DEPUTY SECRETARY OF DEFENSE
1010 DEFENSE PENTAGON
WASHINGTON, DC 20301-1010

NOV - 7 2024

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS

SUBJECT: Department of Defense Unaccompanied Housing Improvement Plan

In September 2024, the Secretary of Defense signed the "Our Enduring Duty to America's Service Members and Their Families" memorandum outlining actions DoD will take in support of the Secretary's commitment to Take Care of Our People. Aligned with this commitment to our Service Members and their families, the Department will develop and implement a Housing Improvement Plan to address quality of life in military housing. The Department's immediate priority is to make quality of life enchancements in Government-owned unaccompanied housing (UH).

Nearly half a million Service members reside in UH. Taking care of these Service members requires investing in the places they call home by implementing actions that improve health and the livability of these facilities. Building on the momentum of the Secretary's September 2024 memo, the Resilient and Healthy Defense Communities strategy, and the work from the UH Tiger Team, each Military Department will take initial steps in Fiscal Year (FY) 2025 to improve our UH facilities in most need and continue to implement these standards in FY 2026 and throughout the future years defense program. These initial actions, outlined in Attachment 1, will achieve the habitability standards articulated in Attachment 2 as a bridging strategy for the new standards and conditions set forth by the UH Tiger Team's work.

We have a moral obligation to take care of the people who defend our nation. This initial step complements the work we are already doing to fully fund barracks maintenance and provide additional oversight and management of these facilities. Improving the quality of life for unaccompanied Service members is vital to recruiting and retaining a lethal, ready, and resilient force, and core to our commitment to take care of our people.

Kathleen H. Hicks

Attachments:
As stated

OSD008264-24/CMD011594-24

Attachment

1

Attachment 1
Implementation Actions

A. Comprehensive Plans for Improvements to UH Inventories: Each Military Service will develop detailed plans to improve its UH building maintenance and implement a long-term strategy to establish or augment the professional maintenance of its UH facilities. These plans will address targeted interventions to achieve the habitability parameters identified in Attachment 2.

   1. Such plans should address, at a minimum, (i) the use of civilian/military/contracted labor, training requirements, and UH privatization opportunities, and (ii) associated funding requirements by fiscal year and any anticipated funding challenges.

   2. Report your plan, by Military Service, to the Chief Housing Officer (CHO) by December 31, 2024.

B. Action Plan for Adverse UH Conditions on Select Installations: To address adverse conditions in UH buildings where Service members cannot be displaced, Army, Air Force, and Navy will each identify six installations — including at least one Space Force and Marine Corps installation among the respective Departments of Air Force and Navy installations — with the greatest need for improved UH building conditions. For each identified installation, develop and implement a plan that prioritizes three Government-owned UH buildings (hereinafter "prioritized UH buildings") with low condition ratings for the immediate and additional improvements specified below beginning in FY 2025. The three prioritized UH buildings should be selected to address the maximum number of Service members currently assigned to low condition rated buildings. Provide dedicated civilian or contract support for consistent and effective oversight of repairs, improvements, and on-going support to these prioritized UH buildings. Provide your improvement plan, by installation and UH building, to the CHO by December 31, 2024, and provide quarterly updates to the CHO until all planned actions are completed. Improvements will enable UH buildings to meet the specifications and standards described in Attachments 2 and 3, to the extent practicable, and shall occur on the following timelines:

   1. Initiate improvements to all living spaces in the prioritized UH buildings by December 31, 2024, and complete these improvements no later than March 30, 2025, to achieve the outcomes identified in Attachment 2. When more comprehensive interventions are unavailable or impractical, then at a minimum, the following improvements will be made according to the specifications outlined in Attachment 3:

      - Implementation of mechanical air cleaning systems.

      - Deployment of portable dehumidification systems, where conditions warrant.

      - Functional blackout window treatments.

- Provide green cleaning products for individual and common area use and post educational content on proper product usage and health benefits.

- Follow Environmental Protection Agency mold cleanup guidelines to immediately respond to reports of mold.

2. Initiate the following additional improvements to all living spaces in the prioritized UH buildings by July 30, 2025, and complete these improvements no later than March 30, 2026:

   - Retro-commissioning of the base building systems (i.e., heating, ventilation, and air conditioning (HVAC) systems; plumbing systems) where warranted; and balanced ventilation when practicable.

   - Paint and cosmetic repair of walls, floors, and ceilings.

   - Improvements to lighting to achieve both illumination and circadian rhythm alignment.

   - Functional peep holes to improve safety.

