REGIONAL QUARTERS RENTAL SURVEY

COVERING
GOVERNMENT-FURNISHED QUARTERS
LOCATED IN

CALIFORNIA SURVEY REGION

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I. SURVEY BACKGROUND

The Quarters Management and Information Systems (QMIS) Office coordinated a contractor-conducted field survey of the private rental housing market in the state of California and Oregon, from February 2002 through April 2002. This survey was undertaken as specified in the Office of Management and Budget (OMB) Circular No. A-45, and the U.S. Department of the Interior's Departmental Quarters Handbook. OMB Circular A-45 provides for reconfirmation of the market based rental rates at least once every five years, or sooner, if conditions warrant.

The collection and analysis of rental housing data were accomplished employing methods similar to those used in previous surveys. Automated and manual analytical procedures were used to establish base rental rates for houses (including plexes), apartments, mobile homes, and trailer spaces. Rental rates for cabins were established based upon their comparability with 1-bedroom houses. Rental rates for temporary housing and travel trailers were established based upon their comparability with mobile homes. Rental rates for dormitories, bunkhouses and transient quarters were established by extending the principle of comparability, as provided for in OMB Circular A-45.

The objective of regional surveys, as set forth in OMB Circular No. A-45, is to develop reasonable rental rates based upon the ". . . typical rental rates for comparable private housing in the general area in which the Government quarters are located . . .." The policy set forth in OMB Circular A-45 is as follows:

> Rental rates and charges for Government quarters and related facilities will be based upon their "reasonable value...to the employee...in the circumstances under which the quarters and facilities are provided, occupied, or made available."...reasonable value to the employee or other occupant is determined by the rule of equivalence; namely, that charges for rent and related facilities should be set at levels equal to those prevailing for comparable private housing located in the same area, when practicable...

The regional survey method uses regression analysis techniques to establish a base rental rate for a given type of quarters that reflects the typical rate for that type of housing in the survey area. Regression analysis allows the QMIS Program Office to establish adjustments that reflect: (1) the contributory value (+ or -) of housing features that the private rental market indicates are significant; and (2) relevant social and economic factors that are manifested in the rent levels of individual communities.

Because regression analysis permits assessment of (and adjustment for) different locations, as measured by market rents, several localities or states can be surveyed at a time to minimize data collection costs and the rates can be individualized for communities significantly at variance with the regional rent pattern.

The resulting product (finalized rental rates), when derived from carefully applied automated statistical analysis, provides a logical and equitable base rental rate structure supported by the market rental rate pattern of the region and the community.

II. INVENTORY OF GOVERNMENT-FURNISHED QUARTERS

This survey was initiated with an inventory of Government-furnished quarters (GFQ) managed by the agencies and bureaus that participate in the QMIS program.

Most agencies and bureaus are now using the QMIS database software to manage their inventories. The QMIS Program Office in Denver developed this software. The database software allows an installation or region to maintain its own housing inventory. Rents can be calculated in just minutes, even for hundreds of quarters. This decentralized system provides local control of the housing inventory. As always, the key to accurate rents is accurate, up-to-date inventory information. Software with the new housing rental rate formulas and new utility rates is distributed from Denver whenever new regional surveys are conducted or at CPI time. If you do not receive new CPI software by approximately January 1st of each year, please contact the QMIS Program Office (303-969-7240). It is important that all agencies and bureaus submit (on diskettes or via electronic mail) updates to their housing inventories at least once a year. This information is used to determine the communities and characteristics to be sampled in new Regional Surveys. The information is also used for various general management reports.

III. CONTRACTING FOR THE PRIVATE RENTAL SURVEY

A. DETERMINATION OF THE COMMUNITIES TO BE SURVEYED

Selection of the communities to be surveyed was initiated with a review of the nearest established communities identified in the quarters inventory process. Their geographic locations and populations were determined to enable selection of established communities nearest to concentrations of Government housing.

Inclusion of these communities enables a comparison of the community rental rate structure with that of the survey region. This permits a ready determination of whether the local or the regional rental rate structure should be utilized to establish the GFQ base rents. A complete discussion of this process is contained in section IV of this report.

The communities surveyed represented broad geographic and population ranges. The largest community surveyed, San Francisco, CA, had a 2000 population of 776,733. The smallest community, Lone Pine, CA, had a population of 1,655. A list of the surveyed communities appears as Table 1. In accordance with OMB Circular A-45, communities with 2000 census populations below 1,500 were not analyzed.

TABLE 1 COMMUNITIES SURVEYED

STATE AND COMMUNITY	2000 CENSUS POPULATION
CALIFORNIA	
Alpine, CA	13,143
Arcata, CA	16,651
Auburn, CA	12,462
Azusa, CA	44,712
Bakersfield, CA	247,057
Big Bear Lake City, CA	5,779
Burney, CA	3,217
Chester, CA	2,316
Corning, CA	6,741
Cottonwood, CA	2,960
Crescent City, CA	4,006
Dunsmuir, CA	1,923
Fillmore, CA	13,643
Fortuna, CA	10,497
Galt, CA	19,472
Hayfork, CA	2,315
Hemet, CA	58,812
Hollister, CA	34,413
Jackson, CA	3,989
Lake Arrowhead, CA	2,600
Lakeport, CA	4,820
Lompoc, CA	41,103
Lone Pine, CA	1,655
Madera, CA	43,207
Mammonth Lakes, CA	7,093
Marina, CA	25,101
Morrow Bay, CA	10,350
Nevada City, CA	3,001
Oakhurst, CA	2,868
Oroville, CA	13,004

TABLE 1 COMMUNITIES SURVEYED (Continued)

STATE AND COMMUNITY	2000 CENSUS POPULATION
CALIFORNIA	
Palmdale, CA	116,670
Palo Alto, CA	58,598
Patterson, CA	11,606
Petaluma, CA	54,548
Placerville, CA	9,610
Pollock Pines, CA	4,728
Porterville, CA	39,615
Quincy, CA	1,879
Ramona, CA	15,691
Redding, CA	80,865
San Bernardino, CA	185,401
Santa Clarita, CA	151,088
San Fernando, CA	23,564
San Pedro/Long Beach, CA	461,522
San Francisco, CA	776,733
Sanger, CA	18,931
Soledad, CA	11,263
Sonora, CA	4,423
Sunnyside - Tahoe, CA	23,609
Susanville, CA	13,541
Taft, CA	6,400
Temecula, CA	57,716
Three Rivers, CA	2,248
Truckee, CA	13,864
Ventura, CA	100,916
Weaverville, CA	3,554
West Los Angeles/Santa Monica, CA	84,084
Willits, CA	5,073
Willow Creek, CA	1,743
Willows, CA	6,220

TABLE 1 COMMUNITIES SURVEYED (Continued)

STATE AND COMMUNITY	2000 CENSUS POPULATION
CALIFORNIA	
Woodlake, CA	6,651
Yreka, CA	7,290
Yuba City, CA	36,758
Yucaipa, CA	41,207
OREGON	
Klamath Falls, OR	19,462

B. DETERMINATION OF THE HOUSING CLASSES TO BE SURVEYED

In order to determine which housing classes to survey, the inventory data for the agencies participating in the QMIS system were separated into housing classes shown in Table 2, below. Analysis of the data revealed the following numbers of units per housing class:

TABLE 2 GOVERNMENT-FURNISHED QUARTERS - (BY HOUSING CLASS)

Housing Class	# of Units	Avg Age	Age Range	Avg. SQFT	SQFT Range
Houses					
4+ Bedrooms	79	54	(14 – 54)	1,768	(926 – 3,353)
3 Bedrooms	411	43	(8 – 88)	1,326	9869 – 4,001)
2 Bedrooms	331	43	(8 – 90)	1,072	(900 – 2,150)
1 Bedroom	122	58	(13 – 107)	868	(329 – 1,920)
Apartments					
3+ Bedrooms	20	44	(25 – 62)	1,248	(840 – 2,040)
2 Bedrooms	83	36	(11 – 70)	930	(554 – 1,178)
1 Bedroom	61	32	(11 – 70)	659	(401 – 880)
Efficiency	1	41	(41)	421	(421)
Cabins	154	49	(11 – 107)	401	(172 – 976)
Mobile Homes					
4+ Bedrooms	2	27	(25 – 28)	1,475	(1,000 – 1,950)
3 Bedrooms	52	28	(16 – 42)	1,050	(750 – 1,300)
2 Bedrooms	58	23	(11 – 39)	865	(600 – 1,100)
1 Bedroom	18	22	(10 – 36)	550	(172 – 770)
Travel Trailers	30	21	(9 – 38)	294	(100 – 1,900)
Dormitories	386	41	(8 – 109)	1,244	(116 – 7,500)
Trailer Pads	636				
TOTAL UNITS	2,444				

As with other regional surveys, the contractor was directed to survey only those housing classes for which a representative sample could be readily obtained in the private rental market. Thus, comparables were not obtained for cabins or lookouts, temporary housing, travel trailers, bunkhouses/dormitories, transient quarters or tents.

Rental rates for cabins were established by using the average rental rate for one-bedroom, single-family houses as the basis of comparison. Additional adjustments, that reflect the absence of certain standard housing features in some cabins, have been included for use when appropriate.

Since temporary housing and travel trailers (mobile home-like structures containing less than 256 square feet of gross living area) are most structurally similar to mobile homes, the rental charges for these housing classes are based upon the analysis of mobile home market rental comparables.

Since comparable bunkhouse or dormitory housing does not exist in most communities, the QMIS Program Office is unable to obtain sufficient market data to provide a satisfactory statistical base. Consequently, rental rates for bunkhouses and dormitories have been established using an extension of the Principle of Comparability, as permitted in OMB Circular A-45. Similarly, the rental charge for transient quarters has been established in conjunction with the dormitory rate structure.

OMB Circular A-45, revised October 20, 1993, excludes tents from the definition of Government-furnished quarters. Therefore, rental charges have not been established (and should not be assessed) for tents which are used as employee housing.

Four housing classes (houses/plexes, apartments, mobile homes and trailer spaces) were ultimately selected for field survey and computer analysis. The contractor was instructed to select comparables, built to Housing and Urban Development (HUD) minimum housing standards, wherever possible. The number of observations obtained for each housing class in each community surveyed varied depending upon the number of nearby Government quarters of that class. The inventory data for each of the housing classes was analyzed to determine frequencies and age and size ranges for major construction elements. The information in Table 2 was used to guide the contractor in the conduct of the survey.

C. HEATING FUELS AND UTILITY CHARGE SURVEY

To ensure reliability of the energy consumption estimates for housing where consumption is neither metered nor measured, this report uses a series of contractor-developed heating and cooling consumption tables for each general type of housing represented in the survey. The tables are based upon energy consumption studies that use a methodology meeting housing industry standards. The results reflect energy consumption for variously sized single-family houses (with and without basements), apartments, and mobile homes. A complete discussion of the energy consumption/cost methodology is contained in Section VI.

D. CONTRACTOR SELECTION

The National Business Center, Products and Services provided procurement support and project coordination for this Private Rental Survey. Reimbursement for survey expenses was underwritten by the agencies and bureaus that participate in the Quarters Management Program.

The private rental survey was completed by Delta-21 Resources Inc. of Oak Ridge, TN, during the months of February 2002 through April 2002. A total of 1,228 private rental housing comparables were sampled. In addition, electrical, heating fuel, utility, appliance, and other related service charges were collected in each of the communities surveyed. The private rental housing costs that were obtained reflected current rental costs and required no adjustment for time.

IV. REGIONAL SURVEY PRINCIPLES AND PROCEDURES

A. SURVEY PRINCIPLES

The purpose of a regional survey is to determine and establish reasonable quarters rents, through an analysis of the market rents of comparable private housing in established communities nearest to concentrations of Government housing. The process of arriving at the base rent of a structure is influenced by real estate appraisal principles, statistical limitations, and administrative considerations. Often there may be a conflict among these three interests, which necessitates a trade-off.

1. Real estate appraisal principles include matching comparables as closely as possible to the specific subject properties in physical characteristics and location, and adjusting in a logical direction for all significant differences.

2. Statistical principles involve: (a) trying to minimize the standard error of the estimate (unexplained variation); (b) getting a good match of characteristics between the properties analyzed and those the analysis is applied to; (c) obtaining a large and diverse sample; and (d) making adjustments for factors that are significant in explaining variation. Ideal samples may not always be available in the market; and the market search may be limited (like an appraisal) because of time and budget constraints.

3. Administrative considerations recognize that Government housing is usually not located in established communities, and that physical characteristics (such as in historical houses, one-room cabins, lookouts or dormitories) are difficult to match in the market. Government quarters are often found in areas influenced by tourism or boom/bust natural resource development that may produce unreasonable rents. Consistency and relative reasonableness, as well as time and budget constraints must also be taken into consideration.

4. While trade-offs among these three considerations may result in a less than ideal application of any one of the three principles, the goal is still to produce "reasonable" Monthly Base Rental Rates (MBRR) for quarters that are relatively consistent with the local market rents for similar housing, internally consistent and logical from one unit to another, and represent reasonable value to the employee.

B. MULTIPLE REGRESSION PROCEDURES USED IN RENTAL RATE COMPUTATIONS

There are several reasons for using the regional survey method to arrive at quarters rental rates. These include accuracy, consistency, fairness, cost effectiveness/economy, and the provision in OMB Circular A-45, that regional surveys are the preferred method.

Prior to the use of the regional survey method, quarters Monthly Base Rental Rates (MBRR's) were reset every five years by individually appraising each quarters unit. The appraisal process normally relied upon the use of a small number (2-4) of comparables for each subject Government quarters unit and made logical or market abstracted adjustments to each comparable. In many instances the same comparables were used to establish rental rates for several quarters. Thus the selection of comparables became critical. Individualized appraisals often led to inconsistencies among units in the same area. Many times different agencies, managing similar or identical housing units in the same area, had substantially different rents after analyzing the same rental market. Appraisers valuing several different units using separate sets of comparables and adjustments can also sometimes arrive at rents not logically related to one another. Finally, the appraisal process required a considerable amount of travel, and individualized writing, typing and editing of appraisal reports, which was expensive and very time consuming.

Alternatively, the regional survey method relies upon much larger samples of comparables. These are analyzed, statistically, to objectively determine those factors that are significant in explaining variations in the adjusted rent of each class of comparables. Each class of comparables (houses, apartments and mobile homes) is analyzed separately to determine which locations and physical characteristics are important in explaining the differences in rents among individual rental units and communities. The computer program independently and objectively determines the best set of characteristics (formula) to explain the rental pattern. This formula varies for each survey region and housing class.

The rental rates are based upon an analysis of regional data and local data. The rents in all surveyed communities for each housing class are tested for statistical significance. All significant negative location adjustments are applied to the quarters using that community as their nearest established community. **Positive location (community) adjustments are not applied; so Government housing units near high-rent communities are charged the typical rent for the region as a whole, rather than the typical rent for that high cost location.**

The statistical process used is called forward in-and-out, step-wise multiple regression analysis. It takes all of the variables considered and forms a matrix or grid showing how every variable is related to every other variable (cross-correlation matrix). In this phase of the analysis, significant inventory items relating to the dwelling structure are coded into the computer as variables to be tested for their impact, if any, on rent. The variable to be explained (in this case rent) is called the dependent variable, because its value is determined by that of the other (independent) variables.

In forward in-and-out step-wise multiple regression analysis, the independent variable that explains the most variation in the dependent variable (rent) is selected first by the computer and entered as Step 1. The remaining variation is then recomputed, and the independent variable that explains the largest portion of the remaining variation is selected by the computer and entered as Step 2. As each new variable is added, the

coefficients of all the previously entered variables are recomputed to take into account relationships among the independent variables. If a previously entered variable no longer meets the test of significance, it is removed.

As this procedure uses the variation squared, it is highly sensitive to cases with extreme variations from the norm. Since the purpose of a regional survey is to find the typical rent for housing with certain characteristics, it is useful (and mandatory) to cull comparables with unusually high or low rents that are apparently unrelated to their characteristics. Such non-conforming rentals tend to obscure the typical pattern. To accomplish this culling, the following steps are normally taken.

Step 1. A listing of all the comparables is checked to see that the program has proper decodes, that no rental has been entered twice, and that the data is complete for each variable to be tested. The range for each rent class is also checked.

Step 2. Regression Run 1 (square foot base formula): The purified data base is analyzed for the best fit of adjusted rent versus square feet and the logarithm of square feet. This comparison is undertaken because square footage in buildings is generally the variable that explains the most variation of adjusted rent. It is also a universal variable (one that applies to all cases) and a continuous variable (one that changes in many small increments).

Step 3. A listing is produced which shows by community the rent/predicted rent ratio of each private rental sample. The predicted rent is one computed using the square foot base formula derived in step 2. The purpose of this listing is to screen out individual rentals whose ratios are far out of line relative to other rental comparables in the same community.

Step 4. A scattergram of rentals for each class, showing adjusted rent by square feet, is produced to visually display the data. These scattergrams, and the listings produced in Step 3, above, are used to remove samples with unusually high or low rents in each size grouping. A separate variable for each of the remaining communities is then entered into the next step, the full regression analysis, to see if it has a statistically significant location adjustment after other adjustments have been made. This run and a crosstab run of physical features allows for selection of other variables that are significantly represented and widely (geographically) distributed. These variables are turned into dummy (yes/no) and combination variables. Continuous and discrete variables are entered as simple variables, logarithmic transformations, and in logical combinations.

Step 5. (First Full Regression Run). The screened samples for each housing class to be analyzed, along with the variables to be tested, are analyzed to find coefficients for the significant variables. The results are checked for logic and cross-correlation; normally only one form of a variable is allowed to stay in the equation. Variables with illogical results are checked to find reasons for such deviation from expected results. Such variables are normally dropped from subsequent regression runs. Sometimes the samples containing such variables are culled; however, that action (culling samples) is uncommon.

Step 6. (Other Full Regression Runs). The full regression analysis is rerun without the illogical variables and/or dropped cases. If the end results look reasonable, the coefficients determined by regression analysis are used to compute Monthly Base Rental Rates (MBRR's) for individual Government-furnished quarters.

Step 7. (Predicted Rent Tables). The coefficients of each satisfactory regression run are put into a computer program which produces a table of predicted quarters MBRR's. The base values and all possible combinations of adjustments are reviewed to ensure the results are reliable for the full range of values. If not, the cause of the problem is diagnosed and corrected, and the regression analysis is rerun, producing a revised set of coefficients. Then Step 6 is repeated, and a new set of rent tables is produced.

V. ESTABLISHMENT OF MONTHLY BASE RENTAL RATES (MBRR)

A. USE OF BASE RENT CHARTS

Although rental computations have been automated, producing Monthly Base Rental Rates (MBRR's) and final Net Rents for most quarters, housing managers should understand the methodology used in determining the rental rates. Therefore, a set of charts has been prepared to allow the manual computation of the MBRR's for each class of rental housing. The charts have been constructed as size/age tables for the three major categories of housing (houses, apartments and mobile homes). By knowing the gross square feet of the livable area (size), the age, and the housing class of a building being used as quarters, one can determine the base rent from the proper table. The charts also contain columns and/or footnotes of rent adjustments which modify the rent from the size/age table to produce a MBRR for an individual quarters unit. **The value of one refrigerator and one stove is included in the rents listed in Tables 3a-d, 4a-d and 5a-c.** Therefore, if the Government does not provide a refrigerator or a range in the quarters, the value of each non-provided appliance should be subtracted from the monthly rent. The current values of a refrigerator and range are shown in Table 18 of this report, and may be adjusted annually by the QMIS Program Office to reflect changes in the Consumer Price Index (CPI) which may occur following the issuance of this report. In selecting the appropriate rent table, it is important to remember that the **design of the quarters, not its use, determines its category.** Thus, a house or an apartment unit **designed** to be occupied by an individual or a family, but which is actually used to house unrelated individuals, would be valued by the category for which it was designed to be used, rather than as a bunkhouse/dormitory. Where, however, a structure is not designed for occupancy by an individual, or family, or has been substantially modified to house individuals on a dormitory basis, it would be appropriate to apply bunkhouse/dormitory rates. Thus, an unmodified three-bedroom house with a **planned occupancy** of six unrelated individuals (normally two persons per bedroom) would have a rental rate determined by calculating the rental rate for a three-bedroom house and then dividing that rate by six. This rate would change if the number of **planned** occupants changed. If the house were later **structurally modified** to be used as a bunkhouse/dormitory, the rate then would be the dormitory rate.

Based upon information provided by the contractor, deductions from the monthly contract rental rate of each rental sample were made for the contributory costs of utilities, appliances, furnishings and services, provided and included in the contract rent. No deductions were made for central air conditioners, refrigerators or ranges; however, if a refrigerator or range was missing, the value was added to the adjusted rent. Central air conditioners are valued at their contributory value, if any. The resulting adjusted monthly contract rental rate represents the contributory value of the dwelling structure equipped with a refrigerator and a range.

The establishment of final monthly quarters rental charges for houses, apartments, mobile homes and cabins/lookouts requires the addition of charges for Government-provided utilities, services, appliances and furnishings. Conversely, **deductions** are required for the values of ranges and refrigerators when they are not provided by the Government.

There are a total of eleven rental rate charts: four charts for single-family housing, four charts for apartments, and three charts for mobile homes. Instructions for computing rental rates for cabins, bunkhouses and dormitories, transient quarters and trailer spaces are found in Sections V.E, V.F, V.G and V.H, respectively. Because OMB Circular A-45 excludes tents from the definition of "rental quarters," there is no charge for the provision of tents.

