



AIR OPERATIONS MANUAL



TURNER FIELD



UNITED STATES MARINE CORPS
MARINE CORPS AIR FACILITY
2100 ROWELL ROAD
QUANTICO, VIRGINIA 22134-5063

IN REPLY REFER TO:
AFO P3700.1F
AF 143

AIR FACILITY ORDER P3700.1F

From: Commanding Officer
To: Distribution List

Subj: AIR OPERATIONS MANUAL

Ref: (a) OPNAVINST 3710.7S
(b) NAVAIR 00-80T-114

Encl: (1) LOCATOR SHEET

1. Purpose. To promulgate the Air Operations Manual for Turner Field, Marine Corps Air Facility, Quantico, Virginia, in accordance with references (a) and (b).

2. Cancellation. AFO P3700.1E.

3. Information. The rules and regulations prescribed in this Manual apply to all who are concerned with the operations of aircraft or vehicular traffic at Marine Corps Air Facility, Quantico, Virginia, and aircraft operations within the airspace and operational areas assigned. This Manual has been prepared in accordance with current directives; however, nothing in this Manual shall be construed as supplementing or modifying existing instructions issued by higher authority, nor does it relieve pilots of their responsibilities for the use of good judgment and the observance of safety precautions.

4. Actions. The Airfield Operations Officer is charged with the administration and enforcement of the provisions of this Manual.

5. Summary of Revision. This manual contains substantial changes and should be completely reviewed.

6. Certification. Reviewed and approved this date.


R. E. CLAY

AFO P3700.1F

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ENCLOSURE (1)

TURNER FIELD, MCAF QUANTICO
in memory of
THOMAS CALDWELL TURNER



Thomas Caldwell Turner was a distinguished Marine Aviator whose career spanned over 30 years from 1901 to 1931.

During his career he saw service in the Philippine Islands, Mexico, Haiti, and afloat. For his service with the first Provisional Marine Brigade in Haiti, he was awarded the Medallion Militaire by the President of Haiti with the following citation:

"An officer of remarkable valor; has taken a very active part in the suppression of the bandits at the time of their attack against the capital on January 15, 1920, repelling and inflicting great losses upon them."

Following his return from duty in Haiti, he was appointed Officer in Charge of Marine Corps Aviation and Marine Corps Aide to the Secretary of the Navy. In 1921 he made an extended flight to Santo Domingo and was awarded the Distinguished Flying Cross with the following citation:

"For extraordinary achievement in aerial flight as Commanding Officer in accomplishing, on April 22, 1921, the pioneer flight of airplanes to make flight from Washington, D.C. to Santo Domingo, D.R., and return, thereby completing the longest flight unguarded, in a land plane, over land and water ever accomplished by Naval Aviators at the time."

He was awarded a second Medalline Militaire by the President of Haiti for this flight.

In 1925, Colonel Turner was transferred to the Marine Barracks, Quantico, Virginia for duty commanding the First Aviation Group. In 1926, he was ordered to the Army Air Service Tactical School at Langley Airfield, Virginia, as a student officer. Upon completion of that course and after a short period of duty at Headquarters Marine Corps, he was ordered to China where he commanded the Aircraft Squadrons, Third Marine Brigade, from August 1927 to November 1928. From January to May 1929, he commanded the Aircraft Squadrons at Quantico, Virginia, when he was, for the second time, appointed Officer-in-Charge of Marine Corps Aviation, Bureau of Aeronautics, Navy Department.

He died at Port au Prince, Haiti, on October 28, 1931, from injuries received when struck by an airplane propeller at Gonaives, Haiti, on October 26th.



THE HISTORY OF MARINE CORPS AIR FACILITY QUANTICO

Aviation first arrived at Quantico in July 1918, when two kite balloons were flown to spot artillery fire. These forerunners of today's spotter aircraft were soon augmented with the assignment of four seaplanes, which operated from the muddy junction of Chopawamsic Creek and the Potomac River.

In 1919, a flying field was laid out and the land leased to accommodate a squadron returning from World War I combat in Europe. The facility was later named Brown Field, in memory of 2ndLt Walter V. Brown, who lost his life in an early accident at that location. The present site was selected in 1931, when larger and faster planes brought recognition of the limitations and hazards of Brown Field - its single, crosswind runway, bound by trees, hills, swamp, a high tension line and a railroad.

A new airfield was constructed by changing the course and flow of Chopawamsic Creek and reclamation of the marshland from that area. The new facility was named Turner Field - after Colonel Thomas C. Turner, a veteran Marine aviator, who lost his life in Haiti in 1931.

By 1939, four squadrons - 68 bombers, scout bombers, fighters, transports, utility and observation planes - were based here. On 1 December 1941, the field was named Marine Corps Air Station, Quantico, and placed under operational control of the Commanding General, Marine Barracks.

In 1947, Marine Helicopter Squadron One was established at Quantico to pioneer an entirely new concept in air operation; to evaluate and test, in coordination with the Landing Force Development Center, the theory of carrying troops to the battle zone by helicopter.

By the close of the Korean conflict, helicopters had gained permanent acceptance by the military for tactical and logistical support operations.

Effective 15 November 1976, MCAS Quantico was re-designated as Marine Corps Air Facility (MCAF), Quantico, Virginia. MCAF Quantico is currently the home of Headquarters Squadron (HqSqn)

and Marine Helicopter Squadron One (HMX-1). HMX-1, in addition to its tactical development mission, flies the President of the United States and provides helicopter support for the Marine Corps Combat Development Command.

On 20 October 1992, MCAF Quantico was reorganized under the Commander, Marine Corps Air Bases, Eastern Area, headquartered at Marine Corps Air Station, Cherry Point, North Carolina.

AIR OPERATIONS MANUAL

RECORD OF CHANGES

Log completed change action as indicated.

[illegible]

AIR OPERATIONS MANUAL

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CHAPTER 1

GENERAL

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CHAPTER 1

GENERAL

1000. DEFINITIONS. Word usage and intended meanings as used in this manual are as follows:

1. Shall. Used only when application of a procedure is mandatory.
2. Should. Used when application of a procedure is recommended.
3. May and Need Not. Used only when application of a procedure is optional.
4. Will. Used only to indicate futurity. Never indicates any degree of requirement for application of a procedure.
5. Unless otherwise specified, all headings in this manual are magnetic, all distances are in nautical miles, all heights are referenced to Mean Sea Level (MSL), and all times are local.

→ 1001. LOCATION. MCAF Quantico is located on the west bank of the Potomac River, 25 nautical miles south of Washington D.C. and 60 nautical miles north of Richmond, Virginia, at latitude 38° 30' 08.91"N, longitude 77° 18' 21.37"W. The assigned magnetic variation is 10° west and field elevation is 11 feet MSL.

1002. RUNWAYS. The landing area consists of one hard surface asphalt runway with the following dimensions: (See Appendix A)

→	<u>Runway</u>	<u>Dimensions</u>	<u>Overrun</u>
	02/20	4279' X 200'	Rwy 02/125'

1003. GENERAL RULES. The regulations prescribed herein shall govern the operation of all aircraft at MCAF Quantico, Restricted Area 6608 (R-6608) and DEMO Military Operating Area (MOA) and control areas under cognizance of this Air Facility. Vehicular traffic on the runways and taxiways is also subject to these regulations. Pilots shall be indoctrinated in the fundamentals and are expected to exercise good judgment in the operation of aircraft and adhere to the general prudential rules of flying. Therefore, this manual is not intended to cover every contingency that may arise, nor every rule of good operating practice. The pilot in command of an aircraft is

responsible for the safe and orderly conduct of the flight and shall operate the aircraft in such a manner as to avoid hazards. Personnel other than pilots who have specific duties or functions on the airfield are expected to be familiar with applicable portions of these regulations. Orders shall not be issued by tenant units that conflict with instructions set forth in this manual.

→1004. WASHINGTON AIR DEFENSE IDENTIFICATION ZONE (ADIZ)

1. ADIZ. Is an area of airspace over land or water in which the ready identification, location, and control of civil aircraft is required in the interest of national security.

2. The Washington, DC Metropolitan Area ADIZ. Is that airspace described by current NOTAM, the dimensions of which change due to the terrorism threat level. No aircraft may operate within the Washington ADIZ unless:

a. Equipped with an operable two-way radio.

b. Two-way radio communication with ATC is established prior to entering the ADIZ and subsequently maintained while operating within.

c. ATC clearance to enter class B, C, or D airspace within the ADIZ has been received.

d. The aircraft is equipped with an operating transponder with automatic altitude reporting capability.

e. A discrete transponder code has been received from ATC.

f. The aircraft's transponder continuously emits the appropriate ATC assigned code.

g. A flight plan has been filed and activated prior to entering or departing the ADIZ.

3. Aircraft operations by the U.S. Military, Law Enforcement, and Aero Medical Flights are exempted from these requirements; however, the Quantico ATC Facility shall make every effort to comply with the above conditions when controlling these aircraft.

4. The Flight Restricted Zone (FRZ) surrounding the Washington, DC Metropolitan Area is a part of the Washington ADIZ and is

also described by NOTAM. Unless specifically authorized by the FAA and other appropriate authorities, flight operations are prohibited within the Washington Metropolitan FRZ.
(See Appendix N)

5. These restrictions do not apply to DOD, Law Enforcement, or Aero Medical Flight operations that are in contact with ATC and are displaying an assigned discrete transponder beacon code.

1005. HANGAR AND SERVICE FACILITIES

- 1. Wheel Load Capacity. Maximum allowable wheel loading limits in operating areas are listed below; any requests for deviations to these limits should be addressed to the MCAF Airfield Manager or Operations Officer for approval.

<u>Area</u>	<u>Single</u>	<u>Dual</u>	<u>Single Tandem</u>
Runway 02/20	72,000	100,000	175,000
Taxiway Alpha	25,000	50,000	N/A
Taxiway Bravo	40,000	70,000	133,000
Taxiway Charlie	40,000	70,000	138,000
Taxiway Delta	29,000	65,000	110,000
→ Mat #1	37,000	70,000	132,000
Mat #3	Not available		

- NOTE: All weights are in accordance with the reference Runway Friction Measurements and Airfield Pavement Condition Index (Aug 1996). All weights are based on 150 PSI. Only a portion of Mat #3 surface material is AM-2 matting.

2. Parking Ramps. C-130 and C-17 aircraft are limited to the Visiting Aircraft Line (concrete ramps) southeast of the control tower.

3. Fuel and oil available:

- a. Fuel - Diesel, Mogas, JP8 jet fuel (cold refuel only)
- b. Oil - 23699 oil for turbine engines

4. Ground Support Equipment (GSE): (Coordinated through HMX-1 at (703) 784-2074)

- a. Electric starting units, NC-10
- b. Electric test units, MMG-2, MMG-1A

- c. NDI (x-ray)
- d. Blade shop
- e. Tugs
- f. All support equipment and tools for H-46, CH-53E, VH-60, and VH-3.

→5. With at least 72 hours prior notice, M-31 arresting gear is available from the 2nd Marine Air Wing. This equipment is not located at MCAF Quantico and the 72 hour notice is to allow for transportation and emplacement.

6. Transient services are available on a limited basis. Prior Permission Required (PPR) numbers are required. Limited hangar space is available to transient aircraft for emergency repairs only.

→7. No Air Freight and Passenger Section exists at MCAF Quantico. The following coordination must be met:

- a. Seventy-Two (72) hour notification and prior permission is required for handling of all inbound/outbound freight.

- b. Arrangements for inbound and outbound freight loading/unloading will be made by the shipping/receiving organization.

- c. The visiting aircraft line will be utilized for all routine arrival and departure of passengers. VIP flights will board and disembark at the VIP spot located at the southeast corner of Hangar 2105 (See Appendix A).

- d. Organizations arranging freight and passenger transportation will furnish an on-the-spot supervisor for cargo loading/unloading and for passenger loading/unloading when ground transportation is required.

8. Complete flight planning and weather service facilities are available in the Airfield Operations Building (Bldg #2105).

→9. The engine test area is located on the extreme northeast portion of the Air Facility. Its use is scheduled through HMX-1 Power Plant Section at (703) 784-2684.

1006. AIRFIELD LIGHTING

→1. Runway Lighting

a. Runway 02/20

(1) Variable, High Intensity Runway Lights (HIRLS).

(2) Red/Green threshold lights.

(3) Precision Approach Path Indicator (PAPI), 3.0 degree angle, which coincides with the PAR glideslope for Runway 02.

2. Runway 02 has a 125 foot unlighted hard surface overrun.

→3. Airfield Beacon. A standard, military, alternating green and dual peaked white rotating beacon is located 1850 feet south of the Runway 02/20 and Taxiway C/D intersection (Larson Gym). The airfield beacon operates between the hours of sunset and sunrise; when the field is below basic VFR; and during the periods the airfield is closed for ship navigation on the Potomac River. (See Appendix A)

→4. Taxiway Lighting. Standard blue lighting of fixed intensity. Taxiway Delta and Mat #3 are not lighted.

5. Runway Distance Markers. Lighted runway distance markers are located on both sides of Runway 02/20 and indicate in thousands of feet the length of usable runway remaining.

1007. HOURS OF OPERATION

1. <u>Day</u>	<u>Summer Hours</u>	<u>Winter Hours</u>
Monday	0800 - 1700	0800 - 1700
Tuesday*	1100 - 2300	1100 - 2100
Wednesday	0800 - 2300	0800 - 2100
Thursday	0800 - 2300	0800 - 2100
Friday	0800 - 1700	0800 - 1700

* Radar services will be available to outlying airfields after 0800 on Tuesdays. Quantico's airfield will not normally be open during this time.

NOTE: Winter hours are in effect during standard time, summer hours are in effect during daylight savings time.

- 2. Requests for operating hour changes to meet special requirements should be made to the MCAF Airfield Manager or Operations Officer 24 hours in advance. Operations may be extended, suspended, or curtailed temporarily by the MCAF Commanding Officer or his representative for the following reasons:
- a. Prevailing weather
 - b. Conditions of landing area
 - c. Priority Missions
 - d. Degraded airfield support capability
3. MCAF Quantico is a PPR airfield. PPR clearance requests may be filed through the MCAF Operations Office, DSN 278-2908/2085, COMM (703) 784-2908/2085 at least 24 hours in advance (72 hours in advance for freight).
- 1008. COMPASS ROSE. The Compass rose is located on Mat #3. Its use is scheduled through the MCAF Operations Office DSN 278-2908/2085, COMM (703) 784-2908/2085 (See Appendix A).
- 1009. WEATHER SERVICES
1. General. The MCAF Weather Service Branch is responsible for providing 24-hour meteorological services to the Air Facility, tenant organizations, Marine Corps Base (MCB), Marine Corps Combat Development Command (MCCDC), and transient aircrews in accordance with current directives. The weather forecaster can be reached at (703) 784-2468/ DSN 278-2468, METOC frequency 355.3, or weather website www.metocwx.quantico.usmc.mil/
 2. Average/Annual weather data |
 - a. Winter temperatures at MCAF Quantico are normally 2-3 degrees (Fahrenheit) higher than outlying areas due to the influence of the Potomac River. Snowfall amounts are particularly influenced by the high temperatures, with differences of 2-3 inches occurring within 1/2 mile west of the field. The mean annual snowfall is 19 inches, but the rapid melt-off results in small accumulations. More than 10 inch accumulations are rare. The mean snow depth for the months of December through March (when over 95% of the snowfall occurs) is 4 inches, 5 inches, 4 inches, and 4 inches, respectively.

b. Rainfall is relatively moderate, averaging close to 38 inches annually and 3.2 inches monthly. There is no significant dry or moist season, but the month of October has the lowest average of 2.5 inches, while August has the greatest average of 4.3 inches.

c. Summers are warm and humid and winters are mild. During spring and autumn generally pleasant weather prevails. The coldest weather occurs during January and February. The warmest weather occurs in late July and early August. The annual mean temperature is 57 degrees Fahrenheit. Temperature extremes range from 5.0 to 105.0 degrees Fahrenheit. Mean relative humidity is 69%.

d. The visibility remains greater than three miles and the ceiling above 1,000 feet 90% of time. The prevailing winds are northwesterly with a mean speed of six knots.

e. Although Quantico's weather is sometimes influenced by passing tropical disturbances, extensive damage is rare.

