

5

Design Considerations

5 - 1

Using This Chapter

This chapter addresses the process of turning the planning concepts and building programs into designs for Community Activity Centers. It presents the design goals, considerations and relationships essential to design criteria setting, preliminary design, and design development of these centers. Most critically, it provides an approach to consolidated design, for organizing and relating the multiple functions and spaces of Community Activity Centers. Design criteria for the individual functional areas within centers are covered in the Design Guides for the respective facility-types, which are excerpted and referenced in Chapter 7.

Design criteria requirements, pre-concept control data, and concept design stages of project development are the primary responsibility of the District Engineer. However, Morale Support Activities personnel, other using services, and involved post user groups influence these efforts through the programmatic requirements included in the PDB and 1391, which should reflect an understanding of the general design considerations presented here. The concept design stage also provides a final opportunity for all these on-post participants to provide input to the project through review and approval of the designs, before final design proceeds. The considerations and recommendations in this chapter should provide a general basis for reviewing concept designs.

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b. Better Space Utilization

(1) Open Design. Each activity should be open to each other as much as possible so that the users become aware of the activities available. The activity spaces will benefit in liveliness from the activity of other areas. This is essential to build the sense of a community-centering place. The feeling of openness will increase the attraction and frequency of use, as well as the vitality of each individual function.

(2) Eliminate Duplication. Nearly all CAC functions require similar support spaces such as control areas, offices, lobbies, lounges, toilets, circulation and maintenance space. Many contain snack bars or vending areas. When functions are consolidated, these areas can be shared among the various activities in the center, reducing square footage by eliminating duplication. In addition, equipment storage, supply, check-out and sale for multiple functions can be combined in one location under single staff control. These support spaces should be designed so that they are accessible as needed from the various activity areas, with minimum duplication (see figure 5 - 2).

(3) Share Spaces. Consolidated facilities provide opportunities for two or more activities to share the same space. This may occur with similar activities such as the theatre scene shop and arts and crafts woodworking, which can share the same space and equipment. It may also occur in a space used by very different functions at different times: such as a multipurpose gymnasium used for sports, performances and dances; or meeting rooms used for music listening, sewing classes or club meetings.

To permit such shared use, spaces should be designed to be flexible and multipurpose. They should not be located or have a design image that suggests they are primarily for use by one program only. They should have movable or removable equipment and furnishings, and possibly movable partitions. There must be adequate, convenient storage for the equipment required by the different functions that use the space - more storage than is typically required for single-use spaces.

(4) Permit Separation. While sharing spaces and overlapping territories between functions is important for consolidated space savings, some distinctions of space are also important. The clear identity of individual programs is key for visibility and user attraction. Functional areas of the center must be distinct enough, and the circulation system so designed, that certain areas and programs can remain open and active while others are closed. This functional separation is essential to achieve efficiency of building operations, staffing and mechanical systems.

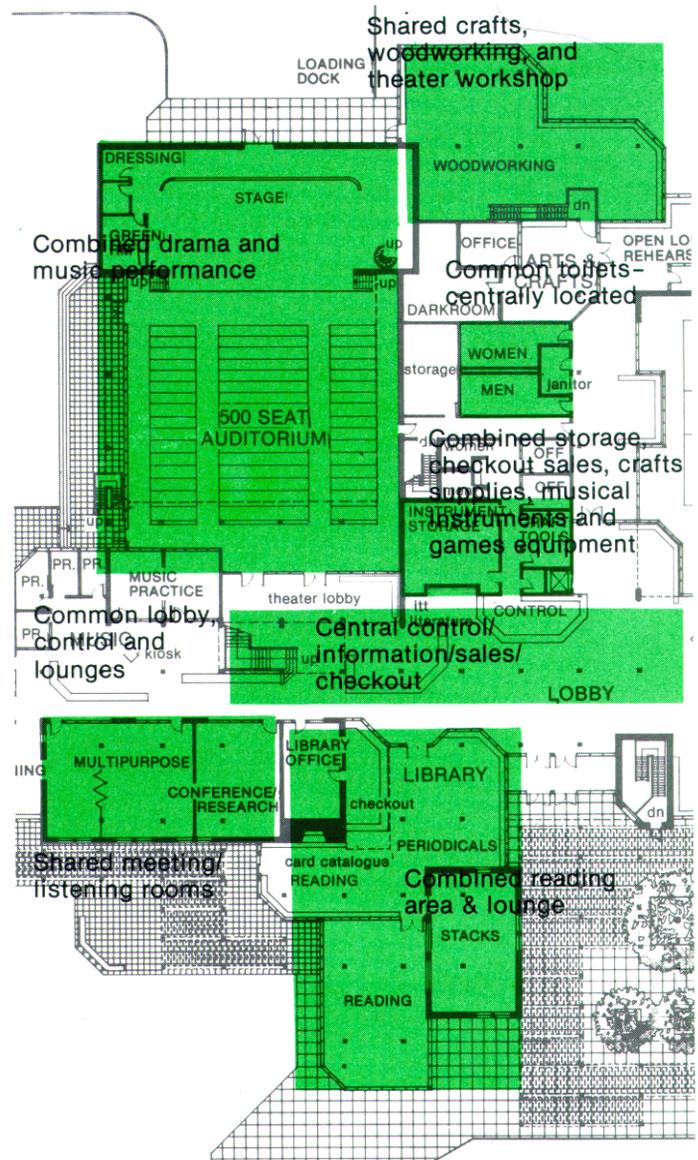


Figure 5 - 2 Space Savings

c. Effective Staffing

(1) Increase Staff Accessibility. Community Activity Centers should be designed so that staff are situated in highly visible and accessible locations in the center of the facility. Staff are thus more readily accessible to the users. This reinforces the efficiency of centralized staff overview and control over the multiple activities taking place (see figure 5 - 3).

(2) Use Versatile Support Staff. Due to the proximity of different activities within the center, it should be possible for CAC staff to oversee and support more than one activity at a time. Versatile support staff can begin to assume more of the general responsibilities for operating the center, as well as some of the less technical aspects of the specialized programs. Where appropriate, program specialist staff should be cross-trained to supervise many activities throughout the center, not just individual programs.

(3) Increase Coordination. It is far easier for staff to coordinate programs if they are located in the same center. In some cases, this may lead to interaction between the staff and users of one facility with those of another. For instance, people using the music facilities in a center may begin to take an active role in establishing a music-oriented collection in the branch library. This is an example of how facility consolidation will assist in implementing true activity integration.

(4) Reduce Numbers. Consolidation will probably yield significant overall staff savings to a post's MSA program. This will be brought about, in part, by personnel reductions in centers where similar activities can be supervised by fewer staff than would be required for separate facilities. Administrative and control areas can be centralized so that the staff can more easily supervise more than one activity. Specialized spaces should be located in areas which have easy access and overview from this control area, and should be designed with maximum use of glass walls to facilitate visibility.

