



UNITED STATES MARINE CORPS  
MARINE HEAVY HELICOPTER SQUADRON 461  
MARINE AIRCRAFT GROUP 26  
2d MARINE AIRCRAFT WING, FMF, ATLANTIC  
MARINE CORPS AIR STATION  
NEW RIVER, JACKSONVILLE, NORTH CAROLINA 28545-6079

IN REPLY REFER TO:  
Sqdno 3140.4K  
4:gmp  
22 Apr 1987

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SQUADRON ORDER 3140.4K

From: Commanding Officer  
To: Distribution List

Subj: Destructive Weather Plan

Ref: (a) GruO 3140.5H  
(b) WgO 3140.3G  
(c) WgO 3140.1K

Encl: (1) List of Articles Required for Hurricane Gear Locker  
(2) Local Area Storms/Thunderstorm Conditions and Actions  
(3) Hurricane/Tropical Storm Conditions and Actions  
(4) Destructive Weather Hangar Fire Fighting Teams  
(5) Aircraft Hangaring Plan

1. Purpose. To set forth procedures to be used by this squadron in preparing for destructive weather.

2. Cancellation. SqdnO 3140.4J.

3. General Information

a. The hurricane season extends from 1 June through 30 November. A hurricane is defined as a tropical cyclone covering a wide area with winds exceeding 75 miles per hour. A storm is defined as a localized violent disturbance to the atmosphere. Both hurricanes and storms are associated with heavy rain and destructive winds; both are classified as destructive weather.

b. Hurricane conditions are promulgated via the Hurricane Coordination Center at MCAS New River. The Hurricane Coordination Center for this squadron will be the Ready Room.

c. Due to their localized nature, the thunderstorm conditions established by the Commanding Officer at MCAS New River will govern the action of this squadron.

d. The Duty Section for the day will implement the procedures outlined in this plan and will be directed by the Squadron Destructive Weather Officer and the Commanding Officer. The primary concern is the internal security of the squadron's assigned offices, barracks and storage areas. The secondary purpose is to assist in the protection of any other Group or Station property.

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e. The water levels for the squadron barracks and hangar are eighteen (18) and twenty-one (21) feet respectively. These figures will be used when determining precautionary measures to be taken against possible high water levels.

f. In the event of destructive weather, close liaison with higher levels of command will be maintained so an overall Destructive Weather Plan may be implemented, this Order/Plan being only one of many other components of the larger plan.

4. Responsibility. The following listed responsibilities apply specifically to Hurricane Conditions; however, the responsibility will apply under any weather conditions which are potentially destructive to personnel, property, equipment or facilities.

a. Commanding Officer

(1) Ensure compliance with the references and this Order.

(2) Ensure security of squadron personnel and equipment during destructive weather conditions.

(3) Coordinate destructive weather preparations within the squadron through the Destructive Weather Officer.

b. Squadron Destructive Weather Officer

(1) Be responsible to the Commanding Officer for all precautionary and security measures during destructive weather conditions.

(2) Perform the duties of Squadron Hurricane Coordinator for this squadron.

(3) Maintain a list of the requirements for all emergency rations, cots, bedding, foul weather gear and quantities on hand.

(4) Draw all required supplies and equipment from the Group Supply Officer through the Squadron Material Officer.

(5) Maintain a Squadron Hurricane Locker which will contain the items listed in enclosure (1).

(6) Check squadron assigned areas for loose material and notify appropriate departments to provide security.

(7) Check assigned buildings for broken windows and doors and coordinate with the Squadron Buildings and Grounds Officer for repairs.

(8) Designate two (2), three man fire fighting teams, to be qualified by the Squadron Training Officer.

(9) Advise the Commanding Officer in writing of any recommended changes to this plan prior to 1 June of each year.

(10) Prepare an Annual Hurricane Readiness Report prior to 1 May of each year in accordance with reference (b).

(11) Maintain close liaison with the Group Destructive Weather Officer/Hurricane Coordinator during destructive weather conditions.

c. Maintenance Officer

(1) Ensure that flight line and ground support equipment areas are secure, all equipment is satisfactorily tied down and that aircraft are properly prepared for high winds.

(2) Prepare hangar for stowage of aircraft.

(3) Upon notification of order to hangar aircraft, given by the Hangar Deck Officer (H&MS 26 Maintenance Officer), supervise the stowage of aircraft in accordance with hangaring diagrams and procedures of reference (b).

