



January 2021

# MILITARY HOUSING

## Actions Needed to Improve the Process for Setting Allowances for Servicemembers and Calculating Payments for Privatized Housing Projects

Accessible Version



A Century of Non-Partisan Fact-Based Work

## MILITARY HOUSING

### Actions Needed to Improve the Process for Setting Allowances for Servicemembers and Calculating Payments for Privatized Housing Projects

#### Why GAO Did This Study

DOD spent about \$20 billion in fiscal year 2019 on BAH—often one of the largest components of military pay. BAH is designed to cover a portion of servicemembers’ housing rental and utility costs in the private sector. Starting in 2015, DOD reduced BAH rates so that servicemembers share a portion of housing costs. The majority of servicemembers rely on the civilian housing market, while others rely on government housing or privatized housing projects. These projects rely on BAH as a key revenue source. In 2018-2020, Congress required DOD to make payments to these projects to help offset the BAH reduction.

Senate Report 116-48 included a provision for GAO to review DOD’s BAH process. This report evaluates, among other things, the extent to which (1) DOD established a process to determine BAH and (2) DOD’s congressionally mandated payments to projects lessened the effects of BAH reductions. To conduct this work, GAO reviewed relevant guidance and other documents, analyzed key data, and interviewed cognizant DOD officials.

#### What GAO Recommends

GAO is making a matter for congressional consideration to revise statutory language to ensure payments to privatized housing projects are consistent with BAH reductions. GAO is also making three recommendations, including that DOD review its sampling methodology to increase sample size. DOD concurred with two recommendations. DOD also partially concurred with one recommendation, which GAO continues to believe is valid, as discussed in the report.

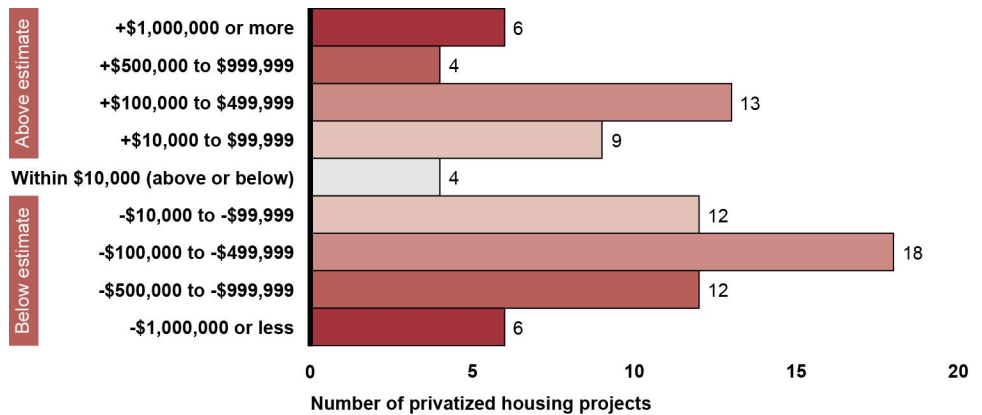
View [GAO-21-137](#). For more information, contact Elizabeth A. Field at (202) 512-2775 or [fielde1@gao.gov](mailto:fielde1@gao.gov).

#### What GAO Found

The Department of Defense (DOD) has established a process to determine basic allowance for housing (BAH) rates, which help cover the cost of suitable housing in the private sector for servicemembers. However, DOD has not always collected rental data on the minimum number of rental units needed to estimate the total housing cost for certain locations and housing types. GAO analysis found that 44 percent (788 of 1,806) of locations and housing types had fewer than the minimum sample-size target. Until DOD develops ways to increase its sample size, it will risk providing housing cost compensation that does not accurately represent the cost of suitable housing for servicemembers.

DOD followed congressional requirements for calculating BAH reductions and payments to privatized housing projects. However, while the 2019 congressionally mandated payments lessened the financial effects of BAH reductions, as intended, they did not do so commensurate with the amount of the BAH reduction. GAO found that privatized housing projects received payments that were either over or under the amount of revenue lost from reductions made to BAH, in some cases by \$1 million or more. (see figure)

**Number of Privatized Housing Projects and Amounts That Congressionally Mandated Payments Were Above or Below the Basic Allowance for Housing (BAH) Reduction Estimate (in 2019)**



Source: GAO analysis of Department of Defense data. | [GAO-21-137](#)

**Data table for Number of Privatized Housing Projects and Amounts That Congressionally Mandated Payments Were Above or Below the Basic Allowance for Housing (BAH) Reduction Estimate (in 2019)**

<b>Amount</b>	<b>Number of privatized housing projects</b>
+\$1,000,000 or more	6
+\$500,000 to \$999,999	4
+\$100,000 to \$499,999	13
+\$10,000 to \$99,999	9
Within \$10,000 (above or below)	4
-\$10,000 to -\$99,999	12
-\$100,000 to -\$499,999	18
-\$500,000 to -\$999,999	12
-\$1,000,000 or less	6

These distortions occurred because the legal requirements for calculating the BAH reduction and the congressionally mandated payments differ. Specifically, the law requires that the BAH reduction be a set dollar amount, regardless of location, while payments to privatized housing projects are required to differ by location. This required method of calculating the BAH reduction amounts is consistent with how prior reductions were calculated. According to DOD, BAH rates were reduced so that servicemembers share a portion of housing costs, and that reduction amount was the same for servicemembers with the same pay grade and dependency status, regardless of location. Until Congress takes steps to ensure congressionally mandated payment calculations are consistent with how BAH reductions are calculated, some privatized housing projects will continue to receive more or less than was intended.

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**Abbreviations**

BAH	Basic Allowance for Housing
DOD	Department of Defense
MHO	Military Housing Office
OSD	Office of the Secretary of Defense
OUSD(P&R)	Office of the Under Secretary of Defense for Personnel and Readiness

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January 25, 2021

Chairman  
Ranking Member  
Committee on Armed Services  
United States Senate

The Honorable Adam Smith  
Chairman  
The Honorable Mike Rogers  
Ranking Member  
Committee on Armed Services  
House of Representatives

The Department of Defense (DOD) spent about \$20 billion in fiscal year 2019 to pay the basic allowance for housing (BAH) to approximately 1 million eligible active-duty servicemembers who live in the United States.<sup>1</sup> BAH is often one of the largest components of cash compensation for military personnel, second only to basic pay.<sup>2</sup> BAH is designed to provide fair housing allowances to servicemembers to help cover a portion of the monthly costs of rent and utilities. By law, BAH rates are to be based on the cost of adequate housing for civilians with comparable income levels in the same areas.<sup>3</sup> In an effort to determine appropriate BAH rates, DOD collects data on rental properties that are considered suitable and adequate for servicemembers of the designated rank.

Prior to 2002, BAH was calculated to cover the estimated local average housing cost for a given pay grade and dependency status—made up of

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<sup>1</sup>DOD provides servicemembers with other types of housing allowances depending on varying circumstances, like the Overseas Housing Allowance, the BAH differential for servicemembers paying child support, and the partial BAH for unaccompanied servicemembers living in government-owned housing. This report addresses DOD's process to set the BAH for servicemembers with and without dependents living in the United States, which comprised more than 90 percent of annual housing allowances paid to military personnel in 2019.

<sup>2</sup>DOD provides active-duty personnel with a comprehensive compensation package that includes a mix of cash, such as basic pay; noncash benefits, such as health care; and deferred compensation, such as retirement pension. Servicemembers, including eligible reserve personnel serving on active duty, are eligible to receive the basic allowance to pay for housing and utilities as a cash payment every month while on active duty.

<sup>3</sup>37 U.S.C. § 403(b)(2).

rent, utilities, and renter's insurance—minus 15 percent of the estimated national average housing cost for that pay grade and dependency status. This approach resulted in servicemembers paying a portion of their housing costs out of pocket.<sup>4</sup> In 2002, DOD began reducing out-of-pocket housing costs for servicemembers. From 2005 through 2014, BAH was calculated to cover 100 percent of local average housing costs. In a subsequent effort to slow the growth of BAH, DOD in 2014 requested that Congress once again require servicemembers to pay a portion of their housing costs out-of-pocket and eliminate renter's insurance costs from the housing allowance. In response, the National Defense Authorization Acts for Fiscal Years 2015 and 2016 authorized DOD to use a phased approach to reduce BAH rates to cover approximately 95 percent of the estimated average housing costs of servicemembers.<sup>5</sup> Moreover, the renter's insurance cost was eliminated from the housing allowance starting in 2015.

BAH is paid to servicemembers regardless of whether they live in civilian or privatized housing. The vast majority of servicemembers—about two-thirds—rely on the civilian housing market, while the remaining servicemembers live in government housing or privatized housing.<sup>6</sup> Privatized housing is owned and managed by private-sector developers who work with the military departments to rebuild and renovate military

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<sup>4</sup>While DOD estimates BAH allowance based on local rental market costs, servicemembers may choose to apply their BAH toward purchasing a home or renting a housing unit that could be more or less than their BAH. Servicemembers are permitted to keep any portion of their BAH not spent on housing and conversely will have to use other funds to pay housing costs that exceed their BAH.

<sup>5</sup>The National Defense Authorization Acts for Fiscal Years 2015 and 2016 authorized DOD to reduce each local BAH amount by up to a specified percent of the national average BAH amount for the same rank and dependency status in a phased approach (1 percent in 2015, 2 percent in 2016, 3 percent in 2017, 4 percent in 2018 and 5 percent in 2019 and beyond). DOD set its annual budgets to reflect the full amount of the authorized reductions.

<sup>6</sup>In 1996, to enable DOD to privatize its housing, Congress provided the department with a variety of authorities to obtain private-sector financing and management to repair, renovate, construct, and operate military housing. See the National Defense Authorization Act for Fiscal Year 1996, Pub. L. No. 104-106, §§ 2801-2802 (1996), *codified as amended* at 10 U.S.C. §§ 2871-2894a.



housing.<sup>7</sup> These developers operate 99 percent of domestic military family housing, as well as a limited amount of housing for unaccompanied military personnel. The developers rely on servicemembers' BAH payments as a key revenue source for these privatized housing projects. According to DOD officials, servicemembers who live in privatized housing are not expected to share the housing cost and, therefore, do not pay more than the BAH rate.

Since 1998, we have conducted various reviews related to BAH and military housing privatization. In 2011, we reported that DOD uses a data-intensive process to set housing allowance rates, but that enhancements related to quality of data as well as cost estimating for budget estimates could improve the process.<sup>8</sup> We recommended, among other things, that DOD assess the benefits and drawbacks of revising its definition of available housing for data collection purposes, and that it develop a communications process for installations to share information on housing tools. DOD generally concurred with our recommendations and took the necessary steps to implement them. In 2018, we reviewed the financial condition of DOD's privatized housing projects and found that DOD should take steps to improve monitoring, reporting, and risk assessment.<sup>9</sup> We recommended, among other things, that DOD fully assess the effects of reductions in BAH on the projects, define tolerances for project risks, and revise guidance to ensure that financial information on privatized housing projects are consistent and comparable. DOD concurred with our recommendations and has been taking steps to address them. For example, in August 2018, DOD issued revised instructions to the military departments for data submissions for subsequent congressional reports to clarify how debt coverage ratios should be calculated and to clarify the instructions regarding reporting periods. A list of related products is included at the end of this report.

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<sup>7</sup>Privatized housing projects are run by a private-sector partner. For the purposes of this report, we refer to this partner as a developer or developers. Developers are alternately referred to by the military departments as project owners, private partners, or managing members. Developers may also be referred to as a lessor of a privatized housing project in their capacity as landlord to the servicemembers who rent the privatized housing.

<sup>8</sup>GAO, *Military Housing: Enhancements Needed to Housing Allowance Process and Information Sharing Among Services*, [GAO-11-462](#) (Washington, D.C.: May 16, 2011).

<sup>9</sup>GAO, *Military Housing Privatization: DOD Should Take Steps to Improve Monitoring, Reporting, and Risk Assessment*, [GAO-18-218](#) (Washington, D.C.: Mar. 13, 2018).

Senate Report No. 116-48, which accompanied a bill for the National Defense Authorization Act for Fiscal Year 2020, included a provision for us to review DOD's process for calculating BAH. This report evaluates the extent to which (1) DOD established and implemented a process using complete and current housing information to determine BAH rates; (2) DOD monitors the appropriateness of BAH rates; and (3) DOD's congressionally mandated payments to privatized housing projects lessened the effects of BAH rate reductions for those projects.<sup>10</sup> In appendix I, we also describe external alternative methods for collecting housing data.

To address all three reporting objectives, we reviewed Office of the Secretary of Defense (OSD) policies and guidance for administration of the BAH program and interviewed officials from DOD's Military Compensation Policy directorate within the Office of the Under Secretary of Defense for Personnel and Readiness (OUSDP&R)); the Deputy Assistant Secretary of Defense for Facilities Management within the Office of the Assistant Secretary of Defense for Sustainment; the BAH contractor; and BAH and housing representatives from each of the military services, including Military Housing Office (MHO) representatives from six military housing areas, about their roles and responsibilities in the BAH data collection and rate-setting process.<sup>11</sup>

In addition, for our first objective, we reviewed DOD's BAH guidance and outputs of the BAH process, including data collected to determine the total housing costs and documentation showing OSD's calculations. We compared DOD's implementation of the BAH process to its program goals. We also determined that the information and communication component of internal control was significant to this objective, along with the underlying principles that management should use quality information and communicate the necessary quality information to achieve

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<sup>10</sup>In the National Defense Authorization Acts for fiscal years 2018, 2019, and 2020, Congress required DOD to make payments to privatized housing projects for a specified percentage based on the local BAH rate.

<sup>11</sup>We judgmentally selected six military housing areas using the following criteria to guide our selection: (1) each of five services (Army, Navy, Marine Corps, Air Force, and Coast Guard) where the service is a primary MHO representative for one or more locations; (2) each of the four U.S. Census Bureau geographic regions (West, South, Midwest, and Northeast); and (3) small, midsize, and large populations of servicemembers receiving BAH within the military housing area. We selected Norfolk/Portsmouth, VA; Honolulu County, HI; Dover Air Force Base/Rehoboth, DE; Carlisle Barracks, PA; Sault Sainte Marie, MI; and Bridgeport, CA.

objectives.<sup>12</sup> Where appropriate, we compared DOD's BAH process to determine the extent to which these underlying principles were used.<sup>13</sup> In addition, we compared DOD's BAH sampling methods to the Office of Management and Budget standards for statistical surveys and the Report of the American Association for Public Opinion Research task force on non-probability sampling.<sup>14</sup>

For our second objective, we reviewed and analyzed applicable DOD policies and studies to determine the process OUSD(P&R) has in place to monitor BAH rates. We also determined that the information and communication and monitoring components of internal control were significant to this objective, along with the underlying principles that management should use quality information, establish and operate monitoring activities, and remediate identified deficiencies on a timely basis.<sup>15</sup> Where appropriate, we assessed DOD's process to monitor BAH to determine the extent to which these underlying principles were used on a consistent basis. We met with officials from OUSD(P&R), the BAH contractor, and the services to discuss the processes in place to monitor the program and the extent to which monitoring activities are conducted consistently.

For our third objective, we reviewed the extent to which DOD reduced BAH from calendar years 2015 through 2020.<sup>16</sup> We chose calendar year 2015 because it was the first year the cost sharing was established and calendar year 2020 because it was the last year of available data. To compare the extent to which the congressionally mandated payments to privatized housing projects lessened the effects of BAH rate reductions for those projects, we chose calendar year 2019 because that was the last full year of payments. To estimate the BAH reduction amount for

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<sup>12</sup>GAO, *Standards for Internal Control in the Federal Government*, [GAO-14-704G](#) (Washington, D.C.: September 2014). Internal control is a process effected by an entity's oversight body, management, and other personnel that provides reasonable assurance that the objectives of an entity will be achieved.

