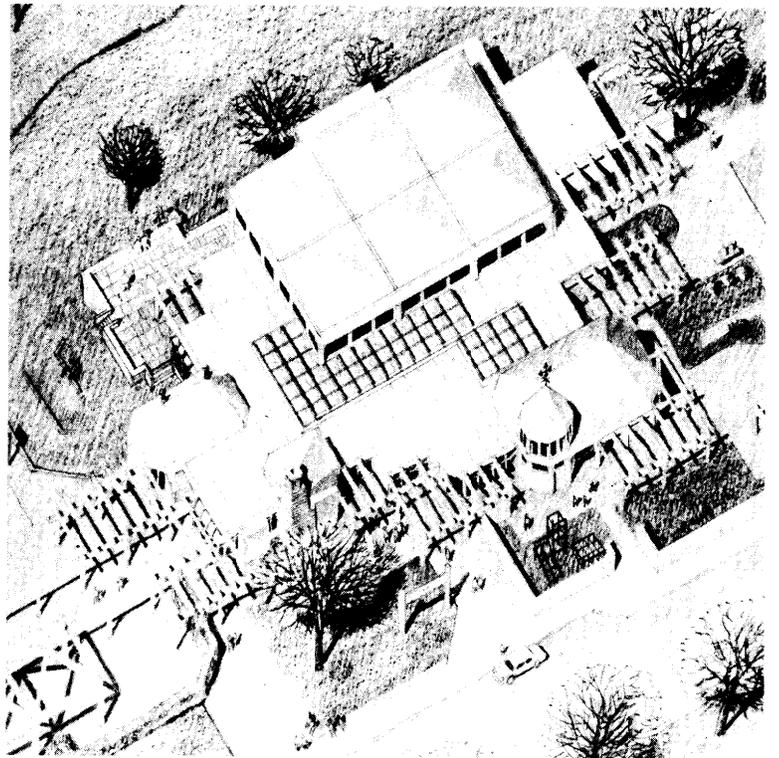




# Chapter 7: Illustrative Designs





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## 7-1 Using this Chapter

This chapter presents case studies of planning a DYAC system and designing four DYAC facilities, to be used by Morale Support Activities staff, Facility Engineers, youth, parents and other interested groups, District Engineers and DYAC architects, as illustrative examples of the application of the guidelines of this Design Guide. The plans and designs are based on hypothetical programs and sites, but the considerations and solutions represent realistic applications of the procedures, principles and criteria for determining project requirements, choosing a system concept, locating facilities, and developing facility design solutions. The terminology and symbols in the descriptions of these cases directly reference the key concepts of the preceding chapters.

These illustrations are not intended to be used as definitive designs and plans, but rather as guides to the process of solving for the needs of specific programs, reflecting the key goals and criteria of this Design Guide. Each installation should develop its own plans and designs responding to local programs and needs, which may vary considerably from these examples.

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# 7-2 DYAC System Location Planning

This example illustrates the process of DYAC system planning, based on a hypothetical population and activity program for an installation, and reflects the considerations in Chapters 2 and 3 of this Design Guide.

## a. Situation and Population.

The installation is located in the eastern United States, approximately 45 miles from a major metropolitan area. Its masterplan is illustrated in figure 7-1.

**(1) Military Population.** The military population of the post is over 15,000, approximately 50% of whom are enlisted men. The post serves a number of different functions, including training and several special highly technical operations components. Thus the military population includes a large segment of senior officers of high level educational background, with teenage children, and a large component of younger officers and enlisted men, many of whom also have families, mostly with young children.

**(2) Youth Population.** The youth population to be served is very large, fairly evenly spaced over the eligible age span, with diverse backgrounds. The official eligible youth population for the post is 32,000. However, many live off-post, including children of active duty personnel and of retired military personnel in the area. On-post there is housing for 3,130 families, including approximately 6,000 youth. According to Morale Support Activities personnel, the active DYA population is 12,000.

**(3) Space Authorization.** Based on the eligible youth population of 32,000 and the space criteria in table 2-1, the maximum total area authorized for Youth Activities facilities would be 120,00 gross square feet, which is probably greater than the installation needs for its programs or would actually be funded to construct. The proposed DYA facilities must be justified on the basis of the use needs of the program and the youth.

## b. Comprehensive Program.

**(1) Existing and Proposed DYA Programs.** The post presently provides a full range of programs for its youth, including (according to the DYA program briefing summary):



**(a) Social Activities**

- Youth Center: Game Room; equipment check out office; snack bar; weekly dances (disco or live bands).
- Teen Club: Movies; field trips; concerts; parties.
- Pre-Teen Activities: Movies; bingo; special events programs (Valentine's Day, Halloween parties, etc.).

**(b) Sports Activities**

- Junior Rifle Club—marksmanship training and competition.
- Swimming Team—advanced swimming instruction and competitive swim meets.
- Judo Club—instruction and competition.
- Tumbling and Apparatus Gymnastics—instruction towards competition.
- Bowling—instruction and competition.
- Softball—intramural and local league competition.
- Baseball—intramural and local league competition.
- Basketball—intramural and local league competition.
- Soccer—intramural and local league competition.
- Football—local league competition.
- Roller skating lessons.
- Tennis.

**(c) Special Programs**

- Summer Day Camp—youth camp, ages 6 to 12 years.
- Girl Scouts of America.
- Boy Scouts of America.
- Dance Classes—Tap, Ballet, Jazz, Toe, Modern.
- Annual Children's Christmas Party.

- Pre-teen Arts and Crafts.
- 4-H Club.
- Music Education.
- Pre-school Story Hour.

Although this is a broad list, there are some gaps the Morale Support staff would like to fill, particularly in the areas of projects, music and children's play activities, and some programs to be more fully provided for. They would like to offer the large youth population the full range of activity opportunities, as listed in Chapter 2. Their priorities are first to strengthen existing operations, particularly the drop-in function, and then to develop more neighborhood-based operations, especially to better serve the younger juveniles.

**(2) Existing and Locally Available Facilities.** The present main DYA facility is the Youth Center, operating in a converted temporary recreation center (located next to the Athletic Fields shown in figure 7-1). Other present DYA facilities, some of which are indicated in figure 7-1, include: a practice gymnasium; football, soccer, baseball and softball fields; tennis courts; judo club; indoor rifle club; several boy scouts' buildings and one girl scouts' building; and a summer day camp site. DYA administrative offices share space in the Recreation Services administration building. DYA programs also share space for selected activities in the installation's swimming pools, crafts center, music and theater centers, library, and sports stadium complex.

This post is unusual in having a full complement of on-post schools—four elementary, one junior and one senior high school—which serve all the youth resident on-post and some off-post. These schools are operated by the county in which the post is located. The high schools particularly have an ample provision of facilities—athletic fields, gymnasiums, and meeting/classroom spaces. Some sharing of these facilities for DYA activities does occur, including special events at the athletic facilities, and casual sports on the fields and play areas, after school hours.

The suburban environment surrounding the post has limited facilities for on-post youth. Some privately-owned entertainment and restaurant facilities are patronized by these youth, but there are no publicly-supported recreational opportunities. For the most part, the on-post youth have to rely on the Dependent Youth Activities program.

### c. Analysis of Installation Geography.

The key features of the installation geography which affect location planning for the DYAC system are shown in the Masterplan Analysis, figure 7-1. This reveals the strong clustering of the family housing into neighborhood units, the majority of which are in the southwestern area of the post with a couple of small areas further north. The family housing is reasonably convenient to the community center and generally well-separated from troop housing and activities concentrations. Three of the housing neighborhoods are quite large—consisting of 780, 790 and 1,400 housing units—and have very substantial, localized youth populations to serve. Each of these three neighborhoods is served by its local elementary school, and the two high schools are reasonably central to the aggregate housing area.

The youth athletic fields are at the edge of the area of the majority of the housing, in easy walking distance from many of the residences. The fields are centrally located on the post, and are easily accessible to on-post and off-post users. They are a focus of pride to the youth, being particularly extensive, well-maintained and well-utilized. The present Main Youth Center is located adjacent to these fields, and the existing practice gym and administration offices (all in temporary structures) are nearby.

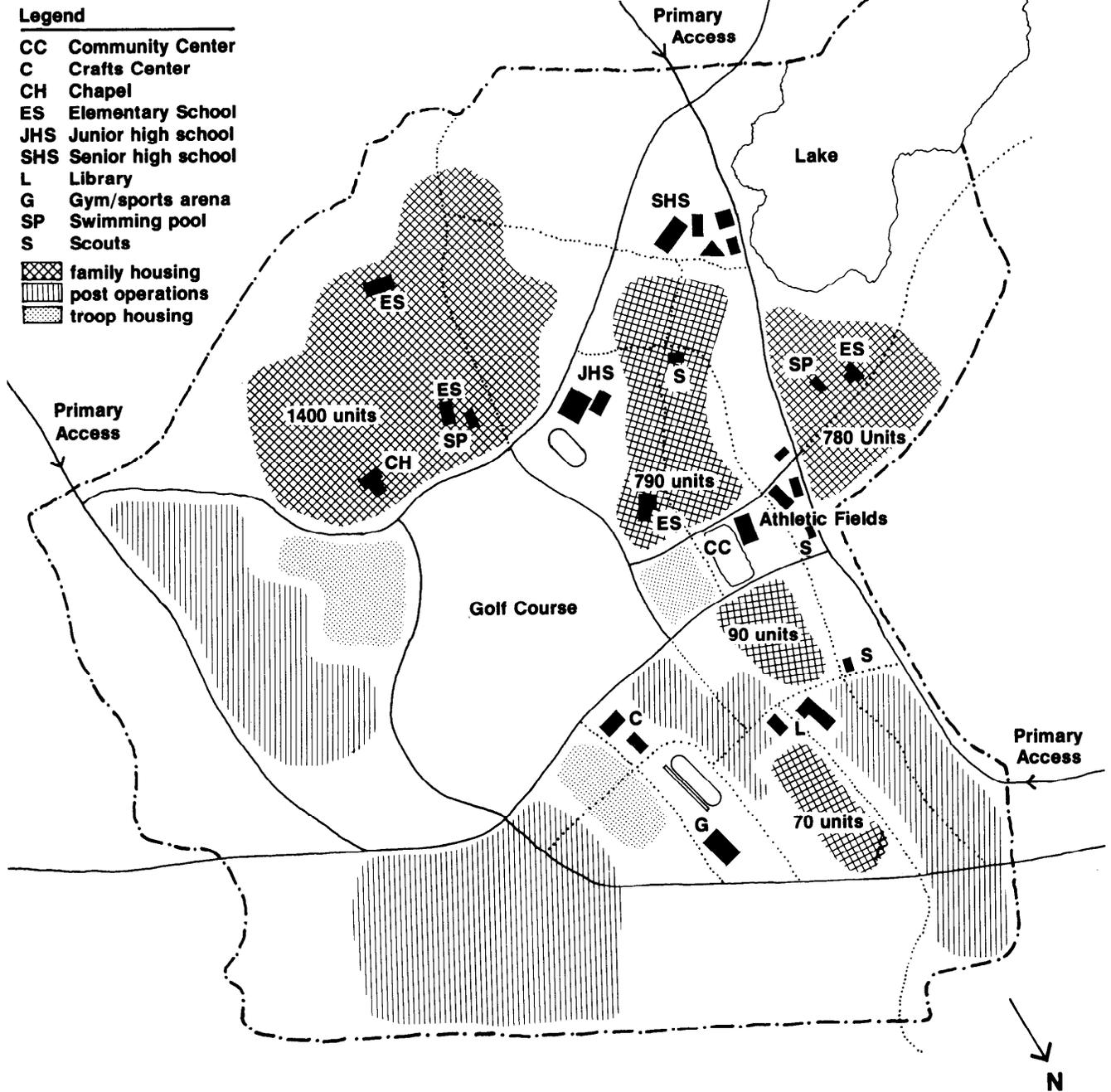


Figure 7-1 Location Planning: Post Masterplan Analysis

### d. DYAC System and Locations.

Figure 7-2 shows the proposed decentralized DYAC with site locations for one Main DYAC and three Neighborhood DYAC's, one for each of the large housing neighborhoods. Given the large youth population and their geographic spread, this decentralization is very appropriate. The number and size of facilities is also justified by the needs of the user population, and will certainly be within the authorized limits for total square footage. The Main DYAC would be the largest size, 18,500 square feet (illustrated in paragraph 7-3 of this chapter) because it is serving a youth population far in excess of 2,400. The Neighborhood DYAC's are each recommended to be of the larger size, roughly 4,110 square feet (see paragraph 7-5), because the three housing neighborhoods they serve each have more than 600 youth population. With an overall DYA system serving so many people, the Neighborhood Centers will be invaluable in giving the local youth a greater sense of identity and will be able to be more responsive to the local needs.

