# STANDARDS

SECTION 5

# SPACE STANDARDS DEVELOPED FOR RANCHO PALOS VERDES

Prior to computing present and projected space requirements, it was necessary to develop realistic and workable space guidelines (or standards) appropriate for Rancho Palos Verdes city operations. The space requirements presented earlier in this volume resulted from applying these standards to the operational needs of each unit or department in the Rancho Palos Verdes organizational structure.

A space standard is defined as a specific square footage allocation for an operation, an item of equipment, or a functional area, to which is added a description of what functions can be performed in that area. Thus, for example, once the functions and activities of a person are known, it is possible to select a workstation and a square footage allowance that are appropriate for that person.

Standardization of guidelines is the preferred approach because sizes are therefore based directly on function and on operation. The guidelines themselves must be developed to allow for each contingency and type of operation to be encountered, and they must be applied carefully in each case. The purpose of this section is to present the standards developed by Prima Associates for the Rancho Palos Verdes civic center facilities. While this discussion is directed mainly to the designer, we have included additional information--especially definitions--which we feel will benefit the client.

## METHODOLOGY FOR DEVELOPING SPACE STANDARDS

### Identifying the Basic Space Elements

The first step in developing space standards is the listing of potential basic elements which can be used in office and other settings being studied. This list includes desks, credenzas, side chairs of various types, tables, files, and an extensive collection of other items. For non-office settings the list includes lockers, vehicle stalls of various types, and so on.

These were then clustered to develop more complex workstations, based on a review of the activities of city staff. Typical workstations were then identified, including:

- desk with credenza,
- desk with side chair,
- desk with credenza and side chair,
- drafting table with desk,
- etc.

Enclosed areas were also identified by clustering equipment in this way. We obtained such areas as:

- office with desk, back table, file, and two side chairs,
- office as above but with four side chairs,
- conference room with a table and eight chairs,
- conference room with a table, 16 chairs, and a small presentation room,
- etc.

Clearly, some of these standard elements and groupings are traditional spaces used in many applications, while others are unique to Rancho Palos Verdes needs. In each case, however, we considered what the city's needs were, on a space-by-space basis, by looking at current or projected operations and activities. Gathering the information for making these considerations is described in the report entitled Space Requirements Data Base.

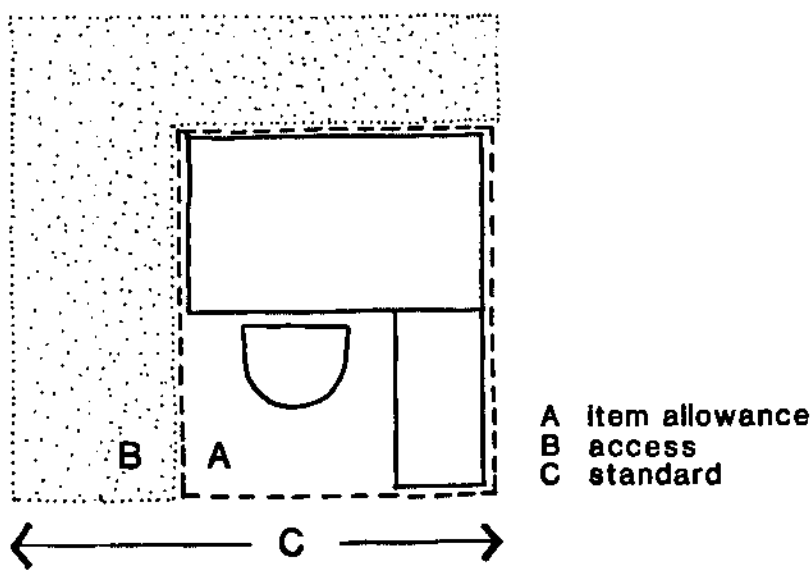
## Computing the Space Standard Size

Each item of furniture, piece of equipment, and workstation grouping of furniture was assigned an item allowance, which is the number of square feet occupied by that furniture or equipment. This is, in effect, the "footprint" of the minimum equipment required to perform a given task, including, for desks, a block of space for the user's chair. For offices, areas were expanded to a uniform multiple of space to simplify design, and this space is designated as the item allowance. Without this uniformity, there is greater chance that the designer will have trouble fitting blocks of space together. The office and room standards we have used are incremented in multiples of 60 sq.ft. (The single exception to this is a 150 sq.ft. office, which has been programmed in several instances at the request of the council.)

In some cases, such as private offices with a minimal interaction requirement with other functional areas, the item allowance is equivalent to the total space required for the activity. In other cases, such as workstations with a high frequency of interaction with other functional areas or which will be clustered with other workstations, an additional allowance for access is added to the item allowance.[1] This access allowance represents the space required by that station and its equipment for ease of movement between that station and another. Item allowance and access are then totaled for each functional element, and it is this number which is the space standard for that element.

As an example, Exhibit 5-1 shows an illustration of space computation for a clerical workstation (desk with typewriter return and chair). The desk and chair comprise the "item allowance" with an additional buffer space for "access." Taken together, we obtain the "space standard" for this workstation. It should be noted carefully that the access space ("B" in the exhibit) is not a rigid space, but may actually be distributed in the layout of the department. This is especially true if many workstations are clustered in one area.

EXHIBIT 5-1




[1] Access allowances are not needed in all cases. When it is not used, as for offices, it is assumed the item will front onto the main circulation paths in the unit.

## METHODOLOGY FOR DETERMINING FACILITY SIZE

### Applying Standards

From an analysis of the functional needs of each activity, we are able to assign an appropriate workstation to each employee. It must be noted that standards are applied uniformly, so that all personnel with the same needs are allotted the same amount of space. Similarly, we applied standards to other areas of the facility.

For example, in the copy room it was determined that we should provide for:

- alternative copier machines which can reduce images, collate, and copy two sides,
- storage for up to 40 cartons bulk paper supply,
- storage for toner and copier needs,
- two eight-foot tables for stacking copies,
- space for the person using the machine, one person collating, and one person contingency.

There is no appropriate copier available that does exactly these things, but there are several models that collate and reduce or collate and copy two sides. By comparing space needs and allowing for service access, we selected a standard that would accommodate a number of models (85 sq.ft.). To allow for paper, we applied our standard for a storage carton to ten cartons (stacked four high), resulting in 35 sq.ft. The copy machine toner and materials needs were estimated at 20 sq.ft. The standard for each eight-foot work table is 60 sq.ft., adding an additional 120 sq.ft. Finally, we added 14 percent access, obtaining 296 sq.ft. Raising this to the nearest multiple of 60 sq.ft. resulted in a space need of 300 sq.ft. for the copy room.

The result of this application of standards to each operational area is a tabulation of rooms, personnel, equipment needs, and all assigned spaces required in the facilities.

The total of the space that results from applying standards to the operations of a department is not yet the total departmental space need. To compute this, we must compute what we call "net square footage."

## Computing Net Square Footage

Net square footage is a poorly defined term, even though it is used often. It is intended to mean the space used by a department or unit, devoid of support and shared areas.[2] Thus, it will include all floor space occupied by offices, rooms, workstations, equipment, and circulation between these things, but excludes major shared corridors between departments, utilities or janitor closets, public restrooms, and the like. We include lobby, display, and receptionist space in our net footage, and an allowance for this appears on the appropriate data sheets on which space tabulations appear.

The standards discussed above, when applied to operations and totaled, do not yet account for (a) circulation between clusters of desks and files, etc., in the department, or for (b) any contingency for design variation. The following discussion describes how these needs are provided for.

The net space requirements for each department or unit are computed by taking the sum of the standardized needs and adding to them a factor of 10 percent for circulation, which represents the space required for movement between, for example, certain private offices or between separate clusters of open area workstations. An additional factor is added to account for layout variance, which is the amount of space required to account for non-rectilinear design or other features peculiar to a given plan or existing facility. The layout factor varies from two to eight percent depending on the specific situation:

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[2] The problems arise first because, even in a straightforward application, different designers define "shared" and "support" differently. Second, there are odd or unusual examples where consistent definitions are almost impossible to use, so that two persons looking at the same space may conclude differently as to whether that particular space is "net footage."

- a 2 percent factor is used for a one-story building generally of a rectilinear or basic design;

- a 4 percent layout factor is used for one- and two-story buildings, providing a modest allowance for design variation;

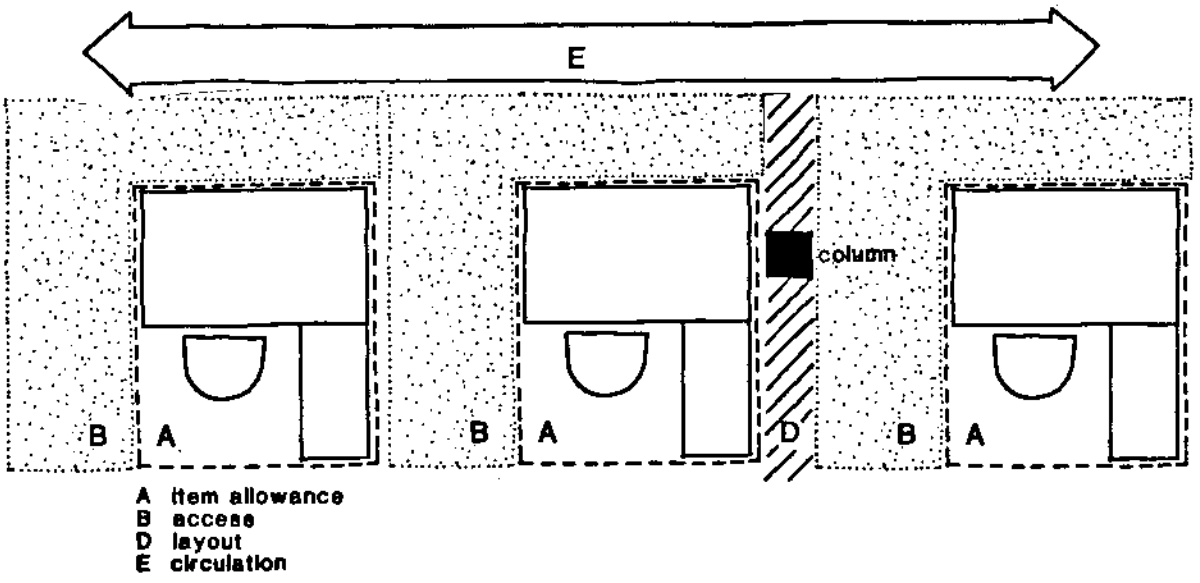
- A 6 percent layout factor is used for three-story and higher buildings, providing an allowance for design variation;

- an 8 percent layout factor is used for retrofitting new interiors to an existing, generally non-modular structure.

The layout factor used in any facility is dependent upon a specific evaluation of the needs and desires of the client and on the constraints within which the facility is being programmed.

Exhibit 5-2 illustrates these separate concepts: item space allowance, access, total standard, circulation, and layout. It shows series of workstations, showing an area for "circulation" (amounting to an average of ten percent of the station area in typical applications) and an extra need for "layout" contingency due, in this case, to the location of a building column. The designer may wish to make use of the layout space allowance in other ways as well, such as for turning certain equipment at angles or for other design variety.

EXHIBIT 5-2



For Rancho Palos Verdes, we have determined that a 4 percent layout factor is appropriate, to be added to the 10 percent circulation allowance. The net space requirements for each department or unit, then, are the sum of the space requirements for personnel and their activity areas as computed from the standards, plus 14 percent for circulation and layout.

## Computation of Gross Square Footage

"Gross square footage" is the total building size. In addition to the net footage, above, it includes such items as:

- the main circulation corridors connecting departments,
- stairwells,
- mechanical shafts for ducts, plumbing, power and the like,
- major wall thicknesses and the space required for structural elements (columns, for example),
- utility and janitorial closets,
- public restrooms, and
- mechanical areas for heat, water heaters, and the like.

In Rancho Palos Verdes, main circulation paths are now exterior to the building. As a result, whenever it rains people must go through the departmental circulation area to get from, say, Environmental Services to Public Works. This means, for example, that the city manager's office must be used as a passageway. To avoid this in the future, then, an appropriate allowance for this space must be made. If the building is developed as a single-story structure, stairwells can be eliminated (except to an attic or the roof), and other requirements are reduced. Stairwells, however, make up but a small part of the extra space needs.

The way we compute the gross square footage for city hall is as follows:

- To allow for all except the mechanical areas, we divide the total net square footage discussed above by the factor of 0.8. This number is called the "efficiency" of the building;[3] the lower this number is, the larger the building becomes for a given net square footage.

- To allow for the mechanical areas we use the rule of thumb which says that this space is typically about five percent of the total gross footage.

The allowance for maintenance buildings is less, and in some designs we need add nothing at all. This would be true, for example, in a vehicle parking garage. For council chambers we used a slightly different approach, programming a specific allowance for internal circulation and using a high efficiency factor (0.95) to allow for shafts, wall thickness, etc.

## TYPES OF STANDARDS DEVELOPED FOR RANCHO PALOS VERDES

The space standards which appear at the end of this section are divided into the following types:

Workstations

- Conventional Offices
- Conventional Open-Area Workstations
- System Furniture Workstations

Open-Area Support Spaces

- Public Counters
- Open-Area Equipment

Enclosed Support Areas

- Conference Rooms
- Other Rooms

Maintenance Facilities Components

Parking

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[3] Some people define efficiency as the ratio of net footage to gross footage <u>after</u> mechanical areas are added in.

## Workstations

A workstation is defined as a space element which is assigned to a person for use in performing regular operations or job functions. Workstations may be enclosed (private office), a "system" workstation, or in an open area (a grouping of desks or tables, for example). Typical copy or mail rooms, conference rooms, training rooms, etc. are considered non-workstations; in unusual cases a workstation may be incorporated in such a room (such as a desk for a mail clerk in a mail room), or an employee may have no individual workstation.

The definition of "system" furniture is elaborated below with a discussion of specific standards. Essentially, system furniture is an integrated unit of partitions, work surfaces, storage units, and (possibly) lighting and power. The principal feature is the integration of parts as a single unit and the use of partition surfaces for hanging elements of the workstation. It differs in appearance, concept, and application from traditional desks in the open and from private offices. Note that the use of free-standing partitions around open, conventional furniture is included in our conventional open area standards, and is not related in any material way to what is termed system furniture.

## Open Area Support Spaces

Open areas are distinguished by the variety of equipment contained there, the variety of functions which occur in adjacent areas not separated by partitions, and the circulation pattern of persons through the area to reach enclosed spaces or other areas. Open area support spaces include file banks, work tables, public counters, waiting areas, and the like.

## Enclosed Support Areas

Enclosed support spaces are standardized in the same manner as are enclosed workstations where the room size is based on space needs of the room contents. A support space is considered "enclosed" if the area is specifically surrounded by four walls. We have not programmed spaces for Rancho Palos Verdes that are called "enclosed" but which may have open sides. We have recommended, for example, that all conference rooms be fully enclosed for acoustic reasons. Of course, glass walls are possible, but acoustic transmission must be considered.