3. Services

a. A DD-175-1 Flight Weather Brief is prepared for all flights for which a DD-175 is received. The DD-175-1 may be provided via fax or in person. DD-175-1 briefs will not normally be provided by METRO or telephone; however, aircrews phoning from locations without adequate weather facilities may receive their brief via telephone.

b. Briefs may be Visual Flight Rules (VFR) stamped upon request for local flights in forecasted VFR meteorological conditions.

c. Flight Weather Packages are normally provided upon request for cross-country or transoceanic flights. The package will include a forecast Horizontal Weather Depiction chart, flight level winds/temperatures, DD-175-1, and flight forecast folder. Routine flight weather packages require four hours for preparation.

d. Squadron/Strike briefs are available with 48-hour advance notification for routine missions. The brief will include a flight weather presentation and may include electromagnetic predictions, electro-optical tactical decision aids, and other environmental products relevant to the mission.

e. Climatologic briefs and Climatology/Astronomical/Tidal Data reports are available for any location.

f. Optimum Path Aircraft Routing System (OPARS) is available for flight planning.

g. Instrument Ground School is available to satisfy NATOPS requirements for aviation weather training.

- 4. The Weather section maintains a web page in lieu of a weathervision service at www.metocwx.quantico.usmc.mil/. The web page will contain current weather and local forecast, but does not replace the DD-175-1 flight weather brief.

1010. DANGER TO LIFE OR PROPERTY. A pilot shall report without delay to the MCAF Airfield Manager or Operations Officer if any of the following occur:

- 1. Unintentional or unintended jettison of ordnance outside the limits of regularly defined target areas.
2. Post flight inspection determines that ordnance and/or aircraft parts or stores have been inadvertently dropped. Reporting pilot shall initiate a "Things Falling Off Aircraft" (TFOA) report with the MCAF Airfield Manager if required.
- 3. Any flight maneuver that is employed, or gives the appearance of endangering the life or property of military or civilian personnel.
4. Observes an apparently uncontrolled fire or ship in distress.
5. Observes violations of flying regulations or of the general prudential rules of flying.

- 1011. SUSPENSION OF FUELING OPERATIONS. Based on information received from the Control Tower, the MCAF Airfield Manager shall suspend all fueling operations whenever lightning is observed within 10 miles of the airfield or when the airfield is in thunderstorm condition one. Fueling may be resumed when the MCAF Airfield Manager determines that the electrical storm has moved a sufficient distance from the airfield.

1012. ENVIRONMENTAL CONCERNS. Tenant and transient aircrews and maintenance personnel will work to eliminate all possible hazardous material (HAZMAT) releases and spills from their aircraft, auxiliary internal tanks, external fuel pods, repair and cleaning materials, and all servicing equipment.

→1. In the event of a HAZMAT release/spill, personnel involved will: immediately secure the source/flow of the material if possible, clear all personnel from the endangered area and report the HAZMAT release/spill by telephone to the MCAF Airfield Manager or Operations Officer at 784-2908/2085 (after hours to ARFF 784-2312/2571/3629) and the Natural Resources and Environmental Affairs at 784-4030.

2. The person(s) responsible for a HAZMAT release/spill and that person's command/unit are accountable for HAZMAT cleanup to include contracted support if required. The MCAF Commanding Officer or Commanding Officer MCB Quantico may initiate administrative or punitive actions and/or Federal, State, or Local Environmental Protection Agencies may impose fines.

→1013. PERIODS OF CONSTRUCTION. When contract construction is being performed on the airfield, the specific areas, control and use of the contractors' vehicles and equipment must be coordinated by prior written agreement between the MCAF Airfield Manager and the Resident Officer-in-Charge of Construction. The MCAF Logistics Officer will arrange daily or routine coordination and notify the MCAF Airfield Manager. Construction within close proximity of the runway will require two way radio communication with the control tower. A radio will be provided to the foreman from the Flight Clearance Office.

1014. BIRD/ANIMAL STRIKE HAZARDS (BASH)

1. The hazard posed by birds and animals to safe flight operations at an airfield is an ever-present problem that cannot be completely eliminated. An active program has been implemented to reduce aircraft exposure to bird and animal hazards on and about the airfield. Aircraft users shall be made aware of potential hazards via ATIS transmission and other radio broadcasts whenever bird/animal activities are observed or reported.

2. The Natural Resources Manager is notified whenever significant or dangerous bird/animal activities are observed, and an officer from the U.S. Fish and Wildlife Service may be dispatched to disperse or remove the wildlife.

3. All airfield users shall report every animal/bird strike in accordance with OPNAVINST 3750.6R. The MCAF Airfield Manager or Operations Officer shall be notified of all bird/animal strikes. MCAF Quantico VA //AF 143-1// should be an info addressee on all BASH reports for incidents occurring upon the airfield or in airspace under its control.

1015. AIR FACILITY PHOTOGRAPHIC SECURITY

1. No military, civilian, or news media representatives are permitted to take official or unofficial photographs (still or video) of aircraft operating areas without the specific authorization of the Commanding Officer, Marine Corps Air Facility, Quantico, or his designated representative.

→2. All personnel are directed to be alert for unauthorized personnel taking photographs (still or video) aboard the Air Facility. Unauthorized personnel discovered to be violating this order will be reported immediately to HMX-1 security personnel. The MCAF Anti-Terrorism / Force Protection Officer (AT/FP) will be notified at the earliest opportunity at (571)221-8948/(703)432-0704.

→1016. BASE OPERATIONS FREQUENCY

1. MCAF Quantico Base Operations frequency is 355.3 (same as METRO frequency). Transient aircrews are encouraged to call Base Operations to confirm estimated time of arrival (ETA), any codes aboard, fuel requests, or any special requirements. This frequency is available 24 hours, seven days a week.

CHAPTER 2

FLIGHT PLANNING

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CHAPTER 2

FLIGHT PLANNING

2000. GENERAL. Flights originating at MCAF Quantico will be authorized in accordance with procedures outlined in OPNAV Instructions, FAA directives, Flight Information Publications, and this manual. The Flight Clearance Section provides planning services for the tenant squadron of the Air Facility and for transient aircrews as necessary.

2001. CLEARANCE AUTHORITY

1. Flight Plan Approval. The pilot in command of an aircraft or formation leader is authorized to approve the flight plan for his/her proposed flight or modification thereof.

2002. FLIGHT PLANNING PROCEDURES

1. Flight Planning. The flight planning room is available during airfield operating hours and is located on the southeast corner of the first deck of Hangar 2105.

2. Filing. Flight Plans (DD-175) shall be filed for all flights originating at this facility with the following exceptions:

a. Local flights which utilize R-6608 and the MCAF Quantico local flying area will be cleared by a published squadron flight schedule submitted to the Flight Clearance Section, or cleared individually with the HMX-1 Operations Duty Officer (ODO) prior to departure.

b. A local flight is any VFR flight which originates and terminates at MCAF Quantico and is conducted within the local flying area. (See Appendix F)

→ 3. The Marine Corps Community Services (MCCS) Quantico Flying Club and tenant activities may file flight plans directly with Leesburg FSS or at the MCAF Flight Planning Office.

→ 4. Flight plans for aircraft airborne may be filed through ATC using normal Airfile procedures.

→ 5. All flight plans should be filed at a minimum of 30 minutes prior to expected time of departure (ETD).

a. VFR flight plans should be filed 30 minutes prior to ETD.

b. IFR flight plans should be filed 45 minutes prior to ETD.

c. International flight plans should be filed 60 minutes prior to ETD.

2003. WEATHER MINIMA

1. VFR Minima. Ceiling not less than 1,000 feet and visibility not less than three statute miles.

2. SVFR Minima. One statute mile visibility.

→ 3. SVFR Procedures. Pilots must request authorization from ATC for SVFR operations, aircraft must remain clear of clouds, and pilot and aircraft must be certified for instrument flight when operating under SVFR during hours of darkness. The number of SVFR aircraft in the tower pattern will be at the discretion of ATC.

4. IFR Departure Minima

a. Special Instrument Rating. No take-off ceiling or visibility minima apply. Take-off shall depend on the judgment of the pilot and the urgency of the flight.

b. Standard Instrument Rating. Ceiling six hundred feet, one statute mile visibility, or ceiling 300 feet and $\frac{3}{4}$ to one statute mile visibility, provided Quantico Approach is open. (Check lowest takeoff minima)

5. IFR Landing Minima. Pilots shall be guided by the minima published for the approach being utilized.

CHAPTER 3
COURSE RULES

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CHAPTER 3

COURSE RULES

3000. GENERAL. The pilot in command of an aircraft is directly responsible for the safe conduct of the flight and for compliance with all regulations governing that flight. ATC personnel are responsible for the issuance of clearance and control instructions based on known traffic and airport conditions. ATC will issue advisory assistance with regard to field and weather conditions, as required. Pilots operating in visual meteorological conditions, regardless of the type of clearance (IFR/VFR), are ultimately responsible for avoidance of other aircraft.

1. Positive Control. Aircraft entering the Quantico Class D Surface Area shall contact Quantico Tower. Deviations from clearances or control instructions are permitted only in the event of an emergency or when, in the judgment of the pilot, adherence would jeopardize safety.

2. Course Rules Brief. Visiting aircrews operating out of MCAF Quantico shall attend a course rules brief given by ATC personnel before conducting operations.

3001. AUTOMATIC TERMINAL INFORMATION SERVICE (ATIS)

→1. The ATIS is broadcast on 263.15.

2. ATIS information includes, but is not limited to, weather and field conditions, BASH, landing runway, NOTAMS, status of restricted areas and MOAs, and other pertinent information.

3. Pilots should obtain ATIS information prior to contacting Ground Control, Approach Control, or Tower, and advise on initial contact, which current ATIS information has been received.

3002. TAXI INSTRUCTIONS

→1. All aircraft shall request taxi instructions and clearance from Ground Control prior to aircraft movement. Taxiing aircraft shall remain on Ground Control frequency and monitor Guard until ready for take-off or instructed to switch frequency by Ground Control.

2. Aircraft shall be taxied only on the runway, designated taxiways, and/or parking ramps. Taxiway Alpha (north diagonal) through the HMX-1 Security Area is closed to all aircraft except HMX-1 (See Appendix A).

→3. Pilots of taxiing aircraft sighting emergency vehicles on the field displaying a flashing red light, or having knowledge that the Control Tower is controlling an emergency, shall stop and hold their position until authorized to proceed by radio or light signals from the Control Tower. During emergencies, taxiing aircraft will maintain strict radio discipline.

4. Clearance delivery will normally be accomplished on Ground Control frequency and clearance should be requested prior to requesting taxi instructions.

3003. TAKE-OFF INSTRUCTIONS

1. Aircraft shall not take position on the runway or take-off without specific clearance from the control tower. Aircraft cleared "position and hold" shall acknowledge "position and hold" instructions.

2. Rotary wing aircraft may use taxiways C and D for take-off.

→3. Fixed wing section take-offs for aircraft of similar performance are authorized in accordance with OPNAVINST 3710.1 provided weather conditions are VFR and approved by the parent unit.

4. Aircraft are encouraged to utilize the TURNER 3 standard instrument departure procedure.

3004. LANDING INSTRUCTIONS

1. Fixed Wing. Fixed wing aircraft shall contact Quantico Tower at ten miles for landing information and instruction to follow one of the below procedures:

a. Overhead Approach. The initial point is located on the extended runway centerline, five miles from the approach end of the runway. Initial altitude is 1,500 feet with a level break over the runway at mid-field descending to 1,000 feet on downwind. The initial point will be approached at a 45 degree angle or less to the extended runway centerline. Right breaks to Runway 02. Left breaks to Runway 20. (See Appendix B)

→ b. Straight-in Approach. Straight-in approaches shall commence at five miles from the runway at 1,000 feet.

c. Downwind Entry. Aircraft shall enter the downwind leg at a 45 degree angle or less at 1,000 feet.

2. Rotary Wing/VTOL

a. Runway. Rotary wing aircraft will conform to the flow of runway traffic at a pattern altitude of 500 feet. Alternate altitudes above 500 feet may be approved upon request.

b. Mat #3 (Harrier Pad). Vertical take-offs and landing with Harriers shall be conducted only on the Harrier Pad. This pad is 96' X 96' and partially constructed of AM-2 matting with associated anchoring. The matting is 1.5 inches higher than the surrounding asphalt. Aircraft ground taxiing from the pad should avoid tire contact with corners. Westerly arrivals or departures off of the Harrier Pad are not authorized. Helicopter operations are authorized to the Harrier Pad. Closed traffic operations to Mat #3 shall conform to the flow of runway traffic at an altitude of 300 feet or below, and remain at least 250 feet from the eastern edge of Runway 02/20.

c. Helicopter Overhead Approach. Initial point is located at five miles on the extended centerline of the runway of intended landing. Standard break point is over the upwind numbers, unless otherwise instructed by the control tower. Altitude is 1,000 feet throughout the procedure.

3005. ORDNANCE/WEAPONS/HAZARDOUS CARGO AREA. MCAF Quantico does not operate a hazardous cargo storage area (Red Label) for ordnance/weapons loading/unloading.

3006. HUNG/UNEXPENDED ORDNANCE

→1. Aircraft with hung/unexpended ordnance will avoid all populated and built up areas and are only authorized to land at MCAF Quantico in the event an in-flight emergency exists. Recommended divert airfields for non-emergency aircraft are Andrews AFB and NAS Patuxent River.

2. Pilots will inform ATC of hung ordnance conditions as soon as possible and proceed as pre-briefed, or return to the staging area (i.e., NAS Patuxent River, R-5 buildup area, or home base), whichever is applicable and execute hung ordnance procedures for that station.

3. In the event of an emergency landing with hung/unexpended ordnance, a straight-in approach will be executed. Upon landing, the aircraft will be taxied to Mat #3 and shut down heading 160. The aircrew will pin and safe all ordnance on the aircraft. Under no circumstances will aircraft be fueled or maintenance performed while the aircraft is armed. No aircraft will leave Mat #3 while armed.