(4) Notify the Commanding Officer of the number of aircraft capable of fly-away evacuation.

d. Administrative Officer. Maintain a current duty section roster.

e. Sergeant Major. From the duty section designate a ten (10) man working party and a three (3) man fire watch to be available for duty when called for by the Squadron Destructive Weather Officer.

f. Department Heads. Ensure that respective departments are in a general condition of readiness during the period of 1 June to 30 November (e.g., doors and windows are in good repair, no loose gear left in area).

g. Squadron Duty Officer. Notify the Squadron Destructive Weather Officer and the Commanding Officer whenever destructive weather conditions are established by higher authority. During the absence of the Squadron Destructive Weather Officer and the Commanding Officer, assume the duties of executing the procedures set forth in this order.

h. Training Officer. Train personnel concerning possible damage to aircraft, buildings, equipment and injury to personnel and preventive measures that can be taken to minimize such damage.



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i. Buildings and Grounds Officer

(1) Ensure that doors, windows, utilities and water piping/conduits, are in good repair at all times.

(2) When destructive weather conditions occur, coordinate with the Squadron Destructive Weather Officer for repair/priority assignment for repair of squadron areas.

(3) Keep the Commanding Officer and Squadron Destructive Weather Officer advised as to the status of all structures and systems within the squadron areas which are likely to sustain, or have sustained damage as a result of the weather conditions.

(4) Assign priorities for repair and coordinate with Base Maintenance.

(5) Report all damages received after the destructive weather passed, to the Squadron Destructive Weather Officer and the Commanding Officer.

(6) Report immediately to Base Maintenance Emergency Desk, Squadron Destructive Weather Officer and the Commanding Officer, any structure or system which at any time presents a definite hazard to personnel as a result of destructive weather. Post a guard at the scene to keep personnel clear.

j. Safety Officer

(1) Monitor events to ensure the safe implementation of this order.

(2) Advise the Squadron Buildings and Grounds Officer and Squadron Destructive Weather Officer of any unsafe conditions when observed.

(3) Maintain the highest level of safety possible under the hazardous weather conditions.

k. Fire Marshall

(1) The Group Fire Marshall will be available for the maximum utilization of all fire-fighting equipment.

5. Hazardous/Destructive Weather Actions To Be Taken

a. Procedures listed in enclosure (2) will be used in the event of Local Area Storms/Thunderstorms. Procedures will be explained to all personnel by OIC's and NCOIC's.



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b. Procedures listed in enclosure (3) will be used in the event of Hurricane/Tropical Storm Conditions. Procedures will be explained to all personnel by OIC's and NCOIC's.

c. As soon as possible after the destructive weather has subsided, the Squadron Destructive Weather Officer will make a verbal report to the Commanding Officer to be relayed to the Group Commander. The report will include personnel casualties and damage to aircraft, buildings and facilities. Written reports of damage will be submitted to the Hurricane Coordinator (MAG 26) within 24 hours. Negative reports are required and may be verbally made.

