PREFACE

THIS FOLIO HAS BEEN PREPARED WITH THE PRIME OBJECTIVE OF IMPROVING THE OVERALL DESIGN OF MILITARY FAMILY HOUSING AND OBTAINING THE HIGHEST QUALITY OF HOUSING POSSIBLE WITHIN THE LIMITATIONS SET BY THE CONGRESS AND AT THE MOST REASONABLE COST CONSIDERING BOTH INITIAL INVESTMENT AND ULTIMATE MAINTENANCE COSTS. THE DEFINITIVES CONTAINED IN THIS FOLIO ARE INTENDED TO SET A MINIMUM STANDARD OF ACCEPTABLE DESIGN AND TO PRESENT NEW IDEAS AND CONCEPTS. WE ARE COGNIZANT THAT BETTER HOUSING CANNOT BE EFFECTED THROUGH A DESIGN FOLIO ALONE. THE REALIZATION OF THIS GOAL REQUIRES THE VISION, COOPERATION AND CONCERTED EFFORT OF THOSE RESPONSIBLE FOR THE DEVELOPMENT OF EACH PARTICULAR MILITARY FAMILY HOUSING PROJECT.

JOHN J. REED
Deputy Assistant Secretary of Defense
(Family Housing)
INTRODUCTION

This folio of definitive plans is of multi-purpose; it sets forth a minimum standard of acceptable design, and by presentation intends to foster economies in coordinated house and site design, as well as to challenge the imaginations of those charged with the development of new family housing projects.

It is hoped that this challenge will produce house and site plans which will make revision of this folio desirable and necessary. Additionally, changing trends in design acceptance and construction technology will also require revision and augmentation of the folio. Accordingly, the folio is presented in a form which facilitates change, and the addition of new concepts is encouraged.

The military family housing program is large and widespread. It would be exceedingly difficult to initially include in the folio sufficient plans to produce the most appropriate houses for all local conditions. House types which can meet most building conditions are herein presented. Care was taken to include houses for both sloping and flat sites so that excessive site development would be avoided.

The definitive drawings initially include four groups of houses, each group having been prepared by a nationally outstanding architectural firm:

Group I. Cold Climate houses consisting primarily of Enlisted and Company Grade units.
Architects - Robert A. Little & George F. Dalton & Associates of Cleveland, Ohio.

Group II. Cold Climate houses consisting primarily of Field Grade and Senior Officer units.
Architects - A. Quincy Jones and Frederick E. Emmons & Associates of Oakland, California.

Group III. Warm Climate houses consisting primarily of Field Grade and Senior Officer units.
Architects - George Matsumoto of Oakland, California.

Group IV. Warm Climate houses consisting primarily of Field Grade and Senior Officer units.
Architects - Robert A. Little & George F. Dalton & Associates of Cleveland, Ohio.

Many ideas gained through the architects' successful experience in the residential housing field are reflected in the folio plans. Included are such desirable features as family rooms, bathrooms with attractive tile walls, and attractive, well-planned kitchens. Some features have been included which might not be universally suited for every location of military family housing. It is intended that such items as large glass areas and the indicated open areas can effect the desired economies, while retaining many of the attractive features of the loosely staked single or duplex houses.

Since the town house will have a prominent part in the forthcoming increments of the family housing construction program, the following design guidance is set forth for consideration in the utilization of the definetives as well as any alternate plans.

CRITICAL POINTS IN THE PLANNING OF A TOWN HOUSE PROJECT

A town house development is a very difficult kind of project to plan in a completely satisfactory way and requires the skills of the most competent professionals in architecture and land planning. However, if designed with better than minimum standards, with adequate provision for private yards, as well as large easily accessible areas for community facilities and children's play yards, this type of community development can provide comfortable and private living conditions with the added advantage of larger park and recreation areas. The benefits of the town house development have been excellently expressed by the Federal Housing Administration in its recent publication "Land Planning Bulletin No. 6", and much of the following information is credited to that document.