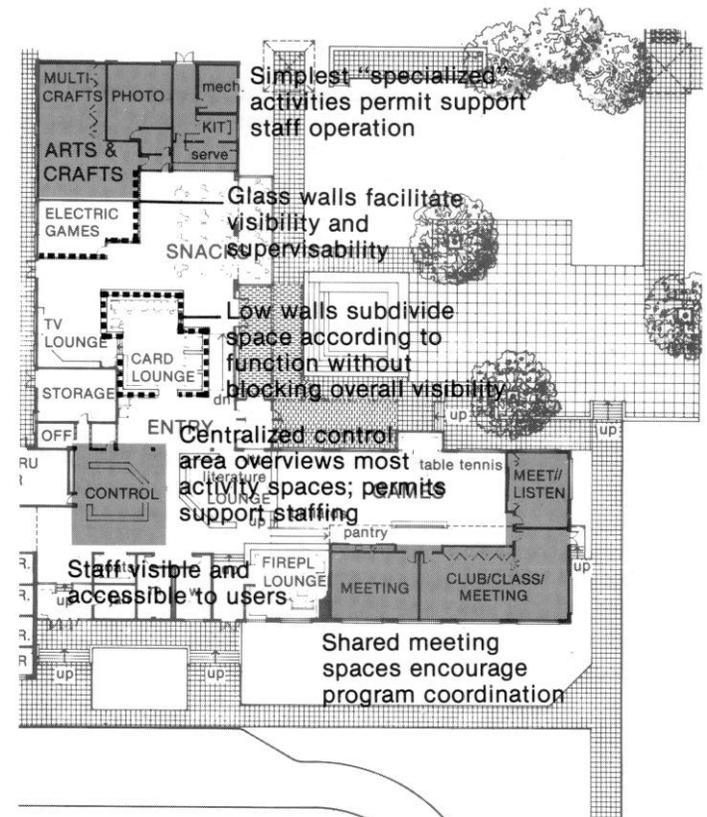


Figure 5 - 3 Staff Efficiency

d. Sense of Community

A strong sense of community contributes greatly to the morale and well-being of the military population and their families, serving to enhance their quality of life. The co-location and consolidation of activities in Community Activity Centers can reinforce this sense of community in several ways.

(1) Concentrate Activities. The level of activity in consolidated centers is inevitably greater than that in separate facilities, due to the multiple activities occurring at once, and to the greater numbers of users in the same place. This concentration of activity provides a focus for the community and creates a sense of liveliness at the center, a place of major importance for the whole post, or for the individual troop billeting or family housing area (see figure 5 - 4). The opportunity for encounter and interaction between different groups of the community members, and among users and staff with varied interests, increases the dialogue among community members

and ultimately improves the sense of community and morale of the entire post.

(2) Establish an Image. The consolidation of MSA and other community activities, in one central place, makes it possible to establish an image for the facility which is highly visible and recognizable as the place where community activities occur. The design should strive for a sense of identity - an open, attractive image - the users' own place. This image of a place where social, educational and recreational activities are ongoing can help to reinforce the positive feeling of community on the installation.

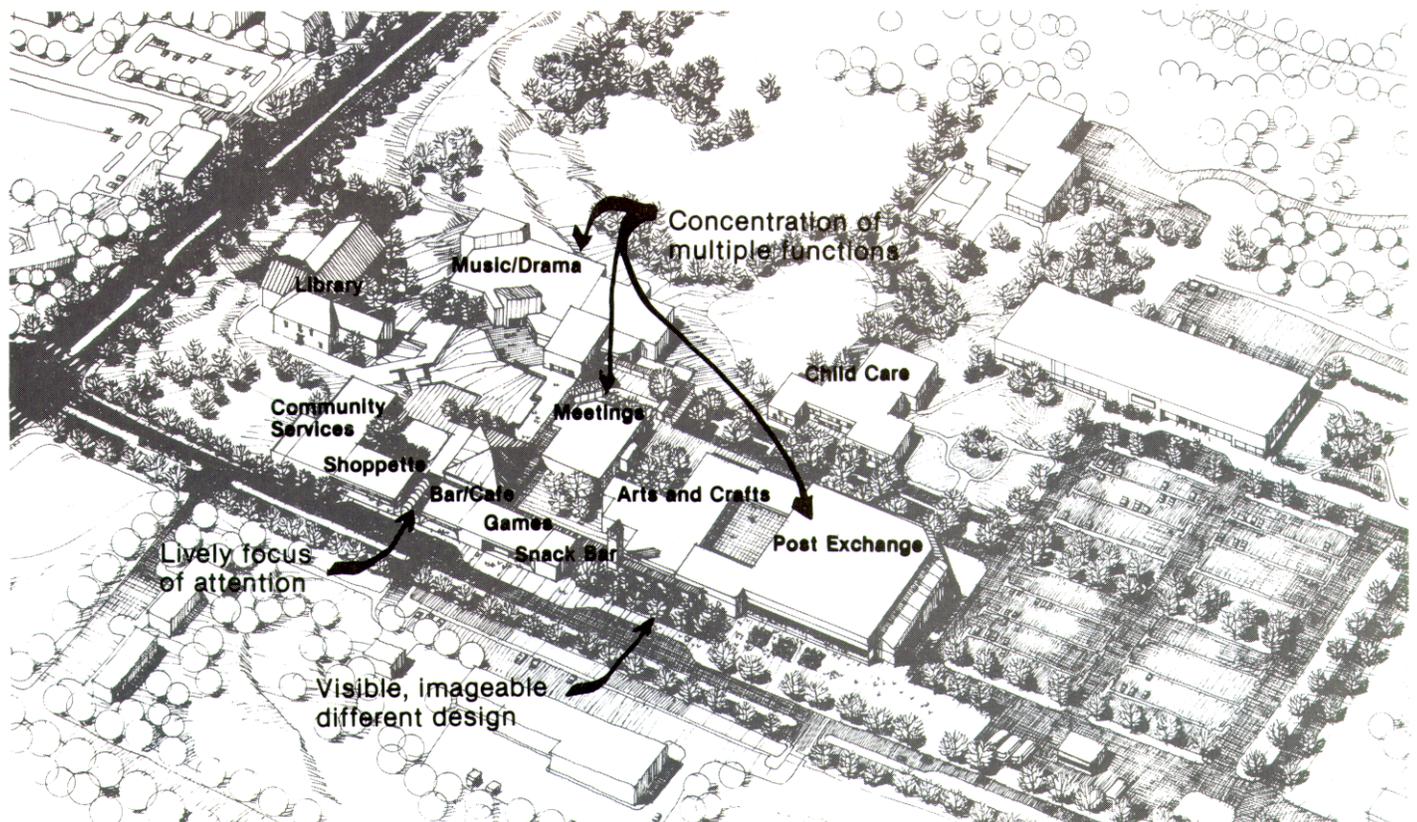


Figure 5 - 4 Activity Concentration

e. Family Support

(1) Design for Entire Family. Providing community facilities for military families, and supporting the sense of family, is a basic goal of the Community Activity Center concept. Consolidating a number of activities into one family center means that an entire family can use the center at one time, by providing something for everyone. This is very important considering the logistical and transportation problems which families experience with children of different ages and interests. Centers which provide child care as well as activities for parents and older children serve families who would not otherwise be able to participate in these activities.

Providing facilities for families is primarily an issue of programming and scheduling the use of the spaces. Some considerations relating to use by families affect the design of the center. Lounges, toilets, support areas and all furnishings and equipment must be designed to accommodate adults and children of different ages. Child care spaces should be convenient to activity areas likely to be used by parents. Some distinct spaces that can provide the separate “turfs” desired by different age/youth groups are important in family centers, especially in the lounge/recreation areas (see figure 5 – 5).

(2) Support Housing Areas. There are few community support facilities in family housing areas on post. MSA facilities used primarily by troops tend to discourage use by families. Centers designed for families and located in the family housing area will fill a critical need and will be heavily used. They will reinforce the sense of cohesiveness and community in the housing area, by creating an accessible, identifiable focus for the neighborhood. Their image, visibility, and location should be designed to support these goals.