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DISTRIBUTION: A



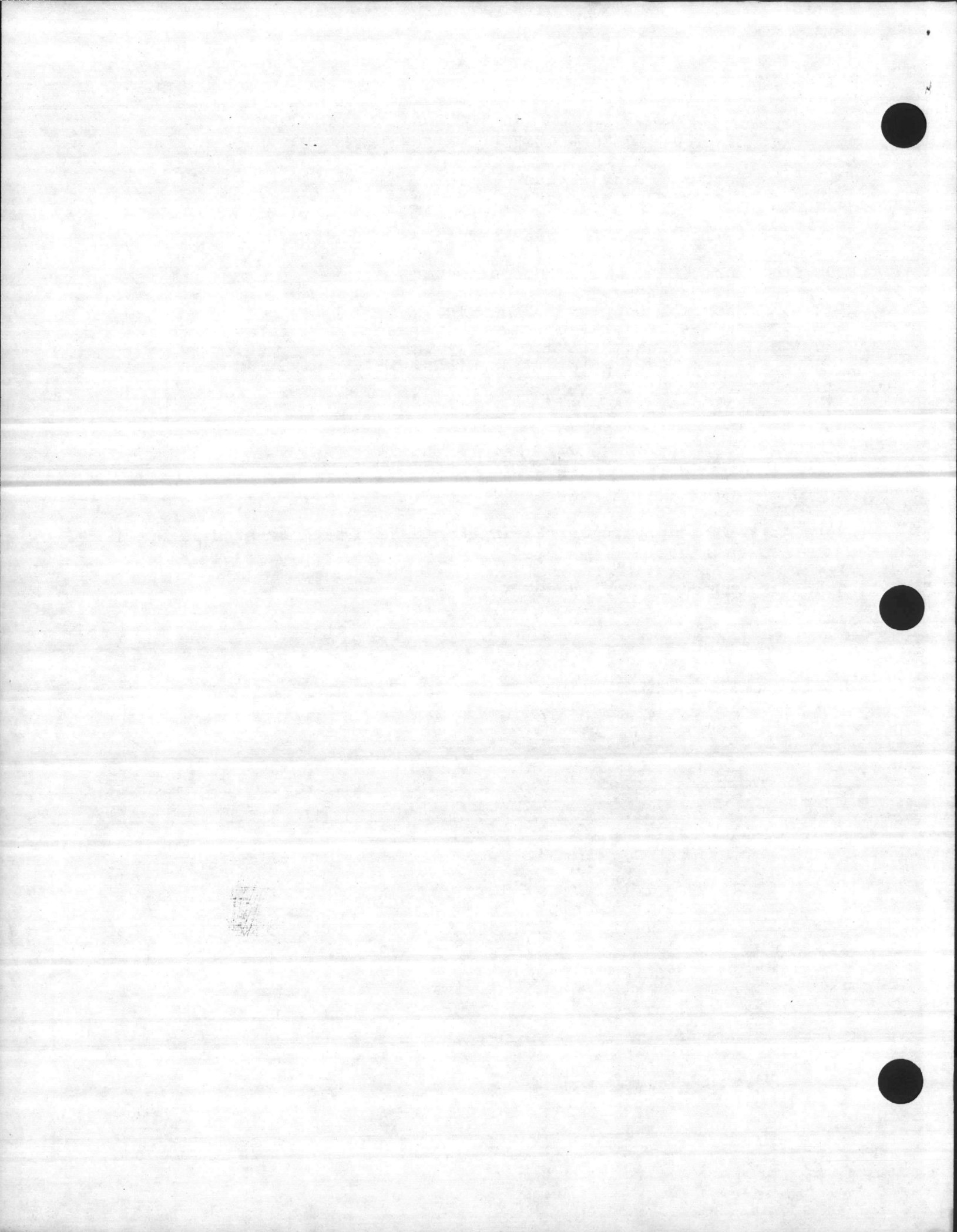
LIST OF ARTICLES REQUIRED FOR HURRICANE GEAR LOCKER

3	Brooms, Push, Rattan
3	Electric Lamps (Note 1)
12	Candles, Wax
6	Pails, Metal, 14 quarts
3	Tarpaulins, Canvas, Waterproof
200 ft.	Rope, Manila, 1½ inch diameter
1	Bail Sandbags
3	Shovels, Long or "D" Handle
24	Stakes, Steel (Note 1)
6	Water Cans, Military, 5 gallons
2	Rolls Masking Tape (for windows)
10	Cots, Folding
10	Matresses, Air
4	Books of Matches
10	Flashlights
20	Batteries (Note 2)
4	Foul Weather Gear Sets
4	Helmets

Note 1: Equipment is required in Hurricane Locker or readily available.

Note 2: Secured in Tool Room.





LOCAL AREA STORM/THUNDERSTORM CONDITIONS AND ACTIONS

1. Local Area Storms. This weather generally covers a small geographical area and is of short duration as compared with weather associated with tropical disturbances. The following fall into this category:

a. Tornadoes. A tornado is a rotary storm and one of the most violent types of storms known. The winds spiral upward around the axis of the tornado cloud. Wind speeds may be as high or higher than 250 miles per hour. The speed of the funnel cloud or storm itself over the ground is comparatively slow, 20 to 35 miles per hour; its life is short, averaging only a few hours.

b. Thunderstorms. Thunderstorms may develop within sight of the station and not have a destructive appearance until shortly before passing. They may be accompanied by extremely strong winds with gusts of 40 to 100 miles per hour, torrential rainfall and visibilities near zero. The storm's winds are usually of short duration and their direction may be radically different from the prevailing winds before the storm.

c. Storm Warnings. Winds of 48 miles per hour or greater.

d. Gale Warnings. Winds of 33 to 48 miles per hour.

e. Small Craft Warnings. Winds of 22 to 33 miles per hour.

f. Local Wind Warnings. Winds of sufficient force to warrant special precautions.

