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TECHNICAL HANDBOOK FOR  
ENVIRONMENTAL HEALTH AND ENGINEERING  
VOLUME IV - REAL PROPERTY MANAGEMENT  
**PART 36 - QUARTERS MANAGEMENT**

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**CHAPTER 36-7 CONSTRUCTION OF HOUSING**

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Unless otherwise provided by law (e.g., 10 U.S.C. § 2826), the following provides guidance to agencies on determining housing construction needs and construction standards:

**36-7.1 DETERMINATION OF NUMBER OF FAMILIES TO BE HOUSED AND PATTERN OF HOUSING REQUIRED**

The Indian Health Service (IHS) should determine the number of families to be housed under the particular circumstances and the probable pattern of family size and composition by a statistical study of families and numbers of dependents within the IHS adjusted by past experience, changes in staffing patterns, and national trends in family size. Most frequently, IHS will be adding a limited number of houses at a station where some housing already exists. Under these circumstances, IHS should first make certain that existing housing (owned, leased, or otherwise available to IHS) is properly assigned. After ascertaining that there is a proper utilization of existing housing, IHS should determine what further construction, if any, is required to establish a proper pattern of housing at the station. The determination must discount temporary and unusual peak numbers of employees at the station, but not necessarily recurring requirements for seasonal employees who must be housed. Three general situations with basically different housing requirements are likely to occur:

- A. Small Station - One to five Government houses are to be supplied at a station, it is likely that no stable family pattern can be predicted on a statistical basis. The most reasonable method of meeting the housing requirement under these circumstances is to supply three-bedroom houses, one two-bedroom house, and one four-bedroom house.
- B. Medium Station - Five to 25 Government houses are considered a medium station, this size station is probably still too small to expect a stable family pattern, but the group is too large to permit building all houses the same size. Under these circumstances, IHS should seek to develop a flexible housing

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supply, if possible. However, in view of family size trends, it would be best to construct mostly three-bedroom houses, with a smaller number of two-bedroom houses, and a few four-bedroom houses.

- C. Large Station - More than 25 Government houses is a large station and it is reasonable to expect that a fairly stable family pattern exists. Under these circumstances, IHS should determine what this pattern is, as described above, and, utilizing Table 1, below, plan to provide the appropriate number and distribution of rooms. In the table of net floor areas given below, Table 1, the normal construction limits will govern the maximum areas of houses to be constructed, except that agencies may construct up to the statutory or maximum limitation for housing for commanding officers and in unusual circumstances. The numbers of rooms will be governed by Table 1, below, showing the relation between number of bedrooms and net square footage areas. The Office of Management and Budget (OMB) will consider exceptions under special circumstances only when fully justified.

<b>NUMBER OF ROOMS</b>				
<b>Persons in household</b>	<b>Rooms to be provided</b>	<b>Bedrooms</b>	<b>Baths One-story</b>	<b>Baths Two-story</b>
2-3	4	2	1	1 or 1½
4	5, 5½, or 6	3	1 or 1½	2 or 2½
5	5½, 6, or 7	3 or 4	1½ or 2	2 or 2½
6	7	4	2	2 or 2½

*Table 1*

### **36-7.2 TYPES OF FAMILY DWELLINGS TO BE CONSTRUCTED**

Family dwellings similar in type to acceptable dwellings normally built in the local area will be constructed whenever practicable, with full advantage being taken of the economy of construction and maintenance of multiple-family dwellings - apartment, row, or duplex. The construction of single-family dwellings may receive special consideration in locations where remoteness of the station from other community facilities makes it undesirable. Special considerations may include safety, employee morale, recruitment and retention of personnel, and satisfactory living conditions under adverse circumstances.

### **36-7.3 PROSPECTIVE RENTAL LEVELS AND ITS EFFECT ON CONSTRUCTION**

The type of dwellings to be constructed will also be governed by the amount of rent that the occupants can afford to pay (public quarters excepted) as determined in accordance with this circular. Hence, care must be taken to ensure that dwellings would rent at rates within the reach of employees to be housed. Where there are large numbers of high-salaried personnel who would normally rent larger houses than are

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usually provided on the station and where the ability to hold such employees in Government service may be dependent upon the housing available, agencies may construct a limited number of larger houses upon securing specific advance approval from OMB.

**36-7.4 DETERMINATION OF THE NUMBER OF ROOMS TO BE PROVIDED IN FAMILY HOUSING**

The number of rooms to be provided must be based on the size and normal composition of families to be housed. Consideration should be given to the trends in family size. It is permissible to provide larger houses for civilian directors or military commanders of large stations, for military officers of general or flag rank, chiefs of Foreign Service missions, Foreign Service officers with the rank of career minister, and to a limited extent, for higher salaried personnel who can afford to and will pay commercially comparable rents for superior quarters. Table 2, below, indicates the number of rooms and bedrooms that should normally be planned for families of varying sizes. Again, OMB will consider justified exceptions depending upon the remoteness of the small or medium station and the extent to which the family is isolated from normal community facilities.