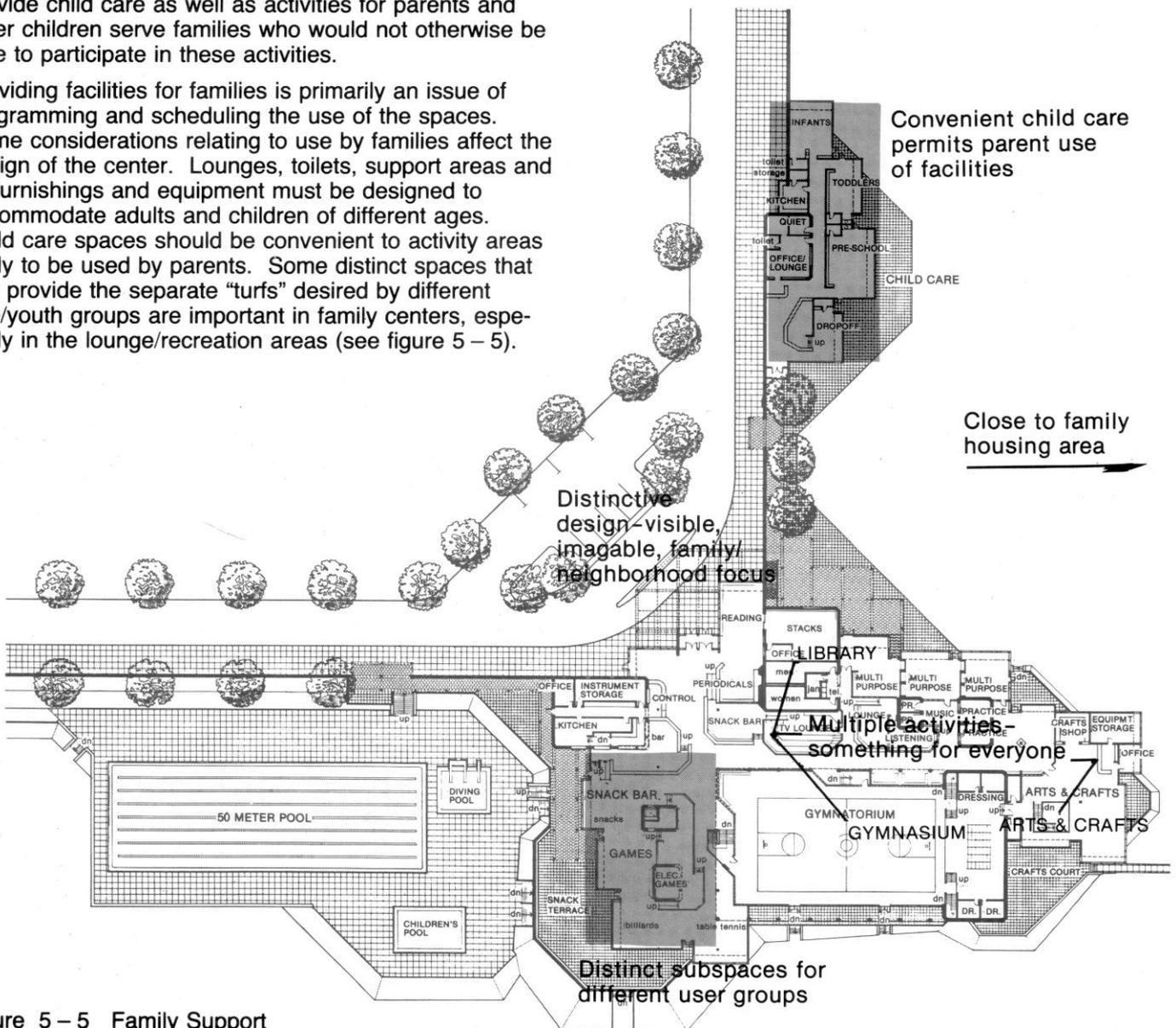


Figure 5 – 5 Family Support

f. Convenience and Choice

(1) Locate Conveniently. Convenience of access and use are most effectively ensured by locating Community Activity Centers near the users they serve, or along the routes to other activities they regularly use. Main Post Centers should be on primary roadways, near central concentrations of post activities. Local Centers should be located in or adjacent to the billeting or housing areas served, or along the most heavily travelled pedestrian routes in and out of the individual residential areas. Design of entrances and circulation paths in and around the centers should relate closely to already-used paths (see example figure 5 - 6).

(2) Encourage User Interest. The variety of activities provided in a consolidated CAC is more likely to attract many users. In separate, specialized facilities which provide only a single activity, people who are unfamiliar with

the activity may be reluctant to visit the facility. When these activities are combined or consolidated with more familiar recreational activities, it is easier for users to make use of the facility and explore new activities. A visually open design that provides views from the outside, as well as between activity spaces, can expose users to new areas of interest.

(3) Provide Options. The consolidation of activities in Community Activity Centers provides a diverse range of choice - from relaxing lounging to active sports, from shopping to cultural activities. This means that users can choose to participate in more than one activity in the center and find satisfaction for their diverse interests. It also means that the visitors' curiosity can be stimulated by exposure to a variety of events.

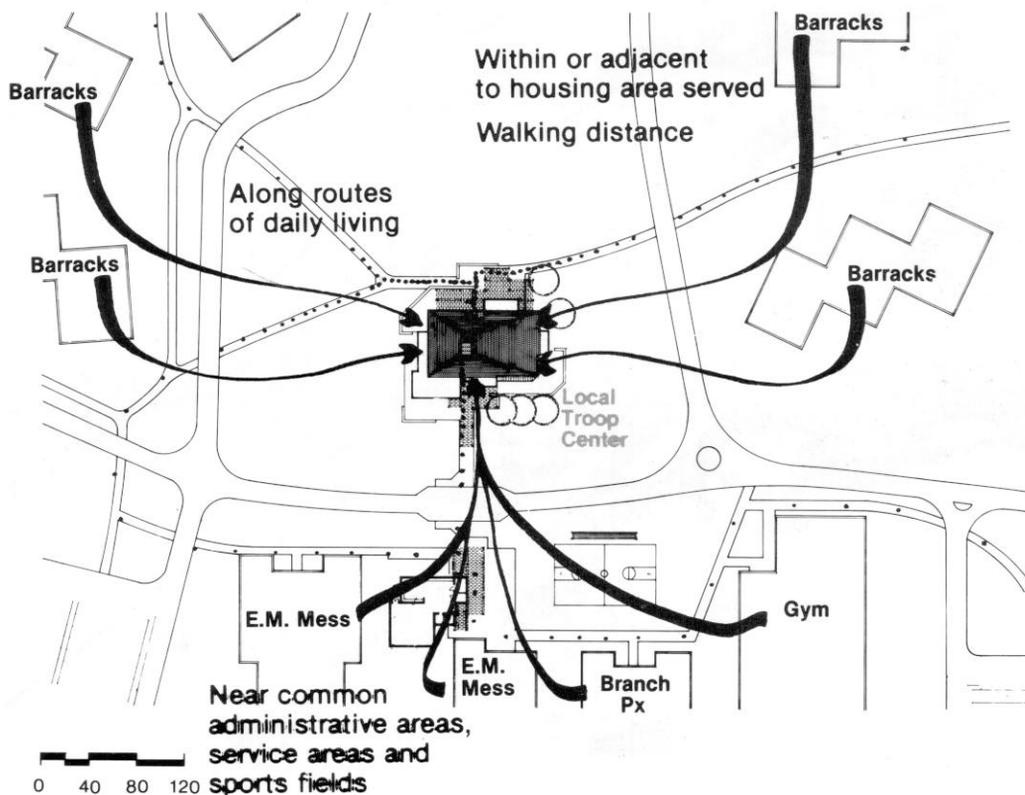


Figure 5 - 6 Convenient Location

g. Design for People

The design of the Community Activity Center should reinforce the principle of service to the community and the individual user. The design itself can reflect this by conveying a non-institutional, welcoming quality to its users.