2. Weather Conditions Associated With Local Area Storms

a. Condition III. Thunderstorm/Gale/Storm/Tornado/Small Craft/Local Wind Warning...within a 100 mile radius of MCAS New River and expected to pass within 25 miles of MCAS New River within the next six (6) hours.

b. Condition II. Thunderstorm/Gale/Storm/Tornado/Small Craft/Local Wind Warning...within a 100 mile radius of MCAS New River and expected to pass within 25 miles of MCAS New River within the next two (2) hours.

c. Condition I. Thunderstorm/Gale/Storm/Tornado/Small Craft/Local Wind Warning...Imminent, to pass within five (5) miles of MCAS New River.

3. Action. Upon notification of a storm condition the Squadron Duty Officer will take appropriate action to safeguard personnel, equipment and facilities.

ENCLOSURE (2)

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a. When winds are forecasted to have a sustained velocity in excess of 60 knots for any weather condition, aircraft shall be moved inside designated hangars in accordance with reference (c). All outside areas shall be policed for loose gear and all equipment which cannot be properly secured to the deck shall be removed from the flight line and stowed.

b. When winds are forecasted for less than 60 knots, the following action will be taken for each weather condition, but are not limited to the following:

(1) Condition III

(a) Warn all personnel concerned with security and operations.

(b) Take precautionary measures which will permit the squadron or activity to be secured on short notice.

(2) Condition II

(a) Secure all aircraft not airborne. Aircraft will normally be recalled to the vicinity of the field.

(b) Secure or properly stow all loose gear. All nonessential equipment will be removed from the flight line and stowed.

(c) Recall all troops or maintenance personnel from the field or flight line.

(3) Condition I

(a) Take all precautions to safeguard personnel and equipment.

(b) Air Traffic Control will advise all flights within the New River area that Condition I is in effect.

c. During the designated Hurricane/Tropical Storm Season, all aircraft will be secured at the end of each day for winds up to 50 knots. All other equipment will be secured or removed from the line and stowed.

ENCLOSURE (2)



HURRICANE/TROPICAL STORM CONDITIONS AND ACTIONS

1. Hurricane/Tropical Storms. Weather of this type generally affects a wide area, has life of days rather than hours and is tropical in origin, The following fall into this category:

a. Hurricane. A hurricane is a cyclonic storm which travels as a unit, with movement over the ground of 10 to 20 miles per hour. The central area or eye is a region of relative calm, while the area around the eye could have winds in excess of 150 miles per hour, with associated winds 64 knots or greater.

b. Tropical Storm Warning. Storm with winds between 34 to 63 miles per hour. This storm could develop into a hurricane.

c. Tropical Depression. Developing storm with winds between 10 and 33 miles per hour, in connection with a tropical disturbance.

2. Weather Conditions Associated with Hurricane/Tropical Storms

a. Condition V. Secure from hurricane conditions. Threat has passed. Return to normal operations.

b. Condition IV. The path of the hurricane has been fairly well established and its trend tends to indicate a possible threat of destructive winds within 72 hours.

c. Condition III. The hurricane continues to advance and destructive winds are possible within 48 hours. Take preliminary precautions.

d. Condition II. Destructive winds are anticipated within 24 hours. Take precautions that will permit establishment of an appropriate state of readiness on short notice.

e. Condition I. Destructive winds are anticipated within 12 hours or less. Take appropriate actions to minimize damage.

3. Action. Hurricane/Tropical Storm Warnings for MCAS New River and tenant units will be set and announced by CG MCB, Camp Lejeune. If instructions are not received in time for adequate preparation, the Commanding Officer MCAS New River shall establish and announce the appropriate condition, based on the most accurate weather forecast available. Squadron department heads shall accomplish the following tasks of each condition of readiness and report to the Squadron Destructive Weather Officer or the Commanding Officer when completed.

a. Condition IV (72 hours)

(1) Review all pertinent orders and directives.

ENCLOSURE (3)

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(2) Check assigned spaces for broken windows, screens and doors and arrange for necessary repairs.

(3) Install tie-downs on temporary bulidings.

(4) Remove all loose gear, debris and portable equipment from outside areas.

(5) Regulate liberty as directed by the Commanding Officer.

(6) Prepare hurricane watch lists and submit to Group.

b. Condition III (48 hours)

(1) Be prepared to hangar aircraft when directed. Maintain sufficient aircraft handling personnel and equipment on duty to ensure safe and expeditious movement of aircraft.

(2) Inspect assigned areas for security precautions.

(3) Place a four-man work detail on call to the Group DWC.