## Maintenance Facilities Components

Maintenance yards have particular needs which, although based on similar principles as the categories described above, require specialized standards. Such standards have been developed for shops, maintenance bays, storage areas, employee facilities, and office areas. In addition, provision is made for bulk storage areas, whether covered or not, and for specialty areas such as fuel islands.

## Parking

Parking spaces are also standardized, with special identified needs for sedan-sized vehicles, for mini-vehicles, and for trucks, tractors, and special equipment. Not all such standards are appropriate in Rancho Palos Verdes, but we include them in the standards tabulations for completeness.

## CONVENTIONAL OFFICES

A conventional office is defined here as a room with partitions that are full ceiling height and which has a door. The room needs a sense of personal privacy to it, and has been assigned at most to two people. In that case, we refer to it as a "shared private office" or "semi-private office."

In assigning offices for personnel, consideration must be given to the nature of the job function, frequency of office conferences, degree of privacy required, and prestige of the position. In these areas, it has been assumed that the furniture is functionally appropriate and arranged for the convenience of the person using it. In determining the total space required for these areas, it is assumed that access will be directly off major circulation and therefore no access factor has been added to the item allowance for the office. The space standard measures the office from center-line of the partition to the opposing center-line.

### Sizing Offices

Offices are sized based on the equipment they contain, and the necessary circulation inside for using the space. We have in most cases used sizes in multiples of 60 sq.ft. to uniformize layout and also to allow some flexibility in furniture choices. The 60-square-foot multiple is consistent with or near to several building module options.[4] As noted earlier, the single exception to this is a 150 sq.ft. office which has been programmed in several instances at the request of the council.

### Assigning Offices

Exhibit 5-3 summarizes the functional elements, size, and assignments made for private offices. Illustrations of these offices which show typical furnishings follow the exhibit.

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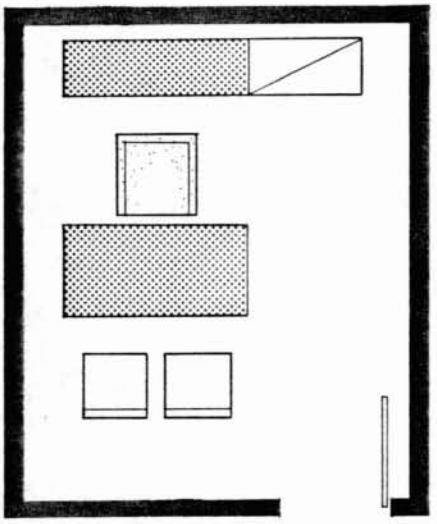
[4] A "building module" is a grid on which structural elements (such as columns) are placed. Not all buildings are modular, especially single story. If they are modular, it is best to size rooms so that partitions fall along column lines, etc.

EXHIBIT 5-3

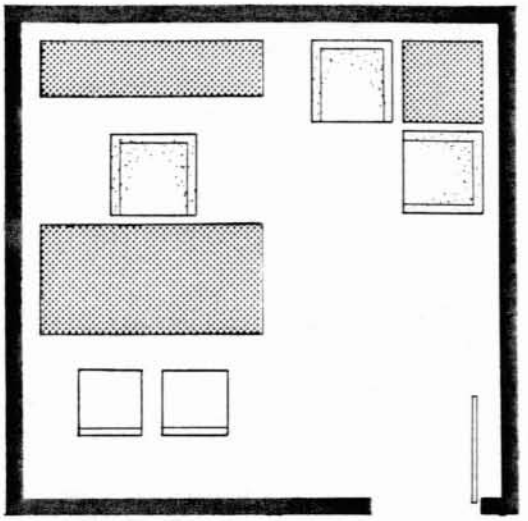
CONVENTIONAL PRIVATE OFFICE STANDARDS

| POSITION ASSIGNED | TYPICAL FURNISHINGS AND FUNCTION | SPACE STANDARD | | |
|---|---|---|---|---|
| | | STATION ALLOWANCE | ACCESS | TOTAL |
| Council (share) | Desk and chair, credenza or back table, file, two side chairs. | 120 | - | 120 |
| City Manager | Desk and chair; credenza, 2 guest chairs at desk, side seating for 6. May substitute a small conference table for side seating. | 300 | - | 300 |
| Department Head, and others requiring 4 guest chairs | Desk and chair, credenza or back table, seating for up to 4 others. | 180 | - | 180 |
| Person needing a private office and some guest seating | Desk and chair, credenza or back table, file, seating for two others. | 150 | - | 150 |
| Person needing a private office with guest seating, but not expected to occupy the office on a full-time basis | Desk and chair, credenza or back table, seating for two others. | 120 | - | 120 |

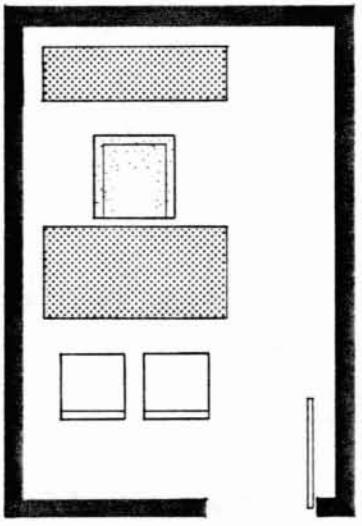
# Private Offices



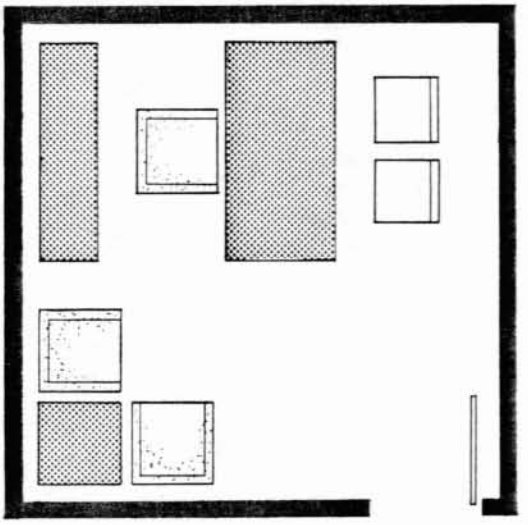
150 sq. ft.



180 sq. ft.



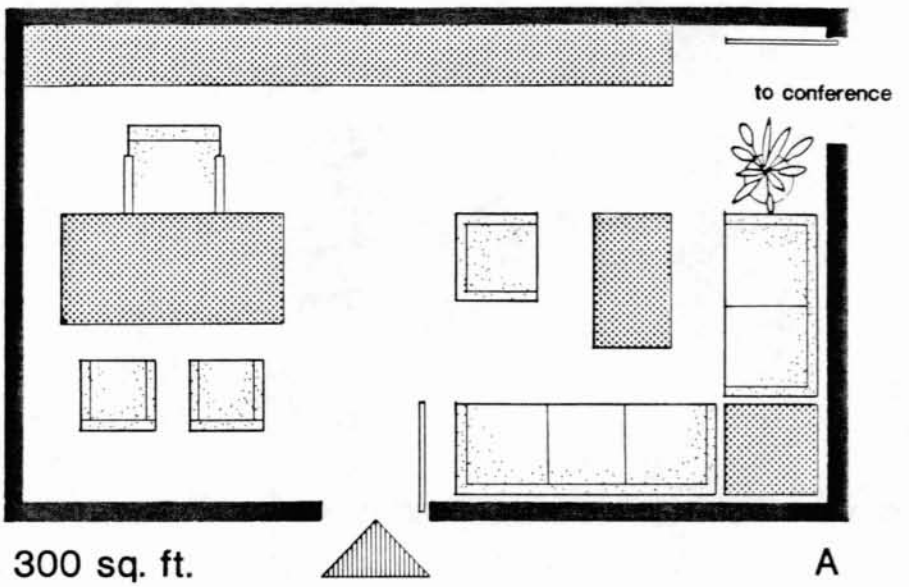
120 sq. ft.

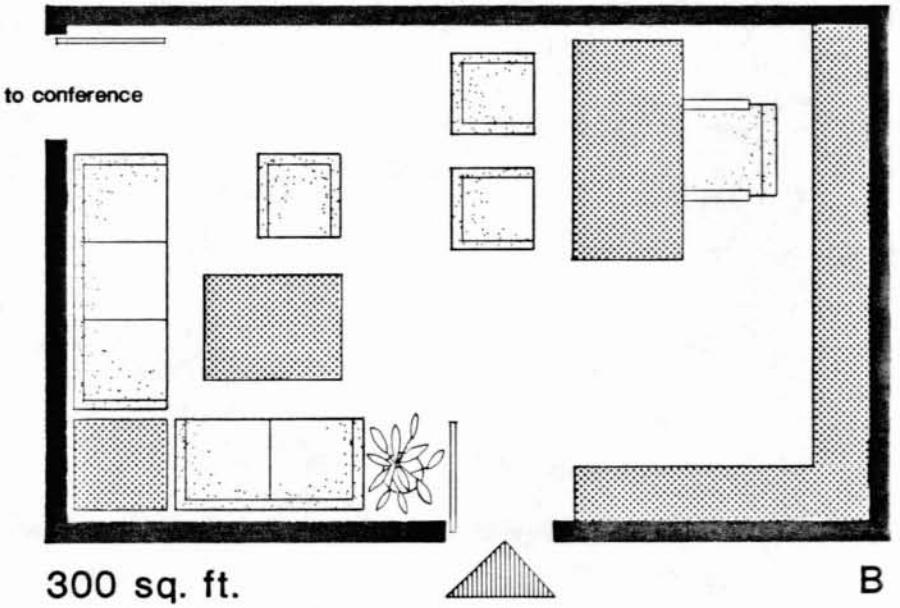


180 sq. ft.

The 180 sq.ft. office is shown with two alternative furniture layouts. The 150 sq.ft. office, which breaks with the 60 sq.ft. incremental approach, is included to show an intermediate size office, as requested by the council.

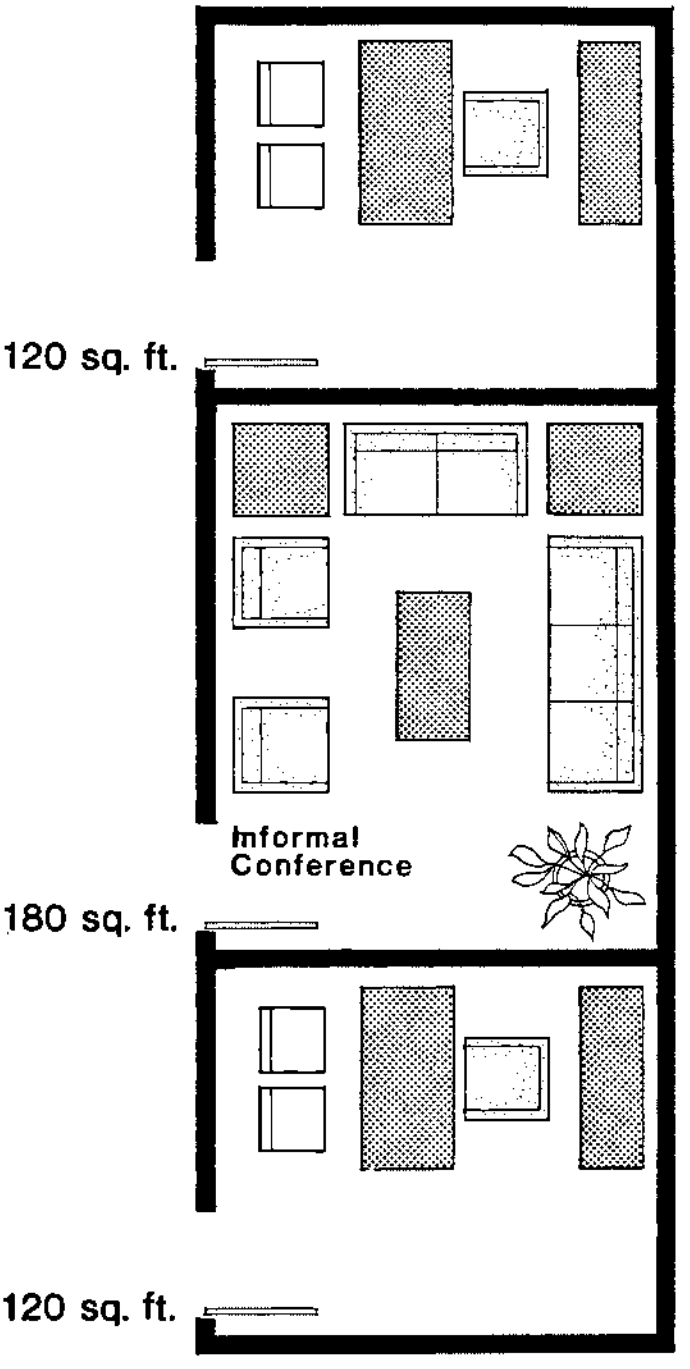
# City Manager's Office




The city manager's office is shown with two alternative furniture layouts.

# Council Offices and Conference Room




This illustration shows a possible layout for the two council offices and shared informal conference.

## CONVENTIONAL OPEN AREA WORKSTATIONS

Open areas are distinguished by several features including the variety of equipment there, the scale of the area or number of users, and the fact that passage through the area is often needed to reach offices and rooms. Open area workstations can include all the elements placed in offices, but are usually smaller clusters of furniture such as (a) a desk and chair, (b) a desk, user chair, and side chair, (c) a desk, chair, and credenza, and so on.

Free-standing partitions may be used between open area workstations, but this must be done with care so that access to file banks, public counters, and other shared equipment is not made dysfunctional in the area. The purpose of free-standing partitions is generally to create more isolation and to reduce sound transmission. While careful layout may result in appropriate places for using such partitions, it is our experience that they are often used as a substitute for sound design decisions as to proper placement of noise-producers (e.g., typewriters) in the open area. Further, there are many inferior quality partitions on the market and great care must be exercised in identifying acceptable ones. Unless they provide proper acoustical control their use will greatly impede staff productivity.

### Sizing Workstations

Open area workstations usually occur in clusters, and we include an access allowance in our computation of the workstation standard. The total of the equipment areas ("item allowance" in the table below) and the access is equal to the space standard. Since open areas are characterized by passage through them to reach offices and rooms, the circulation allowance (estimated at 14 percent of the program net for the department) will be provided in these open areas.

### Assigning Conventional Open Area Workstations

Exhibit 5-4 summarizes the elements, size, and typical assignments made for conventional open area workstations. Additional equipment (such as files) must be added separately. Illustrations of these areas follow the exhibit.