**36-7.5 NET AREAS OF HOUSES**

The net areas shown below in Table 2 may be increased 10 percent (a) if outside the continental United States, (b) for commanding officers or civilian heads of large installations, or (c) under conditions of extreme isolation where the family may be confined to the home for long periods due to weather conditions or lack of community facilities within reasonable distance. The minimum floor areas below represent the limit below which it is not deemed advisable to go when building permanent housing; such minimum areas should be used only for multiple-family dwellings. Maximum floor areas represent the limit above which Federal funds need not be invested to provide housing reasonably commensurate with income for all but the highest income groups.

Although agencies cannot always determine the grades of the occupants, there is a normal range of grades for the personnel who are required or permitted to occupy housing at the installation. The minimum size for the number of bedrooms needed should be provided for those in the lowest grades in order that the housing may not be more expensive than the occupants could be expected to rent if they were securing their own quarters commercially. Larger quarters may be provided for progressively higher grades up to the maximums for personnel at and above general schedule grade 14 and ranks equivalent to the military rank of colonel.

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<i>MAXIMUM AND MINIMUM NET FLOOR AREA PER DWELLING UNIT</i>				
	<i>1 Bedroom<sup>1/</sup></i>	<i>2 Bedrooms</i>	<i>3 Bedrooms</i>	<i>4 or more Bedrooms</i>
Minimum <sup>2/</sup>	550 sq. ft.	750 <sup>3/</sup>	960 <sup>3/</sup>	1,190 <sup>3/</sup>
Normal <sup>4/</sup>	730	1,000	1,415	1,670
Maximum	810	1,250 <sup>5/</sup>	1,670 <sup>5/</sup>	2,100 <sup>6/</sup>

*Table 2*

<sup>1</sup> For multi-family or apartment construction only. No one-bedroom houses should be built.

<sup>2</sup> Any construction proposed to provide less square footage than these minimums must be specifically approved by OMB.

<sup>3</sup> Applies to flats or multi-family construction. Not recommended for single or duplex houses.

<sup>4</sup> Budget estimates will not be considered for construction beyond these normal limits unless accompanied by a specific determination of IHS that up to the specified maximums are necessary.

<sup>5</sup> Applies to single-family houses without basements for higher salaried personnel only.

<sup>6</sup> Applies to single-family houses without basements for higher salaried personnel only. Larger areas may be considered by OMB on special justification for heads of large stations, flag officers, or in unusual circumstances only.

### **36-7.6 SPECIAL FEATURES**

Special features may be provided to meet special work or isolation conditions. These include: extra rooms with outside doors for the employees whose home is also their work headquarters; special access to bath or shower rooms without going through the house where the employee's work is particularly dirty and shower facilities are not provided in work buildings; fireplaces in remote areas where wood is readily available and the fireplaces would serve a practical purpose; extra storage space and facilities where distances to market are such as to necessitate purchasing food and other supplies in quantity; and some space for recreation purposes where families may be confined to the house for long periods of time during bad weather conditions.

Air conditioning provided by refrigeration equipment may be installed in living quarters only in locations where during the six warmest months of the year the dry bulb temperature is 80 °F or higher for over 650 hours or the wet bulb temperature is 67 °F or higher for over 800 hours.

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Air conditioning may also be provided by evaporative cooling when engineering studies indicate it is feasible and more economical than other mechanical refrigeration systems.

### **36-7.7 BASIC GOVERNMENT STANDARDS**

All PHS-Funded new construction must conform to the standards set forth in this Chapter; to those issued by the Department of Housing and Urban Development (HUD) in its publication entitled, Minimum Property Standards for Housing (HUD 4910.1); HUD's Federal Manufactured Home Construction and Safety Standards, and to OMB Circular A-45, revised, dated October 20, 1993. All PHS-funded rehabilitation shall conform to the standards and guidelines set forth in this Chapter. The HUD publications are available from the Superintendent of Documents, United States Government Printing Office.

PHS agencies shall provide for separate energy metering in all new construction and in all major renovations to existing buildings. In accord with Department of Energy policy (10 CFR 436.51).

### **36-7.8 COMPLIANCE WITH DESIGN STANDARDS**

New construction of family housing shall be planned in accordance with this chapter; nationally recognized design standards, such as those set forth in the Uniform Building Code or the codes developed by the Council of American Building Officials; and other IHS design and construction standards. Budget requests and apportionment requests for this purpose shall be based upon compliance with the approved design standards and the provisions of this chapter. The square-foot construction cost should not exceed that generally recognized as prevailing in the area for non-Federal dwellings of similar size and type of occupancy. Exceptions may be made, but they must plainly be set forth in the budget or apportionment request.

### **36-7.9 BUDGET AND APPORTIONMENT REQUESTS**

Consult OMB Circular No. A-11, Preparation and Submission of Budget Estimates, subsection 12.5(n), for guidance respecting budget and apportionment requests.

### **36-7.10 EXCEPTIONS/ADVANCE APPROVALS**

If exceptions to the criteria as stated in this chapter or advance approvals are required, written requests shall be submitted through Area Directors to the Headquarters East, Office of Environmental Health and Engineering, Division of Facilities Management, for subsequent determination by the appropriate office.