→ 3007. JETTISON AREA. The ordnance jettison area is TA-9 (R-6608) and shall be used only after prior coordination with the Commander, MCB Quantico (Attn: Director, Operations Division). External ordnance shall be dropped in the safe position. Range Control frequency 328.4, Range Control telephone DSN 278-5322.

3008. NOISE ABATEMENT/AVOIDANCE AREAS

1. Aircraft operating in the vicinity of MCAF Quantico shall maintain a distance of one mile or a minimum altitude of 3,000 feet from the following areas:

- a. Mainside (west of the airfield)
- b. Mason Neck Wildlife Refuge (045/11)
- c. Mount Vernon (045/16)
- d. Indianhead Controlled Firing Area (055/8)
- e. EXXON fuel storage area in Springfield (010/10)

NOTE: All bearings and distances are approximate from MCAF Quantico.

2. Aircraft operating to the west of MCAF Quantico shall maintain a distance of one mile or a minimum altitude of 1,500 feet from the MCCDC Ammo Dump located four and one half miles west of MCAF Quantico.

→ 3. Aircraft operating to the west of MCAF Quantico are required to maintain an altitude of at least 1000 feet in the vicinity of the Bald Eagle Nesting Site located in the marshland on the south side of Chopawamsic Creek, approximately two miles west of the Air Facility.

3009. LOCAL FLYING AREA. The local flying area is depicted in Appendix F.

3010. RESTRICTED AREAS AND MILITARY OPERATING AREAS

1. Definition

a. Restricted Area. A restricted area is airspace within which the flight of aircraft, while not wholly prohibited, is subject to restriction. Most restricted areas are designated joint use, and IFR/VFR operations in the area may be authorized by the controlling ATC facility when it is not being utilized by the using agency. Restricted areas are depicted on enroute and sectional charts. Where joint use is authorized, the name of the ATC controlling facility is also shown.

b. Military Operating Areas (MOAs). A MOA is an airspace assignment of defined vertical and lateral dimensions established outside positive control areas to separate/segregate certain military activities from IFR traffic and to identify for VFR traffic where these activities are conducted.

NOTE: Caution should be exercised when working in MOAs, as civilian aircraft operating VFR may fly in or through these areas without contacting ATC. MCB Quantico's DEMO MOAs are located south-southwest of R-6608 (See Appendices C, D).

→2. Location of areas. Restricted areas and MOAs are located to the west, south, and southwest of MCAF Quantico (See Appendix C).

<u>AREA</u>	<u>VERTICAL LIMITS</u>	<u>CONTROLLING AGENCY</u>	<u>USING AGENCY</u>
R6608	SFC - 10,000	Potomac TRACON	MCB Quantico
R6601	SFC - 5,000	Potomac TRACON	Fort A.P. Hill
R6611	SFC - 40,000	Washington Center	Navy Dahlgren
R6612	SFC - 7,000	Washington Center	Navy Dahlgren
R6613	SFC - 40,000	Washington Center	Navy Dahlgren
DEMO 1	500 - 50,000	Potomac TRACON	MCB Quantico
DEMO 2	10,000 - 15,000	Potomac TRACON	MCB Quantico
DEMO 3	5,001 - 15,000	Potomac TRACON	MCB Quantico
HILL	SFC - 3,000	Potomac TRACON	Fort A.P. Hill

3. Scheduling and procedures

a. R-6608 and DEMO MOAs 1, 2, 3

(1) Ranges for live firing exercises and demonstrations are available in R-6608.

→ (2) All units requiring use of these areas shall request authorization from the Director, Operations Division, MCB, Quantico, Virginia at DSN 278-5502 or COMM (703)784-5502.

→ (3) Scheduling can be accomplished by contacting the Marine Corps Base Scheduler at the Range Management Branch, Operations Division, no later than five working days prior to requested times. One of the following methods may be used:

(a) DSN: 278-5322/5321

(b) Comm: (703)784-5518/5328/5322/5321

(c) Guard Mail: Range Scheduler, Range Management Branch Operations Division Code-B032.

(4) Pilots planning to utilize R-6608 shall check the weekly Terrain and Gate Schedule (MCCDCBul 1500), prior to launch, for detailed information on scheduled activity.

→ (5) No aircraft shall enter a restricted area without first contacting MCB Range Control on FM 38.70 or 328.40 for authorization to enter R-6608 and DEMO MOA, in accordance with MCCDCO P1500.1.

→ (6) Aircraft requesting an IFR clearance upon exiting the restricted area should advise Quantico ATC of their request at least 5 minutes prior to their exit time. This procedure will allow for coordination with Potomac TRACON and reduce delay time for aircraft clearance exiting the area.

(7) Quantico ATC shall provide radar containment services for fixed-wing aircraft operating in R-6608 and the DEMO MOAs. Quantico Approach will coordinate containment services with aircraft upon entry into R-6608 or DEMO MOA.

NOTE: Due to the close proximity of the Dulles Class B Airspace and the Manassas and Stafford Airports to the DEMO MOAs and R-6608, pilots must be extremely vigilant when working these areas to avoid spill outs. The area north of R-6608 and DEMO 2 has

become increasingly congested with commercial and private aircraft since the opening of the Control Tower at Manassas Airport. Pilots should also exercise vigilance when inbound to, or outbound from the Quantico areas in VFR conditions due to primary arrival and departure corridors located west and east of R-6608. Pilots should request flight following to avoid these areas. (See Appendices C, D, E)

b. R-6601 and Hill MOA. Scheduling may be accomplished by contacting R-6601 scheduling office at DSN 578-8224/8374/8303, COMM (804) 633-8406 a minimum of 30 days in advance of requested times.

3011. LOCAL OBSTRUCTIONS (See Appendix G)

1. Local obstructions that are hazardous to flight within five miles of MCAF Quantico are:

a. Three towers, 370 feet high, 2½ miles north-northwest of the Air Facility.

b. Three water towers, 363 feet high, 2 miles north-northwest of the Air Facility.

c. Five smoke stacks, 2 miles north-northeast of the Air Facility. The tallest stack is 371 feet high.

d. Hills 200 feet high, 1½ miles south-southwest of the Air Facility.

e. Hills 200 feet high, 1½ miles north-northwest of the Air Facility.

f. A transmitter tower, 361 feet high, 1 mile north-northwest of the Air Facility.

g. Tower, 371 feet high, 4.7 miles south-southwest of the Air Facility.

h. Towers with power lines, 270 feet high, 2 miles northeast of the Air Facility,

i. Water tower, 300 feet high, 3 miles north-northwest of the Air Facility.

2. All obstructions within the traffic pattern, except the hills, are clearly marked by obstruction lights.

3012. HAZARDOUS CARGO

- 1. MCAF Quantico is not certified for hazardous cargo/red label operations.
- 2. Per DoD 6055.9-STD, limited hazardous cargo loading may be conducted on aircraft parking aprons upon approval of an event waiver by the Naval Ordnance Safety and Security Activity. All requests for event waivers shall be submitted to MCB Quantico Explosive Safety Division at (703) 784-5127 or DSN 278-5127.
- 3. Inbound aircraft with an approved waiver for hazardous cargo will inform ATC on initial contact of amount and type of hazardous cargo. After landing, aircraft will taxi as directed by the Control Tower.

3013. PERSONNEL AND VEHICULAR RESTRICTIONS

- 1. The use of taxiways and runways by personnel or vehicles, other than those specifically assigned to do so in the performance of their normal duties, is prohibited except by prior permission of the MCAF Airfield Manager or Operations Officer.
- 2. Prior to operating any vehicles on the airport surface, operators shall:
 - a. Obtain authorization from Airfield Operations Department.
 - b. Complete the Quantico Airfield Operator's course and obtain an airfield driver's license.
 - c. Obtain a two-way radio from Flight Clearance.
 - d. Obtain and display either a standard orange/white checkered flag or orange flashing beacon.
- 3. Clearances to operate on or cross runways/taxiways shall be obtained from Quantico Ground control. After clearance has been received and confirmed, all vehicles shall visually ascertain that the runway/taxiway is clear before crossing or driving onto the runway or taxiway.

→ 4. No vehicles shall drive onto a runway or taxiway during the hours when the airfield is closed, with the exception of ARFF vehicles performing official duties.

5. The following speed limits shall be observed:

a. Vehicles towing aircraft - 5 MPH.

b. Vehicles in the vicinity of operating aircraft - 5 MPH.

c. Vehicles on parking and ramp areas - 10 MPH.

d. Vehicles on runways or taxiways - 25 MPH.

e. The speed of emergency vehicles responding to an emergency must be that at which the vehicle can respond and maneuver safely with special consideration to weather, ambient light, airfield surface conditions, and proximity to aircraft.

f. Aircraft, while on parking and ramp areas, shall taxi no faster than a person can comfortably walk.

6. During the hours of darkness, the following rules shall apply:

a. Aircraft with internal power systems that are being towed shall have external lights on.

b. Headlights shall be on low beam. Vehicles shall not be operated with only parking lights illuminated.

c. Vehicles shall be operated in such a manner that headlights are not directed at aircraft taxiing, taking off or landing.

7. All persons, except those duly authorized, desiring to enter the Control Tower or Radar Room shall obtain permission from the Air Traffic Control Facility Officer.

8. All personnel, with the exception of HMX-1 flight line and security personnel, are restricted from the security area located on the north end of the parking area between Hangar 2104 and Hangar 2102, including that portion of Taxiway Alpha inside that area (See Appendix A).

3014. CLOSED FIELD OPERATIONS

1. Authority to conduct closed field operations is granted to HMX-1 by the Commanding Officer, MCAF, Quantico, as outlined in reference (a) and in accordance with the Letter of Agreement (LOA) between MCAF and HMX-1.

2. SECNAVINST 3770.1C limits the use of Navy/Marine Corps aviation facilities by civil aircraft to those hours when the facility is normally in operation; however, the MCCA Quantico Flying Club is authorized to conduct closed field operations from sunrise to sunset in VFR conditions. Military aircraft should exercise extreme caution when the field is closed and monitor frequency 118.6, if able.

→3. When the field is closed, Aircraft Rescue and Fire Fighting (ARFF) services are reduced in accordance with NAVAIR 00-80R-14, to a level below operational airfield category limits. A runway alert (Hot Spot) crew is not posted during closed field operations. ARFF, with backup from the Base Fire Department, will respond when alerted to an emergency or MEDEVAC. Medical support must be dispatched from the Mainside clinic. Pilots assume additional risk during closed field operations due to a potential delay in emergency response. To report an emergency during closed field, use any of the following:

<u>Unit</u>	<u>DSN 278-</u>	<u>COMM (703) 784-</u>	<u>VHF FM</u>
ARFF Dispatch	2571/2312	2571/2312	140.1
Fire Department	2222/3333	2222/3333	

4. Twenty-four hour weather information can be obtained by contacting the Weather Service Station (DSN 278-2468/2298 or COMM (703) 784-2468/2298) or by radio contact once airborne on Metro frequency 355.3. Weather information can also be obtained via the internet at <https://www.metocwx.quantico.usmc.mil/>.

5. Flight planning can be accomplished by contacting Flight Service Station (FSS) Leesburg at (1-800)-468-6621 or by radio contact once airborne.

3015. LOST COMMUNICATIONS. Aircraft without radio communications shall over-fly the airport at 1,500 feet or higher to ascertain the current landing pattern direction. Aircraft shall then enter the pattern via the downwind leg, rocking wings (daylight hours) or flashing lights (after dark), and observe the tower for the appropriate light gun signals.

3016. HOT BRAKES. Aircraft with smoking or apparently overheated brakes shall not return to normal parking areas until it has been determined that no fire hazard exists. The warm-up areas for runways 02/20 are designated as the hot brake parking areas (See Appendix A).

3017. SPECIAL HANDLING. Situations requiring special handling aboard the field are discussed below. These are guidelines only. Common sense and good judgment shall be exercised in each case.

1. Overdue Aircraft

→ a. Responsibility. An aircraft is considered overdue when neither communications nor radar contact can be established and 30 minutes have passed since ETA at destination. The Flight Clearance Section shall monitor all DD-175 flight plans inbound to MCAF Quantico. HMX-1 shall monitor local squadron flights on their daily flight schedule. Flight Clearance should be notified immediately when an aircraft becomes overdue.

b. Procedures for Overdue Aircraft. Flight following procedures shall be initiated and monitored by Flight Clearance. The following action shall be taken for overdue aircraft:

→ (1) Initiate a check at the destination airfield for the aircraft in question. Tenant unit will make a physical check of their flight line and report results to Flight Clearance.

(2) Contact FSS and request a preliminary communications search be initiated.

→ (3) For local flight plans, if the aircraft has not been located within one hour after issuance of the alert notice, the MCAF Airfield Manager shall ensure the Rescue Coordination Center, Langley AFB, Hampton, Virginia has been notified. The Rescue Coordination Center telephone number is DSN: 574-8112.

→ (4) Quantico Flying Club Dispatch shall initiate lost plane procedures for Aero Club aircraft on local area flights.

2. Use of Airfield by Civil Aircraft

a. Civil aircraft are not permitted use of MCAF Quantico unless prior coordination has been made with the MCAF Operations Department.

- b. Civil aircraft landing at MCAF Quantico must be on Official business, and must provide a valid Civil Aircraft Landing Permit (CALP), Proof of Insurance, and a Release of Liability.
- c. A Prior Permission Required (PPR) number must be obtained from the Airfield Operations Department prior to Civil aircraft landing at MCAF Quantico.

3018. DIVERT AIRFIELDS

1. Military

- a. Primary Divert - Andrews AFB
- b. Secondary Divert - NAS Patuxent River

→ 2. Civilian

- a. Primary Divert - Manassas Regional Airport
- b. Secondary Divert - Stafford/Shannon

→ 3019. VIOLATIONS OF FLIGHT REGULATIONS. Violations of flight regulations will be reported to the MCAF Airfield Manager or Operations Officer at DSN 278-2908/2085 or COMM (703) 784-2908/2085. The MCAF Airfield Manager or Operations Officer will notify the MCAF Air Traffic Control Facility Officer who will investigate each incident and determine, if a flight violation did occur. A report of his investigation and appropriate recommendations will be forwarded to the MCAF Commanding Officer via the MCAF Operations Officer for action as set forth in either OPNAVINST 3710.7 or FAA Regulations, as applicable. The MCAF Operations Officer shall initially investigate, on an informal basis, all accidents of inadvertent discharge/jettison of ordnance or aircraft components and report all such incidents to the MCAF Commanding Officer.

→ 3020. UNUSUAL MANEUVERS. The MCAF Commanding Officer does not have the authority to approve deviations from 14 CFR Part 91. Pilots shall not request unusual maneuvers such as low passes, fly-bys, or high-performance takeoffs.

3021. QUIET HOURS. During published quiet hours, all airfield movement will be limited. Requests for quiet hours shall be forwarded to the MCAF Commanding Officer via the chain of command.

3022. MCCS QUANTICO FLYING CLUB

→1. Federal Aviation Regulations, 14 CFR Part 91 and MCO P1710.16 shall govern the operation of MCCS Quantico Flying Club aircraft except in those cases where this manual or other directives issued by higher authority have specified more stringent requirements.

