MCPB
Item # 12
07/18/02

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

July 11, 2002

MEMORANDUM

TO: Montgomery County Planning Board
VIA: John A. Carter, Chief, Community-Based Planning Division JAC
FROM: Judy Daniel, Rural Team Leader JD
Community-Based Planning Division
Maria Martin, Community Planner, Rural Team MAM
Community-Based Planning Division

CASE NUMBER: MR-00701-F&S-1
REVIEW TYPE: Mandatory Referral

PROJECT NAME: Montgomery County Department of Public Works and Transportation
Damascus Community Center
REVIEW BASIS: Article 28, Chapter 7-112 of Regional District Act

ZONE: RE-2C
LOCATION: 25520 Oak Drive, Damascus, Maryland
MASTER PLAN: Damascus

APPLICANT: Montgomery County Department of Public Works and Transportation

---

STAFF RECOMMENDATION: APPROVAL with comments:

- Must provide a sidewalk connection on Oak Street from the center's entrance to the western property line, toward the park and school.
- Must provide a sidewalk from the entrance of the property along the roadway leading to the community center building.
- Must comply with the Department of Permitting Services' requirement for stormwater management.
- Must provide a second mandatory referral for the future outdoor amphitheatre, skateboard park, and in-line skate rink.
    - A skateboard park should be constructed at the indicated site next to the recreation center.
    - The multi-use court indicated on the plans must be extended to accommodate a full size roller hockey rink.
- Coordinate site access design on Oak Drive with the Montgomery County Department of Public Works and Transportation (DPWT).
- Dedicate right-of-way along the property frontage on Oak Drive to provide 30' of right-of-way from centerline.

BACKGROUND

Project Description

The Montgomery County Department of Public Works and Transportation (DPWT) and CDCI, Inc. intend to construct a new 23,500 net square foot community recreation center at 25520 Oak Drive in Damascus, Maryland. (See Figures 1, 2 and 3.) The Department of Public Works and Transportation staff indicates this facility is necessary to serve a rapidly expanding population that is expected to reach more than 47,000 by 2010. There are no existing community center facilities in this region of the County. The Department of Recreation's Facility Development Plan has identified the UpCounty Region as the top priority for new facility development. Construction will start this year and will last about 18 months.

The facility will include a gymnasium, exercise room, social hall, kitchen, senior community lounge, music/classroom, hobby craft and kiln room, game room, vending space, conference room, offices, lobby, rest rooms and storage space. The outdoor activity space will include a 160,000-square foot athletic field, an 8,000-square foot multipurpose court for volleyball and basketball, and a 7,500-square foot playground. In the future, the center will have an outdoor amphitheatre, skateboard park, and in-line skate rink. 150 parking spaces are proposed to service the facility; this includes seven handicapped spaces. The hours of operations are 9:00 a.m. to 10:00 p.m. Monday through Saturday and noon to 6:00 p.m. Sunday.

The Department of Public Works and Transportation staff has submitted a revised plan with an extension of a sidewalk to the property line, as requested by M-NCPPC staff (see Attachment 4).

Community Context

The Damascus Community Center building site is approximately 37 acres in size and zoned RE-2C. The site is located in an area consisting of public facilities and single-family residential houses.

- To the north of the site, there are single-family houses zoned RE-2C.
- To the east across Ridge Road, there are single-family homes zoned R-200, RT-8 and RT-6.
- To the south and west, Park and Planning own property that is an undeveloped park and there is a PEPCO right-of-way, both zoned RDT.
- To the south is the John T. Baker Middle School, zoned RC and property owned by Montgomery County, zoned RE-2C. Also to the south, across Oak Drive, there are single-family homes zoned R-200 and R-90.

ANALYSIS

Transportation

Site Access and Circulation

The site design proposes a single vehicular access point on Oak Drive, approximately 500 feet west of Ridge Road (MD 27). Ridge Road is classified as a Major Highway (M-27) with a 120-foot right-of-way. Oak Drive is not classified in the Damascus Master Plan, but is rather classified as a secondary residential roadway. Per the County Code, Oak Drive has a recommended 60-foot right-of-way. Oak Drive connects to Ridge Road at two points about 4,000 feet apart. The site is at the northern end of Oak Drive.

The site design includes provision of a sidewalk along the property frontage on Oak Drive to improve pedestrian safety and accessibility to the site. This connection is particularly valuable given the site proximity to John T. Baker Middle School, approximately 500 feet to the southwest along Oak Drive. The staff recommends that the site plan be modified to incorporate a sidewalk along the driveway to provide pedestrian and bicycle access from Oak Drive to the on-site recreational facilities.

Local Area Transportation Review

The proposed development is estimated to generate more than 50 peak hour trips during the peak hour of the morning and evening weekday peak periods. The applicant therefore completed a Local Area Transportation Review (LATR) study, dated May 2002, to determine the extent of impacts on the area roadway network. The study concludes that the Damascus Community Center will not have an adverse effect on the roadway network.

Trip generation for the Damascus Community Center was developed using observed driveway traffic counts at the Potomac Community Center on Falls Road. The Potomac Community Center is similar in size and scope of services to the Damascus Community Center. Traffic counts taken in 1998 at the Potomac Community Center showed weekday morning and evening peak hour driveway counts of 96 and 158 vehicles, respectively. The most relevant difference between the two sites is that the Potomac Community Center includes child daycare facilities, whereas the Damascus Community Center will not. The Potomac Community Center therefore provides a slightly conservative estimate of traffic impacts.

The congestion standard for the Damascus Policy Area is a critical lane volume (CLV) of 1500. As shown in the table below, each of the intersections studied have a CLV below 1500 during both the morning and evening peak hours of the weekday peak period for existing, background, and total future traffic conditions.

Results of Critical Lane Volume (CLV) Analysis

Location	Existing CLV		Background Conditions CLV		Total Future Traffic Conditions CLV	
	AM	PM	AM	PM	AM	PM
Ridge Road and Oak Drive (north leg)	1056	1061	1061	1070	1068	1111
Ridge Road and Oak Drive (south leg)	1213	1151	1272	1207	1286	1274
Oak Drive and Site Driveway					227	204

Policy Area Transportation Review

The site is located in the Damascus Policy Area, which has a remaining capacity of 835 jobs as of June 30, 2002.

Transportation Recommendations

Transportation Planning staff recommends the following on the referenced mandatory referral:

- Coordinate site access design on Oak Drive with the Montgomery County Department of Public Works and Transportation (DPWT).
- Dedicate right-of-way along the property frontage on Oak Drive to provide 30' of right-of-way from centerline.
- Provide for completion of sidewalk along the property frontage on Oak Drive and a sidewalk connection to the on-site facilities.

Environment

Forest Conservation

This application is subject to the Forest Conservation Law. The Natural Resources Inventory (#4-01056) was submitted and approved. A final Forest Conservation Plan was submitted and approved. The applicant must place 14.32 acres of forest into a Category I Conservation Easement.

Stormwater Management

The site is located within two watersheds: Great Seneca Creek and Little Bennett. The *Countywide Stream Protection Strategy* (CSPS) assesses the Magruder Branch of Upper Great Seneca Creek, Use I-P, as having fair stream conditions and good habitat conditions, labeling it as a Watershed Restoration Area. The CSPS assesses the headwaters of Little Bennett, Use IV-P, as having good stream conditions and good habitat conditions, labeling it as a Watershed Preservation Area.

The applicant submitted a stormwater management concept plan to the Department of Permitting Services. Water quantity and quality control must be provided via a mixture of bio-retention facilities, sand filters, and underground infiltration trenches.

Parks

An area designated for a skateboard park is indicated on the plans for the proposed Damascus Community Center. A skateboard facility in the Damascus area has been under discussion for some time. There has been significant community support, particularly through the Up-County Regional Recreation Advisory Board and the Damascus Community Alliance for this type of recreational facility in Damascus. In addition, there have been ongoing discussions between Parks staff and the Department of Recreation in support of this need.

In July 2001, a meeting was held with a Commission staff member, the Project Manager from the Department of Public Works and Transportation, and a representative of the Department of Recreation to discuss the possibility of allowing space on the community center property for a skateboard park. An agreement was made to locate a skateboard park in the current location indicated on the plans. No funding was available at that time. The original thought was that the Commission would fund the project. A Consultant to the Commission drew up a concept plan for a skateboard park in that location and coordinated the drawing with the DPWT Project Manager. (See Figure 5).

Parks staff held a subsequent meeting with Greg Bayor, Director of the Department of Recreation, Jeff Bourne, the new Director of Community Centers, and Hamid Omidvar, DPWT Project Manager to review the plans for the Center and reconfirm the need for a skateboard park. Greg Bayor suggested that the Department of Recreation request the funding for the skateboard park through a supplemental appropriation with support from the Department of Parks. The completed facility will be operated by the Department of Recreation.