(4) If required and upon approval of CG, 2d MAW, commence evacuation of aircraft in accordance with reference (d).

(5) Hangar or secure all vehicles not in use or on a standby status.

(6) Regulate liberty as directed by the Commanding Officer.

(7) The Squadron Destructive Weather Officer will report to the Group DWC that the required conditions of readiness for Hurricane Condition III been set.

c. Conditions II (24 hours)

(1) Hangar all aircraft unless directed otherwise by higher authority.

(2) Hangar or secure all vehicles not assigned in direct support of destructive weather precautions.

(3) Liberty is cancelled except for personnel living off station when their services are no longer required. At least two (2) duty sections will be on station at all times in the utility uniform.

ENCLOSURE (3)

(4) Secure all buildings and take full precautions immediately. Remove files, furniture and equipment from the vicinity of doors and windows to avoid damage by water spray or seepage. Fill all available water containers. Evacuate all buildings not designated as hurricane personnel shelters.

(5) All personnel not assigned storm watches will secure to their quarters.

(6) Establish hurricane command posts and watches. Maintain liaison with the DWC (phone 6101, 6063, 6967).

(7) The Squadron Hurricane Officer will report to the Group DWC that the required conditions of readiness for hurricane Condition II have been set.

(8) Move all classified files to secure areas.

(9) Report to DWC the number of dependents requiring use of evacuation centers if required.

d. Condition I

(1) Ensure that full precautions are in effect.

(2) Liberty conditions of Condition II apply.

(3) Protective helmets (steel) will be worn by working parties and all personnel outdoors.

(4) The Squadron Destructive Weather Officer will request that the Group Supply Officer deliver emergency rations to the barracks for the enlisted personnel and to the Ready Room for Watch Standers.

(5) The Squadron Destructive Weather Officer will report to the Group DWC that the required conditions of readiness for Hurricane Condition I have been set.

(6) Evacuation of dependents from quarters will be accomplished in accordance with reference (a).

e. Condition V (after storm passage)

(1) Report personnel casualties, equipment and material damage to the GROUP DWC (phone 6101/6063) as soon as possible.

(2) Secure hurricane equipment and resume normal operations.

ENCLOSURE (3)



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4. Destructive Weather Coordinator

(1) Check all personnel assignments and familiarity with assigned duties.

(2) Clear all hangar decks in anticipation of hanging aircraft.

(3) Report to MAG 26 Hangar Deck Officer (phone 6101/6063,6967) the total number and type aircraft for stowage.

(4) Be prepared to execute the following when ordered:

a. Break out hurricane equipment and position it where required. Inspect and prepare foul weather gear.

b. Report to the Group Hurricane Coordinator the requirements for rations, cots and bedding.

c. Provide personnel to combat fires.

d. Provide water for drinking and sanitary purposes in the vicinity of each occupied building.

e. Evacuate all buildings considered unsafe to withstand the hurricane wind pressure.

f. Provide emergency lighting in designated personnel shelters (barracks and office spaces).

(5) The Squadron Destructive Weather Officer will report to the Group DWC that the required conditions of readiness for Hurricane Condition IV have been set (phone 6106/6063).

ENCLOSURE (3)

DESTRUCTIVE WEATHER HANGAR FIRE FIGHTING TEAMS

1. The Destructive Weather Fire Fighting Teams will consist of three or more men from each squadron. Fire Fighting Team members will not man a post in excess of four (4) hours during a twelve (12) hour period.
2. The Destructive Weather Hangar Fire Fighting Teams will be activated upon hangaring of all aircraft due to inclement weather.
3. Team assignments in Hangar 504 are as follows:
  - a. Posts one through three are assigned to HMT 204.
  - b. Posts four and five are assigned to HMH 362.
  - c. Posts six and seven are assigned to HMH 461.
  - d. In the event one HMH is deployed, the remaining squadron will assume the empty posts.
  - e. The Squadron Duty Officer of HMT 204 will supervise the Fire Fighting Teams in Hangar 504.
4. The Destructive Weather Hangar Fire Fighting Team NCOIC will:
  - a. Be a Sergeant or above.
  - b. Establish a Command Post on the hangar deck where he may best supervise the areas of the hangar deck.
  - c. Supervise the operation of the Fire Fighting Team.
  - d. Be prepared to conduct all necessary fire fighting measures.
  - e. Ensure, by briefing, that each member of the Fire Fighting Team is thoroughly familiar with the operation of each piece of fire fighting equipment in the hangar deck areas and with the contents of the Group Fire Bill and the Group Destructive Weather Bill.
  - f. After activation of the Fire Fighting Team, report to the Group DWC (phone 6101/6063) when all stations are manned and ready.
  - g. Ensure by repeated checks that all posts and stations are maintaining proper vigilance.