SITING:
The success of a town house project is dependent upon the quality of the siting, and it is imperative that the importance of this phase of the design not be underestimated.

Economies in town house construction are largely obtained by closely grouping the houses to reduce street and utility costs while leaving the remainder of the land in open park areas. It follows that the densities will tend to be high; however, the intensity of development should be determined individually for each project depending upon the characteristics of the site and the economies to be obtained.

The development of the site should be strongly influenced by the existing topography. Recognition of the terrain in the design will (1) avoid excessive costs for grading, drainage and erosion control, (2) provide the project with distinctive character and appeal, and (3) permit the preservation of existing vegetation and other natural site features which tend to impart interest and a feeling of stability to the project.

Careful planning of the open spaces is basic, as these common recreational areas and their facilities provide benefits not common in most subdivisions. The architect should strive to blend the house with these open areas and to provide easy and attractive access between the two.

Parking:
 Adequate, unobtrusive parking facilities are essential and should be designed to provide each tenant with a conveniently located assigned parking space, preferably within 100 feet of his house. Skillful design of parking courts is critical, as large areas of pavement can drastically reduce the visual appeal of the project. Parking spaces must be designed to blend with the architecture and residential flavor of the community, using attractive walls, focii, and planting to screen the cars and eliminate the stark effect usually associated with such areas. Landscaping should include trees to shade the paved surfaces and to reduce glare. When placing courts, consideration should be given to the problem of clearing heavy snows.

CER CIRCULATION AND ACCESS:
Traffic circulation should be around a residential development, not through it. Major traffic arteries should provide for fast and convenient access to the project, but when the project has been reached, safety, convenience, and pleasant living for the residents should take precedence over traffic speed and shortcuts through the project. Arterial streets should normally not be used for car access to the houses, but the backing of cars from the driveways into fast-moving traffic is a likely cause of accidents.

Collector streams of ample width and flowing alignment should feed traffic between the arterial streets and a network of minor access streets on which most of the houses are located. Location of collector streams near the perimeter of a project is often advantageous. Short loop streets and cul-de-sacs are best for the minor streets because they provide the safest access to and from the house clusters. Superblocks made up of several or many such minor elements are very appropriate to the cluster subdivision and town house concept. With careful design, the common open space and its recreational facilities can be made accessible by foot from all houses without crossing any street.

The width of minor streets should be limited to two traffic lanes if car parking for tenants and guests is adequately and conveniently provided elsewhere. Through careful design, this can produce savings in grading, drainage, and street construction.

HOUSING UNITS:
Physically a town house is one of a number of attached homes — part of a group of related structures. Basically, however, it should be designed to be a private family home and, as such, must be satisfying as a home on its own merits. Therefore, when planning a town house it is important to create a feeling of spaciousness as well as a feeling of privacy. Visually relating the unit's interior with private patios is one method of accomplishing this. Aesthetically privacy also relates to a feeling of separation and spaciousness. Special attention should be given to the adequate soundproofing of walls between living units.

Each house should provide a court yard, properly landscaped for child care, relaxation and utility services. Landscaping of these private areas should be confined to plants which stay small without trimming and to shrubs and trees which require relatively little care. Areas conducive to the growth of plant life should be covered with gravel, concrete or similar low-maintenance materials.

DEPARTMENT OF DEFENSE — FAMILY HOUSING
PREPARED BY THE OFFICE OF THE DEPUTY ASSISTANT SECRETARY OF DEFENSE (FAMILY HOUSING)
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DEPARTMENT OF DEFENSE – FAMILY HOUSING
PREPARED BY THE OFFICE OF THE DEPUTY ASSISTANT SECRETARY OF DEFENSE (FAMILY HOUSING)
Design Group I contains Town House units of three and four bedrooms for Enlisted Men and Company Grade Officers, plus two detached Senior Officer houses of compatible design. All of these houses have been designed for a Cold Climate, and they provide considerable storage, both indoors and out.

The most obvious need for the families in these houses is SPACE. The plans that follow have tried to achieve the most generous, usable, and pleasant living space obtainable within the government's limitations of area and cost.