EXHIBIT 5-4

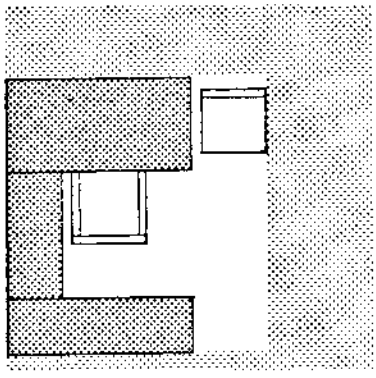
CONVENTIONAL OPEN AREA WORKSTATION STANDARDS

| SYMBOL USED | POSITION ASSIGNED | TYPICAL FURNISHINGS | STANDARD | | |
|---|---|---|---|---|---|
| | | | ITEM ALLOWANCE | ACCESS | TOTAL |
| cws-ref-sch | Staff not needing special privacy but requiring extra work surface and visitor space | Desk and chair, credenza, file, and side chair | 56 | 44 | 100 |
| cws-ref | Staff (mainly clerical) needing extra work surface or storage | Desk and chair, and credenza or lateral file | 40 | 40 | 80 |
| cws-sch | Staff needing visitor space | Desk and chair, guest chair | 42 | 33 | 75 |
| cws | Clerical or other staff needing only one surface | Desk and chair, or table and chair | 29 | 31 | 60 |
| dws-ref-sch | Staff needing a complete drafting station and guest seating | Drafting table (6') and chair, 6-foot back table or desk, and side chair | 81 | 40 | 121 |
| dws-ref | Staff needing a drafting table and a back table. This is a complete drafting station | Drafting table (6') and chair, and 6-foot back table or desk | 62 | 37 | 99 |

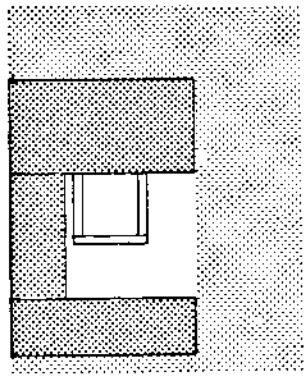
EXHIBIT 5-4 (cont'd)
Conventional Open Area Workstation Standards

| SYMBOL USED | POSITION ASSIGNED | TYPICAL FURNISHINGS | STANDARD | | |
|---|---|---|---|---|---|
| | | | ITEM ALLOWANCE | ACCESS | TOTAL |
| dws | Staff needing a drafting table only | Drafting table (6') and chair | 42 | 30 | 72 |
| counter station | A desk built into a counter, used for a cashier or counter clerk | Counter section (4-1/2'), chair, and space for visitor to stand or sit | 36 | 24 | 60 |

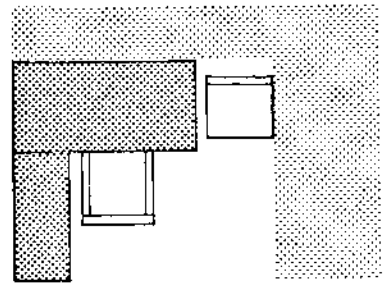
# Conventional Workstations



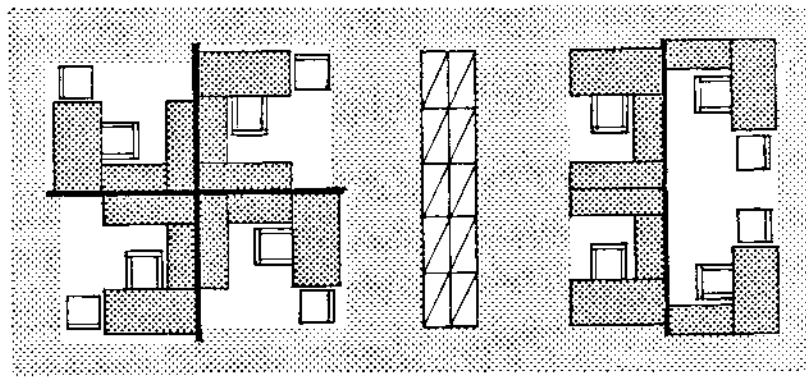
cws-ref-sch
100 sq. ft.



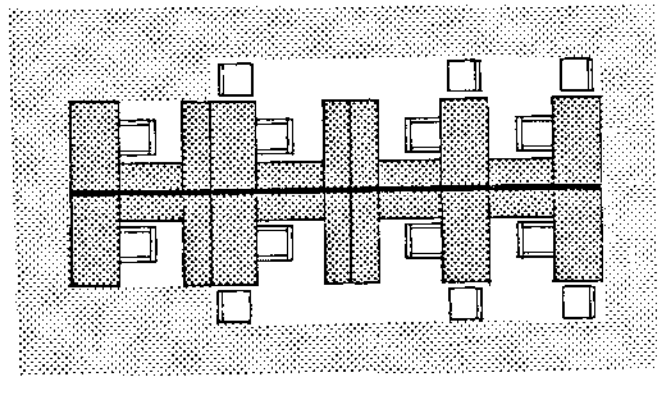
cws-ref
80 sq. ft.



cws-sch
75 sq. ft.



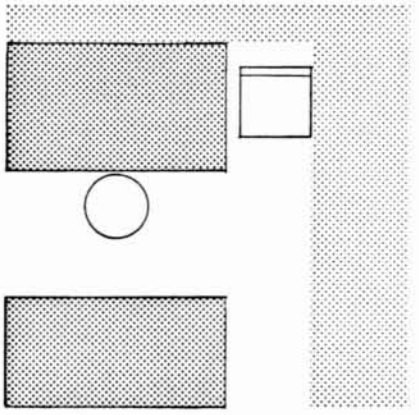
Sample Layout



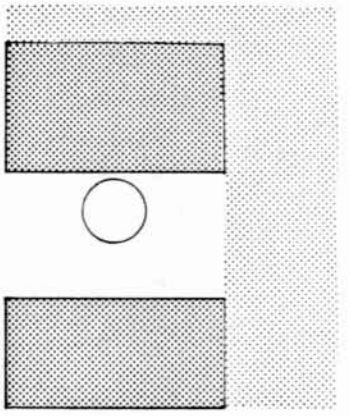
Sample Layout

The sample layouts are included to show the effects of combinations of standards on the distribution of access space.

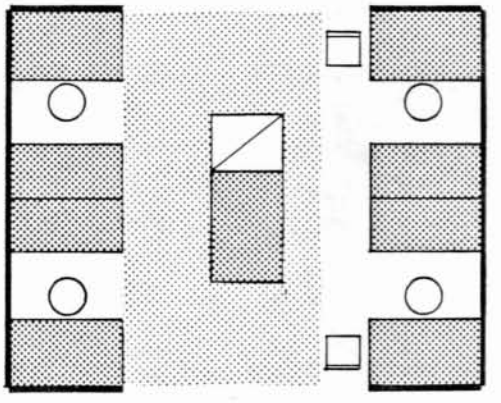
# Conventional Workstations



dws-ref-sch
121 sq. ft.



dws-ref
99 sq. ft.



Sample Layout

## SYSTEM FURNITURE WORKSTATIONS

System furniture workstations are integrated units of partitions, work surfaces, storage elements, and (possibly) power and lighting. They are characterized, in part, by the hanging of storage or work surfaces on the partitions themselves, and therefore in a given square footage area the system furniture will provide more surface and storage than will conventional furniture. It is important to note that system furniture is in no way substituted by conventional furniture around which free-standing partitions are placed, and the inherent values of system furniture are simply unavailable by that approach.

### Factors to Consider in Selecting System Furniture

System furniture does not save very much space in city offices because the basic space needs for guests and primary work surfaces are comparable in either case. Some savings occur, however, because some conventional open stations need greater distance between them. The system alternative also provides for more storage, since credenzas, bookcases, files, etc., can be built in and hung over other areas.

There are several factors to be considered in selecting system furniture design concepts for a particular unit. The most important of these are:

- cost of installation and relocation;
- operating costs;
- privacy implications;
- group dynamics and interactions;
- movement of people and materials;
- design "look" or ambiance.

In any event, each unit must be studied individually, and some areas within a single unit may be more suited to system furniture than others. There are also many design approaches that mix space use strategies, and some nominal open plans may actually provide a high degree of enclosure. In fact, a "total" system approach is not feasible in the city hall, because city operations require greater isolation and privacy for some areas. Therefore, the application of system concepts will occur in a "mixed system and conventional" space use plan.

Costs

Cost considerations are affected by four primary factors: (1) system furniture requires high initial cost, (2) it is typically easy to relocate and rearrange (depends on manufacturer as to degree, however), (3) energy consumption can be reduced if it is known in advance that task lighting[5] will be used, and (4) different systems are designed for different purposes, and some emphasize low maintenance costs or other features.

While initial costs are high, there are discounts available that reduce the first purchase unit price. This is at the expense of later purchase additions usually, and if slow growth is anticipated, then a larger initial purchase may be cheaper in the long run. Once purchased, it is almost impossible to change concepts, and consistent systems are recommended to allow interchangeable parts. Therefore, the high expense of additions must be considered.

If reorganizations and mixed growth rates are expected, the easy relocation of systems furniture can be expressed as dollars saved over moving fixed partitions. One danger, however, is the risk of overcrowding these movable units together over the years, destroying the assets of this approach.

The decision to use system furniture must include a decision as to type or manufacturer as well. This is because power, lighting, and air handling all must be integrated with these decisions and they affect construction and design. Sound absorbancy, whether lighting is to be supplemented or replaced, how power outlets are accessed, and density of layout are all interrelated with cost decisions. Maintenance costs are also important considerations, since some systems "wear" better than others, and some provide a slight space between the partition and the floor to assist with janitorial services.

Above all, the most important caveat is this: the system selected must be of high quality, to assure proper acoustics, rigidity of partitions and surfaces, durability, flexibility, and convenience. To fail in this would be a costly mistake.

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[5] Task lighting means that work surfaces are directly illuminated, thereby reducing general room lighting needs. Very sophisticated technology has been developed in this area.

## Privacy and Group Dynamics

The fear that system stations do not provide privacy is unfounded. Of course, some offices must be conventional private rooms due to confidentiality needs (the Director of Administrative Services, dealing with city finance and budgets, is an example). Also, appropriate conference rooms (enclosed) must be provided for others to use when confidential matters must be discussed or when group discussions are likely to be disruptive. Still, if system furniture is designed and selected properly, typewriters will be adjacent to acoustic baffles, high and low partitions will be used in appropriate locations, and system size and separation will enhance the privacy of the station as well as the natural acoustic absorbancy of partition materials.

Counter-balancing privacy is the need for appropriate group dynamics and interaction. The system chosen should be flexible enough to allow relocation of workstations into task force work groups, if this is the desire of the city. Relocation is not a trivial matter of course, but some systems are easier than others. Also, some systems allow for greater choice in surface location, partition height, and storage elements; thus, the needs for interaction are served in different ways by different systems.

## Movement of People and Materials

The frequent movement of paper, staff, visitors, and equipment may make the selection of system furniture more attractive depending upon the interactive nature of these things. Postage and mail handling stations, for example, are available from some manufacturers. If security is needed, then the system approach may be less desirable. If a full-time mail clerk is contemplated (we did not plan for this in Rancho Palos Verdes) then a system station could provide for part-time typing, say, or other desk work in addition to mail sorting and delivery.

## Design Ambiance

The design "look" of the space is affected by the choice of conventional or system furniture. The density of the overall office must be more carefully controlled in using open systems furniture, or else problems develop with heat, air conditioning, lighting, noise and acoustic failure, and a generally "cluttered" look. Conventional plans--for offices anyway--more or less are controlled by virtue

of the fixed walls. Conventional open areas can suffer from the same problems as system furniture if overcrowding is allowed or the improper use of free-standing panels is permitted, but our programming of space needs is based on standards appropriate to each use.

## Determining Standard Sizes

Our standards are not based on any one manufacturer's system but rather are the result of four major national systems now used widely. These four were deliberately selected because (a) they are in wide acceptance and (b) they represent a range of approaches to system design.[6] The "station allowance" was obtained by taking the inside space dimensions which accept any one of the four manufacturers stations for a given (or comparable) furniture complement. "Access" was determined by allowing a small access space between stations if they are located in a cluster; the amount is based on actual test layouts. The total of the station allowance and the access is the space standard.

## Assignment of System Furniture Workstations

System workstations can be used to replace certain offices, clerical areas, and so on. Exhibit 5-5 presents the system workstation standards developed for this report. Illustrations of selected system workstations follow the exhibit.

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[6] For example, one of the four is Knoll, which has work surfaces that are similar to conventional furniture, and more freestanding parts than other systems. Another is Herman Miller, which is a more highly integrated system with "built-in" qualities and a greater variety of components that allows for more variation in workstation design. Also, each of these deal with panel connections in different ways, resulting in alternative station dimensions.

EXHIBIT 5-5

SYSTEM WORKSTATION STANDARDS

| SYMBOL USED | TYPE OF STATION OR POSITION SUGGESTED | TYPICAL FURNISHINGS | SPACE STANDARD | | |
|---|---|---|---|---|---|
| | | | STATION ALLOWANCE[a] | ACCESS | TOTAL |
| ENO170 | Office type; intermediate conference | Desk unit (hung) and chair, reference surface, substantial wall-hung storage, 3' round or 6'x3' table, 3 or 4 side chairs. May substitute drafting surfaces. | 170 | - | 170 |
| ENO130 | Office type; small conference | Desk unit (hung) and chair, reference surface, wall-hung storage, 3' round conference table, 2 or 3 side chairs. May substitute drafting surface, etc. | 130 | - | 130 |
| ENO100 | Office type station | Table or desk and chair, wall-hung reference or work surface, wall-hung storage, two side chairs. May substitute drafting surface, etc. | 100 | - | 100 |
| END110 | Drafting--with guest | Drafting table and chair, reference table or credenza, side chair, wall-hung storage elements. | 80 | 30 | 110 |

[a] Standards are rounded up from a survey of several manufacturers' systems; thus, some systems may be more efficient than others, and the standards here are accurate approximations.