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h. Establish a watch list for the posts assigned, rotating the roving patrol among members of the Fire Fighting Team.

5. The members of the roving patrol will:

a. Maintain a continuous walking patrol of their assigned posts remaining on the alert at all times for potential fire hazards such as gasoline fumes, fuel leaks, oil leaks, etc. and immediately report to the NCOIC who will take necessary action to eliminate the hazard.

b. In the event of fire, sound the alarm immediately and assist as directed or required in extinguishing the fire.

c. Remain on post until properly relieved.

6. The members assigned to the dry chemical stations will:

a. Remain continuously at their post until properly relieved.

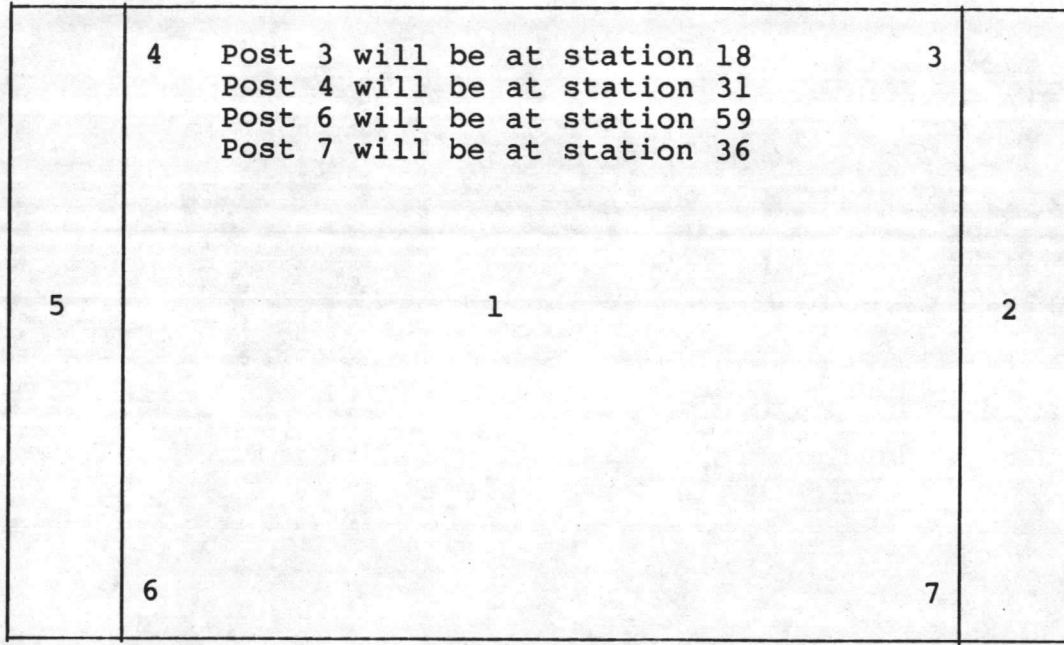
b. Remain on the alert at all times for potential fire hazards within sight of their posts.

c. In the event of fire, sound the alarm immediately and take steps as necessary or directed to extinguish the fire.