As important as Space is PRIVACY. All families desire Privacy. Privacy becomes particularly important in a group living situation such as exists in a town house project. Not only do the residents live together, but they also spend every day working in the close society of military life, and the desire for Privacy becomes an urgent requirement.

Privacy is achieved in these designs by several means. Inside, the dividing walls are to be made as soundproof as possible, by such means as block partitions, staggered studs, insulation, and the avoidance of sound transmission through back-to-back electrical outlets. On the outside, bedroom windows are spaced to be some distance from the neighbors. On the ground, the requirements for a combination of party walls, fences, and planting is mandatory in both front and rear yards. The following drawings indicate various possibilities which should be used generously and fully. The economic advantages of the row-house designs will be negated if the livability and privacy are sacrificed by the omission of proper fences, walls, and planting.

Design Group I has two developmental schemes. The Horizontal Scheme is designed to be used in relatively open areas. The Vertical Scheme is designed to be used in more urban or crowded areas.
This diagram shows how like units of Design Group I may be combined in horizontal groups in even numbers up to ten, as fit a given site. At the bottom of the diagram, for example, are shown four units of I EM 1, two units of I EM 3, and eight units of I EM 2. These buildings are arranged around an Entrance Court (foreground) with parking for the families and their guests. In every case, the kitchen faces the entrance court and there is a front yard designed for children’s play and for the storage of outdoor toys, furniture, and recreational equipment. Extensions of the brick Party Walls are shown between units. These walls create privacy and are vital to the scheme. A number of Front Yard Variations are shown at the left, and additional treatments are shown on the individual unit elevations. One or another of these variations should be used, dependent on the degree of privacy desired. Omission of these front yards and fences is not recommended. Carports or garages can be used interchangeably with the various yards, as indicated in the following drawings.

On the other side of these buildings, away from the Entrance Court, each unit has a rear garden for private outdoor living. This garden side of the houses faces a Pedestrian Park and playspaces, with no automobiles (see Plot Plan sheet). By the proper use of the front and rear yard variations shown on the left of this diagram, with appropriate wall and fence extensions, planting and terraces, and by properly locating these buildings on a site, a high degree of comfort and privacy can be achieved both indoors and out. This same planning technique may be applied to any of the units in Design Group I which are shown at the top of this page (namely I EM 1 through I EM 6 & 7).

The fences, walls, and gardens also become the most important visual feature of this architectural design. The long second floor blocks with their unbroken roofs create a unity and quiet “Country House” quality to the project. Opposed to the long lines of these upper-floor blocks, the variety of the first-floor fences, walls, yards, and storage units is a required contrast and relief. The intended materials are wood for the second-floor block, with masonry and contrasting wood on the first floor. Generally it will be best to use one uniform light color for all roofs in a project, and not more than one or two colors for the second-floor blocks. More variety of color and texture can be introduced on the ground-floor walls, fences, and doors. In the diagram, Enlisted Men’s houses are shown for purposes of illustration, but the same scheme may of course be applied to Company Grade Officers’ houses as well. See following drawings for more detail.
Typical house (EM 1) from the Public, or Entrance, side, showing a low solid fence and a low storage unit, plus eight foot party wall extensions. Kitchen window looks out on play yard. Overhang provides shelter at entrance door.
Typical house (CGD 2) from the Private, or Garden, side. Brick party walls extended for some degree of privacy. Interior shows semi-open stair and sliding pass-through door to kitchen.
LAND DENSITY SCHEDULE

AREA A • 3.0 ACRES, 44 UNITS • 14.6 UNITS/NET ACRE
AREA B • 3.4 ACRES, 42 UNITS • 12.3 UNITS/NET ACRE
AREA C • 3.8 ACRES, 46 UNITS • 12.1 UNITS/NET ACRE
AREA D • 1.8 ACRES, 22 UNITS • 12.2 UNITS/NET ACRE
L • LAUNDROMAT BUILDING

This plot plan shows how the buildings of the previous page might be located on typical gently rolling terrain. The purpose of the drawing is to show principles of site planning, not to represent any given actual locality.