C. Action Plan to Address Deficiencies at UH facilities enumerated in 2023 GAO Report on Military Barracks: Complete all UH facility deficiencies explicitly mentioned, by installation, in the 2023 GAO report and complete all action by December 31, 2024. Report all completed actions, by installation and building, to the CHO by December 31, 2024.

Attachment

2

Attachment 2:
Parameters to Inspect

Indoor Air Quality Parameters

Parameter	Recommended Level	Testing Frequency
Particulate Matter 2.5	EPA: 35 μg/m^3 (based on 24 hrs)	Where environmental conditions warrant; As needed due to a complaint, IAW each Military Department's procedures
Particulate Matter 10	EPA: 150 μg/m^3 (based on 24 hrs)	Where environmental conditions warrant; As needed due to a complaint, IAW each Military Department's procedures
Carbon Monoxide	Every dwelling unit shall have at least one functioning carbon monoxide (CO) alarm on every habitable floor and outside each separate sleeping area, in the immediate vicinity of every bedroom. In the event a CO alarm sounds, the cause of the alarm condition shall be identified and corrected.	- Continuously - Prior to building acceptance post-construction and after major renovation before residents move in, IAW each Military Department's procedures
Carbon Dioxide	ASHRAE®: Indoor concentration: $\leq$ 700 ppm above outdoor air level (outdoor concentration levels are typically 300-500 ppm)	- As needed due to a complaint, IAW each Military Department's procedures
Radon	EPA: Action Level 4 pCi/L	- Prior to building acceptance post-construction and after major renovation before residents move in, IAW each Military Department's procedures

Formaldehyde	0.008 ppm (CDC ATSDR*). Follow 15. U.S.C. 2697(b)(2) (formaldehyde emission standard for building materials)	- Prior to building acceptance post-construction and after major renovation before residents move in, IAW each Military Department's procedures - As needed due to a complaint, IAW each Military Department's procedures
Total Volatile Organic Compounds (TVOC)	< 500 µg/m^3 or 0.5 mg/3	- Continuously - Prior to building acceptance post-construction and after major renovation before residents move in, IAW each Military Department's procedures - As needed due to a complaint, IAW each Military Department's procedures
Temperature Range	ASHRAE®: 68 to 75 degrees Fahrenheit (°F) (winter) and 73 to 79 °F (summer) for human comfort	- Continuously - Prior to building acceptance post-construction and after major renovation before residents move in, IAW each Military Department's procedures - As needed due to a complaint, IAW each Military Department's procedures
Relative Humidity	EPA: 30-50% (< 60% to minimize the potential for mold growth)	- Continuously - Prior to building acceptance post-construction and after major renovation before residents move in, IAW each Military Department's procedures - As needed due to a complaint, IAW each Military Department's procedures
Dew Point	ASHRAE®: < 55 °F	- As needed due to a complaint, IAW each Military Department's procedures

Ventilation Parameters -	- UFC's - ASHRAE 62.1 - CFM/person • Design to use ≥ MERV 11 filters • Use ≥ MERV 8 filters if system is designed for it • Bathroom exhaust fans connected with humidity sensor and/or automatic-connection with light switch o Fans will be vented to the outside o Fan noise will adhere to Well-Building noise guidelines	- Prior to building acceptance post-construction and after major renovation before residents move in, IAW each Military Department's procedures - As needed due to a complaint, IAW each Military Department's procedures
Noise	The maximum background noise level for bedrooms in a dwelling unit is 35 decibels (dB).	- Prior to building acceptance post-construction and after major renovation before residents move in, IAW each Military Department's procedures - As needed due to a complaint, IAW each Military Department's procedures

Government Entity References:
***CDC ATSDR: Centers for Disease Control & Prevention Agency for Toxic Substances Disease Registry**
Non-Government Entity References:
American National Standards Institute (ANSI) / American Society of Heating, Refrigerating and Air Conditioning (ASHRAE) Standards, https://www.ashrae.org/
American Conference of Governmental Industrial Hygienists (ACGIH) TLVs and BEIs, 2019
NOTE:
$\mu g/m^3$: micrograms/cubic meter
ppm/ppb: parts per million/parts per billion
pCi/L: picocuries per liter
MRL: Minimal Risk Level (Recommended limit from ATSDR)
STEL: Short Term Exposure Limit
TWA TLV: Time-Weighted Average Threshold Limit Value

Environmental Comfort Parameters

Water Temperature: Rises to the maximum allowed by applicable building code.

Water Quality Threshold: Complies with Safe Drinking Water Act and State Regulatory Requirements.

Lighting: Meets circadian regulation and can be controlled by the user.[1]

Thermal comfort: Individuals have access to adjust thermal comfort, including access to cooling fans.

[1] *WELL Residential Criteria*, UFC 3-530-1