

university of minnesota
twin cities campus

recreational sports facilities study

- athletic facilities board
- ad. hoc. committee on recreational sports

- recreational sports office
- office of physical planning

october 1977

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PREFACE

Webster's Seventh New Collegiate dictionary defines "recreation" as a means to "create anew, restore, refresh; refreshment of strength and spirits after toil." Recreational sports are activities of a sporting nature performed voluntarily by individuals, usually in their leisure time, for the sake of enjoying a satisfying sports experience. Other words which describe recreational sports are: informal or formal, self-directed, self-motivated, impromptu, non-competitive and competitive. Studies at the University of Minnesota show that increasing numbers of students are using recreational sports as a major form of relaxation. Recreational sports has become the largest, single extracurricular activity on campus as measured by three quarters of a million participations annually.

The primary purpose of the recreational sports program at the University, is to "serve the University community through sports" by providing each student, staff and faculty member; regardless of age, sex, race, skill level, physical impairment or past experience; with an opportunity to participate in a wide variety of mind-body sports experiences. At the University, recreational sports include all sports activities other than those in intercollegiate athletics and those taught in physical education classes.

INTRODUCTION

In light of a growing concern regarding the unsatisfactory state of recreational sports facilities on the University of Minnesota Twin Cities campus, the Chairman of the University's Athletic Facilities Board appointed an 'ad hoc' committee to study the current status of recreational sports facilities on the Minneapolis and St. Paul campuses. The committee first convened in April of 1977 to determine and recommend a feasible development program for new and improved recreational sports facilities. This report documents the Committee's findings and recommendations.

It is becoming increasingly apparent to even the most casual observer that during recent years expanding demands on the University's indoor recreational sports facilities are not being met from the standpoint of either quality or quantity. The last facility used primarily for recreational sports on the Twin Cities campus was constructed in 1934 when the student population was 16,425. By contrast, the fall quarter, 1976 student population was 46,371 - a population increasingly interested in recreational sports participation.

The unprecedented expectations of women in the area of sports participation has further created a major facilities demand. Presently, sixty-five percent of all University of Minnesota women students use recreational sports facilities. It is expected that with the incoming generation, the percentage of women participants will increase to seventy-seven percent, thereby equaling the present percentage of male participants on campus.

This study is not designed or intended to address all of the athletic facility needs at the University of Minnesota. The scope is limited to the indoor facility needs of the Rec Sports program because of the anticipation of "user fee" funding for development which is a highly unlikely possibility for other major user groups such as Inter-Collegiate Sports and Physical Education.

The use of public funds to finance new and improved recreational sports facilities is difficult to justify in light of equally demanding academic needs which, understandably, are allotted a higher priority. This is particularly true now when funds are generally limited.

For purposes of this study, then, it is assumed that the bulk of financing for any new or improved indoor recreation facility proposal must come from major user groups (i.e. students, faculty and staff) and private support, coupled with public funds where possible.

HISTORICAL PERSPECTIVE

The need for a new recreational sports center (then referred to as an intramural building) was first noted in 1954 by the Director of Intramurals. In 1965, a program committee, made up of members from the departments of physical education, intercollegiate athletics, and intramurals, was established to study the need for, and to make recommendations concerning, such a facility. In their final report, the Program Subcommittee on Athletic Activity Planning discussed the future of professional and nonprofessional programs; the organization of professional physical education, health education, recreation leadership and intramurals; finance; additional faculty and staff needs; and facility needs (refer to the Preliminary Report of the Program Sub-committee to the Central Committee on Athletic Activity Planning, April 20, 1965).

The new facilities recommended by the subcommittee, which at the time would have required funding in the amount of 25 million dollars identified the need for additional indoor space of 400,083 square feet (79,310 sq. ft. on the St. Paul Campus; 81,619 sq. ft. on the West Bank; and 239,154 sq. ft. on the East Bank) and outdoor space of 2,708,404 square feet (624,940 sq. ft. in St. Paul; 177,608 sq. ft. on the West Bank; and 1,905,836 sq. ft. on the East Bank). The subcommittee recommended the addition of the following activities: twelve basketball courts, five swimming pools, twenty-six handball-racquetball courts, and twenty-six tennis courts.

Since that time, the only indoor facility constructed was the Bierman Field Athletic Building (used primarily for Inter-Collegiate athletics) and the development of the West Bank and Como Fields, the latter being reduced in size due to housing expansion. St. Paul Campus participants are virtually without any adequate athletic fields. With the existing facilities and current program growth in recreational sports, some of the recreational sports activities begin as early as 7:00 am. and continue as late as 12:00 midnight and after. Approval of a request in excess of \$470,000 for outdoor lighted sports facilities to alleviate some of the problems on the St. Paul Campus was denied at the last legislative session. The request for such funds, however, will be resubmitted at a future session.

In 1972 a study was conducted to determine the maximum use of Memorial Stadium, University of Minnesota Minneapolis Campus, and how to achieve maximum utilization of the structure. The research team found that due to weather, design and present purpose, the stadium was operating at far less than full capacity. While the present stadium houses such activities as football, softball and jogging; ten handball courts (unregulation); eight squash courts; fencing strips; a boxing room; a wrestling room; a judo-karate room; and locker-shower rooms (unused), these facilities are generally dark and depressing in appearance and in need of better heating and ventilation.

The study concluded that the extended periods of snow, sleet, rain and subzero temperatures each year in Minnesota severely inhibited use of the stadium. Study results found that encapsulation of the stadium would eliminate this obstacle and provide a full time facility for year-round use. A study of alternate structural systems that could be used for doming the stadium indicated a significant saving, in both first costs and in operating costs, through use of a cable-supported roof. Once domed, the multi-use aspect of an enclosed facility would take on particular significance: a complete spectator stadium for football, as well as a multi-use facility for intramurals and physical education (including renovation of existing facilities and the addition of Olympic swimming and diving pools), would be available. The cost of the multi-use center, if constructed and in the new west side of the stadium, would be 20% less (1.5 million dollars) than for a detached building.

As per an October 1975 legislative request for information regarding the feasibility, and ramifications, of remodeling Memorial Stadium, the Office of Physical Planning submitted a report responding to the various questions submitted by the Legislative Subcommittee. The questions dealt with the following issues: stadium design, parking, community impacts and administration.

The report concluded that Memorial Stadium could be renovated into a viable structure to compete with the best of present day football stadiums at a reasonable cost. The basic frame, the exterior wall structure and foundation was found to be quite sound. The more negative aspects, e.g. narrow aisles, poor concourse circulation, inadequate toilet facilities, dreary appearance, poor sight lines for seating and inadequate press facilities, would be eliminated or minimized in the proposed new design.

A 1976 survey of Student Leisure Interests at the University of Minnesota, conducted by Dr. Roger Harrold (Assistant Director - Student Activities Center), indicated that recreational sports are a most important component of students' leisure time. The survey concluded that more than one-half of the student body (57.7%) participates at some time during their student life. A further study identified that 62% of the students were interested in recreational sports. The next highest activity was 7%. (A more recent study documented later in this report indicates that 70% of the student body now participate).

In January 1977, a Rec Sports Position Paper referred to a survey indicating that rec sports is the largest, single extracurricular activity on campus measured by three quarters of a million participations annually.

Growth in the various phases of recreational sports over the years can be expressed in simple numerical terms. Intramurals (the competitive tournament phase of recreational sports) has experienced a growth in teams from 888 in 1952-53 to 3,400 in 1975-76. Participants have increased from 24,665 in 1952-53; 180,804 in 1975-76; and 172,008 in 1976-77. Self-Service participation, since records have been kept, has grown dramatically from 14,177 in 1961-62 to 148,303 in 1970-71; to 310,510 in 1975-76; and to 357,040 in 1976-77. Sports Club participation rose from 10,863 in 1970-71 to 249,099 in 1975-76 (although a drop to 217,082 was observed in 1976-77), with its major growth from 67,752 in 1961-62; to 740,413 in 1975-76; to 746,130 in 1976-77. Each of these phases made use of indoor facilities which have become overcrowded due to the heavy growth. At the present time, it has been necessary to place limitations on some of the recreational sports programs.

The 1977 Position Paper (noted earlier) held that a new facility is necessary if the University expects to keep pace with the nationwide recreational sports facilities trend. The structure should include areas for court games such as basketball, volleyball, badminton, tennis, handball, paddleball, racquetball and squash; swimming pools; judo, karate, wrestling rooms; weight training rooms; ice rink; steam dry heat rooms; recreational games rooms; sports club rooms; lockers; equipment; etc.

To fund such a facility, the paper further recommends the Student Service Fees Committee establish a capital improvements fund for rec sports, comparable in concept to the one in existence for Student Unions and similar to the intramural capital improvement fund established in 1965 but subsequently converted to the Consolidated Fund.

existing facilities

- **inventory**
- **condition**
- **evaluation**

FACILITIES INVENTORY

Listed below are the facilities used by recreational sports which were evaluated by the Office of Physical Planning for the Ad Hoc Committee on Athletic Activity Planning. For orientation purposes, the major buildings are keyed to their respective campus maps (see figures 1 & 2). Additional structures not keyed to the maps are: the Golf Course Clubhouse, the West Bank Sports Field Service Building, the St. Paul Student Center (bowling lanes), Coffman Union (bowling lanes), Peik Hall Gymnasium and Bierman Field Clubhouse. These facilities are not included for the reason that, in some instances, although the facilities are used by recreational sports participants, they are not considered a recreational sports facility (e.g. the Coffman Union bowling lanes). In other instances, the facilities, although owned by the University of Minnesota, are controlled by the Minneapolis School System and are therefore not available for University rec sports participants (e.g. Peik Hall Gymnasium).

Facilities housing rec sports activities contain a total of 476,900 assignable square feet.

1. Golf Course Clubhouse *
 2. West Bank Sports field Service Building
 3. St. Paul Student Center
Bowling lanes *
 4. Coffman Union
Bowling lanes *
 5. Peik Hall Gymnasium **
 6. St. Paul Gymnasium - all areas.
 7. Bierman Field Clubhouse
 8. Field House
 9. Bierman Field Athletic Building
 - Room 101 - Gymnasium
 - Room 101A, B, and C - Office and storage
 - Room 101F - Weight Room
 - Room 115 - Locker Room, Men
 - Room 115A & B - Showers and toilets
 - Room 287 - Gymnasium Balcony
 - Room 293 - Locker Room, showers, toilets, Women
 10. Cooke Hall
 - Room S-2 - Women's Locker Room
 - Room S-2A, B, and C - Showers, toilets, sauna
 - Room S-4 - Women's Locker Room
 - Room S-4B and C - Showers and toilets
 - Room S-6 - Women's Locker Room
 - Room S-6A and B - Showers and toilets
 - Room S-10 - Visiting Team Room
 - Room S-10A and B - Showers and toilets
 - Room 10 - Small Pool
 - Room 15 - Exhibition Pool
 - Room 13 - Attendant's Room
 - Room 2, 2A, 2B - Equipment Room
 - Room 5 - Men's Locker Room
 - Room 5A, B, and D - Showers, toilets, steam room
 - Room 100 - Lobby
 - Room 101 - Office
 - Room 106 - Office
 - Room 107 - Office
 - Room 108, 108A, B, C, and D - Offices
 - Room 114 - Lounge
 - Room 302 - Apparatus Gymnasium
 - Room 308 - Apparatus Gymnasium
 - Room 307 - Equipment Issue Room
 - Room 305 - Equipment Storage
 - Room 325 - Gymnasium
 11. Williams Arena
 - Room W100 - Ice Rink
 - Room W 115C - Storage
 - Room W 162 - Storage
 - Room E 100 - Basketball Court
 12. Stadium
 - Room 202 - Weight Room
 - Room 205 - Karate Room
 - Room 205C - Women's toilet
 - Room 207 - Judo Room
 - Room 207A and B - Boxing Room
 - Rooms 208, 209, 212, 214, 215, 217, 218, 220, 221, 251, 252, 254, 255, 257, 258, 260, 262, and 263 - Racquetball - Squash Courts
 - Room 211A - Men's toilet
 - Room 264 - Adapted Gymnasium
 - Room 265 - Locker Room
 - Room 267 - Golf Gymnasium
 13. Norris Hall
 - Room 51 - Pool
 - Room 50, 50A, B and C - Changing Room - Women
 - Room 55 - Men's Locker Room
 - Room 54 - Equipment Room
 - Room 52 - Lounge
 - Room 70 - Women's Locker Room
 - Room 80 - Women's Locker Room
 - Room 108 - Office
 - Room 151 - Gymnasium
 - Room 151A - Office
 - Room 153 - Gymnasium
 - Room 153A - Gymnasium
 - Room 58 - Pool
 - Room 60 - Field House Annex
 - Room 161 - Squash Court
 - Room 162 - Men's Locker Room
 - Room 162C and D - Showers and toilets
 14. Armory
 - Room 100 - Gymnasium
- * Used by Recreational Sports participants, but not considered a Rec Sports Facility.
- ** Should be reviewed in case the facility is returned to the University by the Minneapolis Schools.