The Main DYAC is located next to the athletic fields, because the site is central to the whole post and readily accessible. Located here, the facility can support the major team sports too, resulting in a more efficient operation and a stronger focus for the youth. The site is not within troop housing and community center areas, but is close enough to the community center facilities so the youth can take advantage of the bowling alley, theatre and commissary. This location also helps to serve the two northerly family housing areas, which lack Neighborhood DYAC's; this is particularly appropriate because the youth in these areas are predominantly adolescents who will use the Main DYAC.

An alternative location for the Main DYAC was considered, which is more central to the major concentration of family housing and adjacent to the Junior High School, and might share some school facilities, such as athletic fields. But this site is less central to the whole post than the first, and is at the intersection of two primary roads. It also does not take best advantage of the already-developed and extensive DYA athletic fields, and could not serve the dual purpose of support of the team outdoor sports activities.

The Neighborhood DYAC's are each located central to their served housing areas, and, most importantly, very near to the local elementary schools. This means these sites are already focal points for the neighborhood youth, and have the potential for shared use of school facilities. In two cases, these sites are also near outdoor swimming pools, also activity centers for the neighborhood youth. In all these cases, including the Main Center, physically appropriate building sites are available at the chosen locations, as worked out with the Facility Engineer.

The first priority for implementation of this DYAC system plan is the new Main DYAC, which will be far more extensive and well-equipped than the present facilities. The existing Main Youth Center, practice gym and administrative offices will be abandoned, and their functions consolidated into the new Main Center. The Neighborhood DYAC's will be built thereafter, starting with that serving the largest population area. Other existing Youth Activities facilities—the scout huts, judo club, rifle club, and athletic fields will be retained in their present, found structures.

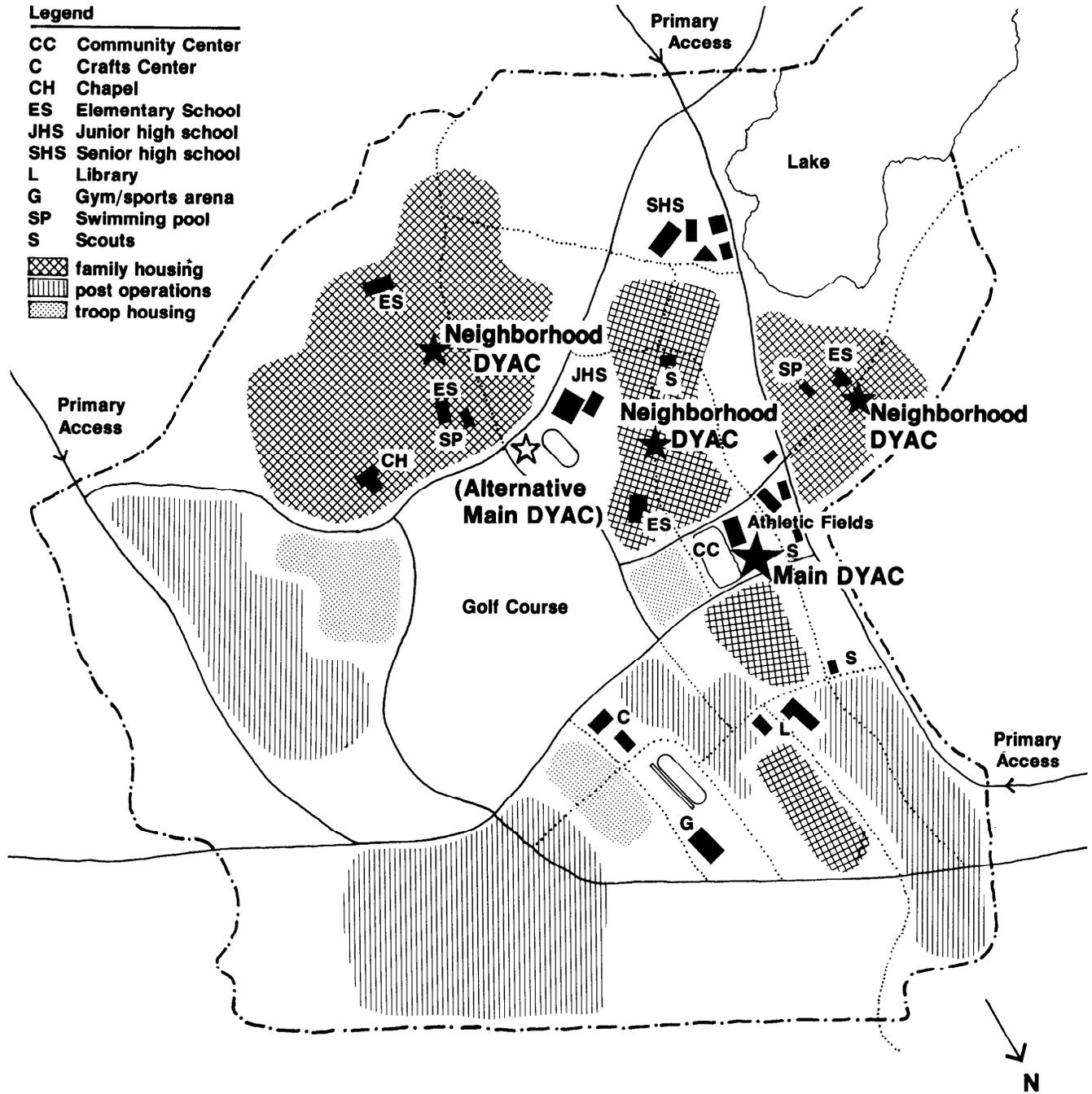


Figure 7-2 DYAC Location Plan

## 7-3 Large Main DYAC

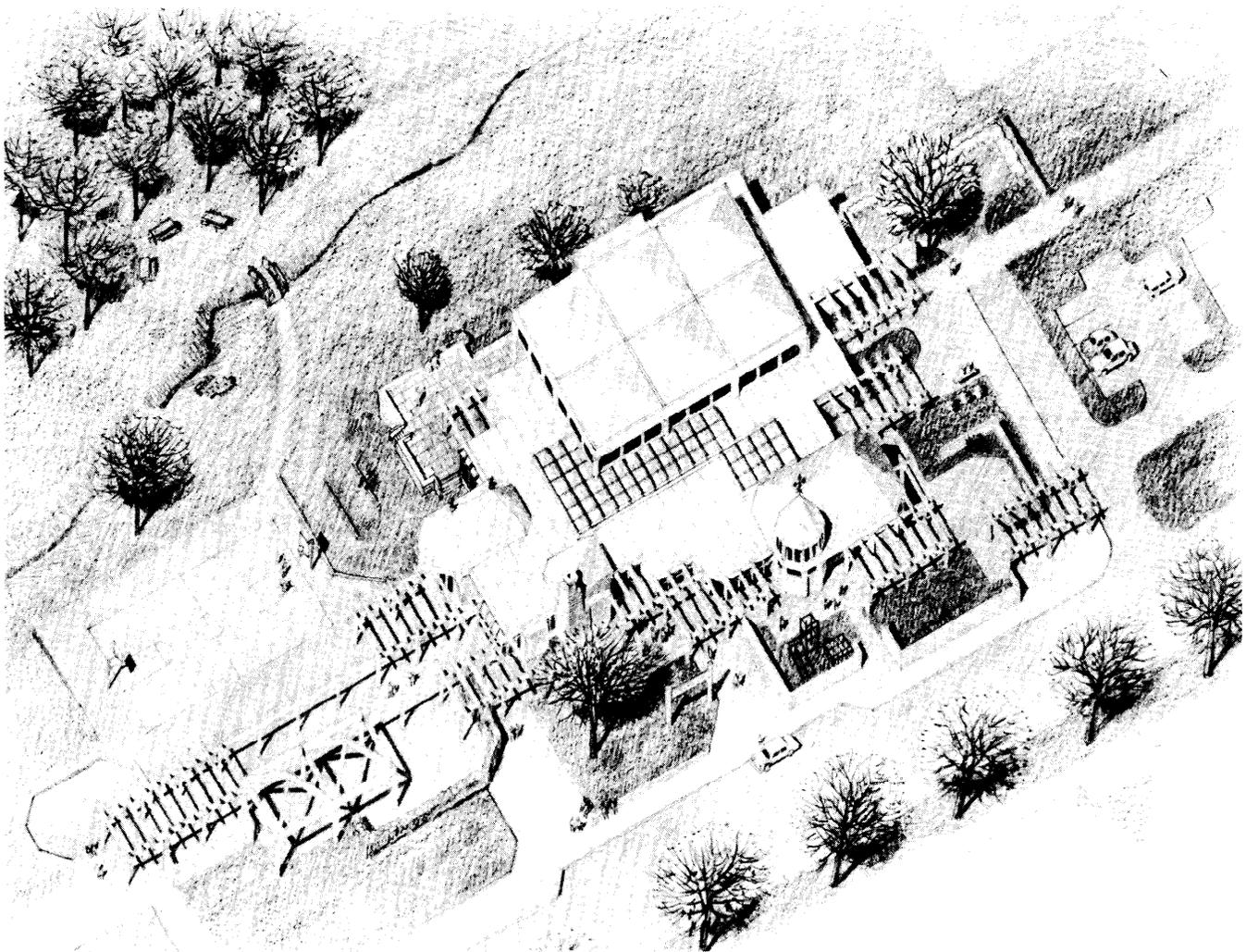


Figure 7-3 Large Main DYAC: Isometric View



## a. Program.

This largest sized Main DYAC, with a programmed area of 18,500 gross square feet, is intended to serve youth on a post with a minimum eligible population of 2,401—as, for example, the Main DYAC proposed for the post in paragraph 7.2. Such a facility could function as the only DYAC on post, or could be supplemented by Neighborhood DYAC's for local purposes.

This Center should be designed to accommodate the full set of Youth Activities programs described in Chapter 2—drop-in, programmed activities, and large space activities. The requirements for these programs, in terms of sizes, character and relationships of spaces and equipment, are discussed in Chapters 4,5 and 6. The Center will include all five activity modules, the area requirements for which, as spelled out in Chapter 5, are summarized in table 7-1.