(1) Create an Identifiable Image. The CAC should have an identifiable architectural image that is different from other buildings on post. It should strive to be attractive and open, revealing the lively, and have leisure-time activities inside. The soldiers, families and other users should be able to identify with the CAC as their place and the center of their community (see figure 5-7).

(2) Express Multiple Elements. The design of the CAC should express the multiplicity of activities among which the user can choose. The various program-areas should be evident in the configuration of the building itself. In this way, even in a large facility, the building can exhibit a comfortable sense of scale that is not overwhelming. Multiple entrances, relating to different function areas, will reinforce this sense of diverse activities and small scale.

(3) Provide a Sense of Privacy. Despite the need for appropriate instructional and protective supervision, the user of a CAC should not have a sense of being watched. Oversight can be provided without intruding on the users with an overbearing sense of control. The design of the control desk should express openness and invitation.

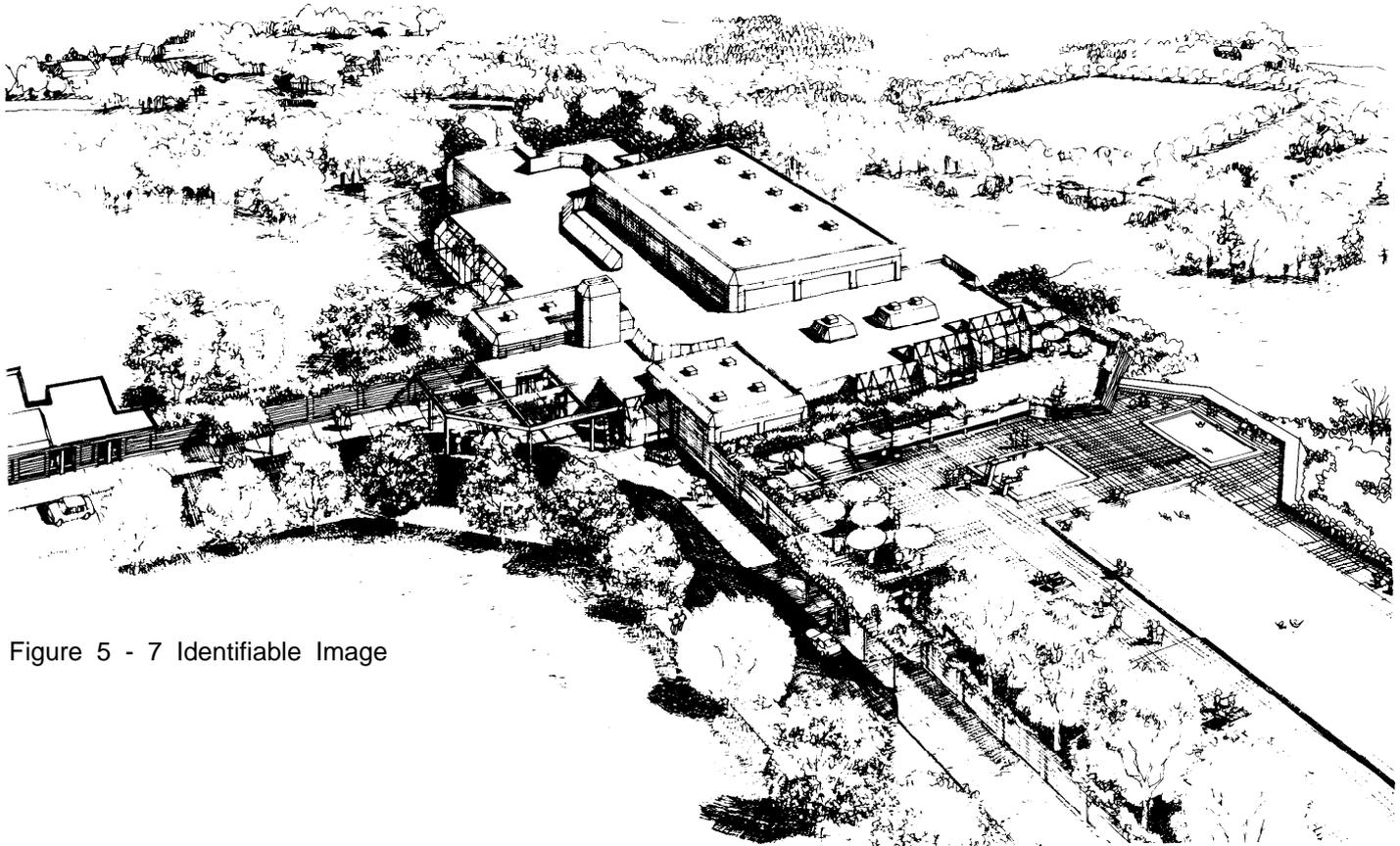
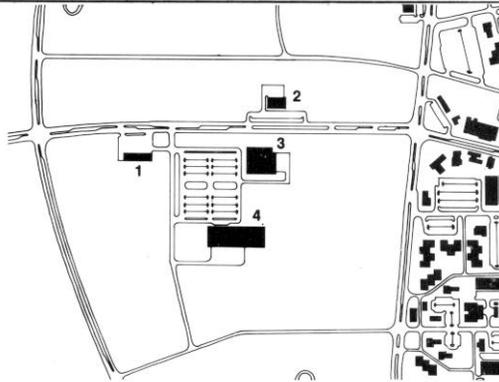


Figure 5 - 7 Identifiable Image

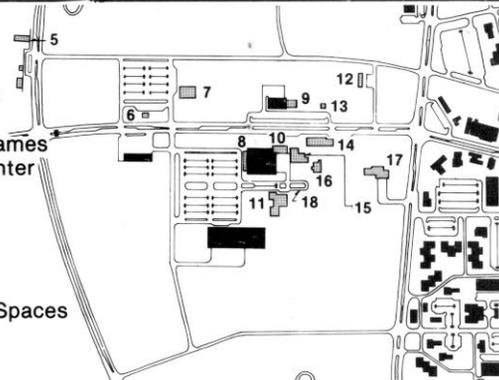
Phase 1

- 1. Gas Station
- 2. Post Office
- 3. PX
- 4. Commissary



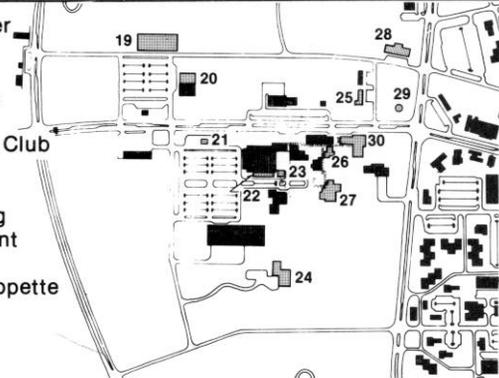
Phase 2

- 5. Central YAC
- 6. Bus Station
- 7. Cinema 1
- 8. Service Stores
- 9. Bank
- 10. Snacks and Games
- 11. Child Care Center
- 12. Guest House
- 13. Laundry
- 14. Bar/Cafe
- 15. Arts & Crafts/
Craft Store
- 16. Multipurpose Spaces
- 17. Library
- 18. Drop-off Loop