Good siting for any housing should take full advantage of natural assets of the site as a first consideration— including drainage, views, slopes, water, trees, sun and wind directions. The design shown here provides for a community center located at a pond on the stream. In the main housing area at center left are Horizontal Groups of houses, each group located around its Entrance Court. This is the PUBLIC AREA of each group and contains parking for families and guests, as well as small laundromat buildings next to small tot lots. Each house has its own fenced front yard outside its kitchen window, facing the Entrance Court. Groups of houses are selected to fit the contours and to give variety. For example, groups of houses EM 1, 2 and 3 are on flat ground, while EM 4 is used on the hillside.

On the other side of each building is the PRIVATE AREA for each family. Here, each family has a walled or fenced garden outside its own Living Room. From each garden, one can go through a gate to the Community Park, which is a combined quiet and recreation area, and through which one can walk to the Community Center without crossing automobile traffic.

At the bottom of the drawing, steeper terrain is utilized for the other buildings designed for hillside conditions— EM 5, 6 and 7. At the upper right is the beginning of a separate community of detached houses - EM 8 and 9.
DEPARTMENT OF DEFENSE - FAMILY HOUSING
PREPARED BY THE OFFICE OF THE DEPUTY ASSISTANT SECRETARY OF DEFENSE (FAMILY HOUSING)

SECOND FLOOR PLAN

BED ROOM 3
10'8" X 12'4"

BED ROOM 2
8'8" X 12'4"

ENTRY

LIVING
4'10" X 33'9"

DINING
10'9" X 12'0"

KITCHEN
8'9" X 10'6"

UTILITY & STORAGE

GROUND FLOOR PLAN

BED ROOM 3
8'8" X 12'4"

BED ROOM 2
6'4" X 9'8"

ENTRY

LIVING
12'1" X 25'3"

DINING
12'1" X 10'8"

KITCHEN
8'9" X 10'6"

UTILITY & STORAGE

ENTRY

BED ROOM 1
12'1" X 12'1"

BED ROOM 2
12'1" X 12'1"

BED ROOM 3
12'1" X 12'1"

STORAGE

THREE STORY ELEVATION

DEPARTMENT OF DEFENSE - FAMILY HOUSING
PREPARED BY THE OFFICE OF THE DEPUTY ASSISTANT SECRETARY OF DEFENSE (FAMILY HOUSING)

GROUND FLOOR PLAN

BED ROOM 3
10'8" X 12'4"

BED ROOM 2
8'8" X 12'4"

ENTRY

LIVING
4'10" X 33'9"

DINING
10'9" X 12'0"

KITCHEN
8'9" X 10'6"

UTILITY & STORAGE

SECOND FLOOR PLAN

BED ROOM 3
10'8" X 12'4"

BED ROOM 2
8'8" X 12'4"

ENTRY

LIVING
12'1" X 25'3"

DINING
12'1" X 10'8"

KITCHEN
8'9" X 10'6"

UTILITY & STORAGE

ENTRY

BED ROOM 1
12'1" X 12'1"

BED ROOM 2
12'1" X 12'1"

BED ROOM 3
12'1" X 12'1"

STORAGE

THREE STORY ELEVATION
The plans of Design Group I have been developed so that a simple Planning Procedure can achieve a very different appearance for a Project, as well as giving a great deal of flexibility in Sizing. This procedure is shown on this diagram and the next two sheets.

By simply using brick end walls for every house up to the roof, and by extending these brick walls out from the front and rear walls the proper distance, and by adjusting the roof overhang slightly, it is possible to put together Units EM 1, 2, 3 and 4 if the contours permit in any order desired.

Therefore, these four units can be joined in the manner of a string of beads, giving the interest and variety illustrated by the diagram at left. Because the dominant element now becomes the vertical brick walls, this group is called the Vertical Scheme. It is particularly well adapted for smaller projects, for in-town locations, and for neighborhoods with small houses nearby. It is easily adaptable to land with steeper contours, and to curved roads by breaking the line either in elevation or in plan, at any party wall.