**Table 7-1 Space Program—Large Main DYAC**

<u>Module and Space</u>	Recommended Area (gross square feet)
<u>Drop-in Module</u>	
Game Room	1,250
Game Room Storage	100
Large Lounge	900
Large Lounge Storage	100
Small Lounge	150
Snack Facilities	1,150
	<u>3,650</u>
<u>Programmed Spaces Module</u>	
Meeting Spaces	1,200
Meeting Spaces Storage	200
Project Space	900
Project Space Storage	150
	<u>2,450</u>
<u>Large Space Module</u>	
Large Activity Space	6,400
LAS Table/Chairs Storage	500
LAS Athletic Storage	250
Outdoor Sports Equipment Storage	(3,000-4,000)*
	<u>7,156</u>
<u>Administration &amp; Support Module</u>	
Entry	800
Circulation Spaces	2,500
Supervision & Administration	600
General Storage	100
Toilets & Locker Rooms	
- Men	620
- Women	570
Maintenance Closet	60
Mechanical Room	(800)*
	<u>5,250</u>
	TOTAL 18,500
<u>Outdoor Module*</u>	
Outdoor Activity Spaces	10,000
Entry Space	1,000
Parking	16,000

\*not included in total programmed building area.

## b. Design Solution.

**Individual Elements Dominate.\*\*** The building is a single-story structure, with spaces on several levels, and a small loft over part of the programmed spaces. The overall building is divided into identifiable subareas for drop-in center, programmed space, large space, and administration and support. The volumetric expression of the building emphasized the individual elements (see figure 7-8) presenting an image like a landscape in, which the individual houses—here, identifiable activity spaces like the large lounge or projects rooms—stand out on the site, with the landscaping—including some building function areas—filling the field in between. These individual places are expressed through chimneys, roof forms, turrets, fenestration, and other such architectural features.

**Design for Life Safety.** The provisions of the life safety code must be considered at an early stage of design. Based on the areas in Table 7-1, the DYAC must be classified as a class A place of assembly, which in turn requires fire resistive construction. An alternative design approach is to separate the large space module and administrative offices by a fire-resistance-rated wall, classifying the separated space as a class B place of assembly and the remainder of the DYAC as class C. The structure of the large space module and administrative offices can be heavy timber construction, and the remainder of the facility, frame construction. The fire-resistance-rated division can be achieved by having a three-quarter-hour assembly, with glazed portions consisting of wire-glass lights of no more than 1,292 square inches, in hollow metal frame. This latter approach was chosen for economic and esthetic reasons.

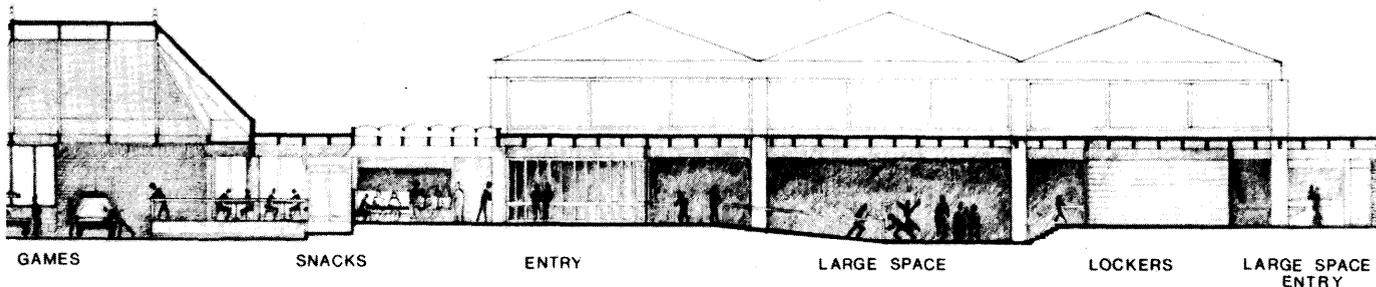


Figure 7-4 Large Main DYAC: Section

**\*\*Marginal Symbols, as defined in chapters 2 and 4, represent:**  
|—Identity Development; \*—Social Development; +—Physical and Cognitive Development.

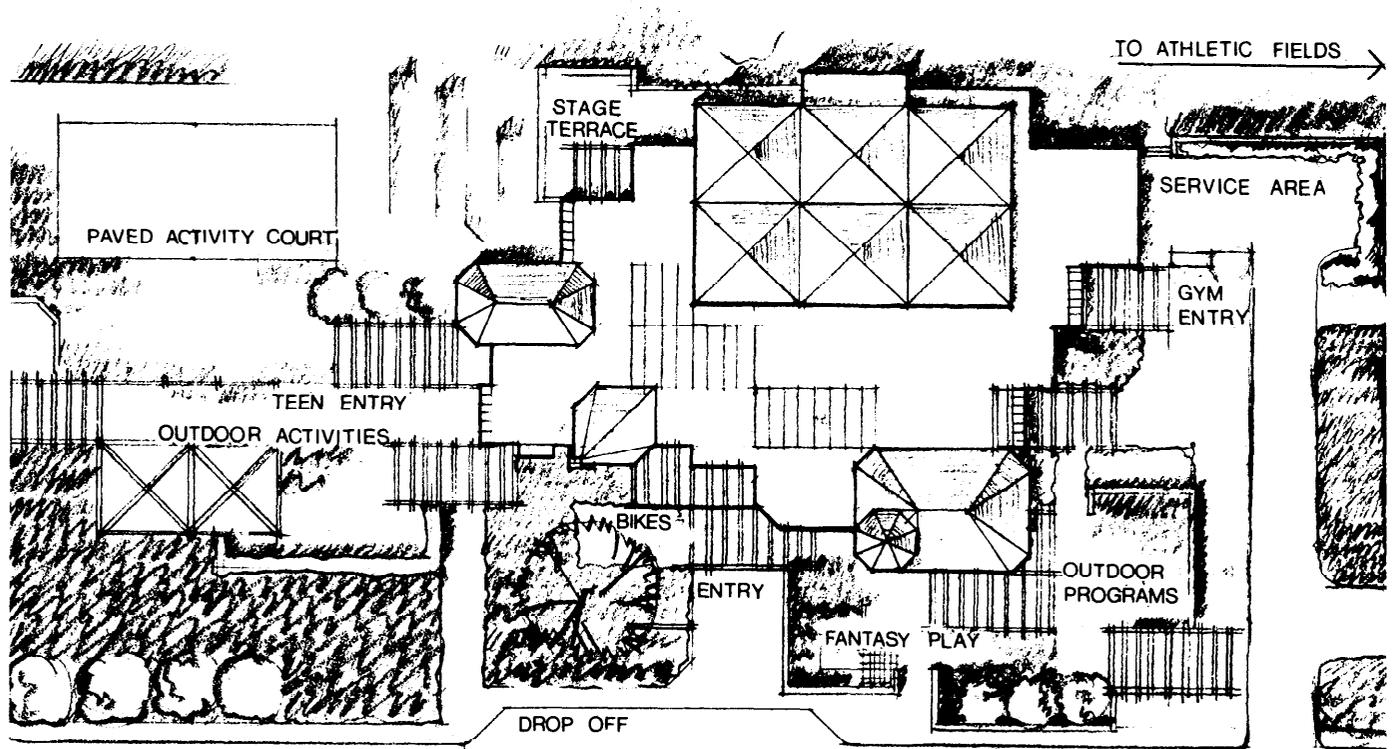


Figure 7-5 Large Main DYAC: Roof Plan

**Structure and Materials.** The basic structural system of the building is slab-on-grade, with masonry piers, bearing walls, and heavy timber posts supporting laminated wood beams. The roofing is almost flat over the connective spaces, but pitched to form volumes emphasizing the key individual activity spaces. The exterior walls are brick and stud, with thermopane glazing; interior partitions are stud and sheetrock covered with vinyl wall fabric. Floors are resilient flooring and carpeting. The roof is an assembly of decking under which is a joint space with insulation and an acoustically absorptive, non-combustible ceiling finish.

**Ambiguous Space Definition.** The structural system establishes a field condition of a regular grid of columns. However, the function-spaces of the building intentionally extend beyond column-lines and overlap and subdivide the areas of the field. The spaces, particularly in the drop-in center, are defined by changes in level and partial or complete enclosures independent of the column grid. This reinforces the indeterminacy and multiplicity of the spatial organization of the place, allowing definition by the users themselves in changing ways.

### c. Design Analysis.

#### (1) Multiple Spaces and Uses.

**+** **Multiple, Differentiated Places.** The three primary modules—drop-in, programmed spaces, and large space—are accommodated in distinctly different types of spaces, reflecting the differences in scale, structure and supervision requirements of their activities. Differences in these spaces appear in their scale and subdivision, degree of openness and closedness, supervision, access, and articulation of spatial forms.

**|** **Variety of Turfs.** The drop-in module includes many “turfs”, varying in size, architectural character, sense of closure, lighting, acoustics, accessibility to supervision, and accommodation to youth activities. These spaces range from sheltered “soda fountain” booths to open tables and seating, from small enclosed lounge space to window seating in the large open lounge to game rooms. They are further differentiated by varying ceiling heights, skylights, focal elements like fireplace hearths, and overlooks into other activity spaces caused by changes in level and by open-ended alcoves.

This differentiation is designed for the multiplicity of user groups and range of activities the drop-in center attracts—inviting each to have its own place, to use as desired. This diversity of character should encourage a range of social interaction situations, from intimate conversation to large active groups, over eating or table games. The variation in ceiling height and size of space is particularly important in creating comfortable environments for social situations ranging from large-scale open activities to intimate interaction.

**+** **Multiple, Simultaneous Use of Spaces.** The programmed spaces module provides two spaces, each of different character in shape, glazing and lighting, which can be used variously for diverse needs. Though one is designated a divisible “meeting room” and the other a “project space”, both have sinks and worktables for multiple project or meeting uses. Their equipment and furnishings should accommodate quiet discussion groups as well as music practice, ballet class, or gymnastics. They also are designed for juvenile play, with spaces and furnishings scaled to children and elements such as turret and loft to foster imaginative free play. The function-spaces can be extended to the adjacent outside areas, for additional programmed activities space.

**+** **Convertible from Sports to Social/Cultural Activities.** The large space is sized to accommodate a regulation high school basketball court, and all other gymnasium requirements, with adequate run-off space to padded walls. It is also designed to accommodate performances and presentations, with an alcove for a demountable stage; dances, with a portable disco booth at the stage area, and with perimeter alcoves and access to exterior patio for social interaction; and parties and banquets, with direct access from the snack bar kitchen to the large space for food serving. The sports equipment can be moved or hidden to allow the character of the space to be transformed for these other functions.

**+** **Outdoor Extensions of Indoors.** The outdoor site development provides a variety of places for different activities, related directly to the corresponding indoor spaces. There are spaces near the entry door for “hanging out,” project or meeting extension spaces and an adventure playground outside the programmed spaces module, teen socializing area near the “teen lounge” entrance, and a hard-surfaced sports area, for basketball and similar games, near the drop-in center. From the inside these outdoor spaces are visible and generally directly accessible. In addition, two separate parking areas—one for the teens near the teen lounge entrance, and one for staff, service, and other visitors near the support and programmed spaces—also reflect the multiplicity of users and use needs of the DYAC.

#### (2) Access and Circulation.

**\* Direct Access from Entry.** From the entry area, access to all the function-areas—drop-in, programmed and large spaces, and administration—is direct, immediate, and understandable.

**\* Snack Area Central.** The snack bar/eating area is near the entry and permits easy access to the center of the drop-in, socialization space for newcomers—an invitation to interaction.

**\* Approach without Intrusion.** Circulation within the drop-in area is integrated into the function-spaces—the lounges, game rooms, eating places. This is efficient both in utilizing space, and in enhancing potential interaction. Youths can move comfortably near or through activity-spaces and see what is going on and who is there, possibly to involve themselves in the activity or interaction without feeling they are intruding. The sitting areas at the edge of activity spaces such as the table tennis area serve a similar role.