2. Rules and regulations governing MCCS Quantico Flying Club flight operations are set forth in this Manual and stipulated in the current LOA between MCAF Quantico and the Flying Club. It shall be the responsibility of the Club Manager to ensure all personnel concerned are thoroughly familiar with and comply with these regulations.

3. MCCS Quantico Flying Club operations shall be conducted on a non-interference basis with military aircraft; however, none of the restrictions or procedures set forth herein shall be used to deny a request for assistance during an emergency situation.

3023. LASER RANGE FINDER OPERATIONS

→1. The Navy Research Lab (NRL) operates a laser range finder used to determine the orbital paths of various satellites. The operation of this laser can result in permanent ocular damage to aircrew. The hazard is higher in close proximity to the laser emitter. The characteristics of the beam and built-in safety systems that prevent direct lasing of aircraft in the beam path significantly reduce the possibility of any exposure to aircrew. Additional procedures have been created to further reduce the risk in the immediate vicinity of the emitter. This section describes the characteristics of the laser system being used, built-in safety systems to prevent lasing of aircraft, and local air traffic control and flight procedures that shall be undertaken to mitigate the hazard to aircrew.

→2. System Description. The laser system is characterized by high-energy pulses of very short duration repeated at a slow rate, with a wide beam width. The result is a moderate energy density for each pulse.

a. Location. The laser is located in the Midway housing area at 38° 30' 08" N 77° 22' 12" W or grid 932640. The elevation of the laser is 185 feet MSL.

b. Wavelength: 1064nm. This wavelength is not visible to human eyes, therefore dazzle or flash-blinding are not hazards to aviators.

3. Built-In Safety System. The laser system is equipped with a radar system that scans for aircraft within a narrow cone around the beam. Detection of an aircraft inside this cone will cause the laser to shut down before lasing of the aircraft occurs.

a. Radar Coverage

(1) Range 22.6 NM

(2) Altitude: up to 50,000 feet

4. Local Procedures

a. Notification of intent to conduct laser procedures.

(1) NRL will notify the following agencies prior to conducting laser operations; HMX-1 ODO, MCAF S-3, Marine Corps Base G-3, and MCB Range Control.

(2) Notification will be made prior to commencement, at the end of operations, and at 0800 daily during extended operations.

(3) Quantico Tower will announce Laser Activity via the ATIS.

b. Swamp departures/arrivals. Swamp departures and arrivals will be prohibited during laser operations.

c. When possible, aircraft operating during laser operations should fly below the lowest elevation (10 degrees) of the laser. Appendix K shows the altitude (Mean Sea Level) of the beam at its lowest elevation. Appendix L depicts a chart showing altitudes that will pass below the beam in the vicinity of the Midway Housing area.

→ d. Parachute operations in the vicinity of Quantico class D airspace, R6608, or the DEMO MOA, are prohibited during laser operations. The radar return of an individual parachutist is not sufficient to activate the laser's safety mechanism.

CHAPTER 4
INSPECTIONS

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CHAPTER 4

INSPECTIONS

4000. GENERAL. Certain airfield maintenance and repairs are performed by the Facilities Maintenance Department, MCB Quantico under the staff cognizance of the MCAF Logistics Officer.

4001. OPERATING AREA INSPECTIONS. Prior to field opening each day, the ARFF Section shall make a visual inspection of the runway, taxiways and parking ramps to check for FOD, obstructions or any other unsafe condition(s).

1. Airfield Lighting Inspections. During the operating area inspection, and again after sunset (during normal field operations), ARFF will visually inspect all airfield lighting systems to include:

- a. Runway lights.
- b. Taxiway lights.
- c. Threshold lights.
- d. PAPI lights.
- e. Rotating beacon.
- f. Obstruction lights.
- g. Runway marker lights.
- h. Traverse way stop lights and alarm on perimeter road.

2. Closed Field Inspection. ARFF duty personnel will conduct an operating area inspection at sunrise on days the airfield is closed in support of authorized closed-field operations. New hazards (those that were not reported on the day the field was last open) will be reported by phone to the HMX-1 Duty Officer at 784-2760/2209, MCCS Quantico Flying Club Duty Manager at (703) 640-6596, and forwarded by formal report(s) via the chain of command on the next open airfield day.

3. Airfield Inspection Sheet. The airfield inspection sheet will be utilized to document and forward discrepancies found during airfield operational area checks. Noted discrepancies will be circled and numbered with correspondingly written

comments included. The completed report will be forwarded to the MCAF Airfield Manager at the start of normal working hours. Problems that may affect safety of flight shall be immediately relayed to ATC.

4. The Flight Clearance Section will ensure that appropriate NOTAMS are issued to identify conditions that may affect the safe operations of aircraft

4002. FOREIGN OBJECT DAMAGE (FOD) PREVENTION. Units occupying hangar space are responsible for the maintenance of FOD control programs in the hangar and flight line vicinity. Those conditions that cannot be corrected by the units, or are beyond their capability will immediately be reported to the Airfield Manager. A sweeper may be requested by contacting Flight Clearance at 784-2085.

4003. EMERGENCY EQUIPMENT CHECK. Prior to the start of each day's flight operations, the ARFF Section/Medical will complete pre-operational inspections of assigned aircraft firefighting and support vehicles and organic equipment required to support the level of scheduled flight activity. Required equipment that is not operational will be reported to the Airfield Manager or a reduction of flight operations per NAVAIR 00-80R-114 will be required.

4004. CRASH ALERT SYSTEM CHECK. ATC will operationally check the crash phone 10 minutes prior to scheduled field opening.

CHAPTER 5

AIR TRAFFIC CONTROL

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CHAPTER 5

AIR TRAFFIC CONTROL

5000. GENERAL. Positive air traffic control requires that all aircraft obtain specific ATC clearance prior to maneuvering on an airport movement area, or within MCAF Quantico designated airspace. Positive air traffic control shall be exercised by Marine Quantico Tower over all civil and military aircraft during published operating hours. No aircraft may operate on the Quantico Movement Area or Class D Surface Area without two-way radio communications unless prior coordination has been accomplished. (See Appendix H)

5001. AIRSPACE DESCRIPTION

- 1. Quantico Approach Airspace. Quantico Approach Control Airspace is located to the immediate south of the Baltimore-Washington TRI-AREA Terminal Control Area (TCA). Adjacent ATC facilities include: Reagan National to the NNE; Navy Patuxent River to the east; Richmond to the south; and Dulles to the NNW. By letters of agreement Dulles, Richmond, and Washington National (PCT TRACON) have delegated MCAF Quantico that airspace depicted in Appendix C.

5002. FREQUENCIES AND NAVIGATIONAL AIDS

1. Frequencies. Commonly used frequencies in use at MCAF Quantico are listed below. A complete list of local frequencies is given in Appendix I.

- | | | | | | |
|------|-----------------------|-----------------|---------|--------|----------------|
| → a. | Quantico Tower | - | 360.2 | 118.6 | 140.1 FM |
| | b. | Quantico Ground | - | 340.2 | 121.75 |
| → c. | Quantico Approach | - | 290.925 | 127.05 | |
| → d. | SFA's | - | 351.95 | 363.15 | 353.65 120.925 |
| → e. | ATIS | - | 263.15 | | |
| → f. | METRO/Base Operations | | 355.3 | | |

2. Navigational Aids

a. Brooke VORTAC

(1) Located 10 miles south of MCAF Quantico

(2) Identifier - BRV

(3) Frequency - 114.5 / Channel 92

5003. AIR TRAFFIC CONTROL SERVICES

1. VFR Control. Quantico Tower exercises positive control over all air traffic within its operational airspace with the exception of the Mat #3 helicopter pattern, where it may exercise preventive control. All aircraft operating on the airport will be issued instructions and clearances by radio or visual techniques.

2. IFR Control. Quantico Approach Control is responsible for all IFR aircraft operation and IFR handling of VFR aircraft within the Approach Control Airspace assigned to MCAF Quantico. Besides MCAF Quantico, approach control services are also provided to Shannon Airport, Dahlgren Naval Surface Weapons Center, Stafford Regional Airport and Fort A. P. Hill. Standard separation procedures are applied for all aircraft operating within Quantico Approach Control jurisdiction.

3. SVFR Procedures. SVFR operations are authorized within the MCAF Quantico Airspace. Quantico Tower issues SVFR clearances after obtaining approval from Approach Control. Weather minimums for SVFR operations are outlined in FAA Handbook 7110.65 and the Airmen Information Manual (AIM), as well as, paragraph 2003.2 of this order.

5004. INSTRUMENT APPROACH PROCEDURES

1. Available navigation aids and approved instrument approach procedures are published in current DoD Flight Information Publications. Radar and instrument approaches are available to Runway 02 only, with priority given to inbound IFR traffic. The PAR to Runway 02 is the primary approach in use at MCAF Quantico; pilots can expect to be offered this approach upon initial contact.

2. Pilots should be vigilant when flying in the vicinity of Brooke VORTAC because it is the initial approach fix for Stafford Regional Airport, Shannon Airport, and MCAF Quantico. Brooke VORTAC is also used as a feeder fix for Dulles. Pilots should be especially vigilant for commercial and private aircraft descending to 4,000 feet proceeding northbound from Brooke VORTAC.

5005. CIRCLING APPROACHES. When Runway 20 is the duty runway, pilots can expect to circle east of the field for landing due to the unavailability of instrument or radar approaches to Runway 20. Caution should be exercised during these operations because of the necessity of the Control Tower to control opposite direction traffic.

NOTE: Circling is not authorized west of the airfield or from a PAR approach.

5006. DUTY RUNWAY DESIGNATION. The Tower Watch Supervisor is responsible for designating the duty runway. In making this designation, primary consideration is given to prevailing wind direction and speed. Other weather and field conditions, status of available NAVAIDS, and type of air traffic expected are taken into consideration. Pilots experiencing an emergency will be given their choice of runway, whenever possible.

5007. EMERGENCY PROCEDURES

1. Pilots of aircraft experiencing an emergency should contact ATC as soon as possible and preface their transmission with, "This is an emergency." This procedure will give the Control Tower maximum time to notify appropriate supporting agencies.

2. Pilots of distressed aircraft should provide the following information to ATC as soon as possible:

- a. Call sign.
- b. Type of aircraft.
- c. Nature of emergency.
- d. Position.
- e. Intentions.

NOTE: Above is the minimum information required by ATC to plan their actions. If time permits, the following info should be provided:

- f. Number of persons on board.
 - g. Fuel remaining in minutes.
 - h. Ordnance/Hazardous cargo.
3. Aircraft with an emergency will be given appropriate priority over all other aircraft.
4. Pilots should be aware of the distinction made between the terms "Emergency Fuel" and "Minimum Fuel."
- a. Emergency Fuel - Constitutes an emergency and will be treated as such by ATC personnel.
 - b. Minimum Fuel - Indicates the aircraft has enough fuel available for normal spacing and traffic handling, but not for undue delays. This phrase does not justify special or priority handling.

5008. WHEELS CHECK PROCEDURES

1. Voice Report

- a. All pilots will report "wheels down and locked" prior to landing. This report will normally be given prior to turning base leg or prior to one mile final on a straight-in approach.
- b. If the wheels down report has not been received by base leg, ATC shall advise the aircraft to "check wheels down" prior to issuing a landing clearance.

2. Visual Check. When doubt exists as to the position of the landing gear, pilots may request clearance for a low pass for a visual inspection by the Control Tower.

5009. ATC LIGHT SIGNALS. All personnel operating aircraft or vehicles, whether in the Class D Surface Area or on the airfield movement area, shall be familiar with ATC light gun signals.

→ <u>Color and Type of Signal</u> <u>Personnel</u>	<u>Meaning to A/C</u> <u>On the Ground</u>	<u>Meaning to A/C</u> <u>In Flight</u>	<u>Meaning to Vehicles,</u> <u>Equipment, and</u>
Steady Green	Cleared for take-off	Cleared to land	Cleared to cross, proceed, go
Flashing Green	Cleared to taxi	Return for landing (to be followed by steady green at proper time	N/A
Steady Red	Stop	Give way to other aircraft and continue circling	Stop
Flashing Red Taxiway/Runway	Taxi clear of landing area/runway in-use	Airport unsafe do not land	Clear the
Flashing White	Return to starting point on airport	N/A	Return to starting point on airport
Alternating Red and Green	General warning signal - exercise extreme caution	General warning signal - exercise extreme caution	General warning signal - exercise extreme caution

NOTE: The warning signal is not a prohibitive signal and can be followed by any other light signal, as circumstances warrant.

CHAPTER 6

TRANSIENT AIRCRAFT

	<u>PARAGRAPH</u>	<u>PAGE</u>
GENERAL	6000	6-3
TRANSIENT AIRCRAFT OPERATIONS	6001	6-3
BILLETING	6002	6-4
MESSING	6003	6-4
TRANSPORTATION	6004	6-4
EMBARKATION OF PASSENGERS	6005	6-4
VIP	6006	6-5
ORDERS ENDORSEMENT	6007	6-5
CUSTOMS	6008	6-5
CLASSIFIED MATERIAL AND WEAPONS	6009	6-5

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CHAPTER 6

TRANSIENT AIRCRAFT

6000. GENERAL

1. Facilities available to transient pilots and aircraft are limited. Aircrews should consult the IFR Supplement and NOTAMS for current information.
2. The Visiting Aircraft Line (VAL) is responsible for the handling of transient aircraft. Visiting aircrew are responsible for arranging their own billeting and transportation requirements prior to, or upon their arrival.

6001. TRANSIENT AIRCRAFT OPERATIONS

1. Military

- a. Pilots of inbound aircraft are requested to make maximum use of radar services available, consistent with their mission.
- b. Transient aircraft will be parked on the VAL line unless prior arrangements have been made with tenant activities. VAL personnel will coordinate/assist with aircraft servicing.
- c. The designated VIP area is the ramp area immediately to the south of the Control Tower.
- d. MCAF does not have a VAL hangar certified for aircraft parking. Transient aircraft requesting hangar space shall contact HMX-1 Maintenance Control at DSN 278-2164 or commercial (703) 784-2164.

2. Civil

- a. Civil aircraft operations are governed by SECNAVINST 3770.1.
- b. Aircraft must have a CALP to conduct approaches to the airfield (NAVAIR 00-80T-114)
- c. Emergency service will be provided to any aircraft upon request. In an emergency, a CALP is not required; however, the pilot will be required to fulfill this requirement prior to the aircraft being authorized to depart.

6002. BILLETING

- 1. Military. Transient quarters are available at MCB Quantico and are arranged through the Liversedge BOQ, DSN 278-3148/3149, COMM (703) 784-3148/3149 or at the Crossroads Inn at (1-800)-965-9511 or (703) 630-4444.
- 2. Civil. The area surrounding the base offers several motels for those personnel authorized or desiring to use off station quarters.

6003. MESSING

- 1. Military Facilities. Officers and enlisted service members may eat in the Air Facility messhall. Personnel on COMRATS/PerDiem must pay for their meals.