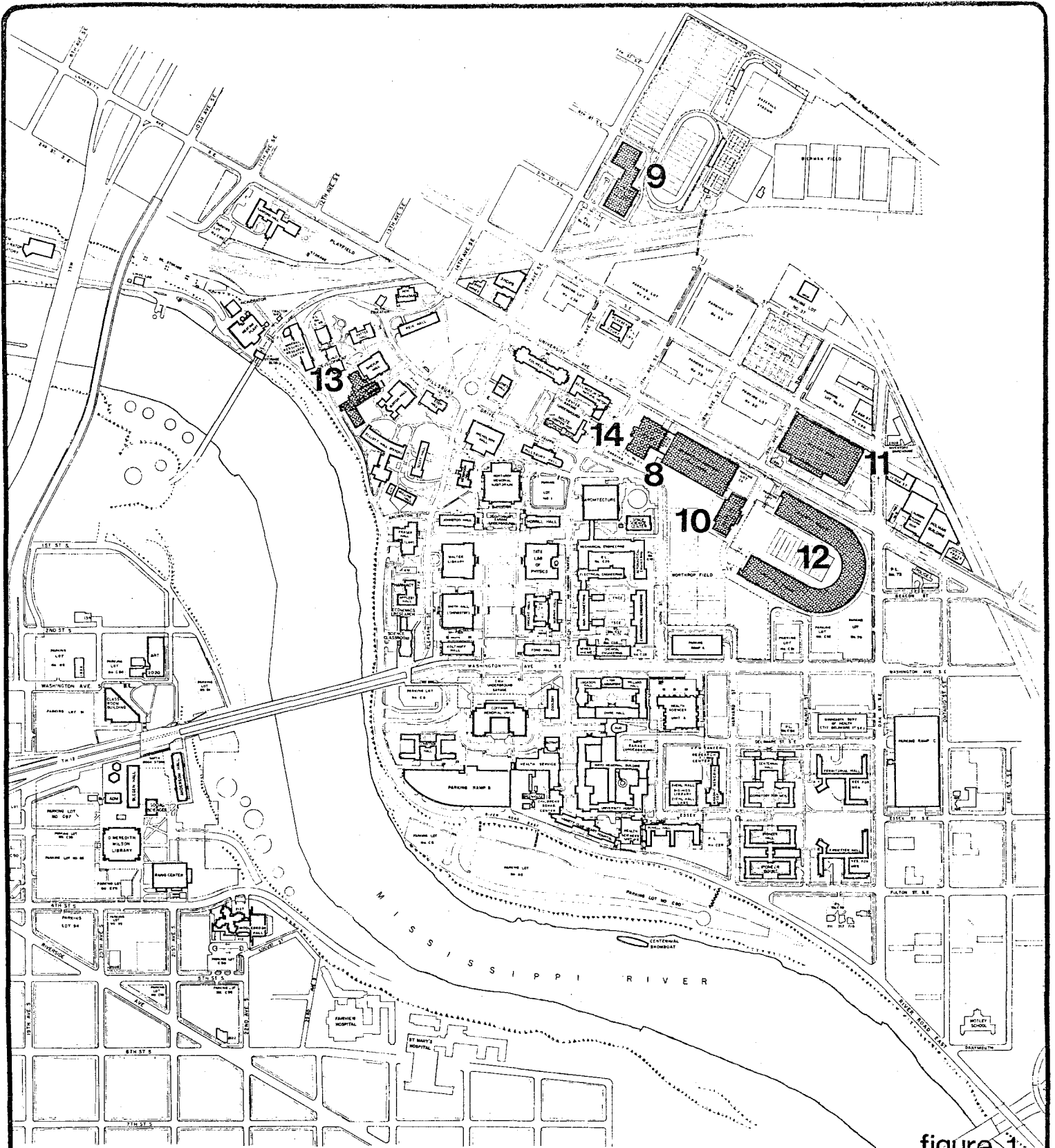


figure 1

location of indoor rec. sports facilities -
minneapolis campus

rec. sports facilities study



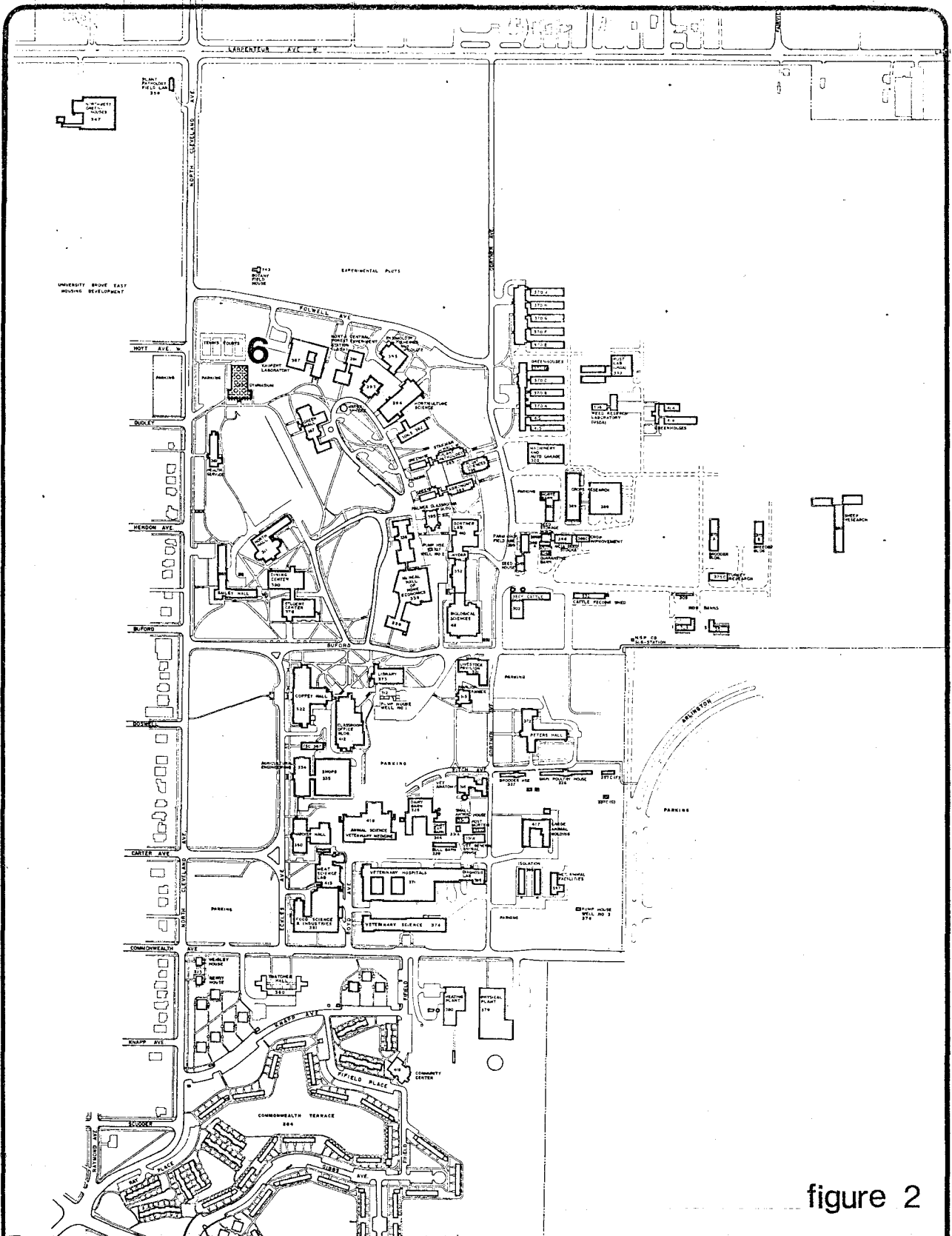
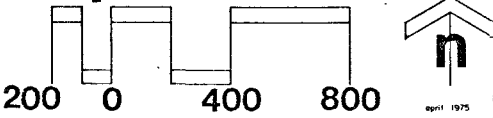


figure 2

**location of indoor rec. sports facilities-
saint paul campus**

rec. sports facilities study



FACILITIES SURVEY

On June 27, 1977 an interdisciplinary team of University staff participated in a walking tour and evaluation of approximately 50 spaces utilized for scheduled rec sports activities.¹

The purpose of this on-site inspection was to, in a qualitative way, determine the level of serviceability of existing rec sports facilities. A survey form (Figure 3) comprised of a list of 11 questions was prepared in order to provide a common base to rate each space or facility. The evaluation team discussed each space as it was visited and arrived at a general consensus on each element of the evaluation questionnaire.

It should be pointed out that the approximately 50 spaces which were visited in some instances represented a group of facilities. For example, while only two or three representative racquetball courts were looked at there are actually 13 courts in total on the Twin Cities Campus. Therefore the percentages would vary slightly if all individual spaces were rated in the survey.

General Observations

The survey indicated that the facilities located in the Stadium were the most inadequate and totally unacceptable for their intended uses. The facilities in the field house are generally unacceptable at the present time due to the dirt floor and insufficient lighting.² However, the space is totally flexible and could be upgraded. Many of the facilities in Cooke Hall were also found inadequate to a large degree and will require major work to improve their useability.³ The facilities in Norris Gym were found to be similar with the exception of locker facilities which were improved with recent renovation projects within the complex. The locker room facilities in St. Paul will be adequate when remodeling, now under way, is completed. However, the gymnasium, handball courts, pool areas, etc. require much work to bring them up to acceptable standards. The Bierman facilities were found to be optimal.

¹The survey team consisted of Bruce Anderson - Associate Director of Rec Sports, Holger Christiansen - Finance and Facilities Coordinator for Physical Education and Athletics, Don Herron - Engineer for Environmental Health and Safety, Greg Kittelsen - Assistant Director for Physical Planning, Ken Stebbins - Coordinating Planner for Physical Planning, Les Szomor - Architect for Physical Planning.

²It is important to note that the field house (as well as many of the rec sports facilities) is used on a shared basis with inter-collegiate and/or physical education activities. Therefore, any proposed alterations would have to take other uses into account. In the case of the field house the space could certainly be upgraded but not partitioned for rec sports purposes because partitions would destroy the space for baseball or indoor track for example.

³Recent renovations have improved some facilities but by and large these expenditures were designed to maintain the building itself and did not facilitate the improvement of activity areas.

Rec. Sports Facilities Study - Space Evaluation

Building/Building No. _____

Space/Room No. _____

Description of Activity

Evaluation

1. Does the space or facility meet established design or dimensional standards for its intended use? [YES, PARTIALLY, NO]
2. Is the space or facility [DIFFICULT, AVERAGE, EASY] to maintain?
3. Is the space or facility [WELL, ADEQUATELY, POORLY] lit?
4. Are the mechanical systems which ventilate/heat/air-condition the space or facility [GOOD, FAIR, POOR]?
5. Are the materials and finishes within the space or facility [APPROPRIATE, ACCEPTABLE, INAPPROPRIATE] for the activities intended?
6. Is the space or facility safe for its intended use(s) [YES, MARGINAL, NO]
7. Is the space or facility accessible to the handicapped? [YES, NO]
Can the space or facility be easily and inexpensively made accessible? [YES, NO]
8. How would you rate the adjunct facilities necessary to support the activities within the space or facility? [GOOD, FAIR, POOR]
Are the adjunct facilities well located in relationship to the spaces they serve? [YES, NO]
9. In your opinion, what is the general overall condition of the space or facility? [OPTIMAL, MARGINAL, OBSOLETE]

Comments

RESPONSES TO THE SURVEY QUESTIONS

Question One

This question related primarily to whether or not the facilities evaluated met recommended dimensional and design standards.

Of the spaces observed, 44% were found to be partially substandard in providing adequate space to meet dimensional requirements for court games and activities. Twenty-six percent were found totally unacceptable while the remaining 30% were acceptable.

Question Two

Ease of maintenance plays an important role in the long term success of a facility. Of the facilities visited 48% of the facilities were found to be average for maintenance, with 26% difficult to maintain and 26% easy to maintain.

Question Three

The quality of lighting in the facilities surveyed seemed to be a major problem in that 36% were found only adequately lit and 36% were considered poorly lit. Only 28% were considered well lit, requiring no improvements.

Question Four

Another major problem with existing facilities involves the mechanical systems which heat, ventilate, and air condition the spaces. The survey showed that 55% of the facilities were poorly ventilated and air conditioned; 34% were rated fair and only 11% were considered to be in good condition. This was particularly true for locker rooms and the facilities in the Stadium which were very hot, stuffy and generally uncomfortable.

Question Five

The room finishes of over 80% of the facilities were observed to be acceptable or appropriate (61% and 22% respectively) for the activities which take place within them. The facilities which appeared to be in the worst condition were the racquetball/handball courts which had bad floors, walls and often no ceilings. An additional problem also came to light concerning the use of carpet in locker rooms which although is comfortable to walk on, retains an odor and is difficult to keep clean and sanitary.

Question Six

From a safety standpoint 43% were found to be marginally safe due to limited out-of-bounds markings, inappropriate columns within spaces, dead-end corridors, etc. Eight percent of the facilities were totally unsafe and the remaining 49% were judged safe.

Question Seven

Handicapped accessibility stood out as the most apparent problem. In some instances this was due to the building itself being inaccessible. The survey showed that 74% were not accessible and that to make all facilities accessible, major expenditures would be required. The bulk of these costs would be involved in the addition of new elevators.

Question Eight

The relationship between adjunct rec sports facilities (i.e. locker rooms to pools) was reasonably good. Sixty-two percent were found to have good relationships while only 38% were found to be poor. As for the facilities themselves, 43% were rated as good, 27% were rated fair, and 30% were found to be poor.

Question Nine

An assessment of the general overall condition of the facilities was included to sum up the survey. An additional rating of acceptable was added to the survey form to broaden the value scale. Six percent of the facilities were rated as optional while 53% were determined to be obsolete.

INDOOR FACILITIES EVALUATION

The table below is an inventory of the indoor recreational sports facilities on the University of Minnesota Twin Cities campus. The evaluation not only gives the type of facility by building location, but differentiates between those facilities that are "adequate" and those that are "substandard" as determined through on site inspection; "adequate" being those useable in their present state, i.e. of regulation size, etc. "Substandard" are those facilities that, while useable, are deficient in some way, e.g. non-regulation, poorly lit, etc.

UNIVERSITY OF MINNESOTA INDOOR FACILITIES - TOTAL AND SUBSTANDARD								
ARMORY	BIERMAN	COOKE HALL	FIELDHOUSE	MEMORIAL STADIUM	NORRIS	ST. PAUL GYM	WILLIAMS ARENA	TOTALS
Std. Sub Total	Std. Sub Total	Std. Sub Total	Std. Sub Total	Std. Sub Total	Std. Sub Total	Std. Sub Total	Std. Sub Total	Std. Sub Total
Archery			0 1 1		1 0 1	0 1 1		1 2 3
Badminton		4 0 4			0 11 11	2 1 3		6 12 18
Basketball	0 1 1	2 0 2	0 3 3	0 3 3	0 2 2	0 2 2	1 0 1	3 11 14
Boxing				0 1 1				0 1 1
Dance Studio					1 0 1			1 0 1
Diving		0 1 1						0 1 1
Fencing				0 1 1				0 1 1
Golf				1 0 10	0 1 1	0 1 1		1 2 3
Gymnastics		2 0 2						2 0 2
Handball, Racquetball, Paddleball				0 10 10		0 3 3		0 13 13
Ice Hockey							1 0 1	1 0 1
Jogging			0 1 1			1 0 1		1 1 2
Judo-Karate	0 1 1							0 1 1
Sauna	1 0 1	2 0 2			2 0 2			5 0 5
Shuffleboard				0 1 1		0 2 2		0 3 3
Squash				0 8 8	0 1 1			0 9 9
Swimming		1 1 2			0 2 2	0 1 1		1 4 5
Table Tennis		0 2 2		0 2 2	0 2 2	0 1 1		0 5 5
Tennis	3 0 3	0 2 2			0 1 1			3 3 6
Track-Indoor			0 1 1					0 1 1
Volleyball	0 2 2	3 0 3	0 4 4		0 6 6	0 2 2		3 14 17
Wt. Lifting	1 0 1				0 1 1	0 1 1		1 2 3
Wrestling				0 1 1				0 1 1
Totals								28 87 125

figure 4.