The use of the charts is fairly simple. First, find the chart for the category into which the GFQ fits. Next, round the square feet **down** to the nearest hundreds of square feet. Thus, if a unit has 980 square feet, the row labeled 900 SQFT would be used. Then the age should be rounded **up** to the nearest age increment. If the dwelling at issue was built in 1979, its age would be computed as 2002 (the current year) minus 1979 (the year built). Thus, in this instance, the unit is 2002 - 1979 = 23 years old; and the column headed by "25 YEARS OLD" should then be followed down to the 900 SQFT row to obtain the size/age adjusted rent.

The rent charts also have various location adjustments, as well as adjustments for physical features such as the number of bathrooms, the type of garage facilities, the condition of the housing, etc. These should be subtracted from, or added to, the size/age adjusted rent, as specified, to determine the MBRR.

When computing the final biweekly rent (net rent) to be paid, the MBRR must be adjusted to include the value of Government-provided related facilities (utilities, appliances, furnishings and services); and the administrative adjustments prescribed in OMB Circular A-45. Use Form DI 1880, Rent Computation Schedule, or similar form as may be used by agencies other than DOI.

Where a dwelling is larger than the highest square footage in the chart pertinent to that unit, use the size/age rent and adjustments of the bottom (largest SQFT) row. This may eliminate the need for some administrative adjustments due to excess size of the housing. If a dwelling is smaller than the smallest square footage, use the lowest square footage listed on the chart.

The rent for a dwelling with more than 4 bedrooms (3 bedrooms for apartments and mobile homes) is calculated as if the unit had 4 bedrooms (3 bedrooms for apartments and mobile homes). In addition, the carport charge is the same regardless of the size of the carport; the maximum garage charge is the amount for a 2-car garage; and the fireplace charge is the same for one or more fireplaces. For rental calculation purposes a "cap" of 3 bathrooms applies. Therefore, assume 3 bathrooms when applying the bathrooms charge in the rent charts shown in tables 3a-d, 4a-d and 5a-c.

To assist in the calculation of quarters MBRR's, examples are provided in the following pages. While the rates appearing in the following tables should allow you to establish MBRR's for essentially all of your properties, we recognize that we might not have anticipated all situations and conditions. Therefore, housing managers should use professional discretion to set rates for truly unusual situations. In cases where

you must use some other method to establish rates, please notify the National Business Center, Products & Services, Quarters Operations Office via telephone **303-969-7240** or fax 303-969-7173. You should explain the conditions, the rate used, and your reasoning so that we may anticipate such circumstances in the future. You should retain the documentation for such actions in your files.

B. SINGLE FAMILY HOUSING

For single family detached houses, including plexed dwellings and townhouses, use the rental chart which appropriately describes the housing class and the number of bedrooms of the subject quarters. The charts for houses are in tables 3a through 3d.

Assume for example, a 3-bedroom, 1 1/2-bath house, that was built in 1972, and which has a 2-car garage, two fireplaces, a central refrigerated air conditioning system and 1,276 gross square feet of living space. The house, located near Sanger, CA, is fair in both exterior and interior condition.

First, the chart for 3-bedroom, good condition, 1 bathroom, houses (Table 3b) should be located and used. These charts are baseline charts, which assume that each house is in good condition inside and outside and has one full bathroom. Therefore, if the house is in good condition inside and outside and has one bathroom, no additional computations are needed. If there is a deviation from either good inside or outside condition or there are less or more bathrooms than one, then the computations must be changed as discussed below. In the first step, Table 3b is selected as the proper chart for 3-bedroom houses. Next, the size (gross finished floor space) should be rounded **down** to the nearest 100 square feet (from 1,276 to 1,200 sqft). Under the column headed "**SQFT**," the figure 1,200 should be located. Further adjustments will be taken from this row.

Finally, the appropriate age column should be selected. The house in this example is 2002 - 1972 = 30 years old. The age should be rounded **up** to the next highest age column, which, in this case, is the column headed "**35 YRS OLD**." Follow this column down to the 1,200 square feet row to obtain the size/age "Chart Rent" of $795.

The first adjustment is the extra bathroom charge. Follow the column headed "**PER EXTRA BATHROOM**" down to the 1,200 SQFT row to find a charge of $88 for a full extra bathroom. As the house in this example has only 1/2 of an extra bathroom, the adjustment is $88 x .5 (1/2 extra bathroom) = $44.00. Add $44 to the rent.

The second and third adjustments are made for a fair exterior and a fair interior condition. Follow the column headed "**FAIR EXTERIOR/INTERIOR***" down to the 1,200 SQFT row. The amount reflects a deduction of $15 for a house with a fair exterior **and** a deduction of $15 for a house with a fair interior. Since both the exterior and interior are in fair condition, the total adjustment is $-30.

The fourth adjustment is for the central refrigerated air conditioning system. Follow the column headed "A/C (REF)" down to the 1,200 SQFT row. The amount reflects an addition of $40 for central refrigerated air conditioning.

The fifth adjustment is for a two-car garage. Follow the column headed "**GARAGE (PER CAR)**" down to the 1,200 SQFT row. $35 should be charged for each car the garage is designed to accommodate. Since the house in this example has a 2-car garage, multiply the amount shown for one car ($35) times 2 to reflect the value of a 2-car garage (2 x $35 = $70). Add $70 to the rent.

The sixth adjustment is made for the fireplace. Follow the column headed "**FIREPLACES**" down to the 1,200 SQFT row. The amount reflects an addition of $59 for one or more fireplaces. Add $59 to the rent for the fireplace.

The final adjustment is the community adjustment. The house in this example is located near Sanger, CA. The notes beneath the table (see "**COMMUNITY ADJUSTMENTS**") reflect that Sangier, CA receives an adjustment of -$223. As instructed, subtract $223 from the rent. Community adjustments are given only to communities in which the market rents are **lower** than the regional average level of rents. Communities not listed in the tables have rents, which are equal to or higher than the regional average rent and do not receive community adjustments.

In summary, the adjustments that produce the Monthly Base Rental Rate for the house used in this example are shown below.

Chart Rent (1,200 SQFT/35 yrs. old)	$795.00
Extra Bath Adjustment (.5 X $88)	+ 44.00
Fair Exterior Condition Adjustment	- 15.00
Fair Interior Condition Adjustment	- 15.00
Central Refrigerated Air Conditioning Adjustment	+ 40.00
Garage Adjustment (Per Car X $35)	+ 70.00
Fireplace Adjustment	+ 59.00
Community Adjustment (Sanger, CA)	- 223.00
Monthly Base Rent	$755.00

TABLE 3a

THE CALIFORNIA QUARTERS MONTHLY BASE RENT CHART
FOR GOOD CONDITION 4 BEDROOM, 1 BATHROOM HOUSES

SQFT	5 YRS OLD	15 YRS OLD	25 YRS OLD	35 YRS OLD	45 YRS OLD	55 YRS OLD	75+ YRS OLD	PER EXTRA BATH ROOM	EXCEL EXTER -IOR/ INTER -IOR*	FAIR EXTER -IOR/ INTER -IOR*	POOR EXTER -IOR/ INTER -IOR*	A/C (REF)	GAR-AGE PER (CAR)	FIRE-PLACE(S)	PLEX
700	$982	$912	$875	$850	$831	$816	$792	$+51	$+25	$-15	$-20	$+40	$+35	$+59	$-65
800	$989	$919	$882	$857	$838	$823	$799	$+58	$+25	$-15	$-20	$+40	$+35	$+59	$-74
900	$996	$926	$890	$865	$846	$831	$807	$+66	$+25	$-15	$-20	$+40	$+35	$+59	$-84
1000	$1004	$933	$897	$872	$853	$838	$814	$+73	$+25	$-15	$-20	$+40	$+35	$+59	$-93
1100	$1011	$941	$904	$879	$860	$845	$821	$+80	$+25	$-15	$-20	$+40	$+35	$+59	$-102
1200	$1018	$948	$911	$887	$868	$852	$829	$+88	$+25	$-15	$-20	$+40	$+35	$+59	$-112
1300	$1025	$955	$919	$894	$875	$860	$836	$+95	$+25	$-15	$-20	$+40	$+35	$+59	$-121
1400	$1033	$963	$926	$901	$882	$867	$843	$+102	$+25	$-15	$-20	$+40	$+35	$+59	$-130
1500	$1040	$970	$933	$908	$890	$874	$851	$+110	$+25	$-15	$-20	$+40	$+35	$+59	$-140
1600	$1047	$977	$941	$916	$897	$882	$858	$+117	$+25	$-15	$-20	$+40	$+35	$+59	$-149
1700	$1055	$985	$948	$923	$904	$889	$865	$+124	$+25	$-15	$-20	$+40	$+35	$+59	$-158
1800	$1062	$992	$955	$930	$911	$896	$872	$+131	$+25	$-15	$-20	$+40	$+35	$+59	$-167
1900	$1069	$999	$963	$938	$919	$904	$880	$+139	$+25	$-15	$-20	$+40	$+35	$+59	$-177
2000	$1077	$1006	$970	$945	$926	$911	$887	$+146	$+25	$-15	$-20	$+40	$+35	$+59	$-186
2100	$1084	$1014	$977	$952	$933	$918	$894	$+153	$+25	$-15	$-20	$+40	$+35	$+59	$-195
2200	$1091	$1021	$984	$960	$941	$925	$902	$+161	$+25	$-15	$-20	$+40	$+35	$+59	$-205
2300	$1098	$1028	$992	$967	$948	$933	$909	$+168	$+25	$-15	$-20	$+40	$+35	$+59	$-214

ADDITIONAL ADJUSTMENTS:

STRUCTURAL ADJUSTMENTS:

CARPORT ADD $25 CENTRAL EVAPORATIVE AIR CONDITIONING ADD $33

COMMUNITY ADJUSTMENTS:

ANGELS CAMP, CA.	-$102;	ARNOLD, CA.	-$102;	AUBERRY, CA.	-$124;	BAKERSFIELD, CA.	-$222;
BURNEY, CA.	-$278;	CHESTER, CA.	-$213;	CHICO, CA.	-$267;	COLUSA, CA.	-$128;
CORNING, CA.	-$267;	COTTONWOOD, CA.	-$227;	CRESCENT CITY, CA.	-$211;	CRESTLINE, CA.	-$151;
DELANO, CA.	-$325;	DUNSMUIR, CA.	-$199;	EXETER, CA.	-$139;	FORTUNA, CA.	-$19;
GALT, CA.	-$117;	GROVELAND-BIG OAK, CA.	-$102;	HAYFORK, CA.	-$360;	HEMET, CA.	-$121;
JACKSON, CA.	-$33;	LAKE ARROWHEAD, CA.	-$24;	LAKE ISABELLA, CA.	-$222;	LONE PINE, CA.	-$197;
MADERA, CA.	-$157;	MERCED, CA.	-$157;	OAKHURST, CA.	-$124;	OROVILLE, CA.	-$178;
PALMDALE, CA.	-$94;	PATTERSON, CA.	-$37;	PORTERVILLE, CA.	-$325;	QUINCY, CA.	-$142;
RED BLUFF, CA.	-$267;	REDDING, CA.	-$312;	REEDLEY, CA.	-$139;	SAN BERNARDINO, CA.	-$151;
SANGER, CA.	-$223;	SONORA, CA.	-$102;	SUSANVILLE, CA.	-$163;	SUTTER CREEK, CA.	-$33;
TAFT, CA.	-$259;	THREE RIVERS, CA.	-$96;	TWAIN HARTE, CA.	-$102;	VISALIA, CA.	-$139;
WEAVERVILLE, CA.	-$161;	WILLITS, CA.	-$129;	WILLOW CREEK, CA.	-$292;	WILLOWS, CA.	-$275;
WOODLAKE, CA.	-$139;	YREKA, CA.	-$247;	YUBA CITY, CA.	-$128;	YUCAIPA, CA.	-$39;
KLAMATH FALLS, OR.	-$202;						

* - IF BOTH THE INTERIOR AND EXTERIOR ARE IN THIS CONDITION, APPLY THIS FACTOR TWICE.

REGARDLESS OF ADJUSTMENTS, THE MINIMUM BASE RENT IS $260 PER MONTH.

THE APPROPRIATE CPI FACTOR SHOULD BE APPLIED AFTER COMPLETING THE ABOVE ADJUSTMENTS.

TABLE 3b

THE CALIFORNIA QUARTERS MONTHLY BASE RENT CHART
FOR GOOD CONDITION 3 BEDROOM, 1 BATHROOM HOUSES

SQFT	5 YRS OLD	15 YRS OLD	25 YRS OLD	35 YRS OLD	45 YRS OLD	55 YRS OLD	75+ YRS OLD	PER EXTRA BATH ROOM	EXCEL EXTER -IOR/ INTER -IOR*	FAIR EXTER -IOR/ INTER -IOR*	POOR EXTER -IOR/ INTER -IOR*	A/C (REF)	GAR-AGE PER (CAR)	FIRE-PLACE(S)	PLEX
500	$875	$805	$769	$744	$725	$710	$686	$+37	$+25	$-15	$-20	$+40	$+35	$+59	$-47
600	$883	$813	$776	$751	$732	$717	$693	$+44	$+25	$-15	$-20	$+40	$+35	$+59	$-56
700	$890	$820	$783	$758	$739	$724	$700	$+51	$+25	$-15	$-20	$+40	$+35	$+59	$-65
800	$897	$827	$791	$766	$747	$732	$708	$+58	$+25	$-15	$-20	$+40	$+35	$+59	$-74
900	$905	$834	$798	$773	$754	$739	$715	$+66	$+25	$-15	$-20	$+40	$+35	$+59	$-84
1000	$912	$842	$805	$780	$761	$746	$722	$+73	$+25	$-15	$-20	$+40	$+35	$+59	$-93
1100	$919	$849	$812	$788	$769	$753	$730	$+80	$+25	$-15	$-20	$+40	$+35	$+59	$-102
1200	$926	$856	$820	$795	$776	$761	$737	$+88	$+25	$-15	$-20	$+40	$+35	$+59	$-112
1300	$934	$864	$827	$802	$783	$768	$744	$+95	$+25	$-15	$-20	$+40	$+35	$+59	$-121
1400	$941	$871	$834	$809	$791	$775	$752	$+102	$+25	$-15	$-20	$+40	$+35	$+59	$-130
1500	$948	$878	$842	$817	$798	$783	$759	$+110	$+25	$-15	$-20	$+40	$+35	$+59	$-140
1600	$956	$886	$849	$824	$805	$790	$766	$+117	$+25	$-15	$-20	$+40	$+35	$+59	$-149
1700	$963	$893	$856	$831	$812	$797	$773	$+124	$+25	$-15	$-20	$+40	$+35	$+59	$-158
1800	$970	$900	$864	$839	$820	$805	$781	$+131	$+25	$-15	$-20	$+40	$+35	$+59	$-167
1900	$978	$907	$871	$846	$827	$812	$788	$+139	$+25	$-15	$-20	$+40	$+35	$+59	$-177
2000	$985	$915	$878	$853	$834	$819	$795	$+146	$+25	$-15	$-20	$+40	$+35	$+59	$-186
2100	$992	$922	$885	$861	$842	$826	$803	$+153	$+25	$-15	$-20	$+40	$+35	$+59	$-195

ADDITIONAL ADJUSTMENTS:

STRUCTURAL ADJUSTMENTS:

CARPORT ADD $25 CENTRAL EVAPORATIVE AIR CONDITIONING ADD $33

COMMUNITY ADJUSTMENTS:

ANGELS CAMP, CA.	-$102;	ARNOLD, CA.	-$102;	AUBERRY, CA.	-$124;	BAKERSFIELD, CA.	-$222;
BURNEY, CA.	-$278;	CHESTER, CA.	-$213;	CHICO, CA.	-$267;	COLUSA, CA.	-$128;
CORNING, CA.	-$267;	COTTONWOOD, CA.	-$227;	CRESCENT CITY, CA.	-$211;	CRESTLINE, CA.	-$151;
DELANO, CA.	-$325;	DUNSMUIR, CA.	-$199;	EXETER, CA.	-$139;	FORTUNA, CA.	-$19;
GALT, CA.	-$117;	GROVELAND-BIG OAK, CA.	-$102;	HAYFORK, CA.	-$360;	HEMET, CA.	-$121;
JACKSON, CA.	-$33;	LAKE ARROWHEAD, CA.	-$24;	LAKE ISABELLA, CA.	-$222;	LONE PINE, CA.	-$197;
MADERA, CA.	-$157;	MERCED, CA.	-$157;	OAKHURST, CA.	-$124;	OROVILLE, CA.	-$178;
PALMDALE, CA.	-$94;	PATTERSON, CA.	-$37;	PORTERVILLE, CA.	-$325;	QUINCY, CA.	-$142;
RED BLUFF, CA.	-$267;	REDDING, CA.	-$312;	REEDLEY, CA.	-$139;	SAN BERNARDINO, CA.	-$151;
SANGER, CA.	-$223;	SONORA, CA.	-$102;	SUSANVILLE, CA.	-$163;	SUTTER CREEK, CA.	-$33;
TAFT, CA.	-$259;	THREE RIVERS, CA.	-$96;	TWAIN HARTE, CA.	-$102;	VISALIA, CA.	-$139;
WEAVERVILLE, CA.	-$161;	WILLITS, CA.	-$129;	WILLOW CREEK, CA.	-$292;	WILLOWS, CA.	-$275;
WOODLAKE, CA.	-$139;	YREKA, CA.	-$247;	YUBA CITY, CA.	-$128;	YUCAIPA, CA.	-$39;
KLAMATH FALLS, OR.	-$202;						

* - IF BOTH THE INTERIOR AND EXTERIOR ARE IN THIS CONDITION, APPLY THIS FACTOR TWICE.

REGARDLESS OF ADJUSTMENTS, THE MINIMUM BASE RENT IS $260 PER MONTH.

THE APPROPRIATE CPI FACTOR SHOULD BE APPLIED AFTER COMPLETING THE ABOVE ADJUSTMENTS.

TABLE 3c

THE CALIFORNIA QUARTERS MONTHLY BASE RENT CHART
FOR GOOD CONDITION 2 BEDROOM, 1 BATHROOM HOUSES

SQFT	5 YRS OLD	15 YRS OLD	25 YRS OLD	35 YRS OLD	45 YRS OLD	55 YRS OLD	75+ YRS OLD	PER EXTRA BATH ROOM	EXCEL EXTER -IOR/ INTER -IOR*	FAIR EXTER -IOR/ INTER -IOR*	POOR EXTER -IOR/ INTER -IOR*	A/C (REF)	GAR-AGE PER (CAR)	FIRE-PLACE(S)	PLEX
300	$748	$678	$642	$617	$598	$583	$559	$+22	$+25	$-15	$-20	$+40	$+35	$+59	$-28
400	$756	$686	$649	$624	$605	$590	$566	$+29	$+25	$-15	$-20	$+40	$+35	$+59	$-37
500	$763	$693	$656	$632	$613	$597	$574	$+37	$+25	$-15	$-20	$+40	$+35	$+59	$-47
600	$770	$700	$664	$639	$620	$605	$581	$+44	$+25	$-15	$-20	$+40	$+35	$+59	$-56
700	$778	$708	$671	$646	$627	$612	$588	$+51	$+25	$-15	$-20	$+40	$+35	$+59	$-65
800	$785	$715	$678	$653	$635	$619	$596	$+58	$+25	$-15	$-20	$+40	$+35	$+59	$-74
900	$792	$722	$686	$661	$642	$627	$603	$+66	$+25	$-15	$-20	$+40	$+35	$+59	$-84
1000	$800	$729	$693	$668	$649	$634	$610	$+73	$+25	$-15	$-20	$+40	$+35	$+59	$-93
1100	$807	$737	$700	$675	$656	$641	$617	$+80	$+25	$-15	$-20	$+40	$+35	$+59	$-102
1200	$814	$744	$708	$683	$664	$649	$625	$+88	$+25	$-15	$-20	$+40	$+35	$+59	$-112
1300	$821	$751	$715	$690	$671	$656	$632	$+95	$+25	$-15	$-20	$+40	$+35	$+59	$-121
1400	$829	$759	$722	$697	$678	$663	$639	$+102	$+25	$-15	$-20	$+40	$+35	$+59	$-130
1500	$836	$766	$729	$705	$686	$670	$647	$+110	$+25	$-15	$-20	$+40	$+35	$+59	$-140
1600	$843	$773	$737	$712	$693	$678	$654	$+117	$+25	$-15	$-20	$+40	$+35	$+59	$-149
1700	$851	$781	$744	$719	$700	$685	$661	$+124	$+25	$-15	$-20	$+40	$+35	$+59	$-158
1800	$858	$788	$751	$726	$708	$692	$669	$+131	$+25	$-15	$-20	$+40	$+35	$+59	$-167
1900	$865	$795	$759	$734	$715	$700	$676	$+139	$+25	$-15	$-20	$+40	$+35	$+59	$-177

ADDITIONAL ADJUSTMENTS:

STRUCTURAL ADJUSTMENTS:

CARPORT ADD $25 CENTRAL EVAPORATIVE AIR CONDITIONING ADD $33

COMMUNITY ADJUSTMENTS:

ANGELS CAMP, CA.	-$102;	ARNOLD, CA.	-$102;	AUBERRY, CA.	-$124;	BAKERSFIELD, CA.	-$222;
BURNEY, CA.	-$278;	CHESTER, CA.	-$213;	CHICO, CA.	-$267;	COLUSA, CA.	-$128;
CORNING, CA.	-$267;	COTTONWOOD, CA.	-$227;	CRESCENT CITY, CA.	-$211;	CRESTLINE, CA.	-$151;
DELANO, CA.	-$325;	DUNSMUIR, CA.	-$199;	EXETER, CA.	-$139;	FORTUNA, CA.	-$19;
GALT, CA.	-$117;	GROVELAND-BIG OAK, CA.	-$102;	HAYFORK, CA.	-$360;	HEMET, CA.	-$121;
JACKSON, CA.	-$33;	LAKE ARROWHEAD, CA.	-$24;	LAKE ISABELLA, CA.	-$222;	LONE PINE, CA.	-$197;
MADERA, CA.	-$157;	MERCED, CA.	-$157;	OAKHURST, CA.	-$124;	OROVILLE, CA.	-$178;
PALMDALE, CA.	-$94;	PATTERSON, CA.	-$37;	PORTERVILLE, CA.	-$325;	QUINCY, CA.	-$142;
RED BLUFF, CA.	-$267;	REDDING, CA.	-$312;	REEDLEY, CA.	-$139;	SAN BERNARDINO, CA.	-$151;
SANGER, CA.	-$223;	SONORA, CA.	-$102;	SUSANVILLE, CA.	-$163;	SUTTER CREEK, CA.	-$33;
TAFT, CA.	-$259;	THREE RIVERS, CA.	-$96;	TWAIN HARTE, CA.	-$102;	VISALIA, CA.	-$139;
WEAVERVILLE, CA.	-$161;	WILLITS, CA.	-$129;	WILLOW CREEK, CA.	-$292;	WILLOWS, CA.	-$275;
WOODLAKE, CA.	-$139;	YREKA, CA.	-$247;	YUBA CITY, CA.	-$128;	YUCAIPA, CA.	-$39;
KLAMATH FALLS, OR.	-$202;						

* - IF BOTH THE INTERIOR AND EXTERIOR ARE IN THIS CONDITION, APPLY THIS FACTOR TWICE.