The additional suggestion was made to pave an extension of the multi-use court indicated on the plans to accommodate a regulation size roller hockey rink. This would complement the skateboard park as another skating facility in an area of the County that is in significant need of recreational opportunities for young people. The Department of Recreation staff agreed to provide the rink, however, the plans do not include an area large enough for league play. The Department also agreed to provide pedestrian access to the center.

All three conditions are critical to ensuring the active use of the Recreation Center by young people. There is an identified need in Damascus, particularly for a skateboard park, as well as a constant demand for regulation size roller hockey rinks in the Up-County area. Young people will be unable to use the Center if safe pedestrian access is not provided from the adjacent middle school.

Sidewalk on Park Property Adjacent to Community Center

During the review of the mandatory referral, staff recognized an opportunity to provide a pedestrian connection between the Baker Middle School and the Community Center. Staff acknowledges that a small portion within the community center's property lines will be constructed as part of this project. Montgomery County Public School will have to provide the connection on their property. A large portion of this sidewalk connection is on Park property and the cost will be borne by this Commission.

When the sidewalk is engineered, consideration should be given to creating a sidewalk that meanders the path a bit around the existing trees to make people feel more protected from the road versus the traditional beside the road design. Children in this age group tend to be more active when walking along -- running, jumping, jostling, nudging. A path that is further back from the road may offer a safer connection to a destination that will be heavily used by this age group. The traditional sidewalks on open section roads with no ditch, such as Oak Drive, are used for parking in many cases. Children walking around parked cars may not make for ideal conditions.

Staff would suggest the following conditions when the Commission reviews sidewalk proposals:

- Path should not get too far way from the road (12 feet approximately).
- Thick underbrush must be cleared. The clearing would prevent the creation of path that is isolated and would endanger personal security. The sidewalk would be visible from the road.

Park Recommendations

The Department of Parks has three conditions for the approval of the Damascus Community Center mandatory referral:

- A skateboard park should be constructed at the indicated site next to the recreation center.
- Pedestrian access from the driveway of the center to the western property line and a continuing sidewalk along the driveway up to the Center should be provided. This will allow safe access for middle school children to use the proposed skateboard park and roller hockey rink as well as the recreation center activities and after school program. The middle school age group comprises a significant number of skateboard users throughout the County.

- There is a need to extend the multi-use court indicated on the plans to accommodate a full size roller hockey rink. There is a significant demand for league play in the County and there are very few regulation size rinks.

CONCLUSION:

Staff recommends APPROVAL for this mandatory referral with the comments noted in this report.

MAM:ha: a:\martin1\Damascus report.doc

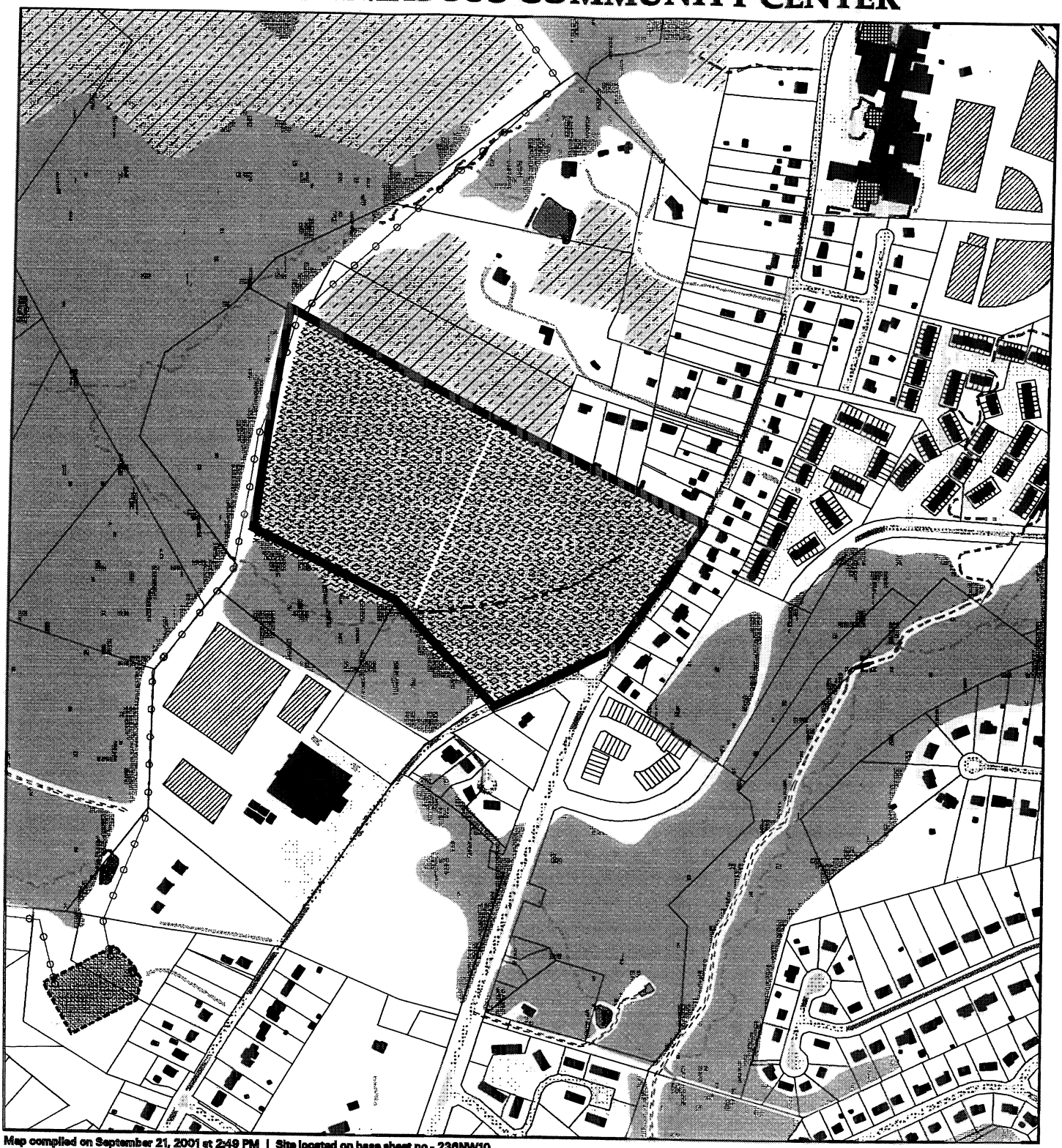
Attachments:

Attachment 1:	Vicinity Map
Attachment 2:	Aerial Map
Attachment 3:	Site Plan
Attachment 4:	Revised Site Plan From Applicant
Attachment 5:	M-NCPPC Concept Plan for a Skateboard Park
Attachment 6:	Damascus Community Center Program of Requirements

ATTACHMENT 1

VICINITY MAP FOR

MR-00701-F&S-01 DAMASCUS COMMUNITY CENTER



Map compiled on September 21, 2001 at 2:49 PM | Site located on base sheet no - 236NW10