<sup>13</sup>[GAO-14-704G](#).

<sup>14</sup>Office of Management and Budget Standards and Guidelines for Statistical Surveys (September 2006) and Summary Report of the AAPOR Task Force on Non-probability Sampling (Journal of Survey Statistics and Methodology (2013) 1, 90–143).

<sup>15</sup>[GAO-14-704G](#).

<sup>16</sup>DOD begins its process to develop BAH rates in the year prior to the calendar year the BAH rates take effect. Thus, calendar year 2020 BAH rates were determined in calendar year 2019.

calendar year 2019, using the congressionally mandated payment data, we first identified the number of servicemembers by pay grade and dependent status in which the privatized housing project received a payment. Using this information, we determined the estimated BAH reduction by multiplying the prorated number of servicemembers for calendar year 2019 by the national average BAH reduction amounts. Based on responses to data reliability questionnaires, including specific questions about our analysis of the data, from OSD and the military services and follow-up interviews as appropriate, as well as our examination of the data, we determined that the data were sufficiently reliable for our purposes to determine the total congressionally mandated payments and estimate the BAH reduction for calendar year 2019.

To describe external alternative methods for collecting rental housing data, we reviewed three publicly available government data sources that collect rental housing data: the American Community Survey, the American Housing Survey, and the Consumer Expenditure Quarterly Interview Survey. We also met with officials from the U.S. Census Bureau to better understand each of these surveys, including their purpose, data collected, data collection period, and sample size.

We conducted this performance audit from November 2019 to January 2021 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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## Background

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### DOD Policy for Housing Allowance and Roles and Responsibilities

DOD's policy is to ensure that eligible active-duty personnel and their families have access to affordable, quality housing and services consistent with grade and dependent status, and that the housing should generally reflect contemporary community living standards.<sup>17</sup> In its policy,

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<sup>17</sup>DOD Manual 4165.63, *DOD Housing Management* (Oct. 28, 2010) (incorporating change 2, Aug. 31, 2018).

DOD acknowledges that it relies on the local private sector housing market as the primary source of housing for servicemembers, whether unaccompanied or accompanied by family. According to DOD data, about two-third of active-duty servicemembers live in local private sector housing and about a third of active-duty servicemembers live in DOD-owned housing or privatized housing projects.

The Military Compensation Policy directorate within the Office of the Deputy Assistant Secretary of Defense for Military Personnel Policy, which supports the Under Secretary of Defense for Personnel and Readiness, develops policy for the housing allowance program and provides associated oversight. The directorate annually sets the housing allowance rates for all personnel who receive the allowance. To do so, it uses a year-long, multistep process that relies on hundreds of officials from installations' military housing offices and a contractor to collect housing cost data for 301 military housing areas throughout the United States.<sup>18</sup>

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## Trends in BAH Costs and Rates

Based on DOD budget requests for fiscal year 2014 and fiscal year 2019, the department's costs for BAH for active-duty personnel decreased by 4 percent—or \$1 billion—to \$20 billion, adjusting for inflation.<sup>19</sup> The decrease in obligations is in part due to the following factors: (1) a decrease in active-duty servicemembers receiving BAH during this time frame, from about 963,000 to about 905,000, (2) the elimination of renter's insurance in DOD's BAH payment calculation starting in 2015,

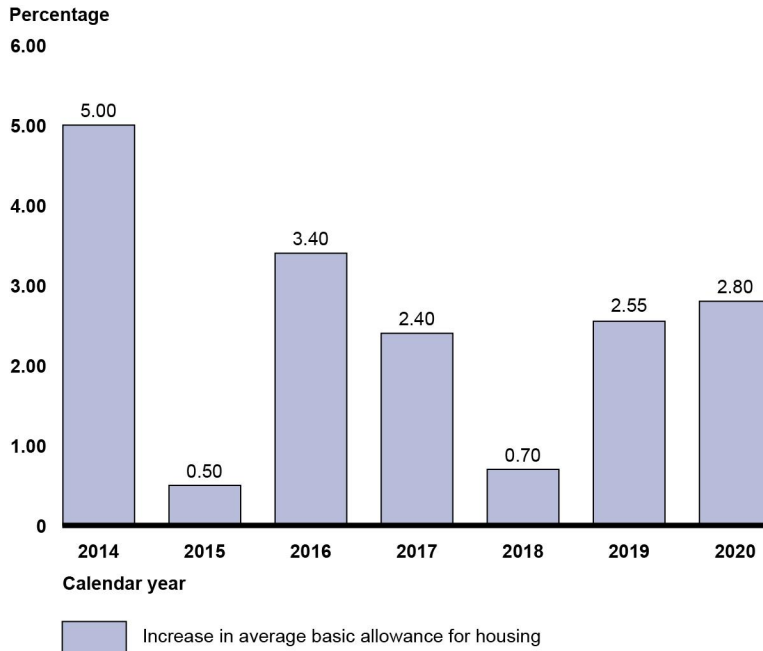
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<sup>18</sup>In 2020, there were 301 Military Housing Areas in the United States, including Alaska and Hawaii. Military housing areas represent a geographic area in which servicemembers are assumed to look for community housing and are defined by a collection of zip codes. In addition to the military housing areas, there are 39 county cost groups. Although half the U.S. counties are in these county cost groups, these counties contain less than 2 percent of military members eligible to receive BAH, according to DOD.

<sup>19</sup>These total costs were derived from actual costs recorded in DOD's annual budget requests for fiscal years 2014 and 2019. Total costs of BAH in nominal terms (not adjusted for inflation) was \$18.4 billion in fiscal year 2014 and \$19.3 billion in fiscal year 2019. To convert obligations to constant dollars, we used the series of military personnel deflators for fiscal years 2014 and 2019 listed in DOD's National Defense Budget Estimates for fiscal year 2020, published by the Office of the Under Secretary of Defense (Comptroller). We chose 2014 to compare BAH rates prior to the first year before the implementation of BAH reduction as authorized in the National Defense Authorization Acts for 2015 and 2016 to current BAH rates. We chose fiscal year 2019 because 2019 is the most current data available for actual BAH obligations.

and (3) the implementation of the National Defense Authorization Acts' authorization to reduce each local BAH rate by up to a specified percent of the national average BAH rate.<sup>20</sup> From 2014 through 2020, the national average BAH rate across all locations, pay grades, and dependency status increased each year, according to DOD (see fig. 1).

**Figure 1: DOD Has Reported Annual Percentage Increases in the Average Basic Allowance for Housing**



Source: Department of Defense. | GAO-21-137

<sup>20</sup>The National Defense Authorization Acts for Fiscal Years 2015 and 2016 authorized DOD to reinstate an out-of-pocket cost-sharing element to reduce each servicemember's local BAH amount by up to a specified percent of the national average BAH amount in a phased-in approach (1 percent in 2015, increased by 1 percent annually to a maximum 5 percent in 2019 and beyond). DOD implemented the maximum percentage allowed.

**Data table for Figure 1: DOD Has Reported Annual Percentage Increases in the Average Basic Allowance for Housing**

Calendar year	Percentage
2014	5
2015	0.5
2016	3.4
2017	2.4
2018	0.7
2019	2.55
2020	2.8

While BAH rates as a whole have, on average, risen each year since 2014, individual rates can increase or decrease for a given pay grade, dependency status, and geographic location. For example, BAH for an E6 with dependents located in the Johnstown, Pennsylvania, area decreased by 16 percent from 2014 to 2019, while BAH for an enlisted servicemember with dependents and a pay grade of E6 located in the San Francisco, California, area increased by 28 percent in BAH over the same timeframe, after adjusting for inflation.<sup>21</sup> The change in BAH rates reflects the changes in the local rental housing market conditions, according to DOD officials. If BAH rates in an area increase, then a servicemember stationed in that area will receive the increased rate. However, if BAH rates in an area decrease from 1 year to the next, the servicemember retains the higher housing allowance rate, known as “rate protection,” as long as location and dependency status remain unchanged and pay grade does not decrease. This rule protects servicemembers already committed to a long-term commitment, such as a lease or contract.<sup>22</sup>

<sup>21</sup>We used the Consumer Price Index (CPI-U) to calculate the adjustment to 2019 dollars. The BAH rate for an enlisted servicemember with a pay grade of E6 with a dependent located in the Johnstown, PA, area in 2014 was \$942 or \$1,017 in 2019 dollars and in 2019 was \$858. BAH rate for an E6 with a dependent located in the San Francisco, CA, area in 2014 was \$3,657 or \$3,950 in 2019 dollars and in 2019 was \$5,052.

<sup>22</sup>Per DOD guidance, rate protection continues unless the status of a servicemember changes due to (1) permanent change of station; (2) reduction in pay grade; or (3) change in dependent status.

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## BAH for Civilian and Privatized Housing

Servicemembers sign a lease and pay their rent—whether living in civilian or privatized housing—with their monthly BAH.<sup>23</sup> Unlike landlords in the civilian housing market, DOD’s agreements with privatized housing developers prohibit them from charging more for rent than the BAH rate. Therefore, if a servicemember lives in privatized housing, the rent is typically equivalent to the housing allowance. Those servicemembers who choose not to live in privatized housing may apply their allowance toward purchasing a home or renting a housing unit that is more or less than their housing allowance. They are permitted to keep any portion of their housing allowance not spent on housing and, conversely, have to use other funds to pay housing costs that exceed their allowance.

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## The Military Housing Privatization Initiative and Privatized Housing Roles and Responsibilities

In 1996, Congress enacted the Military Housing Privatization Initiative in response to DOD concerns about the effect of inadequate and poor quality housing on servicemembers and their families.<sup>24</sup> The Military Housing Privatization Initiative provided DOD with various authorities to obtain private-sector financing and management to repair, renovate, construct, and operate military housing. Since then, private-sector developers and property management companies have assumed primary responsibility for military family housing, hereafter referred to as privatized housing, in the United States.<sup>25</sup> Each privatized housing project is a separate and distinct entity governed by a series of legal agreements that are specific to that project. While each project is distinct, there are some common elements in how projects invest and utilize funds.

Every project takes in revenue, which consists mostly of rent payment received from servicemembers. Therefore, privatized housing developers

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<sup>23</sup>Servicemembers assigned to privatized housing may be required to make their rent payments in the form of an allotment. In these cases, BAH is paid directly to the privatized project developer. Otherwise, BAH is paid directly to servicemembers.

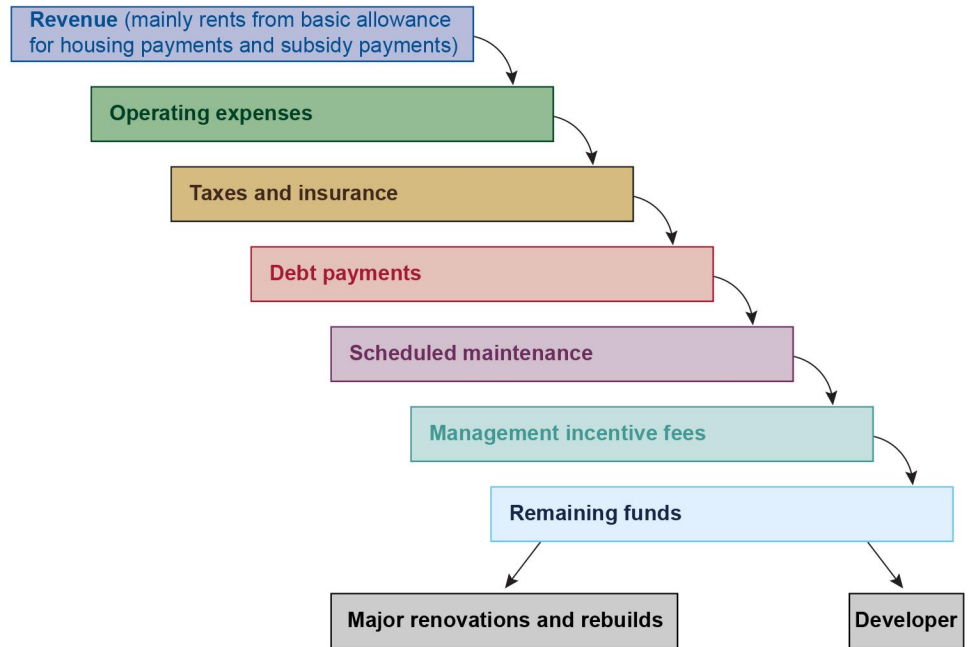
<sup>24</sup>DOD requires certain key personnel and junior unaccompanied personnel, to live on an installation. As noted, about one-third of active duty servicemembers live on installations—and that includes those required and those who elect to do so.

<sup>25</sup>Almost all DOD family housing in the United States has been privatized; however, DOD is still responsible for overseas family housing and most housing for unaccompanied military personnel in the United States.



rely on servicemembers' BAH payments as a key revenue source. Projects use their rental revenue to pay for operating expenses, including administrative costs, day-to-day maintenance, and utilities, among other things. After that, projects generally allocate funds for taxes and insurance, followed by debt payments. Figure 2 shows a typical funding structure for a privatized housing project.

**Figure 2: Typical Funding Structure for a Privatized Housing Project**



Source: GAO analysis of Department of Defense information. | GAO-21-137

**Text of Figure 2: Typical Funding Structure for a Privatized Housing Project**

- 1) Revenue (mainly rents from basic allowance for housing payments and subsidy payments)
- 2) Operating expenses
- 3) Taxes and Insurance
- 4) Debt payments
- 5) Scheduled maintenance
- 6) Management incentive fees

7) Remaining funds

- a) Major renovations and rebuilds
- b) developer

In the typical privatized housing project depicted in figure 2, once debt payments are made, funds are allocated to accounts that fund scheduled maintenance.<sup>26</sup> These accounts exist to fund repair and replacement of items such as roofs, heating and cooling systems, and infrastructure. After that, funds are allocated to a series of management incentive fees, such as the property management fee. Finally, the project divides these remaining funds according to a fixed percentage between accounts that fund major renovations and rebuilds on the one hand and go to the developer on the other hand. The percentages may vary, but the majority of funds go toward the accounts funding major renovations and rebuilds.

The Deputy Assistant Secretary of Defense for Facilities Management, under the authority, direction, and control of the Assistant Secretary of Defense for Sustainment, is responsible for matters related to the military housing privatization Initiative and is the program manager for all DOD housing—DOD-owned, DOD-leased, or privatized. In this capacity, the Deputy Assistant Secretary is to provide programmatic oversight, guidance, and general procedures related to DOD’s housing programs, to include monitoring necessary to ensure that the military departments provide proper oversight of their housing projects under the Military Housing Privatization Initiative, review and coordinate required approvals of new projects or project restructures, and submit required reports to Congress.<sup>27</sup> The military departments provide oversight of Military Housing Privatization Initiative projects to ensure the private developers provide safe, quality housing while protecting long-term project viability. Projects and housing units under the Military Housing Privatization

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<sup>26</sup>If a project has received a loan from the government—as is the case with many Air Force projects and one Navy and one Marine Corps project—the debt payments are prioritized such that the senior private-sector debt payment is made and then the junior or subordinated direct loan payment is made. This step is not depicted in figure 2 as Army, Navy, and Marine Corps projects generally do not include government loans.

<sup>27</sup>Section 2884(c) of Title 10 of the United States Code requires the Secretary of Defense to report semiannually an evaluation of the status of oversight and accountability measures for military housing privatization projects, including, among other things, information about financial health and performance and the backlog of maintenance and repair. According to DOD officials, although the statute requires semiannual reporting, due to the effort involved, DOD aims to produce one report for each fiscal year rather than two.