REGARDLESS OF ADJUSTMENTS, THE MINIMUM BASE RENT IS $260 PER MONTH.

THE APPROPRIATE CPI FACTOR SHOULD BE APPLIED AFTER COMPLETING THE ABOVE ADJUSTMENTS.

TABLE 3d

THE CALIFORNIA QUARTERS MONTHLY BASE RENT CHART
FOR GOOD CONDITION 1 BEDROOM, 1 BATHROOM HOUSES

SQFT	5 YRS OLD	15 YRS OLD	25 YRS OLD	35 YRS OLD	45 YRS OLD	55 YRS OLD	75+ YRS OLD	PER EXTRA BATH ROOM	EXCEL EXTER -IOR/ INTER -IOR*	FAIR EXTER -IOR/ INTER -IOR*	POOR EXTER -IOR/ INTER -IOR*	A/C (REF)	GAR-AGE PER (CAR)	FIRE-PLACE(S)	PLEX
100	$589	$519	$483	$458	$439	$424	$400	$+7	$+25	$-15	$-20	$+40	$+35	$+59	$-9
200	$596	$526	$490	$465	$446	$431	$407	$+15	$+25	$-15	$-20	$+40	$+35	$+59	$-19
300	$604	$534	$497	$472	$453	$438	$414	$+22	$+25	$-15	$-20	$+40	$+35	$+59	$-28
400	$611	$541	$504	$480	$461	$445	$422	$+29	$+25	$-15	$-20	$+40	$+35	$+59	$-37
500	$618	$548	$512	$487	$468	$453	$429	$+37	$+25	$-15	$-20	$+40	$+35	$+59	$-47
600	$626	$556	$519	$494	$475	$460	$436	$+44	$+25	$-15	$-20	$+40	$+35	$+59	$-56
700	$633	$563	$526	$501	$483	$467	$444	$+51	$+25	$-15	$-20	$+40	$+35	$+59	$-65
800	$640	$570	$534	$509	$490	$475	$451	$+58	$+25	$-15	$-20	$+40	$+35	$+59	$-74
900	$648	$577	$541	$516	$497	$482	$458	$+66	$+25	$-15	$-20	$+40	$+35	$+59	$-84
1000	$655	$585	$548	$523	$504	$489	$465	$+73	$+25	$-15	$-20	$+40	$+35	$+59	$-93
1100	$662	$592	$556	$531	$512	$497	$473	$+80	$+25	$-15	$-20	$+40	$+35	$+59	$-102
1200	$669	$599	$563	$538	$519	$504	$480	$+88	$+25	$-15	$-20	$+40	$+35	$+59	$-112
1300	$677	$607	$570	$545	$526	$511	$487	$+95	$+25	$-15	$-20	$+40	$+35	$+59	$-121
1400	$684	$614	$577	$553	$534	$518	$495	$+102	$+25	$-15	$-20	$+40	$+35	$+59	$-130
1500	$691	$621	$585	$560	$541	$526	$502	$+110	$+25	$-15	$-20	$+40	$+35	$+59	$-140

ADDITIONAL ADJUSTMENTS:

STRUCTURAL ADJUSTMENTS:

CARPORT ADD $25 CENTRAL EVAPORATIVE AIR CONDITIONING ADD $33

COMMUNITY ADJUSTMENTS:

ANGELS CAMP, CA.	-$102;	ARNOLD, CA.	-$102;	AUBERRY, CA.	-$124;	BAKERSFIELD, CA.	-$222;
BURNEY, CA.	-$278;	CHESTER, CA.	-$213;	CHICO, CA.	-$267;	COLUSA, CA.	-$128;
CORNING, CA.	-$267;	COTTONWOOD, CA.	-$227;	CRESCENT CITY, CA.	-$211;	CRESTLINE, CA.	-$151;
DELANO, CA.	-$325;	DUNSMUIR, CA.	-$199;	EXETER, CA.	-$139;	FORTUNA, CA.	-$19;
GALT, CA.	-$117;	GROVELAND-BIG OAK, CA.	-$102;	HAYFORK, CA.	-$360;	HEMET, CA.	-$121;
JACKSON, CA.	-$33;	LAKE ARROWHEAD, CA.	-$24;	LAKE ISABELLA, CA.	-$222;	LONE PINE, CA.	-$197;
MADERA, CA.	-$157;	MERCED, CA.	-$157;	OAKHURST, CA.	-$124;	OROVILLE, CA.	-$178;
PALMDALE, CA.	-$94;	PATTERSON, CA.	-$37;	PORTERVILLE, CA.	-$325;	QUINCY, CA.	-$142;
RED BLUFF, CA.	-$267;	REDDING, CA.	-$312;	REEDLEY, CA.	-$139;	SAN BERNARDINO, CA.	-$151;
SANGER, CA.	-$223;	SONORA, CA.	-$102;	SUSANVILLE, CA.	-$163;	SUTTER CREEK, CA.	-$33;
TAFT, CA.	-$259;	THREE RIVERS, CA.	-$96;	TWAIN HARTE, CA.	-$102;	VISALIA, CA.	-$139;
WEAVERVILLE, CA.	-$161;	WILLITS, CA.	-$129;	WILLOW CREEK, CA.	-$292;	WILLOWS, CA.	-$275;
WOODLAKE, CA.	-$139;	YREKA, CA.	-$247;	YUBA CITY, CA.	-$128;	YUCAIPA, CA.	-$39;
KLAMATH FALLS, OR.	-$202;						

* - IF BOTH THE INTERIOR AND EXTERIOR ARE IN THIS CONDITION, APPLY THIS FACTOR TWICE.

REGARDLESS OF ADJUSTMENTS, THE MINIMUM BASE RENT IS $260 PER MONTH.

THE APPROPRIATE CPI FACTOR SHOULD BE APPLIED AFTER COMPLETING THE ABOVE ADJUSTMENTS.

C. APARTMENTS

For all apartment units, use the rental chart which appropriately describes the housing class and the number of bedrooms of the subject quarters. The charts for apartments are in Tables 4a through 4d.

Assume a 2-bedroom, 2-bathroom apartment, near Lompoc, CA with 760 square feet. The exterior is in poor condition; the interior is in fair condition. The apartment, which was built in 1957, is 45 years old (2002 - 1957), has a carport, and central refrigerated air conditioning.

First, the two-bedroom chart for good condition apartments (Table 4b) should be located and used. These charts are baseline charts, which assume that each apartment is in good condition inside and outside and has one full bathroom. Therefore, if the apartment is in good condition inside and outside and has one bathroom, no additional computations are needed. If there is a deviation from either good inside or outside condition or there are less or more bathrooms than one, then the computations must be changed as discussed below. In the first step, Table 4b is selected as the proper chart for 2-bedroom apartments.

In the second step the size (gross living area) is rounded **down** from 760 to 700 square feet. Under the column headed **"SQFT"** the figure 700 should be located. All further adjustments will be taken from this row.

In the third step the appropriate age column is selected. A 45-year old apartment is between 35 and 45 years old; therefore, the **"45 YRS OLD"** column should be used. A two-bedroom apartment, in good condition with 700 square feet of living space (gross), and which is 45 years of age, has a "Chart Rent" of $416 per month.

The first adjustment is the extra bathroom adjustment charge. Following the 700 SQFT row along to the column headed **"PER EXTRA BATHROOM"** you will find a charge of $141. To compute the charge for the extra bathroom, multiply 1 (1 extra bath) times $141 (the extra bath charge). Add $141 to the rent.

The second and third adjustments are for a poor exterior and a fair interior condition. Follow the 700 SQFT row across the table to the column headed "POOR EXTERIOR/INTERIOR*" a deduction of $17 is shown; and in the next column titled "FAIR EXTERIOR/INTERIOR*", a deduction of $12 is shown. Subtract from the rent $17 for poor exterior condition, and $12 for fair interior condition.

The fourth adjustment is for a carport. Beneath the table, under "STRUCTURAL ADJUSTMENTS", there is an instruction to add $25 for a carport of any size. As instructed add $25 to the rent of this apartment.

The fifth adjustment is for central refrigerated air conditioning. Beneath the table, under **"STRUCTURAL ADJUSTMENTS,"** there is an instruction to add $110 for Central Refrigerated Air Conditioning.

The final adjustment is the community adjustment. The apartment in this example is located near Lompoc, CA. The notes beneath the table (see "**COMMUNITY ADJUSTMENTS**") show no adjustment for Lompoc, CA. Therefore, rental values in Lompoc, CA for apartments are equal to or greater than the regional average. Since positive community adjustments are not applied, no community adjustment is shown for Lompoc, CA.

The last step is to round the resulting MBRR (Monthly Base Rental Rate) to the nearest whole dollar. Any amount resulting in an amount of $.50 or greater is rounded up; any amount resulting in an amount of $.49 or less is rounded down. The decision to round is discretionary.

In summary, the Monthly Base Rental Rate for the apartment in this example is determined as follows:

Chart Rent (700 SQFT/45 years old)	$416.00
Extra Bath Adjustment (1 X $141)	+141.00
Poor Exterior Adjustment	-17.00
Fair Interior Adjustment	-12.00
Carport Adjustment	+25.00
Central Refrigerated Air Conditioning Adjustment	+110.00
Location Adjustment (Lompoc, CA)	- 00.00
Monthly Base Rental Rate	$663.00

TABLE 4a

THE CALIFORNIA QUARTERS MONTHLY BASE RENT CHART
FOR GOOD CONDITION 3 BEDROOM, 1 BATHROOM APARTMENTS

SQFT	5 YRS OLD	15 YRS OLD	25 YRS OLD	35 YRS OLD	45 YRS OLD	55 YRS OLD	75+ YRS OLD	PER EXTRA BATH ROOM	EXCEL EXTER IOR/ INTER IOR*	FAIR EXTER- IOR/ INTER- IOR*	POOR EXTER- IOR/ INTER- IOR*	GAR- AGE (ANY SIZE)
600	$456	$451	$446	$441	$436	$431	$421	$+121	$+22	$-12	$-17	$+40
700	$476	$471	$466	$461	$456	$451	$441	$+141	$+22	$-12	$-17	$+40
800	$496	$491	$486	$481	$476	$471	$461	$+161	$+22	$-12	$-17	$+40
900	$516	$511	$506	$501	$496	$491	$481	$+181	$+22	$-12	$-17	$+40
1000	$536	$531	$526	$521	$516	$511	$501	$+201	$+22	$-12	$-17	$+40
1100	$557	$552	$547	$542	$537	$532	$522	$+201	$+22	$-12	$-17	$+40
1200	$577	$572	$567	$562	$557	$552	$542	$+201	$+22	$-12	$-17	$+40
1300	$597	$592	$587	$582	$577	$572	$562	$+201	$+22	$-12	$-17	$+40
1400	$617	$612	$607	$602	$597	$592	$582	$+201	$+22	$-12	$-17	$+40
1500	$637	$632	$627	$622	$617	$612	$602	$+201	$+22	$-12	$-17	$+40
1600	$657	$652	$647	$642	$637	$632	$622	$+201	$+22	$-12	$-17	$+40
1700	$677	$672	$667	$662	$657	$652	$642	$+201	$+22	$-12	$-17	$+40
1800	$697	$692	$687	$682	$677	$672	$662	$+201	$+22	$-12	$-17	$+40

ADDITIONAL ADJUSTMENTS:

STRUCTURAL ADJUSTMENTS:

CARPORT (ANY SIZE)	ADD $25	CENTRAL REFRIGERATED AIR CONDITIONING	ADD $110
FIREPLACE(S)	ADD $68	CENTRAL EVAPORATIVE AIR CONDITIONING	ADD $103

COMMUNITY ADJUSTMENTS:

AUBERRY, CA.	-$30;	BURNEY, CA.	-$154;	CHESTER, CA.	-$36;	EXETER, CA.	-$62;
OAKHURST, CA.	-$30;	REEDLEY, CA.	-$62;	SANGER, CA.	-$121;	THREE RIVERS, CA.	-$66;
VISALIA, CA.	-$62;	WOODLAKE, CA.	-$62;	KLAMATH FALLS, OR.	-$34;		

*IF BOTH THE EXTERIOR AND INTERIOR ARE IN THIS CONDITION, APPLY THIS FACTOR TWICE.

REGARDLESS OF ADJUSTMENTS, THE MINIMUM BASE RENT IS $260 PER MONTH.

THE APPROPRIATE CPI FACTOR SHOULD BE APPLIED AFTER COMPLETING THE ABOVE ADJUSTMENTS.

TABLE 4b

THE CALIFORNIA QUARTERS MONTHLY BASE RENT CHART
FOR GOOD CONDITION 2 BEDROOM, 1 BATHROOM APARTMENTS

SQFT	5 YRS OLD	15 YRS OLD	25 YRS OLD	35 YRS OLD	45 YRS OLD	55 YRS OLD	75+ YRS OLD	PER EXTRA BATH ROOM	EXCEL EXTER IOR/ INTER IOR*	FAIR EXTER- IOR/ INTER- IOR*	POOR EXTER- IOR/ INTER- IOR*	GAR- AGE (ANY SIZE)
400	$375	$370	$365	$360	$355	$350	$340	$+80	$+22	$-12	$-17	$+40
500	$395	$390	$385	$380	$375	$370	$360	$+101	$+22	$-12	$-17	$+40
600	$415	$410	$405	$400	$395	$390	$380	$+121	$+22	$-12	$-17	$+40
700	$436	$431	$426	$421	$416	$411	$401	$+141	$+22	$-12	$-17	$+40
800	$456	$451	$446	$441	$436	$431	$421	$+161	$+22	$-12	$-17	$+40
900	$476	$471	$466	$461	$456	$451	$441	$+181	$+22	$-12	$-17	$+40
1000	$496	$491	$486	$481	$476	$471	$461	$+201	$+22	$-12	$-17	$+40
1100	$516	$511	$506	$501	$496	$491	$481	$+201	$+22	$-12	$-17	$+40
1200	$536	$531	$526	$521	$516	$511	$501	$+201	$+22	$-12	$-17	$+40
1300	$556	$551	$546	$541	$536	$531	$521	$+201	$+22	$-12	$-17	$+40
1400	$576	$571	$566	$561	$556	$551	$541	$+201	$+22	$-12	$-17	$+40
1500	$596	$591	$586	$581	$576	$571	$561	$+201	$+22	$-12	$-17	$+40
1600	$616	$611	$606	$601	$596	$591	$581	$+201	$+22	$-12	$-17	$+40

ADDITIONAL ADJUSTMENTS:

STRUCTURAL ADJUSTMENTS:

CARPORT (ANY SIZE)	ADD $25	CENTRAL REFRIGERATED AIR CONDITIONING	ADD $110
FIREPLACE(S)	ADD $68	CENTRAL EVAPORATIVE AIR CONDITIONING	ADD $103

COMMUNITY ADJUSTMENTS:

AUBERRY, CA.	-$30;	BURNEY, CA.	-$154;	CHESTER, CA.	-$36;	EXETER, CA.	-$62;
OAKHURST, CA.	-$30;	REEDLEY, CA.	-$62;	SANGER, CA.	-$121;	THREE RIVERS, CA.	-$66;
VISALIA, CA.	-$62;	WOODLAKE, CA.	-$62;	KLAMATH FALLS, OR.	-$34;		

*IF BOTH THE EXTERIOR AND INTERIOR ARE IN THIS CONDITION, APPLY THIS FACTOR TWICE.

REGARDLESS OF ADJUSTMENTS, THE MINIMUM BASE RENT IS $260 PER MONTH.

THE APPROPRIATE CPI FACTOR SHOULD BE APPLIED AFTER COMPLETING THE ABOVE ADJUSTMENTS.

TABLE 4c

THE CALIFORNIA QUARTERS MONTHLY BASE RENT CHART
FOR GOOD CONDITION 1 BEDROOM, 1 BATHROOM APARTMENTS

SQFT	5 YRS OLD	15 YRS OLD	25 YRS OLD	35 YRS OLD	45 YRS OLD	55 YRS OLD	75+ YRS OLD	PER EXTRA BATH ROOM	EXCEL EXTER IOR/ INTER IOR*	FAIR EXTER- IOR/ INTER- IOR*	POOR EXTER- IOR/ INTER- IOR*	GAR- AGE (ANY SIZE)
300	$303	$298	$293	$288	$283	$278	$268	$+60	$+22	$-12	$-17	$+40
400	$323	$318	$313	$308	$303	$298	$288	$+80	$+22	$-12	$-17	$+40
500	$343	$338	$333	$328	$323	$318	$308	$+101	$+22	$-12	$-17	$+40
600	$363	$358	$353	$348	$343	$338	$328	$+121	$+22	$-12	$-17	$+40
700	$383	$378	$373	$368	$363	$358	$348	$+141	$+22	$-12	$-17	$+40
800	$403	$398	$393	$388	$383	$378	$368	$+161	$+22	$-12	$-17	$+40
900	$423	$418	$413	$408	$403	$398	$388	$+181	$+22	$-12	$-17	$+40
1000	$443	$438	$433	$428	$423	$418	$408	$+201	$+22	$-12	$-17	$+40
1100	$464	$459	$454	$449	$444	$439	$429	$+201	$+22	$-12	$-17	$+40
1200	$484	$479	$474	$469	$464	$459	$449	$+201	$+22	$-12	$-17	$+40
1300	$504	$499	$494	$489	$484	$479	$469	$+201	$+22	$-12	$-17	$+40
1400	$524	$519	$514	$509	$504	$499	$489	$+201	$+22	$-12	$-17	$+40
1500	$544	$539	$534	$529	$524	$519	$509	$+201	$+22	$-12	$-17	$+40

ADDITIONAL ADJUSTMENTS:

STRUCTURAL ADJUSTMENTS:

CARPORT (ANY SIZE)	ADD $25	CENTRAL REFRIGERATED AIR CONDITIONING	ADD $110
FIREPLACE(S)	ADD $68	CENTRAL EVAPORATIVE AIR CONDITIONING	ADD $103

COMMUNITY ADJUSTMENTS:

AUBERRY, CA.	-$30;	BURNEY, CA.	-$154;	CHESTER, CA.	-$36;	EXETER, CA.	-$62;
OAKHURST, CA.	-$30;	REEDLEY, CA.	-$62;	SANGER, CA.	-$121;	THREE RIVERS, CA.	-$66;
VISALIA, CA.	-$62;	WOODLAKE, CA.	-$62;	KLAMATH FALLS, OR.	-$34;		

*IF BOTH THE EXTERIOR AND INTERIOR ARE IN THIS CONDITION, APPLY THIS FACTOR TWICE.

REGARDLESS OF ADJUSTMENTS, THE MINIMUM BASE RENT IS $260 PER MONTH.

THE APPROPRIATE CPI FACTOR SHOULD BE APPLIED AFTER COMPLETING THE ABOVE ADJUSTMENTS.

TABLE 4d

THE CALIFORNIA QUARTERS MONTHLY BASE RENT CHART
FOR GOOD CONDITION 0 BEDROOM, 1 BATHROOM APARTMENTS

SQFT	5 YRS OLD	15 YRS OLD	25 YRS OLD	35 YRS OLD	45 YRS OLD	55 YRS OLD	75+ YRS OLD	PER EXTRA BATH ROOM	EXCEL EXTER IOR/ INTER IOR*	FAIR EXTER- IOR/ INTER- IOR*	POOR EXTER- IOR/ INTER- IOR*	GAR- AGE (ANY SIZE)
100	$189	$184	$179	$174	$169	$164	$154	$+20	$+22	$-12	$-17	$+40
200	$209	$204	$199	$194	$189	$184	$174	$+40	$+22	$-12	$-17	$+40
300	$229	$224	$219	$214	$209	$204	$194	$+60	$+22	$-12	$-17	$+40
400	$249	$244	$239	$234	$229	$224	$214	$+80	$+22	$-12	$-17	$+40
500	$269	$264	$259	$254	$249	$244	$234	$+101	$+22	$-12	$-17	$+40
600	$289	$284	$279	$274	$269	$264	$254	$+121	$+22	$-12	$-17	$+40
700	$309	$304	$299	$294	$289	$284	$274	$+141	$+22	$-12	$-17	$+40
800	$329	$324	$319	$314	$309	$304	$294	$+161	$+22	$-12	$-17	$+40
900	$350	$345	$340	$335	$330	$325	$315	$+181	$+22	$-12	$-17	$+40
1000	$370	$365	$360	$355	$350	$345	$335	$+201	$+22	$-12	$-17	$+40
1100	$390	$385	$380	$375	$370	$365	$355	$+201	$+22	$-12	$-17	$+40

ADDITIONAL ADJUSTMENTS:

STRUCTURAL ADJUSTMENTS:

CARPORT (ANY SIZE)	ADD $25	CENTRAL REFRIGERATED AIR CONDITIONING	ADD $110
FIREPLACE(S)	ADD $68	CENTRAL EVAPORATIVE AIR CONDITIONING	ADD $103

COMMUNITY ADJUSTMENTS:

AUBERRY, CA.	-$30;	BURNEY, CA.	-$154;	CHESTER, CA.	-$36;	EXETER, CA.	-$62;
OAKHURST, CA.	-$30;	REEDLEY, CA.	-$62;	SANGER, CA.	-$121;	THREE RIVERS, CA.	-$66;
VISALIA, CA.	-$62;	WOODLAKE, CA.	-$62;	KLAMATH FALLS, OR.	-$34;		

*IF BOTH THE EXTERIOR AND INTERIOR ARE IN THIS CONDITION, APPLY THIS FACTOR TWICE.

