glow; following at a short distance was a bright, white star - like object. The UFO was moving at a very high altitude from the SE to NW, at a speed comparable to a jet. Trees obscured further observation. No sound-but radio reception seemed to be affected.

- - -

1962

A series of saucer sightings in Tucson, Arizona, late last June turned out to be the work of a group of students who were sending up candle-carrying balloons at night. The balloons were supposedly a serious attempt to study wind velocities, though the students seemed pleased to have caused several people, including a local professor, to mistake their experiments for genuine UFO's.

OFFICE, SECRETARY OF THE AIR FORCE
OFFICE OF INFORMATION

SUSPENSE: 24 Sept 1962 | DATE: 18 Sept 1962

TO:

- ☐ GEN. MARTIN
- ☐ COL. CASEY
- ☐ COL. BOYD
- ☐ COL. EVANS
- ☐ LT COL SANDVIG
- ☐ CAPT. FREEMAN
- ☐

- ☐ SAFOI-1A (RESERVE FORCES)
- ☐ SAFOI-1B (BANDS & MUSIC)
- ☐ SAFOI-1C (SCTY COORD)
- ☐ SAFOI-2 (COMMUNITY REL)
- ☑ SAFOI-3 (PUBLIC INFO)
- ☐ SAFOI-4 (PLANS & PROG)
- ☐ SAFOI-5 (INTERNAL INFO)

ATTENTION:

PREPARE REPLY FOR SIGNATURE OF:

- ☐ DIRECTOR
- ☐ DEPUTY DIRECTOR
- ☐ ASST. DIRECTOR
- ☐ EXECUTIVE

- ☐ SECRETARY
- ☐ CHIEF OF STAFF
- ☐ VICE CHIEF OF STAFF
- ☐ ASST VICE CHIEF OF STAFF

- ☐ DIRECT REPLY
- ☑ ACTION
- ☐ INFORMATION
- ☐ FILE

- ☐ COORDINATION
- ☐ RECOMMENDATION
- ☐ COMMENT
- ☐ NOTE & RETURN

- ☐ DIRECTOR HAS SEEN
- ☐ DEP. DIR. HAS SEEN

SAFOI-	1A	1B	1C	2	3	4	5	HAS ACTION
SAFOI-	1A	1B	1C	2	3	4	5	HAS INFO.

COMMENTS:

KG

KENNETH G. SANDVIG
Lt Colonel, USAF
Executive
Office of Information

SAFOI - 100

25 JUNE

SAFOI-3b/Major Hart/kw/75630

September 24, 1962

Dear Mrs. [redacted]

The Office of the President has referred your letter to the Air Force for reply.

The Air Force has no record of the sighting you refer to therefore it has not been investigated by the Air Force. The validity of an evaluation reached as a result of investigation at this late date would be subject to question. It can only be stated that as of this date the Air Force has conducted over 7,500 investigations of reported sightings, none of the reported aerial phenomena have given indication of threat to our national security. There has been no evidence submitted to or discovered by the Air Force that unidentified sightings represented technological developments or principles beyond the range of our present day scientific knowledge and there has been nothing in the way of evidence or other data to indicate these unidentified sightings were extraterrestrial vehicles under intelligent control.

The inclosed fact sheet will provide you with additional details of our findings.

Sincerely,

Attachment

C. R. CARLSON
Colonel, USAF
Deputy Chief
Public Information Division
Office of Information

Mrs. [redacted]
Tucson, Arizona

SAFOI-3b - Comeback
SAFOI-1 - Reading
SAFLL - 2 Cys (Info)
FTD - Col Friend (Info

d

Dear Mr President

I am enclosing a copy
of the story of Shirley Lieser
which I wrote in Miss Kirkland's class
by the A.P.R.O. Staple a book
which my sister Pat received
on the Eighth of June 25 1962.