Key Map

N

Research & Technology Center

0 600

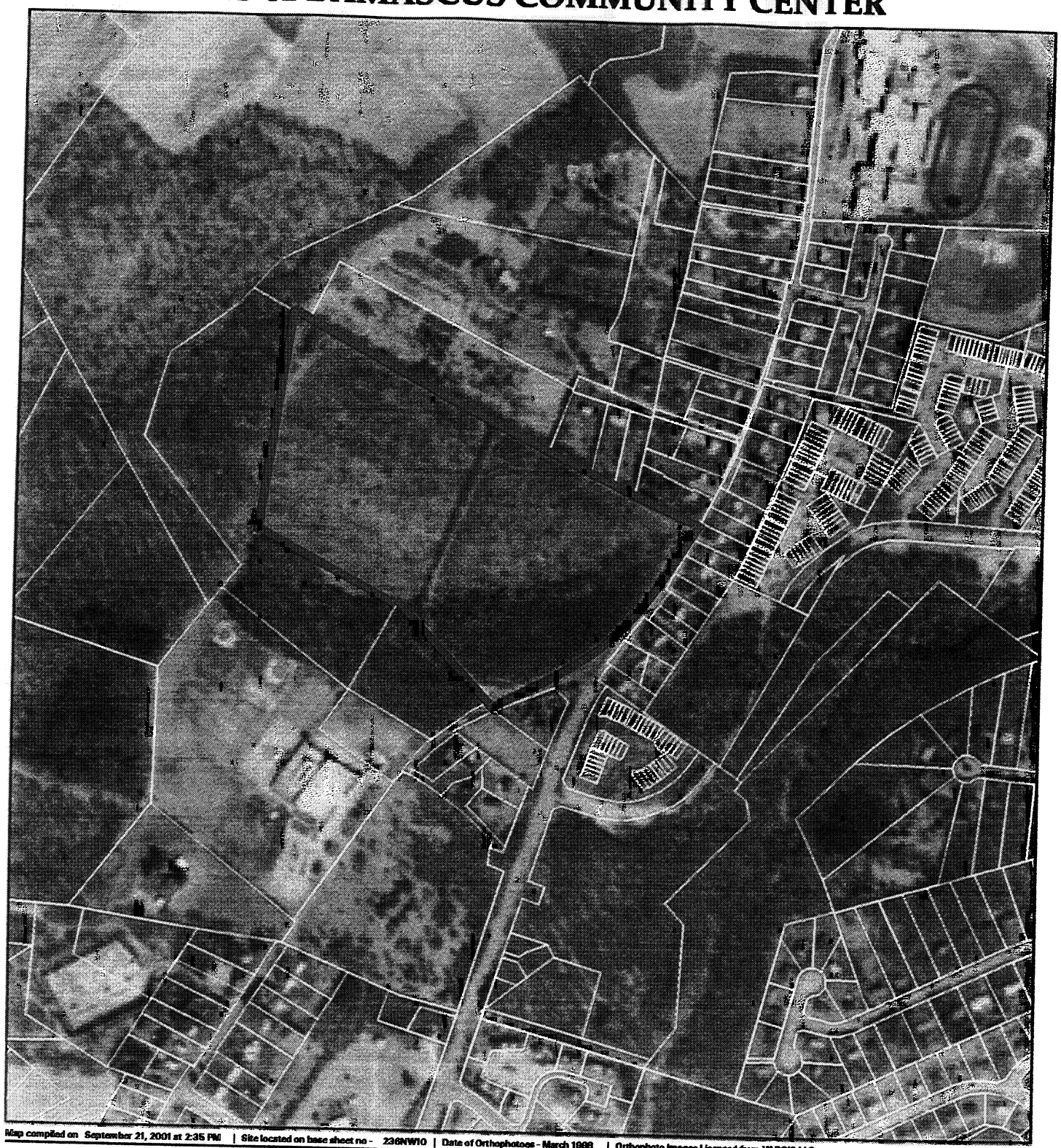
1 : 7200

MONTGOMERY COUNTY DEPARTMENT OF PARK AND PLANNING
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION
8787 Georgia Avenue - Silver Spring, Maryland 20910-3760

VICINITY MAP FOR

ATTACHMENT 2

MR-00701-F&S-01 DAMASCUS COMMUNITY CENTER



Map compiled on September 21, 2001 at 2:35 PM | Site located on base sheet no - 236NW10 | Date of Orthophotos - March 1998 | Orthophoto Images Licensed from VARGIS LLC.