REGARDLESS OF ADJUSTMENTS, THE MINIMUM BASE RENT IS $260 PER MONTH.

THE APPROPRIATE CPI FACTOR SHOULD BE APPLIED AFTER COMPLETING THE ABOVE ADJUSTMENTS.

D. MOBILE HOMES, TRAVEL TRAILERS, AND HOUSEBOATS

For these housing classes, use the mobile home base rental charts (Tables 5a-c). To familiarize the reader with these charts, assume a 490 square foot, 1-bedroom mobile home built in 1967 with a 3/4 bathroom. This mobile home is in poor interior and poor exterior condition and is located near Woodlake, CA. The Monthly Base Rental Rate for the mobile home in this example is calculated from Table 5c as follows.

The 1-bedroom chart for good condition mobile homes (Table 5c) should be located and used. This chart is a baseline chart, which assumes that each mobile home is in good condition inside and outside and has one full bathroom. Therefore, if the mobile home is in good condition inside and outside and has one full bathroom, no additional computations are needed. If there is a deviation from either good inside or outside condition or there are less or more bathrooms than one, then the computations must be changed accordingly.

First, locate the table for mobile homes in good condition with *one full bathroom* (Table 5c). Next, the gross square feet of living area should be rounded down to 400 square feet, and the **age** (2002 - 1967 = 35 years) is rounded **up** to 35+ years. The column headed **"SQFT"** is followed **down** to 400. All other adjustments are taken from this row. On this row, under the column headed **"35+ YRS OLD,"** the "Chart Rent" is $344.

The base rental value of $344 (computed above) includes the value of one full bathroom. Since the unit in this example has only a 3/4 bathroom, an adjustment must be made for the missing 1/4 bathroom. At the top of the table is a column titled **"PER EXTRA BATHROOM."** Follow this column down to the 400 SQFT row. A value of $18 is shown. Multiply this value times .25 (1/4 bathroom) to calculate the value of the missing 1/4 bathroom ($18 X .25 = $4.50). Subtract $4.50 from the rent.

The second and third adjustments are for the condition of the unit. Follow the 400 SQFT row to the column headed **"POOR EXTERIOR/INTERIOR*"**; subtract $31 for the poor exterior condition and another $31 for the poor interior condition.

The final adjustment is the community adjustment. The mobile home in this example is located near Woodlake, CA. The notes beneath the table (see "**COMMUNITY ADJUSTMENTS**") show an adjustment of -$193 for Woodlake, CA. The rental values for mobile homes in Woodlake, CA are much lower than the survey area average. The rent for mobile homes which use Woodlake, CA as the nearest established community should be reduced by $193.

The Monthly Base Rental Rate for this mobile home is shown below.

Chart Rent (400 SQFT/35+ years old)	$344.00
Bathroom Adjustment (.25 X $18)	- 4.50
Poor Exterior	- 31.00
Poor Interior	- 31.00
Location Adjustment (Woodlake, CA)	- 193.00
Computed Monthly Base Rental Rate	$84.50
Computed Monthly Base Rental Rate (Rounded)	$85.00
Actual Monthly Base Rental Rate (Minimum Base)	$260.00

Note: In this example, the Monthly Base Rental Rate computes to $85.00, which is less than the $260.00 minimum Monthly Base Rental Rate for the California Survey Region (refer to the footnotes on each rent table for the minimum base rent). Therefore, the Monthly Base Rental Rate for the mobile home in this example will be set at $260.00. Keep in mind that the *Monthly Base Rental Rate* is different from the minimum monthly *final rent*. Thus, $260.00 is not the minimum final rent possible.

TABLE 5a

THE CALIFORNIA QUARTERS MONTHLY BASE RENT CHART
FOR GOOD CONDITION 3 BEDROOM, 1 BATHROOM MOBILE HOMES

SQFT	5 YRS OLD	10 YRS OLD	15 YRS OLD	20 YRS OLD	25 YRS OLD	30 YRS OLD	35+ YRS OLD	PER EXTRA BATH ROOM	EXCEL EXTER-IOR/ INTER-IOR*	FAIR EXTER-IOR/ INTER-IOR*	POOR EXTER-IOR/ INTER-IOR*
400	$574	$564	$554	$544	$534	$524	$514	$+18	$+30	$-26	$-31
500	$578	$568	$558	$548	$538	$528	$518	$+22	$+30	$-26	$-31
600	$582	$572	$562	$552	$542	$532	$522	$+26	$+30	$-26	$-31
700	$587	$577	$567	$557	$547	$537	$527	$+31	$+30	$-26	$-31
800	$591	$581	$571	$561	$551	$541	$531	$+35	$+30	$-26	$-31
900	$596	$586	$576	$566	$556	$546	$536	$+40	$+30	$-26	$-31
1000	$600	$590	$580	$570	$560	$550	$540	$+44	$+30	$-26	$-31
1100	$604	$594	$584	$574	$564	$554	$544	$+48	$+30	$-26	$-31
1200	$609	$599	$589	$579	$569	$559	$549	$+53	$+30	$-26	$-31
1300	$613	$603	$593	$583	$573	$563	$553	$+57	$+30	$-26	$-31
1400	$618	$608	$598	$588	$578	$568	$558	$+62	$+30	$-26	$-31
1500	$622	$612	$602	$592	$582	$572	$562	$+66	$+30	$-26	$-31
1600	$626	$616	$606	$596	$586	$576	$566	$+70	$+30	$-26	$-31

ADDITIONAL ADJUSTMENTS:

STRUCTURAL ADJUSTMENTS:

GARAGE (ANY SIZE):	ADD	$25
CARPORT (ANY SIZE):	ADD	$20
CENTRAL REFRIGERATED AIR CONDITIONING	ADD	$39
CENTRAL EVAPORATIVE AIR CONDITIONING	ADD	$25

COMMUNITY ADJUSTMENTS:

ANGELS CAMP, CA.	-$11;	ARNOLD, CA.	-$11;	AUBERRY, CA.	-$11;	AUBURN, CA.	-$25;
DELANO, CA.	-$147;	EXETER, CA.	-$193;	GROVELAND-BIG OAK, CA.	-$11;	LOMPOC, CA.	-$120;
OAKHURST, CA.	-$11;	OJAI, CA.	-$60;	PORTERVILLE, CA.	-$147;	QUINCY, CA.	-$40;
REEDLEY, CA.	-$193;	SANGER, CA.	-$105;	SANTA MARIA, CA.	-$120;	SOLVANG, CA.	-$120;
SONORA, CA.	-$11;	THREE RIVERS, CA.	-$16;	TWAIN HARTE, CA.	-$11;	VENTURA, CA.	-$60;
VISALIA, CA.	-$193;	WILLOW CREEK, CA.	-$117;	WILLOWS, CA.	-$124;	WOODLAKE, CA.	-$193;
YREKA, CA.	-$164;						

* - IF BOTH THE EXTERIOR AND INTERIOR ARE IN THIS CONDITION, APPLY THIS FACTOR TWICE.

REGARDLESS OF ADJUSTMENTS, THE MINIMUM BASE RENT IS $260 PER MONTH.

THE APPROPRIATE CPI FACTOR SHOULD BE APPLIED AFTER COMPLETING THE ABOVE ADJUSTMENTS.

TABLE 5b

THE CALIFORNIA QUARTERS MONTHLY BASE RENT CHART
FOR GOOD CONDITION 2 BEDROOM, 1 BATHROOM MOBILE HOMES

SQFT	5 YRS OLD	10 YRS OLD	15 YRS OLD	20 YRS OLD	25 YRS OLD	30 YRS OLD	35+ YRS OLD	PER EXTRA BATH ROOM	EXCEL EXTER-IOR/ INTER-IOR*	FAIR EXTER-IOR/ INTER-IOR*	POOR EXTER-IOR/ INTER-IOR*
400	$489	$479	$469	$459	$449	$439	$429	$+18	$+30	$-26	$-31
500	$493	$483	$473	$463	$453	$443	$433	$+22	$+30	$-26	$-31
600	$497	$487	$477	$467	$457	$447	$437	$+26	$+30	$-26	$-31
700	$502	$492	$482	$472	$462	$452	$442	$+31	$+30	$-26	$-31
800	$506	$496	$486	$476	$466	$456	$446	$+35	$+30	$-26	$-31
900	$511	$501	$491	$481	$471	$461	$451	$+40	$+30	$-26	$-31
1000	$515	$505	$495	$485	$475	$465	$455	$+44	$+30	$-26	$-31
1100	$519	$509	$499	$489	$479	$469	$459	$+48	$+30	$-26	$-31
1200	$524	$514	$504	$494	$484	$474	$464	$+53	$+30	$-26	$-31
1300	$528	$518	$508	$498	$488	$478	$468	$+57	$+30	$-26	$-31
1400	$533	$523	$513	$503	$493	$483	$473	$+62	$+30	$-26	$-31
1500	$537	$527	$517	$507	$497	$487	$477	$+66	$+30	$-26	$-31

ADDITIONAL ADJUSTMENTS:

STRUCTURAL ADJUSTMENTS:

GARAGE (ANY SIZE):	ADD	$25
CARPORT (ANY SIZE):	ADD	$20
CENTRAL REFRIGERATED AIR CONDITIONING	ADD	$39
CENTRAL EVAPORATIVE AIR CONDITIONING	ADD	$25

COMMUNITY ADJUSTMENTS:

ANGELS CAMP, CA.	-$11;	ARNOLD, CA.	-$11;	AUBERRY, CA.	-$11;	AUBURN, CA.	-$25;
DELANO, CA.	-$147;	EXETER, CA.	-$193;	GROVELAND-BIG OAK, CA.	-$11;	LOMPOC, CA.	-$120;
OAKHURST, CA.	-$11;	OJAI, CA.	-$60;	PORTERVILLE, CA.	-$147;	QUINCY, CA.	-$40;
REEDLEY, CA.	-$193;	SANGER, CA.	-$105;	SANTA MARIA, CA.	-$120;	SOLVANG, CA.	-$120;
SONORA, CA.	-$11;	THREE RIVERS, CA.	-$16;	TWAIN HARTE, CA.	-$11;	VENTURA, CA.	-$60;
VISALIA, CA.	-$193;	WILLOW CREEK, CA.	-$117;	WILLOWS, CA.	-$124;	WOODLAKE, CA.	-$193;
YREKA, CA.	-$164;						

* - IF BOTH THE EXTERIOR AND INTERIOR ARE IN THIS CONDITION, APPLY THIS FACTOR TWICE.

REGARDLESS OF ADJUSTMENTS, THE MINIMUM BASE RENT IS $260 PER MONTH.

THE APPROPRIATE CPI FACTOR SHOULD BE APPLIED AFTER COMPLETING THE ABOVE ADJUSTMENTS.

TABLE 5c

THE CALIFORNIA QUARTERS MONTHLY BASE RENT CHART
FOR GOOD CONDITION 1 BEDROOM, 1 BATHROOM MOBILE HOMES

SQFT	5 YRS OLD	10 YRS OLD	15 YRS OLD	20 YRS OLD	25 YRS OLD	30 YRS OLD	35+ YRS OLD	PER EXTRA BATH ROOM	EXCEL EXTER-IOR/ INTER-IOR*	FAIR EXTER-IOR/ INTER-IOR*	POOR EXTER-IOR/ INTER-IOR*
100	$390	$380	$370	$360	$350	$340	$330	$+4	$+30	$-26	$-31
200	$395	$385	$375	$365	$355	$345	$335	$+9	$+30	$-26	$-31
300	$399	$389	$379	$369	$359	$349	$339	$+13	$+30	$-26	$-31
400	$404	$394	$384	$374	$364	$354	$344	$+18	$+30	$-26	$-31
500	$408	$398	$388	$378	$368	$358	$348	$+22	$+30	$-26	$-31
600	$412	$402	$392	$382	$372	$362	$352	$+26	$+30	$-26	$-31
700	$417	$407	$397	$387	$377	$367	$357	$+31	$+30	$-26	$-31
800	$421	$411	$401	$391	$381	$371	$361	$+35	$+30	$-26	$-31
900	$426	$416	$406	$396	$386	$376	$366	$+40	$+30	$-26	$-31
1000	$430	$420	$410	$400	$390	$380	$370	$+44	$+30	$-26	$-31
1100	$434	$424	$414	$404	$394	$384	$374	$+48	$+30	$-26	$-31
1200	$439	$429	$419	$409	$399	$389	$379	$+53	$+30	$-26	$-31

ADDITIONAL ADJUSTMENTS:

STRUCTURAL ADJUSTMENTS:

GARAGE (ANY SIZE):	ADD	$25
CARPORT (ANY SIZE):	ADD	$20
CENTRAL REFRIGERATED AIR CONDITIONING	ADD	$39
CENTRAL EVAPORATIVE AIR CONDITIONING	ADD	$25

COMMUNITY ADJUSTMENTS:

ANGELS CAMP, CA.	-$11;	ARNOLD, CA.	-$11;	AUBERRY, CA.	-$11;	AUBURN, CA.	-$25;
DELANO, CA.	-$147;	EXETER, CA.	-$193;	GROVELAND-BIG OAK, CA.	-$11;	LOMPOC, CA.	-$120;
OAKHURST, CA.	-$11;	OJAI, CA.	-$60;	PORTERVILLE, CA.	-$147;	QUINCY, CA.	-$40;
REEDLEY, CA.	-$193;	SANGER, CA.	-$105;	SANTA MARIA, CA.	-$120;	SOLVANG, CA.	-$120;
SONORA, CA.	-$11;	THREE RIVERS, CA.	-$16;	TWAIN HARTE, CA.	-$11;	VENTURA, CA.	-$60;
VISALIA, CA.	-$193;	WILLOW CREEK, CA.	-$117;	WILLOWS, CA.	-$124;	WOODLAKE, CA.	-$193;
YREKA, CA.	-$164;						

* - IF BOTH THE EXTERIOR AND INTERIOR ARE IN THIS CONDITION, APPLY THIS FACTOR TWICE.

REGARDLESS OF ADJUSTMENTS, THE MINIMUM BASE RENT IS $260 PER MONTH.

THE APPROPRIATE CPI FACTOR SHOULD BE APPLIED AFTER COMPLETING THE ABOVE ADJUSTMENTS.

E. CABINS OR LOOKOUTS

For purposes of rental rate establishment, the rental housing class most comparable to cabins or lookouts would be 1-bedroom, single-family houses, regardless of the number of bedrooms in the cabin. One-bedroom, single-family rental houses generally consist of smaller and older housing units. Where the cabins or lookouts are outfitted for housekeeping, and contain an independent primary heating system, the rental rates (including all applicable adjustments) are determined by using the 1-bedroom house chart (i.e. Table 3d).

Where a cabin or lookout lacks full housekeeping facilities (including running water, an inside heated bathroom, or a central heating system), additional adjustments (shown below) must be made to the Monthly Base Rental Rate. A free standing stove without a fan, or a fireplace does not qualify as a central primary heating system. These adjustments are designed to take into consideration the inconvenience resulting from the lack of full housekeeping facilities. However, the adjusted monthly base rental rate may not be set below the minimum monthly base rent of $260.

. No Electricity =	- 20%
. No Inside Bathroom =	- 20%
. No Running Water =	- 20%
. No Central Heating System =	- 15% (*)
. Less Than Two Rooms (One-Room Cabin or Lookout) =	- 10%

(*) Applied only if used during the heating season.

F. BUNKHOUSE AND DORMITORIES

Bunkhouses and dormitories should only include housing units that have been specifically constructed or modified for use as bunkhouses or dormitories. Single-family houses, apartments or mobile homes that are **used** as dormitories or bunkhouses, must be valued as what they are (houses, apartments or mobile homes), with the rent divided by the number of **planned** occupants (normally 2 per bedroom).

Dormitory or bunkhouse units typically lack either a living room or kitchen, or have common baths and kitchens serving many people. Many also have multiple bunk beds in large ward-like rooms. Such housing units pose a valuation problem, as they are normally found only in association with institutions such as the military or colleges, of which its occupants are members. Since these institutions do not typically rent to the public at large, one cannot obtain an arms-length market rent.

Under circumstances where there is a lack of comparable rental data, OMB Circular A-45 provides that rental rates may be established using an extension of the Principle of Comparability. Under this procedure, rental rates are established using the most comparable rental housing available, and the rate is essentially 50 percent of the average house rent.

During the February, 1994 National Quarters Conference, the National Quarters Council decided that one aggregate monthly rate should be established for **all** dormitories in a survey region. This aggregate dormitory rate, which includes the value of Government-provided utilities, furnishings and services, was determined as follows.

An analysis of the comparables used in this survey found that the average single-family house had 1,178 square feet of finished floor space, 2.5 bedrooms and an average monthly adjusted contract rent of $926. By applying an extension of the Principle of Comparability, the Base Shelter Rental Rate (BSRR) for bunkhouses and dormitories is calculated as shown below.

Average adjusted contract rent x .5 = $926 x .5 = $463.00

$463.00 / (average # of bedrooms x 2 occupants per bedroom)
$463.00 / (2.5 bedrooms x 2 occupants) = $463.00 / 5 = $92.60 per month/per occupant.

Charges were then added to this rate for utilities, services and furnishings that are provided by the Government. The aggregate value of these items was based on a study of the rates prevailing in the regional survey area. These charges were prorated based upon a 1,178 square foot, 2.5 bedroom, single-family house occupied by 2 people per bedroom. The aggregate charge for these related facilities is $67.22.

Monthly, weekly, and daily bunkhouse and dormitory rates are computed as follows.

TABLE 6 BUNKHOUSE/DORMITORY RENTS

CALIFORNIA

Monthly Charge

Dormitory Rate $92.60
Related Facilities Charges $67.22

MBRR ..... $159.80 (Rounded)

Bi-Weekly Charge

To convert to bi-weekly rate
multiply MBRR by .4615 and
round to nearest five cents $73.75

Weekly Charge

To convert to weekly rate
multiply MBRR by .2308 and
round to nearest five cents $36.90

Daily Charge

To convert to daily rate
multiply MBRR by .0333 and
round to nearest five cents $5.30

Note: An administrative adjustment of -10% is permitted if 3 or more people must share a bedroom or sleeping area. Also, an administrative adjustment of –10% is permitted for dormitories that lack kitchen or cooking facilities.

G. TRANSIENT QUARTERS

Transient quarters are those which are occupied on a transient basis, normally for a period of 90 days or less. Government provided transient quarters offer a range of accommodations. At some locations kitchen facilities, private telephones and private bathrooms may be available; at others, they are not provided. At some locations, maid service is provided (with varying degrees of frequency); at other locations, employees are "issued" bedding and other domestic items, and must take care of their own house keeping arrangements.

Given the diversity of facilities and services associated with Government-provided transient quarters, the QMIS National Quarters Council determined that private housing, comparable to Government transient quarters, generally does not exist. Accordingly, the rental charges for transient quarters have been established by extending the principle of comparability, as provided in OMB Circular A-45.

Essentially, the rental charge for transient quarters is the sum of the monthly dormitory rate (see Table 6); a monthly charge for maid service (Table 18); and a 20 percent administrative/service charge required by OMB Circular A-45 paragraph 7.c (4)(a). Monthly, weekly and daily charges for transient quarters are shown, below, in Table 7.

TABLE 7 TRANSIENT QUARTERS RENTS

Dormitory BSRR	$92.60
Related Facilities Charges (Table 6)	67.22
Maid Service (Table 18)	67.75
Subtotal	$227.55
Administrative Charge (OMB Cir. A-45)	x 1.20
Total (Rounded)	$273.05
Monthly Charge (Rounded)	$273.05
Bi-Weekly Charge ($273.05 x .4615 Rounded)	$126.00
Weekly Charge ($273.05 x .2308 Rounded)	$63.00
Daily Charge ($273.05 x .0333 Rounded)	$9.10

H. TRAILER SPACES

During the course of the survey, trailer pads were surveyed in a wide variety of mobile home parks and varied widely in physical characteristics, utilities, rents, and geographical location.

A simplified analysis of this data was done. The value of related facilities in the contract rent was subtracted to arrive at an adjusted rent. After excluding extreme outliers, the average adjusted rent was determined for the remaining samples.

The average adjusted rent was then divided into the actual rent of each remaining sample. Those communities where the adjusted contract rents were significantly lower than the average rent for the region were given their typical adjusted rents. The rental rates of trailer pads in all other communities were established at the survey average rental level for the region.

During the February, 1993 National Quarters Conference, the National Quarters Officers of the agencies that participate in the Quarters Management Program agreed to assess the same monthly base rental rate (the rate for a single-wide space) for **all** GFQ trailer spaces. This is because most employees do not own/occupy doublewide mobile homes, and because the market differences are negligible.