From the foregoing survey and analysis a "baseline" inventory of sound acceptable facilities is established (i.e. those facilities which were determined to be of at least standard quality with respect to current function). The baseline inventory establishes a starting point for program development once needs can be determined.

Those facilities which are determined to be substandard will be re-evaluated with respect to their ability to accommodate other program needs; either through re-assignment of use or through remodeling if feasible.

facility demand

FACILITIES DEMAND

Introduction

The Recreational Sports program at the University of Minnesota includes all sports activities other than intercollegiate athletics and those taught in physical education classes. Programs are offered in organized, competitive sports, open recreation and sports clubs.

Those served by the Rec Sports program include full-time day students and those extension students and faculty-staff who purchase a Rec Sports participation card. There are approximately 12,000 faculty-staff members, 19,000 extension students and 46,371 (Fall 1976) day school registrants. Although each group has created an increased demand for Recreational Sports programming and facilities, day school students represent the largest group of Rec Sports participants within the program.

In an attempt to determine the extent of interest and participation of full-time students in the Recreational Sports program, the Office of Admissions and records conducted a survey during Spring Quarter 1977 registration. The survey information collected for the Recreational Sports Office was to serve as a guide for improving services.

1 PLEASE READ:	INFORMATION IS COLLECTED ON THIS CARD TO PROVIDE GUIDANCE TO UNIVERSITY OFFICES IN THEIR DESIRE TO IMPROVE SERVICES FOR STUDENTS. YOUR RESPONSES ARE NEEDED. CALL 373-5365 FOR DETAILS.					ADMISSIONS & RECORDS OFFICE FOR STUDENT AFFAIRS		STUDENT SURVEY CARD					
NAME _____						FILE NO. _____							
NAME/ADDRESS RELEASED TO OFFICES BELOW						SURVEY ITEMS — NAME AND ADDRESS NOT RELEASED — SURVEY ITEMS							
RECREATIONAL SPORTS DEPT. Have you ever participated in organized (team/individual) recreational sports at the U?			RECREATIONAL SPORTS DEPT. Have you ever participated in open (not organized) recreational sports at the U?			RECREATION SPORTS DEPT. X Most recent years of recreational sports participation:		HEALTH SERVICE X Times you've used the HS in the past 3 quarters: ONE ONLY		TRANSIT OFFICE X Where you plan to live spring quarter 1977: ONE ONLY		HOUSING OFFICE X Amount of money you earn at a job each week: ONE ONLY	
Yes _____ No-would like to _____			Yes _____ No-would like to _____			1976-77 1 1975-76 2 1974-75 3 1973-74 4		None 1 1-2 2 3-5 3 6 or more 4		Hennepin County - N. of I94 & Highway 12 1 Hennepin County - S. of I94 & Highway 12 2 Ramsey County - N. of I94 3 Ramsey County - S. of I94 4 Anoka County 5 Carver County 6 Dakota County 7 Scott County 8 Washington County 9 None of the above 0		\$0 - 19.00 1 \$20 - 39.00 2 \$40 - 59.00 3 \$60 - 79.00 4 \$80 - 99.00 5 \$100 - 119.00 6 \$120 - 139.00 7 \$140 - 159.00 8 \$160 - 179.00 9 \$180 - 199.00 0 \$200 and over A	
Not interested _____			Not interested _____			X Current frequency of participation in sports per week: 1 2 3 4 5 6 7 more		X Degree of satisfaction with HS care you received: Very satisfied 1 Satisfied 2 Indifferent 3 Dissatisfied 4 Very dissatisfied 5					
X Sports below			X Sports below			X Reason for not taking part in recreational sports: Conflicts with work 1 Conflicts with class/study Distance 2 Transportation problem 3 No one to play with 4 Not interested 5		X Degree of satisfaction with the way HS personnel treated you: Very satisfied 1 Satisfied 2 Indifferent 3 Dissatisfied 4 Very dissatisfied 5					
Archery 1	1	1	Archery 1	1	1	Have you participated in co-recreational sports? Yes 1 No, would like to 2 Not interested 3							
Badminton 2	2	2	Badminton 2	2	2								
Baseball 3	3	3	Baseball 3	3	3								
Basketball 4	4	4	Basketball 4	4	4								
Bicycle 5	5	5	Bicycle 5	5	5								
Bowling 6	6	6	Bowling 6	6	6								
Broomball 7	7	7	Broomball 7	7	7								
Golf 8	8	8	Golf 8	8	8								
Hockey 9	9	9	Hockey 9	9	9								
Jogging 0	0	0	Jogging 0	0	0								
Racquetball A	A	A	Racquetball A	A	A								
Soccer B	B	B	Soccer B	B	B								
Softball C	C	C	Softball C	C	C								
Squash D	D	D	Squash D	D	D								
Swimming E	E	E	Swimming E	E	E								
Table Tennis F	F	F	Table tennis F	F	F								
Tennis G	G	G	Tennis G	G	G								
Touch football H	H	H	Touch football H	H	H								
Track I	I	I	Track I	I	I								
Volleyball J	J	J	Volleyball J	J	J								
Water polo K	K	K	Water polo K	K	K								
Wrestling L	L	L	Wrestling L	L	L								

figure 5

Survey Results

For purposes of this survey, the Recreational Sports program was categorized into three types of activities: (1) organized (team/individual) sports, (2) open (self-service/recreational) sports, and (3) co-rec (sports in which there is simultaneous participation by men and women) sports.

Survey cards (see Figure 5) were distributed to day school students on the Twin Cities Campus at registration. As indicated on the survey card (Fig. 5), ten questions were related to Recreational Sports. The first six questions were asked of every student; the last four were asked of 20% of the student population. The response rate was approximately 50% (over 20,000 responses), which gave the study statistical validity.

The results of the study most relevant to this report are divided into two categories: participation and sports popularity, and are summarized below. More detailed results are in Appendix C.

Participation Patterns

The results of the survey indicate that 70% of the students participate in at least one of the three phases (organized, open, co-rec) of the Rec Sports program. Another 10% currently do not participate but would like to, and 20% indicate no interest in any phase of the program. For females, the pattern is 65% participate in at least one phase, 9% would like to, and 26% are not interested. For males, 77% participate in at least one phase, 8% do not but would like to and 15% are not interested.

A breakdown of participation patterns for each of the three phases reveals the following:

1. 32% of the University student population have participated in organized Rec Sports at the University. 22% would like to participate, although they do not presently; and 46% are not interested in participating.
2. 32% of the University Student population have participated in open Rec Sports at the University. 26% would like to participate, although they do not presently; and 42% are not interested in participating.
3. 35% of the University student population have participated in co-rec sports. 27% would like to participate, although they do not at the present time; and 37% are not interested in participating.

50% of the student population participating in sports do so once a week, 24% participate twice a week, 14% participate three times per week and 12% participate more than three times per week.

Although 70% of the students indicated they participate in at least one phase of Rec Sports, the study shows that a number of these individuals do not but would like to participate in other phases of the program. In this regard, 54% of the students indicated that they would like to participate in additional activities.

Conflicts with classes, studying and work are the major reasons for non-participation in Rec Sports. Transportation ranked last as a reason for non-participation.

Sports Popularity

Although the survey included both indoor and outdoor sports, this discussion centers on only the indoor sports.

Table I, page 19, provides a percentage breakdown of the top ten indoor sports. It indicates what percent of the University student population - men and women - plays or would like to play each organized and open indoor life sport.

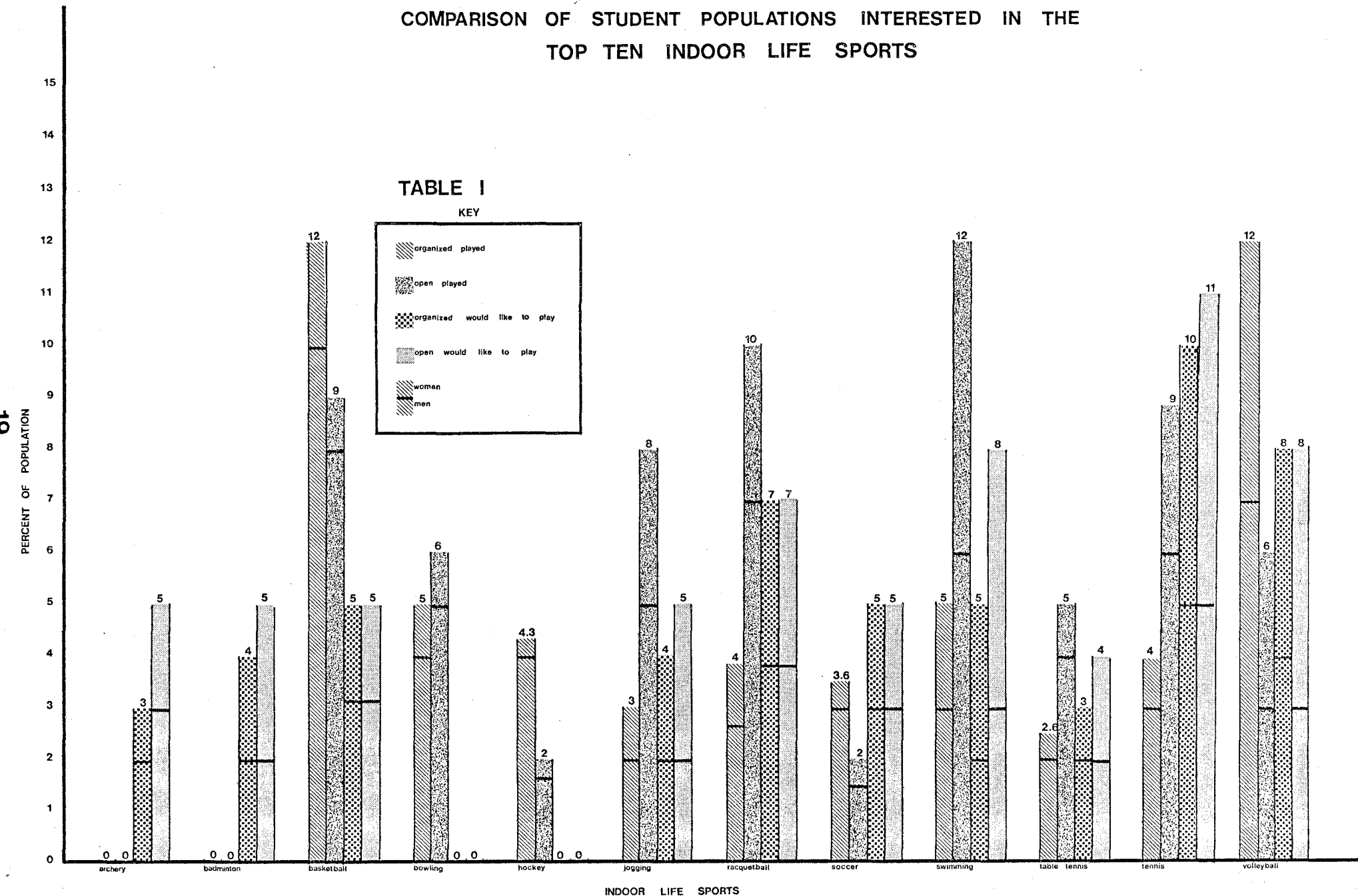
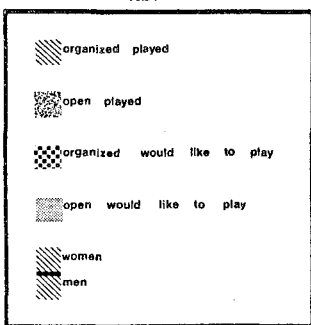
The Table below provides a rank order percentage breakdown of indoor sports played by University students. It indicates what percent of the University student population -- men and women -- plays organized or open indoor sports. Basketball, volleyball and swimming head the list. For women, the top sports are volleyball, swimming, racquetball, tennis and jogging.

Indoor Sports	% of "U" Pop. Playing Each Sport	% of Men in "U" Pop. Playing Each Sport	% of Women in "U" Pop. Playing Each Sport
1. Basketball	21%	18%	3%
2. Volleyball	18%	10%	8%
3. Swimming	17%	9%	8%
4. Racquetball	14%	10%	4%
5. Tennis	13%	9%	4%
6. Bowling	11%	8%	3%
7. Jogging	9.2%	5.2%	4%
8. Table Tennis	7.6%	6%	1.6%
9. Hockey	6.6%	6%	.6%
10. Badminton	3.1%	1.6%	1.5%
11. Archery	2%	1.3%	.7%
Water Polo	2%	1.2%	.8%
12. Squash	1.8%	1.4%	.4%
Wrestling	1.8%	1.8%	0%

COMPARISON OF STUDENT POPULATIONS INTERESTED IN THE TOP TEN INDOOR LIFE SPORTS

TABLE I

KEY



INDOOR LIFE SPORTS

The Table below provides a rank order percentage breakdown of the indoor sports University students would like to play. Tennis, volleyball, racquetball, swimming and basketball head the list. For women, tennis, volleyball, swimming and racquetball are the most popular. For men, tennis, racquetball, volleyball and basketball are the highest ranked.