Key Map

N

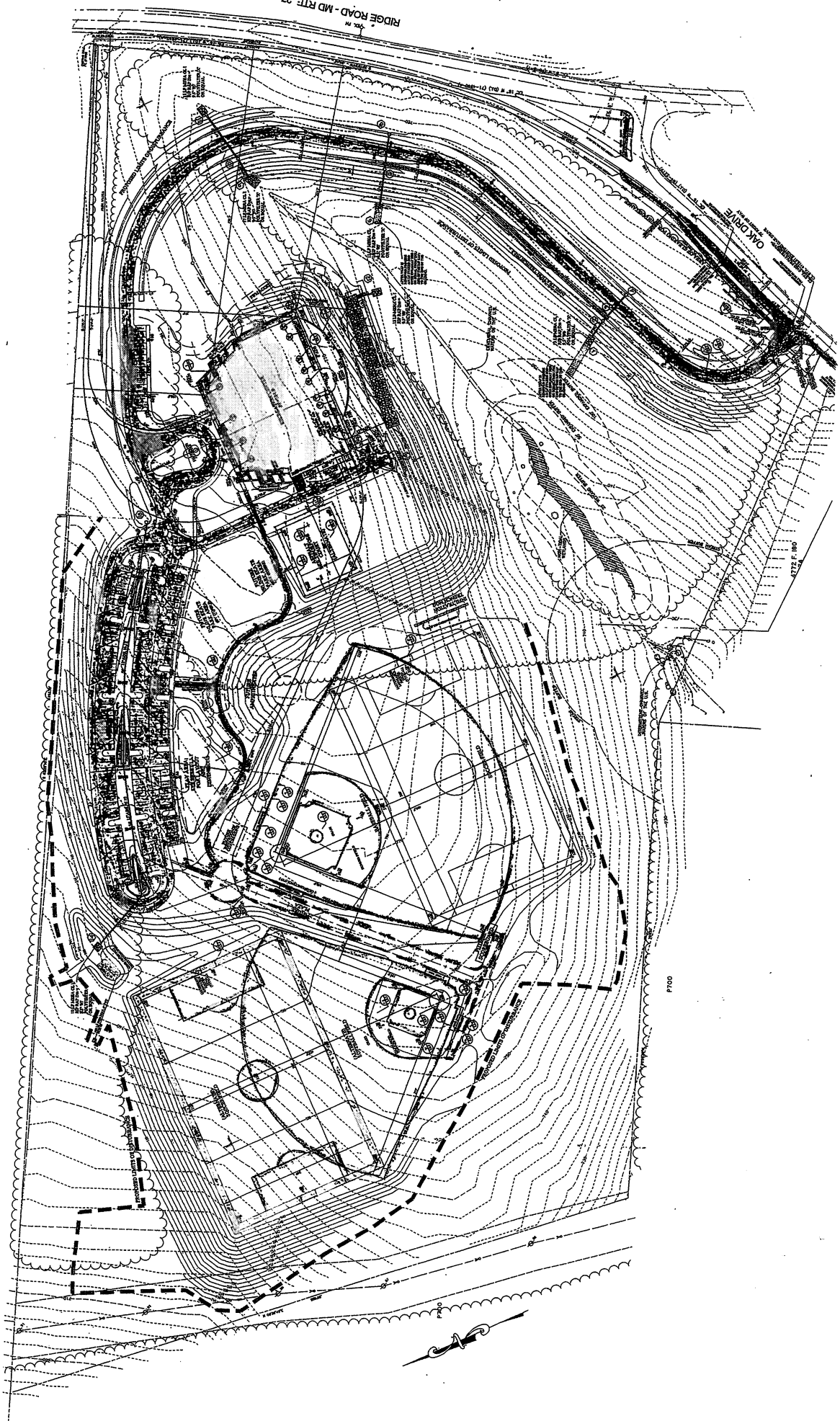
Research & Technology Center

0 600

1 : 7200

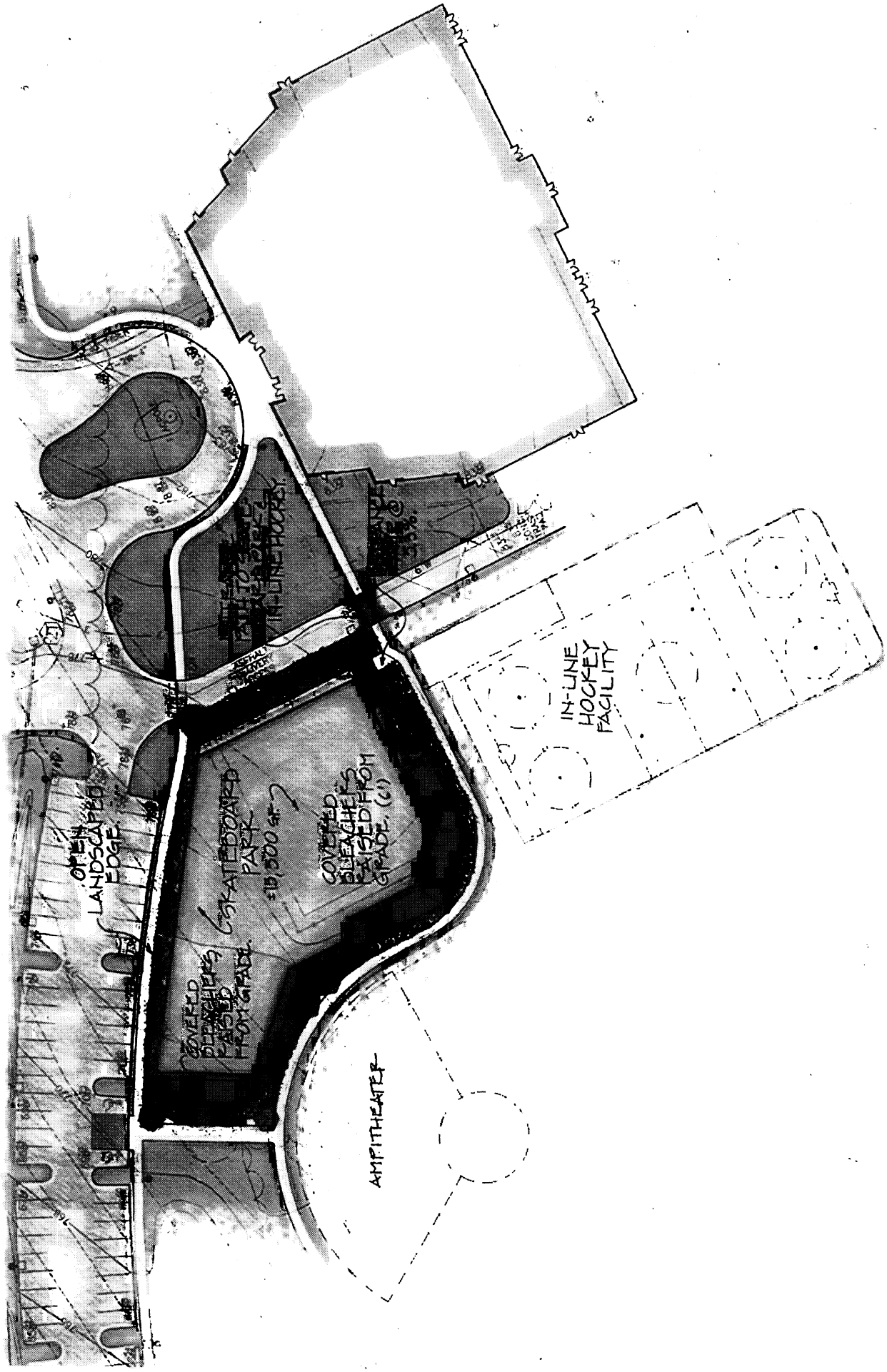
MONTGOMERY COUNTY DEPARTMENT OF PARK AND PLANNING
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION
8787 Georgia Avenue - Silver Spring, Maryland 20910-3760

ATTACHMENT 3



ATTACHMENT 4

ATTACHMENT 5



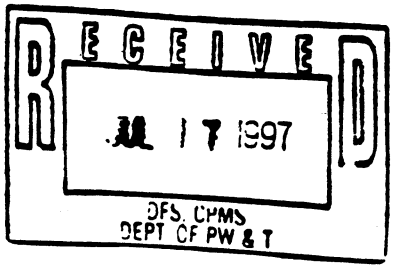
ATTACHMENT 6

DAMASCUS

COMMUNITY CENTER

PROGRAM OF REQUIREMENTS

April 1997



PROGRAM OF REQUIREMENTS

FOR

DAMASCUS COMMUNITY CENTER

April 1997

APPROVED: _____ 7-11-97
Bruce Romer. Chief Administrative Officer — Date

APPROVED: _____ 7/9/97
Robert K. Kendal. Director
Office of Management and Budget — Date

APPROVED: _____ 5/14/97
Fred Edwards. Chief
Division of Facilities and Services. DPW&T — Date

APPROVED: _____ 5/14/97
Greg Bayor. Director
Department of Recreation — Date

DAMASCUS COMMUNITY CENTER

PROGRAM OF REQUIREMENTS

TABLE OF CONTENTS

I. INTRODUCTION

A. **Description:** This project provides construction of a new 23,500 net sq. ft. community center. The standard net assignable area of this facility includes a gymnasium, exercise room, social hall, kitchen, senior community lounge, music/classroom, hobby craft and kiln room, game room, vending space, conference room, offices, lobby, rest rooms and storage space.

B. **Service Area:** This facility will serve the Up-County Region including Damascus and Clarksburg (Planning Areas:10,11,13,14,15).

C. **Justification** This is a geographically isolated area with a rapidly expanding population expected to reach more than 47,000 people by 2010. There are no existing community center facilities in this region.

D. **Plans and Studies**: The Department of Recreation Facility Development Plan has identified the Up County Region as the top priority for new facility development.

E. **Coordination:**

Department of Recreation
Department of Public Works and Transportation, Division of Facilities & Services
M-NCPPC Department of Parks
Office of Management and Budget
Department of Information Systems Technology

F. **Guidelines:** The community center must be designed in compliance with the Division of Facilities and Services Design Guidelines and Standards; and the Energy Design Guidelines.

II. SITE DESIGN

A. In planning the relationship of the site design to that of the building, it is important to consider both function and aesthetics. Ideally the amenities of the site will complement the building uses.

B. Basic considerations of site design include:

1. Facility footprints and orientation
2. Construction impacts on adjacent residential and commercial property owners
3. Traffic flow patterns for automobiles, buses, bicycles, pedestrians
4. Parking
5. Exterior lighting plan
6. Exterior security and safety
7. Landscaping
8. Surface materials for courts
9. Development impacts, especially traffic and noise, on residential areas.
10. Vehicular access, egress and parking.
11. Orientation of the building on the site for optimum use of sunlight for natural illumination and the reduction of snow and ice problems at entrances and exits in winter months.

C. Summary of outdoor activity spaces

1. Parking:	150 spaces
2. Multipurpose Court (Volleyball, basketball, roller hockey)	8,000 sq. ft.
3. Playground	7,500 sq. ft.
4. Athletic Field	160,000 sq. ft.

D. Parking and Traffic Flow Plan

1. Parking Spaces:

a. Up to 150 spaces should be located adjacent to the community center with convenient access to all recreational amenities.

b. Parking is should be designed to minimize paved area.

c. Pick up and drop-off areas should be located near the entry to the Recreation Center.

d. Adequate driveway space to allow turning radius for all vehicles including buses, emergency vehicles and dumpster trucks.

2. Emergency delivery and maintenance vehicle access:

a. Delivery access should be convenient to the gymnasium and social hall and screened from view.

b. Trash pick-up should be screened from view and located in close proximity to the social hall.

c. A concrete pad should be constructed for the dumpster to protect asphalt paving.

d. Trash receptacles should be located near all entrances to the building.

e. Emergency vehicles must have access to all activity areas.

E. Bicycles

1. Bicycle and motorcycle parking should be provided as required by code.

2. The site plan should provide connections to any existing bicycle paths.

3. Bicycle racks should be available to provide security for bike commuters and should be visible from interior control rooms. The location of these racks should not visually detract from the entrance to the building nor create a pedestrian, bicycle, or auto traffic flow problem.

F. Pedestrians

1. Walkways should direct pedestrian traffic to all activity spaces including fields and courts.

2. Walkways should connect to community walkways to encourage pedestrian access to the facility.

G. Landscaping

1. Tree removal during site clearing, grading and earthwork should be minimized.

2. Plantings should be easily maintained and should provide visual screens and buffers from parking and activity areas.

3. Thorn bushes should be considered along fenced areas to enhance security.

4. The landscaping and lighting plans should be coordinated and planned to enhance security.

H. Exterior Lighting

1. Lighting for the site should maximize the security of the facility and of participants, while minimizing the impact on adjacent properties.

2. All exterior lighting should be controlled by the County energy management control system. An emergency override system, should be located at the administrative control area of the facility.

3. Walkways should be illuminated for safety and security.

III. GENERAL DESIGN

A. Accessibility

1. The site, building and all activity spaces must be fully accessible to persons with disabilities in accordance with the Americans With Disabilities Act and applicable State and local codes.

2. The building design should accommodate persons from all age groups.

3. Automatic door openers should be installed on the main entrance lobby doors.

B. Acoustics

1. Special accommodations for the hearing impaired should be made in the social hall.

2. The design should minimize noise levels through the use of sound absorbent materials and zoning of activity spaces.

3. Mechanical rooms should be carefully located to minimize the sound transfer to activity areas.

C. Energy Conservation

1. Reference the attached Energy Program of Requirements.

2. A mechanical system that is simple for staff to control and maintain should be provided.

3. Problems associated with vandalism and building security should be considered in determining the placement of windows, clerestories and roof monitors.

D. Roof

1. The roofing system must be designed in compliance with Division of Facilities and Services Design Guidelines and Standards

2. Maintenance, security and reduction of vandalism should be considered when the roof is designed. Steep roof type is preferred.

3. If the design requires access to the roof for systems maintenance, access should be possible from inside the building, with adequate space for maintenance workers to reach the roof with tools and supplies.

4. In order to minimize vandalism and to eliminate an attractive nuisance, access to the roof should be difficult for youth.