I'm writing after the story
so I can tell you how the
story came about. Shirley
is my sister Pat's friend
when the story first came
out Pat brought the
book home and I read
it. I thought it was
interesting so I decided
to tell the Lieser family
and I sent them a
letter telling them
I'd written a story
about Shirley.

[redacted]

Pat and I enjoyed
reading it to them
when we finished
we sent it to
the A.P.R.O. Staple

THE A.P.R.O. BULLETIN

The A. P. R. O. Bulletin is the official copyrighted publication of the Aerial Phenomena Research Organization (A.P.R.O.), 4145 E. Desert Place, Tucson, Arizona, and is issued every other month to members only. The Aerial Phenomena Research Organization is a non-profit group dedicated to the eventual solution of the mystery of the unidentified objects which have been present in the skies for hundreds of years. Inquiries regarding membership may be made to the above address.

TUCSON, ARIZONA — JULY, 1962

Saucers Shoot Rockets over Tucson, Arizona

By Coral E. Lorenzen

"Some doors opened in the bottom and something came out." An unconventional aerial object hovered for a period of time at Tucson, Arizona and a strange device had lowered to the ground. The boy relating the details was 14-year-old John Westmoreland. He and his brother James and next-door neighbor Ronnie Black had spent the night of June 25, 1962 in the tent in the Westmoreland back yard and during the course of four hours had witnessed a strange but revealing chain of events.

On the evening of the 26th of June I opened the Tucson Daily Citizen newspaper. When I came to the local news section, these words seemed to pop right out of the page: "Saucers, Rockets Inhabit Night Sky."

I scanned the article briefly and reached for the telephone book. Seconds later I was talking to Mrs. Logan Westmoreland, the mother of John and James Westmoreland. She graciously invited Mr. Lorenzen and me to come to her home and interview the boys. Three hours later we were seated in the comfortably furnished living room of the Westmoreland home in southeast Tucson.

The boys were eager to talk about their adventure, partly I suspect, because they were met with doubt at first. As soon as we got the gist of the story we started the slow process of cross-examination.

The three boys had been given permission to spend the night in the tent, so, armed with a deck of playing cards, pad and pencil, they settled down to a game of 500 Rummy by lantern light. Shortly before nine they were bored with cards and not sleepy, so they decided to go outside, watch for meteors and look at the stars and try to catch an errant, cooling breeze. The summer rains were in the offing and the air was warm and humid. The day had been hot; the night air was a welcome change.

At about 9 o'clock John noticed a star at 5 degrees south of due west, 30-40 degrees elevation, which didn't behave

(See Saucer Shoot page 3)

Saucers Shoot . . . .

(Continued from page 1)

like a star. It was very bright, white in color, and "moved around a little," in the boys' words. Soon it dimmed, moved a little toward the south, lost a few degrees in altitude and then became stationary.

The boys soon lost interest and went back into the tent to another game of Rummy. From time to time they peeked out and took a look at the strange "star" but it "just stayed there." Then at about 11:45 things began to happen.

The bright "star" became much brighter and seemed to move closer. Instead of looking like a star, it assumed a triangular shape as it grew larger. Then it became stationary again. How long this process took the boys did not know, but according the kitchen clock (they kept peeking in the window to check the time), a surprising thing happened at 12:15. Three green flares or rockets were fired horizontally from the main object.

At this time, John scrambled into the tent and emerged with the score pad and pencil. He decided to keep notes. On the pad he wrote: "At 9 o'clock at night we saw a flying saucer. At 12:15 it shot three green things that traveled faster than any plane." These rockets were too fast to track visually.

After the first "rocket" was fired, John noticed the second "saucer" which we will hereafter refer to as Number Two. It came in racing from west to east across the northern sky, "turned a flip" and came to rest at about 15 degrees east of north at a slightly greater elevation than No. 1. Shortly No. 2, which appeared closer and larger than No. 1, was approached by the "flare-like object," which came in from underneath and appeared to be absorbed through the bottom of No. 2.