Indoor Sports	% of "U" Pop. Interested in Playing Each Sport	% of Men in "U" Pop. Interested in Playing Each Sport	% of Women in "U" Pop. Interested in Playing Each Sport
1. Tennis	21%	10%	11%
2. Volleyball	16%	7%	9%
3. Racquetball	14%	8%	6%
4. Swimming	13%	5%	8%
5. Basketball	10%	6%	4%
6. Bowling	9%	5%	4%
Badminton	9%	4%	5%
Jogging	9%	4%	5%
7. Archery	8%	5%	3%
8. Table Tennis	7%	4%	3%
9. Hockey	5%	4%	1%
10. Water Polo	3.5%	2%	1.5%
11. Squash	2.6%	1.6%	1%
12. Wrestling	1.9%	1.9%	0%

By combining figures of actual participation with those students who would like to play, it appears the following five sports represent the greatest demand at the University of Minnesota:

1. Tennis
2. Volleyball
3. Basketball
4. Swimming
5. Racquetball

More detailed tables and data about the study may be found in Appendix C.

program recommendations

- **program development**
- **program justification**
- **design considerations**
 - **projected costs**
 - **facility renovation**
 - **site selection for new facilities**

PROGRAM DEVELOPMENT

A sub-committee of the Ad Hoc Recreational Sports Facilities Committee was appointed to make recommendations for space needs of the Twin Cities Campus Recreational Sports Centers. The sub-committee members were Holger Christianson, Finance and Facilities Coordinator; G. Alan Stull, Director of the School of Physical Education, Recreation and School Health Education; and Bruce Anderson, Jennifer Sue Larson and Pat Mueller from the Recreational Sports staff, all of whom have expertise serving as facilities consultants for other educational institutions.

The following points of reference were discussed in determining the final recommendations:

- (a) Surveys conducted by Dr. Roger Harrold and Dr. John Huebner identifying current Rec Sports participation and student interests in Rec Sports were reviewed. (see previous Chapter - Facilities Demand)
- (b) The 1965 program sub-committee report and the subsequent 1969 legislative report requesting facilities for Recreational Sports, Intercollegiate Athletics and Physical Education were analyzed.
- (c) The numbers and status of existing facilities at the University of Minnesota were evaluated along with the survey of numbers of facilities among Big 10 universities. (see Appendix A, page a-1)
- (d) Rec Sports facilities on campuses other than the Big 10 institutions were also considered.
- (e) Expected increases in women's participation without increased enrollment at the University was an important factor.
- (f) An analytical evaluation of space planning and needs (page 23).

The sub-committee recommends a total of 228,900 square feet of assignable space for the Recreational Sports Centers on the Twin Cities Campus -- 166,027 square feet for the Minneapolis Campus and 62,873 square feet for St. Paul. The first unrestricted evaluation of the recreational sports space needs produced 320,000 square feet but was reduced subsequent to considerations for renovating existing substandard facilities, potential funding availability, etc. There is an approximate space ratio of three to one between the Minneapolis and St. Paul Campuses. Eighty-five percent of the space is for direct program activities with the remainder utilized for service and support areas such as locker and equipment rooms.

The sub-committee highlights the following considerations relating to specific space allocation recommendations and facilities construction:

Program Justification

- A major portion of the space allocation recommendation is for the five most popular sports listed in the student interest survey. These are basketball, swimming, volleyball, racquetball and tennis (national surveys indicate that tennis and racquetball are the fastest growing sports at the present time).

- All areas are multi-purpose, and include combinations of activities, such as basketball-volleyball-badminton-tennis; fencing-karate-dance; judo-wrestling.
- Approximately 80% of the facilities surveyed were found sub-standard. For example, there are no official, regulation-size handball-racquetball-paddleball courts at the University of Minnesota, a condition which exists at no other major university in the United States.
- The nationally recognized reference book University Space Planning: Translating the Educational Programs of a University into Physical Facility Requirements presents a systematic methodology for deriving the space requirements of a University called the "Numeric Method." Through a series of steps a standard of space for an activity can be identified. In the case of athletic facilities, indoor recreation facility requirements are determined in the following manner:
 1. Each undergraduate student requires nine net assignable square feet (NASF) of indoor activity area.
 2. Space requirements for lockers, showers, etc. should equal 35% of the activity space. Therefore each undergraduate student requires 12.1 NASF of activity space.
 3. Graduate students are 25% as active as undergraduate students, therefore: $.25 \times 12.1 \times \# \text{ graduate students}$.¹
 4. Faculty and staff are 15% as active as undergraduate students, therefore: $.15 \times 12.1 \times \# \text{ faculty and Staff}$.²

Applying these standards to the University of Minnesota, then, the University should have:

- Undergraduates $12.1 \times 38,406 = 464,713$ NASF
- Graduate Students $.25 \times 12.1 \times 26,294^2 = 79,539$ NASF
- Faculty/Staff $.15 \times 12.1 \times 12,000 = 21,780$ NASF

The existing usable space for indoor recreation activities at the University of Minnesota totals 476,900 (including space that is considered substandard, whether nonregulation in size or due to inadequate facilities and including Williams Arena (141,000 NASF) which is available for only limited recreational activities).

¹University Space Planning: Translating the Educational Programs of a University into Physical Facility Requirements, p. 69

²Extension students are included in this Figure. These students were felt to have a participatory rate more equal to that of graduate students than undergraduates.

In summary form:

Recommended	566,032 NASF
Existing	476,900 NASF
Deficient	89,132 NASF
Williams Arena*	141,000 NASF
Total Deficient	<u>230,132 NASF</u>

Design Considerations

- The commons area is highlighted for pre- and post-activity participation and includes student administrative offices for serving numerous student organizations rather than individual students.
- The locker room space is streamlined to serve the maximum numbers of individuals, utilizing combination dressing-storage lockers on a four to one ratio.
- Consideration should be given to the latest building concepts and products, which will insure functional, low-cost facilities.
- Conservation of energy must be a guiding principle, potentially utilizing solar energy and/or underground construction. Large gymnasiums may operate at cooler temperatures than other buildings on campus, and therefore require less energy per cubic foot. Through design patterns, it may be possible to have low-temperature controls in all areas except the swimming pool, offices, commons area, and locker rooms. The offices and commons area should be air conditioned.
- All facilities areas must be designed to accommodate handicapped individuals.

The following figures identify specific areas, their dimensions, and total square feet.

*Includes seating for intercollegiate events.

UNIVERSITY OF MINNESOTA

PROPOSED TWIN CITIES CAMPUS RECREATIONAL SPORTS FACILITIES
ASSIGNABLE SPACE

ST. PAUL					MINNEAPOLIS			
AREA	NUMBER	DIMENSIONS	N.A.S.F.	SUBTOTAL G.S.F.	NUMBER	DIMENSIONS	N.A.S.F.	SUBTOTAL G.S.F.
GYMNASIUM	1	125' x 220'	27,500	34,375	3	125' x 220'	82,500	103,125
INDOOR SWIMMING POOL A) pool plus deck space B) diving area plus deck Note: Spectator seating not included.	1	65' x 100'	6,500	8,125	1	184' x 83'	17,625	24,531
					1	40' x 50'	2,000	
RACQUETBALL/HANDBALL/ PADDLEBALL COURTS	8	20' x 40'	6,400	8,000	24	20' x 40'	19,200	24,000
SQUASH COURTS					6 singles	18' 6" x 32'	3,552	5,046
					1 doubles	25' x 45'	1,125	
WEIGHT TRAINING	1	25' x 35'	875	1,094	1	40' x 40'	1,600	2,000
GENERAL EXERCISE	1	40' x 40'	1,600	2,000	1	40' x 40'	1,600	2,000
COMBATIVES/DANCE fencing/karate/dance room judo/wrestling room	1	40' x 40'	1,600	3,531	1	40' x 40'	1,600	3,532
	1	35' x 35'	1,225		1	35' x 35'	1,225	
CONFERENCE ROOM	1	12' x 12'	144	180	1	15' x 15'	225	281

ST. PAUL					MINNEAPOLIS			
AREA	NUMBER	DIMENSIONS	N.A.S.F.	SUBTOTAL G.S.F.	NUMBER	DIMENSIONS	N.A.S.F.	SUBTOTAL G.S.F.
OFFICES administrative offices	1	15' x 13'	195	1,200	1	20' x 20'	400	3,206
	3	10' x 13'	390		8	10' x 13'	1,040	
reception area	1	15' x 13'	195		1	30' x 20'	600	
work room	1	12' x 15'	180		1	15' x 20'	300	
office machines					1	15' x 15'	225	
COMMONS lounges	1	40' x 30'	1,200	6,250	1	40' x 30'	1,200	8,013
snack bar & storage	1	12' x 30'	360		1	15' x 24'	360	
student offices	3	10' x 13'	390		8	10' x 13'	1,040	
equipment sales & storage	1	10' x 15'	150		1	15' x 14'	210	
meeting room	1	30' x 30'	900		1	40' x 30'	1,200	
games room	1	40' x 50'	2,000		1	40' x 60'	2,400	
LOCKER & EQUIPMENT equipment & storage room	1	40' x 30'	1,200	13,836	1	50' x 40'	2,000	33,031
locker rooms	2	50' x 80'	8,000		2	100' x 100'	20,000	
shower-drying rooms	2	30' x 20'	1,200		2	40' x 40'	3,200	
saunas	2	10' x 15'	300		2	15' x 20'	600	
training room	1	15' x 15'	225		1	15' x 15'	225	
whirlpool	1	12' x 12'	144		1	20' x 20'	400	

GRAND TOTAL 62,873 78,591 167,652 209,565

GRAND GRAND TOTAL N.A.S.F. 230,525 G.S.F. 288,156

figure 6

UNIVERSITY OF MINNESOTA
 PROPOSED TWIN CITIES CAMPUS
 RECREATIONAL SPORTS FACILITIES

GYMNASIUM COURT AREAS

ACTIVITY	ST. PAUL - 1 GYMNASIUM AREA				MINNEAPOLIS - 3 GYMNASIUM AREAS			
	BADMINTON	BASKETBALL	TENNIS	VOLLEYBALL	BADMINTON	BASKETBALL	TENNIS	VOLLEYBALL
Number of Courts per Area	12	4	4	6	12	4	4	6
Dimensions	20' x 44'	50' x 84'	36' x 78'	30' x 60'	20' x 44'	50' x 84'	36' x 78'	30' x 60'
Number of Courts per Facility	12	4	4	6	36	12	12	18
GRAND TOTAL FOR ALL GYMNASIUM AREAS:	48	16	16	24				

figure 7

Projected Costs:

The following costs were developed by the University's Office of Physical Planning. All estimates are in today's dollars (a factor of 8%/year would have to be applied to determine future costs) and represent actual or total building costs. National average square foot costs for 1977 were applied to G.S.F. recommendations.

	<u>Minneapolis</u>	<u>St. Paul</u>	<u>TOTAL</u>
TOTAL BUILDING COSTS	8.54 million	3.26 million	11.80 million
*TOTAL PROJECT COSTS	11.40 million	4.35 million	15.75 million

*Total building costs represent 75% of the total project costs. The project cost figures take into account all non building costs (e.g. Architect Fees, Equipment and Furnishings, Utility Access, etc.).

Construction cost escalated 8%/year to dates shown assuming mid point of construction in spring.

	1978	1979	1980	1981
Constr. Cost	12,744,000	13,763,520	14,846,601	16,035,769
Total Project Cost	16,992,000	18,351,360	19,795,468	21,381,025

RENOVATED FACILITIES

The indoor facilities evaluation table from Page 15 establishes a baseline of those existing facilities which are considered sound and adequate. It also tabulates those facilities which were considered substandard for one reason or another. As previously suggested, some of these substandard facilities may be salvageable through remodeling and use reassignment at a cost which could be less than the cost of similar provisions in a new facility.

Because these substandard facilities were not considered as part of the existing inventory for initial program development purposes (which identified a need for 330,000 G.S.F.) they represented space available for remodeling which after re-evaluation reduced the program demands for new facilities to 288,000 sq.ft.

A second review was conducted to see if additional cuts could be made on new facility demands. However, after a careful examination of each of these facilities it has become apparent that all existing space (standard or not) is typically used for more than one activity and by more than one University sponsor. For example, Cooke Hall contains 4 standard badminton and volleyball courts and 3 substandard basketball courts (overlaid on the same floor) and each of these facilities is scheduled for use by both Rec Sports and Physical Education. Similarly, the Field House contains 3 substandard basketball courts, however these are temporary in nature and must be periodically moved to accommodate greater space using activities (e.g. Men's and Women's Intercollegiate baseball, track and field, etc.).

These and similar findings become apparent in virtually every instance of existing substandard space with the exception of some of the single purpose activities found in Memorial Stadium (e.g. fencing, golf, judo/karate, etc.).

Therefore, it can be concluded that, with very few exceptions, there would be little or no additional cost savings through the reclamation of existing substandard space.

As noted, the exceptions are primarily found in Memorial Stadium which could indeed be remodeled, as noted in previous studies (i.e. EFL Study - Stadium Renovation Report); however, any limited remodeling of the Stadium may be ill-advised in light of future possibilities for a new domed stadium in the Metropolitan area which could limit the future viability of Memorial Stadium. In other words any isolated remodeling of Memorial Stadium would in all probability be a mistake in a long term context.

Even though renovation of substandard facilities wouldn't effect (excepting the complete renovation of Memorial Stadium) the recommendations for new facilities, the studies conducted here suggest that some remodeling should take place in conjunction with the development of new facilities. For example, all gymnasiums which currently house substandard (particularly when safety is the primary reason for substandard status) activity areas should be revamped to accommodate only those activities which can be accommodated safely. This, at a minimum, would require floor resurfacing, painting, window replacement and the removal of certain facilities such as diving boards. Both the Cooke and Norris facilities would be in line for this kind of treatment.

A relatively major renovation should be undertaken in the Field House. Even though the Field House would not be critical to the Rec Sports Program, given the development of new facilities it is a unique facility necessary for uses which require a large indoor space. Such uses include:

1. Baseball practice (intercollegiate)
2. Track and Field (intercollegiate)
3. Women's Softball (intercollegiate)
4. Campus Carnival
5. Student association sponsored functions
6. Indoor football practice (intercollegiate)
7. R.O.T.C. field drills
8. Band practice

It is currently estimated that an additional \$750,000.00 would be necessary to upgrade the Field House for the above uses. This would include a new floor (which is currently dirt causing substantial maintenance and use problems), new toilet facilities and adequate lighting.

SITE SELECTION FOR NEW FACILITIES

In light of the foregoing discussion it is fairly clear that Rec Sports Program needs should be accommodated in new facilities; and while it would not be critical to Rec Sports programming it is also evident that existing facilities should be renovated or replaced to more appropriately accommodate other athletic facility users.