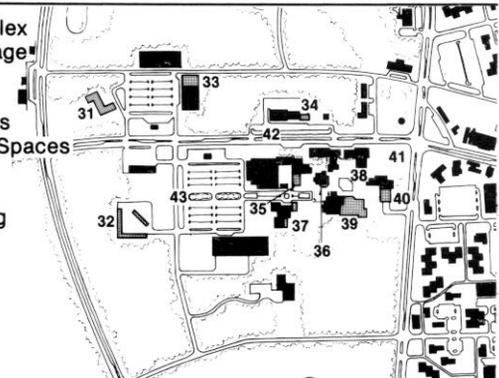
Phase 3

- 19. Bowling Center
- 20. Cinema 2
- 21. Car Wash
- 22. Service Stores
- 23. Thrift Shop
- 24. Family Health Club
- 25. Guest House
- 26. Lounge
- 27. Music Building
- 28. Post Restaurant
- 29. Post Museum
- 30. ACS/AER/Shoppette



Phase 4

- 31. Theater Complex
- 32. Self-Help Garage
- 33. Cinema 3
- 34. Credit Union
- 35. Arts and Crafts
- 36. Multipurpose Spaces
- 37. Child Care
- 38. Amphitheater
- 39. Music Building
- 40. Library
- 41. Town Green
- 42. Main Street
- 43. Mall



h. Phased Development

Some CAC facilities should be designed to be built over time as a sequence of construction projects, thus accommodating available funding, and resulting in a unified complex based on a phased master plan. Whether for a single building or a complex, plans should permit parts to be built at different times and to operate in the interim as workable wholes (see figure 5 - 8). Alternative phasing possibilities should be considered in order to respond to unanticipated conditions.

An architectural master plan of the whole facility complex should be designed from the beginning, to set the pattern of relationships between all elements and guidelines for their design development. The detailed design of each part should respond in form and circulation patterns to the uses of all nearby building elements. Efficient operation, access and staffing must be possible at all stages of partial and final completion. This may require changes in the use of certain spaces as the facility grows, with space built for one purpose and then later modified, or built to accommodate a future stage of demand but partly used in the interim for other functions. Such phased use patterns, and the configurations and temporary construction required to accommodate them, should be understood and designed from the beginning of the project.

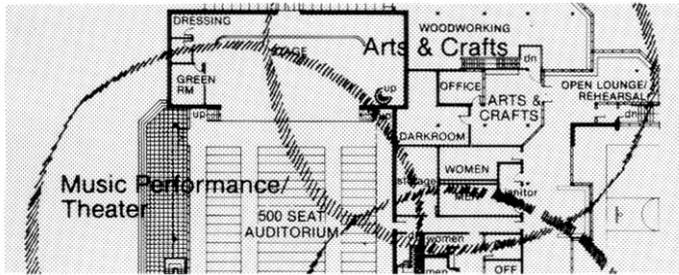
Figure 5 – 8 Phased Development

i. Energy Conservation

The Community Activity Center should be designed to minimize energy consumption. It should take advantage of the applicable considerations of siting, building orientation, landscaping, layout, enclosure, insulation, glazing, passive solar design, wind protection and wall shading, in order to reduce energy consumption and expenditure.

In addition, the CAC is a consolidated facility with component elements that may have different operating schedules, leaving some parts of the building open while others are closed. The mechanical and electrical systems should be designed to permit energy-efficient operation of the whole building or of its parts. This may require zoning of the building and its heating and cooling systems. More than one mechanical system may provide a more flexible and efficient design. The mechanical system alternatives should be compared through life-cycle costing, as well as other building design and system options, for an energy-efficient choice.

The consolidated nature of the CAC requires special consideration of the design of the mechanical and electrical systems. These include the special power demands of ceramic kilns, theatre lighting, electronic audio-visual equipment, the ventilation, exhaust and waste disposal requirements of woodworking, metalworking, painting and other crafts processes, among others. These individual needs and the most flexible and energy-efficient means of meeting them with single or composite systems should be analyzed in the early stages of mechanical and electrical system design.



5 – 3

Design for Consolidated Activities

Design for consolidated activities involves procedures to aid the design of Community Activity Centers. These include a system for analyzing, organizing and relating the various functional spaces of the centers. They address the key issues in CAC design: What does consolidation mean for MSA and community facilities? Which functions are consolidated and which not? What degrees of sharing and relationship apply and where?

a. Accessibility and Supervision

A key goal of consolidation is to encourage sharing of spaces and supportive relationships between functions and to provide more attractive and actively utilized facilities. To best accomplish this, the spaces accommodating the activities should be open and accessible to users as often as possible. The need for supervision sometimes restricts completely free access to the space. The goal of good design for consolidated activities should be to maximize the degree of accessibility and minimize the amount of space not always available for use.

The activities in a CAC require varying degrees of supervision. Some activities, such as table games and casual reading, require little or no supervision. The most specialized functions may require full supervision, typically by program specialists. The swimming pool must be supervised by lifeguards at all times, the woodworking shop requires a crafts specialist whenever it is in use. This need results in controls that limit access when supervision is not available. However, not all aspects of the specialized programs require this high degree of supervision or access control. Many of the supervisory