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DESTRUCTIVE WEATHER HANGAR FIRE FIGHTING TEAMS

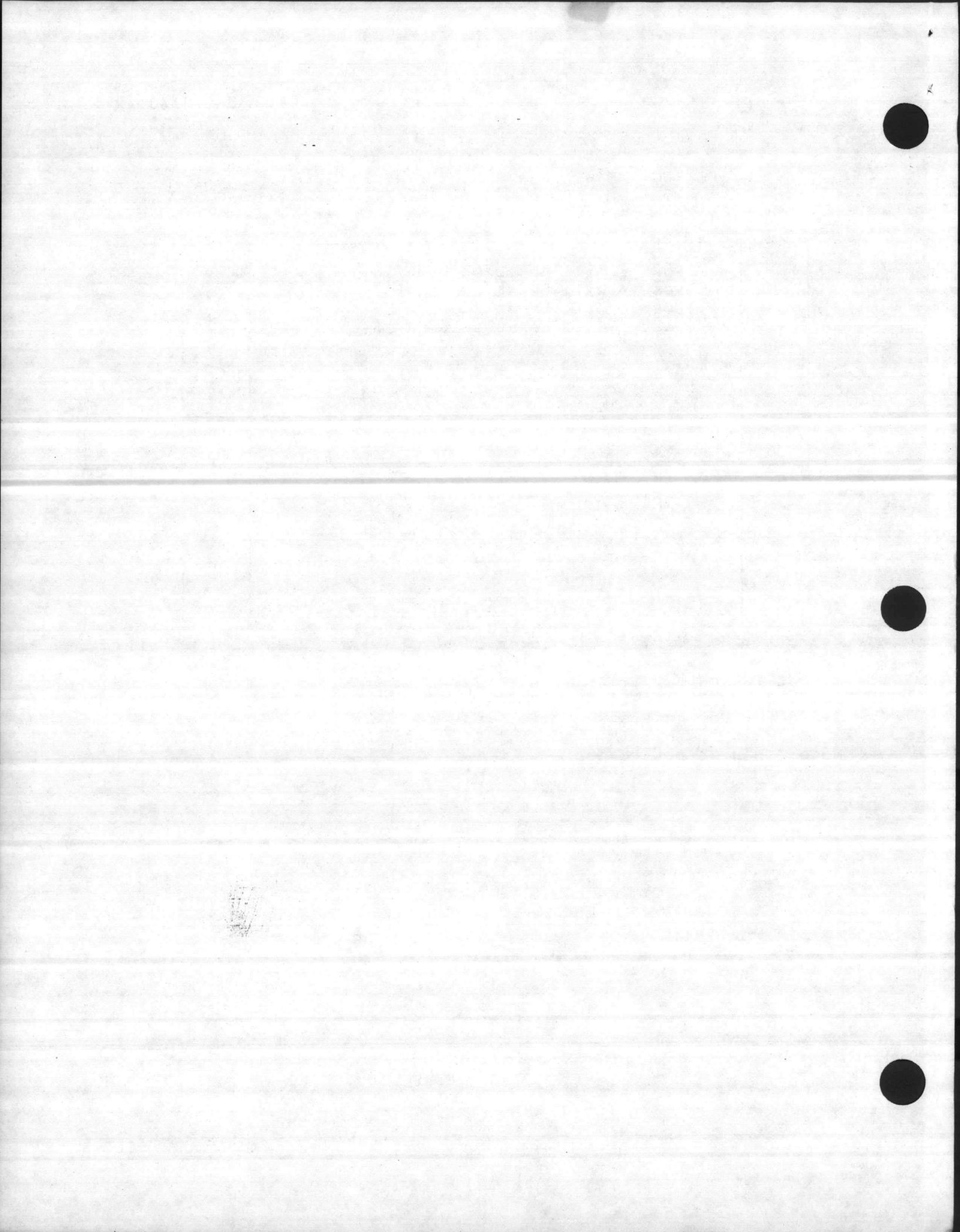


Hangar 504

- 1 - NCOIC Post
- 3, 4, 6 and 7 - Stationary Posts
- 2 and 5 - Roving Posts

Note: Hangar not to scale

ENCLOSURE (4)



AIRCRAFT HANGARING PLAN

1. Upon receiving the Group Commander's decision to hangar the aircraft the following action will be taken by the squadron:

a. Aircraft Maintenance Officer

(1) Upon receipt of notification of destructive weather conditions inform the Group AMO (phone 6346/6347) of the following:

- (a) Number of aircraft on hand.
- (b) Number of aircraft Not Mission Capable (NMC).
- (c) Number of aircraft without blade fold capability.
- (d) Number of aircraft NMC and without blade fold capability.

(2) When notified by the Group AMO to clear the hangar decks, all support equipment will be stowed in the shops or passageways. Items too large for shops or passageways will be moved outside until the aircraft are in position.

(3) At the time the hangar is cleared, all aircraft capable of blade fold shall be folded. Aircraft that are NMC and cannot fold blades shall have their blades removed. Mission capable aircraft that cannot fold will stand by for a determination as to whether they will be flown away. All CH-53's with tip tanks will have tip tank fins and CAD's removed.

(4) Upon notification to commence hangaring each squadron will provide three working parties to handle aircraft. Each working party will consist of qualified tractor driver and sufficient wing walkers in accordance with reference (e). A tow tractor and tow bar must be provided with every working party. The physical movement of the squadron's working parties, however, the Hangar Deck Officer and Aircraft Handling SNCO's will be responsible for the direction and coordination of movement since aircraft will not necessarily be hangared in spaces allotted to the squadron.

b. Aircraft Handling SNCO's

(1) Will ensure that the recall roster is updated at all times and that they are familiar with the contents of this instruction.