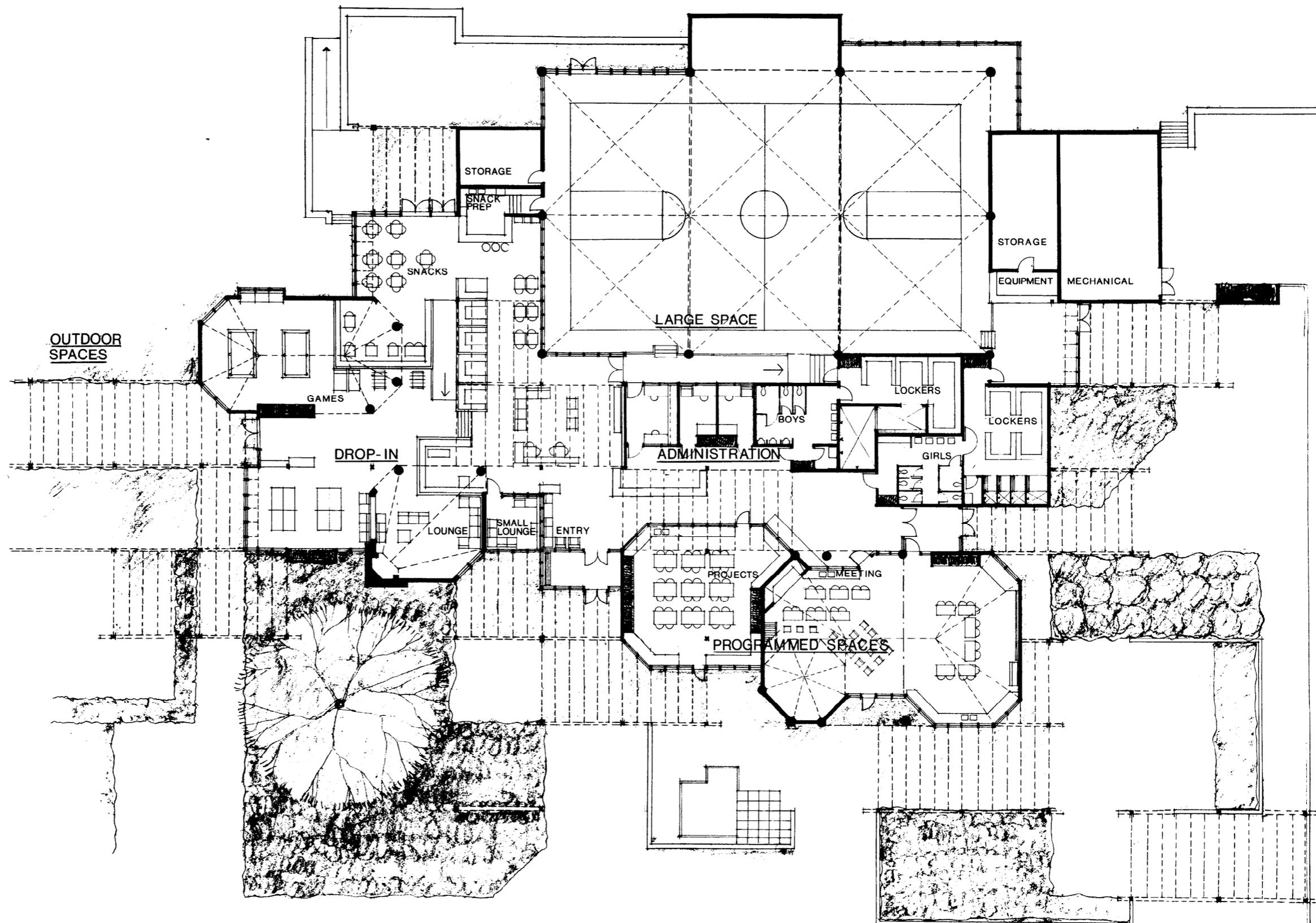


Figure 7-6 Large Main DYAC: Floor Plan

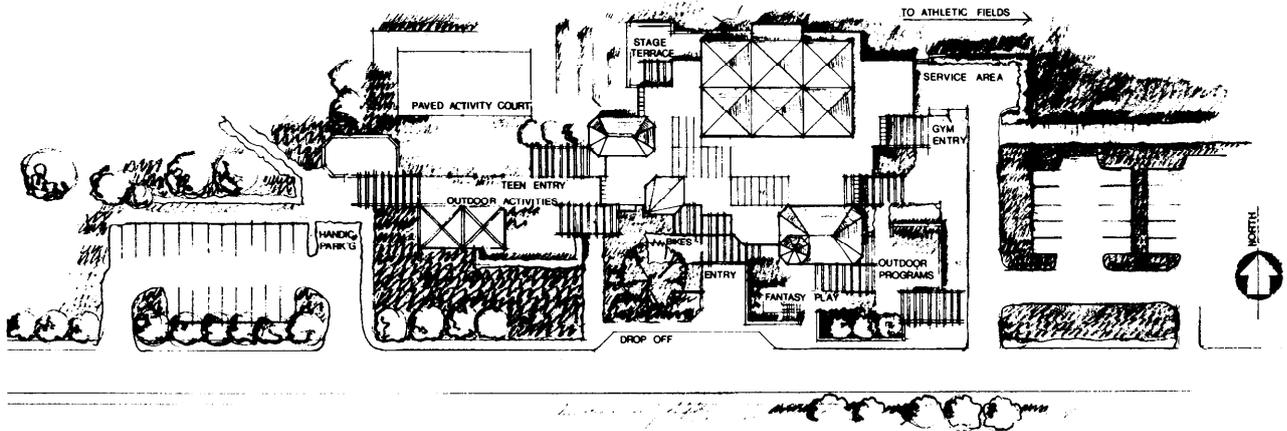


Figure 7-7 Large Main DYAC: Site Plan

**Teens' Own Place.** A separate "teen lounge" entrance into the drop-in center reinforces the teens' sense of identification with this as "their place." It accesses directly from the teens' parking area and outdoor socialization and sports spaces, and allows the teens to enter the building without relating to other parts of the center.

**Functional Separability.** The programmed space module and large space module are functionally separable from the entry and drop-in center, and can be closed off when they are not in use but other parts of the DYAC are.

**Handicapped Access.** Access for the handicapped to all parts of the DYAC is maintained, despite the changes of level, by provision of convenient ramps to all areas. These ramps are integrated into the circulation and use spaces so they do not interrupt space relationships or take up otherwise prime space.

**(3) Sequence of Viewpoints.**

Many significant issues of building form, image, identity and relationships of this Large Main DYAC design can be understood by analyzing the projected views of the building from a sequence of key station-points. These viewpoints are located in figures 7-9 and 7-10.

**Viewpoint 1—Approach from Afar: Distinctive Image.** Clear boundaries, created by walls and landscaping of the site, set the DYAC and its site apart from the rest of the post. The image of the building, in its plan articulation and volumetric expression, is architecturally distinctive from that of other

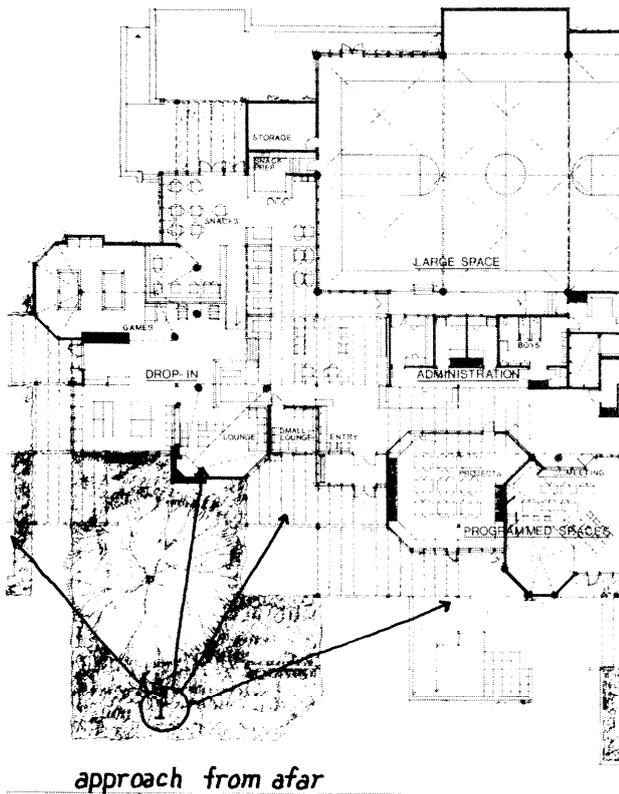


Figure 7-9 Large Main DYAC: Sequence of Viewpoints - 1

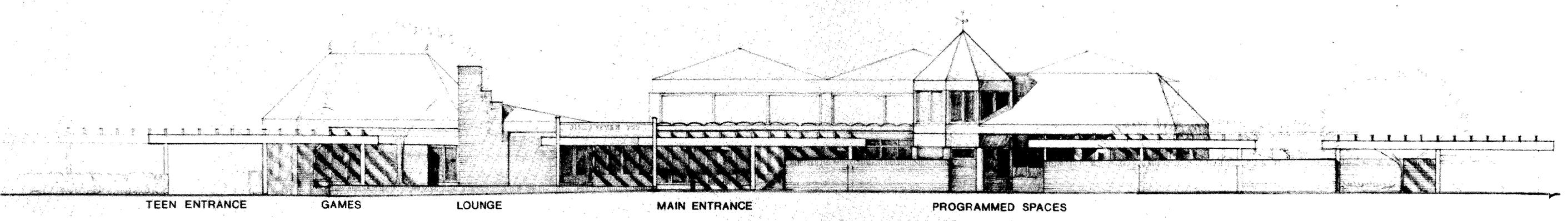
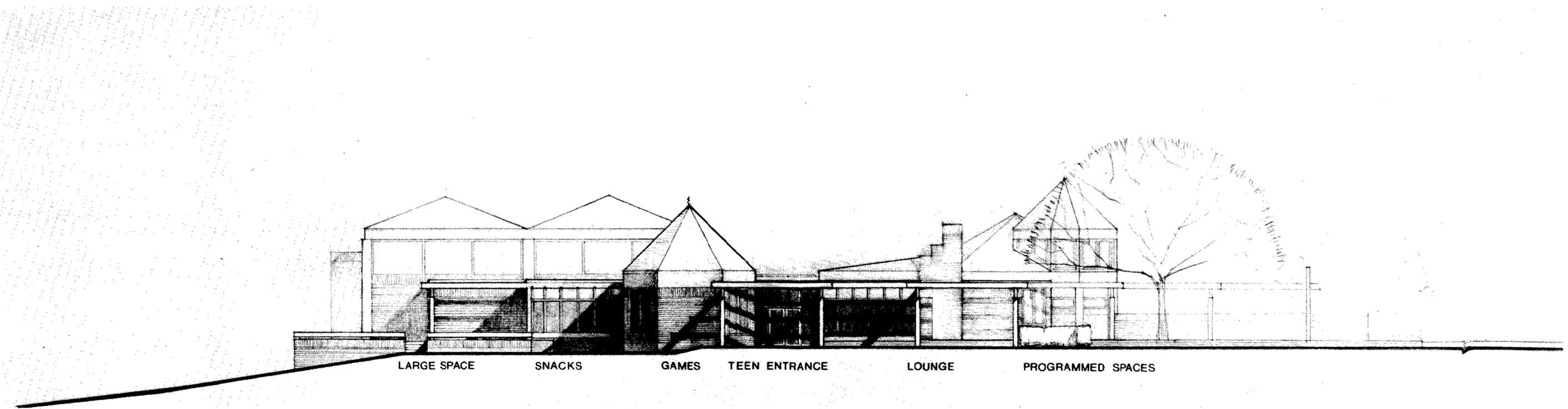
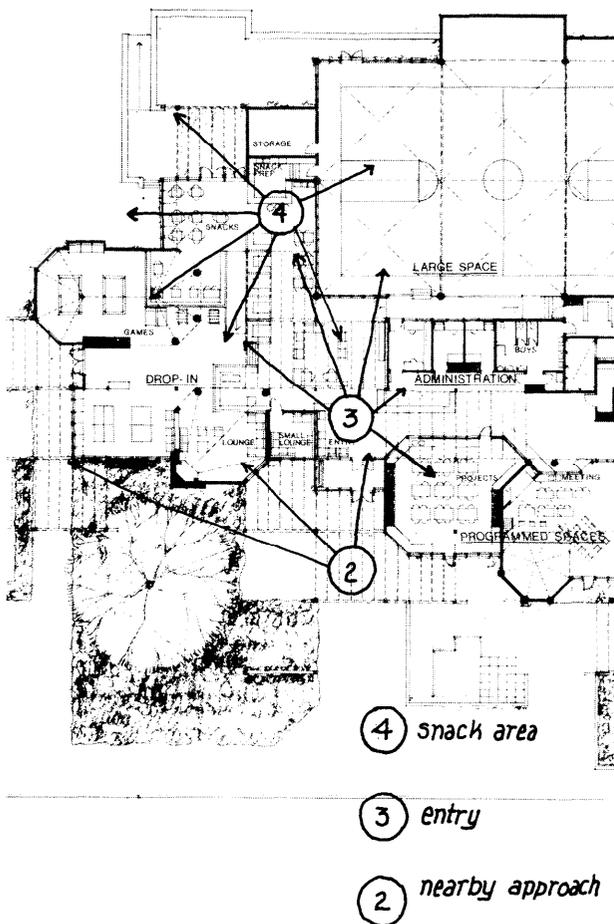