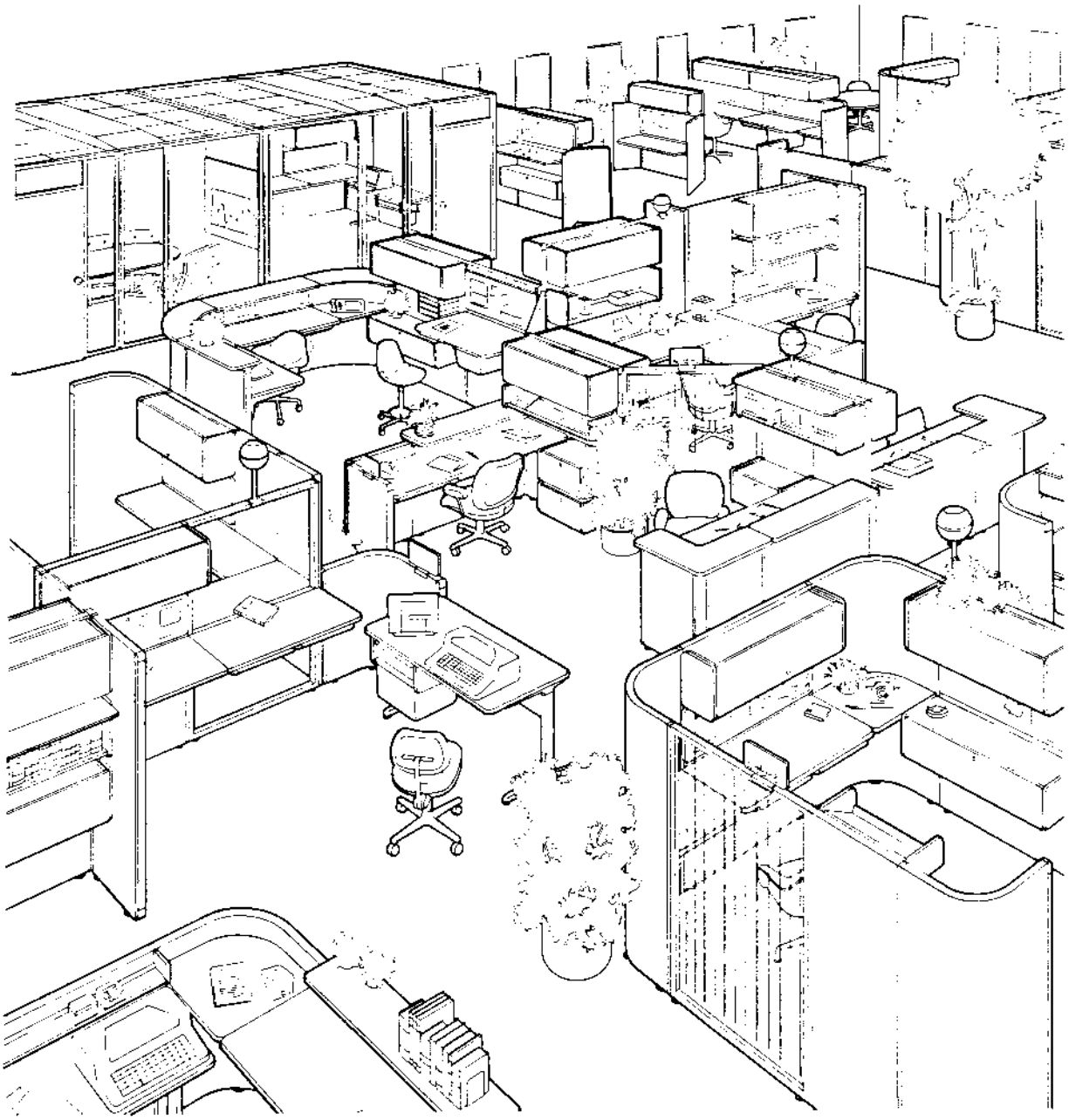
EXHIBIT 5-5 (cont'd)

System Workstations Standards

| SYMBOL USED | TYPE OF STATION OR POSITION SUGGESTED | TYPICAL FURNISHINGS | SPACE STANDARD | | |
|---|---|---|---|---|---|
| | | | STATION ALLOWANCE[a] | ACCESS | TOTAL |
| EN100 | Extra surface station with guest chair | Desk unit (6') and chair, reference surface (or credenza), side chair, wall-hung storage. | 73 | 27 | 100 |
| EN75 | Single surface station with guest chair | Desk unit (6') and chair, wall-hung storage, and side chair. | 53 | 22 | 75 |
| EN75 | Extra surface station without guest chair | Desk unit (6') and chair, reference surface or credenza, and wall-hung storage. | 53 | 22 | 75 |
| EN65 | Single surface station | 6-foot unit and chair, wall-hung storage. | 42 | 23 | 65 |
| EN45 | 5-Foot surface station | 5-foot desk unit and chair, wall-hung storage. | 25 | 20 | 45 |
| END85 | Drafting station | Drafting table and chair, reference surface or credenza, wall-hung storage elements. | 56 | 29 | 85 |

[a] Standards are rounded up from a survey of several manufacturers' systems; thus, some systems may be more efficient than others, and the standards here are accurate approximations.

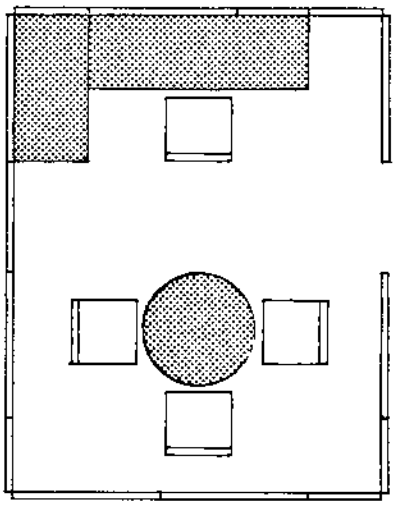
# System Furniture



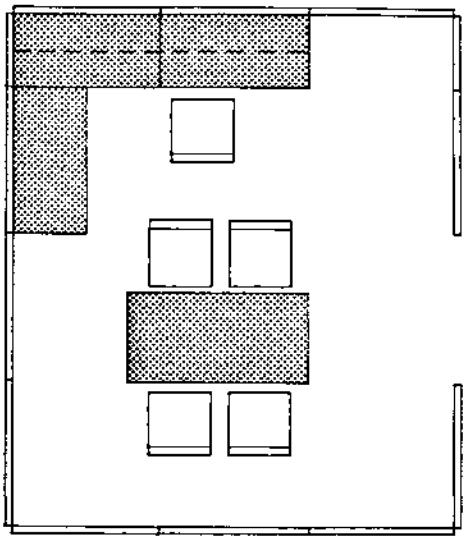
Source: Herman Miller, Inc.
Reprinted with Permission

This illustration of one manufacturer's system (Herman Miller's Action Office) shows the interlocking characteristics of system furniture, and the use of vertical surfaces to support storage and other equipment.

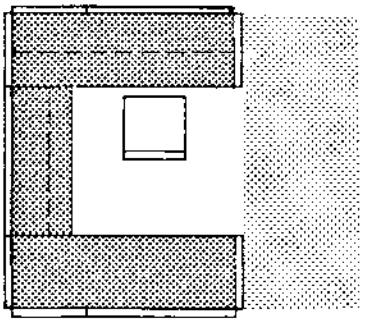
# System Workstations



ENO 130
130 sq. ft.



ENO 170
170 sq. ft.



EN 75 (ref)
75 sq. ft.

## PUBLIC COUNTERS AND OPEN SEATING/WAITING

Space allocated to public counters includes the area required for the counter, a work space behind the counter, access to the work space, and public space in front of the counter. Each counter "station" is figured as 60 sq.ft., allowing a counter section length of about four and one-half feet. Accordingly, two counter "stations" provide for nine feet of counter length, at a standard allowance of 120 sq.ft., and so on. For a seated-height counter, a "station" will accommodate one patron. For traditional counters, two "stations" will serve three patrons in typical applications, but when substantial papers or plans are involved, then a station serves one patron only.

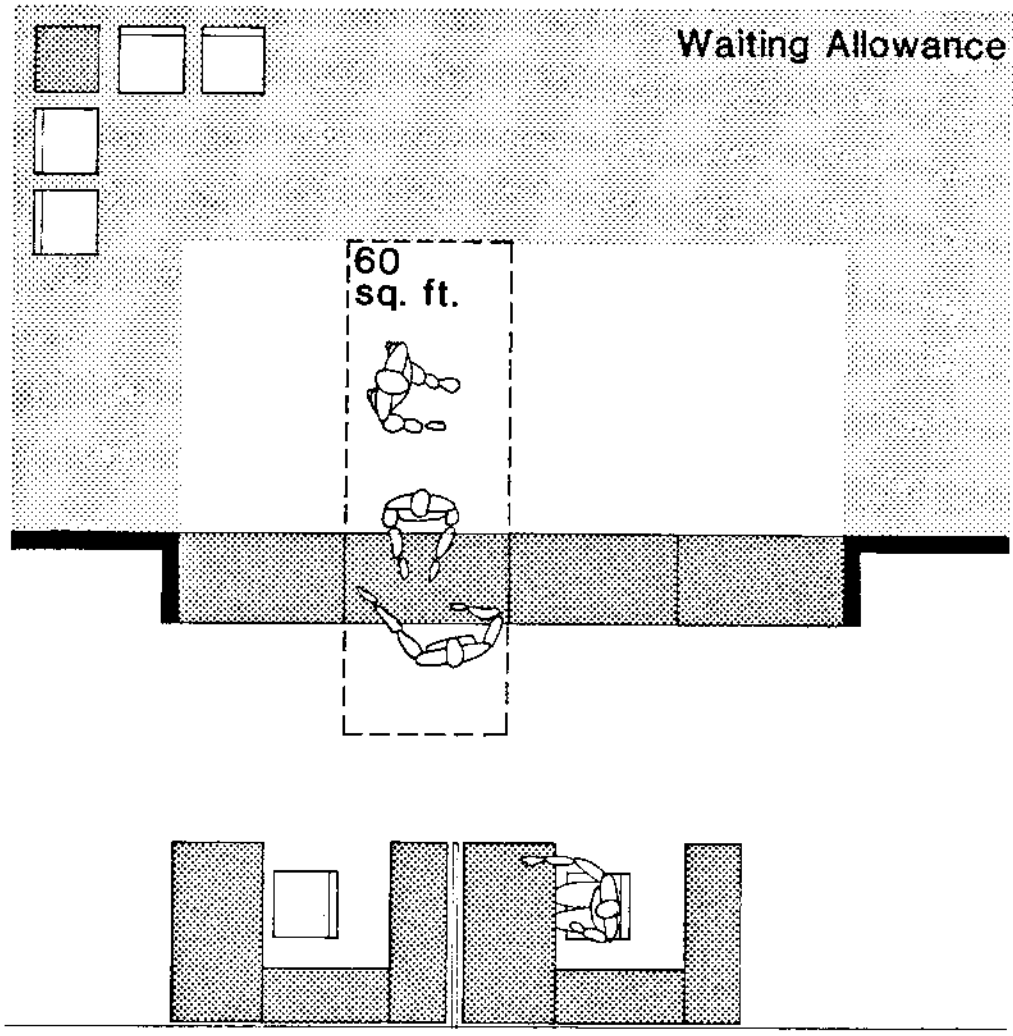
Whenever extra reception or waiting space is required, we have added this separately. In doing so, however, we have been careful to add multiples of 60 sq.ft. in proportion to the counter length (number of "stations") for layout. A 60-square-foot waiting area allows for three chairs in a row (plus front access) or two chairs and a small table; four chairs (at right angles) with a corner table require 100 to 120 sq.ft., depending on access needs. Exhibit 5-6 summarizes these standards. Illustrations follow the exhibit.

EXHIBIT 5-6

PUBLIC COUNTER AND WAITING AREA STANDARDS

| | | STANDARD | | |
|---|---|---|---|---|
| ITEM | DESCRIPTION | ITEM ALLOWANCE | ACCESS | TOTAL |
| Counter | 9-foot length (2-station) | 72 | 48 | 120 |
| Counter | 12-1/2-foot length (3-station) | 108 | 72 | 180 |
| Counter | 18-foot length (4-station) | 144 | 96 | 240 |
| Waiting | 2 or 3 chairs | 30 | 30 | 60 |
| Waiting | 4 chairs in lounge arrangement | 80 | 40 | 120 |
| Waiting | Additional waiting or standing area, per counter station | 60 | - | 60 |

# Public Counters




This illustration shows a sample layout, with 4 counter stations, a waiting area allowance of 240 sq.ft., and adjacent workstations.

OPEN AREA EQUIPMENT

There are three primary considerations in determining the space requirements for a particular piece of equipment: (1) the area occupied solely by the equipment item; (2) the space required for the equipment user or operator; and (3) the need for access.

Exhibit 5-7 outlines the equipment dimensions and square footage allocations for frequently used items. The total space requirement of each piece of equipment of this nature is determined by increasing the actual physical area of equipment to allow for access. This factor has been determined from previous experience in developing physical layouts for similar facilities. Space for nonstandard items and specialized equipment is calculated on an individual item basis.

EXHIBIT 5-7

SQUARE FOOTAGE ASSIGNED TO
STANDARD UNIT EQUIPMENT

| Item | Standard Size | STANDARD Area Required | Access | Total |
|---|---|---|---|---|
| Bookcase | 36"x12" | 3 | 7 | 10 |
| Card File | 18"x28" | 4 | 6 | 10 |
| Coat Rack | 24"x48" | 8 | 11 | 19 |
| File Cabinet | 18"x28" | 4 | 6 | 10 |
| Horizontal Plan File | 41"x29" | 8 | 16 | 22 |
| | 47"x35" | 12 | 19 | 31 |
| | 54"x42" | 15 | 27 | 42 |
| Horizontal Roll Plan File | 16"x44" | 4 | 6 | 10 |
| | 16"x56" | 6 | 8 | 14 |
| Lateral File | 48"x18" | 6 | 11 | 17 |
| Library Shelving | 36"x12" | 3 | 9 | 12 |
| Movable Stand | 12"x24" | 2 | 4 | 6 |
| | 24"x36" | 6 | 10 | 16 |
| Storage Cabinet | 36"x18" | 5 | 7 | 12 |
| Shelving | 36"x12" | 3 | 5 | 8 |
| | 36"x18" | 5 | 7 | 12 |
| | 36"x24" | 6 | 10 | 16 |
| Stick Plan File | 42"x24" | 7 | 12 | 19 |
| Table | 36"x24" | 6 | 10 | 16 |
| | 60"x30" | 12 | 21 | 33 |
| | 72"x36" | 18 | 30 | 48 |
| | 96"x30" | 20 | 33 | 53 |
| Vertical Roll Plan File | 18"x18" | 3 | 3 | 6 |
| Roller Shelf Unit | 20"x14" | 2 | 5 | 7 |
| | 34"x29" | 7 | 11 | 18 |
| | 72"x38" | 19 | 31 | 50 |
| | 72"x46" | 23 | 38 | 61 |

## CONFERENCE ROOMS

### Determining Need

The method for determining the need for and capacity of conference rooms is described in the report entitled Space Requirements Data Base. Essentially, it is to determine the number and type of meetings held by various units, the frequency and duration of such meetings, the number of persons attending, and the location and function of the department or unit which calls these meetings. Shared use potential is also studied, and compatible functions of the sharing departments is important to the success of this shared use, avoiding scheduling conflicts, and providing for the correct display or presentation space and equipment.