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Initiative are owned, managed, developed, maintained and recapitalized under a ground lease and associated legal agreements with the military department.

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## DOD Has Established and Implemented a Process to Determine BAH Rates, but Has Not Consistently Met Minimum Sample-Size Targets, Used Current Data, or Fully Documented Its Process

DOD has developed and implemented a process for setting BAH that generally meets its BAH program goal of providing housing allowances to help servicemembers cover the costs of suitable housing in the private sector. However, DOD has not consistently collected the data on available rental units for certain locations and housing types needed to meet its sample size targets and has not always relied on current-year rental housing data. Moreover, DOD has not fully documented this process in guidance for stakeholders.

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## DOD Has Established and Generally Followed Its Annual Process to Collect BAH Data and Set Rates for Servicemembers' Housing Allowance

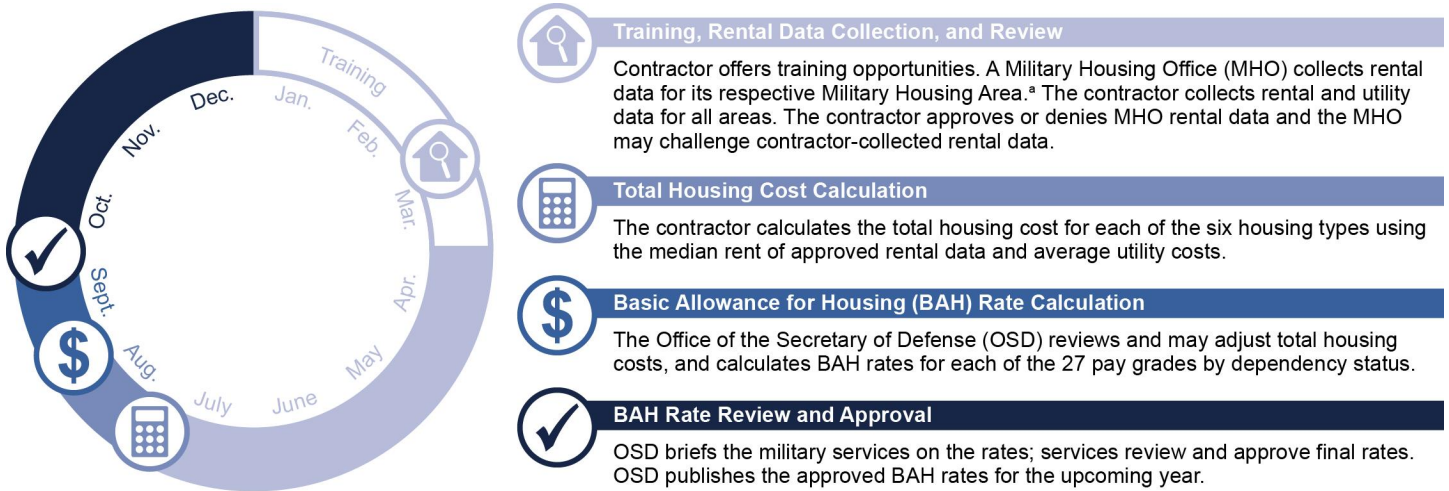
We found that DOD has developed and to a great extent has followed its year-long, data-intensive process that produces BAH rates for 301 military housing areas.<sup>28</sup> By law, housing allowance rates are to be based on the cost of adequate housing for civilians with comparable income levels in the same areas.<sup>29</sup> To do this, DOD relies on an established methodology to estimate the cost of housing in the private sector. Figure 3 describes the key steps in DOD's year-long data collection and rate-setting process.

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<sup>28</sup>There are 301 Military Housing Areas in the United States, including Alaska and Hawaii. Military housing areas represent a geographic area in which servicemembers are assumed to look for community housing and are defined by a collection of zip codes.

<sup>29</sup>See 37 U.S.C. § 403(b)(2).

**Figure 3: DOD’s Basic Allowance for Housing (BAH) Data Collection and Rate-Setting Process**



Source: GAO analysis of Department of Defense information. | GAO-21-137

**Text of Figure 3: DOD’s Basic Allowance for Housing (BAH) Data Collection and Rate-Setting Process**

1. **Training, Rental Data Collection, and Review**  
 Contractor offers training opportunities. A Military Housing Office (MHO) collects rental data for its respective Military Housing Area.<sup>a</sup> The contractor collects rental and utility data for all areas. The contractor approves or denies MHO rental data and the MHO may challenge contractor-collected rental data.
2. **Total Housing Cost Calculation**  
 The contractor calculates the total housing cost for each of the six housing types using the median rent of approved rental data and average utility costs.
3. **Basic Allowance for Housing (BAH) Rate Calculation**  
 The Office of the Secretary of Defense (OSD) reviews and may adjust total housing costs, and calculates BAH rates for each of the 27 pay grades by dependency status.
4. **BAH Rate Review and Approval**  
 OSD briefs the military services on the rates; services review and approve final rates. OSD publishes the approved BAH rates for the upcoming year.

<sup>a</sup>There are 301 Military Housing Areas in the United States, including Alaska and Hawaii. Military housing areas represent a geographic area in which servicemembers are assumed to look for community housing and are defined by a collection of zip codes. Most MHOs start collecting rental data in March, but 40 military housing areas are designated to start early so they can begin collecting rental data in February.

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### Training, Rental Data Collection, and Review

The BAH contractor offers training to MHOs on the BAH process starting in January. The goal of the training, according to DOD officials, is to help standardize the BAH data collection process and educate the MHOs about what type of housing is suitable and adequate. Based on documentation provided by DOD of their training materials, MHOs are trained to collect suitable, appropriate, and available housing data that capture the median rent for the area.

The rental data collection phase begins in March for the vast majority of the MHOs.<sup>30</sup> During this phase, which ends in July, rental data are collected and entered into an online data repository, called the MHO Portal, by (1) staff at MHOs located throughout the United States who collect data for their local area and (2) the BAH contractor who collects data for all military housing areas. Based on our review of data collected for 2020 rates, of the over 75,000 rental units used to set 2020 BAH rates, the MHOs collected 26 percent, the BAH contractor collected 19 percent, and a combination of MHOs and the BAH contractor collected the remaining 55 percent. To collect the necessary data, MHOs and the contractor identify and select rentals from a variety of sources, including local newspaper advertisements, real estate rental listings, and management companies.<sup>31</sup> MHOs have additional sources, such as word of mouth and local onsite advertising.

To determine the types of rental units for which rental data are to be collected, MHO staff and the BAH contractor use judgmental sampling to select rental units that are: (1) adequate and located in approved market areas, (2) available, and (3) reflects various “anchor points”—or types of housing.<sup>32</sup>

- **Adequate and located in approved market areas.** As noted earlier, the law stipulates that servicemembers’ BAH rates must be based on the costs of adequate housing for civilians with comparable income

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<sup>30</sup>Most military housing areas’ data collection starts in March. However, 40 military housing areas that traditionally have a seasonal, remote, or an otherwise difficult rental housing market have been designated for an early data collection start date of February.

<sup>31</sup>Rental data are collected for each military housing area in the United States representing areas in which servicemembers are assumed to look for community housing. These housing areas do not include government housing.

<sup>32</sup>Judgmental sampling, a non-probability sampling approach based on professional knowledge, is used to select sample units that meet these criteria.

levels in the same area. According to guidance, adequate housing is both suitable (i.e., meets or exceeds minimum standards) and appropriate (i.e., is not unduly extravagant relative to the surrounding area). For the purpose of deciding which rental properties are adequate for BAH purposes, DOD also excludes properties deemed inadequate or unsuitable. Criteria for determining rental units are inadequate, and therefore excluded from the approved samples, can be based on subjective criteria (i.e., the rental unit has deferred maintenance) or objective criteria (i.e., the rental unit is a mobile home).<sup>33</sup> According to DOD guidance, MHOs' local expertise is critical to ensuring that the sample units included in the data collection represent adequate housing for servicemembers.

Moreover, MHOs may identify and exclude areas with substandard housing, including high crime areas. These areas within the military housing area are defined by census tracts.<sup>34</sup> Once approved by Military Compensation Policy and BAH service representatives, MHOs can exclude census tracts from rental data collection if any of the underlying reasons for those exclusions render housing in those tracts predominately unsuitable for servicemembers.

- **Available.** The MHOs and BAH contractor are responsible for collecting rental data on properties that are available for long term (i.e., 12 months). According to DOD guidance, "available" means that the properties are vacant and currently on the market within the availability window.<sup>35</sup> In addition to submitting available rental units, MHO representatives can submit data from large apartment or townhouse rental complexes that may not have a rental unit currently

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<sup>33</sup>DOD's definition of "inadequate or unsuitable" includes: Mobile homes, efficiency apartments, apartments located above a business, transient housing, seasonal or weekly rentals, furnished housing, income-subsidized housing, and age-restricted housing. In addition, other subjective conditions that make the property unsuitable include: units with unsuitable physical condition, deferred maintenance, health, safety, crime, or environmental concerns, extremely high prices, lavish amenities, and location near busy streets or industrial properties.

<sup>34</sup>According to DOD guidance, census tracts are defined by the U.S. Census Bureau as "small, relatively permanent statistical subdivisions of a county designed to be homogeneous with respect to population characteristics, economic status, and living conditions."

<sup>35</sup>The data availability window is different from the data collection period. For example, for 2020 BAH rates, while the data availability window for non-early start military housing areas was between March 15 to September 1 the data collection period was between March 15 to July 31. Units that are available during the data availability window can be included.

available, since managers know what they would charge if a unit were available.<sup>36</sup>

- Various anchor points.** Rental unit data falls into DOD’s six-anchor-point housing types, ranging from a 1-bedroom apartment to a 4-bedroom single-family house. These anchor points are used to benchmark BAH rates for certain pay grades. Anchor points, according to DOD guidance, match the type of housing normally occupied by civilians with comparable incomes. DOD allows MHOs to substitute an alternative housing type when the anchor-point housing type is not available or is scarce within the military housing area. For example, based on our analysis for 2020 BAH rates, for anchor point 3—a 2-bedroom duplex/townhouse—DOD used 3-bedroom apartments for 48 percent of the approved sample units. Similarly, for anchor point 6—a 4-bedroom single-family house—DOD used a 5-bedroom single-family house for 14 percent of the approved sample units. Table 1 shows the six-anchor-point housing types and permitted substitutions.

**Table 1: The Six-Anchor-Point Housing Types for the Basic Allowance for Housing and Possible Substitutions**

Anchor point	Anchor-point housing type	Substitution housing type
1	1-bedroom apartment	None
2	2-bedroom apartment	None
3	2-bedroom duplex/townhouse	3-bedroom apartment
4	3-bedroom duplex/townhouse	None
5	3-bedroom single-family house	None
6	4-bedroom single-family house	5-bedroom single-family house

Source: GAO analysis of Department of Defense information. | GAO-21-137

Rental data review is performed by the MHOs and the BAH contractor. The BAH contractor and the MHOs work together to ensure rental units included in the sample are adequate and appropriate and meet DOD’s suitability criteria. As a quality assurance measure, MHOs are responsible for reviewing (assessing suitability) and ultimately flagging rental unit data

<sup>36</sup>To help ensure the sample is representative of all the suitable housing available in the military housing area, the BAH contractor limits the number of units that can be collected at any single property/community to four units per housing type.

collected by the contractor if it is determined that a unit is not suitable.<sup>37</sup> For additional quality assurance of the data collected, the contractor reviews submitted data and eliminates data errors, any duplicate rental units submitted, and any extreme rent outliers. All sample units collected by the MHOs that are included in the final data set to calculate median local housing cost have been approved by the contractor.<sup>38</sup> For example, MHOs and the contractor in 2019 collected nearly 95,446 data points to set the 2020 BAH rates, but of those, 75,129 or about 79 percent were approved. Of the remaining rental units that were not approved, about two-thirds were unable to be verified or were pending verification, and about one-third were denied.<sup>39</sup> Of those denied, about half were flagged by the MHO; the reasons identified for flagging rental units included not meeting unit size guidelines, being located in a high crime area, and being in poor condition.

### Total Housing Cost Calculation

Once the data collection and review step is complete, the contractor uses the approved rental data that were collected to calculate the median monthly rent for each military housing area and housing type. In addition, the contractor calculates the average monthly utility cost using data from the American Community Survey.<sup>40</sup> The contractor combines the median rent and average utility costs to calculate the average monthly housing

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<sup>37</sup>The MHO is responsible for accepting or “flagging” (i.e., marking for attention) contractor-collected data. The contractor then reviews MHO-flagged units and will either uphold or overturn MHO flags based on appropriate reasons. Flag decisions and reasons are visible to both the contractor and MHO in the Portal. In cases where the MHO flags a high percentage of Approved Units, the contractor will investigate to ensure (a) the contractor is following the proper data collection protocols in that area and (b) that the MHO is flagging for appropriate reasons. If needed, disputes are arbitrated by the MHOs’ Service Representative.

<sup>38</sup>According to BAH guidance, units are listed as approved when the contractor has confirmed that the unit details are correct, and it is suitable and appropriate for the BAH sample. Only approved units are used in the final BAH sample.

<sup>39</sup>According to BAH guidance, units are listed as unable to be verified or pending verification when the contractor cannot or has not confirmed the unit information is listed as denied when the contractor confirms that the unit is not available, suitable, or appropriate for the BAH sample.

<sup>40</sup>The American Community Survey is an ongoing survey administered by the Census Bureau of around 3.5 million households across the United States. The survey collects data on the economic, social, housing, and demographic characteristics of communities at various geographic levels, including states and counties.



costs, which the contractor provides to DOD, specifically the Military Compensation Policy directorate within the Office of the Deputy Assistant Secretary of Defense for Military Personnel Policy.

The Military Compensation Policy directorate uses these cost data to edit or adjust the total housing cost for each anchor point and military housing area as necessary. While 72 percent of the 2020 total final housing costs for the 301 MHAs and six anchor points were not adjusted and were based solely on the rental data collected, adjustments to the median housing cost were made for the remaining 28 percent. These adjustments included, but were not limited to, placing caps on large increases or decreases when compared to prior years to limit rate volatility.<sup>41</sup> Another adjustment was using a weighted average of the current and previous 2 years of data or using the national average percentage between housing types when the required sample size had not been met.<sup>42</sup>

### BAH Rate Calculation

Military Compensation Policy uses the final total housing cost as the basis for setting the next year's BAH rates and makes adjustments, as needed, to calculate BAH rates for each pay grade and dependency status. To do this, DOD uses interpolation to calculate the BAH rate for those pay grades that are not assigned to an anchor point. The anchor points and percentage used to fill in between anchor points are found in DOD's interpolation table.<sup>43</sup>

DOD performs additional adjustments as needed. For example, DOD adjusts the without-dependent rate when it falls below 75 percent of the

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<sup>41</sup>If rates are 15 percent above or 10 percent below the previous year's rates, the total housing cost is reviewed with more scrutiny to determine if such increases or decreases are warranted. If determined appropriate, a cap is placed on the percentage of increase or decrease when compared to the prior year.

<sup>42</sup>To use the national average percentage difference between anchor points (i.e., housing types), DOD multiplies the lower anchor point total housing cost by the national average percentage difference between anchor points.

<sup>43</sup>DOD's interpolation table assigns each pay grade to one of the six anchor points, depending on dependency status. Some pay grades use the total median housing cost and no interpolating (or "filling in") between anchor points is needed. With the exception of E1-E4 with dependents, to interpolate rates, DOD calculates the difference between the assigned anchor point and the next anchor point and adds a percentage of that difference to the assigned anchor point rate. For E1-E4 with dependents, to calculate the total housing cost, DOD uses the midpoint between a 2-bedroom apartment and 2-bedroom townhouse/duplex.

with-dependent rate for the same pay grade. In addition, as part of its housing cost-sharing initiative, DOD calculates 5 percent of the national average BAH rate for each pay grade and dependency status. DOD reduces the local BAH rates by this amount.