To determine the trailer pad Monthly Base Rental Rate, use the applicable rate contained in Table 8. Do not use the rates in Table 8 if the trailer pad is occupied by a Government-owned or leased mobile home, as the land rent is already included in the base rent for all improved quarters.

If, as an example, the trailer pad were occupied by a tenant-owned mobile home located near Hayfork, CA, the base rent for this pad would be $127 per month. If, for another example, the trailer space were located near Redding, CA, the base rental rate for this pad would be $260 (the "All Other Locations" charge). No other adjustments are made for physical characteristics such as the date the trailer pad was installed, the front or square footage, or the total number of sites at that location.

However, all appropriate administrative adjustments (such as amenity and isolation adjustments), as well as all charges for Government provided related facilities (such as utilities and furnishings) should be applied to the Monthly Base Rental Rates in Table 8 to determine the monthly net rental charge.

TABLE 8 TRAILER SPACES - MONTHLY BASE RENTAL RATES

COMMUNITIES	MONTHLY BASE RENTAL RATES
CALIFORNIA	
Arcata, CA	$224
Auberry, CA	$257
Burney, CA	$138
Chester, CA	$182
Corning, CA	$237
Delano, CA	$239
Dunsmuir, CA	$187
Exeter, CA	$161
Fortnua, CA	$174
Greenfield, CA	$231
Hayfork, CA	$127
King City, CA	$231
Lakeport, CA	$226
Oakhurst, CA	$257
Oroville, CA	$192
Palmdale, CA	$234
Porterville, CA	$239
Quincy, CA	$161
Reedley, CA	$161
Soledad, CA	$231
Susanville, CA	$148
Visalia, CA	$161
Weaverville, CA	$174
Willow Creek, CA	$120
Willows, CA	$151
Woodlake, CA	$161
Yreka, CA	$164
OREGON	
Klamath Falls, OR	$185
ALL OTHER LOCATIONS	$260

I. OBSOLETE QUARTERS

OMB Circular A-45 revised October 20, 1993 excludes from the term rental quarters ". . . housing which due to extreme deterioration is unsuitable for occupancy except in exigent circumstances. . .." The net effect of this change means there will be no base rental rate for obsolete quarters. However, assessments will be made for utilities, furnishings, appliances and any other services that are provided by the Government.

The Department of the Interior Quarters Handbook (DQH), and the regulations of other QMIS program participants, provide that housing used as employee quarters must be safe, sanitary, and energy efficient. Where housing is in obsolete condition, it is by definition unfit for use as employee housing, and should be renovated, replaced, destroyed or used for non-residential purposes. Section 7.3A of the DQH also provides that the appropriate Program Assistant Secretary, or his/her designee (Bureau Head), may authorize temporary occupancy (for a period not to exceed one year), pending rehabilitation or replacement action where sufficient written justification is provided.

VI. CHARGES FOR UTILITIES, APPLIANCES AND RELATED SERVICES

A. BACKGROUND

OMB Circular A-45 requires that, whenever possible, utilities should be provided by a private company and billed directly to quarters occupants. Where Government-furnished utilities are provided, they should be metered or measured. When Government-furnished utilities are not metered or measured, consumption will be determined from an analysis of the average amounts of utilities used in comparable private housing in the nearest established community or survey area. **Where the Government furnishes utilities, and where the quarters rental rates are established by the regional survey method, the utility rates shall be the regional average utility rates prescribed in this report - <u>not</u> the rates prevailing in the nearest established community.**

The regional average utility rates contained in this report include all applicable delivery charges, adjustments, taxes and surcharges. Charges for Government-provided appliances, services and furnishings will be based upon nationwide average costs.

The following sections of this report detail the consumption and cost data to be used in the circumstances described above. The cost data in this report will be updated by the QMIS Program Office each year and distributed with the Consumer Price Index (CPI) adjustment that takes effect each year.

B. ENERGY CONSUMPTION STUDY

1. **General**. Energy consumption estimates are required where the Government furnishes the space heating or cooling fuel and the electricity, and where consumption is neither metered nor measured. In such instances, average energy consumption must be estimated and the Government must assess a charge based on private sector energy costs in the survey area. No methodology for estimating energy consumption can exactly predict the amounts of energy needed to heat or cool specific dwellings. Precise consumption measurements are possible only when metering is used. However, the methodology used in this report will yield **reasonable** estimates of the heating and cooling energy consumption requirements of unmetered dwellings. The methodology employed in this section was contractor-developed. For this report, however, the contractor-provided tables and conversion charts have been reformatted, and the methodology has been restated to simplify the process of estimating energy consumption requirements. The unit costs for various fuel types and for electricity (e.g., the cost per gallon for fuel oil and propane; the cost per MCF (1,000 cubic feet) for natural gas; and the cost per KwH for electricity) are regional averages of the unit fuel/electricity prices gathered by the contractor in each community surveyed.

2. **Housing Prototypes**. For the California energy study, estimates of the heating and cooling energy requirements were prepared for each of the following six prototypical housing units.

   Type I - Single family, one story, no basement

   Type II - Single family, one story, full basement

   Type III - Single family, two story, no basement

   Type IV - Single family, two story, full basement

   Type V - Apartment unit

   Type VI - Mobile Home

3. **Assumptions**. For each of the housing prototypes, the following assumptions were made:

   a. Location. - The housing is located in Bakersfield, CA.

   b. R values. - Each housing type has the R values of insulation in floors, walls, and ceilings recommended in the HUD Minimum Property Standards (HUD-MPS) for the Bakersfield, CA area.

   c. Occupants. - The housing contains an average compliment of occupants who are energy conscious (one person per 500 feet of floor space was assumed).

   d. All measurements are of finished living space only and are based upon exterior dimensions.

   e. Condition. - The housing is in good condition.

f. Building shape. - A rectangular shape with a ratio of 2:1 was established. This provides more building skin than a square configuration therefore, the rectangular shape yields a conservative estimate of skin loads.

g. Window area. - A window area of 10 percent of wall area was used to match UBC (Uniform Building Code) minimum window area standards.

h. Roof type. - A flat or pitched roof with ceiling insulation was assumed in all cases.

i. Air changes. - 1.5 air changes per hour was established as representing a conservative estimate of air changes in residential applications.

j. Perimeter loss. - Approximately 10 percent of overall building load is attributed to the slab on grade floors with rigid insulation to a value of R-6.

4. Using the above assumptions, infiltration factors developed by the Department of Energy, R values, building dimensions, and cooling and heating degree days, a contractor has formulated methodologies for estimating British Thermal Unit (BTU) and kilowatt hour (KwH) consumption rates, and costs, for heating and cooling. The relevant portions of the methodology are explained below.

C. SPACE HEATING (FOSSIL FUEL) CONSUMPTION/COST CALCULATIONS

To illustrate the procedure for calculating the cost of heating with fossil fuel, a single story 1,850 square foot house, with no basement, located near Hayfork, CA will be used as an example.

1. The first step is to select from among Tables 9a through 9f, the table which most closely describes the quarters unit at issue. In this case, Table 9a is for a 1-story, single family house with a partial (50 percent or less) or no basement (Prototype I). When determining the prototype, use the total basement (finished and unfinished) square footage. Unfinished space is only considered when determining the prototype. It is never used when using a rent setting or consumption chart. Table 9a should be selected in this example.

2. The second step is to determine the number of BTU's consumed **annually** for heating the house used in this example. Select from Table 9a the annual MBTU (million BTU's) consumption appropriate for the heating degree days (HDD's) and the gross **finished** square footage of the house in this example. Use the table as shown below.

   a. Find the number of HDD's for the established community near which the quarters are located. Table 10 contains the HDD's for the nearest established communities in the California survey region; this table shows that Hayfork, CA has 3,831 HDD's. In Table 9a, 3,831 HDD's lies between the columns headed **"3,600"** and **"4,000."** Round 3,831 HDD's down to 3,600 HDD's.

   b. In Table 9a, 1,850 square feet (the size of the house used in the example) lies between 1,800 and 2,000 square feet; round 1,850 down to 1,800 square feet.

c. From Table 9a (1,800 square feet and 3,600 HDD's) the annual MBTU consumption rate is 66.9 MBTU's.

3. The third step is to calculate the amount of fossil fuel needed to produce 66.9 MBTU's. Table 11 shows the amount of fossil fuel needed to produce 1 MBTU. The total amount of heating fuel required to produce 66.9 MBTU's is computed by multiplying the appropriate fuel factor in Table 11 by the number of MBTU's. In this case the fuel required is:

Natural gas:	66.9 MBTU's x 1 MCF	=	66.9 MCF.
Propane:	66.9 MBTU's x 10.2 gallons	=	682.38 gallons
Fuel oil:	66.9 MBTU's x 7.04 gallons	=	470.98 gallons

4. The fourth step is to calculate the annual cost of the fuel consumed. This can be done by multiplying the annual fuel consumption by the unit fuel charges shown in Table 12. Following this procedure, the charge for fuel consumed annually to produce 66.9 MBTU's is:

Natural gas:	66.9 MCF x $9.07 (per MCF)	=	$606.78
Propane:	682.38 gallons x $1.49(per gallon)	=	$1,016.75
Fuel oil:	470.98 gallons x $1.07 (per gallon)	=	$503.95

5. The fifth step is to calculate the monthly charge for fossil heating fuel. This is done simply by dividing the annual charges (above) by 12 (months). In this manner the monthly charges are: natural gas = $50.57; propane = $84.73 and fuel oil = $42.00.

6. The final step is to multiply the monthly charge (computed in step 5 above) by the appropriate HUD MPS Heating Zone conversion factor (Table 13). In order to use Table 13, it is first necessary to determine the HUD MPS Zone for the community at issue (Hayford, CA). Table 10 shows the HUD MPS Zones for the nearest established communities located within the California survey region. From Table 10, it can be seen that Hayfork, CA is in MPS Zone 4. The conversion factor can now be found in Table 13. The conversion factor for a single story dwelling with no basement (Prototype I) in HUD MPS Zone 4 is .95. Multiply the monthly charges determined in step 5 above by .95 (the conversion factor). In this manner, the heating fuel charge can be computed for any quarters unit in any community or location. In this example, the final monthly fossil fuel heating costs are $48.04 ($50.57 x .95) for natural gas, $80.49 ($84.73 x .95) for propane and $39.90 ($42.00 x .95) for fuel oil.

The above example pertained to a single story dwelling with a partial (50 percent or less) or no basement. When calculating the heating fuel charge for a different type of housing (including apartments and mobile homes), use the Table (9a through f) which most closely describes the quarters unit to compute the annual MBTU consumption.

TABLE 9a ANNUAL MBTU USAGE (MILLIONS BTU'S) - PROTOTYPE I

Single Family, One Story, Partial (Less Than 50%) or No Basement

BASELINE CITY, Bakersfield, California

Gross Square Feet	Heating Degree Days 1200	1500	1800	2100	2400	2700	3000	3300	3600	4000	4500	5000	5500	6000	6500	7000	8000
100	1.2	1.5	1.9	2.2	2.5	2.8	3.1	3.4	3.7	4.1	4.6	5.2	5.7	6.2	6.7	7.2	8.3
200	2.5	3.1	3.7	4.3	5.0	5.6	6.2	6.8	7.4	8.3	9.3	10.3	11.4	12.4	13.4	14.5	16.5
400	5.0	6.2	7.4	8.7	9.9	11.1	12.4	13.6	14.9	16.5	18.6	20.6	22.7	24.8	26.8	28.9	33.0
600	7.4	9.3	11.1	13.0	14.9	16.7	18.6	20.4	22.3	24.8	27.9	31.0	34.1	37.2	40.3	43.4	49.6
800	9.9	12.4	14.9	17.3	19.8	22.3	24.8	27.3	29.7	33.0	37.2	41.3	45.4	49.6	53.7	57.8	66.1
1000	12.4	15.5	18.6	21.7	24.8	27.9	31.0	34.1	37.2	41.3	46.5	51.6	56.8	61.9	67.1	72.3	82.6
1200	14.9	18.6	22.3	26.0	29.7	33.4	37.2	40.9	44.6	49.6	55.7	61.9	68.1	74.3	80.5	86.7	99.1
1400	17.3	21.7	26.0	30.4	34.7	39.0	43.4	47.7	52.0	57.8	65.0	72.3	79.5	86.7	93.9	101.2	115.6
1600	19.8	24.8	29.7	34.7	39.6	44.6	49.6	54.5	59.5	66.1	74.3	82.6	90.9	99.1	107.4	115.6	132.1
1800	22.3	27.9	33.4	39.0	44.6	50.2	55.7	61.3	66.9	74.3	83.6	92.9	102.2	111.5	120.8	130.1	148.7
2000	24.8	31.0	37.2	43.4	49.6	55.7	61.9	68.1	74.3	82.6	92.9	103.2	113.6	123.9	134.2	144.5	165.2
2200	27.3	34.1	40.9	47.7	54.5	61.3	68.1	75.0	81.8	90.9	102.2	113.6	124.9	136.3	147.6	159.0	181.7
2400	29.7	37.2	44.6	52.0	59.5	66.9	74.3	81.8	89.2	99.1	111.5	123.9	136.3	148.7	161.1	173.4	198.2
2600	32.2	40.3	48.3	56.4	64.4	72.5	80.5	88.6	96.6	107.4	120.8	134.2	147.6	161.1	174.5	187.9	214.7
2800	34.7	43.4	52.0	60.7	69.4	78.0	86.7	95.4	104.1	115.6	130.1	144.5	159.0	173.4	187.9	202.4	231.3
3000	37.2	46.5	55.7	65.0	74.3	83.6	92.9	102.2	111.5	123.9	139.4	154.9	170.3	185.8	201.3	216.8	247.8

TABLE 9b ANNUAL MBTU USAGE (MILLIONS BTU'S) - PROTOTYPE II

Single Family, Single Story, Full Basement

BASELINE CITY, Bakersfield, California

Gross Square Feet	Heating Degree Days 1200	1500	1800	2100	2400	2700	3000	3300	3600	4000	4500	5000	5500	6000	6500	7000	8000
100	1.2	1.5	1.8	2.1	2.3	2.6	2.9	3.2	3.5	3.9	4.4	4.9	5.4	5.9	6.4	6.9	7.8
200	2.3	2.9	3.5	4.1	4.7	5.3	5.9	6.5	7.0	7.8	8.8	9.8	10.8	11.7	12.7	13.7	15.7
400	4.7	5.9	7.0	8.2	9.4	10.6	11.7	12.9	14.1	15.7	17.6	19.6	21.5	23.5	25.5	27.4	31.3
600	7.0	8.8	10.6	12.3	14.1	15.9	17.6	19.4	21.1	23.5	26.4	29.4	32.3	35.2	38.2	41.1	47.0
800	9.4	11.7	4.1	16.4	18.8	21.1	23.5	25.8	28.2	31.3	35.2	39.2	43.1	47.0	50.9	54.8	62.7
1000	11.7	14.7	17.6	20.6	23.5	26.4	29.4	32.3	35.2	39.2	44.1	49.0	53.8	58.7	63.6	68.5	78.3
1200	14.1	17.6	21.1	24.7	28.2	31.7	35.2	38.8	42.3	47.0	52.9	58.7	64.6	70.5	76.4	82.2	94.0
1400	16.4	20.6	24.7	28.8	32.9	37.0	41.1	45.2	49.3	54.8	61.7	68.5	75.4	82.2	89.1	95.9	109.6
1600	18.8	23.5	28.2	32.9	37.6	42.3	47.0	51.7	56.4	62.7	70.5	78.3	86.2	94.0	101.8	109.6	125.3
1800	21.1	26.4	31.7	37.0	42.3	47.6	52.9	58.2	63.4	70.5	79.3	88.1	96.9	105.7	114.5	123.4	141.0
2000	23.5	29.4	35.2	41.1	47.0	52.9	58.7	64.6	70.5	78.3	88.1	97.9	107.7	117.5	127.3	137.1	156.6
2200	25.8	32.3	38.8	45.2	51.7	58.2	64.6	71.1	77.5	86.2	96.9	107.7	118.5	129.2	140.0	150.8	172.3
2400	28.2	35.2	42.3	49.3	56.4	63.4	70.5	77.5	84.6	94.0	105.7	117.5	129.2	141.0	152.7	164.5	188.0
2600	30.5	38.2	45.8	53.5	61.1	68.7	76.4	84.0	91.6	101.8	114.5	127.3	140.0	152.7	165.5	178.2	203.6
2800	32.9	41.1	49.3	57.6	65.8	74.0	82.2	90.5	98.7	109.6	123.4	137.1	150.8	164.5	178.2	191.9	219.3
3000	35.2	44.1	52.9	61.7	70.5	79.3	88.1	96.9	105.7	117.5	132.2	146.9	161.5	176.2	190.9	205.6	235.0

TABLE 9c ANNUAL MBTU USAGE (MILLIONS BTU'S) - PROTOTYPE III

Single Family, Two Story, Partial (Less Than 50%) or No Basement

BASELINE CITY, Bakersfield, California

Gross Square Feet	Heating Degree Days 1200	1500	1800	2100	2400	2700	3000	3300	3600	4000	4500	5000	5500	6000	6500	7000	8000
100	1.0	1.3	1.6	1.8	2.1	2.3	2.6	2.8	3.1	3.4	3.9	4.3	4.7	5.2	5.6	6.0	6.9
200	2.1	2.6	3.1	3.6	4.1	4.7	5.2	5.7	6.2	6.9	7.8	8.6	9.5	10.3	11.2	12.1	13.8
400	4.1	5.2	6.2	7.2	8.3	9.3	10.3	11.4	12.4	13.8	15.5	17.2	19.0	20.7	22.4	24.1	27.6
600	6.2	7.8	9.3	10.9	12.4	14.0	15.5	17.1	18.6	20.7	23.3	25.9	28.5	31.0	33.6	36.2	41.4
800	8.3	10.3	12.4	14.5	16.6	18.	20.7	22.8	24.8	27.6	31.0	34.5	37.9	41.4	44.8	48.3	55.2
1000	10.3	12.9	15.5	18.1	20.7	23.3	25.9	28.5	31.0	34.5	38.8	43.1	47.4	51.7	56.0	60.4	69.0
1200	12.4	15.5	18.6	21.7	24.8	27.9	31.0	34.1	37.2	41.4	46.6	51.7	56.9	62.1	67.3	72.4	82.8
1400	14.5	18.1	21.7	25.3	29.0	32.6	36.2	39.8	43.5	48.3	54.3	60.4	66.4	72.4	78.5	84.5	96.6
1600	16.6	20.7	24.8	29.0	33.1	37.2	41.4	45.5	49.7	55.2	62.1	69.0	75.9	82.8	89.7	96.6	110.4
1800	18.6	23.3	27.9	32.6	37.2	41.9	46.6	51.2	55.9	62.1	69.8	77.6	85.4	93.1	100.9	108.6	124.2
2000	20.7	25.9	31.0	36.2	41.4	46.6	51.7	56.9	62.1	69.0	77.6	86.2	94.8	103.5	112.1	120.7	137.9
2200	22.8	28.5	34.1	39.8	45.5	51.2	56.9	62.6	68.3	75.9	85.4	94.8	104.3	113.8	123.3	132.8	151.7
2400	24.8	31.0	37.2	43.5	49.7	55.9	62.1	68.3	74.5	82.8	93.1	103.5	113.8	124.2	134.5	144.8	165.5
2600	26.9	33.6	40.4	47.1	53.8	60.5	67.3	74.0	80.7	89.7	100.9	112.1	123.3	134.5	145.7	156.9	179.3
2800	29.0	36.2	43.5	50.7	57.9	65.2	72.4	79.7	86.9	96.6	108.6	120.7	132.8	144.8	156.9	169.0	193.1
3000	31.0	38.8	46.6	54.3	62.1	69.8	77.6	85.4	93.1	103.5	116.4	129.3	142.3	155.2	168.1	181.1	206.9

TABLE 9d ANNUAL MBTU USAGE (MILLIONS BTU'S) - PROTOTYPE IV

Single Family, Two Story, Full Basement

BASELINE CITY, Bakersfield, California

Gross Square Feet	Heating Degree Days 1200	1500	1800	2100	2400	2700	3000	3300	3600	4000	4500	5000	5500	6000	6500	7000	8000
100	1.1	1.4	1.7	1.9	2.2	2.5	2.8	3.0	3.3	3.7	4.1	4.6	5.0	5.5	6.0	6.4	7.3
200	2.2	2.8	3.3	3.9	4.4	5.0	5.5	6.1	6.6	7.3	8.3	9.2	10.1	11.0	11.9	12.8	4.7
400	4.4	5.5	6.6	7.7	8.8	9.9	11.0	12.1	13.2	14.7	16.5	18.4	20.2	22.0	23.9	25.7	29.4
600	6.6	8.3	9.9	11.6	13.2	14.9	16.5	18.2	19.8	22.0	24.8	27.5	30.3	33.0	35.8	38.5	44.1
800	8.8	11.0	13.2	15.4	17.6	19.8	22.0	24.2	26.4	29.4	33.0	36.7	40.4	44.1	47.7	51.4	58.7
1000	11.0	13.8	16.5	19.3	22.0	24.8	27.5	30.3	33.0	36.7	41.3	45.9	50.5	55.1	59.7	64.2	73.4
1200	13.2	16.5	19.8	23.1	26.4	29.7	33.0	36.3	39.6	44.1	49.6	55.1	60.6	66.1	71.6	77.1	88.1
1400	15.4	19.3	23.1	27.0	30.8	34.7	38.5	42.4	46.3	51.4	57.8	64.2	70.7	77.1	83.5	89.9	102.8
1600	17.6	22.0	26.4	30.8	35.2	39.6	44.1	48.5	52.9	58.7	66.1	73.4	80.8	88.1	95.5	102.8	117.5
1800	19.8	24.8	29.7	34.7	39.6	44.6	49.6	54.5	59.5	66.1	74.3	82.6	90.9	99.1	107.4	115.6	132.2
2000	22.0	27.5	33.0	38.5	44.1	49.6	55.1	60.6	66.1	73.4	82.6	91.8	101.0	110.1	119.3	128.5	146.8
2200	24.2	30.3	36.3	42.4	48.5	54.5	60.6	66.6	72.7	80.8	90.9	101.0	111.1	121.2	131.2	141.3	161.5
2400	26.4	33.0	39.6	46.3	52.9	59.5	66.1	72.7	79.3	88.1	99.1	110.1	121.2	132.2	143.2	154.2	176.2
2600	28.6	35.8	43.0	50.1	57.3	64.4	71.6	78.7	85.9	95.5	107.4	119.3	131.2	143.2	155.1	167.0	190.9
2800	30.8	38.5	46.3	54.0	61.7	69.4	77.1	84.8	92.5	102.8	115.6	128.5	141.3	154.2	167.0	179.9	205.6
3000	33.0	41.3	49.6	57.8	66.1	74.3	82.6	90.9	99.1	110.1	123.9	137.7	151.4	165.2	179.0	192.7	220.3