6004. TRANSPORTATION

- 1. Limited military transportation is available at MCAF. Coordination for transportation must be arranged with the MCAF Logistics Officer DSN 278-2550/2559, COMM (703) 784-2550/2559 prior to arrival.
- 2. Civilian taxi service is available for those personnel desiring to go off base. Yellow Cab Company can be reached at phone number (703) 640-6464.
- 3. Rental cars are available through Enterprise Rentals, located in the Marine Corps Exchange. Enterprise can be reached at phone number (1-800)736-8222.

6005. EMBARKATION OF PASSENGERS

- 1. A passenger is any individual traveling in an aircraft who is not part of the aircrew.
- 2. No person shall enplane as a passenger nor any cargo be embarked on a Naval aircraft, unless authorization has been granted by competent authority in accordance with applicable directives (see DoD 4515.13, OPNAVINST 4630.25).
- 3. Squadron commanders may exercise passenger clearance authority for passengers embarked in their squadron aircraft.
- 4. Pilots will attach to their flight plan or file with their squadron, a complete roster containing last name, initials,

grade, social security number, and parent unit of all passengers on board.

6006. VIP

1. Aircraft inbound to MCAF Quantico shall notify MCAF Quantico ATC upon initial radio contact of VIPs on board and provide the following information:

- a. Highest code on board.
- b. Chock time.
- c. Landing site if other than the airfield.
- d. Transportation requirements.
- e. Any other requests.

2. Pilots should anticipate parking on the VIP spot.

→ 3. The Flight Clearance Section will notify the MCAF Operations Officer of the estimated time of arrival/departure of VIPs.

6007. ORDERS ENDORSEMENT. All endorsements for quarters and messing can be obtained through the Liversedge BOQ, DSN 278-3148/3149, COMM (703)784-3148/3149.

→ 6008. CUSTOMS. MCAF Quantico provides limited military customs service. Request for service should be made 72 hours in advance.

6009. CLASSIFIED MATERIAL AND WEAPONS

→ 1. No storage facilities are available at MCAF Quantico for classified material. Transient flight crews may store registered materials with the MCB Classified Control Center, (703)784-2707, Building 3250. Turn-in and pick-up are to be made during normal working hours.

2. Small arms may be temporarily stored at the MCAF Quantico Armory, Building 2106, during normal working hours. In order to store small arms after normal working hours, prior arrangements must be made with the MCAF Logistics Officer.

CHAPTER 7

AIRCRAFT CRASH AND RESCUE

	<u>PARAGRAPH</u>	<u>PAGE</u>
GENERAL	7000	7-3
SEARCH AND RESCUE	7001	7-3
MEDICAL EVACUATION (MEDEVAC)	7002	7-4
SALVAGE	7003	7-4

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CHAPTER 7

AIRCRAFT CRASH AND RESCUE

7000. GENERAL

1. The current edition of AFO P3130.1, Aircraft Rescue and Fire Fighting (ARFF) Bill, provides detailed instructions and procedures for the conduct of Aircraft Rescue and Fire Fighting operations at MCAF Quantico. Each station or department concerned shall respond to all crash or emergency alarms in accordance with the instructions contained in the ARFF Bill.
- 2. The MCAF Operations Officer exercises direct control over the ARFF facilities assigned to MCAF Quantico. Firefighting and Rescue shall be under the supervision of the senior qualified member of the MCAF ARFF crew on duty.
3. Only ARFF and security personnel are authorized access to the scene of a crash. Unit commanders of aircraft involved, their Accident Investigation Board, and certain other technical personnel will be authorized access to the crash site at the earliest possible time consistent with safety.
- 4. In the event a crash occurs during closed field operations, ARFF will ensure that the following personnel are notified in the following order:
 - a. MCAF Operations Officer
 - b. MCAF Executive Officer
 - c. MCAF Commanding Officer

7001. SEARCH AND RESCUE. There are no designated Search and Rescue aircraft at MCAF Quantico; however, HMX-1 aircraft may be requested to participate in a coordinated search and rescue effort by the Rescue Coordination Center, Langley AFB, Hampton, Virginia.

7002. MEDICAL EVACUATION (MEDEVAC)

1. The Commanding Officer, HMX-1, is tasked with providing aircraft and crews as a secondary response for medical evacuation.
2. The HMX-1 Operations Duty Officer has the authority to launch the MEDEVAC aircraft in those emergency situations which require immediate response.
3. All other requests for MEDEVAC aircraft will be referred to the HMX-1 Operations Officer, DSN 278-2760/2209, COMM (703) 784-2760/2209. After normal working hours, weekends and holidays, contact the HMX-1 Duty Officer, DSN 278-2760/2209, COMM (703) 784 2760/2209.

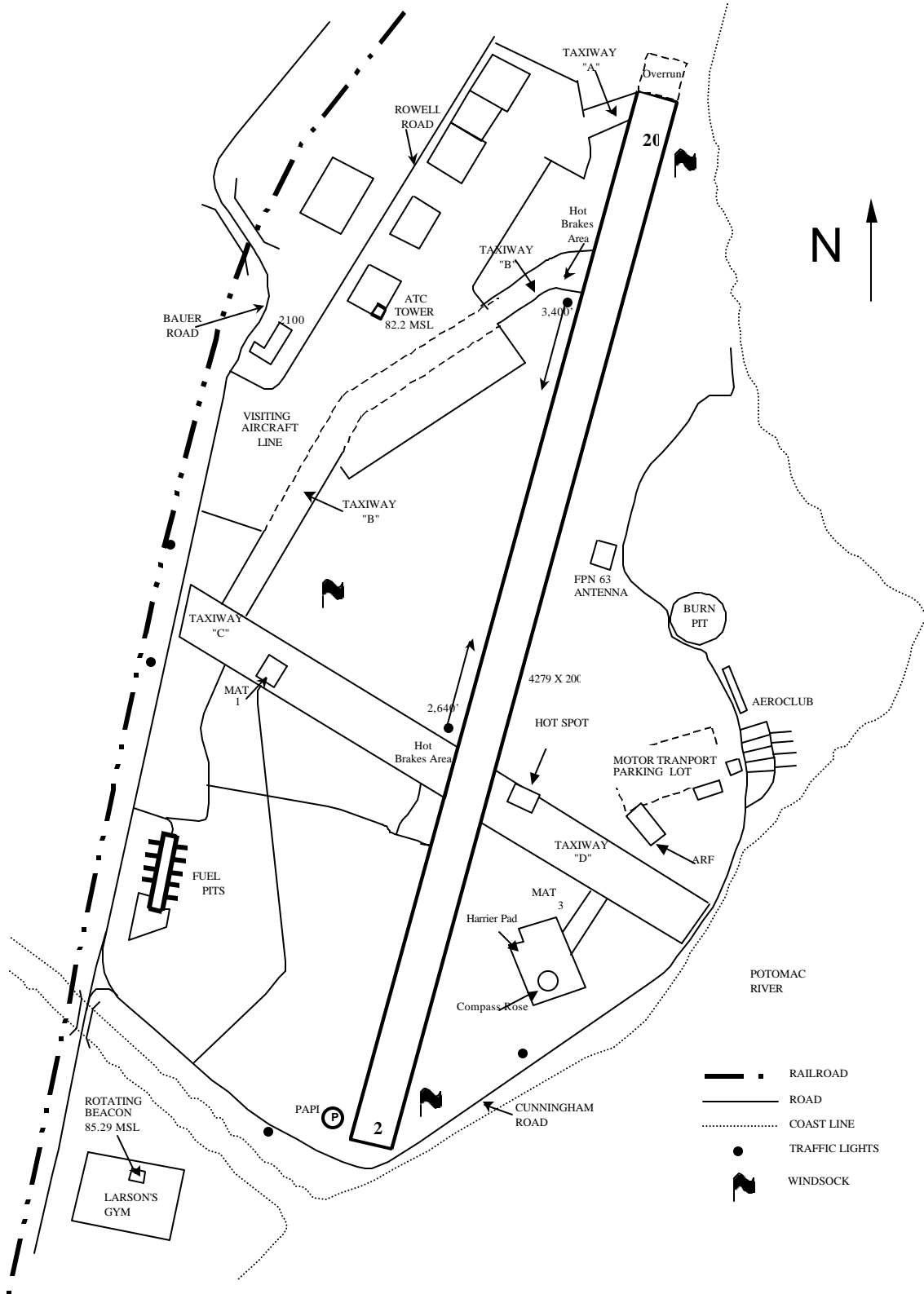
7003. SALVAGE

- 1. The MCAF Operations Officer will take the following actions during salvage operations:
- a. Assist in rescue or salvage, if practicable.
 - b. Maintain liaison with the command affecting the salvage operation.
 - c. Assist in providing transportation to the scene of the crash if required.
2. The MCAF Quantico Logistics Officer will assist in the coordination during salvage operations. Personnel and equipment support will be requested from MCB Quantico, as required.
 3. Salvage operations will not be commenced until the aircraft is released for salvage or recovery by the reporting custodian of the aircraft and will be completed as expeditiously as possible.

AIRFIELD OPERATIONS MANUAL

APPENDIX A

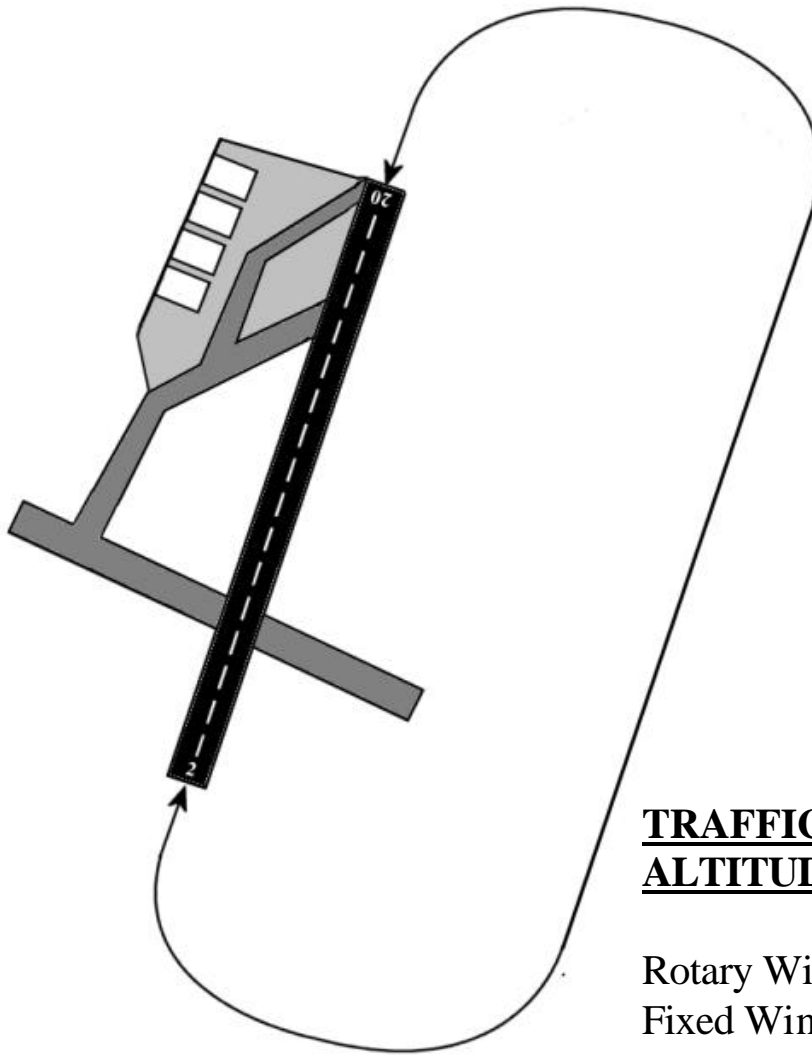
MCAF QUANTICO AIRFIELD LAYOUT



AIRFIELD OPERATIONS MANUAL

APPENDIX B

TRAFFIC PATTERNS



TRAFFIC PATTERN
ALTITUDE

Rotary Wing	500 '
Fixed Wing	1000 '

Overhead

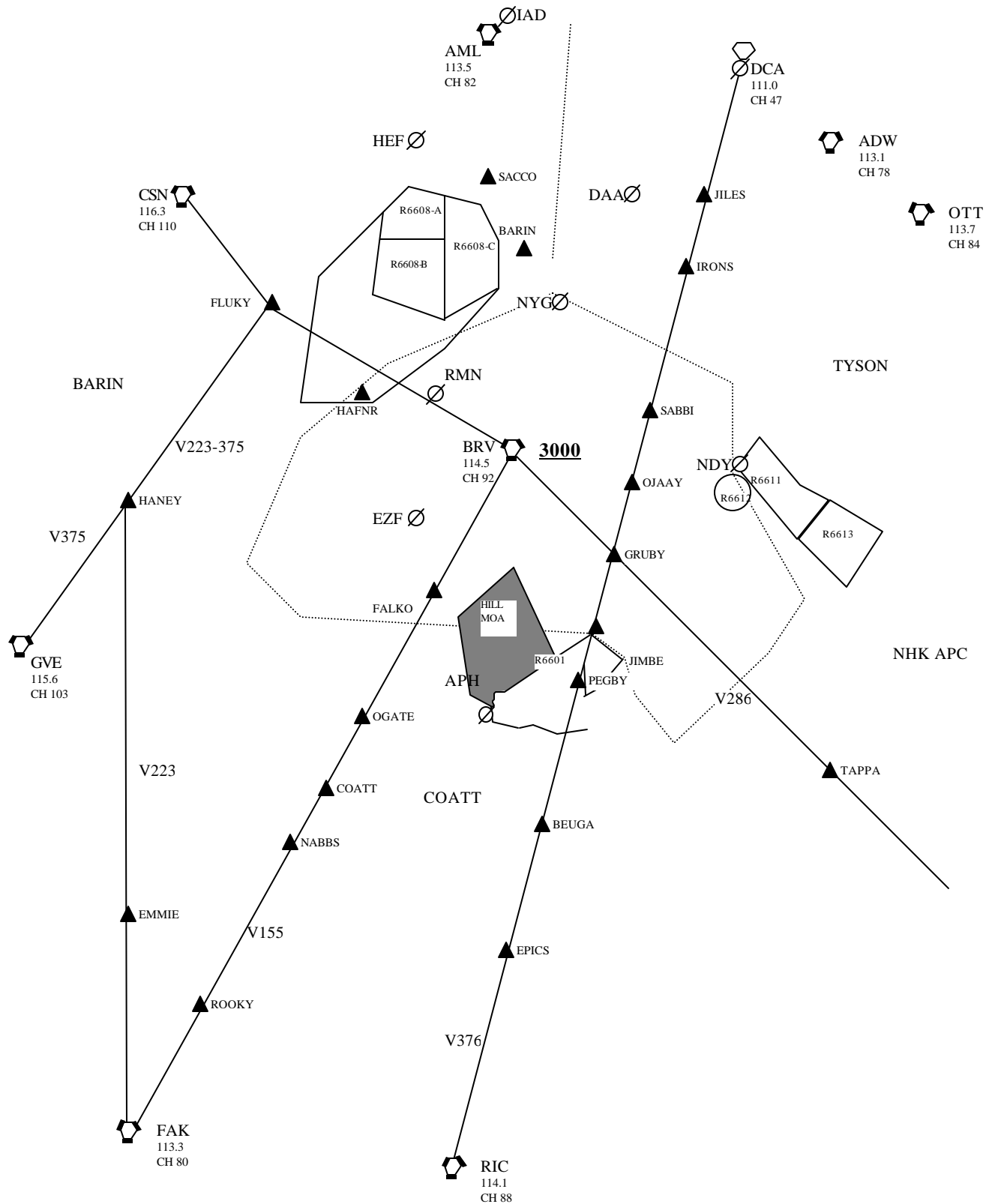
Initial-	5nm at 1500'
Break-	Level at 1500'
	descend on
	downwind