E. HVAC

1. The entire recreation center will be air conditioned and may require special HVAC system enhancements for kitchen, kiln, exercise and game rooms.

2. The system must provide effective zone control to permit set back or shut off when an activity area or room is unoccupied.

3. Operable windows should be provided to permit natural ventilation.

F. Fire Protection

The fire suppression and alarm systems must comply with the Americans With Disabilities Act and other applicable codes.

G. Plumbing

1. Drinking fountains should accommodate users of different heights.

2. Special consideration should be given to the drain requirements of the kitchen, art studio, pottery wheel area, janitorial cleaning sinks, restrooms and mechanical rooms..

3. One kitchen dish wash sink should be equipped with a grease trap which is easily accessed for maintenance.

H. Electrical

1. Kitchen appliances and art studio machinery will require 220 v service.

I. Public Address System

1. The system should provide for two way intercom from the central control area to each activity space. This communication should be able to be directed to a selected activity space or spaces without broadcasting throughout the facility

2. The system should have a paging capability throughout the center that can transmit voice, AM-FM radio or cassette recorded music to each or all activity spaces.

3. One microphone jack should be installed in the gymnasium, and two in the social hall to support announcing, lectures, music and theatrical uses.

4. Speakers should provide adequate sound distribution at acceptable levels to all activity spaces with separate on/off and volume control to each space. The social hall may be subdivided for program uses and should be zoned as two separate rooms.

5. All public address equipment should be secured and protected from theft, vandalism and normal activities.

J. Maintenance and Materials

1. All systems and finishes should be designed to provide easy maintenance using a variety of generally available cleaning procedures. New technologies and materials must be evaluated and the requirements for specialize maintenance equipment or procedures must be clearly defined.

2. All systems materials and finishes should be vandal resistant.

3. Finishes in exercise rooms and toilet rooms must be resistant to the absorption of odors.

K. Telephone/ Computer

1. There will be a pay telephone in the lobby near the social hall and administrative control center. The public pay telephone must comply with requirements of the Americans With Disabilities Act. Pay telephones should not receive incoming calls.

2. The phones at the main administrative control area should have four lines.

3. There will be three computer work stations, one at the main administrative control station and two in the office. Data lines will be required to support E-mail, Fax-modem operations, LAN and Fibernet. Installation should be in accordance with guidelines established by the Department of Information Systems Technology.

L. Lighting

1. Follow requirements of the Energy Design Guidelines on light levels, lighting fixtures, lamps and ballast types permitted.

2. All lighting fixtures should provide ease of maintenance and be vandal-proof.

3. All rooms should have multiple switching options to allow control for slide presentations.

4. Exterior lights should be controlled by the County energy management control system.

5. The entire perimeter of the facility should be lighted to enhance security.

6. Systems should be designed to provide emergency illumination in the event electrical power is interrupted.

M. Cable Television:

Wiring and cable plans should provide for cable television capability to the social hall, community lounge and conference room.

N. Signs

1. Signs must comply with the Americans With Disabilities Act requirements.

2. International symbols should be used.

3. Exterior signs will include:

   a. Recreation Center identification sign
   b. Parking and traffic control signs
   c. Special facility use instructions or regulations
   d. Marquee sign with minimum 4' x 6' changeable illuminated letter board.

4. Interior signs will include:
   a. Dedication plaque
   b. Directional signs
   c. Activity space identification
   d. No smoking regulations
   e. Fire code capacities
   f. Exits
   g. Staff
   h. Hours of operation

O. Security

1. The administrative control area is also the security control center. Security system controls should be incorporated into a counter located in this area. Visual access from this point to activity spaces and parking lots is essential.

2. *Coordination:* The recreation center will be part of the Montgomery County security system. Specific requirements for the system will be determined when the design of the building is established.

3. *Visual Access:* The building design should enhance supervision and minimize security problems by providing maximum visual access to all activity spaces and eliminating blind corners, hallways and exterior recesses. Security cameras should be placed to monitor entrances and the parking lot.

4. *Cameras, Monitors and Recorders:* Two security system monitors are to be placed on each end of the control counter. These monitors are connected to the cameras positioned to cover all building exits, program spaces and parking lot. A video recorder is included to tape the record of monitored areas

on a 24 hour cycle. Camera systems should be designed to allow additional cameras to be added if needed.

5. *Locks:* The keying system should require a minimum number of keys.

   a. The main entrance door should have a programmable cipher lock
   b. Separate keys for exterior doors and interior doors are required.
   c. The center director's office should be keyed differently from other spaces.
   d. One key should access all recreation activity spaces within the building.

6. *Alarms:* Panic alarms and security system keypads are to be located at the control desk.

IV. RECREATION CENTER

A. Recreation Center Operations

1. Hours of operation: Programs are typically scheduled between 9 a.m. and 10 p.m. Monday through Saturday and 12 noon to 6 p.m. Sundays. Administrative and maintenance time may extend these schedules by as much as 4 hours per day prior to and following programmed activities.

2. Staff: The typical staff compliment for a recreation center includes:

   a. Center Director
   b. Community Activities Coordinator
   c. Building Service Workers (2 positions)
   d. Temporary Seasonal Employees Contractual (These positions are related to program activities and not Center operations and may employ up to 150 persons.)

RECREATION CENTER INTERIOR SPACE SUMMARY

Activity Space	Net Square Feet
Lobby	1.600
Administrative Control Space	Included in lobby space
Center Staff Office	450
Conference Room	400
Game Area	1.600
Hobby Craft and Kiln Room	875
Music/Classroom	1.200
Senior/Community Lounge	600
Kitchen	250
Social Hall	3.600
Storage	1.350
Gymnasium	7.675
Exercise	1.600
Custodial	100
Rest Rooms	1.000
Vending	400
Mechanical/Electrical	800
TOTAL RECREATION CENTER:	23.500

B. Recreation Center Activity Spaces

1. LOBBY

a. Size: 1600 square feet

b. Purpose: This area is the main arrival point and focus of the community center. It should be designed to provide a bright, open and inviting environment. Activity spaces should radiate from the lobby. This area should be a focal point from the parking lot and clearly convey its function as the main entrance to the building. A vestibule should be provided for energy conservation.

c. Key features:

(1) The lobby should have a view of the parking lot and comfortable seating for 10 people.

(2) The entrance door, vestibule, lobby and counter should be so designed that police patrols can view the whole area from the entrance without having to enter the building.

(3) There should be a locking, glass-encased combination bulletin board and letter message board.

(4) Wall information display rack for fliers should be provided.

(5) Pay telephone should be adjacent to the entrance to the social hall and near administrative control area. This phone should be capable of outgoing calls only.

(6) Drinking fountains should be adjacent to the social hall and to the gymnasium.

(7) Two rest rooms should be provided immediately adjacent to the lobby.

(8) Floor surfaces of the lobby should be quarry tile or equivalent to provide an attractive and easy to maintain area that is subject to a high level of pedestrian traffic.

2. ADMINISTRATIVE CONTROL SPACE

a. Size: Included in lobby space

b. Purpose: This area is designed to be the central control and information point in the center. Recreation staff will work from this area to supervise the general use of the building. The control center should be a focal point of the building upon entering. The design should provide as much visual access to activity areas as possible, preferably by use of windows rather than video monitoring.

c. Key features:

(1) This area must be located with a commanding view of the entrance, lobby, game, gymnasium vending areas, exercise room, and as many other center functions as possible.

(2) There should be a U-shaped counter. This space should serve as a work station for three employees with under counter locking lateral files, secretarial chairs, and space for 3 telephones, 2 computers, 2 printers, and a cash register.

(3) Access from the lobby to behind the counter should be controlled.

(4) Locking storage should be built into the control counter. Items to be stored are likely to include: up to 4 basketballs; 4 volleyballs; 2 sets of pool balls; ping pong balls and paddles; boxed table games; office supplies.

(5) A safe with a top drop slot should be built into the control counter.

(6) The following building systems controls should be operable from the control counter:

(a) Lighting control panel for interior and exterior lights
(b) Override timer for energy management system
(c) Public address system, microphone, amplifier, and audio loop controls in a locking cabinet
(d) Security system annunciation panel with visual and audible alarms tied to all exterior and controlled access doors
(e) Door lock activation system controls
(f) Telephones for all workstations

(7) Commercial modular furniture should be considered as an alternative to custom made cabinet work.

(8) A coat rack to accommodate a minimum of five coats should be provided.

(9) The entire administration and control counter area should be carpeted with stain-resistant carpet.