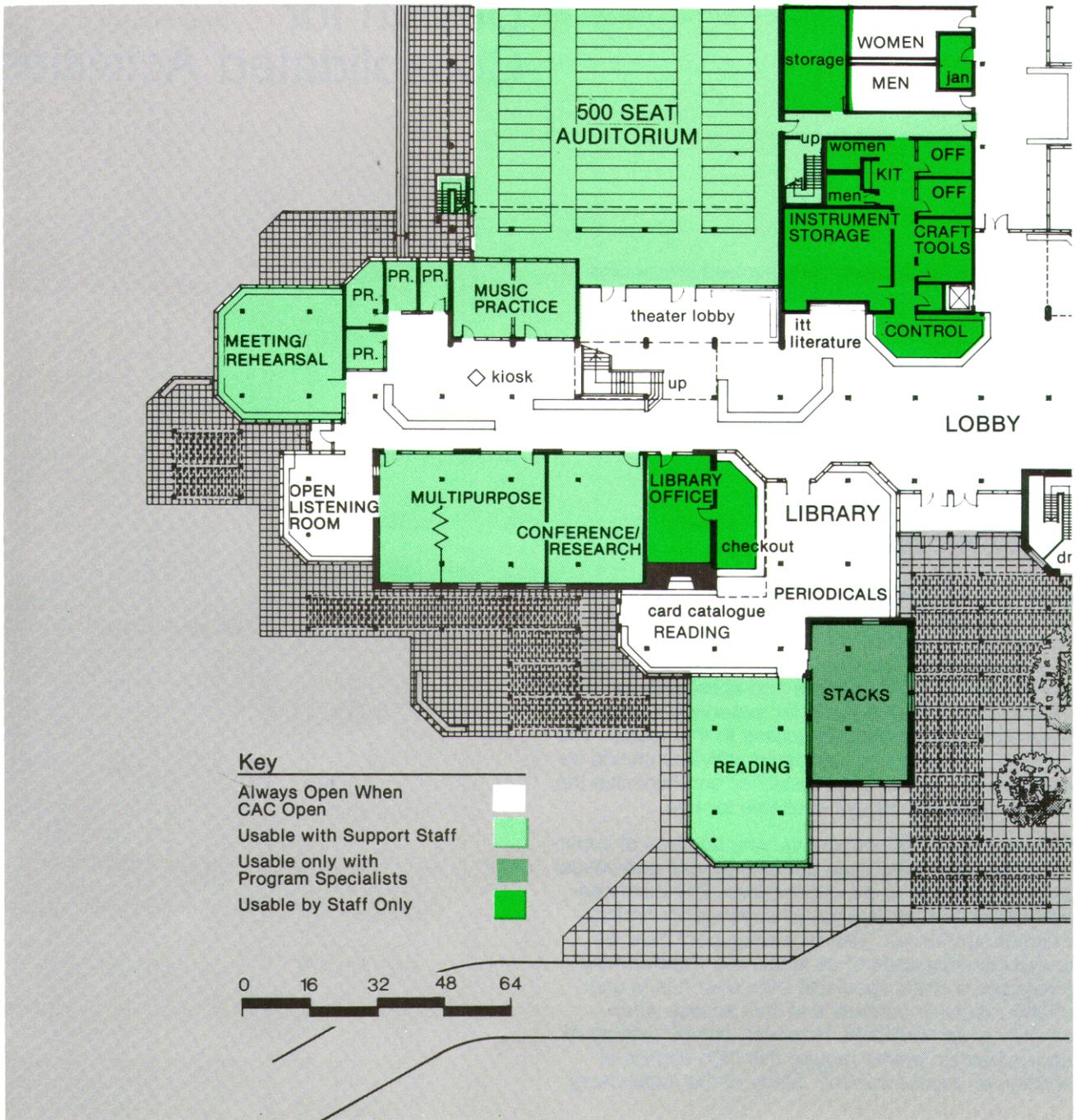


Figure 5 – 9 Design for Consolidated Activities: Zone Definition

roles can be performed by support staff, who are also serving other functions in the center. The various program facilities of the CAC should be designed so that the areas which require stringent supervision and controls are kept to a minimum, while the more flexible and less dangerous areas and support spaces are consolidated with the accessible nonspecialized spaces. The effect is to create a Community Activity Center of mostly open spaces, operated and supervised primarily by support staff, with occasional interruptions of more closed spaces where supervised specialized activities occur.

b. Zoning

Consolidation and openness can be achieved by breaking each function into zones, which define those areas that must be kept separate and supervised - like locked storage or spaces with expensive, technical equipment - and those which can be shared and open - like the reading room/lounge. Design for consolidated activities uses four zones of varying degrees of openness and need for specialist supervision, as illustrated in figure 5 - 9.

(1) Always Open. This zone includes areas open and accessible at all times when the center is open. No program specialist supervision is needed.

(2) Usable With Support Staff. This zone includes areas that are accessible to users without supervision by program specialists. Control of use by support staff, not necessarily within the same space, is sufficient.

(3) Usable Only With Program Specialists. This includes areas which can only be used with the presence and supervision of program specialists.

(4) Staff Only. This zone is for spaces to be used by staff only, never for users.

c. Achieving Design for Consolidated Activities

Design for consolidated activities can be achieved in all types and sizes of Community Activity Centers - Main Post Centers and Local Centers, single buildings and complexes - as illustrated in figures 5 - 10, 5 - 11 and 5 - 12. These illustrations suggest which types of spaces fall in each of the four zones. However, these categorizations are not absolutes. The classification of a function-area will vary from center to center, depending on the program characteristics and design constraints.

The architects, programmers and program staff should use the concept of zones to develop the pattern of openness and accessibility which best fits the local program and needs. In general, designers should strive to maximize accessibility and visibility in order to make an open design fit as many functions as possible. For example, a space can be provided with all glass walls and doors which gives visibility yet acoustic separation, and curtains for periodic visual privacy, unless privacy in this space is always required.

Certain types of functional areas commonly fall into one particular zone. As the illustrative plans show, the social activity areas (lounge, games, television, snacks, and multipurpose meeting spaces) and the support spaces (toilets and circulation) are typically in zone (1), "always open." Music practice rooms, listening rooms, performance halls, and gymnasiums are usually in zone (2), "usable with support staff." Child care, retail commercial outlets, ACS/AER services, snack bar kitchens, general supplies/equipment checkout and sales are commonly found in zone (3), "usable only with program specialists." Offices, locked storage, specialized control and equipment functions are typically in zone (4) "staff only."

Many functional areas will vary in their zone indication depending on size, complexity and the degree of specialization involved. For example, woodworking and photography spaces in the small Local Center (figure 5 - 12) and woodworking and general crafts in the large Local Family Center (figure 5 - 10) are in zone (2) "usable with support staff," because they are of a small and simple enough level of operation to be run without program specialists. However, in the Main Post Center (figure 5 - 11), the photography and woodworking areas are zone (3), "only with program specialists," because they involve more complex, expensive and dangerous equipment and operations, while the simpler ceramics and general crafts areas can be zone (2), under support staff supervision.

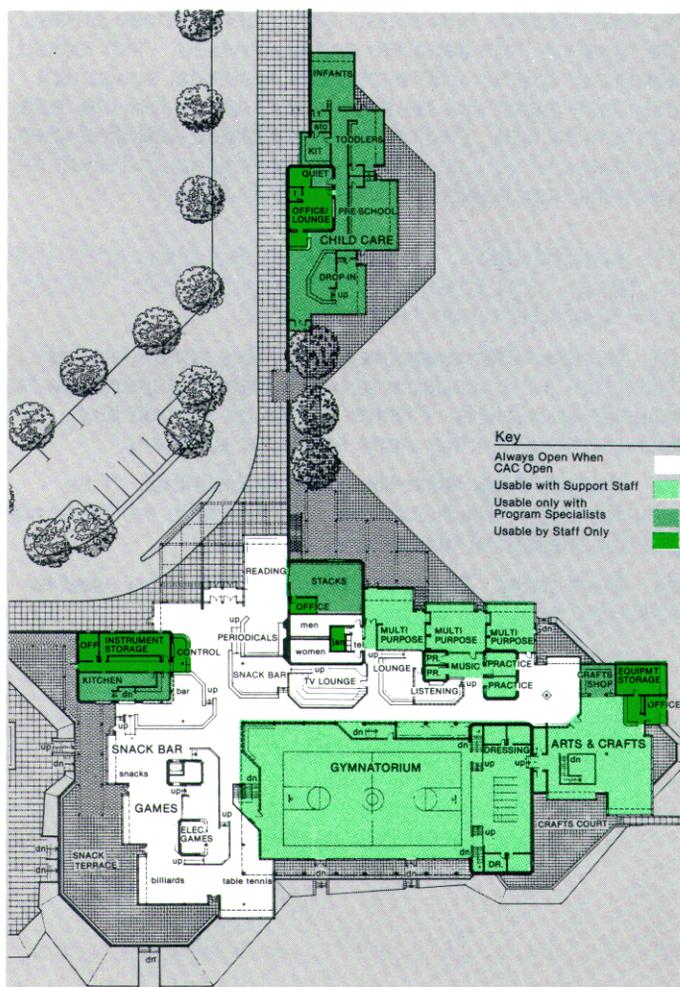
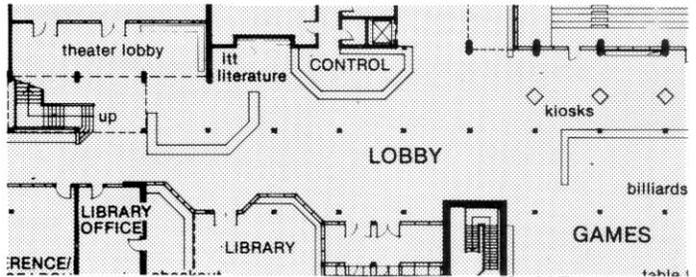


Figure 5 – 10 Design for Consolidated Activities:
Large Local Center

5 - 4



Relationships

In designing the Community Activity Center, relationships between functional spaces of the consolidated programs are critical. These may be positive relationships which the design should reflect and encourage; visibility, accessibility, space sharing, programmatic coordination and support. These may also include negative or conflict situations which the design should control; acoustic interference, dirt transmission, exposed hazards, conflicting crowd movement. The following summarize generalized relationship considerations to be applied as appropriate to each CAC design.

a. Specific Program-to-Program Relationships

Tables 5 - 1 and 5 - 2 indicate significant relationships between individual functional spaces of the primary programs included in the Community Activity Center. Comments on the relationships of each program to all other parts of the center are presented in paragraph b, below.