The following site recommendations for new facilities address the program recommendations developed earlier and displayed on Page 25.

Minneapolis Campus:

As indicated the gross square feet requirements for new facilities is 209,535. In terms of projected building coverage, gross requirements can be reduced by stacking certain use areas which require lower ceiling heights. For rough estimating purposes it can be assumed that:

- . Gymnasium and Swimming Pool Areas should be limited to 1 level.
- . Racquetball/Squash, Weight Training, General Exercise and combatives/Dance can be developed on 2 levels.
- . Conference Rooms, Offices, Commons, Lockers and Storage can be accommodated on 3 levels.

This translates into	-	Gymnasium/Swim	103,125
	-	Racquetball/Squash	16,189
	-	Office/Locker	14,843
			<hr/>
		Total estimated building coverage or roughly a building 450' x 300'	134,157 G.S.F.

The Minneapolis Campus Planning Framework states that "There are two approaches that can be taken in the provision of needed indoor (athletic) facilities. The first is through new construction. The second approach is to undertake major renovations of existing facilities." It goes on to suggest that:

1. A new sports building would be a prime candidate for underground space from a functional point of view.
2. Major renovation solutions would include a major remodeling of Memorial Stadium.

In the first instance (underground construction) the "state of the art" from a technical standpoint has not as yet advanced to a point where development costs can be competitive with surface construction. In the second instance, a major renovation of Memorial Stadium might make the most sense when all of the long term needs of the entire University are considered (i.e. including Inter-Collegiate and Physical Education activities); however, the costs for such an undertaking would be roughly double those projected to accommodate the recommended Rec Sports Program; and a source for those additional funds is not readily identifiable.

If new above ground construction is determined to be the best solution (which is the recommendation here) then the prime location should be north of 4th Street between 17 and 19 Streets. The development of programmed facilities in this vicinity would act as a link between existing athletic precincts.

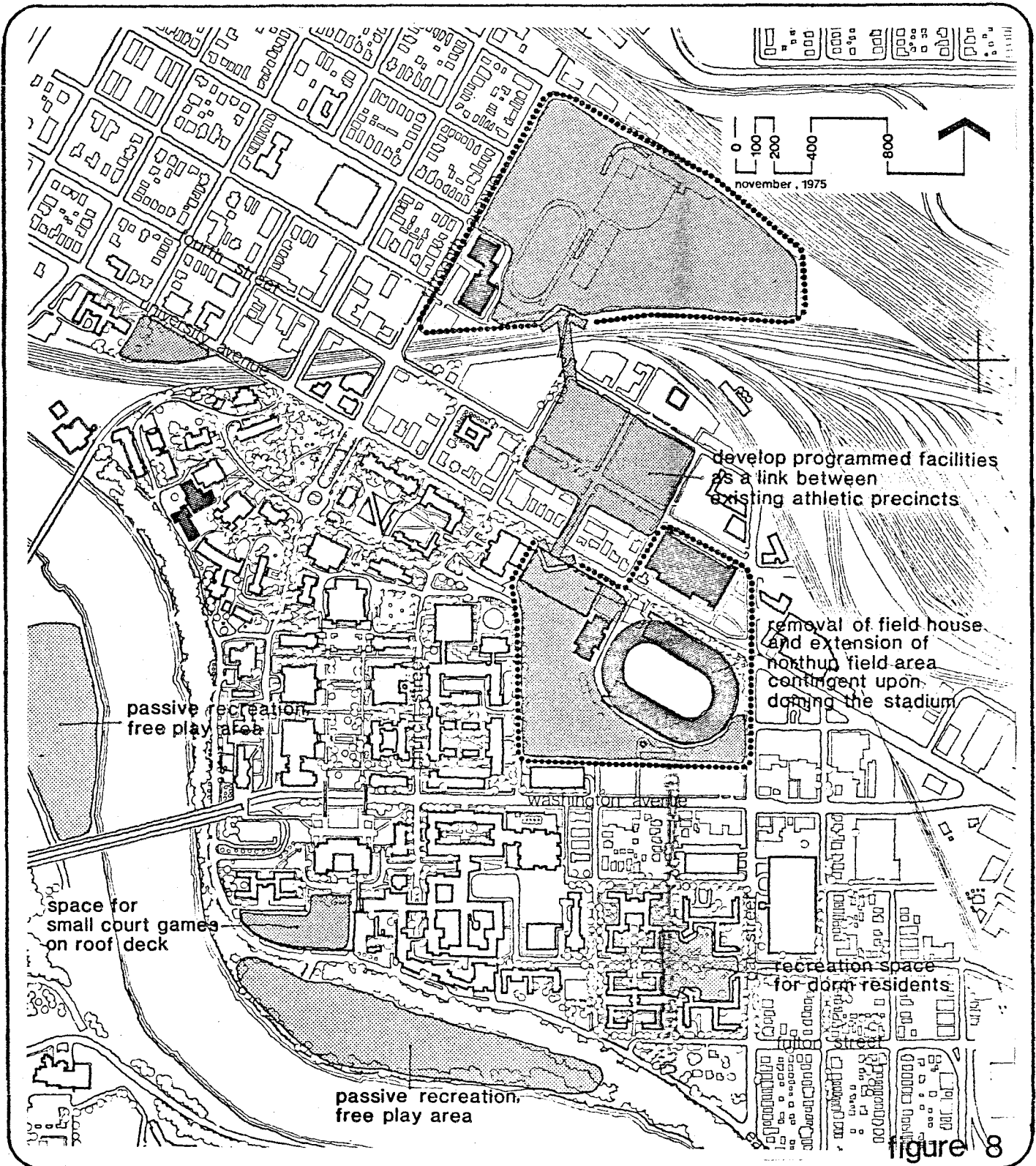
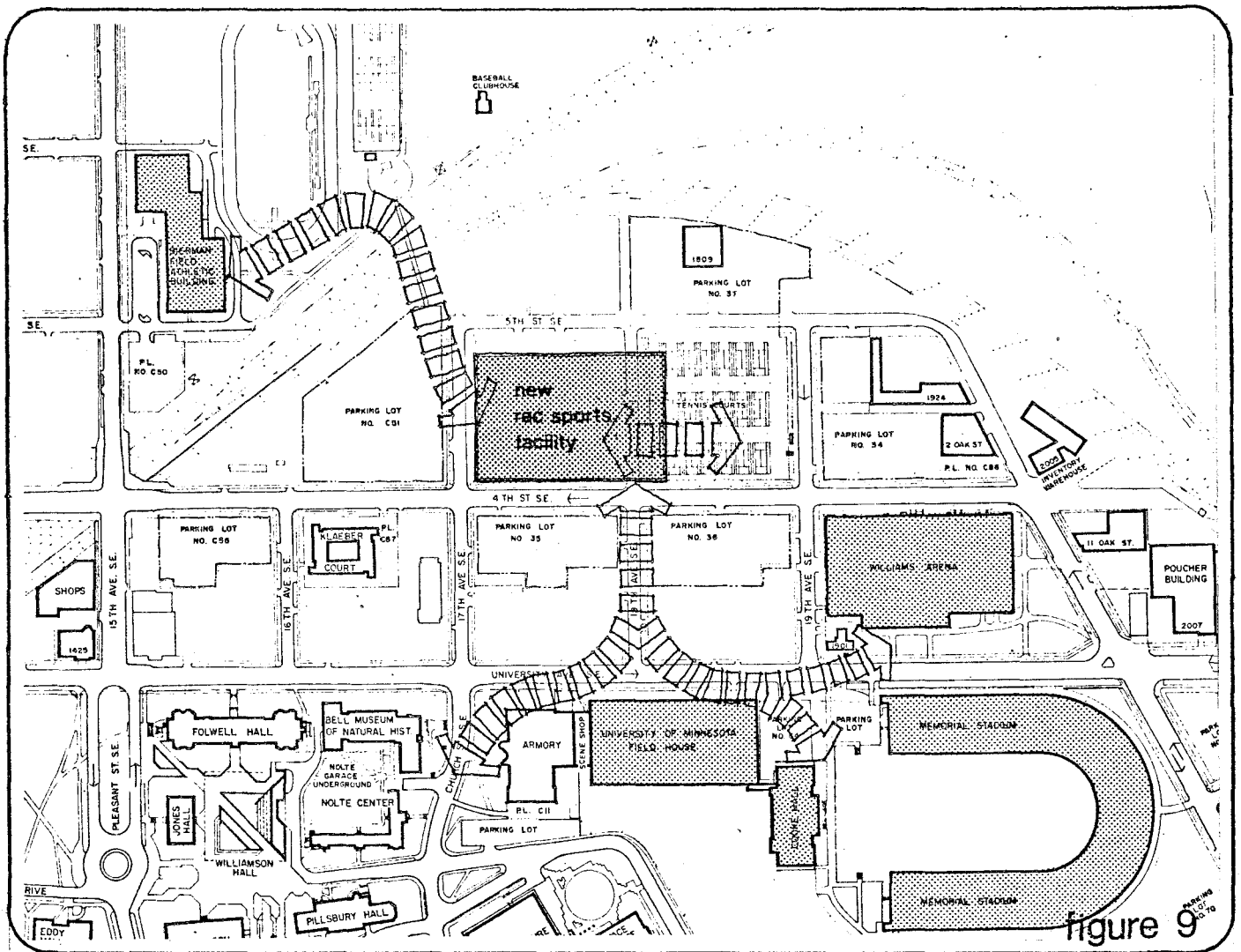


figure 8

Drawing source: Minneapolis Campus LRDP Planning Framework, Office of Physical Planning, January 1976.

Preliminary studies such as that in Figure 9 indicate that a building of the mass required could be accommodated in this area without requiring:

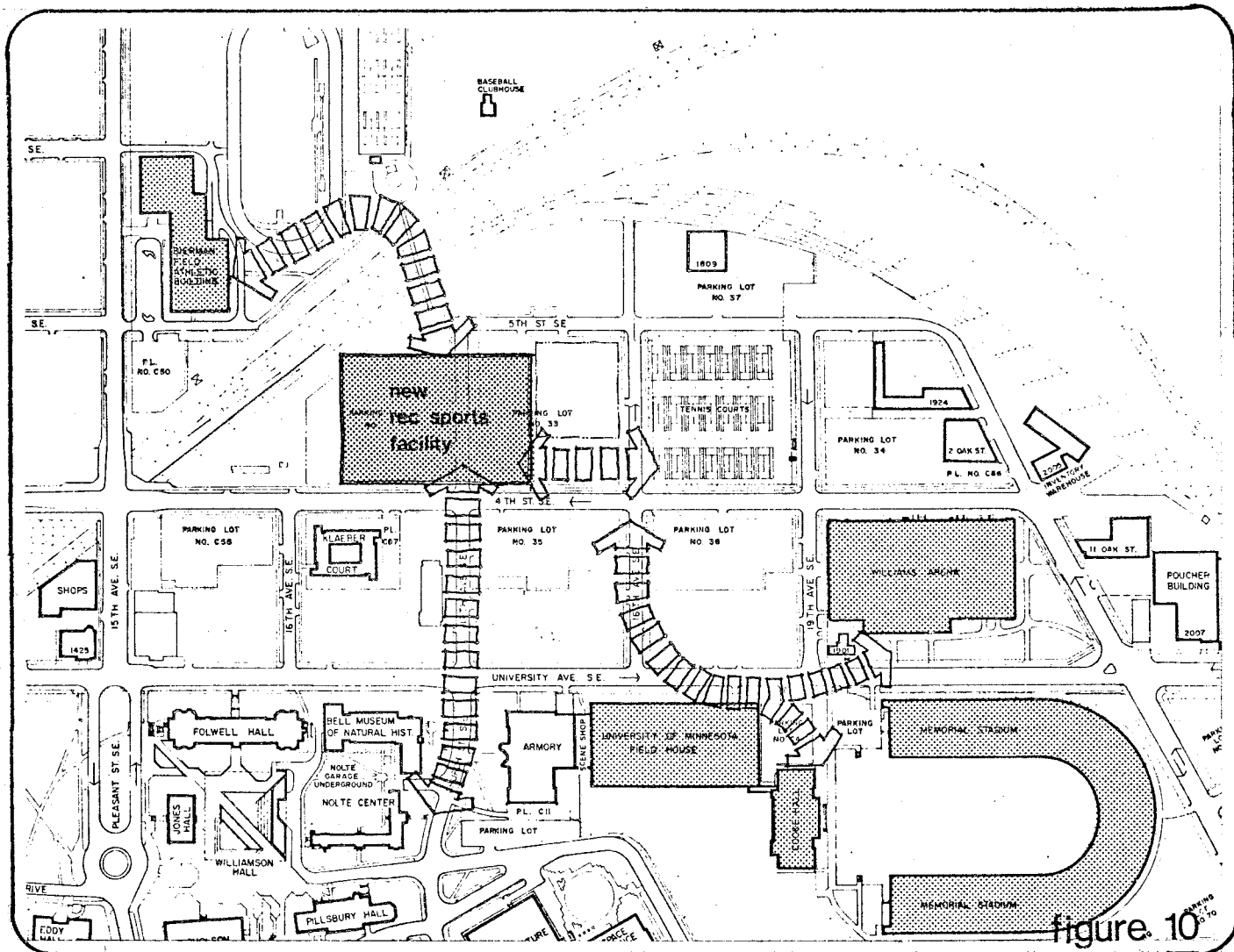
1. additional land acquisition
2. demolition of existing buildings



However, it would require:

1. the loss of a major surface parking lot,
2. the loss of some existing outdoor tennis courts, and
3. the vacation of 18th Street coupled with subsequent utility relocations.

A variation of the above solution should also be considered. An expansion of the site area to include the block immediately West of 17th Street would provide more flexibility in building placement (Figure 10). This solution would of course displace even a greater volume of existing parking. However, if an on-going Inter-Agency effort to implement an inter campus transitway with remote intercept parking provisions is successful, these parking resources may be expendable.*



*"University Area Short Range Transportation Program", Technical Memorandum #8, September 1977.

St. Paul Campus:

The requirements for new facilities call for 86,806 gross square feet. The floor level assumptions used for the Minneapolis campus are also used for St. Paul. The resultant estimated building coverage is:

- Gymnasium/Swim	42,490
- Racquetball	11,425
- Office/Locker	14,843

Total estimated building coverage 61,070 G.S.F.