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(2) Will provide the AMO or Hangar Deck Officer with an alternate if on leave/TAD/etc.

(3) They will muster with the AMO for further instructions upon notification of destructive weather conditions.

(4) They will be responsible for the orderly, efficient stowage of aircraft into their assigned hangar in accordance with this instruction and any verbal instructions from the AMO.

## 2. Hangar Deck Plan

a. Prior to stowage of aircraft the hangar deck will be cleared as specified in the above paragraphs.

b. When the hangar deck is cleared and determination has been made to hangar aircraft, aircraft stowage will commence as follows:

### (1) Hangar 504

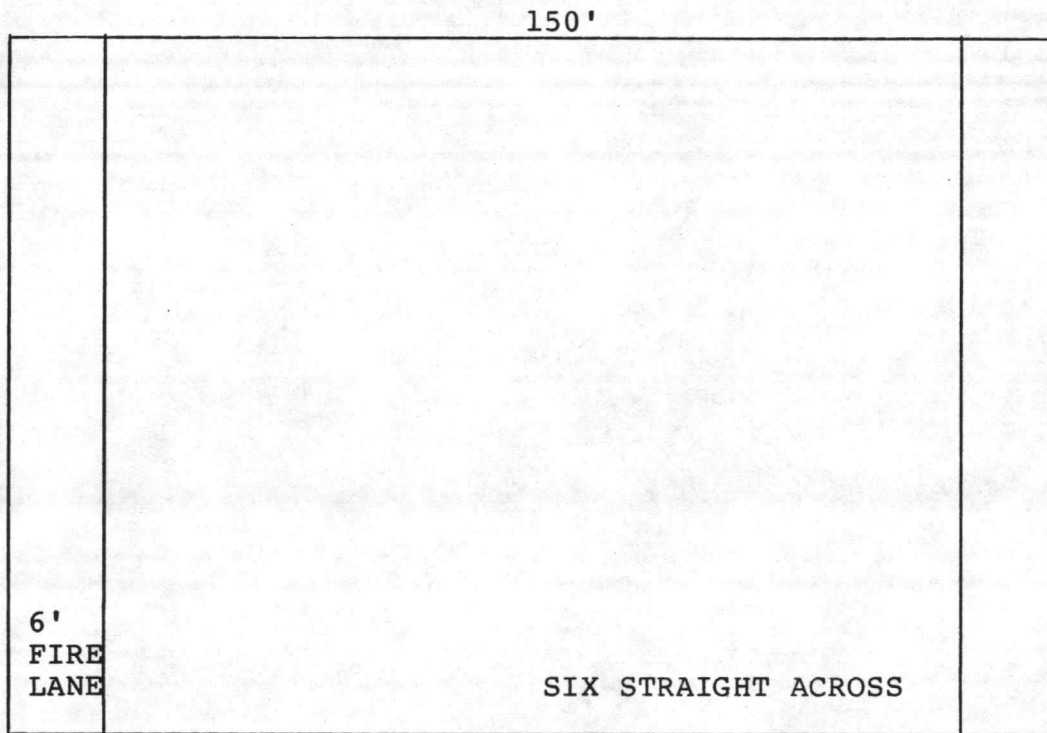
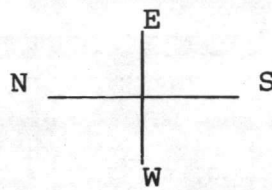
(a) Only CH-53 A's and D's will be stowed in Hangar 504.

(b) Aircraft will be positioned starting at the northwest corner of the hangar and running north to south across the width of the hangar deck.

(c) Six CH-53D's with tip tanks will fit across hangar, leaving a six foot fire lane on each side.

(d) Four rows of six CH-53's will be positioned in the hangar as shown on page 3, allowing 24 CH-53's to be stowed.

AIRCRAFT HANGARING PLAN



Hangar 504

Note: Hangar not to scale

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AIRCRAFT HANGARING PLAN

T/M/S	CONFIGURATION	LENGTH	WIDTH	NOTE
CH-53E		60' 6"	23' 11"	FUEL PROBE ADDS 10'
CH-53D	TIP TANKS	56' 6"	23' 11"	
CH-53A		56' 6"	15' 6"	
CH-46E		45' 8"	14' 7"	
UH-1N		57' 3"	9' 5"	
AH-1T		58'	10' 7"	