Circling not authorized West of
Rwy 2/20

AIRFIELD OPERATIONS MANUAL

APPENDIX C

RESTRICTED AREA/APPROACH CONTROL AIRSPACE



AIRFIELD OPERATIONS MANUAL

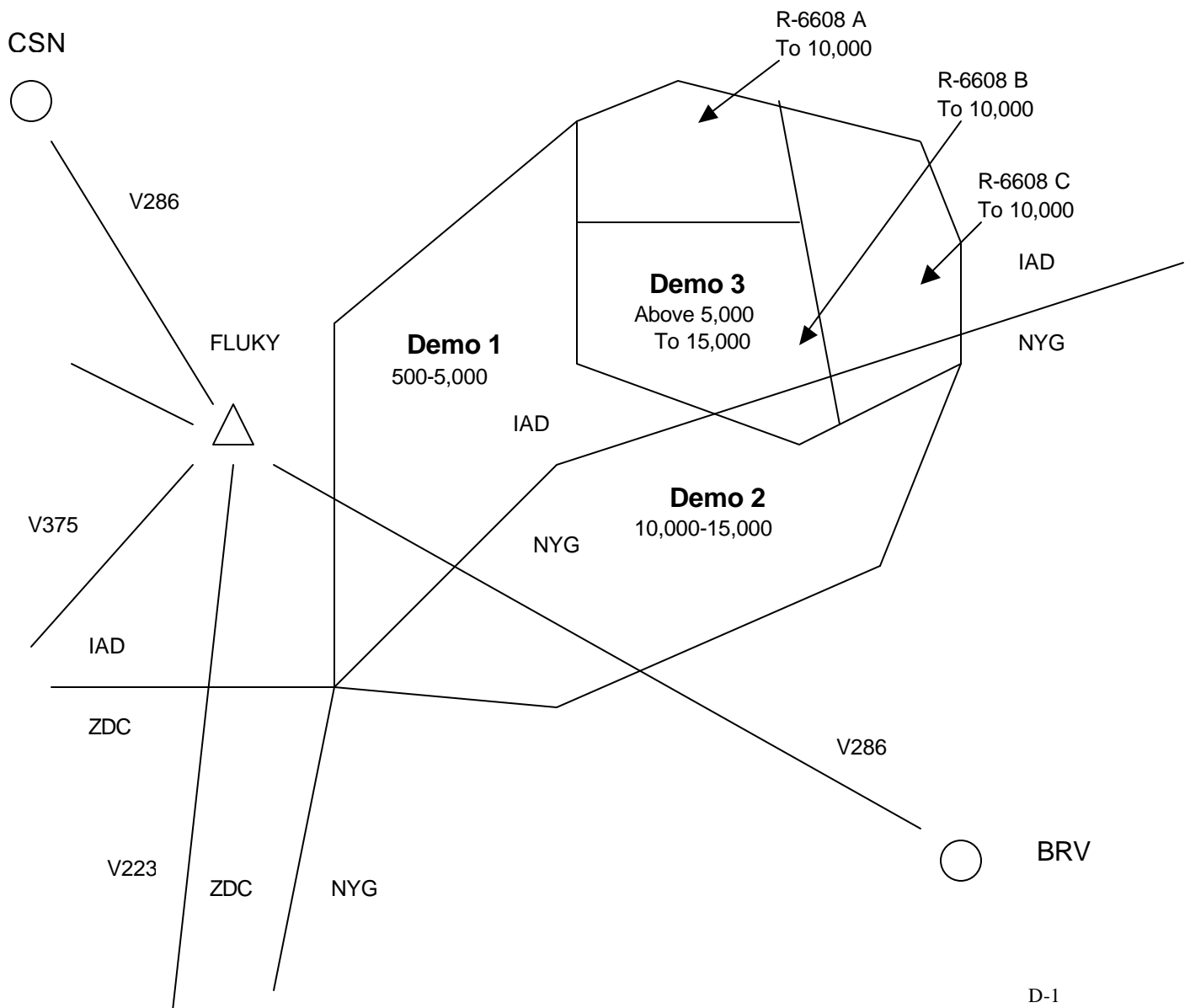
APPENDIX D

DEMO MOAS

DEMO 1
500
to
5,000

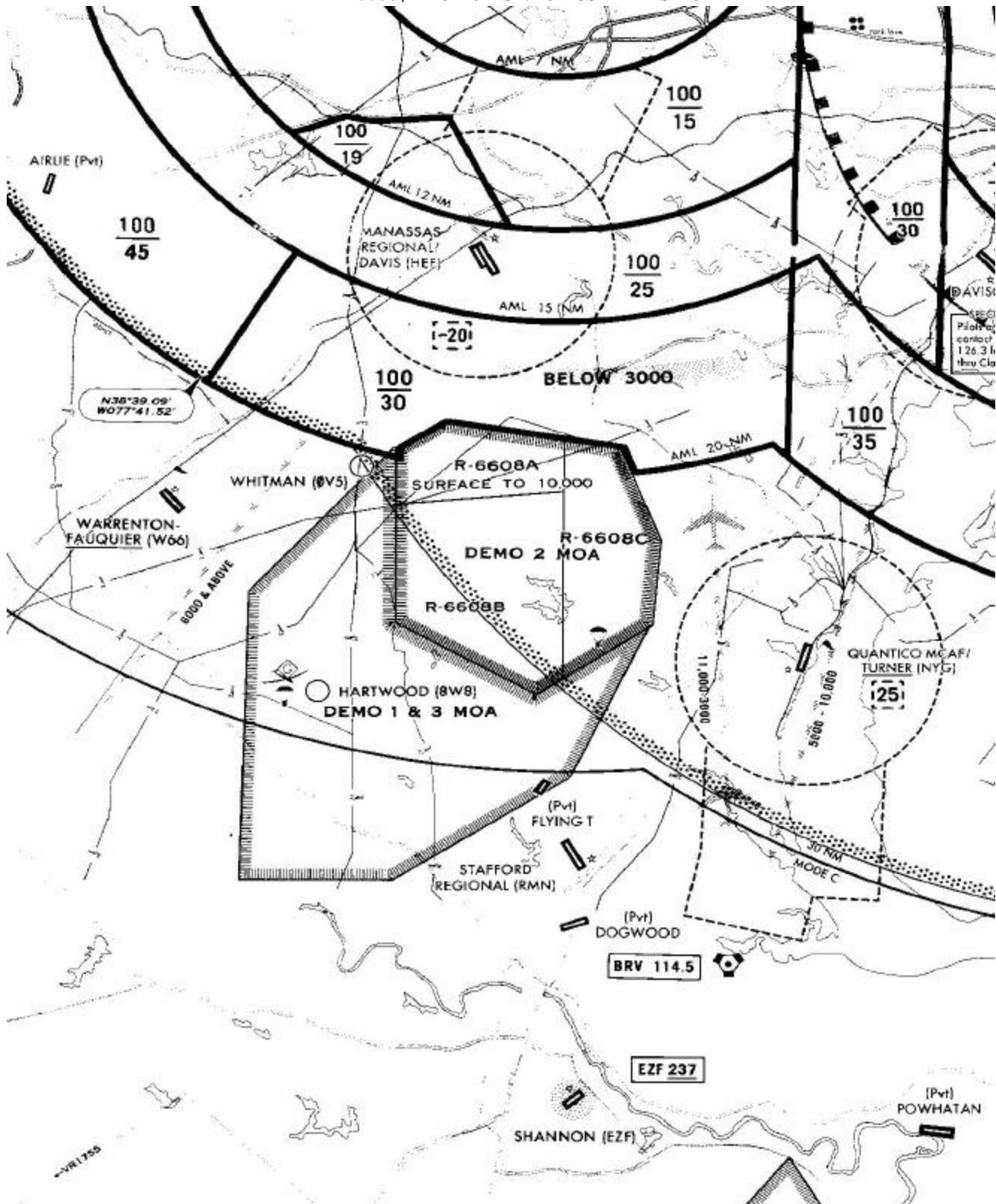
DEMO 2
10,000
to
15,000

DEMO 3
ABOVE 5,000 to
15,000 EXCLUDING
R6608 A, B, C



AIRFIELD OPERATIONS MANUAL

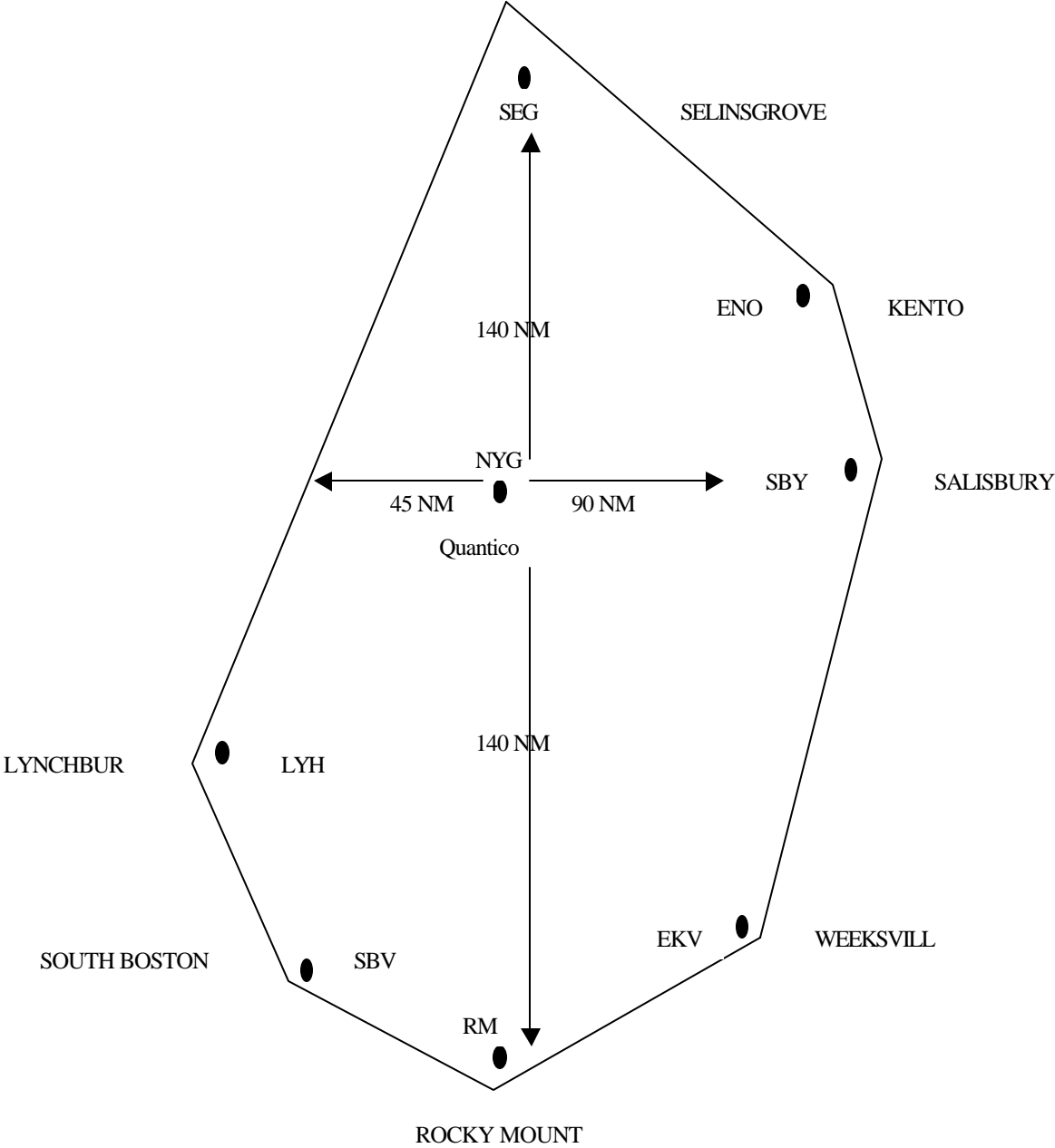
APPENDIX E R6608, DEO MOA'S & CLASS B AIRSPACE