The "Building Development" section of the "Framework Plan" of the St. Paul Campus Long Range Development Plan, as well as the "Academic Zoning" portion, illustrate the perimeter guidelines for expansion of the Gymnasium at St. Paul.

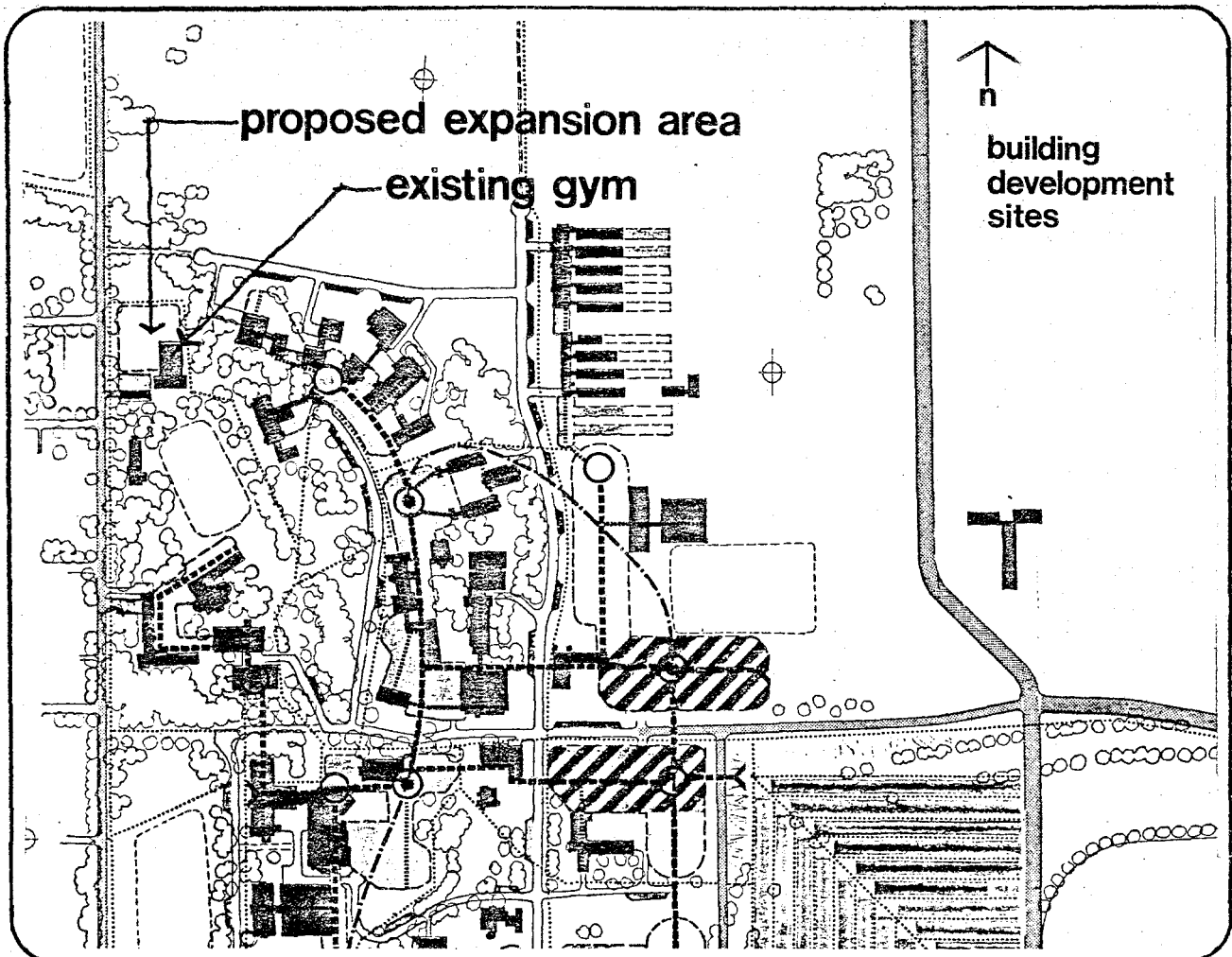
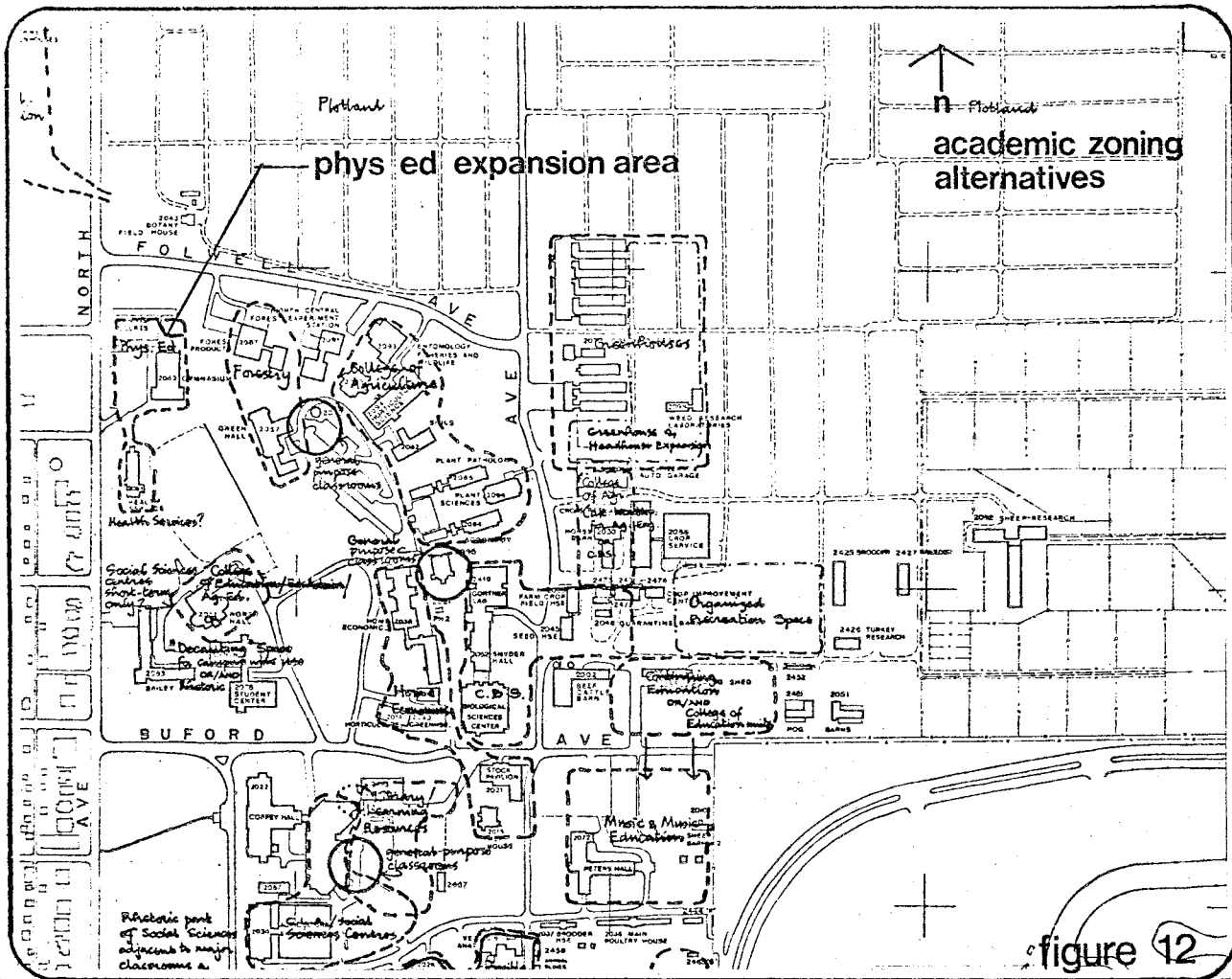
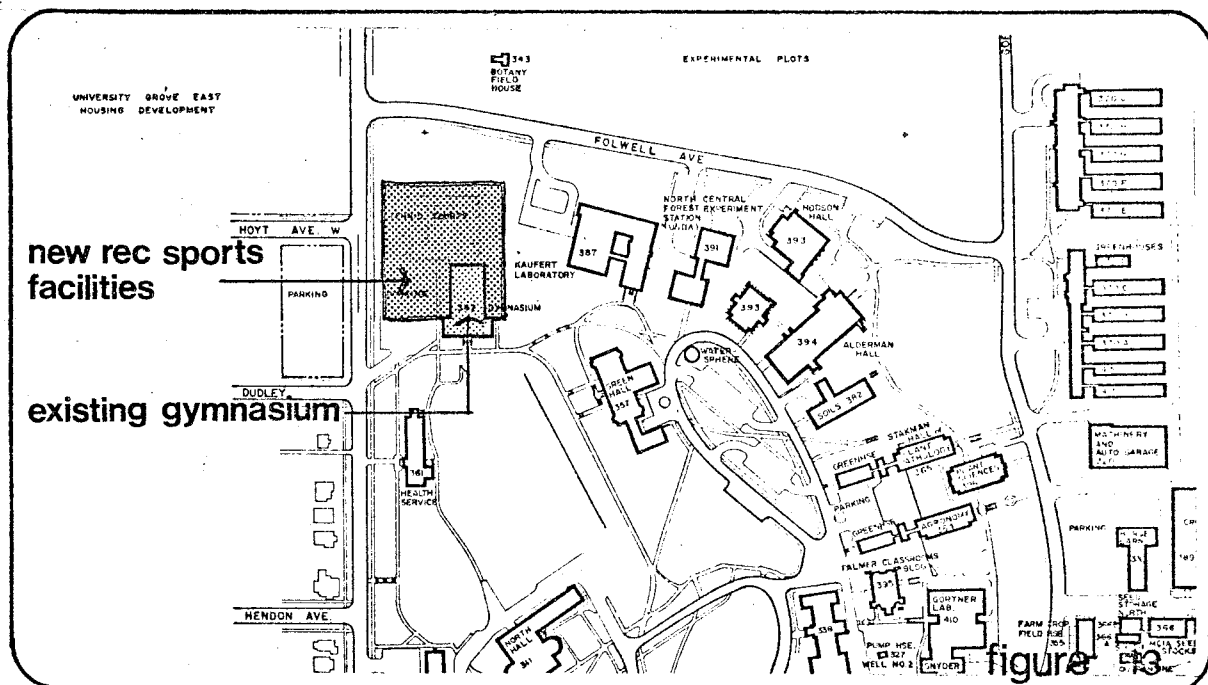


figure 11



Preliminary studies indicate that a building of the mass required could be accommodated adjacent to the existing Gymnasium, within the approximate guidelines of the St. Paul L.R.D.P. The sketch below illustrates a possible configuration which would satisfy the program requirements.



The construction of a new facility at the location illustrated above, would require the following:

1. The loss of 4 tennis courts;
2. The loss of a surface parking facility;
3. The sensitive architectural treatment of the new facility and its relationship/connection with the existing Gymnasium, cited as a "historic structure" on the St. Paul Campus;

financial alternatives

appendix a

- **a comparison with other 'big 10' schools**

A COMPARATIVE ANALYSIS
STUDENTS PER RECREATIONAL SPORTS FACILITY FOR BIG 10 SCHOOLS

FACILITY TYPE	School Enrollment*	33,552 Illinois	32,921 Indiana	22,393 Iowa	34,754 Michigan	43,749 Michigan State	46,371 Minnesota	10,000 Northwestern	49,846 Ohio State	30,194 Purdue	37,924 Wisconsin	High 1,708,500.00	Low 1,460.26	
												34,170	Average	
Archery Targets	4,194.0	4,115.13	2,799.13			43,749.0	2,576.17	1,250.0	4,984.6	10,064.67	12,641.3	5,339.06		
Badminton Courts	838.8	1,371.71	1,317.24		992.97	1,215.25	2,208.14	1,111.1	4,984.6	1,437.8	1,805.9	1,460.26		
Basketball-General	2,097.0	1,496.41			2,396.8	3,124.9	3,567.0	1,666.67	1,846.15	3,019.4	3,792.4	2,270.43		
Bowling Lanes	1,677.6	2,351.5			6,950.8	2,734.3	2,107.8		2,076.9	1,887.13	2,370.25	2,440.71		
Boxing Rooms	33,552.0				34,754.0	43,749.0	46,371.0			30,194.0	37,924.0	56,950.0		
Conference-Meeting Rooms	4,793.14	16,460.5			8,688.5	43,749.0	23,185.5	10,000.0	24,923.0	30,194.0	37,924.0	10,678.13		
Dance Studios					34,754.0	43,749.0	46,371.0	5,000.0	49,846.0	30,194.0	37,924.0	26,284.6		
Dry Heat Rooms					8,688.5	43,749.0	15,457.0			10,064.67	12,641.33	28,475.0		
Faculty Lounges		32,921.0				21,874.5	46,371.0					85,425.0		
*Population data Fall '76														

A COMPARATIVE ANALYSIS
STUDENTS PER RECREATIONAL SPORTS FACILITY FOR BIG 10 SCHOOLS

FACILITY TYPE	School Enrollment*	Illinois	Indiana	Iowa	Michigan	Michigan State	Minnesota	Northwestern	Ohio State	Purdue	Wisconsin	Average
	33,552	32,921	22,393	34,754	43,749	46,371	10,000	49,846	30,194	37,924	34,170	
Fencing Rooms	16,776.0		22,393.0	34,754.0	21,874.5	46,371.0	10,000.0	49,846.0	30,194.0	37,924.0	34,170.0	
Field House Areas		16,460.5	11,196.5	34,754.0	21,874.5	46,371.0	10,000.0	49,846.0	30,194.0	37,924.0	26,284.62	
Games Rooms	16,776.0		22,393.0	34,754.0			10,000.0	2,265.7	10,064.67		34,170.0	
Table Tennis	2,580.9		2,799.13	3,475.4	21,874.5	9,274.2		1,424.17	2,516.17		4,020.0	
Pin Ball	3,728.0			5,792.3				9,969.2			17,085.0	
Foos Ball	16,776.0			8,688.5				24,923.0			42,712.5	
Pool Tables	8,388.0		2,799.13								28,475.0	
General Exercise Rooms	16,776.0	32,921.0	4,478.6	8,688.5	21,874.5	46,371.0	10,000.0	16,615.3	15,097.0	37,924.0	15,531.8	
Golf Hitting Stations	8,388.0	8,230.25	1,866.1		10,937.3	2,318.55	1,666.67	1,661.53		2,917.23	3,674.13	
Gymnastic Areas	11,184.0		22,393.0	34,754.0	43,749.0	23,185.5	10,000.0	49,846.0	30,194.0	18,962.0	26,284.62	
Gym-Jogging Tracks	16,776.0	32,921.0		17,377.0		46,731.0		24,923.0	30,194.0	37,924.0	34,170.0	
Handball-Paddleball Courts	906.8	2,743.4	1,492.87	1,086.06	2,573.47	3,312.2	3,333.3	1,917.15	6,038.8	3,160.33	1,975.14	