As in previous examples, the same planning procedures may be applied to Company Grade Officers' houses as to the Enlisted Men's units shown here.
This site plan shows various siting arrangements of buildings according to the Vertical Scheme.

The locale is a nearly flat property on the outskirts of a town. At the left and bottom are fairly busy traffic streets, at the right is a quiet street.

The buildings are sited in a rectangular pattern consistent with the surrounding buildings and streets.

Access to the property is a minimum on the busy streets at left and at bottom. Where the property is surrounded by streets and traffic, the living is oriented inward away from the noise and danger.

Area A, lower right, is an example of a very small, much varied, housing group such as might be placed in any small community. Twenty-four families are housed on a small partial block, with houses placed near the quiet streets to provide the maximum interior back yard, or Community Park. Parking is concentrated on the outside perimeter, also in order to save as much land as possible for the Private Area or Community Park. Some of these buildings are shown in the Air View on the preceding page.

Area B is a combination of the Vertical Scheme houses in larger strings of similar units. It is easy to alter these combinations at will, as previously indicated.

Area C combines houses of the Vertical and Horizontal Schemes in the same block, with some fairly long Horizontal Houses contrasted to the intimate pattern of the varied Vertical Houses. In Area C, carports are placed near the property line, with a six foot fence or wall screening them from the public streets, as well as protecting the residents from outside traffic and nuisance. Privacy, again, is the aim in plot plan as well as individual houses.

Area D is an Officer's group, which is similar in planning principles to the other areas.

DEPARTMENT OF DEFENSE — FAMILY HOUSING
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This drawing shows at left and below how various units of EM 1, 2, 3 and 4 can be placed together with the vertical brick walls expressed in plan and elevation. The diagrams at right indicate the simple means by which this "string of beads" concept may be accomplished.

The out-to-out depth dimensions of these four units vary from 28'-0" to 32'-4". See Dimension A.

The brick party walls extend 8" beyond each side of the deepest unit, therefore, the brick wall dimension is constant for all houses at 35'-0". See Dimension B.

The roofs of Units EM 1, 2, and 4 overhang the brick party walls by 8", thus allowing the roofs and fascia lines to be continuous. See Dimension C.

The roof of Unit EM 3 butts into the brick party walls. It is 32'-0". See Dimension D.
DESIGN GROUP II
GENERAL REMARKS

DESIGN GROUP II contains a three-bedroom Town House for Enlisted Men, a similar Town House for Company Grade Officers, six Field Grade Officers' houses, two houses for Senior Officers, and two houses for General Officers. These houses have been designed for a Cold Climate, and most of them have basements.

SITE PLANNING

One element of the site planning shown for Design Group II deserves special emphasis. Many traditional urban row houses have a raised first floor, above an "English" basement, not only to provide a greater amount of light and air to the lower floor, but also to raise the first floor above the street and sidewalk level for greater privacy. Although the planning program, as well as the cost and area limitations of the greater part of military family housing, does not readily lend itself to that type of design, some effective means must be used to insure adequate privacy for each dwelling from the public areas in the front and rear of the house and from its neighbors on either side. A courtyard at the front of the house, entered from the public walk by a gate or door, surrounded by walls or well-constructed fences at a height sufficient to provide privacy without blocking out too much light and air from the court, (about 5' - 8" to 6' - 0" high), can answer this purpose well. It can provide an enclosed area for supervised play of small children or pets, a convenient combined construction for tool storage and trash removal and, most importantly, a small buffer zone of privacy between the public areas and the house itself. This form of total enclosure may not be necessary on the other side of the house, although the usefulness of a terrace or sitting area on the off-street side does depend upon adequate walls or fences between adjoining houses. It should be cautioned that these courtyards and walls or fences become a dominant feature of the exterior facades of the houses and must be of sound, permanent construction, attractive in appearance, and be a part of the basic design. On a steep or rugged site, such as the one illustrated, a multi-level or split-level plan might be developed to advantage.