Figure 7-8 Large Main DYAC: Elevations

buildings on-post which are military-oriented rather than youth-oriented—important to the youth’s identification with the DYAC.

The major architectural expression of the building, helping to achieve this distinctive image, is at the level of specific spaces and elements which mean something to the youth and their specific experiences. Elements such as the skylight in the snack and games areas, the lounge fireplace and chimney, and the turret in the project space, are of a scale, individuality, and fancifulness with which the youth can identify.



**Figure 7-10 Large Main DYAC:**  
Sequence of Viewpoints - 2,3,4

**\*Viewpoint 2—Nearby Approach: Open Image.** As the DYAC is approached, the youth can be observed in outdoor activity spaces contiguous to the building or in inside spaces such as the entry, lounge, and game room, engaged in activities acceptable to the adult public—sports, conversation, meeting or childrens’ play. Adult and parent satisfaction with the safety and acceptability of the DYAC as a place for the youth is vital to the program’s success.

**\*Viewpoint 3—Entry: Intervisibility.** From the entry area the visitor can see the whole world of options the DYAC offers: the drop-in center, particularly the snack facilities, the large space, and some of the programmed spaces, as well as the administration/reception desk. In this array of function-areas it is easy to comprehend what goes on where and how to get there, and this is achieved without the visitor intruding on any of the spaces.

**\*Viewpoint 4—Snack Area: Places to See and Be Seen.** The snack area is a focal point for the whole Center, visible from all parts of the DYAC. Although its sub-areas are partially enclosed for privacy and protection from intrusive supervision, one can see out to know what’s going on in other parts of the drop-in center, in other indoor modules, and in the outdoor activity spaces. In turn, one can be observed by people circulating and in other activity spaces. This potential for seeing and being seen, but having one’s own protected place, is important for the fluid social interaction patterns of the youth who will use this space.

## d. Utilities Requirements.

Estimates of mechanical and electrical system requirements for the Large Main DYAC, appropriate for initial planning and funding projections, are indicated in table 7-2.



**Table 7-2 Mechanical and Electrical Requirements—Large Main DYAC**

<u>Hot and Cold Water</u>	<u>Flow Rates</u>	
Cold Water	90 GPM	
Hot Water	50 GPM	
<u>Sewage</u>	<u>Flow Rate</u>	<u>Est. Total Flow/Day</u>
	33 Gal/Day/Person	2,000 Gal
<u>Heating</u>	<u>BTU/Hr./Sq. Ft.</u>	<u>Total MBH</u>
For ambient temp. of:		
–10°F, D.B.	80	1,500
0°F, D.B.	70	1,300
+10°F, D.B.	62	1,150
+20°F, D.B.	55	1,000
<u>Ventilation</u>		
Large space	10 cfm/person	
Locker room	10 air changes per hour	
Toilets	10 air changes or 2 cfm/sq ft.	
Offices	10 cfm/person	
Lounges	10 cfm/person	
Game room	10 cfm/person	
Storage areas	2 air changes per hour	
Snack preparation	2 cfm/sq ft	
Snack eating	10 cfm/person	
Mechanical room	10 air changes, winter	
<u>Cooling</u>		
Air conditioning (based on ambient temp. of 90°F, D.B., 76°F, W.B.)		50 tons, total
Mechanical ventilation (non-air-conditioned facility):		
Large space	6 cfm/sq ft	
Lounge	6-8 cfm/sq ft	
Game room	6 cfm/sq ft	
Drop-in	6 cfm/sq ft	
Snack preparation	8 cfm/sq ft	
Snack eating	6-8 cfm/sq ft	
Mechanical room	20 air changes summer	
Toilets and Lockers	10 air changes or 2 cfm/sq ft	
Offices	6-8 cfm/sq ft	
<u>Electrical</u>	<u>Allowance (watts/s.f.)</u>	<u>Total KVA</u>
Lighting and Miscellaneous Power	3	55
Mechanical Power (Heating and Ventilation only)	3	55
Mechanical Power (Heating, Vent., and Cooling)	7.1	132
Total Load Summary:		
Without A/C		110
With A/C		187

# 7-4 Medium-sized Main DYAC

**Table 7-3 Space Program—Medium-sized Main DYAC**

<u>Module and Space</u>	<u>Recommended Area</u> (gross square feet)
<u>Drop-in Module</u>	
Game Room	700
Game Room Storage	100
Large Lounge	600
Large Lounge Storage	100
Small Lounge	150
Snack Facilities	700
	<u>2,350</u>
<u>Programmed Spaces Module</u>	
Meeting Spaces	700
Meeting Spaces Storage	120
Project Space	450
Project Space Storage	80
	<u>1,350</u>
<u>Large Space Module</u>	
Large Activity Space	4,300
LAS Table/Chairs Storage	300
LAS Athletic Storage	180
Outdoor Sports Equipment Storage	(2,500-3,000)*
	<u>4,780</u>
<u>Administration and Support Module</u>	
Entry	500
Circulation Spaces	1,100
Supervision and Administration	400
General Storage	100
Toilets and Locker Rooms—Men	360
Toilets and Locker Rooms—Women	360
Maintenance Closet	40
Mechanical Room	(650)*
	<u>2,860</u>
<b>Total</b>	<b>11,340</b>
<u>Outdoor Module*</u>	
Outdoor Activity Spaces	7,500
Entry Space	800
Parking	12,000

\*Not included in total programmed building area.

## a. Program.

This Main DYAC design illustrates the next to largest size, with a programmed area of 11,340 gross square feet. It is intended to serve a post with a minimum eligible youth population of 1,201 and could serve a post of over 2,400 eligible population, if supplemented by Neighborhood Centers. As with the Large Main DYAC described in paragraph 7-3, this facility is intended to serve on a post-wide basis, and can function with or without supplemental Neighborhood DYAC's.

The range of programs in this DYAC are the same as for the Large Main DYAC—drop in, programmed activities, and large space activities—except that the diversity of activities will not be as great. The space requirements, including all five activity modules, are as specified in Chapter 5, and summarized in table 7-3.

## b. Design Solution.

The design for the Medium-sized Main DYAC is a diagrammatic variation of the design for the Large Center. It is similar to the Large DYAC in organization and arrangement of spaces, in forms and articulation, level changes, visual and access patterns, construction, and design for life safety. The large space is designed to a smaller gymnasium standard. The drop-in center is reduced in space and number of sub-areas, with a less elaborate snack area and no separate small lounge, and with more intimately-scaled large lounge and sitting spaces. The programmed spaces module includes two project/meeting rooms, with one capable of being subdivided for multiple usage.