Then the first "saucer" spat out another of the small objects. About three minutes later No. 2 was again approached by the tiny object and again the boys watched as it seemingly disappeared into the bottom of No. 2.

No. 1 was still in the same position, appearing to be triangular in shape, and No. 2 appeared much closer and round-shaped with two leg-like or stilt-like protuberances on the underside.

A third flare emerged from No. 1, and was shortly "received" by sauce No. 2. Things were getting interesting. No. 2 then shot out a rocket which quickly disappeared into the night sky. No. 2 began to dim and fade into the night sky and was not seen again. No. 1 retained its same position.

At this time, Saucer No. 3 was spotted at about 100-110 degrees and about 45 degrees elevation. It appeared the largest and highest of the three, which suggests that it was closer. The detail reported by the boys bears this out.

But the best part of the show was yet to come.

Number three sported a cone-shaped superstructure above an apparently round airfoil. Its color was white and like the others it made absolutely no sound. At 1:16 a jet plane went over—we later decided it was probably in the flight pattern of Davis-Monthan AFB, a Strategic Air Command installation a scant 3 or 4 miles from the Westmoreland home.

The new visitor closed in and three of the stilt-like protuberances "popped out." Then the object gained altitude. An elongated dark "something" slid out from above the circular rim and three of the small rocket-like objects emerged in quick succession. In a few brief minutes they were back. Two doors swung open, down, and back up against the underside of the saucer. As the doors opened, the "legs" receded into the object. The little rockets, now clearly seen, swiftly entered the opening, one by one. The big object elevated slightly, and moved sideways, then became stationary again.

The newspaper had printed only the boys' notes which were not detailed except for general movement of the objects. In describing saucer No. 3, John had written: "Something lowered from the bottom. Something came out."

I asked John what he meant by that. He said that something which looked like a rope or cable came out and lowered to the ground. I asked him what color it was, and two voices—his and James', piped up and said "brown." I wondered how they could tell colors at that time of the night and asked them. "From the light," they said.

"What light was that?" I asked. Then then told me that when the doors opened a red light shone down from the inside in a perpendicular narrow beam, that extended to the ground. When the long, ropelike object began to come out, it was clearly visible and appeared to be brown in color.

The boys estimated that the "rope" was extended for from three to five minutes, after which it began to come up into the saucer again. After it had cleared the top of the ridge bordering the wash, they realized that something was on the bottom of it. It was slowly pulled up into the large object, the doors closed and the object moved up and into the east until it was out of sight.

The youngsters stayed up a little longer, watching for more activity in the sky but before long the excitement of

(See Saucers Shoot, page 4)

Saucers Shoot . . . .

(Continued from page 3)

the night and their lack of sleep overcame their curiosity and they retired into the tent. As soon as they had awakened in the morning they rushed in to tell Mrs. Westmoreland what they had seen.

Pat Westmoreland, about 40, is an understanding mother but a firm one. The thought at first that perhaps the boys had had a touch of imagination and set about using all the "trapping tricks" she knew to trip them up in their story, but to no avail. She began to realize that they had had a real experience. She decided the newspapers should know what had happened the preceding night and called them. Thus the article which had drawn my attention came about. It should be noted here that the newspaper printed the notes, pointing out that it could be imaginary or real—they printed it because it was a sensational story.

The matter of the boys' honesty comes to mind as a matter of course in these investigations. After three long visits with the boys, during which time Mr. Lorenzen walked with them to the wash over which they thought the UAO had hovered, and I had sketched the objects from their instructions, we found no indication that the boys were not telling the truth. Mr. Lorenzen said that he had not caught any signs of strain, rehearsed conversation or trickery during his talks with them while walking to and from the wash. Nor did I ever detect any evidence that the boys were attempting to perpetrate a hoax. Some of the things which impressed me concerning the sighting as well as the honesty of the boys were these:

When attempting to describe the object which was brought up by the rope or cable, John Westmoreland said he got the impression that the object was about as long as his father—in other words, its length equalled approximately the height of his father who is about 6 feet tall. If saucer No. 3 was above, Pantano wash as the boys felt it was, we have an idea of its size as well as the size of the rockets or flares and the size of the object which was pulled up into the large object.