*Population data Fall '76

A COMPARATIVE ANALYSIS
STUDENTS PER RECREATIONAL SPORTS FACILITY FOR BIG 10 SCHOOLS

FACILITY TYPE	School Enrollment*	33,552 Illinois	32,921 Indiana	22,393 Iowa	34,754 Michigan	43,749 Michigan State	46,371 Minnesota	10,000 Northwestern	49,846 Ohio State	30,194 Purdue	37,924 Wisconsin	34,170 Average
Ice Rinks	33,552.0				34,754	21,874.5	46,731.0		49,846.0		37,924.0	488,142.86
Judo-Karate Rooms	16,776.0	32,921.0	7,464.3	17,377	43,749.0	46,731.0	10,000	9,969.2	10,064.67			17,984.21
Outdoor Rec Room	33,552.0			22,393.0								1,703,500.00
Rifle Shooting Points	3,355.2	4,115.13			3,475.4	2,734.3	5,796.38	1,250.0	1,993.8	3,774.3	4,740.5	3,383.17
Roller Skating Rinks	16,776.0				34,754.0				49,846.0	30,194.0		683,400.00
Shuffle Board Courts							23,185.5	2,500.0	8,307.67	7,548.5		21,356.25
Squash Courts	4,793.14			22,393.0	1,930.78	10,937.3	5,152.3		8,307.67	2,156.71	6,320.67	5,256.32
Steam Rooms	16,776.0	10,973.7		22,393.0		8,749.8	46,731.0	10,000.0	49,846.0			24,407.14
Student Lounges		16,460.5			17,377.0	43,749.0	46,731.0	10,000.0	49,846.0	30,194.0		379,666.67
Swimming Pools	8,380.0	10,973.7	11,196.5	8,688.5	10,937.3	9,274.2	10,000.0	7,120.86	10,064.67	9,481.0		9,236.14
Tennis Courts	3,355.2	5,486.8	3,732.2	2,673.4	3,124.9	6,624.43	3,333.3	3,116.36	15,097.0	3,160.33		3,839.33

*Population Fall '76

A COMPARATIVE ANALYSIS
STUDENTS PER RECREATIONAL SPORTS FACILITY FOR BIG 10 SCHOOLS

Facility Type	School Enrollment*	Illinois	Indiana	Iowa	Michigan	Michigan State	Minnesota	Northwestern	Ohio State	Purdue	Wisconsin	Average
	33,552	32,921	22,393	34,754	43,749	46,371	10,000	49,846	30,194	37,924	34,170	
Track and Field	33,552.0	32,921.0	11,196.5	34,754.0	43,749.0	46,731.0	10,000.0	49,846.0	30,194.0	37,924.0	31,063.64	
Volleyball Courts	1,525.09	1,028.94	2,400.1	1,654.95	2,916.6	3,567.0	1,666.67	1,661.53	1,007.13	3,160.33	2,309.30	
Weight Lifting Rooms	8,388.0	32,921.0	22,393.0	11,584.7	43,749.0	15,457.0	10,000.0	24,923.0	30,194.0	9,481.0	16,271.43	
Wrestling Rooms	33,552.0	32,921.0	22,393.0	34,754.0	43,749.0	23,185.5	10,000.0	49,846.0	30,194.0	37,924.0	31,063.64	
Total Facilities	236	135	138	203.5	168	181	68	285	137	136	113.4	
Total Facilities/Student	.007	.0041	.00616	.00586	.00384	.0039	.0068	.00572	.00454	.00359	.00332	
Students/Total Facilities	142.17	243.86	162.27	170.78	260.41	256.19	147.05	174.9	220.4	278.85	301.32	

SUMMARY OF RANKING WITH OTHER BIG 10 SCHOOLS

MINNESOTA Rank-By-Facility	High	Low			
	1	10			
Archery Targets	2	Above average	Games Rooms	None	
Badminton Courts	9	Below Average(*)	Table Tennis	6	Below Average
Basketball-general	9	Below Average	Pin Ball	None	
Bowling Lanes	5	Slightly Above Average	Foosse Ball	None	
Boxing Rooms	6	Above Average	Pool tables	None	
Conference Meeting Rooms	6	Below Average(*)	General Excercise Rooms	10	Below Average(*)
Dance Studios	7	Below Average(*)	Golf Hitting Stations	4	Above Average
Dry Heat Rooms	4	Above Average	Gymnastic Areas	5	Slightly Above Average
Faculty Lounges	3	Above Average	Gym Jogging Tracks	7	Below Average(*)
Fencing Rooms	8	Below Average(*)	Handball-Paddleball Courts	9	Below Average(*)
Field House Areas	8	Below Average(*)	Ice Rinks	5	Above Average

a-5

a-6

Rank-By-Facility					
Outdoor Rec. Rooms	None		Total Facilities	4	Above Average
Rifle Shooting Points	9	Below Average(*)	Total Facilities/Student	8	Below Average
Roller Skating Rinks	None		Students/Total Facilities	8	Below Average
Shuffle Board Courts	4	Below Average(*)			
Steam Rooms	4	Slightly Above Average			
Student Lounges	6	Below Average(*)			
Swimming Pools	4	Slightly Below Average			
Tennis Courts	9	Below Average			
Track and Field	9	Below Average (*)			
Volley ball Courts	10	Below Average(*)			
Weight Lifting Rooms	5	Slightly Above Average			
Wrestling Rooms	2	Above Average			
Judo-Karate Rooms	9	Below Average(*)	(*) Very Low		

appendix b

- **new recreational sports facilities at selected colleges and universities**

SELECTED COLLEGES AND UNIVERSITIES

NEW RECREATIONAL SPORTS FACILITIES

Listed below are some of the colleges and universities which have constructed or are planning to construct recreational sports facilities and their approximate costs. Most of these facilities have been funded by student fees.

<u>INSTITUTION</u>	<u>APPROXIMATE COST</u>
University of California - Davis	\$ 8.5 million
Oregon State University	\$ 3.0 million
University of Wisconsin	\$ 8.2 million
Oklahoma State University	\$ 3.0 million
University of Tennessee	\$ 3.0 million
University of Colorado	\$ 5.0 million
University of Washington	\$ 3.0 million
University of Illinois	\$ 11.0 million
Oregon College of Education	\$ 1.5 million
Ohio State University	\$ 10.0 million
University of Northern Iowa	\$ 7.5 million
Purdue University	\$ 2.5 million
University of Idaho	\$ 7.8 million
Boston College	\$ 1.8 million
Michigan State University	\$ 4.0 million
University of South Dakota	\$ 7.5 million
University of Michigan	\$ 9.0 million
University of California at Berkeley	\$ 25.0 million*
Northwestern University	\$ 5.0 million
Southern Illinois University	\$ 10.0 million
Louisiana State University	\$ 1.5 million
University of California at Los Angeles	\$ 8.0 million

Also Notre Dame, Brigham Young, Air Force Academy, Univ. of Texas, Oberlin College, Univ. of Florida, Univ. of Houston, New Mexico State Univ., Elmira College, Univ. of New Mexico, Eastern Kentucky Univ., Univ. of Kentucky, North Carolina State Univ., Univ. of South Florida, Univ. of North Carolina, Bowling Green State Univ., Univ. of Toledo, Central Michigan Univ., Univ. of Northern Colorado, Colorado State Univ., Univ. of Utah have constructed new facilities for which costs are not available

*In planning stage

appendix c

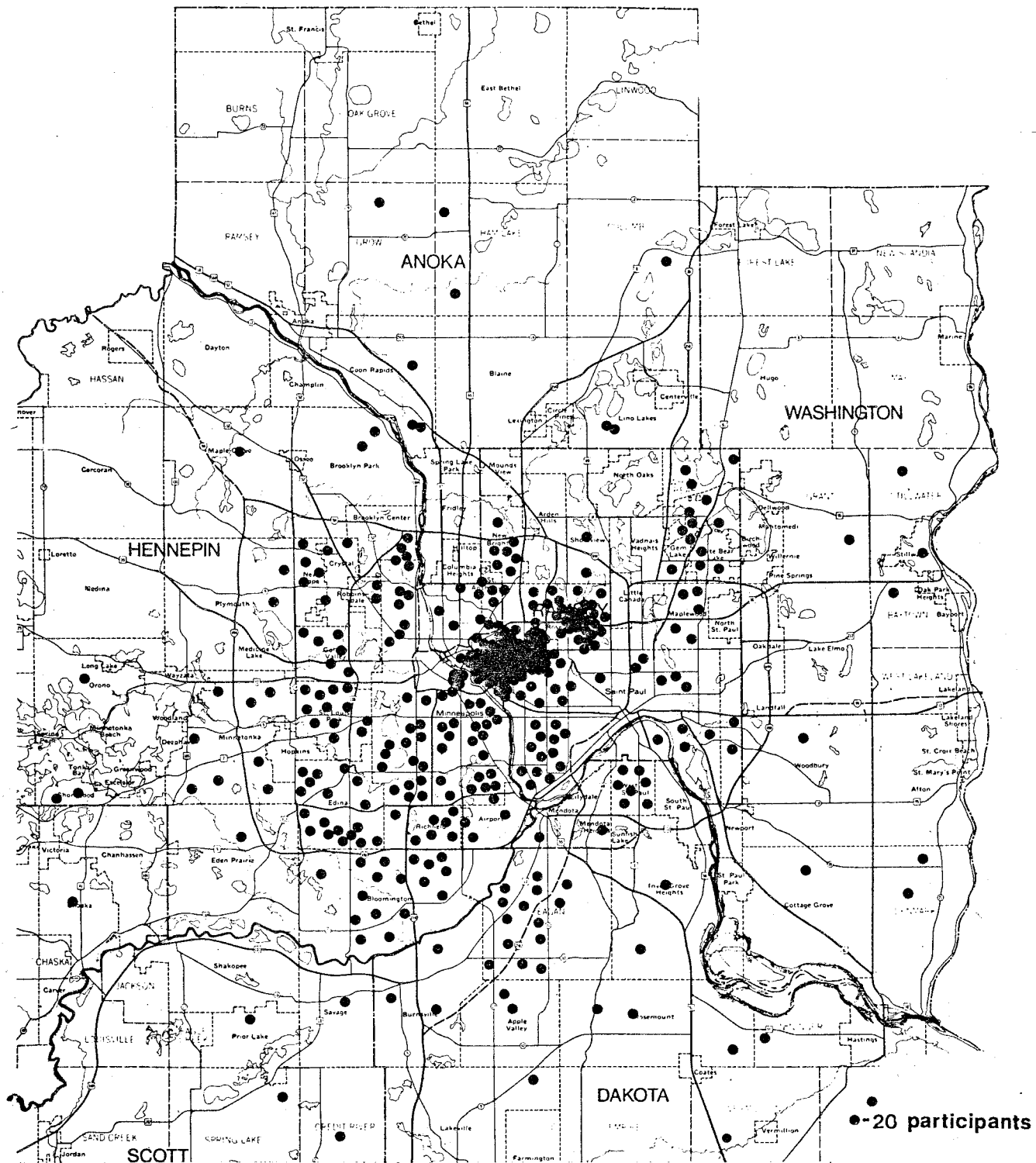
- **participant residency**
- **survey analysis**

Distribution of Rec Sports Participants by Residency within the Metropolitan Area

Through the rec sports card survey conducted winter quarter 1977 the residency, by zip code, of all rec sports participants was tabulated and plotted on the following map.

Each dot represents 20 participants. As the map indicates, the greatest concentration of participants occurs in an area within an easy bus ride, bicycle ride, or walk of the campus.

This pattern closely follows similar studies relating the origin/destination of auto person trips to the Minneapolis Campus. Such a pattern suggests that students living some distance from the campus are willing to commute back to campus to participate in rec sports activities in the evening. This pattern is further supported by the response to the rec sports survey itself, where only 6% and 10% of the respondents said that transportation or commuting distance was the reason why they did not participate in rec sports.



residency of rec sports participants



Participation in Organized Rec Sports

32% of the student population participated in organized rec sports. The breakdown for participants is as follows:

Men	70%	Freshmen	14%
Women	30%	Sophomores	23%
		Juniors	24%
		Seniors	24%

22% of the student population did not participate in organized rec sports although they would like to participate. The breakdown for nonparticipants is as follows:

Men	55%	Freshmen	27%
Women	45%	Sophomores	26%
		Juniors	20%
		Seniors	14%

46% of the student population were not interested in organized rec sports. The breakdown for nonparticipants is as follows:

Men	44%	Freshmen	14%
Women	56%	Sophomores	20%
		Juniors	20%
		Seniors	21%

55% of the question responses were made by men and 45% were made by women. For the population answering the question, the following is a breakdown of answers given by men and women:

	Yes, Participated	No, Nonparticipation	Not interested, Nonpart.
Men	22	12	20
Women	10	10	25

80% of the question responses were made by freshmen through seniors.

	Yes Participated	No, Nonparticipation	Not interested, Nonpart.
Freshmen	27	36	37
Sophomores	33	26	41
Juniors	36	20	44
Seniors	38	15	47

Participation in Open Rec Sports

32% of the student population participated in open rec sports. The breakdown for participants is as follows:

Men	64%	Freshmen	13%
Women	36%	Sophomores	21%
		Juniors	22%
		Seniors	24%

26% of the student population did not participate in open rec sports although they would like to participate. The breakdown for nonparticipants is as follows:

Men	50%	Freshmen	27%
Women	50%	Sophomores	25%
		Juniors	19%
		Seniors	14%

42% of the student population were not interested in open rec sports. The breakdown for nonparticipants is as follows:

Men	47%	Freshmen	14%
Women	53%	Sophomores	20%
		Juniors	21%
		Seniors	22%

53% of the question responses were made by men and 47% were made by women. For the population answering the question, the following is a breakdown of answers given by men and women:

	Yes, Participated	No, Nonparticipation	Not interested, Nonparticipation
Men	21%	13%	20%
Women	12%	13%	22%

80% of the question responses were made by freshmen through seniors.