### Allocation of Size

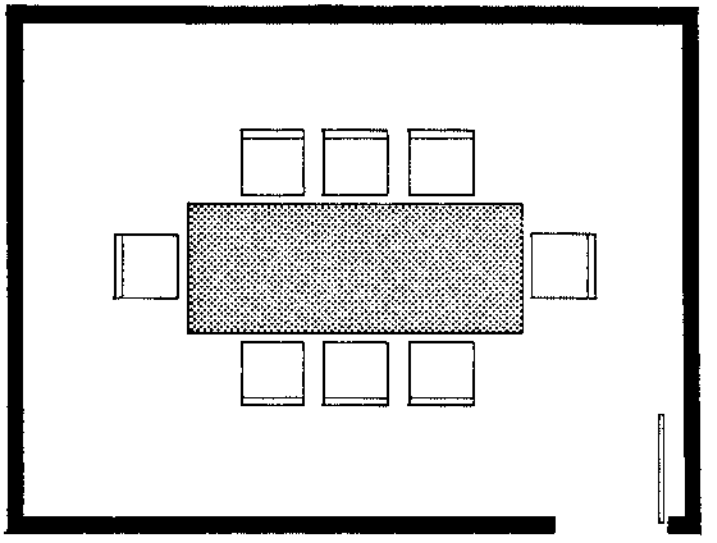
The size of conference rooms depends upon (a) the number of persons seated at the table, (b) the size of the table (e.g., to accommodate plans or other bulky items), (c) the possible requirement for spectators seated away from the table, and (d) presentation or display space. The latter may include such needs as a projector area at the back of the room as well as a screen and presentation area, with podium, at the front. The standards we have used in this study are summarized in Exhibit 5-8. Illustrations of these areas follow the exhibit.

EXHIBIT 5-8

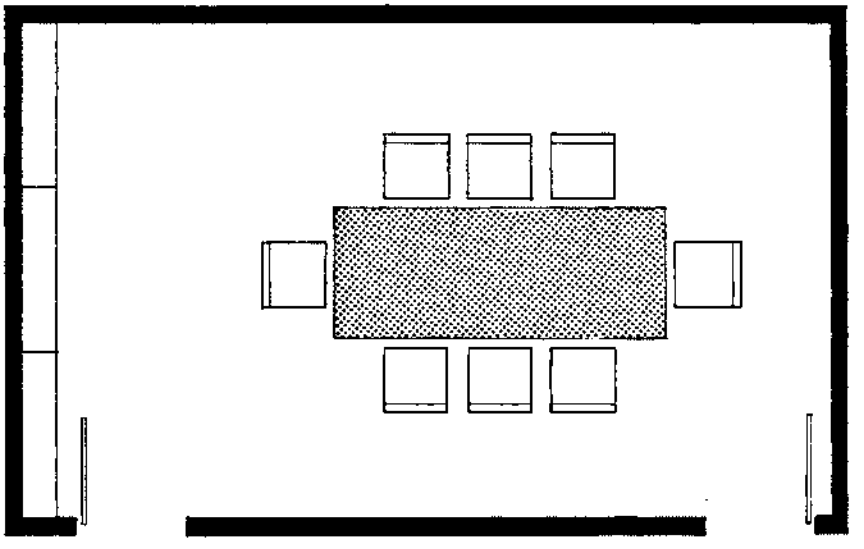
CONFERENCE AND MEETING ROOM STANDARDS

| TYPE | TYPICAL FUNCTION AND FURNISHINGS | SPACE STANDARD | | |
|---|---|---|---|---|
| | | ITEM ALLOWANCE | ACCESS | STANDARD |
| 6-person conference | Table, 6 chairs, possible writing surface on wall. | 180 | - | 180 |
| 6-person conference and training room | Modular tables, 6 chairs, possible writing surface on wall. | 240 | - | 240 |
| 8-person conference with large table | Large table (up to 9 ft.), 8 chairs, possible tackboards or writing surface. Table can seat 10, but crowded. | 240 | - | 240 |
| 8-person conference with presentation space or bookcases | Table, 8 chairs, two bookcases (may be full height), and space for presentations. May seat 10 persons without presentation area. | 300 | - | 300 |
| 16-person conference with presentation space | Table, 16 chairs, presentation space. Must have screen, writing surface, tackboards. | 420 | - | 420 |
| 10-person briefing room (public safety) | 10 chairs with writing surface and presentation area. Must have tackboards, writing board. | 240 | - | 240 |

# Conference Rooms



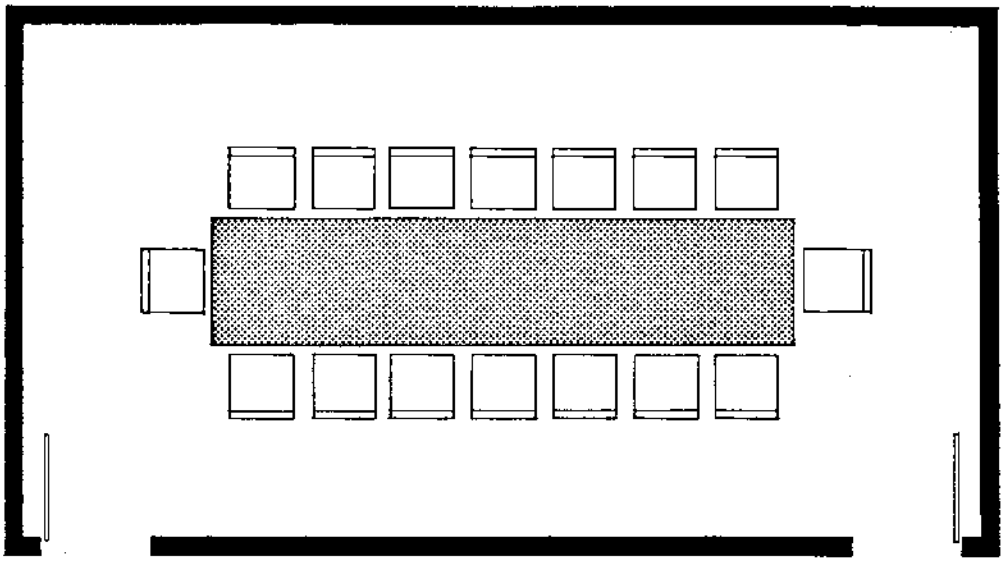
240 sq. ft. 8 Persons



300 sq. ft. 8 Persons

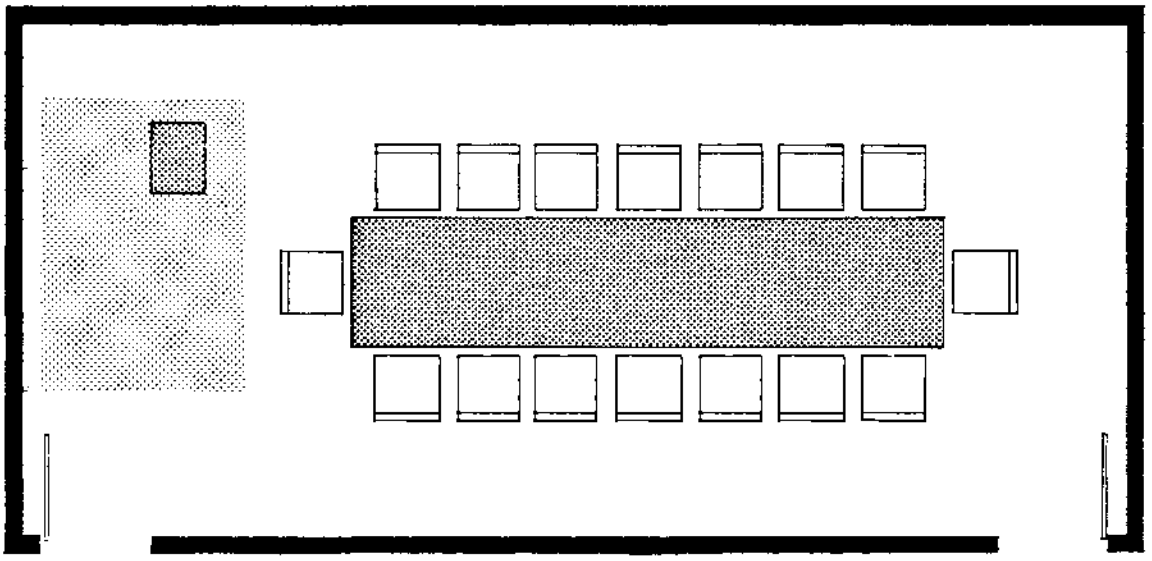
The 300 sq.ft. conference room for 8 persons allows for built-in library shelving at one end.

# Conference Rooms



360 sq. ft.

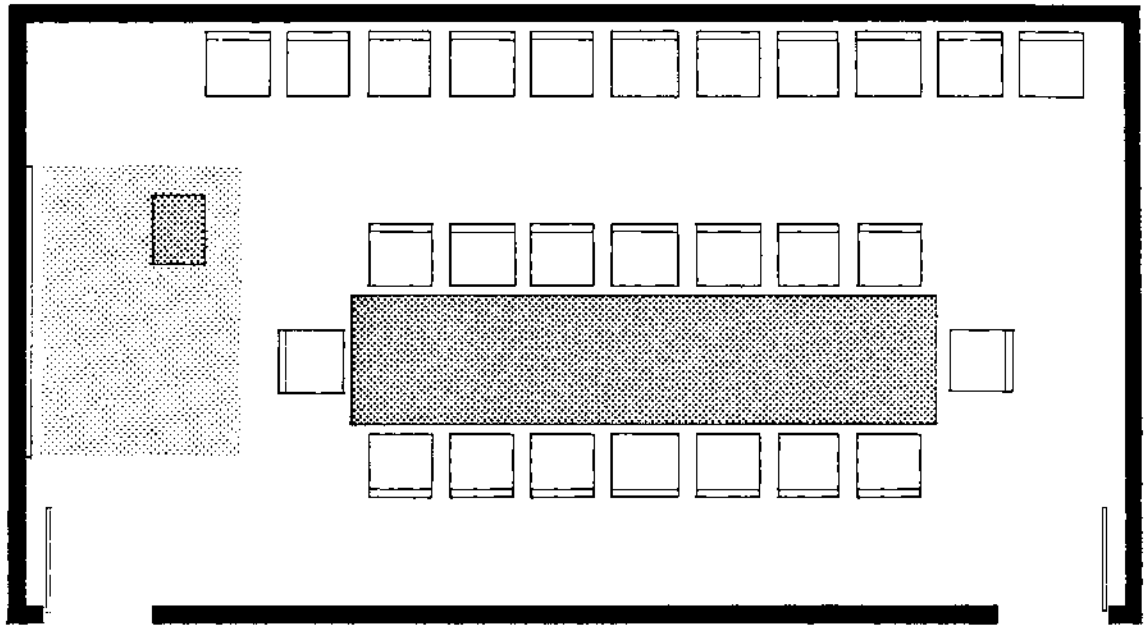
16 Persons

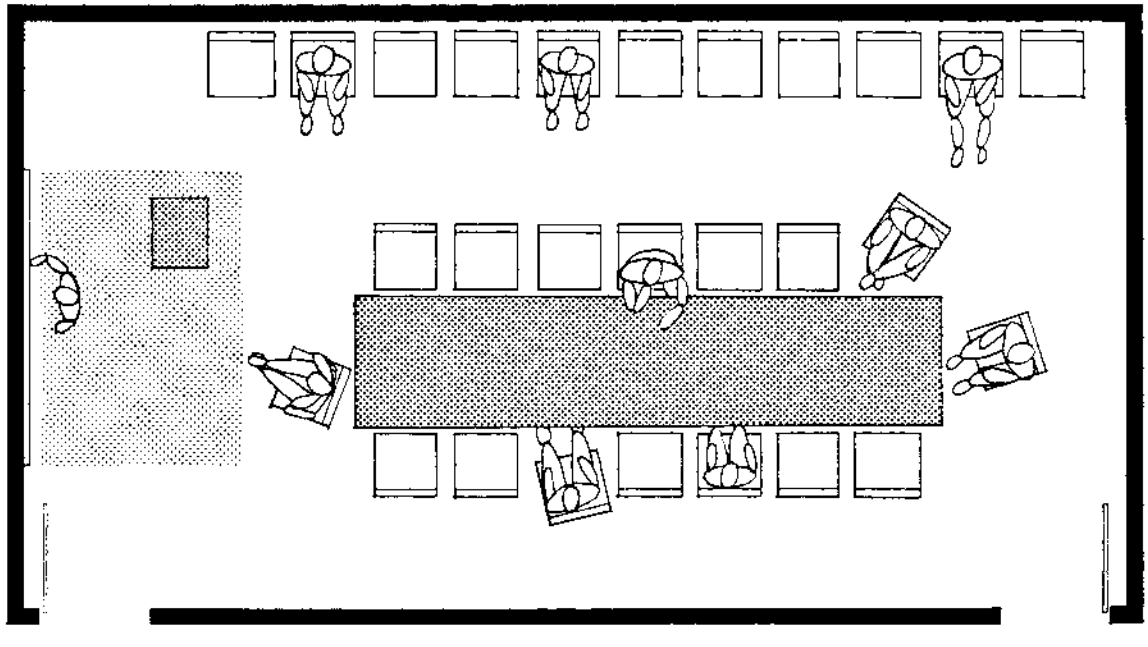


420 sq. ft.

16 Persons
Presentation Area

# Conference Rooms



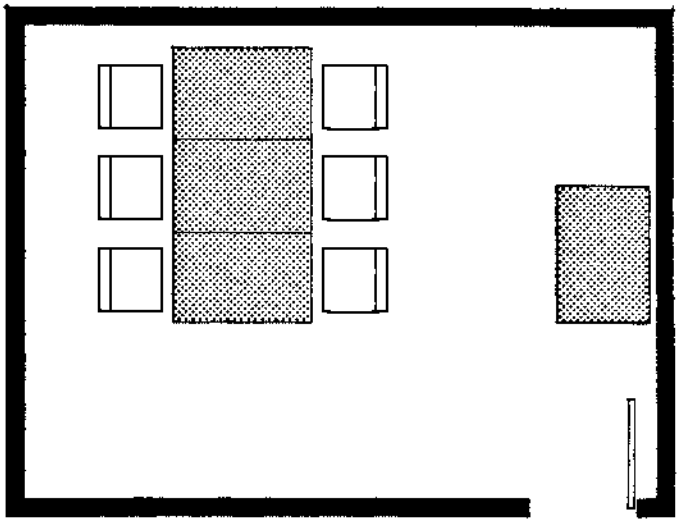


480 sq. ft.

16 Persons
Side Seating
Presentation Area

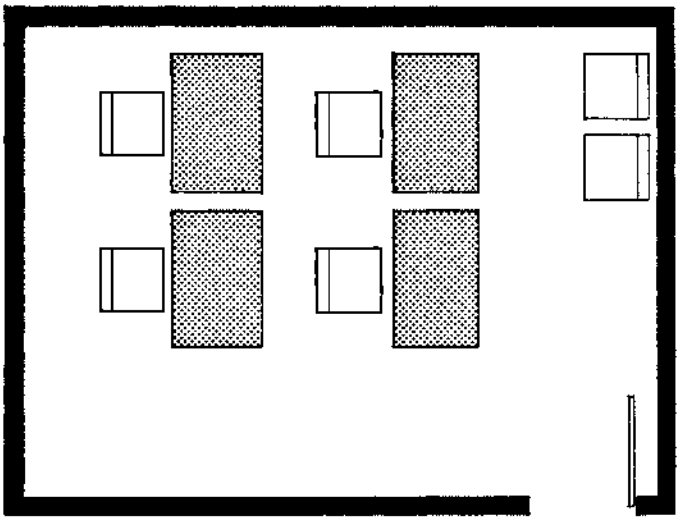
The three variations on 16-person conference rooms show various allowances for presentation area and visitor seating.