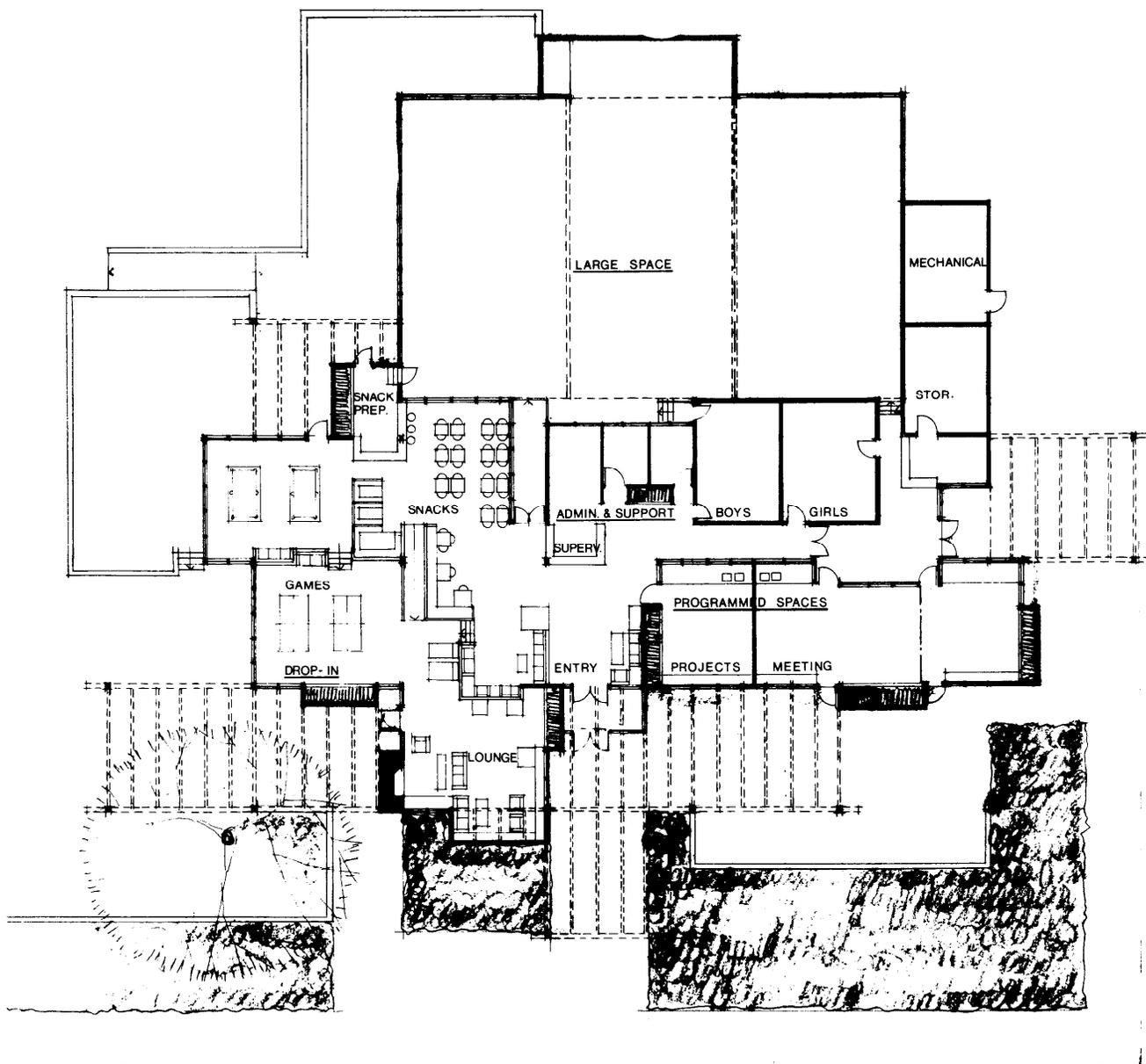


Figure 7-11 Medium-sized Main DYAC: Floor Plan

## 7-5 Neighborhood DYAC

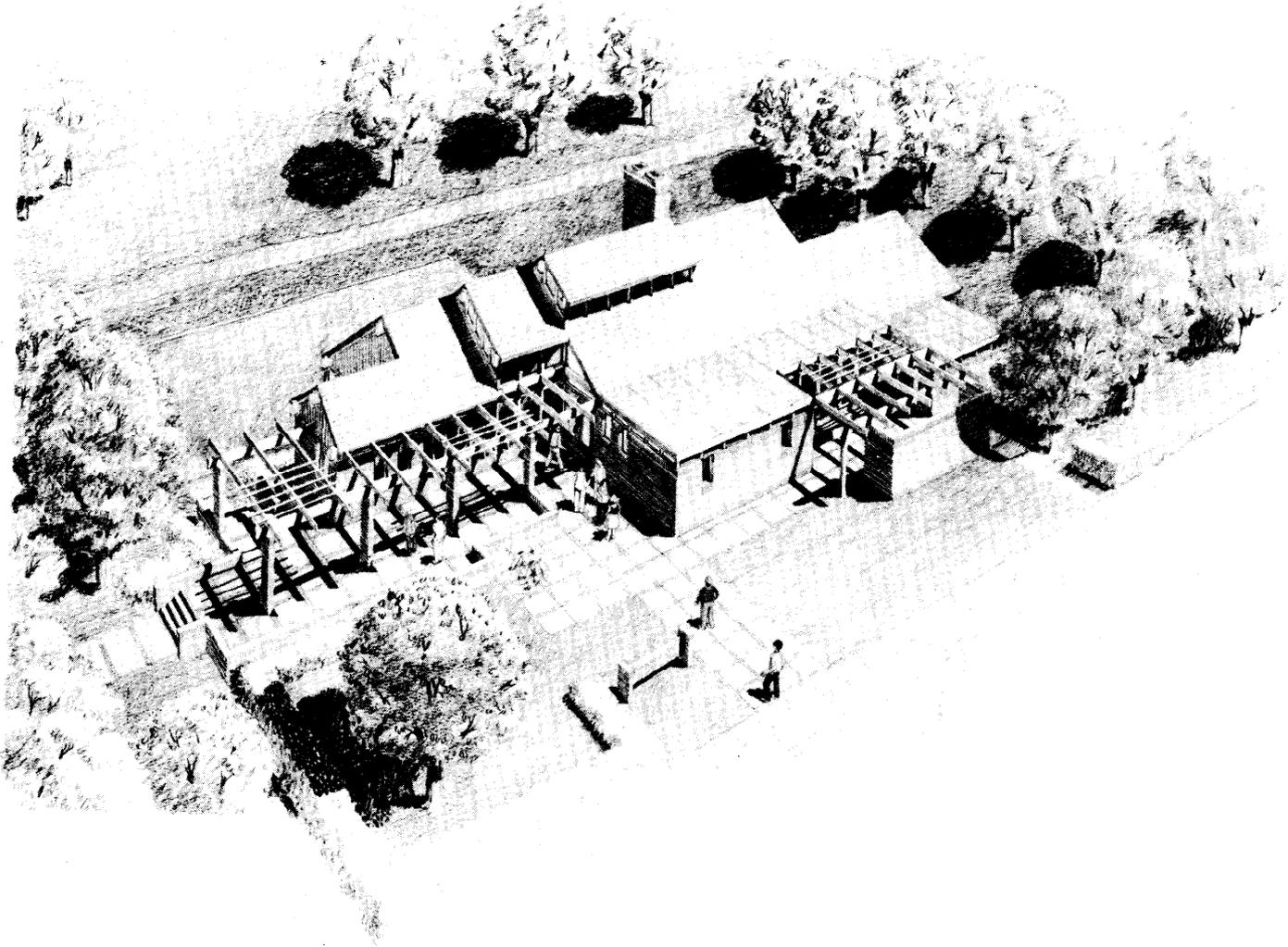


Figure 7-12 Neighborhood DYAC: Perspective



## a. Program.

This DYAC, illustrative of several proposed for the post discussed in paragraph 7-2, is designed to serve a neighborhood with an eligible youth population of 600 or more. The neighborhood served should be within walking distance of the Center, because the predominant users of this DYAC will be juveniles and early adolescents. Some special activities, which this Neighborhood Center may uniquely provide, may attract youth from throughout the post.

The activities at the Neighborhood DYAC include: drop-in functions for the local youth—socializing, games, snacks, unstructured play, hanging out; neighborhood-oriented programmed activities, such as scout meetings, clubs, simple crafts and projects, classes offered by volunteer parents, and neighborhood parents' meetings; and support functions for these activities. The requirements for these functions, in terms of specific spaces, sizes, character and relationships, are discussed in Chapters 4, 5 and 6.

The Neighborhood Center depends on volunteer staffing by local adults or young military personnel, with little or no paid staff. The activity program and the operations, supervision and hours will depend on volunteer staff availability. In this situation, a building is needed which is as easy to manage and supervise as possible. Activities will be limited to simpler kinds not requiring professional direction and complex equipment. Self-direction by the youth, assisted by volunteer adults, will be the predominant pattern.

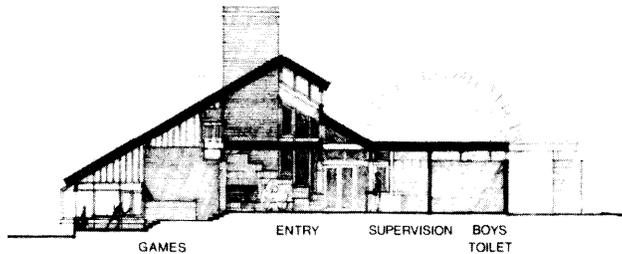
The Neighborhood Center should be an integral part of the residential community—in function and image—so parents will trust their children to go there on their own. However, the center must also provide an escape from home for the young adolescents, who at this age are seeking independence from parents and adults.

Table 7-4 summarizes the programmed space requirements for the Neighborhood DYAC, as discussed in Chapter 5.

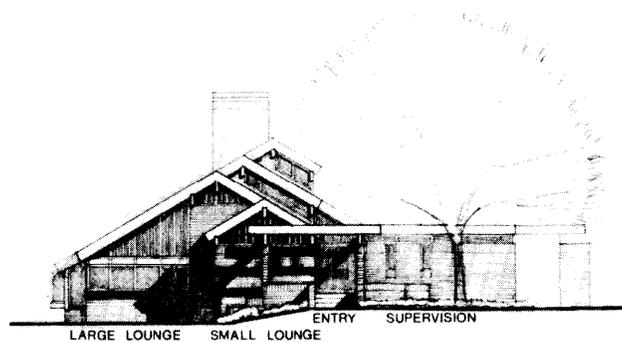
**Table 7-4 Space Program-Neighborhood DYAC**

<u>Module and Space</u>	<u>Recommended Area</u> (gross square feet)
<u>Drop-in Module</u>	
Game Room	750
Game Room Storage	50
Large Lounge	500
Large Lounge Storage	50
Small Lounge	150
Snack Facilities	420
	<u>1,920</u>
<u>Programmed Spaces Module</u>	
Meeting Rooms	600
Meeting Rooms Storage	80
Project Space	300
Project Space Storage	40
	<u>1,020</u>
<u>Administration and Support Module</u>	
Entry and Circulation	700
Supervision and Administration	100
General Storage	50
Toilets—Men	150
Toilets—Women	150
Maintenance Closet	20
Mechanical Space	(300)*
	<u>1,170</u>
Total	4,110
<u>Outdoor Module*</u>	
Outdoor Activity Spaces	4,000
Entry Space	500
Parking	4,500

\*Not included in total programmed building area.



**Figure 7-13 Neighborhood DYAC: Section**



**Figure 7-14 Neighborhood DYAC: Lounge Elevation**

## b. Design Solution.

This Neighborhood Center is a one-story structure, with several different levels, and a small loft space over part of the entry/lounge area. The building consists of a distinct programmed spaces module, with meeting rooms and a project space, a drop-in center with several interrelated areas, and a small administration and support module near the main entry.

**Variety of Turfs.** The drop-in center is a continuous open space, except for a small private lounge, subdivided into function-areas. These sub-areas—snack, large lounge, games—are on different levels, overlooking one another, and connected by ramps and stairs. There is also a lounge loft, a platform in the rafters over the entry, reached by a stairway which winds around the fireplace chimney. Outside the function-areas are many terraces, sheltered and defined by trellises, which act as extensions of the indoor areas they abut.

**Oriented to Youths' World.** The architectural image and vocabulary of the building is residential—in size, roof pitches, scale and articulation of sub-areas—to fit comfortably into the neighborhood. The front of the building, facing the street, is mostly solid and closed, while the rear opens out to the outdoor activity space, playfields, and elementary school. The sub-spaces are individually articulated, through exterior wall forms, glazing and window-seat projections, different roof planes, and focal elements like the fireplace hearth and chimney.

**Structure and Materials.** The construction system is similar to that of the Large Main DYAC: a slab-on-grade structure, with masonry piers and bearing walls supporting heavy timber beams and rafters. It is classified as a class C place of assembly under the life safety code. The roof is pitched over most of the areas, and divided into several planes, raised up to permit clerestories facing south to let light into the the center of the building: The exterior wall treatment and interior finishes are similar to those of the Large Main DYAC design.