TABLE 9e ANNUAL MBTU USAGE (MILLIONS BTU'S) - PROTOTYPE V

Apartments

BASELINE CITY, Bakersfield, California

Gross Square Feet	Heating Degree Days 1200	1500	1800	2100	2400	2700	3000	3300	3600	4000	4500	5000	5500	6000	6500	7000	8000
100	0.9	1.1	1.3	1.5	1.8	2.0	2.2	2.4	2.6	2.9	3.3	3.6	4.0	4.4	4.7	5.1	5.8
200	1.8	2.2	2.6	3.1	3.5	3.9	4.4	4.8	5.3	5.8	6.6	7.3	8.0	8.8	9.5	10.2	11.7
400	3.5	4.4	5.3	6.1	7.0	7.9	8.8	9.6	10.5	11.7	13.1	14.6	16.1	17.5	19.0	20.4	23.4
600	5.3	6.6	7.9	9.2	10.5	11.8	13.1	14.5	15.8	17.5	19.7	21.9	24.1	26.3	28.5	30.7	35.0
800	7.0	8.8	10.5	12.3	14.0	15.8	17.5	19.3	21.0	23.4	26.3	29.2	32.1	35.0	37.9	40.9	46.7
1000	8.8	10.9	13.1	15.3	17.5	19.7	21.9	24.1	26.3	29.2	32.8	36.5	40.1	43.8	47.4	51.1	58.4
1200	10.5	13.1	15.8	18.4	21.0	23.6	26.3	28.9	31.5	35.0	39.4	43.8	48.2	52.5	56.9	61.3	70.1
1400	12.3	15.3	18.4	21.5	24.5	27.6	30.7	33.7	36.8	40.9	46.0	51.1	56.2	61.3	66.4	71.5	81.7
1600	14.0	17.5	21.0	24.5	28.0	31.5	35.0	38.5	42.0	46.7	52.5	58.4	64.2	70.1	75.9	81.7	93.4
1800	15.8	19.7	23.6	27.6	31.5	35.5	39.4	43.4	47.3	52.5	59.1	65.7	72.3	78.8	85.4	92.0	105.1
2000	17.5	21.9	26.3	30.7	35.0	39.4	43.8	48.2	52.5	58.4	65.7	73.0	80.3	87.6	94.9	102.2	116.8
2200	19.3	24.1	28.9	33.7	38.5	43.4	48.2	53.0	57.8	64.2	72.3	80.3	88.3	96.3	104.4	112.4	128.4
2400	21.0	26.3	31.5	36.8	42.0	47.3	52.5	57.8	63.1	70.1	78.8	87.6	96.3	105.1	113.8	122.6	140.1
2600	22.8	28.5	34.2	39.8	45.5	51.2	56.9	62.6	68.3	75.9	85.4	94.9	104.4	113.8	123.3	132.8	151.8
2800	24.5	30.7	36.8	42.9	49.0	55.2	61.3	67.4	73.6	81.7	92.0	102.2	112.4	122.6	132.8	143.0	163.5
3000	26.3	32.8	39.4	46.0	52.5	59.1	65.7	72.3	78.8	87.6	98.5	109.5	120.4	131.4	142.3	153.3	175.2

TABLE 9f ANNUAL MBTU USAGE (MILLIONS BTU'S) - PROTOTYPE VI

Mobile Homes

BASELINE CITY, Bakersfield, California

Gross Square Feet	Heating Degree Days 1200	1500	1800	2100	2400	2700	3000	3300	3600	4000	4500	5000	5500	6000	6500	7000	8000
100	1.7	2.1	2.5	3.0	3.4	3.8	4.2	4.7	5.1	5.7	6.4	7.1	7.8	8.5	9.2	9.9	11.3
200	3.4	4.2	5.1	5.9	6.8	7.6	8.5	9.3	10.2	11.3	12.7	14.1	15.6	17.0	18.4	19.8	22.6
400	6.8	8.5	10.2	11.9	13.6	15.3	17.0	18.7	20.4	22.6	25.5	28.3	31.1	33.9	36.8	39.6	45.2
600	10.2	12.7	15.3	17.8	20.4	22.9	25.5	28.0	30.5	33.9	38.2	42.4	46.7	50.9	55.1	59.4	67.9
800	13.6	17.0	20.4	23.8	27.1	30.5	33.9	37.3	40.7	45.2	50.9	56.6	62.2	67.9	73.5	79.2	90.5
1000	17.0	21.2	25.	29.7	33.9	38.2	42.4	46.7	50.9	56.6	63.6	70.7	77.8	84.8	91.9	99.0	113.1
1200	20.4	25.5	30.5	35.6	40.7	45.8	50.9	56.0	61.1	67.9	76.4	84.8	93.3	101.8	110.3	118.8	135.7
1400	23.8	29.7	35.6	41.6	47.5	53.4	59.4	65.3	71.3	79.2	89.1	99.0	108.9	118.8	128.7	138.6	158.4
1600	27.1	33.9	40.7	47.5	54.3	61.1	67.9	74.7	81.	90.5	101.8	113.1	124.4	135.7	147.1	158.4	181.0
1800	30.5	38.2	45.8	53.4	61.1	68.7	76.4	84.0	91.6	101.8	114.5	127.3	40.0	152.7	165.4	178.2	203.6
2000	33.9	42.4	50.9	59.4	67.9	76.4	84.8	93.3	101.8	113.1	127.3	141.4	155.5	169.7	183.8	198.0	226.2
2200	37.3	46.7	56.0	65.3	74.7	84.0	93.3	102.7	112.0	124.4	140.0	155.5	171.1	186.6	202.2	217.8	248.9
2400	40.7	50.9	61.1	71.3	81.4	91.6	101.8	112.0	122.2	135.7	152.7	169.7	186.6	203.6	220.6	237.5	271.5
2600	44.1	55.1	66.2	77.2	88.2	99.3	110.3	121.3	132.3	147.1	165.4	183.8	202.2	220.6	239.0	257.3	294.1
2800	47.5	59.4	71.3	83.1	95.0	106.9	118.8	130.7	142.5	158.4	178.2	198.0	217.8	237.5	257.3	277.1	316.7
3000	50.9	63.6	76.4	89.1	101.8	114.5	127.3	140.0	152.7	169.7	190.9	212.1	233.3	254.5	275.7	296.9	339.4

TABLE 10 HEATING/COOLING DEGREE DAYS AND MPS ZONES

Community	Heating Degree Days	Cooling Degree Days	HUD MPS Zone
CALIFORNIA			
Agora, CA	1,961	1,389	2
Alpine, CA	1,947	1,382	2
Alturas, CA	6,808	212	7
Angels Camp, CA	3,618	1,030	6
Apple Valley, CA	2,929	1,735	2
Arcata, CA	4,430	7	4
Arnold, CA	5,972	308	6
Arroyo Grande, CA	2,531	151	3
Auberry, CA	2,868	1,922	3
Auburn, CA	2,992	1,366	4
Azusa, CA	4,039	969	2
Bakersfield, CA	2,120	2,286	2
Banning, CA	4,980	656	2
Barstow, CA	2,294	2,566	2
Beverly Hills, CA	1,344	959	2
Big Bear City, CA	6,598	89	2
Big Bear Lake, CA	6,598	89	2
Bishop, CA	4,314	1,003	4
Blythe, CA	1,295	3,977	2
Bonita, CA	1,321	862	2
Boron, CA	2,492	2,922	2
Brawley, CA	1,155	3,733	2
Burney, CA	6,495	196	6
Calipatria, CA	1,115	3,764	2
Cambria, CA	3,369	50	2
Carmel, CA	3,092	74	3
Carpinteria, CA	1,902	470	3
Chester, CA	6,743	184	7
Chico, CA	2,945	1,334	5
Clovis, CA	2,447	1,963	3

TABLE 10 HEATING/COOLING DEGREE DAYS AND MPS ZONES

Community	Heating Degree Days	Cooling Degree Days	HUD MPS Zone
CALIFORNIA			
Coachella, CA	903	4,388	2
Colusa, CA	2,702	1,401	4
Corning, CA	2,630	1,581	3
Corona, CA	1,599	1,534	2
Cottonwood, CA	2,647	1,926	3
Crescent City, CA	4,716	6	4
Crestline, CA	5,450	462	2
Danville, CA	2,755	858	3
Delano, CA	2,434	1,990	3
Dunsmuir,CA	4,711	503	6
El Cajon, CA	1,560	1,371	2
Emeryville, CA	2,400	377	3
Escondido, CA	1,464	1,436	2
Eureka, CA	4,430	7	4
Exeter, CA	2,588	1,685	2
Fillmore, CA	1,911	602	2
Fontana, CA	1,364	1,901	2
Fortuna, CA	4,430	7	4
Frazier Park, CA	2,555	1,960	3
Galt, CA	2,358	1,570	4
Glendora, CA	1,727	1,191	2
Greenfield, CA	2,384	598	3
Groveland-Big Oak, CA	3,539	1,161	6
Hayfork, CA	3,831	939	4
Hemet, CA	1,914	1,903	2
Hesperia, CA	2,929	1,735	2
Hollister, CA	2,724	405	3
Indio, CA	903	4,388	2
Jackson, CA	4,058	788	6
King City, CA	2,384	598	3

TABLE 10 HEATING/COOLING DEGREE DAYS AND MPS ZONES

Community	Heating Degree Days	Cooling Degree Days	HUD MPS Zone
CALIFORNIA			
LaCanada, CA	4,039	969	2
Lake Arrowhead, CA	5,450	462	2
Lake Elsinore, CA	1,924	1,874	2
Lake Isabella, CA	1,645	3,236	2
Lakeport, CA	3,698	793	3
Lompoc, CA	2,250	322	3
Lone Pine, CA	2,633	2,340	3
San Pedro/Long Beach, CA	1,211	1,186	2
Los Angeles, CA	1,274	679	2
Madera, CA	2,670	1,706	3
Malibu, CA	1,810	429	2
Mammoth Lakes, CA	4,759	828	6
Marina, CA	2,827	128	3
Merced, CA	2,602	1,578	3
Mill Valley, CA	2,857	142	3
Monterey, CA	3,092	74	3
Morro Bay, CA	3,369	50	3
Napa, CA	2,689	529	3
Needles, CA	1,227	4,545	2
Nevada City, CA	4,565	689	5
Newark, CA	2,367	530	3
Oakhurst, CA	6,566	131	4
Ojai, CA	2,092	989	2
Orange, CA	2,538	1,857	2
Oroville, CA	2,818	1,422	5
Palmdale, CA	2,704	1,998	2
Palo Alto, CA	2,584	452	3
Pasadena, CA	1,398	1,558	2
Patterson, CA	2,680	1,449	3
Petaluma, CA	2,741	385	3

TABLE 10 HEATING/COOLING DEGREE DAYS AND MPS ZONES

Community	Heating Degree Days	Cooling Degree Days	HUD MPS Zone
CALIFORNIA			
Placerville, CA	3,324	1,164	4
Pollack Pines, CA	3,324	1,164	4
Porterville, CA	2,053	2,246	3
Portola, CA	7,303	106	7
Quincy, CA	5,490	364	7
Ramona, CA	2,203	1,036	2
Red Bluff, CA	2,647	1,926	3
Redding, CA	2,961	1,741	3
Reedley, CA	2,538	1,857	3
Rialto, CA	1,364	1,901	2
Ridgecrest, CA	3,134	1,965	2
Riverside, CA	1,475	1,863	2
San Bernardino, CA	1,599	1,937	2
San Dimas, CA	1,727	1,191	2
San Fernando, CA	2,502	1,139	2
San Francisco, CA	2,597	163	3
Sanger, CA	2,538	1,857	3
San Juan Capistrano, CA	1,719	543	2
San Luis Obispo, CA	2,138	476	2
Santa Barbara, CA	1,902	470	2
Santa Clariata, CA	2,502	1,139	2
Santa Maria, CA	2,783	121	3
Sagus, CA	1,679	1,292	2
Sausalito, CA	2,597	163	3
Searles Valley, CA	2,367	3,008	2
Sierra Madre, CA	1,398	1,558	2
Soledad, CA	2,907	882	3
Solvang, CA	1,994	970	3
Sonora, CA	3,618	1,030	6

TABLE 10 HEATING/COOLING DEGREE DAYS AND MPS ZONES

Community	Heating Degree Days	Cooling Degree Days	HUD MPS Zone
CALIFORNIA			
Spring Valley, CA	1,321	862	2
Sunnyside-Tahoe City, CA	7,671	47	6
Sunnyvale, CA	2,764	422	3
Susanville, CA	6,168	390	7
Sutter Creek, CA	4,058	788	4
Taft, CA	2,190	2,334	2
Temecula, CA	1,791	903	3
Thousand Oaks, CA	1,961	389	2
Three Rivers, CA	2,615	1,983	3
Truckee, CA	7,591	100	6
Tustin, CA	1,794	1,102	2
Twain Harte, CA	3,618	1,030	6
29 Palms, CA	1,910	3,064	2
Upland, CA	1,599	1,937	2
Ventura, CA	1,936	403	2
Visalia, CA	2,588	1,685	3
Weaverville, CA	4,721	664	4
Weed, CA	6,023	271	4
Willits, CA	4,302	193	4
Willow Creek, CA	3,566	887	4
Willows, CA	2,874	1,358	3
Woodlake, CA	2,588	1,685	3
Woodland, CA	2,683	1,417	3
Yreka, CA	5,550	550	6
Yuba City, CA	2,702	1,401	5
Yucaipa, CA	1,599	1,937	2
Yucca Valley, CA	1,910	3,064	2

TABLE 10 HEATING/COOLING DEGREE DAYS AND MPS ZONES

Community	Heating Degree Days	Cooling Degree Days	HUD MPS Zone
NEVADA			
Gardnerville, NV	5,987	344	7
Zephyr Cove, NV	6,839	143	7
OREGON			
Klamath Falls, OR	6,388	413	7

TABLE 11 FUEL REQUIRED TO PRODUCE 1 MBTU

Type of Fuel	Amount Needed To Produce 1 MBTU
Natural Gas	1 MCF (1,000 cu. ft.)
Propane	10.2 Gallons
Fuel Oil	7.04 Gallons

TABLE 12 HEATING FUEL COST

Type of Fuel	Charge per unit
Natural Gas	$9.07
Propane	$1.49
Fuel Oil #2	$1.07

TABLE 13 MPS HEATING ZONE CONVERSION FACTORS

	Dwelling Prototypes					
	I	II	III	IV	V	VI
HUD MPS Heating Zone	Single Story No Basement	Single Story Full Basement	Double Story No Basement	Double Story Full Basement	Apart-ments	Mobile Homes
1						
2	1.00	1.00	1.00	1.00	1.00	1.00
3	.82	.81	.69	.79	.85	.87
4	.95	.95	.94	.95	.93	.97
5	.88	.91	.90	.92	.93	.97
6	.95	.91	.90	.92	.93	.97
7	.77	.80	.77	.80	.79	.89
8	.79	.74	.80	.77	.81	.90

D. SPACE HEATING (ELECTRICITY) CONSUMPTION/COST CALCULATIONS

The procedure for calculating electrical consumption and costs for space heating (where electricity is unmetered or otherwise unmeasured) is similar to the procedure used for fossil fuels. Tables 14a through 14f are used.

1. Select from these tables the dwelling prototype most similar to the quarters at issue.

2. Determine the annual kilowatt hour (KwH) consumption by finding the appropriate columns for square feet and HDD (heating degree days). Note: HDD's for the nearest established communities may be found in Table 10.

3. Divide the annual KwH by 12 to determine the monthly average electrical consumption.

4. Adjust for HUD MPS Heating Zone, using the conversion factors in Table 13.

5. Adjust for heat pump (if applicable).

6. Determine the appropriate charge per KwH from the table below. **Do not calculate the total cost of electricity in steps such as the first 500 KwH costs so much, then the second 500 KwH costs so much etc.**

KwH Consumed Per Month	Charge per KwH
1 -500	$.127
501 - 1,000	$.151
1,001 -1,500	$.167
Over - 1,500	$.176

7. Compute the monthly charge for space heating by multiplying the appropriate charge per KwH times the number of KwH consumed per month.

8. Example: The average monthly electric heating charge for a single family, 2,100 square foot, two story, no basement home located near Woodlake, CA is computed as follows:

   a. Step 1. Select the table (table 14a through f) which most closely describes the quarters unit at issue. In this case, table 14c (single family, two story, no basement - prototype III) should be selected.

   b. Step 2. Determine from table 14c the annual KwH consumption appropriate for the heating degree days (HDD) and the gross square footage of the house in this example. Use the table as follows:

      1) Find the number of heating degree days for the established community in which the quarters is located. Table 10 (which contains the HDD for established communities in the California survey region) shows that Woodlake, CA has 2,588 HDD . In table 14c, the number of

HDD's in Woodlake, CA (2,588) lies between the column headed 2,500 and the column headed 3,000. Round down to 2,500 HDD.

2) In table 14c, 2,100 square feet (the size of the house used in this example) lies between 2,000 and 2,200 square feet. Round 2,100 down to 2,000 square feet.

3) From table 14c (2,000 square feet and 2,500 HDD) the annual KwH consumption rate is 10,105 KwH.

c. Step 3. Calculate the monthly KwH consumption by dividing the annual KwH by 12 (months). In this instance, the monthly consumption is 842.08 KwH (10,105 12 = 842.08).

d. Step 4, HUD MPS Zone adjustment. The HUD MPS zone adjustment is made as follows:

1) Use Table 10 to find the HUD MPS zone for the community at issue. In this manner, Woodlake, CA is found to be in HUD MPS zone 3.

2) In Table 13, determine the adjustment factor for the appropriate dwelling type and MPS zone. The factor for housing prototype III in HUD MPS zone 3 is .69.

3) Multiply the monthly electric consumption (as computed in paragraph 8c, above) times the HUD MPS adjustment factor (842.08 x .69 = 581.04 KwH per month).

e. Step 5, **Adjustment for heat pump**. The process described above is used for computing the electrical consumption for heating with a straight resistance heating system. Where a dwelling is heated with an electric heat pump, the straight resistance heating consumption (581.04 KwH in this example) should be multiplied by a factor of .75, which represents the greater efficiency of the heat pump. In this example, the monthly electric consumption for a heat pump as the heating source would be 435.78 (581.04 x .75 = 435.78).

f. Step 6. The final step is to compute the monthly charge for the electricity consumed. This is done by multiplying the charge per KwH times the KwH consumed per month. The appropriate charge per KwH may be found in the table below.

KwH Consumed Per Month	Charge per KwH
1 -500	$.127
501 - 1,000	$.151
1,001 - 1,500	$.167
Over - 1,500	$.176

In this example, the average monthly consumption (581.04 KwH) for resistance heat falls in the "501 – 1,000" KwH per month consumption category; the appropriate charge is $0.151 per KwH. The average monthly consumption (435.78 KwH) for a heat pump falls in the "1 - 500" KwH per month consumption category; and the appropriate unit charge is $0.127 per KwH.

Therefore, the monthly electric heating charge for the house used in this example is computed as follows:

Resistance heat: 581.04 KwH x $.151 = $87.74

Heatpump: 435.78 KwH x $.127 = $55.34

E. SPACE COOLING CONSUMPTION/COST

Space cooling costs are calculated in the same manner as for electric space heating except that CDD (Cooling Degree Day) values are used in lieu of HDD values. CDD values for the Nearest Established Communities are found in Table 10. Additionally, only Tables 14a through 14f are used in calculating cooling energy consumption. Briefly, the steps are as follows.

1. Select from Tables 14a through 14f, the table that most closely describes the quarters unit at issue.

2. Based on the size of the dwelling (square feet) and the number of CDD (from Table 10), use the appropriate Table (14a-f) to determine the annual KwH consumption.

3. Divide the annual KwH consumption by 12 (months) to determine the average number of KwH consumed per month.

4. Apply the HUD MPS Zone adjustment factor.

5. Apply the Coefficient of Performance (COP) adjustment.

6. Determine the appropriate charge per KwH from the table below.

KwH Consumed Per Month	Charge per KwH
1 - 500	$.127
501 - 1,000	$.151
1,001 - 1,500	$.167
Over - 1,500	$.176

7. Compute the monthly charge for space cooling by multiplying the appropriate charge per KwH times the number of KwH consumed per month.

8. Example: Compute the average monthly electric cooling charge for a 1,275 SQFT mobile home near Sonora, CA.

   a. STEP 1: Table Selection. Select the table (table 14a through 14f), which most closely describes the quarters unit at issue. Table 14f (Mobile Home - prototype VI) should be selected.

   b. STEP 2: Annual KwH Consumption. Determine from table 14f the annual KwH consumption appropriate for the cooling degree days (CDD) and the gross square footage of the mobile home in this example. Use the table as follows:

      1) Find the number of cooling degree days for the established community closest to the quarters. Table 10 (which contains the CDD for established communities in the California survey region) shows that Sonora, CA has 1,030 CDD. In table 14f, 1,030 CDD lies between the columns headed 1,000 and 1,500. Round down to 1,000 CDD.