# Conference Rooms



240 sq. ft.

6 – 8 Persons
Modular Tables
A



240 sq. ft.

B

These illustrations show a movable set of tables arranged in two possible layouts.

OTHER ROOMS

Other rooms, such as copy rooms, mail rooms, storage rooms, and the like, are sized based on individual contents needs. That is, the workstations, unit equipment, counters, etc., listed above are added together, with an allowance for circulation and use. In almost all cases, however, the circulation allowance is based on actual test sketches. This is to assure that an efficient yet workable standard is chosen. As with other rooms in this study, we have sized rooms in multiples of 60 sq.ft., to allow the design and layout process greater flexibility and simplicity.

## MAINTENANCE FACILITIES COMPONENTS

Rancho Palos Verdes now contracts for maintenance services and, under the assumption of remaining a contract city, its in-house facility needs are small in the future projection years. As small as they are, however, it is essential that appropriate space be determined; to do this, we have developed and applied corresponding space standards. Under the assumptions of a full-service city, of course, there is a substantial maintenance facility need. In order to size this correctly, appropriate space standards are all the more important.

Maintenance facility space components--just as we did for offices and rooms--are first broken down into the most basic elements, and standards for these elements are added together to obtain a standard for the larger component. It should be noted, however, that maintenance equipment is often "nonstandardized" in the sense that items of many shapes and sizes can do similar jobs; in fact, in a full-functioning shop, equipment and work tables may be made in-house to accomplish some specific purposes. As a result, the standards we use for many elements are really "space budgets" or allowances for these items, based on our experience over the years in surveying and sizing similar facilities.

### Basic Components

Maintenance facilities consist of several basic components that serve separate functions. Rancho Palos Verdes, in the full-service case,[7] will have the following:

- Office Areas, which are quite small in this case and to which the general space standards described above are applied.
- Employee Facilities, which consist of lockers, restrooms, shower areas, and an assembly area. This last area serves as a crew briefing space, punch clock area, meeting or training room, and lunch room; it can be sized for the whole crew or for smaller groups.

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[7] Full-service operations have been analyzed in the Space Requirements Data Base report, but are not included in the recommended program on the civic center site. Some, but not all, of the components discussed here are included in the adopted contracted services program for maintenance.

- General Shops, which are potentially of a very wide variety. There are shops for plumbing, painting, street work, and so on; and each shop is sized according to allowances for the elements (work bench, open work space, storage, etc.) it contains.

- Vehicle Maintenance, which is a small but highly specialized shop area consisting itself of smaller areas: welding space, vehicle repair bays, tool and parts storage, and so on.

- Storage Buildings, which may be of three types. These are: (1) shop related storage, which we include above with the shop areas themselves; (2) heated storage areas, which can be separate but need insulation, heat, and more controlled environment; and, (3) unheated storage areas, which also may be separate from the shops and which do not need the same type of construction and thus may be cheaper to build. "Heated storage" has not been assigned in the Rancho Palos Verdes space program.

- Open Areas, which also are of several types. There are: (1) open storage, consisting of flat (possibly paved) and open land on which items are stored; (2) storage bins, which are three-sided, low concrete (or wood, in some cases) walled areas into which loose materials are placed; (3) equipment storage; and, (4) plant materials storage, which is like item (1), above, but which also may have some wind or sun screen cover and which requires drainage or paving.

- Parking, for employees and for rolling stock. This may have light cover or be fully open, or may also be in a multi-story structure. Parking standards apply to all government components, and are discussed separately from this description of Maintenance Facilities.

Each of these basic components has unique elements from which it is composed and for which standards have been developed. The following discussion explains these standards for the above components.

## Office Areas Standards

As noted above, the standards used for general office components are applied. These are presented in earlier parts of this section of the report.

## Employee Facilities Standards

Exhibit 5-9 specifies the net square footage required for employee facility items and the ratios used to determine the number of items required. In determining space requirements, the ratio of the largest number of personnel on a shift at one time is applied to the items.

EXHIBIT 5-9

EMPLOYEE FACILITY STANDARDS

| | SQ.FT. | ONE PER NO. EMPLOYEES PER SHIFT |
|---|---|---|
| Locker (single or double) | 10 | 1 or 2 |
| Shower | 35 | 20 |
| Toilet/Lavatory/Urinal | 50 | 14 |
| Time Clock Area | 75 | 50 |
| Assembly Area/Multi-Purpose[a] (includes use as lunchroom) | 15 | 1 |

[a] This area is not always needed; it depends upon the number and functional needs of the employees.

## General Shops Standards

General shop areas do not lend themselves as well to pre-set standardization since their functions vary and the equipment required differs. Thus, space required for the various shops is determined on an individual basis by allocating space to each item of equipment and furniture needed in the shop, plus additional work space, as required, for breakdown and assembly, temporary materials holding, maneuvering of oversized stock, etc. Additional space is programmed

for storage of on-hand materials and tools, and special equipment or work areas. The sum of the individual space allocations equals the minimum space requirement of each shop.

Exhibit 5-10 lists some of the basic allowances for elements of shop areas. One of the most important elements is safety areas which are required for safe working environment or by OSHA standard. Some safety spaces (first aid room or equipment storage) may be included with office areas if the maintenance facility is small.

EXHIBIT 5-10

REPRESENTATIVE STANDARDS FOR GENERAL SHOP ELEMENTS

| ITEM | FUNCTION/CONTENTS | STANDARD | | |
|---|---|---|---|---|
| | | ITEM Allowance | ACCESS | TOTAL |
| **Safety Areas** | | | | |
| First Aid Room | Contains cot and standard OSHA first aid supplies. | 120 | - | 120 |
| Emergency Shower/ Eye Wash | Shower (no enclosure) with emergency pull-ring, and an eye wash fountain. | 5 | 30 | 35 |
| Personal Safety Equipment Storage | Storage for hardhats, goggles, safety gloves, small first aid kits, etc. | 20 | 30 | 50 |
| **Work Areas** | | | | |
| Workbench | 8'x2-1/2' bench (allowance) | 20 | 40 | 60 |
| Open Work Area | Assembly of parts or temporary work-in-progress space. | | (varies) | |
| **Vehicle Parking** (not maintenance) | | | | |
| Pick-up (3/4- or 1/2-ton) | Parking of a vehicle with clearance for loading. | 450 | - | 450 |

Vehicle Maintenance Bays

Vehicle maintenance shops consist of maintenance bays, described here, and general shop elements, described above. Four separate maintenance bay sizes are standardized: special, heavy, medium, and light.

- "Special" bays are sized to accommodate large trucks, graders, buses, and the like. They are not needed in Rancho Palos Verdes.

- "Heavy" bays are sized to accommodate larger dump trucks, tractors, trash compactors, etc. These, too, are not programmed in Rancho Palos Verdes.

- "Medium" bays are sized to accommodate pick-ups, station wagons, smaller tractors or loaders, sedans, etc. Medium sized dump trucks can be accommodated, but if there are many in the fleet, a heavy bay is preferred.

- "Light" bays are sized to accommodate trucksters, cycles, mowers, and light trailerable equipment. The size allowance for light bays can vary, however, depending upon knowledge about specific equipment to be serviced.

Test layouts have been made to determine the optimum average bay size. The bay size of 30'x60' for special equipment allows five to ten feet of clearance on each side for access and work space, and from five to fifteen feet front and back. The heavy equipment bay size of 20'x40' allows for five to six feet of clearance on each side for access and work space, and from six to ten feet front and back. The medium and light equipment work bays are also sized to provide several feet of clearance on each side as well as front and back. These clearances allow for necessary work space, for movable or fixed workbenches and testing equipment to fit between or at the end of the bays. Exhibit 5-11 summarizes the standardized size of each vehicle maintenance and repair bay.

EXHIBIT 5-11

VEHICLE MAINTENANCE AND
REPAIR BAY STANDARDS

| | DIMENSIONS | SQ.FT. REQUIRED |
|---|---|---|
| Special Equipment Bay | 30'x60' | 1,800 |
| Heavy Equipment Bay | 20'x40' | 800 |
| Medium Equipment Bay | 20'x30' | 600 |
| Light Equipment Bay | 15'x25' | 375 |
| Alt. Light Equipment Bay | 15'x20' | 300 |

## Storage Buildings

Storage buildings are sized for the individualized needs of the anticipated contents. The same methods are applied as those for "Other Rooms," in an earlier part of this section of the report.

## Materials Bins

One element programmed for location in an enclosed storage structure in Rancho Palos Verdes is a group of materials bins for storing sand, chipped bark, road patching mix, etc., for general and parks maintenance needs. Our standard for materials bins is as follows:

EXHIBIT 5-12

MATERIALS BIN SPACE STANDARD

| | | STANDARD | | |
|---|---|---|---|---|
| ITEM | FUNCTION/CONTENTS | ITEM ALLOWANCE | ACCESS | TOTAL |
| Materials Bin | A low-walled, three-sided open bin, 15'x10', for storing loose yard materials. | 150 | 200 | 350 |

PARKING

Parking is an important component of the total space needs and represents a significant portion of the costs of a building program. All units of government need parking facilities for employees and visitors. In addition, certain components require parking space for government-owned vehicles and equipment, as well as for employees and visitors.

Three stall sizes have been developed to accommodate the various types of vehicles. As shown in the exhibit below, the total square footage required per vehicle includes space for the parking stall and space for access and circulation. The latter factor allows for ingress and egress, pedestrian access to the stall and vehicular circulation. These standards are shown in Exhibit 5-13. It should be noted that all standards presented are for surface parking facilities. If employee/visitor parking is provided in a multi-level parking garage, the space required per stall must be increased to allow for columns and other structural components.

EXHIBIT 5-13

PARKING STALL STANDARDS

| | | SQUARE FEET REQUIRED | | |
|---|---|---|---|---|
| | STALL DIMENSIONS | STALL | ACCESS AND CIRCULATION | TOTAL |
| Special Equipment | 15'x60' | 900 | 600 | 1,500 |
| Heavy Equipment | 12'x30' | 360 | 290 | 650 |
| Medium Equipment and Employee/ Visitor Vehicles | 10'x20' | 200 | 180 | 380 |
| Light Equipment (2 stalls) | 10'x20' | 200 | 180 | 380 |

# APPENDIX

# APPENDIX

## CONSIDERATIONS OF A COMMUNITY BUILDING

### INTRODUCTION

#### The Project

As identified in the city's design guidelines,[1] one component to be included in the civic center master plan is a community building. Prima is therefore contracted to prepare a program for such a facility: i.e., determining the size and number of rooms, describing functional needs and proximities, and detailing design constraints and criteria, as we have done for other components. To do this, however, requires a clear knowledge of the preferred activities to be housed in the facility, the community groups targeted, and many other aspects of demand, use levels, and role of the facility. We assumed that such information would be available from the city since the proposed scope of work did not include a needs assessment or survey of the community. Subsequently we found that such an assessment has not been undertaken to the extent we feel is necessary for space program development. We have therefore spent considerable time in fashioning what we hope is an acceptable approach to dealing with this question.

After a review of current civic facility plans on the Peninsula, which we made by talking with many program-active citizens, we are now certain that we should not present a specific space program for a community building. Rather, the city should move very carefully into this area and should place the entire project (of a community building development) on a solid, business oriented footing. While a specific space allocation plan would be a disservice at this time--in part because the community resources are in a state of change and in part because there is no solid and quantified needs analysis to measure these resources by[2]--the master plan requires that we develop examples of possible facility programs for site planning purposes. Two such examples are presented at the end of this section.

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[1] Distributed as part of the RFP.

[2] We elaborate on these two points in a later discussion.

Proposed Approach

While we do not believe it proper to identify a specific use plan and space program, except as noted, we have collected some pertinent data for the city and also have formulated an approach which we feel is intended to place the entire process on a businesslike basis, to promote a self-sustaining value for a community building, and to open the process to wider perspectives as time goes on, balancing the city's ability to pay for physical resources and the potential relationship of the Rancho Palos Verdes contribution to the peninsula-wide needs. This approach is described below; basically, it calls for the city to place responsibility for success of a community building on the community shoulders, allowing social groups to play a part in both the formulation of a building program and the promise of successful use of the space.

In addition to the outline of this approach, we also describe the results of our contacts with various citizens active in community affairs or involved with community center development. The diversity of these responses was surprising to us and also was very encouraging to the approach we suggest. As part of a data base which may be helpful to the city, we have included a brief discussion of what some nearby cities are doing, some results of needs surveys which have been undertaken, and a catalogue of space requirements for various types of activity areas (primarily sports and games). By applying the methods of space needs computations described throughout this study,[3] the city staff should be able to obtain a good estimate of building needs.

## ESTABLISHING NEED AND SUPPORT

The need and demand for a community building remains a nebulous thing. This is because of several factors:

- There has been a great interest and push toward developing various types of facilities, and some new projects are under way as a result. This may cut into the added need for a community building at the civic center. Further it is essential that public

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[3] See especially our discussion of methodology in the Space Requirements Data Base and the discussion of space standards elsewhere in this volume.

and private financial resources not be stretched across so many projects that projects now under way have inadequate support to ensure success. In short, the community is better served by having one or two projects adequately financed than several partially financed.

- There is concern as to just how "multipurpose" a facility can be, and the community may be better served by targeting one or more specific groups. Basically, there are three types of users which emerged from our interviews--teen center, senior citizen center, and general group meetings[4]--and the space needs are all somewhat different, in style and decoration certainly and also to some degree in room needs.

- The role of the Rancho Palos Verdes civic center in the whole peninsula-wide community is still being formulated in its broad concept and implications. While each city is clearly a separate entity--and within each (especially Rancho Palos Verdes, due to size and geography) there are diverse and distinct neighborhood interests--there still persist several unifying influences so that the community center, just like a school building, park, or commercial center, must necessarily fit into this larger picture.

- With changes in how the peninsula cities may view the peninsula-wide needs, with growth and development on the hill in general, and with what appears to be a potential for traditionally isolated groups[5] to be more integrated into various activities, there may be a sizable growth in just what ought to be in a community center as time goes on.

- In contrast to the previous point, the choices between centralized or decentralized community facilities have not really been reviewed by the peninsula governments. Most discussion we hear now

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[4] "Group meetings" mean a gathering of citizen groups, such as a homeowners' association, on a scheduled but possibly irregular basis.

[5] The Western Avenue area, or the Miraleste area, for examples.

is toward sharing, some centralization, and some unification of certain services (police, recreation, for examples). Our citizen interviews[6] produced several views, one being toward more decentralization of services as the communities grow and neighborhoods mature. This may argue, for example, for smaller facilities (perhaps located in parks) supplemented by limited centers attracting a peninsula-wide audience.