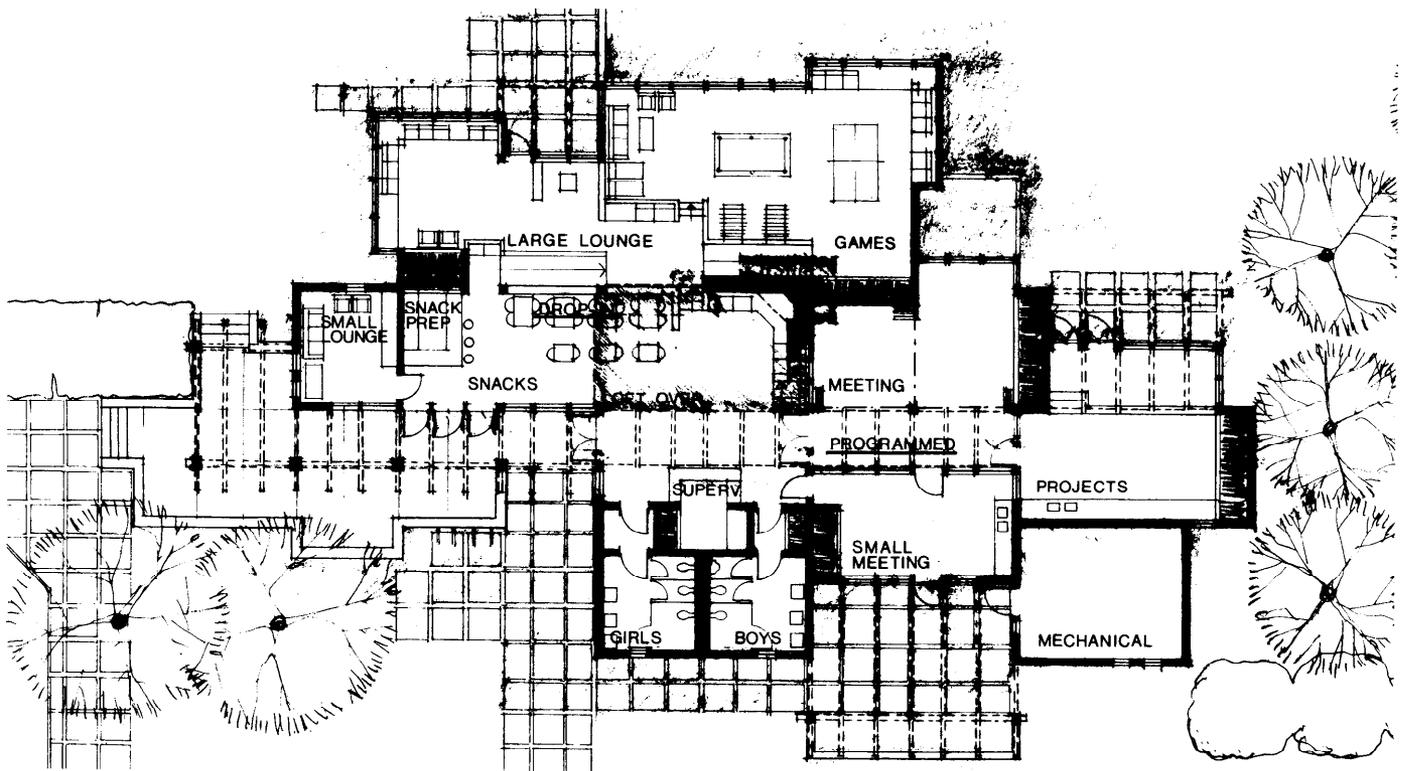


Figure 7-15 Neighborhood DYAC: Floor Plan

## c. Design Analysis.

### (1) Multiple Spaces and Uses.

**Distinct Turfs.** Even though the Neighborhood DYAC is small and compact, it contains a variety of “turfs” to accommodate the multiple groups, individuals, ages and activities which animate the place. These areas differ in character, size, openness, light, privacy, and articulation—for example the open central fireplace hearth, the closed small lounge, the glazed window seats around the games and large lounge areas, and the overlooking loft. The spaces, particularly in the drop-in center, are open and only partially delimited, by level changes, railings, ceiling heights and furnishings. These distinctions and looseness permit more variable usage and definition, and respond to patterns established by the youth themselves.

**+ Spaces to Encourage Imaginative Play.** The use of the Neighborhood Center by the youngest groups, ages 6 to 11, emphasizes the need for free, unstructured fantasy play areas. The partially defined, continuous open space of the drop-in center provides an excellent setting for active movement, hiding games, running around, and inventive play.

\* **Opportunities for Social Interaction.** With no single large space in the Neighborhood DYAC, the drop-in spaces must function for parties and dances at the neighborhood level. The lounge, games and snack areas open to each other, divided only by level changes and ramps, which provides a fine setting for multiple activities, socialization and dancing at a young teen party.

+ **Multiple, Simultaneous Use of Spaces.** The programmed spaces module, with its three spaces of differing character, is also adaptable to multiple uses. Meetings of different sizes and simultaneous project groups or classes can be accommodated in this flexible space.

\* **Varying Degrees of Privacy.** The pitched roofs of the Center add to the definition of size and height of the various use-spaces. The higher roof at the center accommodates the more public entry and snack areas, and allows for introduction of a loft. The lower roofs shelter the more private and specific functions toward the perimeter. This variation of ceiling heights provides spatial interest and appropriate social distances for different interactions.

+ **Outdoor Extensions of Indoors.** Outside the DYAC there are many terraces, relating to and extending the multiple interior spaces and functions. These provide spaces—defined by low walls, trellises, plantings, and the building's recesses—for different activities, including projects, snacks, socializing and dances. Beyond the terraces is a hard-surfaced area for basketball, games, barbecues and parties.

### (2) Access and Circulation.

\* **Direct Access from Entry.** All parts of the Center are easily reached from the entry and the supervision space. The building is small and compact, and the access pattern is direct and easy to understand and control.

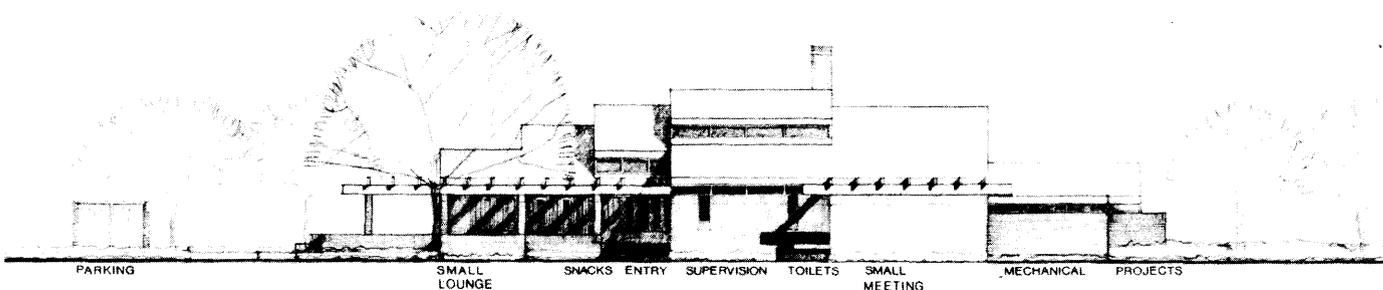


Figure 7-16 Neighborhood DYAC: Front Elevation

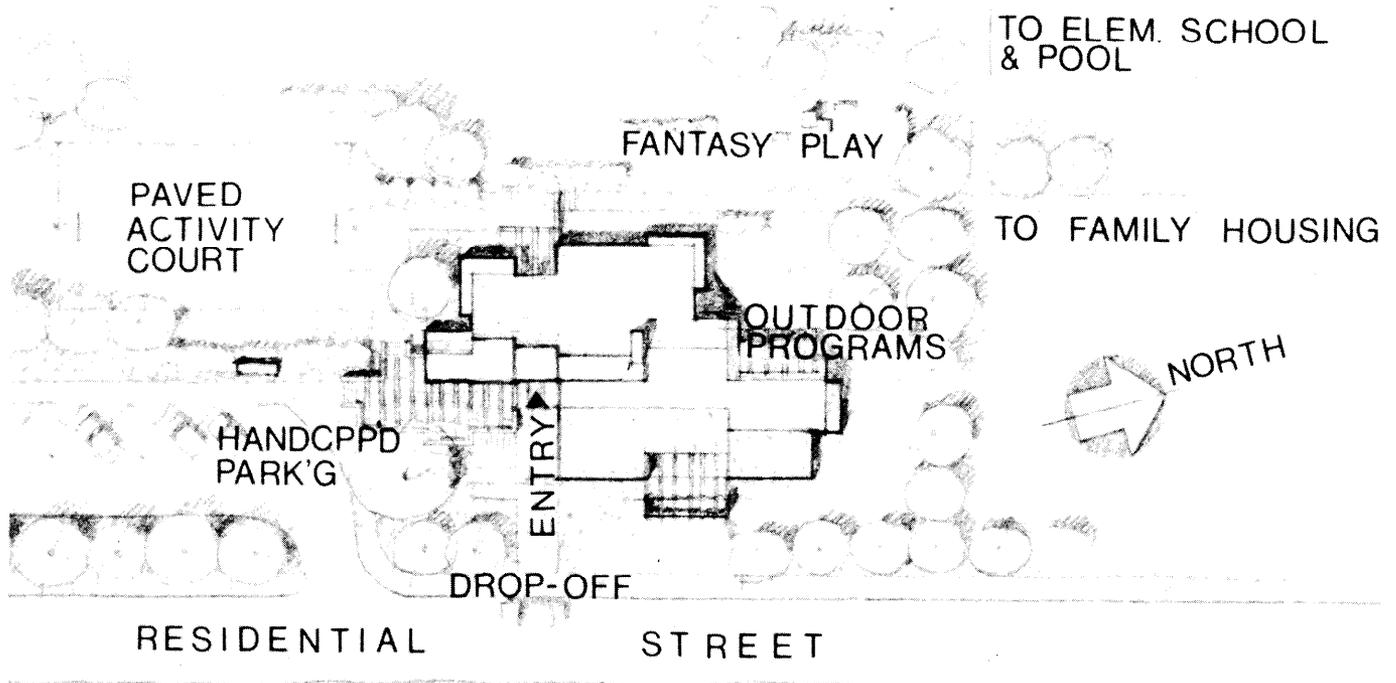


Figure 7-17 Neighborhood DYAC: Site Plan

**\* Approach without Intrusion.** Circulation through the DYAC moves through or at the edges of active use-areas, such as the snack and lounge spaces and meeting room, and thus is very efficient. This pattern allows movement through almost all the areas of the Center without intrusion upon the activities, and encourages interaction. Users can observe and be observed, approach an activity space without temerity, learn who is there and what is going on, and decide whether they want to join. The stepping of levels and visibility across many areas further this easy access and approachability.

**+ Functional Separability.** The programmed space module can be closed to circulation when only the drop-in areas are functioning.

**Outdoor Access.** There is easy access to the outdoor spaces: many doors lead from different spaces—snack area, large lounge, projects—to the various terraces which extend these functions outdoors.

**Handicapped Access.** Barrier-free access for the handicapped to almost every space in the DYAC is provided by the ramps and multiple outside accesses, despite the changes in levels.

**Mechanical Access.** The mechanical space is accessible only from outside the building, as required for use by the facility engineers.

### (3) Sequence of Viewpoints

The sequence of viewpoints indicated in figure 7-18 parallels that described for the Large Main DYAC, and provides a framework for consideration of key issues of building form, image, identity and relationships for the Neighborhood DYAC.

**Viewpoint 1—Approach from Afar: Oriented to Youths' World.** To make the building fit into its neighborhood setting, the image of the Center is residential in character and scale, with the pitched roofs and exterior articulation like a large home. The design should relate to the local style.

The approaching view reveals mostly solid building walls, terrace walls and heavy plantings, defining the youths' "turf" and separating it from the rest of the army post. In contrast, the rear of the building has large glass areas looking out to the youths' world—the outdoor activity spaces, hang-outs, sports areas, and local school.

**Viewpoint 2—Nearby Approach: Open Image.** A closer-in view of the Neighborhood DYAC reveals youth activities acceptable to the adult public—snacks, meeting, conversation, sports. As he approaches the door, the visitor can see what is going on inside the inviting snack area and lounge, before he enters the building.

**Viewpoint 3—Entry: Intervisibility.** From the entry area one can see the full range of opportunities in the Neighborhood Center, without intruding on the activities. The continuous open space and stepped levels reveal all parts of the drop-in area, as well as the programmed spaces. One sees from the tall, more public spaces of the entry and snack area under the pitched roof, to the more intimately scaled spaces at the fireplace hearth and window alcoves of the lounge.

**Viewpoint 4—Snack Area: Places to See and Be Seen.** From within the snack/eating area, the user can see over the terraced levels to all other activity areas, the entry and circulation, and also outside to the front entrance terrace, rear terrace and activity spaces beyond. In this location, the youths can see and be seen by those entering and circulating around the place. While this area is not as enclosed as the drop-in spaces of the Large Main DYAC, the user is given a sense of space definition by the modulated levels, low barriers at given changes, and the articulated exterior walls.