3. CENTER STAFF OFFICE

a. Size: 450 sq. ft.

b. Purpose: This office serves as the primary work space for the center director, and as an auxiliary work place for recreation specialists and department staff who may schedule work at the recreation center.

c. Key features:

(1) Windows for visual access to the control counter, lobby, and as many activity spaces as possible, with blinds for privacy.

(2) Adjacent to the control counter

(3) Locking door keyed to limit access only to the director and maintenance personnel.

(4) Telephone with transfer capabilities to all other office phones in the building and other County offices

(5) Electrical capacity to accommodate PC computer, printer, and modem, FAX, and duplicating machine.

(6) Outlets should accommodate voice and data lines

(7) Coat hooks for six coats

(8) Carpet with anti-static specifications suitable for computer requirements

4. CONFERENCE ROOM

a. Size: 400 sq. ft.

b. Purpose: To provide a quiet meeting space for up to 25 people.

c. Key features:

(1) Carpeted floor

(2) Wired to accommodate voice, data, and cable television.

(3) Acoustically treated ceilings and walls to insure that a quiet space is maintained despite adjacencies to the lobby and game room.

5. GAME AREA

a. Size: 1600 sq. ft.

b. Purpose: To accommodate self-directed recreation games .

c. Key features:

(1) Adjacent to and visible from the control counter to facilitate supervision, but screened from public view so as not to be a focal point upon entering the recreation center

(2) Chair rail around the perimeter of the room designed to protect the wall compatible with the interior furniture plan.

(3) Floors of vinyl composition tiles

(4) Coat rack for twenty five coats

(5) Electrical outlets every six (6) feet around the perimeter of the entire room to accommodate installation of video arcade games

6. HOBBY CRAFT & KILN ROOM

a. Size: 875 square feet

b. Purpose: This 875 square foot area will contain both crafts and kiln rooms and is intended to be used for instruction and self-directed use for drawing, painting, sculpture, silkscreening, ceramics, pottery, lapidary, photography, woodcarving, and wood working. The area will contain suitable support features inciuding deep sinks and multiple heavy duty electrical outlets.

c. Key Features:

(1) Provide locking cabinets along 18 feet of wall adjacent to the kiln room. Floor cabinets should be 36 inches from the floor and topped with a work surface that is 30 inches deep. Wall mounted cabinets should be 24 inches above the work surface of the floor cabinets, and should be 30 inches high with a minimum depth of 18 inches.

(2) This room should be oriented to the north.

(3) Provide blinds for blacking out room.

(4) Three kilns

(5) Direct exterior ventilation, with kilns directly vented using hoods

(6) Steel storage shelves for temporary storage of pottery.

(7) Plumbing: Provide floor drain at pottery area and a deep sink with clay trap.

(8) Electrical: Standard outlets should be located every 3 feet along counter tops and every 8 feet along walls. 220 v electrical service for three kilns (each 208v 35 amp single phase)

(9) A manually operated folding screen partition should extend from the kiln room to screen the arts and craft work areas and create a suitable 600 square foot meeting room for non-art programs.

(10) Floors of vinyl composition tiles for hobby craft room and finished concrete floors for kiln room.

7. MUSIC CLASSROOM

a. Size: 1,200 square feet

b. Purpose: This area will provide space suitable for vocal or instrumental instructions and rehearsals.

c. Key Features:

(1) Acoustical treatment appropriate for vocal and instrumental music.

(2) Music stands

(3) Stacking chairs

(4) Storage cabinets for sheet music and instruments

(5) Sufficient lighting for reading sheet music

8. SENIOR COMMUNITY LOUNGE

a. Size: 600 square feet

b. Purpose: To provide a comfortably furnished passive area that will offer an environment conducive to senior citizen and adult uses such as discussion groups, card clubs, and a reading or work area for parents waiting for children who are participating in other center activities.

c. Key features:

(1) This room should be located adjacent to the lobby, social hall, and kitchen, and away from active areas and acoustically designed to minimize noise levels within the room.

(2) Natural light is not necessary, but desirable, possibly by skylights if located in the middle of the building.

(3) Floor should be carpeted with low pile, soil-resistant carpet. The expectation of spilled coffee, tea, cream, and soft drinks should be considered in selecting color and type of carpet.

(4) There should be a double door entrance from the lobby area to enable this space to be used in conjunction with the lobby for special events and registration activities.

(5) There should be a single door entrance from this room to the social hall in close proximity to the kitchen pass-through serving window.

9. KITCHEN

a. Size: 250 square feet

b. Purpose: The kitchen will serve as both an instructional area for nutrition programs and to warm food for catered events. It should be located adjacent to the social hall and also have direct outside access for service delivery and trash disposal. It is anticipated that the kitchen should accommodate all equipment and provide adequate circulation space for five workers.

c. Key features:

(1) The kitchen must be commercial grade in equipment and finishes for maintenance reasons

(2) Provide a locking commercial refrigerator with freezer

(3) Provide dishwasher

(4) Provide 150 lb. chipped ice making machine

(5) Provide 2 Microwave ovens

(6) Provide rack type roast and hold convection oven capable heating and reheating food and holding standard catering trays in accordance with the State of Maryland Department of Health Code 10.15.03.

(7) Provide sufficient outlets along counter top and work surfaces elsewhere for mixers, electric knives and commercial-sized coffee urns, etc., to avoid the use of extension cords.

(8) Provide at least 10 feet of built-in counter top, 3 feet high with drawers and base cabinets. Provide wall hung cabinets above counter top for additional storage. All cabinets should be locking.

(9) Provide serving counter 3 feet wide by minimum 8 feet long by 3 feet high to the social hall and senior lounge with a metal roll down grille which is not visible when open, and is locking from the kitchen side.

(10) Provide an extra deep stainless steel sink with auto reversing garbage disposal and accessible grease trap.

(11) The ceiling should be moisture resistant acoustic tile per code requirements.

(12) The floor should be moisture resistant non-skid tile with a floor drain that has a grease trap.

(13) The walls should be washable painted CMU.

(14) The kitchen should have direct outside access to the service area for deliveries and access to the dumpster, which should be nearby but well-screened.

(15) The kitchen should be well ventilated.

10. SOCIAL HALL

a. Size: 3,600 square feet

b. Purpose: This is a multi-purpose area that serves both recreation programs and rental use by individuals and community groups for parties, wedding receptions, and similar social functions. The social hall should be designed so that it can be used by two separate groups at one time. An acoustical folding partition should divide the hall into two spaces, enabling simultaneous programs such as bridge or chess classes and aerobic dance in adjacent areas. Both spaces need separate access from the interior of the building.

c. Key features:

(1) Adjacent to the kitchen and service entrance.

(2) Entrance and rest rooms that permit use while restricting access to other parts of the facility.

(3) Coat storage consisting of open closets with shelf above closet pole.

(4) The space should have its own clearly defined outside entrance. A transition patio/park area between the social hall and the parking area should be provided to accommodate outside activities compatible with events in the social hall such as: intermissions during concerts, or adjacent space for party or wedding reception activities. The entrance should face the parking area or be carefully signed to aid entrance.

(5) The kitchen needs to join the social hall and have a pass through for serving food.

(6) The floor should have two finishes: Fifty percent (50%) of the space Vinyl composition tile on concrete slab: fifty percent (50%) of the space hardwood floors with sleepers.

(7) Tile floor should be adjacent to the kitchen, main and exterior entries.

(8) The wood floor should be suited to aerobic and other types of dance.

(a) There should be 60 linear feet of floor-to-ceiling mirrors along one wall adjacent to the hardwood floors.

(b) Portable ballet bars will be used in the social hall.

(9) The ceiling should be finished in acoustic tile. The walls should be finished in washable, painted concrete block. Sound blocks or other methods to reduce the sound level and or shorten the time of reverberation within the space are required.

(10) Entrances to the social hall should be easily in view of the administrative staff.

(11) Lighting

(a) The lighting levels should be switchable from 30 foot-candles for card games down to 5 foot-candles for dancing.

(b) Windows should be capable of being blacked out for showing of movies during daylight hours.

(12) Audio

An audio loop for the hearing impaired should be provided to accommodate 45 persons. This should be located in the area of the room with vinyl composition tile. A change in the floor color should indicate its location.

(13) Security

All exit doors should activate an annunciation panel at the control desk.

(14) Public Address

The social hall should be equipped with its own P.A system. Jacks for microphones should be appropriately located in walls at both ends of the room. There should be adequate outlets along all walls. with at least 6 outlets located in close proximity to the location in the room where a band would most logically play for a dance.

11. STORAGE

a. Size: 1,350 square feet

b. Purpose: This large area will serve as the storage space for the entire center and will also serve the seasonal needs of center based community programs.

c. Key features:

(1) The storage area will be located between the gymnasium and the social hall.