AIRFIELD OPERATIONS MANUAL

APPENDIX F

LOCAL FLYING AREA

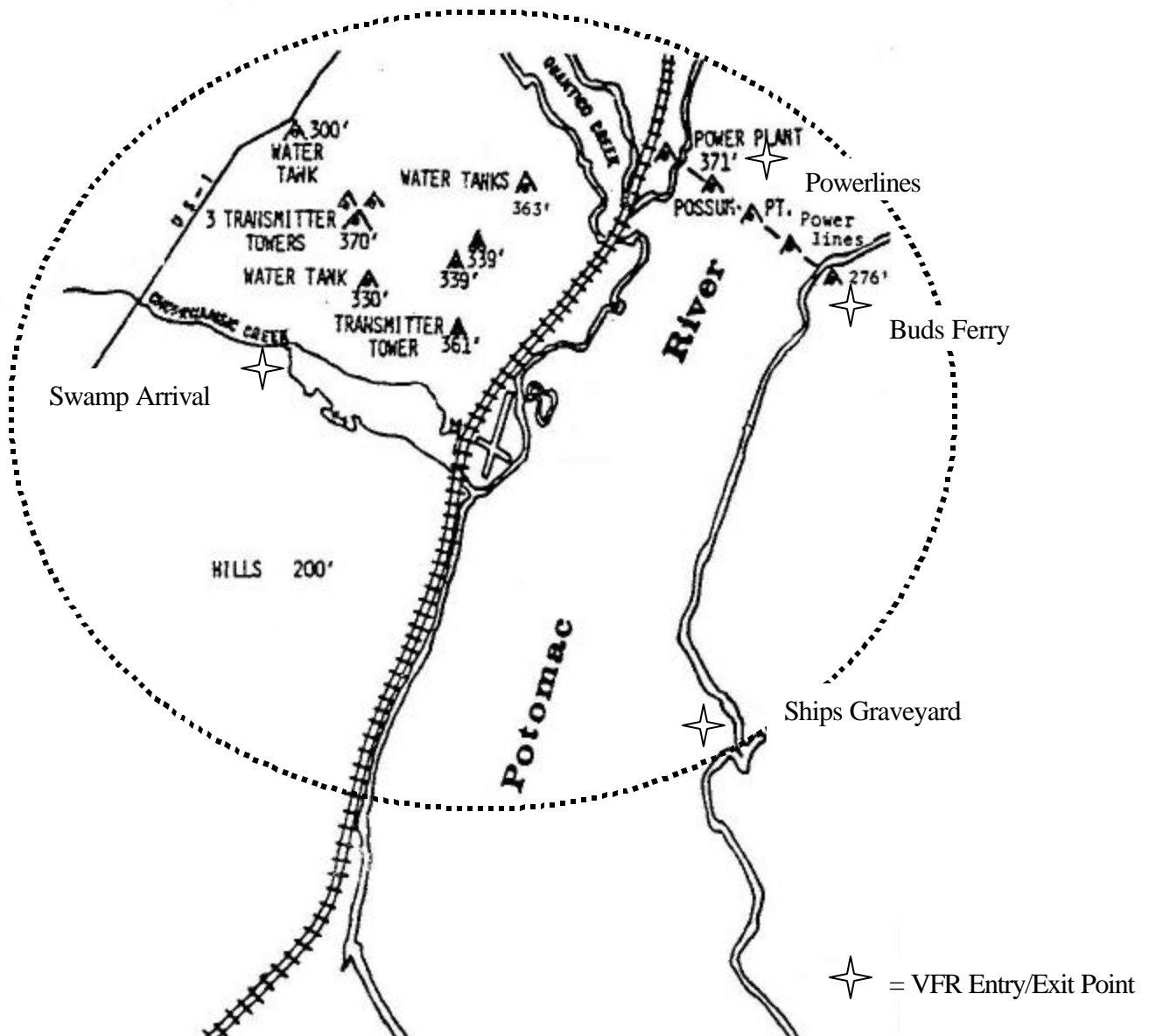


LOCAL FLYING AREA

AIRFIELD OPERATIONS MANUAL

APPENDIX G

LOCAL OBSTRUCTION

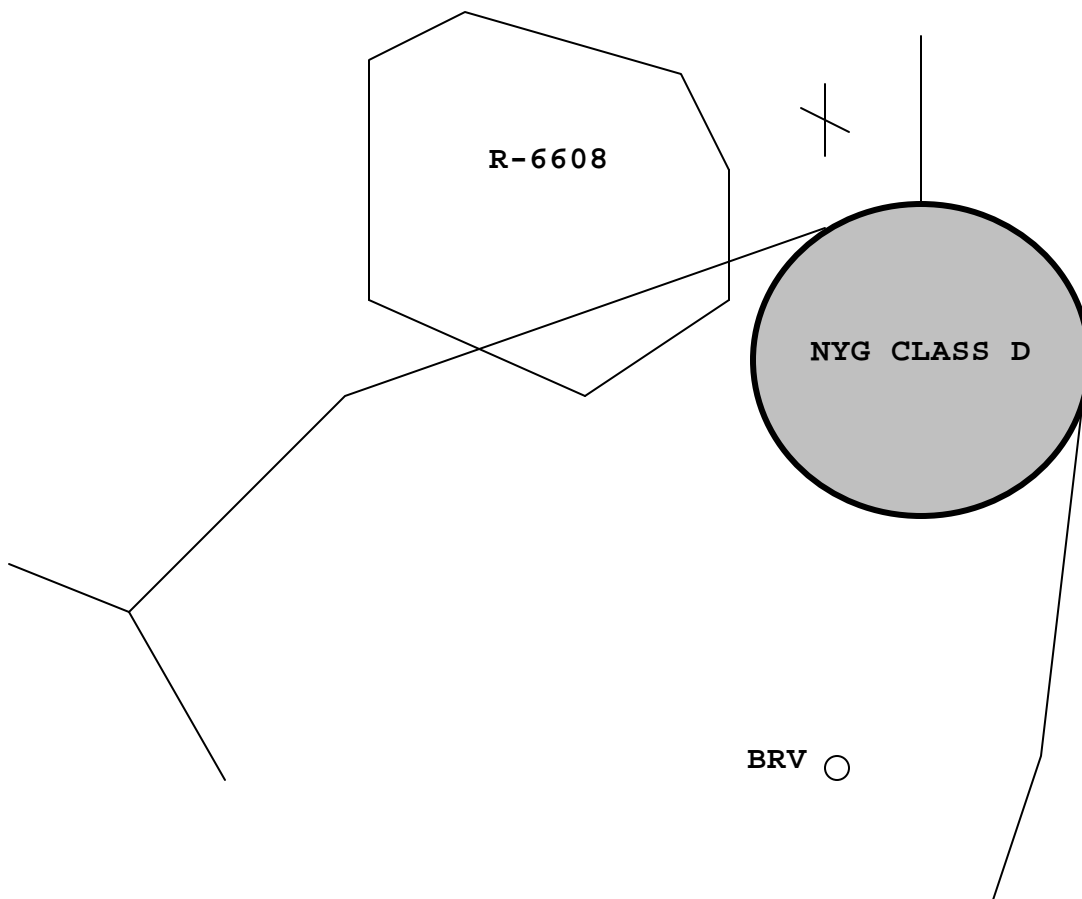


AIRFIELD OPERATIONS MANUAL

APPENDIX H

QUANTICO CLASS D AIRSPACE

That airspace delegated to MCAF Quantico by Potomac TRACON, extending upward from the surface to and including 2,500 feet above the airport elevation (charted in MSL) within a 4-mile radius of MCAF Quantico (Turner Field).



AIRFIELD OPERATIONS MANUAL

APPENDIX I

COMMONLY USED FREQUENCIES

<u>VHF</u>	<u>UHF</u>	
NYG APPROACH(Radar)	127.05	290.375
NYG SFA	120.925	351.95
		353.65
		363.15
NYG TOWER	118.6	360.2
NYG GROUND	121.75	340.2
NYG METRO		355.3
NYG ATIS		263.15
POTOMAC APPROACHES (PCT)		
BARIN (IAD)	124.65	284.625
TYSON (DCA)	118.95	257.2
FLATROCK(FAK)(RIC)	134.7 (V155)	307.2
TAPPA	126.4 (V286)	282.375
EZF UNICOM	122.8	
EZF AWOS	128.125	
RMN UNICOM	122.75	
BROOKE VORTAC	114.5	CH92

AIRFIELD OPERATIONS MANUAL

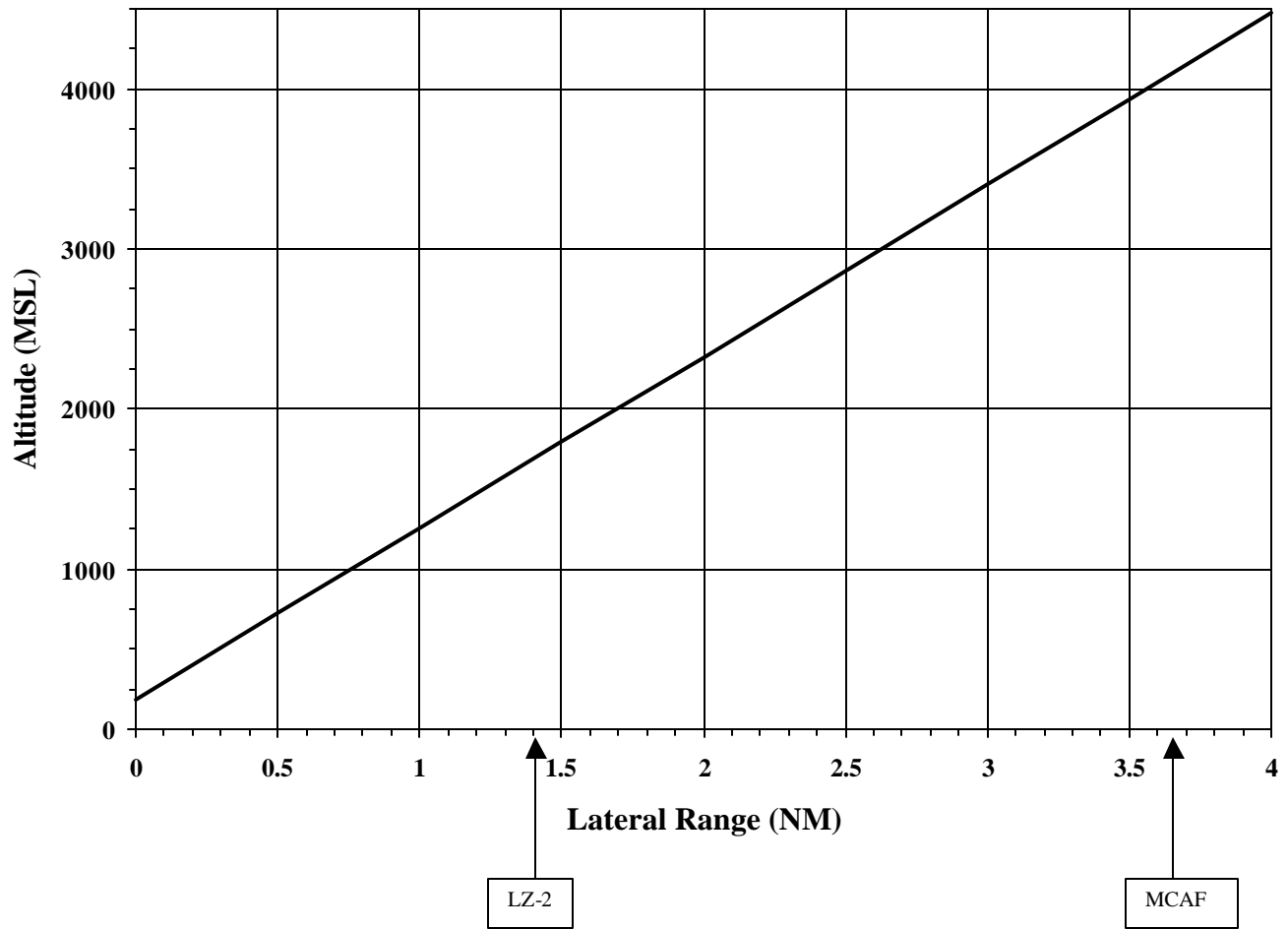
APPENDIX J

AIRFIELD PHONE DIRECTORY

COMMANDING OFFICER	(703) 784-1432/2442/2443
EXECUTIVE OFFICER	(703) 784-1433/2442/2443
OPERATIONS OFFICER	(703) 784-1448
OPERATIONS CHIEF	(703) 784-1475/2908
ATC FACILITY OFFICER	(703) 784-1455
AIRFIELD MANAGER	(703) 784-1449
ATC NCOIC	(703) 784-2446
ATC OFFICE	(703) 784-1470
ATC MAINTENANCE OFFICER	(703) 784-1464
ATC MAINTENANCE	(703) 784-2490/2604
WEATHER OFFICE	(703) 784-2298/2468
FLIGHT CLEARANCE	(703) 784-2085
AIRCRAFT RESCUE FIRE FIGHTING	(703) 784-2312/2571/4862
REFUELERS	(703) 784-4297/4233
AERO CLUB	(703) 640-6596/7200
HMX-1 ODO	(703) 784-2209
RANGE CONTROL	(703) 784-5321/5322
DSN PREFIX	278-XXXX

APPENDIX K

Minimum Altitude of NRL Laser (10 degrees above horizon)



AIRFIELD OPERATIONS MANUAL

APPENDIX L

CHART OF ALTITUDES BELOW RANGE FINDING LASER

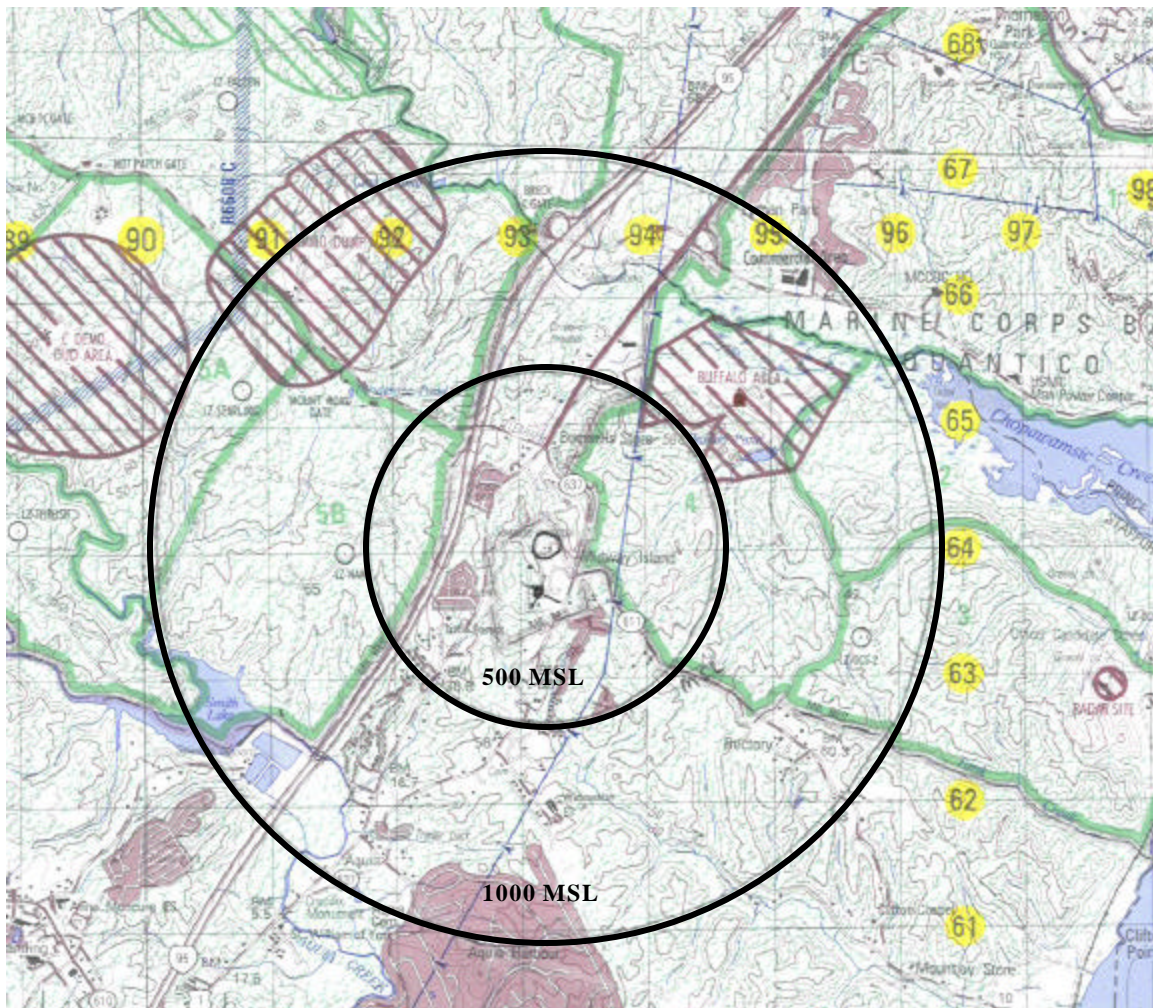


Chart depicts altitudes that will always be below the range finding laser.