Results of these efforts produce monthly local BAH rates. DOD's 2020 local monthly BAH rates ranged from \$585 (BAH rate for an E1-E4 without dependents in the Fort Chaffee/Fort Smith Arkansas area) to \$6,162 (BAH rate for an O7-O10 with dependents in the Santa Clara County, California, area). See appendix II for (1) DOD's BAH housing standards and which pay grades have interpolations performed and (2) the 2020 national average monthly BAH rate by pay grade and dependency status.

#### BAH Rate Review and Approval

Once BAH rates are calculated and all adjustments made, BAH representatives for each of the services review the total housing costs for their area. According to DOD documentation and a senior DOD official, the representatives have an opportunity to inform DOD of any concerns and identify rates that might need to be adjusted. Following service review, the rates are reviewed and approved by the Military Compensation Policy directorate. DOD begins paying new BAH rates in January of the following year.

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#### **DOD Did Not Consistently Meet Minimum Sample-Size Targets for Rental Housing Data and Sometimes Did Not Use Current-Year Data**

DOD has met its minimum sample size data collection targets for some military housing areas for calculating BAH rates, but has not for other military housing areas, and it has not always used current data. First, military housing areas have a minimum sample size "housing area target" for each housing type.<sup>44</sup> The actual target varied by location, ranging from

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<sup>44</sup>To determine the minimum "housing area target" for each location, the BAH contractor uses bootstrap sampling techniques to create simulated data sets for each military housing area and housing type by re-sampling the data they have to estimate the number of sample units needed to achieve estimates with a 10-percent margin of error on a 95-percent confidence interval. However, DOD's use of judgmental sampling has statistical limitations, as it does not produce generalizable results and does not allow DOD to reliably measure the precision.

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30 to 75 rental units per housing type for the 2019 BAH data collection.<sup>45</sup> While some military housing areas' housing types were represented by enough approved rental units to meet the minimum target for the area, others were not. The number of approved rental units varied by military housing area and housing type, ranging from sample sizes as low as 0 to as high as 230 for the 2019 BAH data collection. Based on our analysis of data collected in 2019 for the 2020 BAH rates, for all 1,806 data points (i.e., six housing types for each of the 301 military housing areas), 44 percent had fewer than the minimum housing area target (see table 2).

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<sup>45</sup>According to officials, historical samples suggest that a range of 30 to 75 units generally covers the sample size needed to achieve the target level of precision for the estimated median rent in most areas. For large metropolitan areas, generally more than 75 units are required. The actual housing area target was capped at 75 sample units for purposes of our analysis.

**Table 2: Number and Percentage of the 301 Military Housing Areas That Did Not Meet Department of Defense’s Minimum Housing Area Target for the 2019 Basic Allowance for Housing Data Collection by Housing Type**

	1-bedroom apartment	2-bedroom apartment	2-bedroom townhouse or duplex	3-bedroom townhouse or duplex	3-bedroom single-family detached house	4-bedroom single-family detached house	Total
Number of housing areas with sample size below minimum housing-area target	116	91	132	195	110	144	<b>788</b>
Number of housing areas with sample size at or above minimum housing-area target	185	210	169	106	191	157	<b>1,018</b>
<b>Total</b>	<b>301</b>	<b>301</b>	<b>301</b>	<b>301</b>	<b>301</b>	<b>301</b>	<b>1,806</b>
Percentage (%) of housing areas with sample size below minimum housing-area target	39%	30%	44%	65%	37%	48%	<b>44%</b>

Source: GAO analysis of Department of Defense (DOD) data. | GAO-21-137

Note: There are six anchor points that are associated to six main housing types. DOD allows MHOs to substitute an alternative housing type when the housing type is not available or is scarce within the military housing area. Specifically, a 3-bedroom apartment can be substituted for a 2-bedroom duplex/townhouse and a 5-bedroom single-family house can be substituted for a 4-bedroom single-family house. Military housing areas have a minimum sample size housing area target for each housing type. According to officials, historical samples suggest that a range of 30 to 75 units generally covers the sample size needed to achieve the target level of precision for the estimated median rent in most areas. For large metropolitan areas, generally more than 75 units are required. The actual housing area target was capped at 75 sample units for purposes of our analysis.

Second, when the number of sample units collected fell below 16 rental units, DOD did not rely solely on the data collected to calculate the total housing cost. Instead, DOD used other methods, as noted earlier. Specifically, to calculate total housing costs for 2020 BAH rates, DOD typically used prior years’ data to calculate a weighted average of the current and previous 2 years of data when the sample size of 16 or more was not met. For all 1,806 data points (i.e., six housing types for each of the 301 military housing areas), 16 percent had fewer than 16 sample units for the 2020 BAH rates (see table 3).

**Table 3: Number and Percentage of the 301 Military Housing Areas That Did Not Meet Department of Defense’s Minimum Threshold of 16 for the 2019 Basic Allowance for Housing Data Collection by Housing Type**

	1-bedroom apartment	2-bedroom apartment	2-bedroom townhouse or duplex	3-bedroom townhouse or duplex	3-bedroom single-family detached house	4-bedroom single-family detached house	Total
Number of housing areas with sample size below minimum threshold of 16	44	21	31	90	32	62	<b>280</b>
Number of housing areas with sample size at or above minimum threshold of 16	257	280	270	211	269	239	<b>1,526</b>
<b>Total</b>	<b>301</b>	<b>301</b>	<b>301</b>	<b>301</b>	<b>301</b>	<b>301</b>	<b>1,806</b>
Percentage of housing areas with sample size below minimum threshold of 16	15%	7%	10%	30%	11%	21%	<b>16%</b>

Source: GAO analysis of Department of Defense (DOD) data. | GAO-21-137

Note: There are six anchor points that are associated to six main housing types. DOD allows military housing offices to substitute an alternative housing type when the housing type is not available or is scarce within the military housing area. Specifically, a 3-bedroom apartment can be substituted for a 2-bedroom duplex/townhouse and a 5-bedroom single-family house can be substituted for a 4-bedroom single-family house.

This use of prior year data limits DOD from fully meeting its program goal—to use current year data—for certain areas and housing types. It also can impart bias into rent estimates if rents are changing in a non-random way (that is, consistently increasing or decreasing in prior years). Based in part on input we provided during the course of our review, DOD officials acknowledged that there are issues with using prior year data in lieu of current year data and informed us that they will no longer use this approach starting with the 2021 BAH rates. Instead of using prior year data, DOD plans to use the national average percentage between housing types when minimum sample sizes are not met, according to DOD officials.<sup>46</sup>

DOD and MHO officials told us that small sample sizes can happen when no properties or a limited number of suitable rental units are available for rent during the data collection window for certain housing types. According to DOD officials, the process of collecting data on available rental units (i.e., not occupied) during the data collection period from March through July helps ensure current information is used to determine the next year’s BAH rates. These officials noted that collecting data

<sup>46</sup>To use the national average percentage difference between anchor points (i.e., housing types), DOD multiplies the lower anchor point total housing cost by the national average percentage between anchor points.

outside the timeframe that DOD established and collecting data on already occupied rental units creates a potential for collecting outdated rental information. For example, occupied rental units may have been occupied for a long period of time and therefore the rent charged is not reflective of current market rates. Further, because the data collection period occurs during the year before the rates are set, the rates are already a lagging indicator of the current market. Therefore, expanding the start date would make it even less current. When we spoke with MHO representatives, they told us they were concerned about not being able to meet minimum sample sizes for some housing types, and that they would like to use data they have on recently occupied rental units that servicemembers have rented outside the data availability window. In October 2020, DOD officials told us they would consider allowing recently rented properties, specifically by permitting MHOs to include properties that were available 6 weeks before data collection begins.

In addition to DOD's goal in BAH guidance of having a minimum of 30 approved rental units in sample sizes, DOD guidance states that current, valid rental costs are crucial to calculating accurate BAH rates.<sup>47</sup> *Standards for Internal Control in the Federal Government* call for management to rely on quality information to design a process that uses the entity's objectives and related risks to identify the information requirements needed to achieve the objectives and address the risks in order to achieve key objectives.<sup>48</sup>

DOD has taken some steps to increase sample size for calculating BAH rates, according to the BAH contractor. Further, a significant change in 2013 was made to include rental units that leased at market rate that were or would be available within the availability window. In addition to this, in 2014, DOD implemented recommendations from a contracted study to initiate an early start data-collection period for 40 military housing areas. As a result, these efforts increased sample size of approved rental units. Specifically, based on our analysis of historical data collected in 2013 for the 2014 BAH rates, for each of the six housing types across all MHAs, 64 percent of the data points fell below 30 approved rental units for calculating BAH rates. For data collected for the 2015 through 2020

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<sup>47</sup>Office of the Under Secretary of Defense for Personnel and Readiness, Office of Military Compensation Policy, *A Primer on the Basic Allowance for Housing (BAH) for the Uniformed Services* (January 2020).

<sup>48</sup>[GAO-14-704G](#).

BAH rates, about a third of the data points fell below 30 approved rental units each year.

However, while some progress has been made, DOD has not fully assessed its process and determined ways to better increase the number of collected and approved sample units of current rental housing data used to determine total housing cost. As noted earlier, during the course of our review DOD officials acknowledged that they would consider using recently available rented property as part of the data collection and decided not to use prior year data when calculating the total housing cost. In addition, DOD officials noted that they are considering using external data to identify current rental units, but they have not implemented this approach because they have not found a single source that contains the information needed to determine if such properties meet DOD's criteria. According to DOD, these approaches are encouraging and could help DOD increase sample sizes. However, given that BAH is the second-largest component of cash compensation for active-duty servicemembers, it is particularly important for DOD to fully explore all options for collecting the necessary rental housing data that would produce rates that are accurate and reflective of current suitable housing costs.

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### DOD Annually Updates the BAH Process Guidance but Has Not Accurately and Fully Documented Its Sampling Methodology and Sample-Size Targets

DOD annually updates its BAH process guidance and training materials, but has not accurately and fully characterized the results of the BAH sampling methodology in guidance. Nor has DOD documented and communicated its minimum sample-size targets to MHO representatives involved in the data collection process, according to a senior DOD official and the BAH contractor.

Each year DOD updates its BAH Primer to inform servicemembers, MHO representatives, and others, internal and external to DOD, about how BAH rates are determined. This guidance is meant for a broad audience, according to DOD officials, and was most recently updated in January 2020.<sup>49</sup> Each year, the BAH contractor updates and issues internal guidance to inform MHO representatives about the data collection

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<sup>49</sup>Office of the Under Secretary of Defense for Personnel and Readiness, Office of Military Compensation Policy, *A Primer on the Basic Allowance for Housing (BAH) for the Uniformed Services* (January 2020).

process, including how to enter data into the MHO Portal. In addition to these guidance documents, the BAH contractor produces internal training materials for the MHOs that include information on the BAH data collection program. Further, the MHO Portal is used to communicate guidance to the MHOs, such as the minimum unit size for the local housing area.

However, we found that DOD guidance does not fully (1) characterize its sampling methodology or (2) document and communicate minimum sample size targets to MHO representatives involved in the data collection process.

- **Characterize sampling methodology.** DOD's BAH Primer, which informs servicemembers, MHO representatives, and others about how BAH rates are determined, does not accurately characterize the department's sampling methodology. Specifically, the Primer states that DOD gathers enough data to attain a 95 percent statistical confidence that the estimated median rent is within 10 percent of the true median rent when calculating total housing cost. However, instead of using a statistically generalizable sample that would allow DOD to attain a 95 percent confidence level, DOD uses a judgmental sample to identify rental units. Results from judgmental sampling are not generalizable to the entire population and cannot be used to reach specific confidence levels.<sup>50</sup>

DOD officials told us they use a judgmental sample because they need to rely on the expertise of MHOs to ensure that servicemembers' BAH rates are truly based on the costs of adequate housing for civilians with comparable income levels in the same areas, as required by law. As noted in the Primer, MHOs' local expertise is critical to ensuring that the sample units included in the data collection represent adequate housing for servicemembers. When we asked DOD officials about the discrepancy between the statement in the Primer about the 95 percent confidence level and the department's practice of using a judgmental sample, they acknowledged that they

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<sup>50</sup>The use of judgmental sampling in selecting sample units for rental housing market rates does not provide data for statistically reliable information on true population characteristics. Specifically, without appropriate methods such as model-based estimation techniques designed to account for selection bias, the results from judgmental sampling are not generalizable to the entire population and cannot be used to reach specific confidence levels. Additionally, a judgmental sample does not protect against bias or allow DOD to characterize the preciseness of the BAH estimates as the existing language in the Primer indicates. Thus, the statement that sampling achieves an estimate with a 95-percent confidence interval that is within 10 percent of the true median is not applicable.



needed to amend their guidance. Specifically, they stated that they should remove the incorrect statement regarding the confidence level and clarify how they characterize their sampling methodology.

- **Document and communicate sample size targets.** DOD's BAH guidance states that the minimum sample size target for calculating total housing costs is 30 to 75 rental units, with the exception of military housing areas in large metropolitan areas, which generally require more than 75 approved rental units for a statistically satisfactory sample, and military housing areas in rural and resort areas, which might fall short of 30 approved rental units. However, the guidance does not document that a minimum of 16 rental units is necessary to prevent the use of other methods to determine the total housing cost. MHO officials we interviewed from six of the 301 military housing areas stated that they were not aware that if they collected fewer than 16 rental units (or observations) then DOD would not use the data collected for that housing type and instead rely on another method to determine the total housing cost. MHO officials noted that their focus was on collecting rental units of acceptable quality rather than quantity. Also, some MHO officials told us they were unable to replicate BAH rates for their area using the data in the MHO Portal. We found that this was because the MHO officials we interviewed were unaware that DOD performs additional adjustments to calculate BAH rates. A senior DOD official and the BAH contractor acknowledged that they did not directly inform MHO representatives, but instead informed military service representatives about the adjustments to BAH when the sample size of 16 housing rental units was not met. However, according to the officials we spoke with, we found that the service representatives have not informed their MHOs about the process.

Moreover, according to a senior DOD official and the BAH contractor, the number of rental units necessary to achieve a satisfactory sample size is not communicated to the MHOs. As noted earlier, for all 1,806 data points, 44 percent had fewer than the minimum target that the contractor determined was necessary to achieve an adequate sample size. Further, based on our analysis, of those military housing areas that needed more than 75 rental units (ranging from 16 to 41, depending on housing type), almost all did not collect that many rental units. According to a senior DOD official and the BAH contractor, they chose not to include the sample size housing-area target on the MHO portal in order to avoid confusion.

According to DOD's directive on the responsibilities and functions of the Under Secretary of Defense for Personnel and Readiness (USD(P&R)),

information should be shared as broadly as possible so that information produced as a result of the assigned responsibilities is visible and understandable.<sup>51</sup> Also, the *Standards for Internal Control in the Federal Government* states that management should document responsibilities in policies and communicate quality information to all levels to achieve the entity's objectives.<sup>52</sup>

A clear explanation of the sampling methodology and sample-size targets was not fully documented in guidance because DOD has not systematically reviewed the BAH guidance documents to ensure they accurately and fully cover all key elements of the BAH process that stakeholders need to know. Multiple stakeholders, including DOD officials from the Office of Assistant Secretary of Defense for Sustainment, the services, and MHOs told us that the BAH process to set rates is not completely transparent. For example, an official from the Office of Assistant Secretary of Defense for Sustainment stated that the lack of transparency in the BAH rate-setting process contributes to concerns and questions about the BAH, such as the variance in BAH rates that can occur across different geographic locations and across time by pay grade and dependency status. Until DOD reviews and updates key information in its guidance, DOD's BAH rate-setting process will lack full transparency and servicemembers and others internal and external to DOD may not understand how rates are set. In addition, MHO staff responsible for data collection may not know the minimum housing area target or the full importance of collecting the minimum number of rental units needed to calculate BAH rates using current data.