The rim of the saucer appeared to have the same angular displacement as a five foot cross-arm on a utility pole at the corner of the Westmoreland lot. If it was over Pantano wash (quarter mile distant) it was approximately 30 feet in diameter. The small objects then would be about 6 feet long, and the object which was taken up into the saucer would be about the same size as the "rockets," and certainly the same general configuration. (See sketches).

It is interesting and tempting to speculate that one of the rockets, at some time or other, had become disabled, a search initiated, and eventually, a recovery effected. The latter phase of the sighting, in which a device was lowered to the ground and returned to saucer No. 3 with a triangular-shaped object at the end of it, could have been that "recovery." This may further be supported by the fact that after the object was taken into the saucer, the saucer left. The recovery of that object may have been the sole purpose of the presence of the saucers that night.

It is interesting to note that after the case was fully investigated, the local newspapers were not interested in further information or a follow-up story.

On the 29th, a group of local college students sent up some balloons filled with ordinary kitchen gas and lighted by candles encased in fireproof crepe paper. Although this was not accomplished until three days after the Westmoreland sighting, the idea of saucers had been firmly implanted in the public mind. A local professor of atmospheric physics who is interested in UFO, was told of the strange lighted object in the sky, and went to the U. of A. meteorological lab to track the thing. The story of his sighting was in the Arizona Star morning paper for Friday 29 June 1962. Upon reading the details, plus his theory that the thing was an "extended source of light," I wondered if some hoaxers might have been at work. I called the Tucson Citizen asking that they mention APRO and ask for further sightings of the Thursday evening object and suggested that the object seen that night might have been the result of a prank. Later, I talked to the physicist who had been viewing the object and found that he had also decided that the object was a hoax.

Later news stores stated that the college boys involved in the "prank" were "carrying out experiments dealing with wind velocity and other weather conditions." Considering the type of homemade balloon, and the fact that it contained dangerous highly inflammable gas which was tied to a device with an open flame, it is not likely that any such experiment was being carried out. It appears more likely that a childish prank was being played and the "young men" involved did not want to admit their part in it, attempting to write it off as an experiment.

It is lamentable that the newspapers were satisfied with the experiment explanation and stated that these "experiments" may have been the cause of the saucer sightings in Southern Arizona in the past few months. Certainly, the easiest way to dispose of the perplexing UFO problem is to ignore the evidence which prolongs its mysterious nature. A large percentage of the press is inclined to do precisely that.

In the case of this latter sighting, the only two observers of the lighted plastic bags who called me felt the object was a balloon. The local press gave the impression that those who viewed the hoax objects were completely fooled, but that certainly was not the case.

The events of the week of June 24-30 very aptly demonstrated the contention that I have had for years concerning the psychology of the disbeliever. The skeptic is often so intent upon disproving that which he does not care to believe, by attempting to label it a hoax or a misconception of a conventional object, that he sets about to perpetrate a hoax to support his own convictions and allay his subconscious fears.

A thorough perusal of newspaper stories concerning the Westmoreland sighting as well as ensuing reports of unidentified sky objects emphasizes the foolhardiness of accepting en toto the information pertaining to UFO sightings as presented by the news media and points up the need for thorough investigation. Had I accepted the Westmoreland story as presented by the Tucson Citizen, I would have had a short dissertation completely lacking in detail. A few hours spent in investigation yielded some very important facts, and enabled APRO to log one of the most detailed sightings of an unconventional aerial object which has ever been observed.