(2) The doors should be alarmed..

(3) Double doors at least 8 feet high with deadbolt locks and no threshold. capable of opening 180 degrees. There should be three sets of doors. one set opening to the gym. a second set opening to the social hall. and a third set opening to the lobby.

(4) The ceiling should be acoustical tile. with illumination provided in the same manner as all other activity rooms in the center.

(5) The floor should be vinyl composition tile.

(6) Furnishings will include storage cabinets, equipment cages and steel shelving.

(7) Items to be stored in this area include:

(a) Tables

(b) Chairs

(c) Portable stage

(d) Lectern

(e) Sports equipment: roller skates, lacrosse helmets, lacrosse goals and nets, floor hockey equipment, volleyball standards and nets, and balls.

(f) Ping pong tables

(g) Custodial supplies

d. Equipment:

(1) Woven wire storage lockers and partitions to create 4 lockable storage areas.

12. GYMNASIUM

a. Size: 7,675 square feet with a minimum clear height of 20 feet

b. Purpose: This is the primary facility for all athletic events including but not limited to:

(1) Aerobic exercise
(2) Badminton
(3) Basketball
(4) Floor hockey
(5) Gymnastics
(6) Indoor lacrosse
(7) Martial arts
(8) In-line roller skating
(9) Volleyball

(10) Wrestling

c. Key features:

(1) Lighting: Provide metal halide lights with unbreakable lenses for minimum color distortion. Provide supplemental lighting to provide illumination during the warm up period for the metal halide lights. Illumination should be 30 foot-candles. Natural light is desirable as long as glare is eliminated. Clerestory and roof monitors should be used in lieu of skylights.

(2) Provide public address system for announcing with microphone jacks in the wall at both sides of center court at the sidelines. All speakers should be designed to withstand ball impact, such as occurs in volleyball or basketball games, and located to prevent vandalism or theft.

(3) The gym should have an outside entrance, with double doors to permit delivery of heavy equipment such as gymnastic apparatus. All normal participant access to the gym should be through the lobby and control center.

(4) All doors opening to the outside should be alarmed to restrict entry or exit.

(5) Provide hardwood maple floor with court markings for basketball (1 full court; 2 cross courts); volleyball (2 cross courts); badminton (4 courts).

(6) Provide bleacher seating for 250 spectators.

d. Equipment:

(1) Wall-mounted electronic scoreboard (1) and basketball 30 second timing clocks.

(2) 6' wide wall safety mats under all baskets.

(3) Volleyball standards to be NCAA FNFSHSA specification cantilever self storage sleeve such as AAI Elite Aluminum PVS system, with referee stands and carrier.

(4) Retractable basketball backboards with breakaway safety rims for full court and crosscourt play. Glass backboards are required at the ends of the regulation court only.

(5) Retractable divider net at center court to separate gym into two activity spaces and permit visual supervision of all areas of the gym when in use.

(6) All retractable features to be capable of both manual and electrically power assisted operation. which can be controlled from both the gymnasium and the administrative control counter.

(7) Wall and ceiling anchors for baseball/golf/tennis practice nets.

(8) Coat rack/lockers should be provided adjacent to the gym entrance to accommodate 36 persons using this activity space.

(9) Folding plastic seat bleachers for 250 spectators.

(10) One wall should be designed as a climbing wall.

(11) Wall mats

(12) Floor mats 6' x 12' - quantity 18

(13) Ping pong tables - quantity 12

(14) Floor hockey goals & equipment - quantity 2

(15) Golf Baseball batting cage hooks and nets

(16) Gymnasium floor cover - quantity 1

13. EXERCISE ROOM:

a. Size: 1600 square feet

b. Purpose: To provide for self directed fitness and weight training. This area will be furnished with a variety of exercise apparatus. For safety and control purposes. this area must be in close proximity and visually accessible to the control center.

c. Key Features:

(1) The exercise area may be expected to accommodate up to 35 users at one time. The ventilation system should be capable of maintaining an acceptable odor free environment, provide fresh air ventilation, and control condensation.

(2) This space should be heated and air conditioned. Separate controls at the control counter to permit variations in temperature from other rooms. The thermostatic controls for this room should be separate and located at the building's control counter.

(3) This room should be within visual control of staff and adjacent to the gymnasium. The walls should have windows (or be windows) to allow visual access to the room.

(4) This room is required to have a participant access control system which can be regulated from the administrative control counter, or by the use of access cards.

(5) The doors should be of solid construction and fitted with strong locks, and equipped with an annunciator.

(6) This room should be located away from quiet spaces and should be acoustically designed to minimize noise interference with other activity spaces.

(7) Natural daylight is not required. The artificial lighting should be designed and placed so that it helps to enhance the activity of working with weights in front of mirrors.

(8) 20 linear feet of mirrors are required, mounted 36 inches above the floor.

(9) Walls should be painted acoustical block and extend to the underside of the roof structure for security.

(10) The floor should be covered with a shock absorbent material such as Tuflex.

(11) There should be coat racks and lockers to accommodate 36 users adjacent to the entrance.

(12) The ceiling should be 10 feet high and consist of lay-in acoustical tile.

14. CUSTODIAL ROOM

a. Size: 100 square feet

b. Purpose: To provide storage for cleaning supplies and equipment. The location of this space should be in close proximity to the kitchen and social hall to minimize the need to move cleaning equipment throughout the building.

c. Key features:

(1) The walls should be washable painted block.

(2) The floor should be ceramic tile with a floor drain.

(3) Provide a lockable door with and annunciator.

(4) Mop sink near floor level with hot and cold water supply. Provide ceramic tile on walls around mop sink to a minimum height of 9 feet.

(5) Storage space or shelving should be provided for paper supplies, cleaning supplies, mops, light bulbs, buffer and vacuum cleaner.

(6) Provide storage cabinets for cleaning materials.

(7) Provide exhaust fans appropriate for safe use of toxic materials.

(8) Provide a lockable cabinet to store relevant operation and maintenance manuals and records of building systems.

15. REST ROOMS

a. Size: Total of 1000 square feet

b. Two 300 square foot rooms each with lockers, changing areas, and two (2) showers each near the gym and exercise rooms. Two 200 square foot rest rooms equipped with toilets and sinks near the social hall.

c. Key features:

(1) Provide access for persons with disabilities.

(2) Minimize interaction of participants from the gym. exercise and game areas with participants from other activity areas.

(3) Provide access from the social hall even when other sections of the building are closed.

(4) The bathroom entrances should be in view of the center's control desk.

(5) Toilet partitions and doors should be stainless steel or vandal resistant material such as Kemlit Glasbord or HPL Melamine.

(6) The walls should be masonry painted with epoxy finish.

(7) Provide water saving fittings throughout. Self-mixing and controlled faucets and floor drains should be provided in all bathrooms.

(8) Provide two electric hand dryers in each bathroom. one at youth height and one at adult height.

(9) All light fixtures should be recessed. either in the wall or ceiling. and should be vandal resistant.

(10) Mirrors should be fitted with tamper proof screws.

(11) Floors should be finished with ceramic tile with floor drains.

(12) Ceilings should be moisture-resistant acoustical tile with hold. down clips.

(13) The area should be heated. air conditioned and well ventilated.

16. VENDING

a. Size: 200 square feet

b Purpose: Designated location for 2 vending machines. adjacent to the administrative control area and game room.

c. Key features:

(1) Tile floor

(2) The walls should be masonry painted with epoxy finish

(3) Electrical outlets for 2 vending machines.

17. Mechanical Electrical

a. Size 800 square feet. Actual size will be defined during design to meet the equipment space requirements.

b. All equipment must be easily accessible for maintenance. and required clearances must be maintained.

c. Space for straight run of six duct diameters must be maintained at the discharge of air handlers.

V. OUTDOOR RECREATIONAL ACTIVITY SPACES

A. Multipurpose court (volleyball and basketball, roller hockey)

1. Number: 1 court

2. Dimensions: Length 100 ft. by width 80 ft.; total 8000 sq. ft.

3. Include basketball standards, backboards, rims and chain nets; portable volleyball standards and nets; court markings.