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<sup>51</sup>DOD Directive 5124.02, *Under Secretary of Defense for Personnel and Readiness (USD(P&R))* (June 23, 2008).

<sup>52</sup>[GAO-14-704G](#).

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## DOD Has Taken Some Steps to Monitor the Appropriateness of BAH Rates, but Could Strengthen Its Efforts through More Consistent Monitoring

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### DOD Has Conducted Reviews for Quality Assurance

DOD's BAH process includes several reviews for quality assurance. As noted earlier, each year MHOs review rental housing data collected by the contractor; the contractor verifies all approved rental housing data; the Military Compensation Policy directorate reviews and edits the total housing costs provided by the BAH contractor, as appropriate, and housing allowance representatives in the compensation offices of each of the services reviews the final total housing costs for their areas.

When MHOs have a concern with the BAH program, such as a change in military housing area boundary, DOD has a process for the MHO to submit a request for a site visit in order for a more thorough review of the military housing area. DOD can conduct up to 10 site visits each year. To inform the 2019 BAH rates, five site visits were conducted. Site visits typically involve officials from the Military Compensation Policy directorate, the BAH contractor, and installation officials. The BAH contractor conducts the initial investigation and during the site visit an in-brief, windshield tour, and out-brief is conducted. Following the site visit, the BAH contractor develops a site visit report containing any issues, findings, and recommendations. Following the report, DOD may recommend actions to the services, which the services vote on.

In addition to site visits, the BAH contractor conducts annual site reviews (i.e., windshield tours) at 20 to 25 military housing areas. In 2019, 21 site reviews were conducted. The site reviews are selected based on a variety of factors, including current year sample size and margin of error, BAH population, year of last site review or site visit, and the ability to group multiple site reviews on the same trip. The purpose of the site reviews is to evaluate accuracy, suitability, and appropriateness of minimum, median, and maximum priced units for each housing type. The BAH contractor provides DOD a final report showing each unit evaluated and a determination of whether any units should be excluded from the sample.

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## DOD Has Performed Ad-Hoc Studies of the BAH Program, but Has Not Consistently Monitored Key Data for Assessing the Appropriateness of BAH Rates

Since at least 2009, DOD had the BAH contractor perform ad-hoc studies—sometimes several in a year—to review various topics related to the BAH program, as shown in table 4. According to DOD officials, these topics are often based on proposed improvements in the BAH program that DOD officials believe need to be examined.

**Table 4: Topics of Ad-Hoc Studies of Department of Defense’s Basic Allowance for Housing, by Year**

Year	Ad Hoc Study Topic
2009	Housing Standards
2015	Housing Adequacy Standards for Community Housing
2015	Military Housing Office Rent Premiums
2016	Unit Size Guidelines
2017	Alternate Data Sources
2017	Effective Market Areas
2017	Housing Profiles
2018	Income Based Approach to Basic Allowance for Housing Rates
2018	Utility Methodology Comparison
2019	Using Alternate Utility Costs
2019	County Cost Groups Methodology Review
2019	New York City Metro Boundary Review

Source: GAO Analysis of Department of Defense’s Ad Hoc Studies. | GAO-21-137

While DOD has reviewed various topics related to BAH, we found that DOD has not consistently monitored certain key data that could be used to help ensure that BAH rates are appropriate for servicemembers’ rank and that BAH rates accurately reflect rental housing costs. These key data include: anchor points and interpolation table (filling in between the anchor points), external alternative data, and data monitoring for potential bias.

**Anchor points and the interpolation table:** DOD does not consistently monitor (1) anchor points associated with certain pay grades or the (2)

interpolation table to assess the appropriateness of BAH rates.<sup>53</sup> Both data sources were last updated in 2009, but, as shown above, the BAH contractor performed ad-hoc studies in 2017 and 2018 that examined changes to the anchor points and interpolation table.

The 2017 study conducted by the BAH contractor examined the housing choices of civilians and compared them to those of servicemembers in order to determine whether the BAH program's current linkages between pay grades and housing types remain appropriate.<sup>54</sup> The study found that the American Housing Survey and American Community Survey data generally support the current linkages between pay grade and housing type and they did not anticipate problems with maintaining the current interpolation table. However, the study also noted that changes to the current interpolation table would have repercussions for the BAH program and DOD's overall budget and recommended that DOD test the robustness of these results under different scenarios and assumptions. According to a DOD official, since the study supported the current linkages between housing types and pay grades, the recommendation was not implemented; thus, these results were not tested under different scenarios and assumptions and this type of review has not been conducted on a consistent basis. When we raised this issue with a senior department official, the official stated that while no changes to the anchor points or interpolation table were made as a result of this study, data should be reviewed periodically to ensure the linkages remain relevant.

The 2018 study conducted by the BAH contractor noted that the anchor point methodology relies on two key assumptions about housing preferences: (1) there is a clear link between pay grades and the housing types occupied by comparable civilians for determining anchor points, and (2) civilians' housing type choices are consistent between military housing areas. However, the 2018 study found that all military housing areas do not have rental units that match the BAH anchor points and that this mismatch was the leading cause of most of the rate-setting issues for military housing areas. Further, the 2018 study noted that DOD has ways

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<sup>53</sup>Anchor points refer to DOD's six housing types, ranging from a 1-bedroom apartment to a 4-bedroom single-family house. The interpolation table assigns each pay grade to one of the six anchor points, depending on dependency status. Some paygrades use the total median housing cost and no interpolating (or "filling in") between anchor points is needed.

<sup>54</sup>Federal law stipulates that servicemembers' BAH rates must be based on the "costs of adequate housing for civilians with comparable income levels in the same area" and prescribes separate rates for accompanied and unaccompanied personnel.

to address these challenges, such as rate capping, but they do not solve the underlying problem of setting BAH rates based on mismatched or non-existent anchor points within local housing areas.<sup>55</sup>

The BAH contractor in the 2018 study recommended modifying the current anchor point system in place to allow for regional variation in the pay grade, housing-type linkages used to determine BAH rates. It further noted that by incorporating civilians' housing choices at the military housing area level, the BAH program could avoid pricing housing types that are not available in certain rental markets. However, according to a DOD official, no changes were implemented and this type of study has not been conducted on a consistent basis.

When we asked them about the concerns identified in these studies and the associated recommendations, DOD officials acknowledged that the anchor points and interpolation table should have been updated annually since 2010. While that update has not been performed, they stated that DOD's 5-year plan includes the goal to annually update the anchor points and interpolation table. DOD officials also acknowledged that the anchor points and interpolation table should be consistently monitored.

**Information from external data sources:** DOD does not consistently monitor or rely on information from external data sources, including rental housing costs, to assess the appropriateness of BAH rates. DOD has conducted several studies that used external data sources to monitor the appropriateness of BAH rates, but does not do so consistently. As noted above, DOD's BAH contractor performed an ad-hoc study in 2017 that included a comparison of DOD's BAH rates to external alternative data sources, such as the American Community Survey. The study found that BAH rates are higher than external alternative data sources regarding rental housing costs.<sup>56</sup> It suggested it would be helpful for DOD to look at data from the American Community Survey and monitor trends over time. However, according to a DOD official, this work has not been conducted to date. When we asked DOD officials why trends in the American Community Survey were not monitored over time, as recommended in the 2017 study, they said that because the study was conducted prior to a

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<sup>55</sup>At the conclusion of the annual data collection process, DOD reviews and edits the total housing costs to minimize volatility in BAH rates from 1 year to the next. This process may involve placing caps on large increases or decreases when compared to prior years to limit rate volatility.

<sup>56</sup>See appendix I for more information regarding the American Community Survey and other external alternative methods that may be used to collect housing data.

reorganization in their office, they were not sure why this work had not been done.

According to DOD officials in 2020, as a result of ongoing reviews of BAH's effect on military privatized housing, DOD performed another review comparing BAH rates to external data sources and found BAH rates are less volatile when compared to the American Community Survey, but similar to other alternative data sources. Moreover, BAH rates were generally higher than external alternative data sources regarding rental housing costs. DOD officials also stated that while comparing BAH rates to external alternative data sources is not conducted on a consistent basis, external alternative data, such as private sector data, could be helpful if used in the future on a more consistent basis to evaluate BAH rates.

**Potential for bias in data collection:** DOD has taken some steps to monitor for potential sampling bias.<sup>57</sup> In the 2015 ad hoc study that evaluated rent data from 2010-2014, the BAH contractor compared data collected by the MHOs to the contractor-collected data. The study found evidence of bias and noted that MHO-identified rents were 11.6 percent higher than contractor-identified rents, after controlling for anchor point, year, and military housing area.<sup>58</sup> The study further noted while MHO data may be upwardly biased, it is also possible that contractor-added rental units did not accurately capture the cost of adequate housing either.

As a result, DOD instituted steps to annually monitor for this potential bias. Specifically, after the data collection period each year, the BAH contractor compares the median rents collected by the contractor and by the MHOs for each anchor point within the military housing area. This analysis is provided to DOD. According to DOD officials, they monitor these data to see how rents by source vary each year. DOD officials stated that based on their annual reviews of the rent by source data, they have found that the rental data collected by MHO officials are often higher than the rental data collected by the BAH contractor. Officials stated that

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<sup>57</sup>Sampling bias can occur due to the use of judgmental sampling. Specifically, DOD's judgmental sampling methodology creates risk for biased estimates of rent.

<sup>58</sup>The study's finding was based on its regression model of national BAH rent data. A *regression model* is a type of statistical model that investigates relationships among variables.

they try to mitigate this potential bias through their annual BAH training program.

In addition, they noted that the 2016 ad-hoc study conducted by the BAH contractor that examined unit size guidelines could provide BAH stakeholders a reference point for what is “typical” in their military housing area for each housing type. The absence of clear guidance on unit size led to disagreements among BAH stakeholders, according to the BAH contractor. According to DOD officials, the BAH contractor developed unit-size guidelines based on a combination of five sources of data, including historical BAH data and external alternative data sources, such as the American Housing Survey and private-sector data, to help mitigate bias and to provide criteria about what is too big or too small for unit sizes. Those guidelines have been in use since the 2016 data collection cycle and, according to DOD officials, can help mitigate bias in the data collection process.

However, while DOD has taken some steps to monitor for potential bias, department officials with whom we spoke acknowledged that more action is needed to effectively minimize potential bias, as both the BAH contractor and DOD continue to see evidence of bias. We also identified some evidence of bias. Specifically, in our review of approved rental units collected for 2020 BAH rates, we found that rental units identified by MHOs had rents that were typically higher, on average, than those identified by the contractor. DOD officials acknowledged that the information they annually collect, such as the rent by source could be better used to help determine ways to minimize potential bias. Moreover, while DOD trains MHOs to use substitution of anchor points only when main housing types are not available, we found that substitution was used even when the main anchor point allowed DOD to meet its target.

Substitution of housing types can impart bias into rent estimates if the types of housing being substituted are not equivalent in rent. In the 2015 ad-hoc study that evaluated rent data from 2010-2014, DOD’s BAH contractor analyzed the effect of anchor point substitution. The study noted that rents were significantly higher when substitution was used. Based on our review of 2020 BAH rate collection data for a 2-bedroom townhome or duplex, we found that the average rent for the substituted housing type (i.e., 3-bedroom apartment) was higher for 84 percent of the military housing areas than the average rent for the 2-bedroom townhome or duplex.



DOD Directive 5124.02 requires the Under Secretary of Defense for Personnel and Readiness to develop policies, plans, and programs for compensation of DOD personnel and to ensure that policies and programs are designed and managed to improve standards of performance, economy, and efficiency.<sup>59</sup> *Standards for Internal Control in the Federal Government* requires that management establish and operate monitoring activities and remediate identified deficiencies on a timely basis.<sup>60</sup> Additionally, these standards call for management to use and rely on quality information from reliable internal and external sources to make informed decisions and evaluate the entity's performance in achieving key objectives.<sup>61</sup> Moreover, these standards state that these activities should be performed routinely and consistently.

However, our review found that DOD has not developed a process for DOD to use quality information to consistently monitor anchor points, interpolation table, external alternative data, and potential bias. Nor does DOD have a process to ensure timely remediation of any identified deficiencies to help ensure that BAH rates are appropriate for servicemembers. By establishing and implementing a process that allows for consistent monitoring of anchor points, interpolation table, external alternative data, and potential bias, as well as timely remediation of any identified deficiencies, DOD will help ensure that BAH rates are appropriate for servicemembers' rank and that rates accurately reflect the current costs of housing in the private sector.

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## Congressional Requirements for Calculating Payments to Privatized Housing Projects Lessened the Financial Effects of BAH Reductions, but Created Unintended Distortions

DOD followed statutory requirements when it reduced BAH rates and made payments to privatized housing projects to offset the negative financial effects of BAH rate reductions. Specifically, as required by law,

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<sup>59</sup>DOD Directive 5124.02.

<sup>60</sup>[GAO-14-704G](#).

<sup>61</sup>Quality information is appropriate, current, complete, accurate, accessible, and provided on a timely basis.

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DOD used the national average BAH to calculate the BAH reduction amount and the local BAH to calculate the congressionally mandated payments. This difference in calculations resulted in some privatized projects receiving congressionally mandated payments that more than offset the BAH reduction in 2019, while other projects received payments that did not fully offset their BAH reductions.

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### DOD's Reduction to the BAH Complied with Congressional Requirements

For 2015 through 2020, as part of its housing cost-sharing initiative, DOD reduced BAH rates by the maximum percentage allowed for each year.<sup>62</sup> As the law required, DOD used a percentage of the national average monthly housing cost, by pay grade and dependency status, to reduce the BAH rates. Specifically, DOD first took all local BAH rates for each given pay grade and dependency status and calculated the weighted national average of those rates to determine the monthly housing cost for each pay grade and dependency status.<sup>63</sup> DOD then used these weighted national average rates to determine how much each BAH rate should be decreased.

For example, for the 2020 BAH, DOD determined that the weighted national average monthly housing cost for an enlisted servicemember with a pay grade of E6 and with dependents was \$2,036 per month. DOD then calculated that 5 percent of \$2,036 was \$102. As such, DOD determined that the BAH rate for each servicemember with a pay grade of E6 and with dependents, regardless of location, should be reduced by \$102 per month. See table 5 for monthly and annual amounts by which the 2020 BAH was reduced for each pay grade and dependency status.

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<sup>62</sup>DOD requested changes to statutory authority to allow for a reduction to the BAH so that it could reinvest savings generated into the force for training and readiness. The National Defense Authorization Acts for Fiscal Years 2015 and 2016 authorized DOD to reduce each local BAH rate by up to a specified percent of the national average BAH rate by 2019 in a phased-in approach (a maximum of 1 percent in 2015, 2 percent in 2016, 3 percent in 2017, 4 percent in 2018, and 5 percent in 2019 and beyond).

<sup>63</sup>Once local BAH amounts are determined, using information on the number of servicemembers located within each of the military housing areas, DOD annually calculates the weighted national average BAH for each pay grade and dependency.