(1) Complementary Program Relationships (see table 5 - 1):

- **Program Coordination/Direct Support** - significant opportunities for coordinated program operation, such as audio-visual functions and specialized book collections between library and music or theatre, or child care and arts and crafts jointly developing children's crafts activities, and direct program support relationships, such as the recreation area snack bar serving refreshments for music performance intermissions, or arts and crafts woodworking supporting theatre set production.
- **Multipurpose Meeting Room Sharing** - space sharing opportunities for classes, clubs, music practice and listening, theatre rehearsals, small group meetings, dance and exercise, special child care activities, etc.
- **Gymnasium Space Sharing** - multipurpose/large space sharing potentials, for athletics, theatre and music performances, dances, banquets, entertainment programs and other events.

Table 5 - 1 Program-to-Program Relationships: Complementary

	Child Care	Bowling	Gymnasium/ Swimming	Social Activities				Arts & Crafts	Theatre	Music
				Large Events	Small Groups	Snacks/ ITT	Lounge/ Games			
Library	P,M		P		P,M		P	P	P,M	P,M
Music	P		G,S	P,S,G	M,S	P,S	S	S	P,S,M	
Theatre	P		G	G	M	P,S	P,S	P,S		
Arts & Crafts	P		S		M,S	P,S	S			
Social Activities	Lounge/ Games	P,V	S,V			P,S				
	Snacks/ ITT	P,V	V							
	Small Group	M	M,S							
	Large Events		G							
Gymnasium/ Swimming										
Bowling										

Key
 P = Program coordination potential, or direct support relationship.
 M = Multi-purpose meeting room sharing potential.
 G = Gym/auditorium space sharing potential.
 S = Consolidated operation of supply and sales of equipment and tickets.
 V = Visibility relationship between program spaces.

- **Supply and Sales Consolidation** - potential space, operations and staffing consolidation of equipment supply, check-out and sales for various functions -such as crafts materials, musical instruments, games and sports equipment, as well as ticket booking and sales, for ITT, music and theatre performances, and other events.
- **Visibility** - clear visibility between program-areas when required, such as lounge/snack eating area to gymnasium activities, and general visibility from lobby/control and circulation to most activity spaces.

Table 5 - 2 Program-to-Program Relationships: Conflicts

	Child Care	Bowling	Gymnasium/ Swimming	Social Activities				Arts & Crafts	Theatre	Music
				Large Events	Small Groups	Snacks/ ITT	Lounge/ Games			
Library	N	N	N,W	N		W	N	N,D	N	N
Music	N	N	N,C,W	N,C	N	C	N	N,D	N,C	
Theatre	N	N	N,C,W	N,C	N	C	N	N,D		
Arts & Crafts	N,D	N,D	N,D,W	N	N	N	N			
Social Activities	Lounge/ Games	N	N	N	N					
	Snacks/ ITT	N	N	N,C	N					
	Small Groups	N	N	N,W	N					
	Large Events	N	N	N,C,W						
Gymnasium/ Swimming	N,W	N,W								
Bowling	N									

Key
 N = Noise intrusion, one way or the other.
 D = Dirt pollution.
 W = Unwanted Wetness or food spillage.
 C = User crowd traffic conflict potential.

(2) Conflicting Program Relationships (see table 5 - 2):

- **Noise** - acoustic intrusions requiring isolation and sound-proofing, noise reduction, or distant spacing.
- **Dirt** - dust, wastes, toxic or noxious products, primarily from various crafts activities like woodwork, ceramics and painting which should not be allowed to affect other program-areas. This may be controlled by space isolation, dust collectors and separately-zoned ventilation/exhaust systems.
- **Wetness/Food** - water, wet activities and foods, from swimming pool and snack bar, should be prevented from entering particularly sensitive spaces such as library and musical instrument areas.
- **Heavy User Traffic** - potentially conflicting heavy user traffic from multiple, simultaneous large-group events, such as theatre performances, spectator sports and dances, require appropriate design of circulation capacity, separate entrances, or time scheduling.

b. General Program Relationship Considerations

The following summarizes general relationship considerations between each primary program-area and other functional spaces in the Community Activity Center (see figure 5 - 13 for illustration of major issues).

(1) **Library.** The library in a consolidated facility can serve an important program coordination and support role relative to almost every other activity in the Center. It can serve as a central source of reference documents,

periodicals and audio-visual materials dedicated to each specific activity. With increasing use of computers and audio-visual materials as integral parts of activity programs - for reference, activity recording, programmed learning, entertainment - the potential exists for a shared facility for this expensive equipment, for use by library, sports, crafts, music, theatre and any other program use that this availability will stimulate. Multipurpose use of meeting rooms and combination lounge/reading/periodicals space are other sharing potentials for the library.

Isolation from distracting noise elsewhere in the center is a factor for the library relative to all the other functional areas, including circulation. A reasonably sound-isolated enclosure should suffice. Time-of-operation patterns