      2) In table 14f, 1,275 square feet (the size of the mobile home used in this example) lies between 1,200 and 1,400 square feet. Round down to 1,200 square feet.

      3) From table 14f (1,200 square feet and 1,000 CDD) the annual KwH consumption rate is 3,977 KwH.

   c. STEP 3: Monthly Consumption. Calculate the monthly KwH consumption by dividing the annual KwH consumption by 12 (months). In this instance, the monthly consumption is 331 KwH rounded (3,977 / 12 = 331.42).

   d. STEP 4: HUD MPS Zone Adjustment. The HUD MPS Zone adjustment is made as follows:

      1) Use Table 10 to find the HUD MPS zone for the community at issue. In this manner, Sonora, CA is found to be in HUD MPS Zone 6.

      2) In Table 15, determine the adjustment factor for the appropriate dwelling unit type and MPS zone. The factor for housing prototype VI in HUD MPS zone 6 is 1.43.

3) Multiply the monthly electric consumption (as computed in paragraph 8c, above) times the HUD MPS Zone adjustment factor 331.42 x 1.43 = 473.93 KwH per month.

e. STEP 5: Adjustment for Coefficient of Performance (COP). This adjustment accounts for the differences in the efficiencies of evaporative (swamp) and refrigerated air central cooling systems.

1) Evaporative (swamp) cooling. For a central evaporative cooling system the adjusted KwH (computed in Step 4, above) is divided by a factor of 6.66. In this example, the monthly KwH requirement for central evaporative cooling is computed as 473.93 / 6.66 = 71.16 KwH per month.

2) Refrigerated air cooling. For a central refrigerated air cooling system, the adjusted KwH (computed in step 4, above) is divided by a factor of 2. In this example, the monthly KwH requirement for central refrigerated air cooling is computed as 473.93 / 2 = 236.97 KwH per month.

f. STEP 6: Monthly Charge. The final step is to compute the monthly charge for the electricity consumed. This is done by multiplying the charge per KwH times the KwH consumed per month. The appropriate charge per KwH may be found in the table below.

KwH Consumed Per Month	Charge per KwH
1 - 500	$.127
501 - 1,000	$.151
1,001 - 1,500	$.167
Over - 1,500	$.176

In this example, the average monthly consumption (71.16 KwH) for evaporative cooling falls in the 1 to 500 KwH consumption range. And (236.97 KwH) for refrigerated cooling falls in the 1 to 500 KwH consumption range. The appropriate charge will be $0.127 per KwH for evaporative cooling and $.127 for refrigerated cooling.

Therefore, the monthly charges for cooling the mobile home used in this example would be computed as follows.

Evaporative cooling : 71.16 KwH x $0.127 = $9.04

Refrigerated cooling: 236.97 KwH x $0.127 = $30.10

9. Gas powered Central Air Conditioning Units. If the central air conditioning unit is gas operated (natural gas or propane), the charge is computed as follows:

a. Compute the KwH consumption in same manner as shown in steps 1 through 4 above (Note: the calculations through step 4 produce 473.93 KwH per month).

b. Calculate the Coefficient of Performance (COP) adjustment in step 5 above for refrigerated air conditioning; that is, divide the number of KwH in paragraph 9a, above (473.93 KwH) by the COP (2); for example 473.93 / 2 = 236.97 KwH.

c. Convert the monthly KwH to MBTU's by dividing the KwH calculated in paragraph 9b, above by 234.4. Thus, 236.97 KwH / 234.4 (KwH per MBTU) = 1.01 MBTU's. [It takes 234.4 Kilowatts to generate 1 MBTU]

d. Calculate the volumes of natural gas and propane needed to produce 1.01 MBTU's. This is done as follows.

   1) Natural Gas. For central air conditioning units that operate on natural gas, multiply the MBTU's calculated in paragraph 9c above by 1 MCF (1.01 MBTU's x 1 MCF = 1.01 MCF). Thus, 1.01 MCF of natural gas would be required per month (annual average) to cool the dwelling in this example.

   2) Propane. For central air conditioning units that operate on propane gas, multiply the MBTU's calculated in paragraph 9c above by 10.2 gallons (1.01 MBTU's x 10.2 gallons = 10.30 gallons). Thus, 10.30 gallons of propane would be required per month (annual average) to cool the dwelling in this example.

e. Calculate the monthly charge for natural gas or propane consumed. This is done by multiplying the volume of fuel consumed by the unit cost of the fuel. These calculations are shown below.

   Natural gas: 1.01 MCF x $9.07 per MCF = $9.16 (rounded) per month.

   Propane gas: 10.30 gallons x $1.49 per gallon = $15.35 (rounded) per month.

TABLE 14a ANNUAL KWH USAGE (ELECTRIC HEATING/COOLING) - TYPE I

Single Family, One Story, Partial (Less Than 50%) or No Basement

BASELINE CITY, Bakersfield, California

Gross Square Feet	Heating or Cooling Degree Days																
	150	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000
100	36	121	242	363	484	605	726	847	968	1089	1210	1331	1452	1573	1694	1815	1936
200	73	242	484	726	968	1210	1452	1694	1936	2178	2420	2662	2904	3146	3388	3630	3872
400	145	484	968	1452	1936	2420	2904	3388	3872	4356	4840	5324	5808	6292	6776	7260	7744
600	218	726	1452	2178	2904	3630	4356	5082	5808	6534	7260	7986	8712	9438	10164	10890	11616
800	290	968	1936	2904	3872	4840	5808	6776	7744	8712	9680	10648	11616	12584	13552	14520	15488
1000	363	1210	2420	3630	4840	6050	7260	8470	9680	10890	12100	13310	14520	15730	16939	18149	19359
1200	436	1452	2904	4356	5808	7260	8712	10164	11616	13068	14520	15971	17423	18875	20327	21779	23231
1400	508	1694	3388	5082	6776	8470	10164	11858	13552	15246	16939	18633	20327	22021	23715	25409	27103
1600	581	1936	3872	5808	7744	9680	11616	13552	15488	17423	19359	21295	23231	25167	27103	29039	30975
1800	653	2178	4356	6534	8712	10890	13068	15246	17423	19601	21779	23957	26135	28313	30491	32669	34847
2000	726	2420	4840	7260	9680	12100	14520	16939	19359	21779	24199	26619	29039	31459	33879	36299	38719
2200	799	2662	5324	7986	10648	13310	15971	18633	21295	23957	26619	29281	31943	34605	37267	39929	42591
2400	871	2904	5808	8712	11616	14520	17423	20327	23231	26135	29039	31943	34847	37751	40655	43559	46463
2600	944	3146	6292	9438	12584	15730	18875	22021	25167	28313	31459	34605	37751	40897	44043	47189	50334
2800	1016	3388	6776	10164	13552	16939	20327	23715	27103	30491	33879	37267	40655	44043	47431	50818	54206
3000	1089	3630	7260	10890	14520	18149	21779	25409	29039	32669	36299	39929	43559	47189	50818	54448	58078

TABLE 14b ANNUAL KWH USAGE (ELECTRIC HEATING/COOLING) - TYPE II

Single Family, Single Story, Full Basement

BASELINE CITY, Bakersfield, California

Gross Square Feet	Heating or Cooling Degree Days																
	150	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000
100	34	115	229	344	459	574	688	803	918	1033	1147	1262	1377	1492	1606	1721	1836
200	69	229	459	688	918	1147	1377	1606	1836	2065	2295	2524	2754	2983	3213	3442	3672
400	138	459	918	1377	1836	2295	2754	3213	3672	4131	4590	5048	5507	5966	6425	6884	7343
600	207	688	1377	2065	2754	3442	4131	4819	5507	6196	6884	7573	8261	8950	9638	10326	11015
800	275	918	1836	2754	3672	4590	5507	6425	7343	8261	9179	10097	11015	11933	12851	13769	14686
1000	344	1147	2295	3442	4590	5737	6884	8032	9179	10326	11474	12621	13769	14916	16063	17211	18358
1200	413	1377	2754	4131	5507	6884	8261	9638	11015	12392	13769	15145	16522	17899	19276	20653	22030
1400	482	1606	3213	4819	6425	8032	9638	11244	12851	14457	16063	17670	19276	20882	22489	24095	25701
1600	551	1836	3672	5507	7343	9179	11015	12851	14686	16522	18358	20194	22030	23865	25701	27537	29373
1800	620	2065	4131	6196	8261	10326	12392	14457	16522	18588	20653	22718	24783	26849	28914	30979	33044
2000	688	2295	4590	6884	9179	11474	13769	16063	18358	20653	22948	25242	27537	29832	32127	34421	36716
2200	757	2524	5048	7573	10097	12621	15145	17670	20194	22718	25242	27767	30291	32815	35339	37863	40388
2400	826	2754	5507	8261	11015	13769	16522	19276	22030	24783	27537	30291	33044	35798	38552	41306	44059
2600	895	2983	5966	8950	11933	14916	17899	20882	23865	26849	29832	32815	35798	38781	41765	44748	47731
2800	964	3213	6425	9638	12851	16063	19276	22489	25701	28914	32127	35339	38552	41765	44977	48190	51403
3000	1033	3442	6884	10326	13769	17211	20653	24095	27537	30979	34421	37863	41306	44748	48190	51632	55074

TABLE 14c ANNUAL KWH USAGE (ELECTRIC HEATING/COOLING) - TYPE III

Single Family, Two Story, Partial (Less Than 50%) or No Basement

BASELINE CITY, Bakersfield, California

Gross Square Feet	Heating or Cooling Degree Days																
	150	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000
100	30	101	202	303	404	505	606	707	808	909	1010	1112	1213	1314	1415	1516	1617
200	61	202	404	606	808	1010	1213	1415	1617	1819	2021	2223	2425	2627	2829	3031	3234
400	121	404	808	1213	1617	2021	2425	2829	3234	3638	4042	4446	4850	5254	5659	6063	6467
600	182	606	1213	1819	2425	3031	3638	4244	4850	5457	6063	6669	7275	7882	8488	9094	9701
800	243	808	1617	2425	3234	4042	4850	5659	6467	7275	8084	8892	9701	10509	11317	12126	12934
1000	303	1010	2021	3031	4042	5052	6063	7073	8084	9094	10105	11115	12126	13136	14147	15157	16168
1200	364	1213	2425	3638	4850	6063	7275	8488	9701	10913	12126	13338	14551	15763	16976	18189	19401
1400	424	1415	2829	4244	5659	7073	8488	9903	11317	12732	14147	15561	16976	18391	19805	21220	22635
1600	485	1617	3234	4850	6467	8084	9701	11317	12934	14551	16168	17784	19401	21018	22635	24251	25868
1800	546	1819	3638	5457	7275	9094	10913	12732	14551	16370	18189	20007	21826	23645	25464	27283	29102
2000	606	2021	4042	6063	8084	10105	12126	14147	16168	18189	20209	22230	24251	26272	28293	30314	32335
2200	667	2223	4446	6669	8892	11115	13338	15561	17784	20007	22230	24453	26677	28900	31123	33346	35569
2400	728	2425	4850	7275	9701	12126	14551	16976	19401	21826	24251	26677	29102	31527	33952	36377	38802
2600	788	2627	5254	7882	10509	13136	15763	18391	21018	23645	26272	28900	31527	34154	36781	39409	42036
2800	849	2829	5659	8488	11317	14147	16976	19805	22635	25464	28293	31123	33952	36781	39611	42440	45269
3000	909	3031	6063	9094	12126	15157	18189	21220	24251	27283	30314	33346	36377	39409	42440	45471	48503

TABLE 14d ANNUAL KWH USAGE (ELECTRIC HEATING/COOLING) - TYPE IV

Single Family, Two Story, Full Basement

BASELINE CITY, Bakersfield, California

Gross Square Feet	Heating or Cooling Degree Days																
	150	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000
100	32	108	215	323	430	538	645	753	861	968	1076	1183	1291	1398	1506	1613	1721
200	65	215	430	645	861	1076	1291	1506	1721	1936	2151	2366	2582	2797	3012	3227	3442
400	129	430	861	1291	1721	2151	2582	3012	3442	3872	4303	4733	5163	5593	6024	6454	6884
600	194	645	1291	1936	2582	3227	3872	4518	5163	5809	6454	7099	7745	8390	9036	9681	10326
800	258	861	1721	2582	3442	4303	5163	6024	6884	7745	8605	9466	10326	11187	12047	12908	13769
1000	323	1076	2151	3227	4303	5378	6454	7530	8605	9681	10757	11832	12908	13984	15059	16135	17211
1200	387	1291	2582	3872	5163	6454	7745	9036	10326	11617	12908	14199	15490	16780	18071	19362	20653
1400	452	1506	3012	4518	6024	7530	9036	10542	12047	13553	15059	16565	18071	19577	21083	22589	24095
1600	516	1721	3442	5163	6884	8605	10326	12047	13769	15490	17211	18932	20653	22374	24095	25816	27537
1800	581	1936	3872	5809	7745	9681	11617	13553	15490	17426	19362	21298	23234	25171	27107	29043	30979
2000	645	2151	4303	6454	8605	10757	12908	15059	17211	19362	21513	23665	25816	27967	30119	32270	34421
2200	710	2366	4733	7099	9466	11832	14199	16565	18932	21298	23665	26031	28398	30764	33131	35497	37863
2400	774	2582	5163	7745	10326	12908	15490	18071	20653	23234	25816	28398	30979	33561	36142	38724	41306
2600	839	2797	5593	8390	11187	13984	16780	19577	22374	25171	27967	30764	33561	36358	39154	41951	44748
2800	904	3012	6024	9036	12047	15059	18071	21083	24095	27107	30119	33131	36142	39154	42166	45178	48190
3000	968	3227	6454	9681	12908	16135	19362	22589	25816	29043	32270	35497	38724	41951	45178	48405	51632

TABLE 14e ANNUAL KWH USAGE (ELECTRIC HEATING/COOLING) - TYPE V

Apartments

BASELINE CITY, Bakersfield, California

Gross Square Feet	Heating or Cooling Degree Days																
	150	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000
100	26	86	171	257	342	428	513	599	684	770	855	941	1026	1112	1197	1283	1369
200	51	171	342	513	684	855	1026	1197	1369	1540	1711	1882	2053	2224	2395	2566	2737
400	103	342	684	1026	1369	1711	2053	2395	2737	3079	3421	3763	4106	4448	4790	5132	5474
600	154	513	1026	1540	2053	2566	3079	3592	4106	4619	5132	5645	6158	6671	7185	7698	8211
800	205	684	1369	2053	2737	3421	4106	4790	5474	6158	6843	7527	8211	8895	9580	10264	10948
1000	257	855	1711	2566	3421	4277	5132	5987	6843	7698	8553	9408	10264	11119	11974	12830	13685
1200	308	1026	2053	3079	4106	5132	6158	7185	8211	9237	10264	11290	12317	13343	14369	15396	16422
1400	359	1197	2395	3592	4790	5987	7185	8382	9580	10777	11974	13172	14369	15567	16764	17962	19159
1600	411	1369	2737	4106	5474	6843	8211	9580	10948	12317	13685	15054	16422	17791	19159	20528	21896
1800	462	1540	3079	4619	6158	7698	9237	10777	12317	13856	15396	16935	18475	20014	21554	23094	24633
2000	513	1711	3421	5132	6843	8553	10264	11974	13685	15396	17106	18817	20528	22238	23949	25660	27370
2200	565	1882	3763	5645	7527	9408	11290	13172	15054	16935	18817	20699	22580	24462	26344	28225	30107
2400	616	2053	4106	6158	8211	10264	12317	14369	16422	18475	20528	22580	24633	26686	28739	30791	32844
2600	667	2224	4448	6671	8895	11119	13343	15567	17791	20014	22238	24462	26686	28910	31134	33357	35581
2800	718	2395	4790	7185	9580	11974	14369	16764	19159	21554	23949	26344	28739	31134	33528	35923	38318
3000	770	2566	5132	7698	10264	12830	15396	17962	20528	23094	25660	28225	30791	33357	35923	38489	41055

TABLE 14f ANNUAL KWH USAGE (ELECTRIC HEATING/COOLING) - TYPE VI

Mobile Homes

BASELINE CITY, Bakersfield, California

Gross Square Feet	Heating or Cooling Degree Days																
	150	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000
100	50	166	331	497	663	829	994	1160	1326	1491	1657	1823	1989	2154	2320	2486	2651
200	99	331	663	994	1326	1657	1989	2320	2651	2983	3314	3646	3977	4309	4640	4972	5303
400	199	663	1326	1989	2651	3314	3977	4640	5303	5966	6629	7292	7954	8617	9280	9943	10606
600	298	994	1989	2983	3977	4972	5966	6960	7954	8949	9943	10937	11932	12926	13920	14915	15909
800	398	1326	2651	3977	5303	6629	7954	9280	10606	11932	13257	14583	15909	17235	18560	19886	21212
1000	497	1657	3314	4972	6629	8286	9943	11600	13257	14915	16572	18229	19886	21543	23200	24858	26515
1200	597	1989	3977	5966	7954	9943	11932	13920	15909	17898	19886	21875	23863	25852	27841	29829	31818
1400	696	2320	4640	6960	9280	11600	13920	16240	18560	20880	23200	25521	27841	30161	32481	34801	37121
1600	795	2651	5303	7954	10606	13257	15909	18560	21212	23863	26515	29166	31818	34469	37121	39772	42424
1800	895	2983	5966	8949	11932	14915	17898	20880	23863	26846	29829	32812	35795	38778	41761	44744	47727
2000	994	3314	6629	9943	13257	16572	19886	23200	26515	29829	33144	36458	39772	43087	46401	49715	53030
2200	1094	3646	7292	10937	14583	18229	21875	25521	29166	32812	36458	40104	43750	47395	51041	54687	58333
2400	1193	3977	7954	11932	15909	19886	23863	27841	31818	35795	39772	43750	47727	51704	55681	59658	63636
2600	1293	4309	8617	12926	17235	21543	25852	30161	34469	38778	43087	47395	51704	56013	60321	64630	68939
2800	1392	4640	9280	13920	18560	23200	27841	32481	37121	41761	46401	51041	55681	60321	64961	69601	74242
3000	1491	4972	9943	14915	19886	24858	29829	34801	39772	44744	49715	54687	59658	64630	69601	74573	79545

TABLE 15 MPS COOLING ZONE CONVERSION FACTORS

	Dwelling Prototypes					
	I	II	III	IV	V	VI
HUD MPS Heating Zone	Single Story No Basement	Single Story Full Basement	Double Story No Basement	Double Story Full Basement	Apart-ments	Mobile Homes
1						
2	1.58	1.69	1.75	1.69	1.97	1.56
3	1.12	1.20	1.21	1.18	1.45	1.22
4	1.34	1.42	1.44	1.41	1.58	1.43
5	1.24	1.37	1.38	1.37	1.58	1.43
6	1.33	1.37	1.38	1.37	1.58	1.43
7	1.37	1.24	1.23	1.23	1.38	1.39
8	.98	1.00	1.06	1.00	1.19	1.38

F. NON-SPACE HEATING/COOLING ENERGY CONSUMPTION/COST

The examples in the preceding sections (VI.C, VI.D and VI.E) dealt with the charges for space heating and cooling. However, to compute **total** energy consumption charges, the costs for energy consumed by lights, equipment, and appliances (Government **and** tenant owned) must be determined and added to the heating and cooling charges.

1. **Consumption**. Electric non-space heating/cooling consumption and cost estimates include electricity used by small appliances, lights, radios, television, refrigerators, ranges, washers, dryers, etc. These items, and their associated consumption levels, are shown in Table 16.

   To use Table 16, first, determine the finished floor space square footage range within which a specific quarters unit falls. Then, using the values in Table 16, add the KwH consumed by each appliance or equipment item which is present in the quarters unit. If a housing unit has more than one (1) refrigerator, freezer, room (window) air conditioner, or space heater, multiply the KwH shown in the table times the number of refrigerators, freezers, room air conditioners, or space heaters that are present in the quarters unit to determine the total monthly KwH consumption for these appliances.

   There may be instances where appliances are fueled by fossil fuels rather than by electricity. Table 16a provides monthly consumption (in MCF or gallons of fuel) for the most common of these.

   If an appliance listed in Table 16 or Table 16a is not present in the quarters unit at issue, do not include its monthly energy consumption when computing the total energy consumed by equipment and appliances.

2. **Cost**. The cost of electricity or fossil fuel consumed by appliances and equipment is easily computed by multiplying the total monthly consumption (as determined in the preceding paragraphs) times the appropriate charge per KwH, MCF or gallon. These unit charges are shown in Table 17.

TABLE 16 MONTHLY kWh USAGE: APPLIANCES AND EQUIPMENT

Appliance/ Equipment	Gross Square Feet of Living Space									
	Under 301	301-500	501-700	701-1,100	1,101-1,300	1,301-1,500	1,501-1,900	1,901-2,100	2,101-2,500	Over 2,500
Hot water heater	130	130	245	245	370	370	480	480	600	705
Stove / Microwave	45	45	50	50	55	55	60	60	65	70
Refrigerator 1/	45	50	50	50	85	85	85	85	85	85
Clothes washer	20	35	35	35	45	45	45	55	55	65
Clothes dryer	15	15	25	25	35	35	35	35	40	50
Dishwasher	35	35	45	45	60	60	70	70	80	95
Freezer 1/	70	70	70	70	70	70	70	70	70	70
Furnace fan	15	15	20	20	20	25	25	30	30	35
Room air conditioner	65	65	65	65	65	65	65	65	65	65
Television / radio	5	5	10	10	20	20	20	20	25	25
Lights	50	55	75	80	90	90	95	100	120	120
Space heater (portable) 1/	130	130	130	130	130	130	130	130	130	130
Misc. small appliances	30	30	45	45	65	65	75	80	95	105
Engine Heaters	195	195	195	195	195	195	195	195	195	195
Hot Tub	360	360	360	360	360	360	360	360	360	360

1/ If more than one of these appliances are present in a quarters unit, multiply the kWh consumption times the number of appliances to determine the total kWh consumed for each appliance category.