Ice Cutter Encounters "Lake Lights"

On March 17, 1962, strange lights off the shore of Erie, Pennsylvania, got the ice cutter Ojibwa out of dock to investigate. Chief Warrant officer Kenneth N. Black (Coast Guard) said the lights were seen by several individuals including the ship's crew. The ship got underway, cutting through heavy ice all the way to the Canadian shore and Black said "The closer we moved toward them, the farther away they seemed to be." Black also said he believed the lights were the result of unusual atmospheric conditions causing lights to be refracted on the lake. It is interesting to note that the obvious explanation — that they were chasing moving lights — was apparently not mentioned or considered by Black.

No Case (Information Only)

26 June 1962
Falmouth, Massachusetts

June 26--At Falmouth, Mass. Eleanor Schmidt and two other women reported a large bright red object that maneuvered from side to side and hovered over the ocean for 30 minutes.

1 - 15 JULY 1962 SIGHTINGS

DATE	LOCATION	OBSERVER	EVALUATION
Jul	North Brunswick, New Jersey	[redacted]	Insufficient Data
Jul	Glenside, Pennsylvania.	[redacted]	Insufficient Data
Jul	Ashland, Wisconsin	[redacted]	Aircraft
2	Baltimore, Maryland	[redacted]	Satellite
2	New York, New York	[redacted]	Astro (METEOR)
3	Hyattsville, Maryland	[redacted]	Astro (METEOR)
3	Hutchison, Kansas	[redacted]	Satellite
3	11.45N 174.52W (Pacific)	Military	Satellite
4	San Juan, Puerto Rico	USGG	Satellite
4	20.00N 161.12W (Pacific)	[redacted]	Other (MISSILE)
4	Veracruz, Mexico	State Dept	Insufficient Data
4	Kingsville, Louisiana	[redacted]	Satellite
5	Pacific	Military	Satellite
6	Beeville, Texas	[redacted]	Astro (METEOR)
6	Sagatuck, Michigan	[redacted]	Insufficient Data
6	Cheverly, Maryland	[redacted]	Satellite
7	Hallet Station, Antarctic	Military	Astro (METEOR)
7	Malden, Massachusetts	[redacted]	Insufficient Data
7	Hanscomb Field, Massachusetts	[redacted]	Aircraft
7	Albuquerque, New Mexico	[redacted]	Insufficient Data
7	Dayton, Ohio	[redacted]	Aircraft
8	British Honduras	[redacted]	Insufficient Data
9	Jacksonville, Florida	[redacted]	Astro (METEOR)
9	Moraine, Ohio	[redacted]	Satellite
9	Paterson, New Jersey	[redacted]	Aircraft
10	Dayton, Ohio	[redacted]	Aircraft
10	Meredith, New Hampshire	[redacted]	Aircraft
10	Newark, New Jersey	[redacted]	Aircraft
10-12	Keller, Washington	[redacted]	Aircraft
11	Kankakee, Illinois	[redacted]	Insufficient Data
12	Pacific	[redacted]	Satellite.
12	Westover AFB, Massachusetts	Military	Astro (METEOR)
12	Los Angeles, California	[redacted]	Aircraft
12	18.25N 55.46W (Indian Ocean)	Military	Satellite
13	Springfield, Virginia	[redacted]	Astro (METEOR)
13	06.09S 110.38W (Pacific)	[redacted]	Satellite
13	Carlsbad, New Mexico	[redacted]	Astro (JUPITER)
14	Rock Hill, South Carolina	[redacted]	Insufficient Data
14	Evanston, Illinois	[redacted]	Aircraft
15	Evanston, Illinois	[redacted]	Insufficient Data

ADDITIONAL REPORTED SIGHTINGS (NOT CASES)

DATE	LOCATION	SOURCE	EVALUATION
Jul	Universe	Science News Ltr	
Jul	Philadelphia, Pennsylvania	[redacted] 164)	
7	New Zealand	Newsclipping	
9	Hong Kong	Newsclipping	
11	Dunedin, New Zealand	Newsclipping	
12	Camp Lokota, Illinois	Newsclipping	