**Table 5: Reductions in the Monthly and Annual Basic Allowance for Housing by Pay Grade and Dependency Status, 2020**

	Monthly reductions		Annual reductions	
	With dependents	Without dependents	With dependents	Without dependents
<b>Enlisted members</b>				
E01-E04	\$84	\$69	\$1,008	\$828
E05	92	83	1,104	996
E06	102	87	1,224	1,044
E07	104	89	1,248	1,068
E08	109	96	1,308	1,152
E09	116	97	1,392	1,164
<b>Commissioned officers</b>				
O01	86	78	1,032	936
O02	96	87	1,152	1,044
O03	110	100	1,320	1,200
O04	127	112	1,524	1,344
O05	138	118	1,656	1,416
O06	143	127	1,716	1,524
O07-O10	148	132	1,776	1,584
<b>Commissioned officers with over 4 years active service as enlisted members</b>				
O01E	106	91	1,272	1,092
O02E	112	100	1,344	1,200
O03E	120	105	1,440	1,260
<b>Warrant officers</b>				
W01	88	68	1,056	816
W02	105	89	1,260	1,068
W03	111	98	1,332	1,176
W04	116	104	1,392	1,248
W05	119	103	1,428	1,236

Source: GAO analysis of Department of Defense data. | GAO-21-137

Because BAH rates were reduced by a set dollar amount, regardless of where the servicemember was stationed, the actual percentage of reduction varied. Those servicemembers who lived in higher-cost areas (i.e., areas where the local BAH was greater than the national average) experienced lower percentage decreases than those who lived in lower-cost areas (i.e., areas where the local BAH was less than the national average). For example, the \$102 per month reduction was equivalent to about a 2-percent BAH reduction for an E6 with dependents living in San

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Francisco, California, and about a 10 percent BAH reduction for an E6 with dependents living in Johnstown, Pennsylvania.

This method of calculating the BAH-reduction amounts is consistent with legal requirements, as well as with how prior reductions to the BAH were calculated. For example, as noted previously, prior to 2002, the BAH was calculated to cover the estimated local-average housing cost for a given pay grade and dependency status, minus 15 percent of the estimated national average housing cost for that pay grade and dependency status. In addition, as DOD noted, implementing reductions in this way is equitable, because it ensures that the amount of the reduction (i.e., the amount that comes “out of pocket” from servicemembers’ total compensation) is the same across any given pay grade and dependency status, regardless of where in the United States a servicemember is stationed.

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### Congressional Requirements Led to Payments for Privatized Housing Projects That Exceeded or Were Less than the BAH Reduction

We found that congressional requirements related to how DOD should calculate payments meant to offset the loss of BAH-based rental income for privatized housing projects created some unintended distortions. As noted earlier, privatized housing projects rely on servicemembers’ rent as their primary revenue source.<sup>64</sup> Unlike landlords in the civilian housing market, privatized housing developers are not able to charge servicemembers more than the BAH rate. Therefore, just as BAH rates were reduced based on the national average, so, too, were rents paid to privatized housing projects.<sup>65</sup>

In the National Defense Authorization Acts for fiscal years 2018, 2019, and 2020, Congress required the military departments to make payments

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<sup>64</sup>Every project takes in revenue, which consists mostly of rent payments. Privatized housing developers use rents to pay for operating expenses, including administrative costs, day-to-day maintenance, and utilities, among other things. After that, projects generally allocate funds for taxes and insurance, followed by debt payments. According to DOD, the congressionally mandated payments made to developers would likely flow through the financial waterfall like a typical revenue receipt to a privatized housing project.

<sup>65</sup>The rent amount received by the privatized housing projects may not have been reduced for some servicemembers. Specifically, some of these servicemembers’ BAH may be exempt from the reduction due to DOD’s rate protection policy.

to privatized housing projects. The initial impetus for these payments was to lessen the effect of the BAH reduction on the projects. However, Congress stipulated that the payments should be based on a specified percentage of the local BAH rate, rather than the national average. This difference in calculation caused some distortions. Specifically, we found that, for some projects, the congressionally mandated payments to privatized housing projects exceeded the estimated BAH reductions, while for others, the payments fell short.<sup>66</sup>

For example, in 2019, DOD was authorized to reduce BAH rates by up to 5 percent. DOD did so, using the national average, as required by law. DOD was also required to make payments to the privatized housing projects to offset the reduction in the BAH. DOD did so, using a calculation based on 5 percent of the local BAH amount, as required by law.

Specifically, to calculate the payment for each eligible privatized housing project in 2019, DOD took 5 percent of the monthly housing cost in the military housing area in which that project was located for each given pay grade and dependency status, as determined through the regular BAH rate-setting process.<sup>67</sup> DOD then multiplied those amounts by the number of servicemembers at each pay grade and dependency who resided at the housing project and totaled them together. For example, for the 2019 payment for a housing project located in Santa Clara County, California, DOD took the local monthly housing cost for an enlisted servicemember with a pay grade of E6 and with dependents in that county (\$4,590 per month) and calculated that 5 percent of \$4,590 was \$230 per month. DOD then multiplied \$230 by about 374 (the number of servicemembers at the project with a pay grade of E6 and with dependents), and determined that the monthly payment to that project for its E6

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<sup>66</sup>The congressionally mandated payments are made by the military departments to privatized housing projects. These payments are in addition to the rents paid by servicemembers. The actual BAH reduction amount for a project may be under the estimated amount because the estimated amount does not account for those servicemembers whose BAH was not reduced due to rate protection, per DOD guidance, and it includes payments made to the Military Housing Privatization Initiative's unaccompanied housing projects, which have residents who received only partial BAH payments. Moreover, per DOD guidance, DOD did not make payments for non-servicemembers and for non-married servicemembers who shared a lease in which both members were on the lease. In these cases, the rent may have been reduced as a result of the BAH reduction, but no payment was made.

<sup>67</sup>To calculate the congressionally mandated payment, DOD used the monthly total housing cost prior to the BAH reduction.

servicemembers with dependents was about \$86,000 per month or \$1.03 million in calendar year 2019. DOD followed the same process for each group of servicemembers living in the project and totaled them together, resulting in the final payment to the project for that year.

We reviewed Army, Marine Corps, Navy, and Air Force congressionally mandated payments to privatized housing projects in 2019 and found that the Army’s and Air Force’s overall payments to privatized housing projects on their installations were \$3.4 million and \$3.5 million less, respectively, than the total BAH reduction. By comparison, the Navy’s and Marine Corps’ overall payments were greater than the BAH reduction, by \$9 million and \$2.7 million, respectively (see table 6).

**Table 6: Amounts of Congressionally Mandated Payments above or below the Basic Allowance for Housing (BAH) Reduction in 2019**

In Millions of Dollars

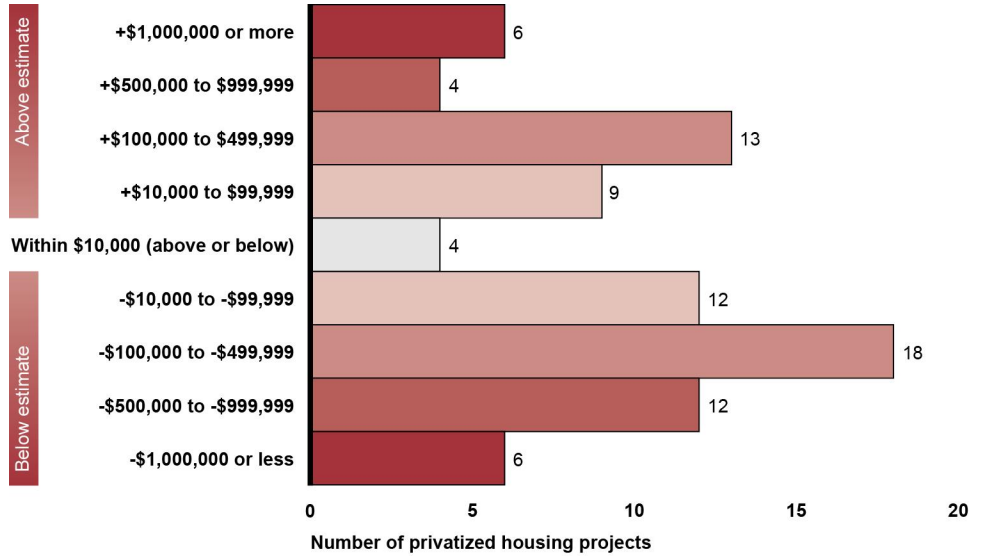
Service	Congressionally mandated payment	BAH reduction estimate <sup>a</sup>	Payment above or below BAH reduction
Army	\$80.26	\$83.70	\$-3.43
Navy	\$45.17	\$36.14	\$9.03
Marine Corps	\$24.19	\$21.46	\$2.73
Air Force	\$48.00	\$51.52	\$-3.52
<b>Total</b>	<b>\$197.63</b>	<b>\$192.82</b>	<b>\$4.80</b>

Source: GAO analysis of Department of Defense (DOD) data. | GAO-21-137

<sup>a</sup>BAH reduction estimate was calculated based on number of servicemembers by pay grade and dependent status in which the privatized housing project received a payment. The actual reduction for a project may be under the estimated amount because it does not account for those servicemembers whose BAH was not reduced due to rate protection, per DOD guidance, and it includes payments made to the unaccompanied housing projects of the Military Housing Privatization Initiative, which has residents who received only partial BAH payments. Moreover, per DOD guidance, payments are not to include non-servicemembers and non-married servicemembers who shared a lease in which both members are on the lease. In these cases the rent may have been reduced as a result of the BAH reduction, but no payment was made.

In our review of individual privatized housing projects, we found some large variances between the congressionally mandated payment amounts and the BAH reduction estimate. For example, six privatized housing projects’ payments were more than \$1 million greater than the estimated amount by which BAH rates were reduced. Conversely, the payments to six other privatized housing projects were more than \$1 million lower than the estimated amount by which BAH rates were reduced (see figure 4).

**Figure 4: Number of Privatized Housing Projects and Amounts That Congressionally Mandated Payments Were above or below the Basic Allowance for Housing (BAH) Reduction Estimate in 2019**



Source: GAO analysis of Department of Defense (DOD) data. | GAO-21-137

**Data table for Figure 4: Number of Privatized Housing Projects and Amounts That Congressionally Mandated Payments Were above or below the Basic Allowance for Housing (BAH) Reduction Estimate in 2019**

Amount	Number of privatized housing projects
+\$1,000,000 or more	6
+\$500,000 to \$999,999	4
+\$100,000 to \$499,999	13
+\$10,000 to \$99,999	9
Within \$10,000 (above or below)	4
-\$10,000 to -\$99,999	12
-\$100,000 to -\$499,999	18
-\$500,000 to -\$999,999	12
-\$1,000,000 or less	6

Note: The BAH reduction estimate was calculated based on number of servicemembers by pay grade and dependent status in which the privatized housing project received a payment. The actual reduction for a project may be under the estimated amount because it does not account for those servicemembers whose BAH was not reduced due to rate protection, per DOD guidance, and it includes payments made to the unaccompanied housing projects of the Military Housing Privatization Initiative, which has residents who received only partial BAH payments. Moreover, per DOD guidance, payments are not to include non-servicemembers and non-married servicemembers who shared a lease in which both members are on the lease. In these cases the rent may have been reduced as a result of the BAH reduction, but no payment was made.

As noted above, the original purpose of the congressionally mandated payments was to lessen the effect of the BAH reduction on the projects. Specifically, Congress noted in a 2017 conference report accompanying a bill for the National Defense Authorization Act for Fiscal Year 2018 that the BAH reduction would have an effect on the long-term recapitalization effort for privatized housing and called for payments to be made to lessors of privatized housing projects to effectively nullify the effect of the reduction for those projects.<sup>68</sup> Starting in 2018, Congress required that DOD pay lessors of privatized housing projects a percent of the local BAH rate.<sup>69</sup> For 2019, as explained above, Congress required DOD to make payments to privatized housing projects equal to 5 percent of the local BAH rate.<sup>70</sup>

The purpose of the payments was then broadened.<sup>71</sup> Specifically, for 2020, Congress required DOD to pay all privatized housing projects equal to 2.5 percent of the local BAH rate to partially offset the 5 percent BAH reduction. Congress also required the services to pay an additional 2.5 percent of the local BAH rates to underfunded privatized housing projects for the purposes of future sustainment, recapitalization, and financial sustainability of the projects.

However, because of the distortions described above, we determined that DOD may be paying projects by amounts that are greater than the estimated BAH reduction, even if those projects have not been deemed by DOD to be underfunded. When we raised the issue that BAH reductions may be more or less than the congressionally mandated payments, depending on the location of the privatized housing projects,

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<sup>68</sup>H.R. Rep. No. 115-404 (2017) (Conf. Rep.).

<sup>69</sup>As required in the National Defense Authorization Acts for Fiscal Years 2018 and 2019, the percentage of local BAH used to calculate the congressionally mandated payment was 1 percent from January through December of 2018, plus another 5 percent from September through December of that year. In calendar year 2018, the percentage of the BAH reduction was not the same as the percentage used for the congressionally mandated payment. Specifically, the BAH reduction in calendar year 2018 was 4 percent.

<sup>70</sup>In calendar year 2019, the percentage of the BAH reduction was the same as the percentage used for the congressionally mandated payment.

<sup>71</sup>Underfunded projects are to be identified by the Chief Housing Officer of the Department of Defense, in conjunction with the Secretaries of the military departments. The responsibilities of the DOD Chief Housing Officer include the creation and standardization of policies and processes regarding housing units, and the oversight of the administration of any DOD-wide policies regarding housing units to include, in coordination with the military departments, the Military Housing Privatization Initiative Tenant Bill of Rights and Military Housing Privatization Initiative Tenant Responsibilities document.



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DOD officials acknowledged that these variances between the BAH reductions and the congressionally mandated payments have occurred, but stated that they calculated each in accordance with legal requirements.

To date, Congress has not revised the National Defense Authorization Act provisions to require DOD's payments to privatized housing projects to be calculated based on the national average BAH rate. Doing so would be consistent with how DOD has been required, by law, to calculate the BAH reduction and which, as discussed earlier, allows DOD officials to ensure that the reduction in BAH affects servicemembers equitably.

Unless Congress take steps to ensure that payments to privatized housing projects are calculated using the national BAH rate, some privatized housing projects will continue to receive payments that are less than intended, thereby potentially hindering those projects' ability to maintain quality housing for servicemembers. Conversely, some privatized housing projects will continue to receive payments that are more than intended, thereby increasing revenue more than is warranted, in some cases by \$1 million or more.

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## Conclusions

DOD has long provided BAH to servicemembers as one of the largest parts of their cash compensation. To that end, DOD spends billions of dollars each year to pay BAH to approximately 1 million servicemembers. The process for setting BAH is essential to help ensure that DOD provides suitable housing for servicemembers and their dependents. We found that DOD generally has met its goal of providing housing allowances to help cover costs of suitable housing in the private sector, but has not collected the required number of sample units for all locations to help ensure BAH rates are accurate. If DOD does not assess its process for collecting sample units, the department will continue to be limited in its ability to set accurate BAH rates. Additionally, we found that guidance documents on the BAH process do not accurately reflect or include details about key elements of the department's sampling methodology. By reviewing and updating its guidance, DOD will help ensure that all stakeholders involved in the process, including the MHOs, understand how BAH rates are determined, as well as better appreciate the importance of collecting the minimum number of units needed to calculate BAH rates using current data.

We also found that DOD has taken some steps to collect and monitor data used for setting BAH rates; however, DOD has not consistently relied on certain key types of data used in monitoring to set accurate BAH rates. Housing cost trends have not been consistently monitored over time and compared against the BAH. In addition, DOD does not have a process that uses quality information to monitor external alternative data sources and other data known as anchor points or the interpolation table, and does not effectively mitigate the potential bias that can occur when selecting rental housing data to include in its data collection. By establishing and implementing a process that allows for consistent monitoring of key data, consistent use of quality information, and timely remediation of any identified deficiencies, DOD would help ensure that BAH rates are appropriate for servicemembers' rank and that rates reflect the current costs of housing in the private sector.