The plans of Design Group II present a variety of unit plans which can be used to create a neighborhood of economy and grace. The elevations of these houses reflect the simple use of a few attractive, durable building materials which, in a large or small housing project, will look better and age better than an attempt to achieve variety by the use of a greater range of building materials.

These designs are based on a domestic, rather than an institutional scale. It is generally better to break up the facade to emphasize the individual unit. The designs are based on the use of good proportion, light and shadow, and appropriately scaled detail. The combination balcony-shade canopy is intended to improve the looks of the house by providing a proportioning device, a shadow and a bit of smaller scaled detail. It also protects the doors and openings below, and improves the privacy, usefulness, and apparent size of the rooms that open onto it.

Construction of these houses is indicated throughout as wood frame with wood, plywood or brick exterior veneer. This is done largely as a matter of convenience since the interior dimensions and areas can remain constant despite the use of various types of exterior materials shown as options on the plans and elevations. The method of construction selected for any particular project should be that which is most suitable and economical in its locality.
END ELEVATION

FRONT ELEVATION

REAR ELEVATION

SECTION

TYPICAL ELEVATIONS

TYPICAL GROUP SITING

TYPICAL GROUP SITING
DESIGN GROUP III

GENERAL REMARKS

Design Group III contains Town House units of three and four bedrooms for Enlisted Men and Company Grade Officers in Warm Climate zones.

SITE PLANNING

The designs of this Group were based on the following general objectives of site planning:

- Provide maximum separation of pedestrians from vehicular traffic, both within the housing area, from unit to unit, and between the housing area and the related base facilities.
- Eliminate automotive traffic from movement within housing development wherever possible, and facilitate vehicular traffic by designing a loop road for site and using cul-de-sac when feasible.
- Develop a grouping of living units with no more than twenty families occupying one cluster, to achieve individuality and identification.
- Group the several buildings in each cluster to relate to certain common facilities.
- Provide space in motor court for residents’ cars, and locate the cars as near to respective living units as feasible, screening the area with plant materials to minimize the visual impact of the parked cars.
- Encourage the increased use of related indoor and outdoor spaces by including essential privacy screening by means of plant materials or fences.
- Provide greenbelts and recreational areas common to the various housing clusters.

The site plan illustrates how clusters of town houses and single family dwellings fit into a total site design. The articulation of greenbelts and recreational areas accomplishes the two-sided objective of unifying the site elements and separating the housing clusters from each other. The units of Design Group III provide outdoor facilities for each unit which is in close proximity to common recreational areas.

UNIT PLANNING

These plans have been designed to accommodate the maximum flexibility in their adaptation to level through rather steep sloping sites. It should be noted that some of the plans that have been designed for a hillslope condition are adaptable to a level site. Although several variations in roof systems and finished materials have been indicated on the drawings, it is not the intention that all should be used in any given project. Unity can only be obtained by the consistent use of materials in one community.

The plans have been drawn assuming wood stud structural system, but other systems such as concrete block may be used in accordance with local conditions of availability and practice. It should be noted that in certain areas of earthquake hazard the stud system would be most practical. If concrete block (with all cells filled) is not used for party walls, double stud and sound insulation is imperative.

Under certain site plan conditions, the carport may be attached to the unit using the force of the entry court as the backwall of the carport. Clustered carport and motor court schemes provide maximum economy in project development. The parking courts should be forced so that they can provide an area for infants to play out-of-doors and under the mother’s supervision with no worry for the safety of the child.
Design Group IV contains a three-bedroom Town House for Enlisted Men, six Field Grade Officers’ houses, three houses for Senior Officers, and two houses for General Officers. These houses have been designed for a Warm Climate.