- The relationship between tax supported (that is, city financed) facilities and private groups is not yet clear. If facilities are built for city staffing, such as a park program building in which structured classes or program activities are to be offered, then there is a fairly clear estimate or "guarantee" of the utility that will come out of the building. If the building is built mainly for community use and availability, then the risks of lower utilization appear to be greater unless (a) a very careful survey of needs and uses is made in advance, (b) some commitments are secured, (c) the operating cost estimates are thought through, and (d) a mechanism for scheduling and ongoing program recruitment is established.

It is in response to these points that we have formulated our recommended approach. We very strongly believe that a community building should be community programmed, and that the users must be involved in formulating the facility need. City staff must have overview responsibilities both for design and operation. The facility should be available for structured city programs, but not at the expense of unavailability for community groups. In this way we distinguish between recreation centers and a community building. It is partly because the future availability of park buildings is not clear, that we cannot be sure how much added community building space will be needed.

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[6] This is discussed below. We surveyed, by telephone, about 20 socially active or interested persons whose names were supplied to us, in order to learn a general sense of interest in community facilities.

Recommendation

Our recommendation includes the following six steps. First, past needs surveys (by private or public groups) should be assembled and a current list of available spaces should be made by type of space and suitability for various uses. The Community Services Department should be responsible for this, and should be the key agency in this entire project. Current ties to the Coordinating Council should be very helpful. Eventually, a comprehensive needs survey will be developed, but this is linked to the subsequent steps and the demonstrable needs of community groups. The ultimate purpose of this step is to develop a coordinated list of needs as well as resources, because it is in the gap between them that the community center must fit.

Second, a committee should be established by the city, similar to the Parks and Recreation Committee but (a) attached to the Community Services Department and (b) charged with the responsibility of advising the city as to community activity needs, especially related to a community building at the civic center. This recommendation is similar to that made in the May 1977 Plan of Action (Park and Recreation Department and Committee). It would be a government sponsored agency through which volunteer and other civic groups can channel their input. The committee should have other specific responsibilities--especially the obtaining of commitments for facility use--as described in subsequent steps. Some staff time will be needed, to work with the citizen committee, but this should be limited and the committee itself should be prepared to commit significant personal time to carrying out its responsibilities.

Third, the committee should review the needs and resources data base and the city should consider reasonable constraints or limits on facility options. A phased approach is reasonable, such as a small facility goal initially with expansion capability to handle expanded needs in the future. For example, it may be that a peninsula-wide cooperation (contributions of time, services, alternative resources, or money) from other cities may be forthcoming at a later date, so that some expansion for this--once the whole approach has demonstrated its viability--should be allowed for. City constraints may include such things as facility size, primary target groups,[7] facility role or character, budget (capital or operating), and so on.

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[7] For example, Hesse Park facilities may shape up as having a senior citizen focus (not exclusive, however), and so a different focus may be desirable here.

Fourth, and central to our approach, the committee should contact community groups and obtain specific commitments for community center use. These commitments must include estimates of how often such facilities will be used, the degree of help with maintenance and cleanup, guarantees of volunteer time or cash contributions, and other demonstrations of commitment. Dollar amounts need not be large; that is not the point here. But, some promise of a dues percentage, or maintenance fee, or contribution in kind (if truly guaranteed) is important to assessing real need and assurance of use. Our point is to involve as strong a business like posture as possible, and to demonstrate that a community-based facility can be anchored in advance of construction if it is properly organized. Volunteer services do a tremendous service to the community, but as tax dollars are significantly involved a more coordinated approach is required. We believe, too, that a coordinated or "business-like" approach may be more attractive to other peninsula cities or to private contributors and foundations interested in community facilities. One danger, of course, is that expectations will be raised and the city may not, at that time, be in a position to follow through with construction of even a first phase community center; it is therefore essential that the process we describe be undertaken with this in mind, and the methodological procedures outlined here are even more important to attracting other potential funding sources. One approach that may be considered (as part of Step 3 and the setting of limits or constraints) is the dedication of city matching funds or other devices to appeal to supplemental financing.

Fifth, specific facility needs should be identified, based on the outcome of the above steps, and a phased approach as mentioned above should also be considered. This can be done only after a reasoned assessment of use is made; building a facility first, and then hoping to match uses to it is ill advised. The space standards tables presented later, and also the data presented in the Space Requirements Data Base and in the general space standards discussions, are intended to assist the staff and the committee in estimating space needs in a community building at the civic center.

Sixth, once the above are completed, the city should review the role of the proposed committee and consider its continued value (a "sunset" review). We believe a prolonged use and importance will be demonstrated, particularly as a community agency clearinghouse and information vehicle to the city generally and to the Community Services Department specifically. Moreover, the committee will be a structure by which ongoing survey of community facility needs can be

assessed and reviewed, so that the proposed community center is made adaptable to future public need, desire, and budget constraint.

## MEASURES OF COMMUNITY INTEREST

We have not made a rigorous survey of available facilities or of community center facility needs, but we have attempted to collect some baseline information which may measure current levels of community interest. The following discussion includes the main body of findings which we obtained, including the results of our interviews, the status of certain (mainly public) facilities in the area which may be available for these uses, and current uses to which the existing school building at the civic center is now put.

### Interviews of Persons Involved in Community Building Development

In the course of our investigations of community center needs, we were directed to a few citizens of the peninsula who were active in the area of community center facilities and related interests. From them, we expanded a list of persons with whom we were advised to talk about this topic. Although our contacts are certainly not comprehensive of all such individuals, we believe they do represent a good cross-section of interested and influential people who have involvement with the outcome of community center development.

We obtained, in all, a list of about 25 names, of which a few persons could not be reached. Agencies or groups are represented on the list, but mainly we talked to these people as individuals who spoke for their own personal interests as well. These persons live in each city on the peninsula, include public officials and others, represented diverse political outlooks, and were active in such groups as the Palos Verdes Peninsula Community Center Association, the Palos Verdes School District, the League of Women Voters, the PTA, and the library board.

Each response was unique, and since we tried to sample a cross section of interests, there were many viewpoints expressed. Some consistent points emerged, however, and some of these were surprising to us in how different priorities grouped together. These contrasts included (1) a principle of central facilities or of decentral and neighborhood facilities; (2) whom to target, generally either

youth groups or senior citizens, although no one suggested any exclusivity; (3) the use of multipurpose, dividable rooms or of special designs such as may be appropriate in a teen center or senior citizen center; (4) the issue of whether need really is demonstrated, with some persons feeling that it is not, but most feeling that it is definite (but varying for youth, seniors, etc.); and, (5) a general consensus for the expenditure of Rancho Palos Verdes tax money for a facility of this type, with varying concerns that a broadly appealing (peninsula wide) facility be supported also by other cities. Associated with some of these points was a general concern over the relationship between private group needs, private facilities, public facilities, and public activity programs, although this was not always articulated in the same way.

On balance, we believe our recommended approach gets at the heart of these findings and is a viable response to define the differences more clearly. The most important points to note, we believe, are these:

- there is tremendous energy, skill, ability, and knowledge in the individuals who, in the final analysis, will make a success of the community center;

- there has been some focusing of this resource in the League of Women Voters, the PVP Community Center Association, and such, but there is no publicly sponsored resource that coordinates it all;

- the thrust of current interests and activities has produced some solid results, in the form of new or planned facilities discussed below, which may change needs perceptions once they are established and operating.

It is the final point which allows for much of the uncertainty about facility needs, and it is because of all these points that the first order of business must be a review of past needs surveys, of current and expected facility resources, and of ongoing needs assessments.

Status of Facilities

The great pressure for various types of community facilities on the peninsula appears to be having the effect of new facility development, both public and private. There is no

accurate current survey that we know of that lists all the facilities in which community activities may occur. Clearly there are quite a few: church rooms of various types and availability, school facilities, city facilities, county buildings, restaurant meeting rooms, public and private recreational facilities, and so on. Still, our interviews indicated a general consensus of the need for more.

There are three private facilities which were noted in our interviews and which may significantly serve to meet some of the current needs. These facilities are (1) the theater and meeting rooms planned as part of the Courtyard Center and developed by the Community Center Association, (2) an ice skating rink planned at the Courtyard, and (3) the conversion of the old Fox Theater into a roller skating rink. The last two of these may meet some needs of youth groups in the peninsula area. The first will address a broader need, containing a large legitimate theater[8] and a 2,500 sq.ft. area for multipurpose meeting rooms.

The public facilities on the peninsula include the following: (1) the Rancho Palos Verdes Park building, an 800 sq.ft. facility consisting of one meeting/program activity room plus a small staff area; (2) a public swimming pool[9] in Palos Verdes Estates available during summer months; (3) the council chambers at Rolling Hills Estates, seating about 100 persons and which is available to some community groups when it is not used by city committees or other official bodies; (4) a new complex at the South Coast Botanical Gardens, consisting of a large main room[10] (7,000 sq.ft.), two smaller rooms, and a full-size catering kitchen, which has been used by various groups, including the PTA, the League of Women Voters, home owner groups, and others; and (5) various school facilities, including school gymnasiums, multipurpose rooms, classrooms, and three swimming pools during summer months, and the administrative building at Point Vicente Park in which Rancho Palos Verdes now holds its council meetings. A summary of this last room's usage is presented later.

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[8] Sizes are not exact yet.

[9] Uncovered. Some people we talked with expressed the wish that a public, covered, heated pool were available for use by senior citizens.

[10] One person we called mentioned that the main room is so large that it is not comfortable for smaller groups.

There are also a number of important facilities now being planned which will add to the public facility inventory. There is also a proposed new use of an existing building complex which has the same effect, this being the lease of school facilities (now closed) by the YMCA for short term use and the development there of various structured programs. It will be an important experiment, the success of which may lead to other YMCA enrichments on the peninsula in the future. New buildings include three structures proposed at Rancho Palos Verdes parks:

- An "interpretive center" of about 1,500 sq.ft. at the Point Vicente Park (ocean side).

- A 7,000 sq.ft. multi-use building at Hesse Park, consisting of (a) a lobby and exhibit area, (b) a large meeting space divisible with moving partitions, (c) a craft and meeting room, opening to a catering kitchen, (d) a quiet gameroom-lounge, opening to an outside deck, (e) restrooms, (f) a staff office near the entry, and (g) outdoor areas.

- A 1,000 sq.ft. multi-use building at Del Cerro park, probably of one room with a small office area similar to that at Rancho Palos Verdes Park.

All of these will likely be busy with structured recreation programs and not available all that much for general community uses. The Hesse Park facilities, while open to many users, appear to be taking on something of a senior citizens' focus (particularly the quiet gameroom/lounge), satisfying some of that apparent need. Hesse Park has been noted to us as being one of the facilities more centrally located to the peninsula as a whole.

It should be noted, too, that other park facility developments may occur, such as by the county and by other cities. In all, the potential facility development is impressive and may go some distance at meeting community need. Based on population levels, however, it appears that the community can keep them fully utilized and could require much more.

## Past Surveys

Several surveys have been made that shed some light on community facility needs. These are almost entirely directed to user needs rather than resource inventories, however. One inventory was made about ten years ago by the school

district, but we know of nothing since then, especially one which is of comprehensive scope (including, for example, church rooms, restaurant rooms, and other private facilities as well as public ones). A useful inventory should indicate room sizes and style, cost for use, availability, and type and frequency of program usage.

There are several surveys of needs, but they are either not comprehensive or are not really focused to community buildings specifically. The Parks and Recreation Committee conducted a survey described in the 1977 report, A Plan of Action, which did include some data pertinent to community facilities. The report also identified several recommendations, including the formulation of a new committee and the development of several specific facilities ("one or more teen centers" was one recommendation), with emphasis on the Nike site.

The League of Women Voters and the PVP Community Center Association have also conducted several surveys. One of these, two years ago, identified that the peninsula has a much larger senior citizen population than was earlier expected. A more recent survey targeted youth needs, using both young people and adults as respondents. The first survey by the Community Center Association, about four years ago, targeted professionals (libraries, police, educators, clergy, etc.) and agencies, and from this emerged their first documented requirements for a community center. Still, talk and interest in a community center has been going on, on the peninsula, for many years.

In all, these surveys do not address the problem of prioritizing needs, and they do not take new facilities planning into account. For these reasons, we have recommended that a fresh look at these surveys be taken and that a new survey effort be undertaken with the intent of matching needs and resource inventories. Then, by focusing on potential user commitments, we believe the best and most useful expenditure of funds for a community center will be possible.

Current Meeting Activities at the Civic Center Site

As one measure of what level exists of public demand for activity spaces, we contacted the Palos Verdes School District and discussed the requests made of it for space. The Palos Verdes School District owns 2.23 acres of land adjacent to the civic center property, on which is located a building of about 10,000 sq.ft. Two rooms in this building are designated for city as well as civic uses:

- The Council Chambers, a room of about 1,700 sq.ft.

- The Community Room, a room of about 850 sq.ft.

The uses made of these rooms include community, city, and educational activities. Exhibit A-1 tabulates the results of our discussion, based on room usage from September 1979 to June 1980. By multiplying the weekly uses by the number of weeks in the ten-month period, etc., we computed[11] the total uses of the rooms to be over 300 times in this period, or an average of over seven times per week.

Review of the exhibit shows a predominance of use as a presentation-type of meeting hall, a use for which the facility is very poorly designed. This result surprised us somewhat, since it is a better space--the larger room, anyway--if used for flexible and active programs. As a meeting hall, acoustics are poor, public toilets are inadequate, visibility is limited if many persons are present (both ways: from the audience or from the speaker), and the utilitarian character of the room is not in keeping with the formality that associates with meeting hall presentations. The smaller "community room" has a somewhat more comfortable environment to it, which smaller groups prefer.

From this, we are convinced that the council chambers should be designed expressly for that type of use and that the room will be well used both by the city and also by community groups who need this specific kind of space. This can serve to supplement the community building, but will not replace or compete with it, and the community building should therefore address other needs.

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[11] If both rooms were reserved at once, we counted only one usage.