BAH is significant, not only as a core component of servicemembers' cash compensation, but also as the primary revenue source for privatized housing projects. Privatized housing developers rely on servicemembers' BAH payments, in part, to maintain quality housing. As such, Congress authorized DOD to make payments to privatized housing projects to offset a reduction in BAH. However, by requiring BAH reductions to be reduced by the national BAH rate and the congressionally mandated payments to privatized housing projects be based on the local BAH rate, Congress created unintended distortions in payments to the projects. Until Congress takes steps to ensure that payments are calculated based on the national average, consistent with BAH reductions, these distortions will continue.

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## Matter for Congressional Consideration

Congress should consider revising the calculation for payments for privatized housing projects so that the payments are based on national average rates, consistent with the calculation for the BAH rate reduction.

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## Recommendations for Executive Action

We are making three recommendations to DOD.

The Secretary of Defense should ensure that the Military Compensation Policy directorate within the Office of the Deputy Assistant Secretary of Defense for Military Personnel Policy, in coordination with the military

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services, (1) assesses its process for collecting rental property data to determine ways to increase sample size of current representative data and (2) ensures sample size targets are met. (Recommendation 1)

The Secretary of Defense should ensure that the Military Compensation Policy directorate within the Office of the Deputy Assistant Secretary of Defense for Military Personnel Policy, in coordination with the military services, reviews and updates BAH guidance to ensure that information about the BAH rate-setting process, including its sampling methodology and use of minimum sample-size targets, is accurately and fully reflected. (Recommendation 2)

The Secretary of Defense should ensure that the Military Compensation Policy directorate within the Office of the Deputy Assistant Secretary of Defense for Military Personnel Policy, in coordination with the military services, establishes and implements a process for consistently monitoring anchor points, the interpolation table, external alternative data, and any indications of potential bias by using quality information to set BAH rates and ensuring timely remediation of any identified deficiencies. (Recommendation 3)

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## Agency Comments and Our Evaluation

We provided a draft of this report to DOD for review and comment. In its written comments, reprinted in their entirety in appendix III, DOD concurred with two recommendations (Recommendations 2 and 3) and partially concurred with Recommendation 1. DOD also provided technical comments, which we incorporated in the report as appropriate.

DOD partially concurred with our recommendation that the department (1) assess its process for collecting rental property data to determine ways to increase sample size of current representative data and (2) ensure sample size targets are met. In its comments, DOD stated it is evaluating aspects of its data collection to increase sample sizes where it is possible to do so; however, DOD stated it disagrees that sample size targets should be met in every case. Specifically, DOD stated that low sample sizes often reflect the limited availability of housing stock of a particular housing type within a military housing area rather than a failure of data collection. As noted in our report, we acknowledge that the lack of adequate housing may prevent DOD from meeting sample size targets in certain military housing areas; however, we continue to believe that DOD should take steps to increase its sample size to help ensure sample size

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targets are met. In doing so, DOD will be better positioned to produce rates that are accurate and reflective of current suitable housing costs, consistent with the stated goals of the program.

We are sending copies of this report to the appropriate congressional committees, the Secretary of Defense, the Secretary of Homeland Security, and the Under Secretary of Defense for Personnel and Readiness. In addition, the report is available at no charge on our website at <https://www.gao.gov>.

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If you or your staff have any questions about this report, please contact me at (202) 512-2775 or [FieldE1@gao.gov](mailto:FieldE1@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. Key contributors to this report are listed in appendix IV.

A handwritten signature in black ink, appearing to read "Elizabeth A. Field". The signature is fluid and cursive, with a large loop at the end.

Elizabeth A. Field  
Director, Defense Capabilities and Management

# Appendix I: Overview of Alternative Federal Government Methods for Collecting Housing Data

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## The Federal Government Has Sources for Housing Data That Is Nationally Representative and Publicly Available

We found the following three sources of nationally representative and publicly available housing data that is produced by federal government agencies excluding the Department of Defense (DOD).

**American Community Survey:** The U.S. Census Bureau conducts this annual survey that is designed to provide communities with reliable and timely data on social (citizenship status, educational attainment, language spoken at home, marital status), economic (class of worker, employment status, health insurance coverage, income and earnings, place of work) housing (occupancy/vacancy status, rent, rooms/bedrooms), and demographic characteristics (age and sex, race, total population). The survey has an annual sample size of about 3.5 million addresses, with survey information collected continuously throughout the year and released annually for all areas by combining the latest 5 years of data.

The Census Bureau uses data collected in the American Community Survey to provide estimates on a broad range of population, housing unit, and household characteristics for states, counties, cities, school districts, congressional districts, census tracts, block groups, and many other geographic areas. The federal government uses American Community Survey information to evaluate the need for federal programs and to run those programs effectively. For example, the U.S. Department of Housing and Urban Development uses the Census Bureau's American Community 5-year gross-rent data collected for two-bedroom units as the base rents for its Fair Market Rents calculations.

**American Housing Survey:** The U.S. Census Bureau conducts this survey for the U.S. Department of Housing and Urban Development every odd-numbered year. The purpose of the American Housing Survey is to

provide up-to-date information about the nation's housing and measures changes in housing stock as it ages, including looking at the physical condition of homes and neighborhoods, the cost of maintaining homes, and the demographics of the individuals who occupy these homes. The American Housing Survey surveys the same housing units each period, adding new units to the sample each survey to adjust for new construction and the changing demographic characteristics of the United States. The survey samples approximately 115,000 housing units each odd-numbered year, and includes geographic identifiers for Census Division and the 15 largest Core-based Statistical Areas.

American Housing Survey data can be used to monitor supply and demand, as well as changes in housing quality and housing costs, to assess the housing needs of homeowners and renters, and to design and administer housing policies and laws. For example, the U.S. Department of Housing and Urban Development uses the American Housing Survey to create a biennial Worst Case Needs report to Congress, improve the efficiency and effectiveness of housing programs, and design programs appropriate for different target groups, such as low-income families, first-time home buyers, and the elderly. The U.S. Department of Housing and Urban Development also uses the data to allocate funds to resolve housing problems, determine qualifications for low-income housing assistance programs, and plan community development, such as roads and schools.

**Consumer Expenditure Quarterly Interview Survey:** The U.S. Census Bureau is the data collection agent for the U.S. Bureau of Labor Statistics Consumer Expenditure Survey. The survey is administered quarterly and collects information on U.S. households' incomes, expenditures, and demographics. The U.S. Bureau of Labor Statistics primarily uses these data to update the Consumer Price Index. The Consumer Expenditure Quarterly Interview Survey targets large, recurring expenditures (such as rent, utilities, and mortgage payments). Each household is interviewed for four consecutive quarters. Data are also collected on a rolling basis so that annual data will include households that have been interviewed one to four times. The Consumer Expenditure Quarterly Interview Survey surveys a nationally representative sample of approximately 50,400 households each year.

## Alternative Federal Government Housing Data Sources Have Different Purposes and Methodologies than the Department of Defense’s Basic Allowance for Housing

DOD’s Basic Allowance for Housing (BAH) process is similar to the other federal agencies surveys described above in that they all collect housing cost data. However, each has different purposes and methodologies for doing so. For example, the purpose of DOD’s BAH process is to provide fair housing allowances to servicemembers. The purpose of the American Community Survey is to provide communities with reliable and timely social, economic, housing, and demographic data. However, the purpose of the American Housing Survey is to provide up-to-date information about the nation’s housing and it measures changes in housing stock as it ages. Lastly, the purpose of the Consumer Expenditure Quarterly Interview Survey is to find out how Americans spend their money.

DOD’s BAH process collects rental housing costs data as part of its methodology; however, the external alternative methods have not collected data solely about rental housing costs. The American Community Survey, the American Housing Survey, and the Consumer Expenditure Quarterly Interview Survey collect information on the housing unit and some of these units may be rentals or owned. Table 7 below describes DOD’s BAH process for collecting rental-housing data compared to external alternative methods.

**Table 7: DOD’s Basic Allowance for Housing Process for Collecting Rental Housing Data Compared to External Alternative Methods**

	<b>Basic Allowance for Housing</b>	<b>American Community Survey</b>	<b>American Housing Survey</b>	<b>Consumer Expenditure Quarterly Interview Survey</b>
<b>Purpose</b>	To provide fair housing allowances to servicemembers, determined by DOD to enable members to afford suitable rental housing near their duty location based on geographic duty location, pay grade, and dependent status.	To provide communities with reliable and timely social, economic, housing, and demographic data.	To provide up-to-date information about nation’s housing and measures changes in housing stock as it ages.	To find out how Americans spend their money.
<b>Data Collected</b>	Rental housing and utilities.	Social, economic, housing, and demographic characteristics.	Wide range of housing subjects.	Large, recurring expenditures and expenditures that occur on a regular basis.



**Appendix I: Overview of Alternative Federal Government Methods for Collecting Housing Data**

	<b>Basic Allowance for Housing</b>	<b>American Community Survey</b>	<b>American Housing Survey</b>	<b>Consumer Expenditure Quarterly Interview Survey</b>
<b>Timeframe</b>	Annually in the spring and summer.	Data collected continuously throughout the year.	Biennially between May and September in odd-numbered years.	Quarterly survey conducted on a rolling basis.
<b>Geographic Location</b>	Includes about 300 Military Housing Areas; which are defined by sets of zip codes.	5-year estimates include nearly all geographic areas, census tracts and block groups. However, 1-year data are produced for geographic areas with at least 65,000 people.	Includes national data and 35 metropolitan areas.	Sample of 91 selected metropolitan and rural areas.
<b>Housing types</b>	Rental costs are collected for six standard housing types used as anchor points. <sup>a</sup>	Data are collected for all housing units.	Data are collected for all housing units.	Data are collected for all housing units.
<b>Sample Size</b>	For each anchor point in each Military Housing Area, the goal is to have a minimum of 30 approved units. Samples are judgmentally selected.	Annual sample size of about 3.5 million selected by complex random sampling methodology. <sup>b</sup>	The 2017 sample was comprised of 114,860 housing units selected by complex random sampling methodology. <sup>c</sup>	Annual sample size of approximately 50,400 or 4,200 units each month selected by complex random sampling methodology. <sup>d</sup>
<b>Available</b>	Data obtained on available/vacant rental units.	Data obtained from unit occupant or from other sources if vacant.	Data obtained from unit occupant or from other sources if vacant.	Data are obtained from occupant.
<b>Suitable</b>	<p>Unsuitable/Out of Scope:</p> <ul style="list-style-type: none"> <li>• Mobile home</li> <li>• Seasonal units</li> <li>• One-room units</li> <li>• Furnished units</li> <li>• Low-income</li> <li>• Lavish units</li> </ul> <p>The military housing offices identify census tracts to be excluded from rental data collection based on reasons such as high crime rate, and environmental concerns. The military housing offices and the BAH contractor should follow unit size guideline specific to each Military Housing Area and housing type. The military housing offices can deem units unsuitable based on judgment.</p>	<p>Unsuitable/Out of Scope:</p> <ul style="list-style-type: none"> <li>• units that have been demolished</li> <li>• business or non-residential unit</li> </ul> <p>Census tracts are not excluded from rental data collection.</p>	<p>Unsuitable/Out of Scope:</p> <ul style="list-style-type: none"> <li>• group quarters</li> <li>• railroad cars</li> <li>• business storage or non-residential unit</li> <li>• units unfit for human habitation</li> </ul> <p>Census tracts are not excluded from rental data collection.</p>	<p>Unsuitable/Out of Scope:</p> <ul style="list-style-type: none"> <li>• living on base</li> <li>• nursing homes</li> <li>• prisons</li> <li>• under construction</li> <li>• non-residential</li> </ul> <p>Census tracts are not excluded from rental data collection.</p>

Source: GAO analysis of Department of Defense and Census Bureau data. | GAO-21-137

<sup>a</sup>There are six anchor points that are associated to six main housing types: 1-bedroom apartment; 2-bedroom apartment; 2-bedroom townhouse/duplex; 3-bedroom townhouse/duplex; 3-bedroom single-family detached house; and 4-bedroom single-family detached house. DOD allows some housing types to be substituted for an alternative housing type when the standard housing type is not

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**Appendix I: Overview of Alternative Federal Government Methods for Collecting Housing Data**

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available or is scarce within the military housing area. Specifically, a 3-bedroom apartment can be substituted for a 2-bedroom duplex/townhouse and a 5-bedroom single-family house can be substituted for a 4-bedroom single-family house.

<sup>b, c, d</sup>These surveys each include data collected on housing units that could be rentals or owned.

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## **Alternative Approach to Military Compensation That Does Not Include Rental Housing Data**

The 13<sup>th</sup> Quadrennial Review of Military Compensation was directed in its charter to determine whether the structure of the current military compensation system, as a system of basic pay, housing and subsistence allowances, and tax advantage remains appropriate, or whether an alternate compensation structure, such as a salary system, would enhance readiness and better enable DOD to recruit and retain tomorrow's military force. Such an alternative compensation structure would not rely on local rental housing data. However, based on the analysis performed, DOD recommended in its December 2020 report that the current compensation system be retained.<sup>1</sup>

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<sup>1</sup> DOD, *Report of the Thirteenth Quadrennial Review of Military Compensation Volume I. Main Report* (December 2020).

## Appendix II: Interpolation Table and National Average Basic Allowance for Housing (BAH) Rates for Servicemembers in 2020

The Department of Defense (DOD) established separate housing types that are associated with six anchor points for servicemembers with and without dependents and established a method to ensure that allowance rates would increase with each pay grade. Each of the six anchor points are assigned to a pay grade and dependency status. For example, an enlisted E5 with dependent is the anchor point for a 2-bedroom townhouse or duplex. For those pay grades that are not assigned to an anchor point, DOD uses interpolation (or “filling in” between anchor points) to calculate the BAH rate. With the exception of E1-E4 with dependents, to interpolate rates, DOD calculates the difference between the assigned anchor point and the next anchor point and adds a percentage of that difference to the assigned anchor point rate. For E1-E4 with dependents, to calculate the total housing cost, DOD uses the midpoint between a 2-bedroom apartment and 2-bedroom townhouse/duplex. See table 8 for DOD’s BAH housing standards, anchor points, and whether interpolation is performed for each pay grade and dependency status.

**Appendix II: Interpolation Table and National Average Basic Allowance for Housing (BAH) Rates for Servicemembers in 2020**

**Table 8: Basic Allowance for Housing Standards and Interpolation<sup>a</sup> between Anchor Points Performed**

Housing type (anchor point)	With dependent pay grade			Without dependent pay grade		
	Enlisted members	Warrant officers	Commissioned officers <sup>b</sup>	Enlisted members	Warrant officers	Commissioned officers <sup>b</sup>
1-bedroom apartment (1)	—	—	—	E1-E4 (anchor point) E5*	—	—
2-bedroom apartment (2)	E1-E4*	—	—	E6-E7*	W1*	O1 (anchor point) O2*
2-bedroom townhouse or duplex (3)	E5 (anchor point)	—	O1-O2*	E8-E9*	W2-W3*	O1E (anchor point) O2E* O3*
3-bedroom townhouse or duplex (4)	E6 (anchor point) E7-E8*	W1-W2*	O1E-O2E* O3*	—	W4-W5*	O3E (anchor point) O4-O5*
3-bedroom single family detached house (5)	E9*	W3 (anchor point) W4-W5*	O3E* O4*	—	—	O6 (anchor point) O7-O10*
4-bedroom single family detached house (6)	—	—	O5 (anchor point) O6-O10*	—	—	—

Legend:

⚓ = anchor point

\* = requires interpolation

— = not applicable, does not exist for the housing type

Source: GAO analysis of Department of Defense (DOD) information. | GAO-21-137

<sup>a</sup>Interpolating is the filling in between anchor points. With the exception of E1-E4 with dependents, to interpolate rates, DOD calculates the difference between the assigned anchor point and the next anchor point and adds a percentage of that difference to the assigned anchor point rate. To calculate BAH rate for E1-E4 with dependents, DOD uses the midpoint between a 2-bedroom apartment and 2-bedroom townhouse/duplex.