SITE PLANNING

To successfully accommodate an emphasis in outdoor living common in the temperate climate zone, clusters of individual living units are grouped around a large internal space. This central open area is readily accessible to all units and is used solely for recreation and pedestrian circulation. On the fringe of this space, yet sheltered between building clusters for greater protection and a more personal scale, are numerous tennis courts and the formal recreation facilities for Officers and Enlisted Men. Vehicular traffic — with the exception of a major artery separating Officers and Enlisted men — is restricted to secondary collector streets on the periphery of the site. In this arrangement, a complete separation of pedestrians and automobiles can be achieved, with a short and direct internal design for pedestrian use and a carefully restricted external pattern for automobiles and daily service.

The living unit clusters are comprised of sub-groups or neighborhoods of 18 to 22 row units; four to six duplexes, and two to three detached houses. All generally grouped around a common entry drive and parking court. The clusters are designed to provide a flexible, efficient sub-grouping with the maximum of variety between groups and the minimum number of intersections with the collector street. Advantages of such cluster groupings include:

- Economy through grouping of facilities, compact utilities, minimum paved areas and reduced driveways.
- Differentiation between fast circulation and slow terminal traffic; yet provision that every car entering the parking court from the collector street can easily turn around before re-entering the faster traffic flow.
- Off-street parking completely segregated from collector streets; and the consequent removal of living units from the hazards, sounds, and noises of a main traffic route.
- Breakdown of the monotonous row unit arrangement.
- Encouragement of personal identity through the identification with smaller sub-groups, resulting in greater community pride.
- Small garden areas that open to a larger, central recreation area, relating such sub-group to the remainder of the development.

In the more detailed placement of the housing units, a conscious effort was made to locate the four-bedroom units farther into the site, where the access to the open spaces is realized more readily. Duplexes and single units are arranged so that unobstructed views can be had in at least two different directions.

Further, it is suggested that utility mains (water, power, sewer) be located internally in the site, following the pedestrian pathways rather than the street pattern. This arrangement is considerably more efficient requiring much shorter utility service mains following, most likely, the natural slope of the terrain, and involving no inconvenience and costly destruction and patching of streets during maintenance.

UNIT PLANNING

The individual dwelling units were designed specifically for the temperate climates. With these warm and humid conditions, a greater volume of space often seems and feels much smaller than a similar space in a colder climate. When it is hot, it is the natural reaction to desire more space and a greater circulation of air. In addition, active, maverick, and living habits become less formal. With these facts in mind, the following planning devices were considered of great importance:

- Open planning, with the combination of related areas (i.e., kitchen-family, living-dining, etc.) to obtain a larger single space.
- Interplay of volumes with higher ceilings whenever feasible, allowing spaces to flow from one level to another.
- Use of generous glass areas to visually borrow space from the out-of-doors.
- Incorporation of terraces, gardens, and courts for outdoor living and entertaining.

In addition, two other design features were considered of great importance in the overall designs. One was the inclusion of a family or multi-purpose room where much of the clutter of household activity can be contained and the other was a distinct entry area (and the ability to circulate directly from it into the living area, kitchen-service area, or bedroom wing). The row houses are designed for maximum efficiency with minimum circulation. They are deep and narrow to reduce frontage, and entry to these units is from both the parking court and the rear garden. Garden walls and planting are important to insure the maximum privacy within a row house arrangement.

For the duplexes, the cost of the higher ceiling in the living room area is offset by the full use of the partially excavated lower levels. In all multi-level three bedroom units, similar bedroom arrangements are placed over similar dining-kitchen-family room units with the hope that this will encourage a certain amount of shop pre-fabrication. Also, it should be noted that certain elevations are interchangeable. The approach was to suggest a range of possible solutions rather than standardizing one particular design.

The Senior Grade and General Officers’ houses are designed to appear more spacious by the extension of wing walls and the incorporation of garden courts. In the major rooms, the ceilings are higher than the normal eight feet; and the bedrooms are arranged so that cross circulation is possible. In the General Officers’ houses, the master bedroom is separated from the other bedrooms for privacy; recognizing that in these instances, children will be older and would enjoy a certain amount of separation.