B. Playground

1. Number: 1 playground

2. Dimensions: as required to fit equipment and size, for a total square footage of 7,500.

3. Include component system play equipment, such as Playventure Component System, benches and trash receptacle.

4. Location to be convenient to center but safely separated from parking and driveways.

C. Athletic Field

1. Number: 1 combination athletic field to accommodate the following:

1 High School baseball field
1 Youth Softball field
2 Rectangular soccer/football/lacrosse fields

2. Dimensions: entire athletic field space total 160,000 sq. ft. (400 x 400) including buffer space.

3. Equipment and fencing:

a) 1 hooded baseball backstop
b) 1 youth softball backstop
c) 2 sets of soccer/football goal posts
d) player benches for baseball/softball
e) safety screens for baseball/softball benches

D. Fencing

1. Enclose exterior mechanical equipment

2. Enclose storm water management pond, if one is needed.

3. Depending on location, fencing may be needed at multipurpose court and playground.

E. Flagpole: One pole located near the entrance of the facility, with lighting controlled by Energy Management System

F. Trash Containers

1. Designed for easy trash collection.

2. Receptacles should be located near entrances of all buildings and near each court and play space.

3. Provide permanently mounted ash trays near entrances of all buildings.

VI. SUMMARY OF BUILDING AREAS PROGRAM ACTIVITY SPACES

SITE SUMMARY:

Activity Space

Parking Lot	150 spaces
Recreation Center	23,500 net sq. ft.
Multipurpose Court	8,000 sq. ft.
Playground	7,500 sq. ft.
Athletic Field	160,000 sq. ft.

RECREATION CENTER SUMMARY

Activity Space	Net Square Feet
Lobby	1600
Administrative Control Space	included in lobby space
Center Staff Office	450
Conference Room	400
Game Area	1,600
Hobby Craft and Kiln Room	875
Music Classroom	1,200
Senior Community Lounge	600
Kitchen	250
Social Hall	3,600
Storage	1,350
Gymnasium	7,675
Exercise	1,600
Custodial	100
Rest Rooms	1,000
Vending	400
Mechanical Electrical	800
TOTAL RECREATION CENTER:	23,500

*Note Community Centers have frequently been co-located with community police drop in stations and day care centers. These are compatible programs that have improved the overall service capacity of the centers however decisions to include space will be in addition to the recreation requirements defined in this program of requirements.

VII. FURNITURE AND EQUIPMENT SUMMARY

Note: Starred items (*) are to be included in the construction contract documents.

SPACE NAME	ITEM
1. Lobby	Blinds Coat Rack Trash Containers Bulletin/Letter Board Display Rack Modular Seating Traffic Control Post Traffic Control Ropes Trophy Display Case
2. Administration Control	Blinds Coat Rack Trash Container Computer Drafting Stools * Safe * Public Address System * Audio Tape Deck * Counter Work Station
3. Center Staff Office	Blinds Coat Rack Trash Containers Printer Secretary's Chair Arm Chair Bookcase Computer * Equipment Bin * Locking Storage Cabinet Modular Work Stations
4. Conference Room	Blinds Coat Rack Trash Containers Chairs Conference Cabinet Tables Television VCR

SPACE NAME	ITEM
5. Game Area	Blinds Coat Rack Trash Containers Foosball Table Pool Table Shuffleboard Air Hockey
6.7. Hobby/Craft & Kiln Room	Coat Rack Trash Containers * Cabinets Chairs * Drying Racks Easels Kilns Pottery Wheel * Shelving Tables
8. Music Classroom	Music Stands Stacking Chairs * Storage Cabinets Coat Rack Trash Containers
9. Senior Community Lounge	Blinds Coat Rack Trash Containers Side Chairs Swivel Chair Table Bases Table Tops Table Tops Game
10. Kitchen	Blinds Coat Rack Trash Containers Coffee Urn * Ice Machine * Locking Refrigerator Freezer * Microwave Oven * Warming Oven

SPACE NAME	ITEM
11. Social Hall	Blinds Coat Racks Trash Containers Ballet Bar Circular Tables Portable Public Address System Rectangular Tables Square Tables Stackable Chairs Stage Stage Trucks Floor Lectern Flag Stands U.S. Flag Maryland Flag County Flag
12. Storage	▪ Shelving ▪ Storage Lockers
13. Gymnasium	Blinds Coat Racks Trash Containers ▪ Retractable Backboards ▪ Rims ▪ Scoreboard/Clocks ▪ Badminton/Volleyball System ▪ Volleyball Referee Platform ▪ Volleyball Standard Pad ▪ Volleyball Transporter ▪ Volleyball Storage Rack ▪ Shot Clocks ▪ Baseball Golf Net System Floor Hockey Goals Wrestling Mat ▪ Retractable Divider Curtain Table Tennis

SPACE NAME	ITEM
14. Exercise	Blinds Coat Rack Trash Containers Exercise Equipment: Ab Crunch Abdominal Rotation Abductor/Adductor Arm Curl Horizontal Chest Press Chin and Dip Climbing Wall Coat Racks Exercise Bike Ham/Glute Hyperextension Vertical Knee Raise Lat Machine Pec Deck 45 Pull Over Seated Leg Extension Shoulder Press Squat Stair Climber Standing Calf Triceps Press Down V Leg Curl Vertical Row Vertical Chest Press Health Rider
15. Custodial	Blinds Coat Rack Trash Containers Flammable Storage Cabinet ▪ Shelving Floor Scrubber
16. Rest Rooms	▪ Baby Changing Station
17. Vending	Vending Machines Trash Containers Recycling Containers

VIII. ENERGY PROGRAM OF REQUIREMENTS

For Damascus Community Recreation Center

INTRODUCTION

Energy efficiency and low operating costs are important design goals for this facility. The designer is required to meet an energy consumption budget on the facility as set by the Owner. The designer must provide the expertise, teamwork, and quality control to meet the energy consumption budget simultaneously with fixed cost of construction and all program requirements.

The designer shall specifically follow all design procedures of DFS *Energy Design Guidelines* (EDG) latest CD-ROM edition. Major program elements in the EDG are as follows:

- Overall Design - Design for energy efficiency must be controlled and verified by following the "road map" of required meetings, reports and coordination points during each phase of design. Technologies and standards to be used are set by building size.

- Energy Analysis - Hourly energy analysis is required to demonstrate compliance with energy budget and perform life-cycle-cost analysis. Analysis to follow specified options and economic factors.

- Thermal Envelope Design - Envelope must by well insulated, free of drafts and cold interior surfaces, and provide natural lighting into the building. Use ASHRAE 90.1 component packages for window area and insulation levels, NIST required details for air-tightness and thermal integrity, and recommended glass and frame requirements. Window placement and materials must be vandal resistant.

- HVAC Design - Mechanical design must be efficient and readily maintainable. Designer must follow guidelines on plant and system types, high-efficiency equipment, VFD's, condensing boilers, commissioning, refrigerant types, and distribution system design standards.

- Energy Management Systems - DDC controls are required for automatic temperature control and energy management of HVAC systems with interface to a lighting management system for ON/OFF scheduling of exterior and interior lights.

- Ventilation & IAQ - Required use of ASHRAE Standard 62.

- Lighting Design - Lighting design must be high quality meeting but not exceeding IES recommended light levels on tasks, visually comfortable, free of reflected glare, using high-efficiency lamps, ballasts, fixtures and controls as specified in Energy Design Guidelines. Facility must use less than the lighting wattage budget established by guidelines.

ENERGY BUDGET

The Owner requires that building designs meet preset energy budgets. For the this building, an energy budget of __42__ **Thousand Btu per gross interior square foot per year** has been set for the facility as a whole. The Architect must analyze the facility as a whole for energy conservation opportunities and include program items for the project necessary to meet the energy budget.

The budget figure includes all metered energy use at the site, including energy for HVAC systems, lighting of the building and grounds, elevators, motors, water heating and receptacles. The Architect is responsible for identifying cost-effective energy conservation strategies which will meet the Building Energy Budget. However, the Owner will determine which strategies are to be analyzed and which options are to be implemented in design.

For purposes of certifying energy budget compliance the consultant must use one of the programs currently accepted, namely:

1) DOE2 - latest available microcomputer version

2) CARRIER E20-II Hourly Analysis Program

3) TRANE TRACE 600 microcomputer version

The energy analysis shall include annual energy simulation of the following types of cases:

- "Base Case": Analysis of the complete facility with all prescriptive features definitely included in the program through *Energy Design Guidelines*.
- "Alternative Packages": Alternative HVAC systems or building features as described under Life-Cycle-Cost analysis options below.

LIFE-CYCLE COST ANALYSIS

Life-cycle-cost analysis will be performed to select the least-cost option in HVAC and envelope options for the facility over a 15-year analysis period. Preliminary options for this size building are as shown in the Technology Application Matrix of the *Energy Design Guidelines*.

REPORTING REQUIREMENTS

Results of the Energy Analysis, Life-Cycle-Cost Analysis and Prescriptive Requirements Analysis must be properly documented for review by the Owner. Report outputs are due with the Schematic and Design Development submittals. The consultant must follow the energy report menu of the EDG CD-ROM fully and completely to fulfill contractual requirements for Schematic Design and Design Development.