<sup>b</sup>Pay grades of O1E, O2E, and O3E represent commissioned officers with over 4 years active service as enlisted members.

Results of these efforts produce monthly local BAH rates for all pay grades by dependency status. See table 9 for the 2020 national averages—monthly and annual—for the BAH rate and BAH amount by pay grade and dependency status.

**Appendix II: Interpolation Table and National Average Basic Allowance for Housing (BAH) Rates for Servicemembers in 2020**

**Table 9: Monthly and Annual National Averages for the Basic Allowance for Housing (BAH) Rates by Pay Grade and Dependency Status, Calendar Year 2020**

		Monthly national average BAH rate		Annual national average BAH amount	
		With dependents	Without dependents	With dependents	Without dependents
<b>Enlisted members</b>	E01	\$1,519	\$1,177	\$18,226	\$14,129
	E02	\$1,561	\$1,361	\$18,732	\$16,336
	E03	\$1,642	\$1,324	\$19,708	\$15,882
	E04	\$1,589	\$1,306	\$19,070	\$15,673
	E05	\$1,741	\$1,575	\$20,893	\$18,904
	E06	\$1,934	\$1,659	\$23,208	\$19,911
	E07	\$1,980	\$1,694	\$23,754	\$20,331
	E08	\$2,074	\$1,838	\$24,887	\$22,054
	E09	\$2,200	\$1,854	\$26,399	\$22,243
<b>Commissioned officers</b>	O01	\$1,629	\$1,484	\$19,552	\$17,805
	O02	\$1,830	\$1,660	\$21,957	\$19,920
	O03	\$2,101	\$1,902	\$25,206	\$22,828
	O04	\$2,410	\$2,134	\$28,917	\$25,606
	O05	\$2,615	\$2,245	\$31,380	\$26,941
	O06	\$2,717	\$2,426	\$32,603	\$29,112
	O07-O10	\$2,818	\$2,503	\$33,813	\$30,040
	<b>Commissioned officers with over 4 years active service as enlisted members</b>	O01E	\$2,014	\$1,725	\$24,167
	O02E	\$2,126	\$1,902	\$25,506	\$22,824
	O03E	\$2,276	\$2,006	\$27,313	\$24,072
<b>Warrant officers</b>	W01	\$1,675	\$1,283	\$20,105	\$15,396
	W02	\$1,991	\$1,688	\$23,888	\$20,256
	W03	\$2,105	\$1,858	\$25,263	\$22,292
	W04	\$2,201	\$1,970	\$26,408	\$23,640
	W05	\$2,265	\$1,962	\$27,178	\$23,549

Source: GAO analysis of Department of Defense information. | GAO-21-137

## Appendix III: Comments from the Department of Defense



MANPOWER AND  
RESERVE AFFAIRS

ASSISTANT SECRETARY OF DEFENSE  
1500 DEFENSE PENTAGON  
WASHINGTON, D.C. 20301-1500

1/5/2021

Ms. Elizabeth A. Field  
Director, Defense Capabilities and Management  
U.S. Government Accountability Office  
441 G Street, NW  
Washington DC 20548

Dear Ms. Field:

This is the Department of Defense (DoD) response to the GAO report, "Military Housing: DoD Needs to Enhance Oversight of Its Process for Setting Allowances and Subsidizing Privatized Housing," dated December 1, 2020 (GAO-21-137).

The Department appreciates GAO's review and generally agrees with the contents of the report. As GAO found, our data collection methods and our processes to set basic allowance for housing rates are extensive and sound. We continue to seek ways to improve this program and welcome your thoughtful recommendations. Our responses to your recommendations are attached.

GAO specifically noted that in some locations we experience challenges in finding adequate housing sample sizes upon which to base rates. As a result, GAO recommended we always ensure sample size targets are met. While we strive to meet these targets, due to the housing demographics in certain locations, this is not always possible. Low sample sizes are not necessarily a failure of data collection. As a result, we employ alternative methodologies and data sources to supplement data collection in these areas. We will continue to strive to meet all of our sample size targets; however, we cannot guarantee that DoD will always meet the sample size targets in each and every location.

Thank you for your thorough review and recommendations for our basic allowance for housing program. My point of contact for this review is Ms. Allison Lovelady, who can be reached at (703) 819-1078 or [allison.e.lovelady.civ@mail.mil](mailto:allison.e.lovelady.civ@mail.mil).

Sincerely,

PENROD VIRGINIA S. PENROD 309140 72640 10/1/19  
3536 03/02/2021 08:50:23-10000

Virginia S. Penrod  
Acting

Attachment:  
As stated

GAO DRAFT REPORT DATED DECEMBER 1, 2020  
GAO-21-137 (GAO CODE 103937)

“MILITARY HOUSING: DOD NEEDS TO ENHANCE OVERSIGHT OF ITS PROCESS  
FOR SETTING ALLOWANCES AND SUBSIDIZING PRIVATIZED HOUSING”

DEPARTMENT OF DEFENSE COMMENTS  
TO THE GAO RECOMMENDATIONS

**RECOMMENDATION 1:** The Secretary of Defense should ensure that the Military Compensation Policy directorate within the Office of the Deputy Assistant Secretary of Defense for Military Personnel Policy, in coordination with the military services, (1) assesses its process for collecting rental property data to determine ways to increase sample size of current representative data and (2) ensure sample size targets are met.

**DoD RESPONSE:** Partially Concur: DoD agrees sample sizes are below targets for certain housing types in certain Military Housing Areas. The Department is evaluating every aspect of the data collection to increase sample sizes where it is possible to do so.

DoD disagrees with point (2) that sample size targets should be met in every case. Low sample sizes often reflect the limited availability of housing stock of a particular housing type within a Military Housing Area (MHA), not a failure of data collection. For example, in MHAs where there are few or no existing adequate 2-bedroom Townhouses, collecting 30-75 units is clearly an unachievable goal. This by no means represents a flaw in the data collection, but rather an idiosyncrasy of the local housing market. In such instances, DoD has developed alternative, data driven methodologies to smooth housing costs in these areas and set accurate rates. Meeting target sample sizes is a major goal of the program, but should not be a requirement, as doing so is impossible in some cases, and striving to inflate sample sizes in these instances could lead to the inclusion of substandard housing units in the BAH sample, and thus less accurate rates.

**RECOMMENDATION 2:** The Secretary of Defense should ensure that the Military Compensation Policy directorate within the Office of the Deputy Assistant Secretary of Defense for Military Personnel Policy, in coordination with the military services, reviews and updates BAH guidance to ensure that information about the BAH rate setting process, including its sampling methodology and use of minimum sample size targets, is accurately and fully reflected.

**DoD RESPONSE:** DoD Concur.

**RECOMMENDATION 3:** The Secretary of Defense should ensure that the Military Compensation directorate within the Office of the Deputy Assistant Secretary of Defense for Military Personnel Policy, in coordination with the military services, establishes and implements a process for consistently monitoring anchor points, the interpolation table, external alternative data, and any indications of potential bias by using quality information to set BAH rates and ensuring timely remediation of any identified deficiencies.

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**Appendix III: Comments from the Department  
of Defense**

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**DoD RESPONSE:** Concur. DoD agrees the program elements mentioned above should be consistently monitored. DoD is planning for a thorough review process of these elements.



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## Text of Appendix III: Comments from the Department of Defense

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Page 1

Ms. Elizabeth A. Field

Director, Defense Capabilities and Management

U.S. Government Accountability Office

441 G Street, NW

Washington DC 20548

Dear Ms. Field:

This is the Department of Defense (DoD) response to the GAO report, "Military Housing: DoD Needs to Enhance Oversight of Its Process for Setting Allowances and Subsidizing Privatized Housing," dated December 1, 2020 (GAO-21-137).

The Department appreciates GAO's review and generally agrees with the contents of the report. As GAO found, our data collection methods and our processes to set basic allowance for housing rates are extensive and sound. We continue to seek ways to improve this program and welcome your thoughtful recommendations. Our responses to your recommendations are attached.

GAO specifically noted that in some locations we experience challenges in finding adequate housing sample sizes upon which to base rates. As a result, GAO recommended we always ensure sample size targets are met. While we strive to meet these targets, due to the housing demographics in certain locations, this is not always possible. Low sample sizes are not necessarily a failure of data collection. As a result, we employ alternative methodologies and data sources to supplement data collection in these areas. We will continue to strive to meet all of our sample size targets; however, we cannot guarantee that DoD will always meet the sample size targets in each and every location.

Thank you for your thorough review and recommendations for our basic allowance for housing program. My point of contact for this review is Ms. Allison Lovelady, who can be reached at (703) 819-1078 or [allison.e.lovelady.civ@mail.mil](mailto:allison.e.lovelady.civ@mail.mil).

Sincerely,

PENROD.VIRGINIA.STRONG

Acting

Attachment:

As stated

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GAO DRAFT REPORT DATED DECEMBER 1, 2020 GAO-21-137 (GAO CODE 103937) "MILITARY HOUSING: DOD NEEDS TO ENHANCE OVERSIGHT OF ITS PROCESS FOR SETTING ALLOWANCES AND SUBSIDIZING PRIVATIZED HOUSING"

DEPARTMENT OF DEFENSE COMMENTS TO THE GAO  
RECOMMENDATIONS

**RECOMMENDATION 1: The Secretary of Defense should ensure that the Military Compensation Policy directorate within the Office of the Deputy Assistant Secretary of Defense for Military Personnel Policy, in coordination with the military services, (1) assesses its process for collecting rental property data to determine ways to increase sample size of current representative data and (2) ensure sample size targets are met.**

**DoD RESPONSE: Partially Concur: DoD agrees sample sizes are below targets for certain housing types in certain Military Housing Areas. The Department is evaluating every aspect of the data collection to increase sample sizes where is it possible to do so.**

DoD disagrees with point (2) that sample size targets should be met in every case. Low sample sizes often reflect the limited availability of housing stock of a particular housing type within a Military Housing Area (MHA), not a failure of data collection. For example, in MHAs where there are few or no existing adequate 2-bedroom Townhouses, collecting 30-75 units is clearly an unachievable goal. This by no means represents a flaw in the data collection, but rather an idiosyncrasy of the local housing market. In such instances, DoD has developed alternative, data driven methodologies to smooth housing costs in these areas and set accurate rates. Meeting target sample sizes is a major goal of the program, but should not be a requirement, as doing so is impossible in some cases, and striving to inflate sample

sizes in these instances could lead to the inclusion of substandard housing units in the BAH sample, and thus less accurate rates.

**RECOMMENDATION 2:** The Secretary of Defense should ensure that the Military Compensation Policy directorate within the Office of the Deputy Assistant Secretary of Defense for Military Personnel Policy, in coordination with the military services, reviews and updates BAH guidance to ensure that information about the BAH rate setting process, including its sampling methodology and use of minimum sample size targets, is accurately and fully reflected.

**DoD RESPONSE:** DoD Concur.

**RECOMMENDATION 3:** The Secretary of Defense should ensure that the Military Compensation directorate within the Office of the Deputy Assistant Secretary of Defense for Military Personnel Policy, in coordination with the military services, establishes and implements a process for consistently monitoring anchor points, the interpolation table, external alternative data, and any indications of potential bias by using quality information to set BAH rates and ensuring timely remediation of any identified deficiencies.

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**DoD RESPONSE:** Concur. DoD agrees the program elements mentioned above should be consistently monitored. DoD is planning for a thorough review process of these elements.

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## Appendix IV: GAO Contact and Staff Acknowledgments

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### GAO Contact

Elizabeth A. Field, Director, (202) 512-2775 or [FieldE1@gao.gov](mailto:FieldE1@gao.gov).

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### Staff Acknowledgments

In addition to the contact above, the following are key contributors to this report: Lori Atkinson (Assistant Director), Stephanie Santoso (Analyst in Charge), Vincent Buquicchio, Christopher Gezon, Cynthia Grant, Dawn Godfrey, Terence Lam, Stephanie Moriarty, Richard Powelson, Terry Richardson, Khristi Wilkins, and John Van Schaik.

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## Related GAO Products

*Military Housing: DOD Needs to Strengthen Oversight and Clarify Its Role in the Management of Privatized Housing.* [GAO-20-281](#). Washington, D.C.: March 26, 2020.

*Military Housing: Preliminary Recommendations to Strengthen DOD's Oversight and Monitoring of Privatized Housing.* [GAO-20-471T](#). Washington, D.C.: March 3, 2020.

*Military Housing Privatization: Preliminary Observations on DOD's Oversight of the Condition of Privatized Military Housing.* [GAO-20-280T](#). Washington, D.C.: Dec. 3, 2019.

*Military Housing Privatization: DOD Should Take Steps to Improve Monitoring, Reporting, and Risk Assessment.* [GAO-18-218](#). Washington, D.C.: March 13, 2018.

*Defense Infrastructure: Army Has a Process to Manage Litigation Costs for the Military Housing Privatization Initiative.* [GAO-14-327](#). Washington, D.C.: April 3, 2014.

*Military Housing: Information on the Privatization of Unaccompanied Personnel Housing.* [GAO-14-313](#). Washington, D.C.: March 18, 2014.

*Military Housing: Enhancements Needed to Housing Allowance Process and Information Sharing among Services.* [GAO-11-462](#). Washington, D.C.: May 16, 2011.

*Military Personnel: Military and Civilian Pay Comparisons Present Challenges and Are One of Many Tools in Assessing Compensation.* [GAO-10-561R](#). Washington, D.C.: April 1, 2010.

*Military Housing Privatization: DOD Faces New Challenges Due to Significant Growth at Some Installations and Recent Turmoil in the Financial Markets.* [GAO-09-352](#). Washington, D.C.: May 15, 2009.

*Military Housing: Management Issues Require Attention as the Privatization Program Matures.* [GAO-06-438](#). Washington, D.C.: April 28, 2006.

*Military Housing: Further Improvements Needed in Requirements Determinations and Program Review.* [GAO-04-556](#). Washington, D.C.: May 19, 2004.

*Military Housing: Better Reporting Needed on the Status of the Privatization Program and the Costs of Its Consultants.* [GAO-04-111](#). Washington, D.C.: October 9, 2003.

*Military Housing: Opportunities That Should Be Explored to Improve Housing and Reduce Costs for Unmarried Junior Servicemembers.* [GAO-03-602](#). Washington, D.C.: June 10, 2003.

*Military Housing: Management Improvements Needed as the Pace of Privatization Quickens.* [GAO-02-624](#). Washington, D.C.: June 21, 2002.

*Military Housing: DOD Needs to Address Long-Standing Requirements Determination Problems.* [GAO-01-889](#). Washington, D.C.: August 3, 2001.

*DOD Personnel: Improvements Made to Housing Allowance Rate-Setting Process.* [GAO-01-508](#). Washington, D.C.: April 16, 2001.

*Military Housing: Continued Concerns in Implementing the Privatization Initiative.* [GAO/NSIAD-00-71](#). Washington, D.C.: March 30, 2000.

*Military Housing: Privatization Off to a Slow Start and Continued Management Attention Needed.* [GAO/NSIAD-98-178](#). Washington, D.C.: July 17, 1998.

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