NOTE: FOR APPLIANCES OPERATED BY FOSSIL FUELS, SEE TABLE 16a.

TABLE 16a MONTHLY FOSSIL FUEL CONSUMPTION: APPLIANCES AND EQUIPMENT

Appliance/ Equipment	Gross Square Feet of Living Space									
	Under 301	301-500	501-700	701-1,100	1,101-1,300	1,301-1,500	1,501-1,900	1,901-2,100	2,101-2,500	Over 2,500
Hot water heater										
Natural Gas MCF	.55	.55	1.05	1.05	1.58	1.58	2.05	2.05	2.56	3.01
Propane Gallons	5.61	5.61	10.71	10.71	16.12	16.12	20.91	20.91	26.11	30.70
Fuel oil Gallons	3.87	3.87	7.39	7.39	11.12	11.12	14.43	14.43	18.02	21.19
Kitchen Range										
Natural Gas MCF	.19	.21	.21	.21	.36	36	.36	.36	.36	.36
Propane Gallons	1.94	1.94	2.14	2.14	2.35	2.35	2.65	2.65	2.86	3.06
Fuel oil Gallons	1.34	1.34	1.48	1.49	1.62	1.62	1.83	1.83	1.97	2.11
Refrigerator 1/										
Natural Gas MCF	.19	.21	.21	.21	.36	.36	.36	.36	.36	.36
Propane Gallons	1.94	2.14	2.14	2.14	3.67	3.67	3.67	3.67	3.67	3.67
Clothes dryer										
Natural Gas MCF	.06	.06	.11	.11	.15	.15	.15	.15	.17	.21
Propane Gallons	.61	.61	1.12	1.12	1.53	1.53	1.53	1.53	1.73	2.14
Freezer 1/										
Natural Gas MCF	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30
Propane Gallons	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06
Space heater (portable) 1/										
Natural Gas MCF	.55	.55	.55	.55	.55	.55	.55	.55	.55	.55
Propane Gallons	5.61	5.61	5.61	5.61	5.61	5.61	5.61	5.61	5.61	5.61
Fuel oil Gallons	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87

1/ If more than one of these appliances are present in a quarters unit, multiply the consumption times the number of appliances to determine the total consumed for each appliance category.
NOTE: To compute the cost per month for an appliance that is fueled by a fossil fuel, multiply the consumption listed by the unit cost found in Table 17 of this report.

G. WATER AND SEWER CONSUMPTION/COST CALCULATIONS

In accordance with OMB Circular No. A-45 and Departmental policies and guidelines, when utilities are furnished by the Government, charges shall be based upon regional average residential rates and consumption levels applicable to private rental housing in the survey region.

Where regional survey procedures are used to establish base rental rates, *the charges for Government-furnished water and sewer services, must be based upon regional average water and sewer rates*, and *not* the rates prevailing in the nearest Established Community. In determining the regional average rates, the water and sewer rates for each survey community were obtained and averaged.

Thus, where the water service is unmetered, and where the Government furnishes water and sewer services, *including well water and septic waste disposal systems*, the regional average flat rate charges, shown below, shall be used. These charges are based upon (1) the average of the monthly service costs (including taxes, service charges, etc.) in all surveyed communities; and (2) consumption levels (based on numbers of bedrooms) contained in planning guides published by the Department of Housing and Urban Development (HUD). The rates below are based upon the number of bedrooms contained in a dwelling.

Flat Rate Water and Sewer Charges

Number of Bedrooms	Monthly Charges			Total
1 (or less)	$16.50 water	+	$19.20 sewer	= $35.70
2	$19.00 water	+	$19.50 sewer	= $38.50
3	$22.50 water	+	$19.50 sewer	= $42.00
4	$26.00 water	+	$21.00 sewer	= $47.00

H. GOVERNMENT PROVIDED METERED UTILITIES

Where the Government provides the utilities, and the consumption is metered *at the quarters unit level*, the following unit charges will apply.

TABLE 17 UTILITY CHARGES (COST PER UNIT)

Do not calculate the total cost of electricity in steps, such as the first 500 KwH costs so much, then the second 500 KwH costs so much, etc.

a. Electricity

KwH Consumed Per Month	Charge Per KwH
0 - 500	$.127
501 - 1,000	$.151
1,001 - 1,500	$.167
Over - 1,500	$.176

b. Fuel Oil #2 $1.07 Per Gallon.

c. Propane $1.49 Per Gallon.

d. Natural Gas $9.07 Per MCF (1,000 cubic feet).

e. Water

Water Consumed Per Month	Cost Per Gallon
1 – 3,000 Gallons	$0.0055
3,001 - 5,000 Gallons	$0.0038
5,001 - 7,500 Gallons	$0.0030
Over - 7,500 Gallons	$0.0026

f. Sewer

Sewer Consumed Per Month	Cost Per Gallon
1 - 3,000 Gallons	$0.0064
3,001 - 5,000 Gallons	$0.0039
5,001 - 7,500 Gallons	$0.0026
Over - 7,500 Gallons	$0.0021

I. GARBAGE/TRASH REMOVAL SERVICE RATES

In the case of garbage and trash hauling, as with other Government-provided services, OMB Circular No. A-45 requires the charges to be based upon the domestic rates for comparable services provided to occupants of private rental units in the survey area.

The garbage and trash services provided to quarters occupants vary from weekly to daily service. Establishment of a service charge based upon the service in the nearest established community may or may not reflect a similar level of service. Therefore, the charge for garbage and trash collection, when conducted by the Government, will, regardless of quarters type, be **$16.80 per quarters unit per month**.

J. CHARGES FOR APPLIANCES AND RELATED SERVICES

OMB Circular No. A-45 requires agencies to charge occupants of Government quarters for appliances, furnishings and services which the Government provides with the quarters. The charges for appliances, furnishings and services most typically provided by Federal agencies are found in Table 18. The monthly recapture cost of the items in Table 18 were determined from information gathered by contractors in the survey communities of all QMIS regions, and from special studies conducted by the QMIS Program Office.

Agencies providing appliances, furnishings or services that are not included in Table 18 are responsible for establishing an appropriate monthly charge which reflects the private market value of the item(s) provided. In such cases, the agency or bureau should advise the QMIS Program Office to ensure that subsequent regional survey reports include charges for all Government-provided appliances, furnishings and services.

TABLE 18 MONTHLY CHARGES FOR APPLIANCES & RELATED SERVICES

APPLIANCES			SERVICES AND FURNISHINGS	
Range (Gas / Electric) *	(+/-)	$3.60	Storage Shed (Per Unit)	$2.55
Refrigerator *	(+/-)	$3.30	Furniture (Per Room)	11.50
Clothes Washer		3.60	Swimming Pool	
Clothes Dryer		3.30	Private Pool	60.00
Dishwasher		3.15	Community Pool	20.00
Microwave Oven		1.40	Satellite Dish	17.70
Trash Compactor		3.60	Cable Television	22.90
Freezer		1.90	Premium Channel (Each)	15.40
Freezer (Community)		1.00	Maid Service	67.75
Window Air Conditioner			Lawncare (Per Mowing)	
Refrigerated Unit		4.10	Houses (Excluding Plexes)	20.80
Evaporative (Swamp) Unit		3.05	All Other Classes	10.40
Free Standing Stove		3.65	Snow Removal (Per Removal)	12.30
Fireplace Insert		4.40	Firewood (Per Cord)	126.75
Lawn Mower		3.80		
Hot Tub		33.30	ELECTRIC CREDITS	
			Well pump (0-1 Bedroom)	1.15
Community Laundry			Well pump (2 Bedrooms)	1.80
(Non-Coin Operated)			Well pump (3 Bedrooms)	2.60
Washer Only		1.90	Well pump (4+ Bedrooms)	3.50
Dryer Only		1.60		
Washer and Dryer		3.50	Sewer Lift Pump (0-1 Bedroom)	1.15
			Sewer Lift Pump (2 Bedrooms)	1.15
			Sewer Lift Pump (3 Bedrooms)	1.35
			Sewer Lift Pump (4+ Bedrooms)	1.80
ISOLATION ADJUSTMENT FACTOR		2.80	Base Radio	1.15
			Remote Control Relay	1.15
			Sump Pump	1.15
			Radon Mitigation Fan	10.35

** If the Government provides one range and refrigerator, no additions or deductions are made.*
If the Government does not provide a range or a refrigerator, deduct the amount shown above.

If the Government provides 2 or more ranges or refrigerators, add the amounts shown above for each appliance furnished in excess of one range and one refrigerator

VII. ADMINISTRATIVE ADJUSTMENTS

Once the MBRR is established, certain adjustments (e.g. for isolation and amenity deficiencies) are authorized by OMB Circular No. A-45. These administrative adjustments are established by OMB and are not derived from regional surveys conducted by the QMIS Program Office.

The administrative adjustments contained in OMB Circular A-45, and described below, are not authorized for dormitories, bunkhouses, or transient quarters. This is because the rental rates for those housing classes are administratively established, through extensions of the principle of comparability, and are not based directly upon market comparability.

A. SITE AMENITY ADJUSTMENTS

Living conditions at some Government housing sites are not always the same as those found in the survey communities. In the communities surveyed, the amenities discussed below (and in OMB Circular A-45) are generally present and their contributory value is included in the contract rent and in the quarters MBRR's determined from the tables in this report. Thus, if any amenity listed below is present at the quarters site, no positive adjustment is made for that amenity because its presence has already accounted for in the MBRR. However, the lack of an amenity discussed below represents a less desirable condition that should be reflected as a **negative** percentage adjustment to the quarters MBRR or CPI-adjusted MBRR (CPI-MBRR), whichever is applicable.

1. **Reliability and adequacy of water supply**. The water delivery system at the quarters site should provide potable water (free of significant discoloration or odor) at adequate pressure at usual outlets. If the water delivery system at the quarters site does not meet these conditions, 3 percent should be deducted from the MBRR or CPI-MBRR, whichever is applicable.

2. **Reliability and adequacy of electric service**. Electric service at the quarters site must equal or exceed a 100-ampere power system, and should provide 24-hour service under **normal** conditions. When evaluating the electric service, housing managers are reminded that OMB Circular A-45 recognizes that occasional temporary power outages are considered to be "**normal**" conditions. Furthermore, if an adequate back-up generator is available, then the electric service amenity will be considered to be reliable and adequate regardless of the reliability of the primary power source. When electric service is inadequate and unreliable, 3 percent should be deducted from the MBRR or CPI-MBRR whichever is applicable.

3. **Reliability and adequacy of fuel for heating, cooling and cooking.** There should be sufficient fuel storage capacity to meet prevailing weather conditions and needs. Where electricity is used as the heating, cooling or cooking "fuel," an adjustment can only be made when a deduction has been made for deficient electric service (see paragraph VII.A.2, above). If the fuel delivery/storage system is inadequate, 3 percent should be deducted from the MBRR or the CPI-MBRR, whichever is applicable.

4. **Reliability and adequacy of police protection**. Law enforcement personnel, including Government employees with law enforcement authority, should be available on a 24-hour basis.

OMB Circular A-45 defines "**availability**" as the ability of law enforcement officers to respond to emergencies at the quarters site as quickly as a law enforcement officer in the nearest established community could respond to an emergency in the nearest established community.

OMB Circular A-45 further provides that where part-time officers serve the quarters site, the fact that the officers are part-time does not necessarily mean that they are less available than officers in the nearest established community. The important point is that the availability determination must be based on comparative response times (quarters site vs. the nearest established community) - not the employment conditions of the officers serving the quarters site.

Finally, OMB Circular A-45 provides that gaps in availability due to temporary illness or injury, use of annual leave, temporary duties, training, or other short absences, do not render law enforcement personnel "unavailable" at the quarters site.

If, after applying these guidelines, it is determined that the law enforcement protection at the quarters site is unreliable and inadequate in comparison to the reliability and adequacy of law enforcement protection in the nearest established community, 3 percent should be deducted from the MBRR or CPI-MBRR, whichever is applicable.

5. **Fire insurance availability or reliability and adequacy of fire protection**. Fire insurance should be available (for the quarters) with the premium charge based upon a rating equal to the rating available to comparable housing located in the nearest established community. Alternatively, adequate equipment, an adequate supply of water (or fire retardant chemical), and trained personnel should be available on a 24-hour basis to meet foreseeable emergencies. OMB Circular A-45 provides that **if either element is present (adequate insurance or an adequate fire fighting capability), no adjustment is authorized**. If both elements are missing, 3 percent should be deducted from the MBRR or CPI-MBRR, whichever is applicable.

6. **Reliability and adequacy of sanitation service**. An adequately functioning sewage disposal system and a solid waste disposal system should be available. OMB Circular A-45 considers septic, cesspool or other systems adequate even though they may require periodic maintenance, as long as they are usable during periods of occupancy. If the sanitation service at the quarters site is unreliable or inadequate, 3 percent should be deducted from the MBRR or CPI-MBRR, whichever is applicable.

7. **Reliability and adequacy of telephone service**. Access to commercial telephone facilities should be available on a 24-hour basis. Deductions (except as provided below) are not allowed for occasional temporary interruptions of telephone service. OMB Circular A-45 allows specific deductions for various levels of service and privacy. These are explained below.

   a. The MBRR or CPI-MBRR (whichever is applicable) should be reduced by 3 percent if telephone service is not available within the quarters or within 100 yards of the quarters.

   b. The MBRR or CPI-MBRR (whichever is applicable) should be reduced by 2 percent if there is no telephone service within the quarters, but telephone service (either private or party line) is available within 100 yards of the quarters.

c. The MBRR or CPI-MBRR (whichever is applicable) should be reduced by 1 percent if telephone service is available in the employee's quarters, but the service is not private line service and/or the service is not accessible on a 24-hour per day basis.

8. **Noise and odors**. If there are frequent disturbing or offensive noises and/or odors at the quarters site, 3 percent should be deducted from the MBRR or CPI-MBRR, whichever is applicable.

9. **Miscellaneous improvements**. One or more of the following improvements should be available at the quarters site: paved roads/streets, sidewalks or street lights. If any one of these improvements is present, no deduction is authorized. If all three of these improvements are missing (i.e., there are no paved roads/streets **and** there are no sidewalks, **and** there are no street lights), 1 percent should be deducted from the MBRR or CPI-MBRR, whichever is applicable.

B. ISOLATION ADJUSTMENT

In some cases, Government quarters are located far from the nearest established community (see paragraph IX.C for the OMB's definition of "established community"). In addition, different modes of transportation (travel categories) may serve to further isolate the quarters from the nearest established community. In situations where the quarters location and the travel categories meet the requirements contained in OMB Circular A-45, an isolation adjustment should be applied. To determine whether an isolation adjustment applies, and the amount of the adjustment (if one does apply), you should follow the steps in the Isolation Adjustment Computation Schedule, shown on the following page. This schedule is a (modified) reproduction of the appendix to OMB Circular A-45, and is included in this report for illustrative purposes, only. Therefore, you should use the form prescribed by your agency or bureau when documenting the isolation adjustment.

Isolation Adjustment Computation

- *Step 1.* Determine the one-way distance in miles (from the quarters to the nearest established community) for each category of transportation listed in Figure 1. Enter mileage(s) in the appropriated block(s) under Column B.

- *Step 2.* Multiply mileage figures entered in Column B by point values listed in Column A for each affected category of transportation to produce one-way points for each category. Add 29 points to the category 4 subtotal and 27 points to the category 5 subtotal to reflect relative differences in cost or time by use of these modes of travel.

- *Step 3.* Add all categories of one-way points in Column C to produce one-way points. (The total must exceed 30 points or there is no adjustment for isolation.)

Figure 1

Category of Travel	Column A Point Value		Column B One-way Miles		Column C One-way Points
(1) Paved road or rail	1.0	X	=		
(2) Unpaved but improved road	1.5	X	=		
(3) Unimproved road	2.0	X	=		
(4) Water, snowmobile, pack animal, foot or other special purpose conveyance	2.5	X	=	___+29	
(5) Air	4.0	X	=	___+27	
TOTAL ONE-WAY POINTS			=		

- *Step 4.* Calculate the Isolation Adjustment Factor (IAF) using the following OMB formula: Multiply 2 (to reflect round-trip points) by 4 (to reflect number of trips per month) and then multiply by $x.xx (GSA's current automobile allowance as of the last day of September of each year). For example, the GSA mileage allowance, as of September 30, 2001, was $0.345 per mile, resulting in a IAF of 2.80.

ISOLATION ADJUSTMENT FACTOR = 2.80

- *Step 5.* Multiply total adjusted points by the Isolation Adjustment Factor to produce the monthly adjustment for isolation (rounded to the nearest whole dollar).

MONTHLY ADJUSTMENT =

C. LOSS OF PRIVACY

Some quarters occupants are subject to a loss of privacy during non-duty hours by virtue of **public visits which occur several times daily**. In other cases, quarters occupants may be **inhibited from enjoying the full range of activities normally associated with living in private rental housing** (such as where restrictions are imposed on activities in quarters at national cemeteries, or where quarters are in view of prison inmates). In such cases, OMB Circular A-45 allows a deduction from the MBRR or CPI-MBRR (whichever is applicable) of up to 10 percent. OMB Circular A-45 instructs housing managers to establish proportional adjustments to reflect situations of less frequency or seriousness in their impact upon privacy or usage, or to reflect seasonal variations.

D. EXCESSIVE OR INADEQUATE SIZE

Quarters occupants are sometimes provided dwellings that are excessively large or small for their needs. This may be because the range and variety of quarters available at an installation may be much less than that which is available in private rental markets. In such cases, OMB Circular A-45 allows a deduction from the MBRR or the CPI-MBRR (whichever is applicable) of up to 10 percent. The Circular instructs that the deduction should be in direct proportion to the degree of excess or inadequacy, and that the deduction must not continue beyond one month after suitable quarters are made available. Before this adjustment is applied, local housing managers should consult with managers within their agencies or bureaus to determine whether other alternatives (such as closing off rooms and other excess space) would offer a more suitable means of adjustment.

E. LIMITATIONS TO ADMINISTRATIVE ADJUSTMENTS

Administrative adjustments cannot be applied without limit. OMB Circular A-45 provides that the MBRR or CPI-MBRR cannot be reduced by more than 50 percent unless an isolation is authorized and applied. For quarters which receive an isolation adjustment, the MBRR or CPI-MBRR may not be reduced by more than 60 percent. These limitations do not apply to excessive heating or cooling adjustments, which are described in paragraph IX.A of this report.

VIII. CONSUMER PRICE INDEX ADJUSTMENTS

OMB Circular A-45 requires annual verification, and adjustment (when necessary) of the following rental components that are presented in this report: (1) the Monthly Base Rental Rates (MBRR's); (2) the charges for related facilities (utilities, appliances, furnishings and services); and (3) the Isolation Adjustment Factor (IAF). These verifications and adjustments are to be made, essentially, in each interim year between baseline regional surveys.

Generally, OMB Circular A-45 specifies that these changes are to be based upon September index levels of specified components of the Consumer Price Index (CPI); and the GSA temporary duty mileage allowance

in effect as of September 30, of each year. These changes must be implemented at the beginning of the first pay period in March of each following year.

The QMIS Program Office is responsible for determining the amounts of these changes, and for providing QMIS Program participants with the information, the software and the instructions needed to implement the required changes. This information is usually distributed to each National Quarters Officer in November of each year. National, regional or installation quarters managers (as required by your agency or bureau) are responsible for implementing these annual rental adjustments.

IX. OTHER OMB CIRCULAR A-45 RENT CONSIDERATIONS

A. EXCESSIVE HEATING OR COOLING COSTS

OMB Circular A-45 authorizes a deduction from the Monthly Base Rental Rate (MBRR) or the Consumer Price Index - adjusted Monthly Base Rental Rate (CPI-MBRR), whichever is applicable, when quarters are unusually costly to heat or cool. This adjustment is allowed only when (1) the excessive heating or cooling costs are due to the poor design of the quarters or the lack of adequate insulation/weather-proofing; and (2) when the energy/fuel used for heating and/or cooling is metered. This adjustment will vary from quarters-to-quarters, but is the difference between the actual heating and/or cooling costs paid by the quarters occupant and 125 percent of the cost of heating and/or cooling a comparable (but adequately constructed and insulated) dwelling located in the same climate zone. For more information on this adjustment, you should consult your agency or bureau policies.

B. INCREMENTAL ADJUSTMENTS

New baseline regional surveys or annual CPI adjustments may occasionally increase quarters rents by more than 25 percent. When this occurs, OMB Circular A-45 allows housing managers to impose the increase incrementally over a period of not more than one year. The Circular also requires that such increases must be applied in equal increments on at least a quarterly basis.

C. ESTABLISHED COMMUNITY

OMB Circular A-45 has established the following minimum standards for use in determining which population centers (cities, towns, etc.) may be used as "established communities" when determining quarters rents.

1. An established community must have a year-round population of 1,500 or more (5,000 or more in Alaska). The population determinations must be based upon the most recently conducted decennial census.

2. An established community must have at least one doctor and one dentist, who are available to all quarters occupants on a non-emergency basis.

3. An established community must have a private rental market with housing available to the general public. This requirement excludes communities on military posts, Indian reservations and other Government installations which may meet the other criteria contained in paragraphs IX.C.1 and 2, above.