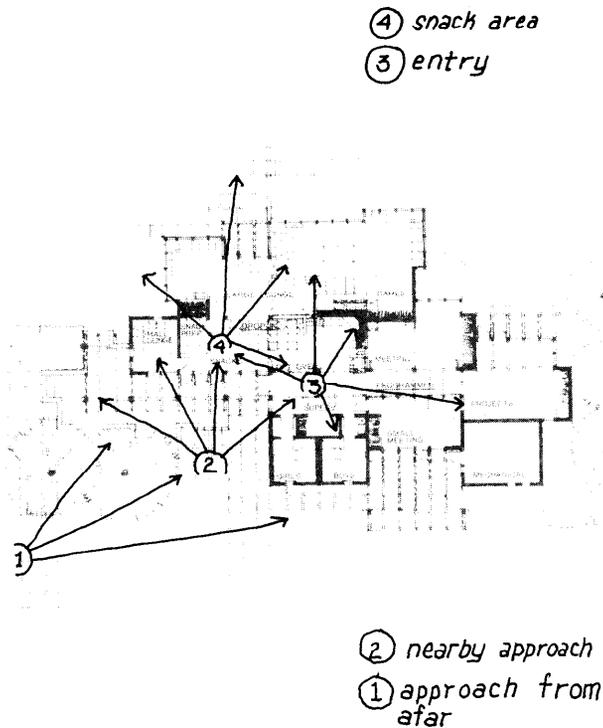


Figure 7-18 Neighborhood DYAC:  
Sequence of Viewpoints



## d. Utilities Requirements.

Estimates of mechanical and electrical system requirements for the Neighborhood DYAC, illustrative for initial planning and funding projections, are indicated in table 7-5.

**Table 7-5 Mechanical and Electrical Requirements—Neighborhood DYAC**

<u>Hot and Cold Water</u>		<u>Flow Rate</u>	
Cold Water		20 GPM	
Hot Water		8 GPM	
<u>Sewage</u>		<u>Flow Rate</u>	<u>Est. Total Flow/Day</u>
		15 Gal/Day/Person	300 Gal.
<u>Heating</u>		<u>BTU/Hr./Sq. Ft.</u>	<u>Total MBH</u>
For ambient temp. of:			
-10°F, D.B.		80	330
0°F, D.B.		70	290
+10°F, D.B.		62	260
+20°F, D.B.		55	230
<u>Ventilation</u>			
Toilets		10 air changes or 2 cfm/sq ft	
Office		10 cfm/person	
Lounges		10 cfm/person	
Game Room		10 cfm/person	
Storage areas		2 air changes per hour	
Snack Preparation		2 cfm/sq ft	
Snack eating		10 cfm/person	
Mechanical room		10 air changes winter	
<u>Cooling</u>			
Air conditioning (based on ambient temp. of 90°F, D.B., 76°F, W.B.)			12 Tons, total
Mechanical ventilation (non-air-conditioned facility):			
Lounge		6-8 cfm/sq ft	
Office		6-8 cfm/sq ft	
Game room		6 cfm/sq ft	
Drop-in		6 cfm/sq ft	
Snack preparation		8 cfm/sq ft	
Snack eating		6-8 cfm/sq ft	
Mechanical room		20 air changes summer	
Toilets		10 air changes or 2 cfm/sq ft	
<u>Electrical</u>		<u>Allowance (watts/s.f.)</u>	<u>Total KVA</u>
Lighting and Miscellaneous Power		3	13
Mechanical Power (Heating and Ventilation Only)		3	13
Mechanical Power (Heating, Ventilation and Cooling)		6.7	28
Total Load Summary:			
Without A/C			26
With A/C			41

# 7-6 Renovated Neighborhood DYAC

**Table 7-6 Space Program—Small Neighborhood DYAC**

<u>Module and Space</u>	<u>Recommended Area</u> (gross square feet)
<u>Drop-in Module</u>	
Game Room	500
Game Room Storage	50
Large Lounge	250
Large Lounge Storage	50
Small Lounge	100
Snack Facilities	200
	<hr/> 1,150
<u>Programmed Spaces Module</u>	
Meeting Rooms	300
Meeting Rooms Storage	40
Project Space	300
Project Space Storage	30
	<hr/> 670
<u>Administration and Support Module</u>	
Entry and Circulation	550
Supervision and Administration	100
General Storage	50
Toilets—Men	150
Toilets—Women	150
Maintenance Closet	20
Mechanical Space	(150)*
	<hr/> 1,020
Total	2,840
<u>Outdoor Module*</u>	
Outdoor Activity Spaces	3,000
Entry Space	400
Parking	3,500

\*Not included in total programmed building area.

## a. Program.

This Neighborhood DYAC, smaller than the one described in paragraph 7-5, is intended to serve a housing neighborhood with an eligible youth population of 250-600. An existing, unused building, within or convenient to the residential neighborhood, is to be renovated to meet the Youth Activities Center requirements. The range of activities (drop-in functions predominantly for juveniles and early adolescents, and locally-oriented programmed activities), the character of the building, and the volunteer-staffing of this center are also similar to those for the larger Neighborhood DYAC.

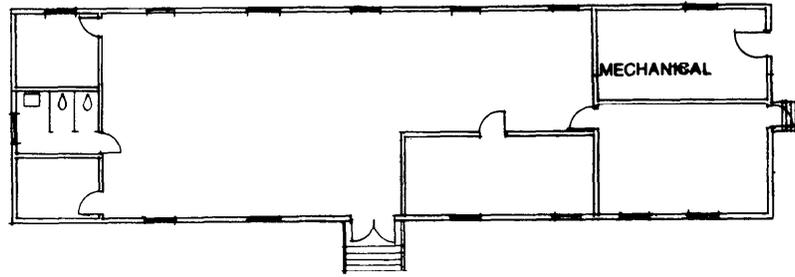
The existing found space (see figure 7-19) is a simple rectangular, one-story, pitched-roof building. It contains 2,250 gross square feet of space, with overall dimensions 90' x 25'. It has a main entrance in the middle of one long side, and another in the middle of one short side, with small windows spaced regularly down the length of the structure. The interior is divided by light partitions into one large space occupying over half the building, several small rooms, and mechanical and toilet spaces.

Table 7-6 summarizes the space requirements for this small Neighborhood DYAC as specified in Chapter 5.

## b. Design Solution.

The design for the renovated Neighborhood DYAC retains the basic structure and shell of the existing building, but makes major renovations to the spatial organization and architectural character. Many existing interior partitions are removed and a new layout of spaces is constructed. The fenestration and exterior entrance pattern is altered to make the building more open and accessible, to connect visually to the exterior activity space, and to make the image different from other on-post structures. An addition of one room is built along the long side of the building, to provide expanded game room/multipurpose space, increasing the overall size to 2,840 square feet. Porches are also added to the front and rear, to provide various outdoor spaces for multiple uses and allow the building to be entered less abruptly.

The number and types of spaces in this design, in comparison with the large Neighborhood Center, differ largely because of the smaller programmed



EXISTING BUILDING

PROPOSED RENOVATION

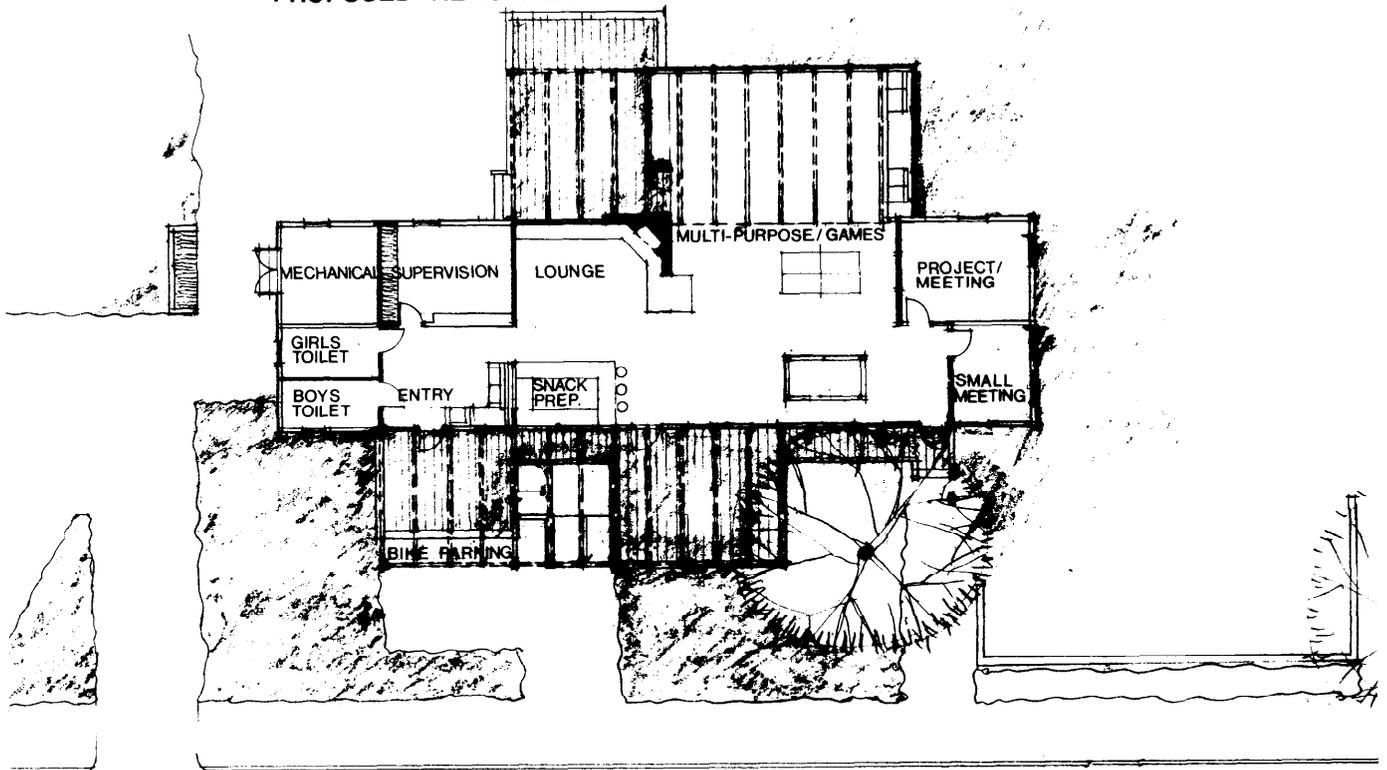


Figure 7-19 Renovated Small Neighborhood DYAC: Floor Plan

## Illustrative Designs

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area. There is a lounge and a snack area, but the small lounge is combined with the entry space. The game room, divided on two levels, also must function as a multi-purpose space—for dances and parties—because there is no other space large enough. There are two meeting/projects rooms, of different sizes, off the games/multipurpose area.

The space organization and sequence of viewpoints have been adapted for the renovation of the existing structure, but follow a similar pattern and logic to that of the large Neighborhood DYAC: There are fences on the front, defining the DYAC turf and providing a distinctive image from the distant viewpoint. The main entrance is approached via trellised porches, revealing to the visitor some of the youth activities before he enters the center. The interior areas adjacent to these porches—the games/multipurpose/snack area and entry—have large window areas permitting views of the outdoor spaces and from outside of some of the indoor activities. The entry area provides a good view of the activity spaces in the building, and is contiguous to the snack and lounge areas. Also adjacent to the entry is the administration/supervision desk, with an overview of all activities in the center. The new addition to the games/multipurpose room allows some change in level to modulate and partially subdivide the space, as in all the other designs, and opens onto another porch and activity space to the rear of the building.