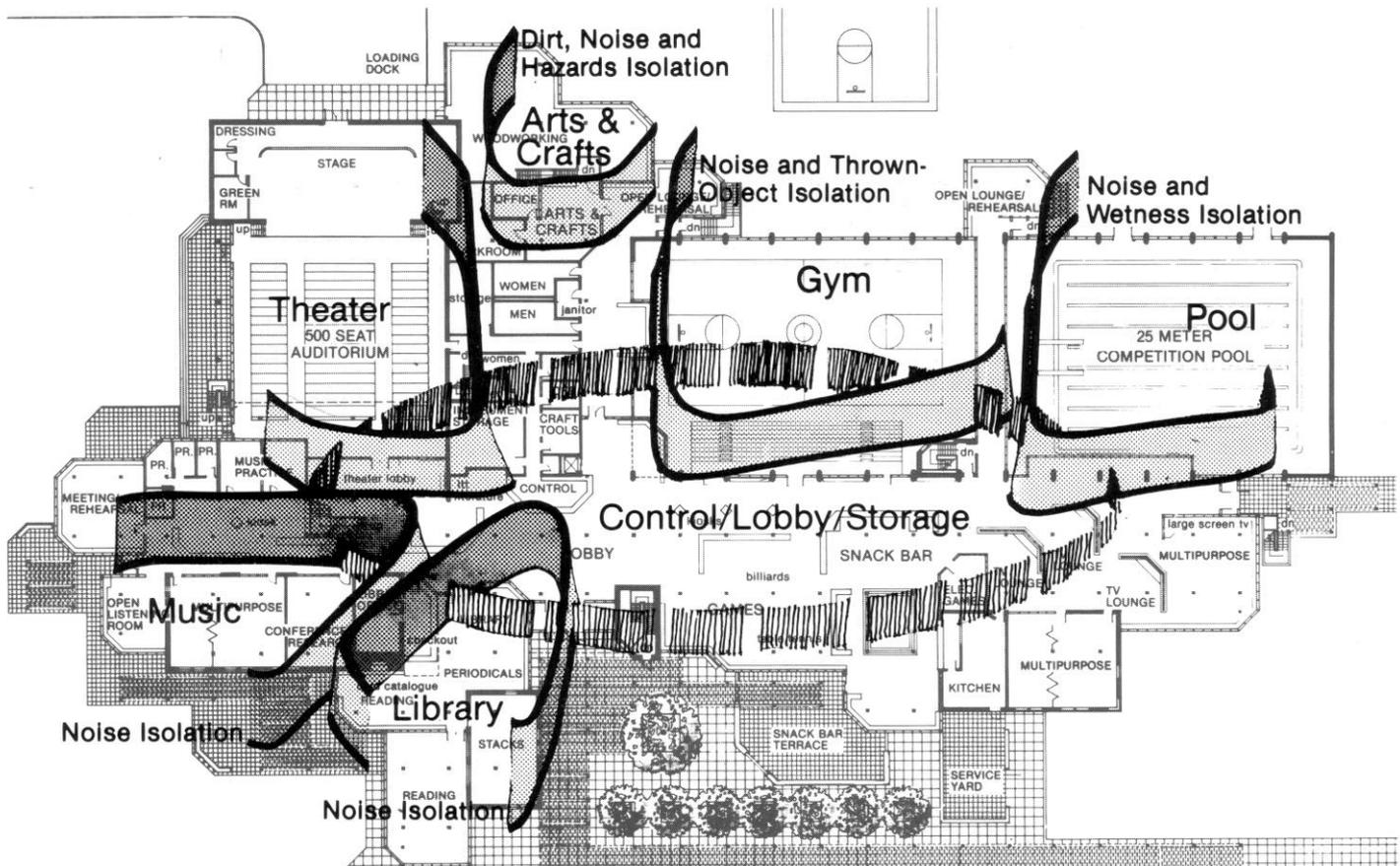


Figure 5 – 13 General Program Relationship Considerations: Local Troop Center

may also conflict, the library commonly being open longer hours than the programmed functions, an issue that functional separability of zoned areas of the CAC should handle. Electric supply issues should also be carefully addressed, to be adequate for potential electronics and computer equipment.

(2) Music and Theatre. Music and theatre programs may share multipurpose space, which may also be used for other functions - films, training, lectures. To permit shared performance space to work, particularly in a multipurpose gym situation, the space must be able to be dedicated to music and theatre not only for the performance times, but for the whole period of preparation, rehearsals and stage set-up between performances. The woodworking/theatre-set shop, and performance equipment storage, can also be successfully combined, but require adequate volume and possible dedication of space strictly for set building and storage for periods of time. Lobby space for performances should be shared with general CAC lobby/circulation space, but must be designed to accommodate music and theatre box office/ticket needs, display boards, and refreshments/snacks, all of which can be consolidated with other CAC program uses. Even dinner theatre may take advantage of consolidated support in a shared multipurpose performance space, using the snack bar kitchen for its catered food-warming requirements, although this will require more elaborate facilities and different equipment than typical snack bar kitchens provide.

Acoustical considerations are a general concern for performance, music practice and listening spaces, requiring sound isolation from concurrent noise-generating activities. Electrical needs must be addressed: heavy power requirements for stage lighting; separate circuits for carbon-arc lights so they do not disrupt sound systems, computers, televisions and other functions elsewhere in the CAC; flexible track-lighting in multipurpose performance/gymnasiums, easily stored or enclosed when not in use. Heavy user traffic could also be a problem with large attendance. Circulation and entrances must be designed to accommodate the crowd without disrupting other activities or conflicting with other large group events.

(3) Arts and Crafts. Arts and crafts has a number of potentials for program coordination and space sharing: with library, music and theatre as mentioned above; in centralized materials storage, supply, and sales; in special programs for youth activities and for preschoolers in child care; for classes in multipurpose meeting rooms; and for art exhibits and crafts display to all CAC users.

But many conflict potentials require special treatment: pollution from particulate and noxious fumes require separate ventilation and exhaust systems, dust collectors, and waste disposal; noise-generating activities like wood-working must be sound-isolated; and hazardous equipment areas must have controlled access and necessary supervision.

(4) Auto Crafts. While auto crafts facilities are not likely to be consolidated in a CAC, unless it is a large complex of buildings, it is possible to program auto crafts into or nearby the center. However, inclusion of auto crafts presents problems such as: the large work-space, parking, and equipment storage space requirements; potential visual offensiveness to users of other functions; and noxious exhaust and special drainage needs

(5) Social Activities. Social activities - lounging, games, snacks, ITT, small and large group events - have a close complementary relationship to all the other CAC functions. Their spaces should, in general, be readily accessible and visible to all CAC areas. Since many of these spaces can be integrated with the circulation and general-purpose areas of the CAC, they can intermix closely with all the specialized program areas. Specific sharing potentials exist in the use of multipurpose meeting spaces for small group activities and multipurpose gymnasiums for large events, centralized storage and supply of games and other equipment, and coordination of ITT with information and ticket sales components of other programs.

(6) Active Sports. Gymnasiums, swimming pools, handball/racquetball courts and other sports facilities are important components of Community Activity Centers as magnets for users and activators of center life. Physically, their relationship to other spaces should be one of high visibility - for spectator interest and use attraction - especially from lounge, snack, games and circulation areas. Enclosure and large glass walls will generally be required, to isolate potential noise and wetness conflicts, and to block thrown objects like basketballs. Sharing potentials occur in multipurpose use of gymnasiums and meeting/exercise rooms, and in equipment supply and ticket sales centralization.

(7) Bowling. Bowling facilities may be included in Community Activity Centers, most likely in the larger ones, especially Main Post Centers. Their relationship to the other functions is much the same as the active sports spaces, with an emphasis on design for noise isolation. The shared use of the snack bar and electronic games rooms serving the entire CAC can be an important feature of consolidation with regard to bowling facilities.

(8) Dependent Youth Activities. Youth activities will either have separate, specialized facilities for the youth, or will be integrated programmatically in other spaces within a Community Activity Center. In general, the youth prefer to have some spaces for the exclusive use of their own age group. This is particularly valid for a separate "Teen Center." Where their activities are consolidated in a Main Post Center or Local Family Center, the youth will partake of activities in all the CAC program areas. This means that design of all the spaces must reflect the size, activity preference and hazard considerations of use by youth, ages 6 to 19. Physical subdivision and time scheduling should be made feasible where age-group or dependent/military separation is advisable. The provision of multiple activity spaces - for instance, several lounge or games areas - is important to permit the youth to have some "territory" of their own, which avoids conflict with other user groups.

(9) Child Development. The child development facility functions separately from the rest of the CAC, although its conveniently accessible location is important for parents using the center. It needs to be separate for reasons of programmatic identity, independent access and reception, noise isolation, and different scale of spaces. This suggests design of either a nearby detached structure for child development (as in figure 5 - 5), or a distinctly separate wing of the center, with form and scale defined by its own program determinants. Since child development programs may provide after-school and vacation activities for children 6 - to - 12 years old, space for these should be included in the main CAC facility, and coordinated with youth activities such as reading, music and crafts.