AIRFIELD OPERATIONS MANUAL

APPENDIX M

MCAF QUANTICO ORGANIZATIONAL
CHAIN OF COMMAND

COMMANDING OFFICER

*
*
*
*
*

EXECUTIVE OFFICER

*
*
*

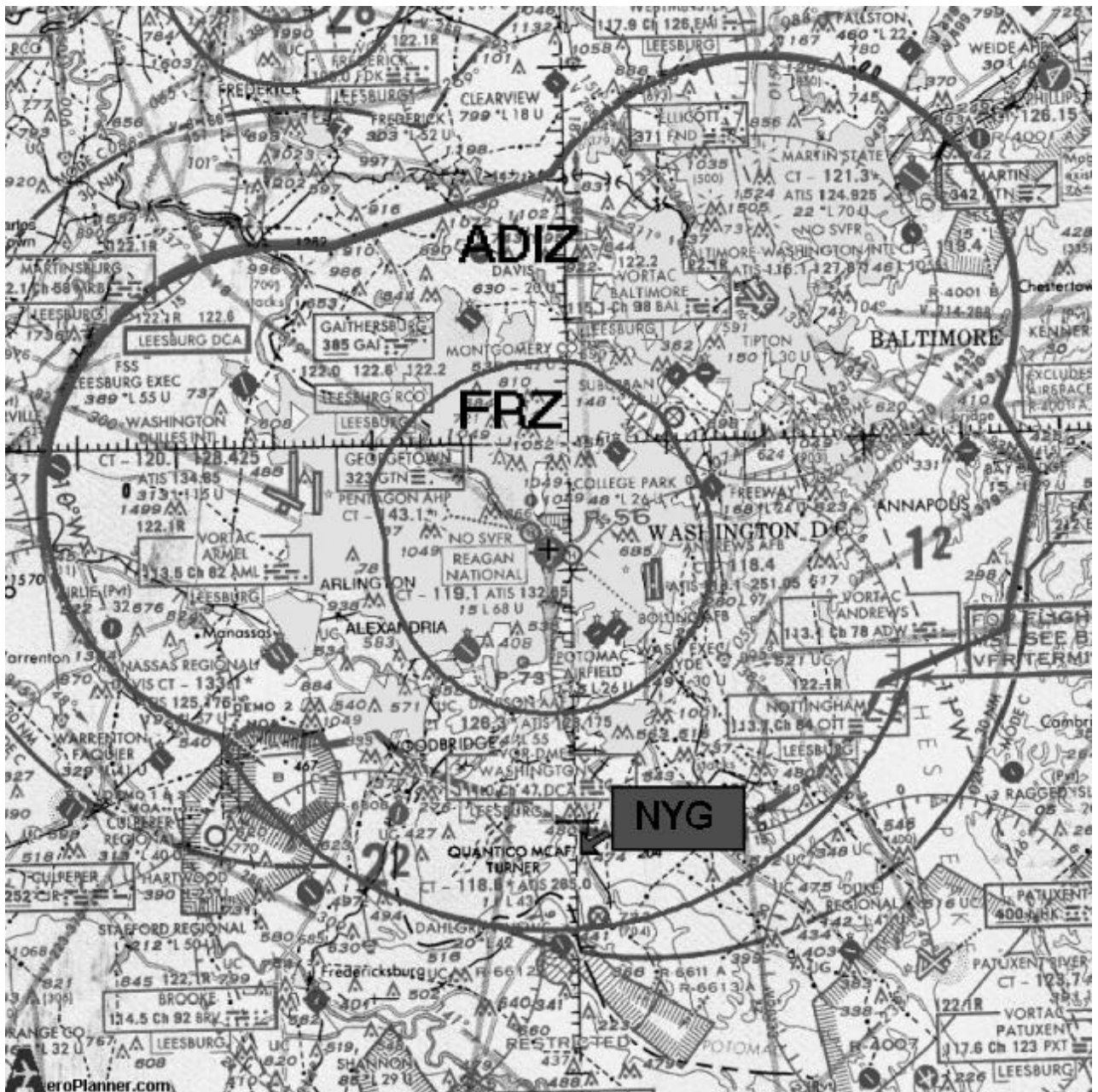
OPERATIONS CHIEF *** OPERATIONS OFFICER ***** AIRFIELD MANAGER**

*
*
*

* * * * *
* * * * *

AIRCRAFT RESCUE & FIREFIGHTING DEPT (ARFF)	AIR TRAFFIC CONTROL DEPT (ATC) AIR OPERATIONS FLIGHT CLEARANCE SECTION (FLT CLNC)	AIR TRAFFIC CONTROL MAINTENANCE DEPARTMENT (ATCM)	HEADQUARTERS SQUADRON TRAINING SECTION	WEATHER DEPT
---	--	--	---	-------------------------

THE FLIGHT RESTRICTION ZONE (FRZ)



REFERENCE

14 CFR Section 99.7, 99.139

AIM Chapter 5, Section 6

NOTAM FDC 3/2126 ZDC

**AIR OPERATIONS MANUAL
EXPLANATION OF CHANGES PAGE**

a. COVER PAGE

- (1) Designed new cover page to replace previous one.

b. SIGNATURE PAGE

- (1) Paragraph 5, Summary of Revision completely deleted.
- (2) Paragraph 6, renumbered to paragraph 5.
- (3) Signature change from D.J. Donovan to R.E. Clay.
- (4) Changed date to current revision date.

c. DISTRIBUTION PAGE

- (1) Moved Commanding Officer, HMX-1 from distribution list to copy to list.
- (2) Patuxent River, added to copy to list.
- (3) Tactical Aircraft Control Center (TACC), added to copy to list.
- (4) Marine Corps Base Quantico (G-3), added to copy to list.
- (5) 2nd MAW, added to copy to list.
- (6) 4th MAW, added to copy to list.
- (7) TBS/Air Ops, added to copy to list.
- (8) Quantico Flying Club, added to copy to list.

d. SUMMARY OF CHANGES PAGE

- (1) Added Explanation of Changes Page.

e. BIBLIOGRAPHY PAGE

- (1) Added picture of Thomas Caldwell Turner.
- (2) Added history of Marine Corps Air Facility Quantico (MCAF).

f. TABLE OF CONTENTS

(1) Added Appendix M, MCAF Quantico Organizational Chain of Command.

(2) Added Appendix N, The Flight Restriction Zone (FRZ).

CHAPTER 1 CHANGES

a. TABLE OF CONTENTS

(1) Added entirely new section 1004, Washington ADIZ.

(2) Added entirely new section 1016, Base Operations Frequency.

(3) Renumbered all paragraphs and page numbers.

b. 1001. LOCATION

(1) Restated location of MCAF Quantico in nautical miles.

c. 1002. RUNWAYS

(1) Added Overrun RWY 02 dimensions.

d. 1004. WASHINGTON AIR DEFENCE IDENTIFICATION ZONE (ADIZ)

(1) Added entirely new section 1004, Washington Air Defence Identification Zone (ADIZ) information.

e. 1005. HANGAR AND SERVICE FACILITIES

(1) Paragraph 1 restated for clarity.

(2) Mat #2 deleted.

(3) Mat #3 added.

(4) Paragraph 2, restated for clarity.

(5) Added paragraph 5, requirements for m-31 arresting gear.

(6) Adjustments, paragraph 6-9 renumbered.

(7) First sentence of paragraph 7 rewritten for clarity.

(8) Paragraph 7.e completely deleted.

(9) Paragraph 9 change telephone number from (703) 784-2768 to (703) 784-2684

f. 1006. AIRFIELD LIGHTING

(1) Paragraph 1.a.(1), capitalization of HIRLS.

(2) Paragraph 1.a.(3), rewritten for clarity.

(3) Paragraph 3, rewritten for clarity.

(4) Paragraph 4, rewritten for clarity.

g. 1007. HOURS OF OPERATION

(1) Paragraph 2, rewritten for clarity.

(2) Paragraph 3, updated Operations telephone numbers, and completely deleted last sentence of the paragraph. Rewritten for clarity.

h. 1008. COMPASS ROSE

(1) First paragraph rewritten for clarity, and updated MCAF Operations telephone numbers.

i. 1009. WEATHER SERVICES

(1) Updated METOC frequency, weather telephone number, and weather website.

(2) Paragraph 4, weather website updated.

j. 1010. DANGER TO LIFE OR PROPERTY

(1) First paragraph, rewritten for clarity.

(2) Paragraph 3, rewritten and reorganized for clarity.

k. 1011. SUSPENSION OF FUELING OPERATIONS

(1) Airfield Operations Officer deleted from paragraph.

l. 1012. ENVIRONMENTAL CONCERNS

(1) First paragraph, updated after hours telephone number to Natural Resource and Environmental Affairs.

m. 1013. PERIODS OF CONSTRUCTION

(1) Information added to end of paragraph.

n. 1015. AIR FACILITY PHOTOGRAPHIC SECURITY

- (1) Paragraph 2, added Anti Terrorism Protection Officer (ATFP) telephone numbers.

o. 1016. BASE OPERATIONS FREQUENCY

- (1) Added entirely new paragraph.

CHAPTER 2 CHANGES

a. 2002. FLIGHT PLANNING APPROVAL

- (1) Paragraph 3, rewritten for clarity.
- (2) Added, paragraph 4.
- (3) Added, paragraph 5.a, 5.b, and 5.c.

b. 2003. WEATHER MINIMA

- (1) Paragraph 3, rewritten for clarity.

CHAPTER 3 CHANGES

a. 3001. AUTOMATIC TERMINAL INFORMATION SERVICE (ATIS)

- (1) First paragraph, updated ATIS frequency.

b. 3002. TAXI INSTRUCTIONS

- (1) First paragraph, rewritten for clarity.
- (2) Paragraph 3, capitalization of Control Tower.

c. 3003. TAKE-OFF INSTRUCTIONS

- (1) Paragraph 3, rewritten for clarity.
- (2) Paragraph 4, added.

d. 3004. LANDING INSTRUCTIONS

- (1) Paragraphs 2.b and 2.c combined, rewritten, and reorganized for clarity.

e. 3006. HUNG/UNEXPENDED ORDNANCE

- (1) Paragraph 3, rewritten and reorganized for clarity.

f. 3007. JETTISON AREA

- (1) Deleted JATO from first sentence and added Range Control frequency and telephone number.

g. 3008. NOISE ABATEMENT/AVOIDANCE AREAS

- (1) Paragraph 3, change 500 feet to 1000 feet.

h. 3010. RESTRICTED AREAS AND MILITARY OPERATING AREAS

- (1) Paragraph 2 chart, convert Controlling Agencies Dulles Tower and Richmond Tower to Potomac TRACON.

- (2) Paragraph 3.a.(2), updated Director, Operations Division, MCB, Quantico, Virginia telephone numbers.

- (3) Paragraph 3.a.(3).(b), updated Range Management Branch, Operations Division commercial telephone numbers.

- (4) Paragraph 3.a.(5), rewritten and reorganized for clarity.

- (5) Paragraph 3.a.(6), converted Dulles Tower in second sentence to Potomac TRACON.

i. 3012. HAZARDOUS CARGO

- (1) First paragraph rewritten and reorganized for clarity.

- (2) Paragraph 3, rewritten and reorganized for clarity.

j. 3013. PERSONNEL AND VEHICULAR RESTRICTIONS

- (1) Paragraph 2.b, rewritten for clarity.

- (2) Paragraph 2.c, converted Air Traffic Control Maintenance Division to Flight Clearance.

- (3) Added paragraph 4, and renumbered paragraphs 4-7.

k. 3014. CLOSED FIELD OPERATIONS

- (1) Paragraph 3, Note portion of paragraph completely deleted.

l. 3017. SPECIAL HANDLING

- (1) Paragraph 1.a, rewritten for clarity.

- (2) Paragraph 1.b.(1), rewritten for clarity.
- (3) Paragraph 1.b.(3), rewritten for clarity.
- (4) Added Paragraph 1.b.(4).
- (5) Paragraph 2.b. rewritten and reorganized for clarity.
- (6) Added Paragraph 2.d

m. 3018. DIVERT AIRFIELDS

- (1) Paragraph 2.a, updated Civilian Primary Divert Airfields.
- (2) Paragraph 2.b, updated Civilian Secondary Divert Airfields.

n. 3019. VIOLATIONS OF FLIGHT REGULATIONS

- (1) Updated MCAF Airfield Operations telephone numbers.

o. 3020. UNUSUAL MANEUVERS

- (1) Converted FAR Part 91 to 14 CFR Part 91.

p. 3022. MCCS QUANTICO FLYING CLUB

- (1) Converted FAR Part 91 to 14 CFR Part 91.

q. 3023. LASER RANGE FINDER OPERATIONS

- (1) First paragraph, rewritten and reorganized for clarity.
- (2) Paragraph 2, c, d, e, f, g, h, completely deleted.
- (3) Added paragraph 4.d.

CHAPTER 4 CHANGES

- a.** No changes to Chapter 4.

CHAPTER 5 CHANGES

a. 5001. AIRSPACE DESCRIPTION

- (1) Added information for clarity.

b. 5002. FREQUENCIES AND NAVIGATIONAL AIDS

- (1) Updated Quantico Tower frequency.
- (2) Updated Quantico Approach frequency.
- (3) Updated SFA's frequencies.
- (4) Updated ATIS frequency.
- (5) Added METRO/Base Operations frequency.

c. 5009. WHEELS CHECK PROCEDURES

- (1) Bold face all titles for ATC lighting signals.

CHAPTER 6 CHANGES

a. 6001. TRANSIENT AIRCRAFT OPERATIONS

- (1) Added paragraph 1.b
- (2) Renumbered paragraph 1.b to 1.c.

b. 6002. BILLETING

- (1) Added billeting information to the end of first paragraph.

c. 6003. MESSING

- (1) First paragraph completely deleted.
- (2) Paragraph 2, renumbered paragraph 1.

d. 6004. TRANSPORTATION

- (1) First paragraph rewritten and reorganized for clarity.
- (2) Paragraph 3, rewritten and reorganized for clarity. Budget and Thrifty phone numbers deleted.

e. 6005. EMBARKATION OF PASSENGERS

- (1) Paragraph 3, rewritten and reorganized for clarity.

f. 6006. VIP

- (1) Paragraph 3, rewritten for clarity.

g. 6008. CUSTOMS

- (1) Rewritten and reorganized for clarity.

h. 6009. CLASSIFIED MATERIAL AND WEAPONS

- (1) First paragraph, Added telephone number to MCB Classified Control Center.

CHAPTER 7 CHANGES

a. 7000. GENERAL

- (1) Paragraph 2, rewritten for clarity.
- (2) Paragraph 4, added 4.e.
- (3) Paragraph 4, rewritten and reorganized for clarity.

b. 7003. SALVAGE

- (1) First Paragraph, rewritten for clarity.

APPENDIX CHANGES

a. APPENDIX A-N

- (1) Updated Appendix A.
- (2) Updated Appendix B.
- (3) Updated Appendix C.
- (4) Updated Appendix D.
- (5) Updated Appendix E.
- (6) Updated Appendix F.
- (7) Updated Appendix G.
- (8) Updated Appendix H.
- (9) Updated Appendix I.
- (10) Updated Appendix J.
- (11) Updated Appendix K.
- (12) Updated Appendix L.

(13) Added Appendix M.

(14) Added Appendix N.