EXHIBIT A-1

USE OF THE COUNCIL CHAMBERS AND COMMUNITY ROOM
For the Period of September 1979 to June 1980

| User | Type of Use | Cncl. Chamb. | Comm'y. Room | Frequency of Use |
|---|---|---|---|---|
| CITY: REGULAR USE | | | | |
| City Council | Council meetings and work sessions each first and third Tuesday | x | x | 2/month |
| Planning Commission | Commission meetings each second and fourth Tuesday | x | x | 2/month |
| Recreation Committee | Committee meetings | x | x | 2+/month |
| Recreation ~~Committee~~ Dept. | Handicapped children each Thursday, 3 p.m. to 5 p.m. | x | x | 1/week |
| Recreation ~~Committee~~ Dept. | Boy Scout merit badge day (also use entire site) | x | x | 1/year |
| Recreation Department | Senior citizens meeting each Thursday, 10 a.m. to 3 p.m. | x | x | 1/week |
| Traffic Committee | Committee meetings each first Wednesdey | x | | 1/month |
| CITY: SEMI-REGULAR OR SPECIAL USE | | | | |
| Recreation Committee | Public hearings. Five times, September to June | x | x | 5 times (10 months) |
| Recreation Department | Programs, each Monday from September through November | x | | 1/week (3 months) |
| | Programs each Tuesday and Thursday from April through June, evenings end mornings. | | x | 2/week (3 months) |
| EDUCATIONAL USES (excluding City Recreation) | | | | |
| Harbor College | Monday classes, 12:45 p.m.-3 p.m., from February through May | x | x | 1/week (4 months) |
| COMMUNITY: REGULAR USE | | | | |
| Girl Scout Troop 382 | Weekly meeting each Wednesday | | x | 1/week |
| RPV Amateur Radio Assn. | Monthly meetings each third Wednesday | x | x | 1/month |
| TOPS | Weight-reduction clinic each Friday | | x | 1/week |

EXHIBIT A-1 (cont'd)
Use of the Council Chambers and Community Room
For the Period of September 1979 to June 1980

| User | Type of Use | Cncl. Chamb. | Comm'y. Room | Frequency of Use |
|---|---|---|---|---|
| COMMUNITY: SEMI-REGULAR OR SPECIAL USE | | | | |
| Church groups | Evening meetings | x | | 3 times[a] |
| Community Center Assn. | Evening meetings | | x | 3 times |
| Girl Scouts | Scout Readers meeting (daytime) | x | | 1 time |
| Homeowner's groups | Evening meeting | | x | 1 time |
| League of Women Voters | Candidates forum | | x | 1 time |
| Local Soccer Association | Meeting of association commissioners | | x | 1 time |
| Los Angeles County Recorder's Office | Training sessions for election staff | x | | 2 times |
| Palos Verdes Coordinating Council | Bloodmobile program | x | x | 4/year |
| PTA Groups | Meeting (regular school meeting room was busy) | | x | 1 time |
| U.S. Census Bureau | Workshops. After one was held, the success encouraged four more meetings. | | x | 5 times |
| U.S. Fish and Wildlife | Public Hearings | x | | 2 times |

SOURCE: Information from this table was supplied by Dorothy Bennett of the Palos Verdes School District.

[a] In this column, number of times is measured from September 1979 to June 1980.

## OTHER CITY COMMUNITY CENTERS

We contacted several local communities[12] in order to provide the city with further basis for comparison and insight into the planning and operation of a community center. We discussed the following topics with persons either responsible for or involved with their respective community centers: the general planning process, the type of space provided in the buildings, frequency of use, rental or fee arrangements, and general staff requirements. We also solicited any additional advice or comments. The following summarizes the comments received.

### General Planning Process

Many communities are using renovated school, club, or office buildings for community or neighborhood centers, and some modular or trailer buildings are being used. When new community buildings were or are being initially planned, most communities follow the more or less standard public input and review process. Park and recreation or community services staff generally supply the major input to the design with formal public input and review occurring at open public meetings. Some survey and sampling of the potential users of a center were noted by some communities, but not all. Costa Mesa noted that during their design process they conducted numerous on-site visits to other community centers, allowing them to choose the positive attributes from them as they designed their own.

### Types of Community Centers

Three distinct types of buildings are grouped together and referred to as "community centers." The first type of building provides for meetings and assemblies, and often has one major meeting room, one or two smaller meeting or conference rooms, a full-service or catering kitchen attached

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[12] The following cities were contacted: Lomita, Carson, Torrance, Redondo Beach, Lakewood, Costa Mesa, and Santa Monica. Rolling Hills Estates and Palos Verdes Estates have no community center building or facility per se, although, as noted elsewhere in this discussion, there are facilities of which special community use is made.

to the large meeting room, and usually a stage or theater arrangement as part of the major meeting area. The interior finishes appeared more likely to be of high quality, with many areas carpeted. The second type of facility is devoted to more physical or program activities such as art classes, dancing, exercise, karate or self-defense, crafts shops and so on. Generally these facilities have built-in work counters, storage cabinets and interior finishes appropriate to these kinds of activities.

The third type of facility is a combination of the above, part meeting space and part activity space. Most people we talked with felt that a multipurpose facility is the most viable alternative because they believed it leads to the maximum level of usage. We did receive one comment that multiple use buildings serve no one activity very well, and that use conflicts result, such as the mixing of noisy activity space with quiet meeting spaces. Any potential mixing of activities must be examined carefully and accounted for during the design of multipurpose facilities.

Torrance noted that they have had problems arise between teenagers and senior citizen users of their adjacent facilities. While they noted that smaller children do not present the same problem, separation either by physically screening these two groups or by carefully scheduling each group's activities was advised, so that there is little or no overlap in their respective uses of the facilities.

Frequency of Use

In each case the department head or staff person we talked with indicated that their respective facilities were frequently used; most said that their facilities were often booked solid and required very advanced reservations.

Apparently, the areas of greatest demand are theaters and small meeting rooms. Some communities noted that the increasing demand is the result of private meeting places in hotels and restaurants becoming prohibitively expensive to the community groups. Santa Monica indicated that the task of scheduling and fee collection for its facilities has grown to such a high level that it almost warrants a full-time position.

## Fee and Permit Systems

Most cities we talked with have instituted a rental or fee schedule for the use of their facilities, but a few communities still make facilities available for no cost to city resident or nonprofit groups. In addition to substantial base fees, some cities require additional charges to cover the added expense associated with maintaining staff during off hours. (Santa Monica noted an average cost of $212 per two hour period for private nonresident groups for the use of large meeting rooms.)

The majority of cities noted that they charge fees that are intended only to help offset the operating costs associated with the facility and staff. Some communities indicated funding for the facilities has become so difficult that they feel any new facility must be self-sustaining, all costs borne by the actual user, but this of course applied to those cities which already had facilities available to its citizens at less cost.

## Staff Requirements

The size of facility, type of activity space, and frequency of use affect the assignment of staff to particular facilities. The reported norm is a single full-time in-resident staff member to supervise the facility during the work day, supplemented by part-time staff in the evenings and on weekends. If the facility is large and extensive in scope of operation and programming, then additional full-time staff is assigned.

Special activity areas may require specialized staff, such as Torrance's drop-in teen center. Their center requires staff to monitor activities and to curb problems with gangs, alcohol, and drugs. The city noted that the staff must also have a visible physical presence in order to give the appearance of being able to enforce their regulations.

# PROGRAMMING TOOLS

The exhibits presented in this section provide information helpful in understanding the relative size and space requirements for potential community center components. Exhibit A-2 lists alternative space elements for meeting rooms, small activity rooms, kitchen, and locker facilities. Exhibit A-3 presents space requirements for selected sports activities. The space requirements for each sport activity

are listed separately, but it should be noted that a single playing surface can accommodate several separate courts. For example, a basketball court can also be striped for several other activities such as badminton, volleyball, shuffleboard, and paddle tennis. The doubling up of playing surfaces requires proper scheduling of activities to avoid conflicts between users.

To convey effectively the decisions made as to the scope, character, intent, and contents of the community building, two items must eventually emerge from the space planning process. One is a space program that lists each type of space, its content, and its size. Size includes not only square footage but also room or area height, if sports activities are planned. The other item is a document clearly stating the intent, design character, and spatial relationships of the various building elements. Together, these allow the designer to produce a product that accurately represents the intended elements of space.

EXHIBIT A-2

LIST OF ALTERNATIVE SPACE ELEMENTS THAT MAY BE PROGRAMMED IN A COMMUNITY BUILDING

| General Use Areas | Comment | Area Per Unit | Capacity |
|---|---|---|---|
| Meeting/Activity Room | May be any size. Allow 12 sq.ft. per person for audience seating; allow 20 sq.ft. per person for card-room or game-room seating. | - | - |
| Counseling Room (individual) | Soundproofing needed. Also, must be a "warm" or relaxing space. | 100 | 2-3 |
| Counseling Room (group) | Soundproofing needed. Also, must be a "warm" or relaxing space. | 400 | 15-20 |
| Music Practice (individual) | Must be soundproofed. Size allows an upright piano. | 100 | 1-2 |
| Music Practice (quartet) | Must be soundproofed. Size allows for an upright piano. | 200 | 4-6 |
| Kitchen (full service) | Space allows for food preparation (400 sq.ft.), cleanup and scullery (100 sq.ft.), pantry (100 sq.ft.), and service area (200 sq.ft.) | 800 | - |
| Locker Facilities | Lockers should be sized at 10 sq.ft. each, including bench space. Number of showers will depend on activity and number of players to be served. | - | - |

EXHIBIT A-3

SPACE REQUIREMENTS OF SELECTED SPORT ACTIVITIES

| Type of Sport or Area | Dimensions Length | Width | Clearances | Area Per Unit (Sq.Ft.) | Users |
|---|---|---|---|---|---|
| Basketball Court: | | | | | |
| Collegiate | 94' | 50' | Unobstructed space on all sides; 3' min, 10' preferable. | 5,600 min. 7,980 pref. | 10 |
| High School | 84' | 50 | 10' preferable. | 5,040 min. 7,280 pref. | 10 |
| H.S. Half Court | 42' | 50 | | 2,680 min. 4,340 pref. | 10 |
| Volleyball | 60' | 30' | Unobstructed space on all sides; 6' min. | 3,024 min. | 12-16 |
| Badminton | 44' | 20' | Unobstructed space; 5' on ends; 6' on sides. | 1,680 | 2-4 |
| Paddle Tennis: | | | | | |
| Official | 44' | 20' | Unobstructed space; 13' on ends; 6' on sides | 2,240 | 2-4 |
| Junior | 39' | 18' | Unobstructed space; 10'-6" on ends, 6" on sides. | 1,800 | 2-4 |
| Table Tennis: | | | | | |
| Regulation Table | 9' | 5' | Unobstructed space: 7' to wall lengthwise; 4' to wall widthwise; 10' between tables lengthwise; 6' between tables widthwise. | 322 | 2-4 |
| Small Table | 8' | 4' | Unobstructed space: 5' to wall lengthwise; 3' to wall widthwise; 8' between tables lengthwise, 3' between tables widthwise. | 180 | 2-4 |
| Boxing: | | | | | |
| Minimum | 16' | 16' | Unobstructed space on all sides: 2' min. | 324 | 2 |
| Maximum | 24' | 24' | Unobstructed space on all | 676 | 2 |
| Wrestling: | | | | | |
| Intercollegiate | 24 | 24 | Unobstructed matted floor space; 5' min. on all sides | 1,156 | 2 |
| Weight Room | 30' | 20' | Allows for 10 to 15 stations | 600 | 10-15 |
| Pocket Billiards | | | Minimum unobstructed space; 5' between table and wall | | |
| Large | 10'0" | 5'9" | | 315 | |
| Common | 9'9" | 5'3" | | 301 | |
| Small | 8'9" | 4'9" | | 277 | |

(continued)

EXHIBIT A-3 (cont'd)
Space Requirements of Selected Sport Activities

| Type of Sport or Area | Dimensions Length | Width | Clearances | Area Per Unit (Sq.Ft.) | Users |
|---|---|---|---|---|---|
| Horseshoes | 50 | 10 | Unobstructed space: 10' between courts | 1,000 | 2-4 |
| American Shuffleboard | 52 | 6 | Unobstructed space: 2' on sides; 4' between courts, 2'6" on ends | 570 | 2-4 |
| Handball (4-wall) | | | | | |
| AAU Standards | 46 | 23 | Height - 23' | 1,058 | 2-4 |
| YMCA Standards | | | Height - 23' | 800 | |
| Bowling 4-lane installation w/sub-surface ball return. | 105'6" | 26' | (inc: pin storage and tool area, lanes, passageway approach, seating area, ball storage | 2,743 | 8-16 |

EXAMPLES OF SPACE REQUIREMENTS

As noted elsewhere in this study, an architectural space program consists of functional criteria, design criteria, and space quantification tabulations. We present below two examples of space needs tables for a community building, but cannot describe functional or design criteria in either case until specific program details are known. The purpose for giving space needs tables here is to quantify site needs in preparing the master plan and to demonstrate a realistic range of uses to which the community building may be put.

The two examples are (1) a teen center with gymnasium and (2) a multipurpose center of smaller size but which still has some teen focus. The latter example is also described in terms of how the existing northeast missile silo may be utilized, and it is this example which appears on the master plan illustrations and development tables elsewhere.

Example 1: Teen Center with Gymnasium

The following is an example of a possible teen drop-in center. It must be stressed, of course, that if a teen center is contemplated, it is essential that activities, volumes of use, times of operation, and many other such factors be considered. Therefore the following example is only hypothetical and is intended to assist in preparing a more accurate program of the city's specific needs.

Design Criteria:

Design criteria should be developed along the lines of the information presented for the city hall. We cannot put a viable example here without assuming many details of the user needs and facility purpose or uses.

Space Program:

| Item | Space Allowance (Sq.Ft.) | |
|---|---|---|
| Supervisor's Office | 120 | |
| Reception Desk Area | 180 | |
| Lounge Area | 600 | |
| Snack Bar (vending machines) | 300 | |
| Game Room (electronic games, pool table, air hockey, table tennis) | 720 | |
| Weight Room (lockable, one universal gym unit and open exercise area) | 600 | |
| Storage Room | 180 | |
| SUBTOTAL | 2,700 | |
| Gymnasium/Multi-use Room | 7,000 | |
| Locker/Lavatories | 1,200 | |
| TOTAL | 10,900 | net sq.ft. |
| Add 14% for circulation/layout | 12,400 | |
| Gross sq.ft. (divide by .85)[13] | 14,600 | |

[13] Assumes lavatories with locker areas; allows 5 percent mechanical room.

Example 2: Multipurpose Center

This example is similar to Example 1, except that the gymnasium is replaced with multipurpose activity areas and the entire program is scaled to allow locating some youth-oriented functions in the existing northeast silo and other activities (for all ages) in an above-grade structure on adjacent park land.

Design Criteria:

The same comments as in Example 1 regarding the need for user data and for design criteria development also apply here.

Space Program:

| Item | Space Allowance (Sq.Ft.) |
|---|---|
| Above Grade | |
| Supervisor's Office | 120 |
| Reception Desk Area | 180 |
| Snack Bar (vending machines) | 300 |
| Reading Room/Lounge | 420 |
| Multipurpose Room (divisible into smaller areas as needed) | 3,000 |
| Chair and Table Storage | 180 |
| General Storage | 180 |
| Kitchen (catering) | 420 |
| Restrooms | 360 |
| SUBTOTAL | 5,160 |
| Add 14% for circulation/layout | 5,882 |
| Gross sq.ft. (divide by .85) | 6,920 |

(continued)

Space Program (cont'd):

| Item | Space Allowance (Sq.Ft.) |
|---|---|
| In Silo | |
| Game Room (electronic games, table tennis, air hockey, etc.) | 720 |
| Weight Room | 600 |
| Locker/Lavatories | 800 |
| Storage | 120 |
| SUBTOTAL | 2,240 |
| Add 14% for circulation/layout | 2,554 |
| Gross sq.ft. (divide by .85) | 3,000 |
| Total Gross Sizes | 9,920 |