	Yes, Participated	No, Nonparticipation	Not interested, Nonparticipation
Freshmen	26%	41%	34%
Sophomores	31%	30%	39%
Juniors	34%	24%	42%
Seniors	37%	18%	45%

Participation in Co-Rec Sports

35% of the student population participated in co-rec sports. The breakdown for participants is as follows:

Men	55%	Freshmen	15%
Women	45%	Sophomores	20%
		Juniors	24%
		Seniors	22%
		Adult Specials and Graduates	18%

27% of the student population did not participate in co-rec sports although they would like to participate. The breakdown for nonparticipants is as follows:

Men	64%	Freshmen	23%
Women	36%	Sophomores	23%
		Juniors	22%
		Seniors	20%
		Adult Specials and Graduates	12%

37% of the student population were not interested in co-rec sports. The breakdown for nonparticipants is as follows:

Men	48%	Freshmen	11%
Women	52%	Sophomores	17%
		Juniors	21%
		Seniors	26%
		Adult Specials and Graduates	25%

Of the men and women in the population the following breakdown indicates their responses:

	Men	Women
1. Yes, participate in rec sports	36%	35%
2. No, but would like to participate	32%	22%
3. Not interested in participating	33%	43%

Of the population answering the questions, the following is a breakdown for freshmen through seniors:

Freshmen	16%
Sophomores	20%
Juniors	22%
Seniors	23%
Adult Specials and Graduates	19%

Frequency of Participation in Sports Per Week

The following breakdown indicates the level (percentage) of participation in sports per week for the University student population:

Frequency of Participation	% of Univ. Pop.	% of Men in "U" Pop. Playing Each Sport	% of Women in "U" Pop. Playing Each Sport
Once a week	50%	31%	19%
Twice	24%	16%	8%
3	14%	8%	5%
4	4.3%	2.7%	1.6%
5	3.4%	1.8%	1.6%
6	1.7%	1.1%	.6%
7	2.5%	1.8%	.7%
More than 7 times per week	.4%	.3%	.1%

Of the University student population indicating frequency of participation in sports, 63% were men and 37% were women.

The following breakdown indicates the level of participation for men and women:

Frequency of Participation	Percent Participating	
	Men	Women
Once a week	49%	52%
Twice	25%	22%
3	13%	14%
4	4%	4%
5	3%	4%
6	2%	1.6%
7	3%	2%
More than 7 times per week	1%	.4%

Of the University student population indicating frequency of participation in sports, 82% were freshmen through seniors.

freshmen	15%
sophomores	20%
juniors	23%
seniors	22%

Reason for Not Participating

For the population indicating reasons for not participating in rec sports, 50% were men; 50% were women.

The following breakdown indicates what percent of the population does not participate in rec sports for the reasons listed below. The summary also indicates the breakdown for men and women and freshmen through seniors.

	Work	Class Study	Distance	Trans.	No One To Play With	Not Int.
Total % (Men & Women)	25%	35%	10%	6%	9%	15%
Men	13%	19%	5%	2%	5%	6%
Women	12%	16%	5%	4%	4%	9%
Total % (Fresh. thru Srs.)	20%	29%	9%	5%	7%	11%
Fresh.	3%	5%	2%	1%	2%	2%
Soph.	5%	8%	2%	1%	2%	2%
Jr.	6%	8%	2%	1%	2%	3%
Sr.	6%	8%	2%	1%	2%	4%

The percentages below indicate how men, women, freshmen, sophomores, juniors and seniors answered the question.

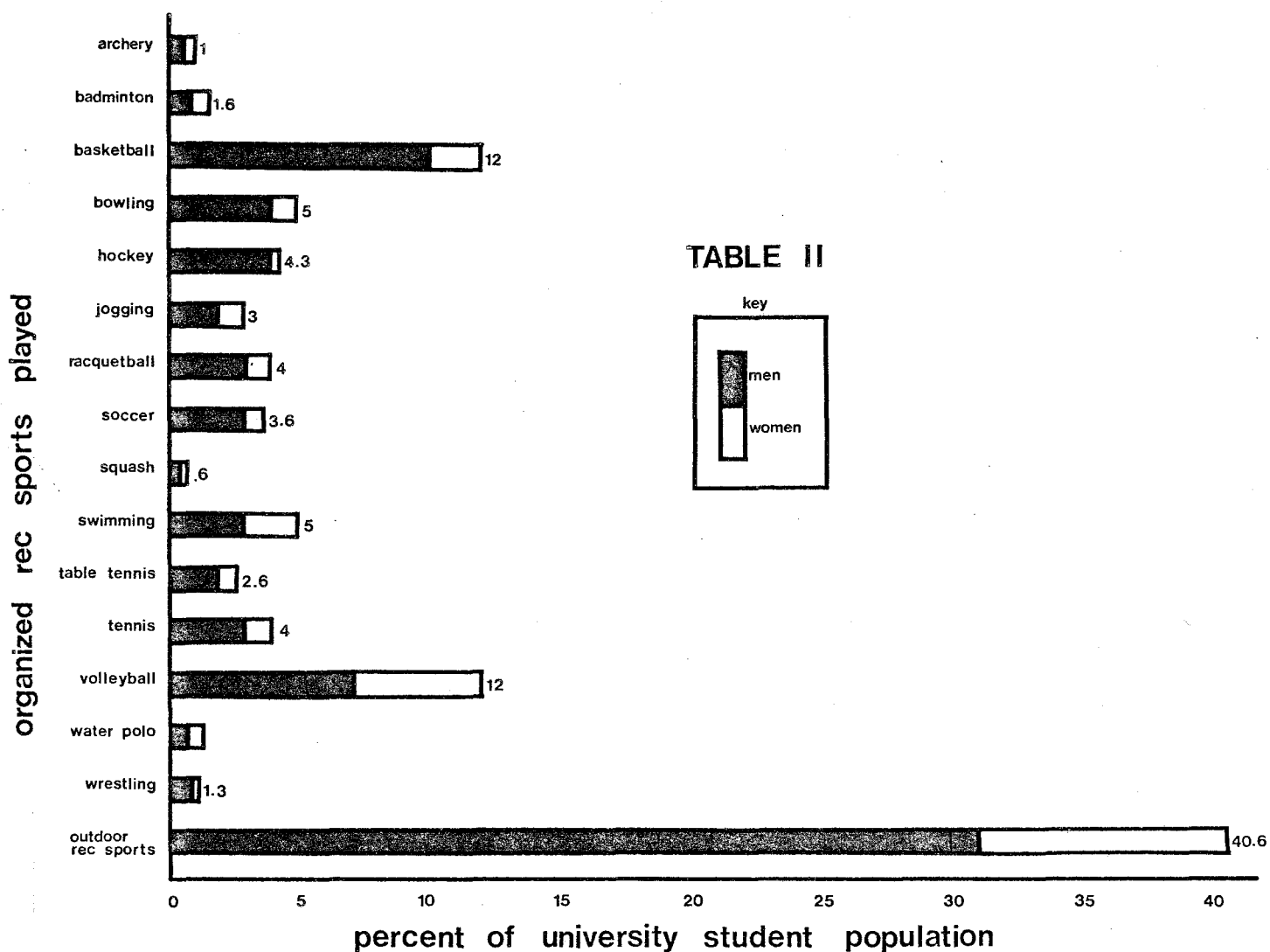
	Work	Class Study	Distance	Trans.	No One To Play With	Not Int.
Men	26%	38%	10%	4%	9%	13%
Women	24%	32%	10%	7%	8%	18%
Fresh.	22%	35%	12%	9%	10%	12%
Soph.	26%	38%	10%	6%	9%	12%
Jr.	26%	36%	11%	6%	9%	12%
Sr.	25%	33%	10%	5%	8%	19%

Organized Rec Sports Played

60% of the individuals playing organized rec sports play indoor life sports; 40% play outdoor rec sports. Of the individuals playing organized rec sports, 73% are men and 27% are women. Of the individuals playing organized indoor rec sports 43% are men and 18% are women.

Table II below indicates the indoor life sports played according to what percent of the University student population plays each one. It also indicates the proportion of men to women playing each sport.

UNIVERSITY STUDENT PARTICIPATION IN ORGANIZED REC SPORTS

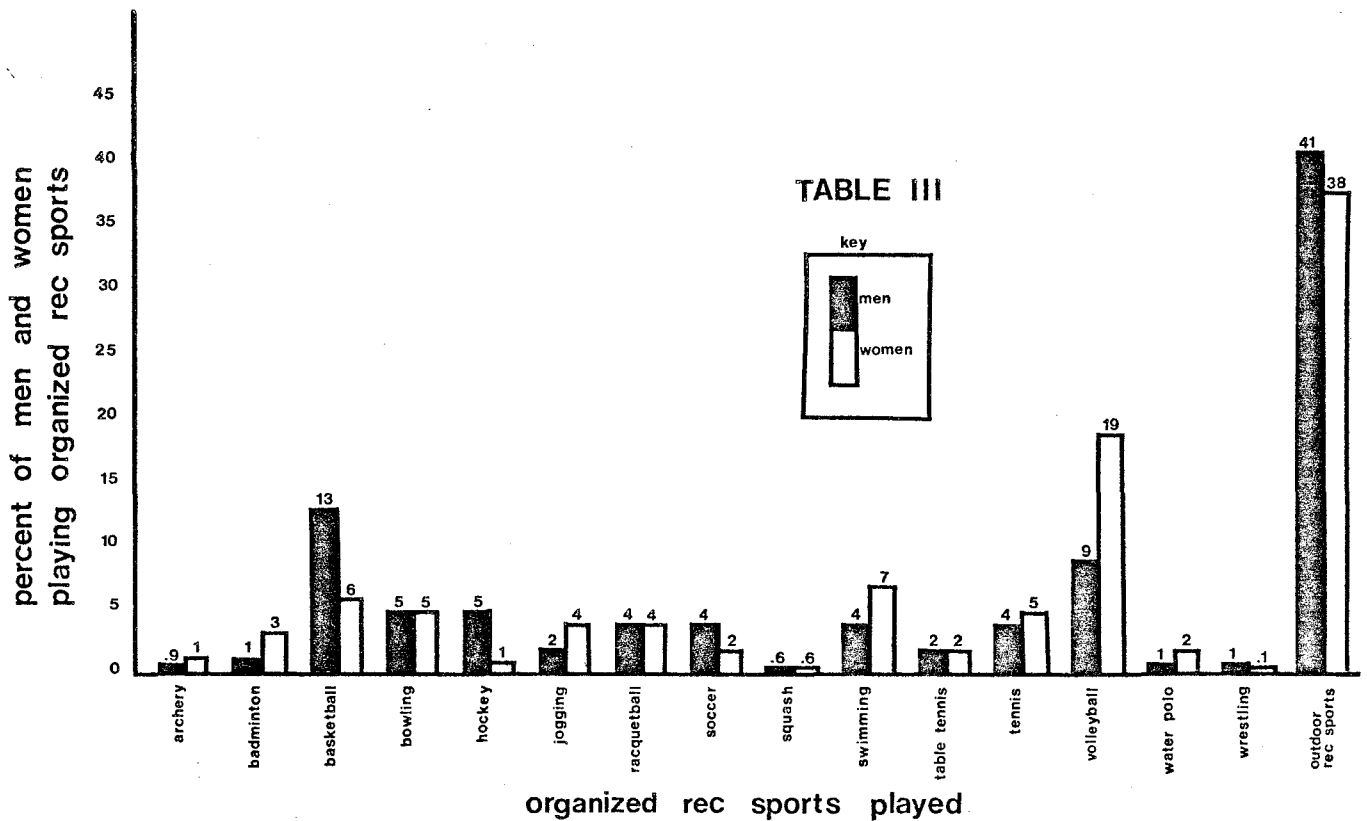


The breakdown on the following page presents the same information as Table II; however, it ranks each indoor life sport played.

Indoor Sports	% of "U" Pop. Playing Each Sport	% of Men in "U" Pop. Playing Each Sport	% of Women in "U" Pop. Playing Each Sport
1. Volleyball	12%	7%	5%
Basketball	12%	10%	2%
2. Bowling	5%	4%	1%
Swimming	5%	3%	2%
3. Hockey	4.3%	4%	.3%
4. Racquetball	5%	4%	1%
Tennis	4%	3%	1%
5. Soccer	3.6%	3%	.6%
6. Jogging	3%	2%	1%
7. Table Tennis	2.6%	2%	.6%
8. Badminton	1.6%	.8%	.8%
9. Water Polo	1.3%	.7%	.6%
10. Wrestling	1.05%	1	.05%
11. Archery	1%	.6%	.4%
12. Squash	.6%	.4%	.2%

Table III below indicates what percent of the male respondents and what percent of the female respondents participate in each organized indoor life sport.

PARTICIPATION IN ORGANIZED REC SPORTS BY MEN AND WOMEN



1. Of all the men participating in organized rec sports, 59% play indoor life sports; 41% play outdoor organized rec sports.

The following breakdown indicates the rank order of organized indoor life sports played by men:

1. Basketball	13%	5. Jogging	2%
2. Volleyball	9%	Table Tennis	
3. Bowling	5%	6. Badminton	1%
Hockey		Water polo	
4. Racquetball	4%	Wrestling	
Soccer		7. Archery	.9%
Swimming		8. Squash	.6%
Tennis			

2. Of all the women participating in organized rec sports, 64% play indoor life sports; 36% play outdoor organized rec sports.

The following breakdown indicates the rank order of organized indoor life sports played by women:

1. Volleyball	19%	6. Badminton	3%
2. Swimming	7%	Soccer	
3. Basketball	6%	7. Water Polo	2%
4. Bowling	5%	Table Tennis	
Tennis		8. Hockey	1%
Jogging		Archery	
5. Racquetball	4%	9. Squash	.6%
		10. Wrestling	.1%

Of the population playing organized rec sports, 86% are freshmen, sophomores, juniors and seniors and 14% are graduate and adult special students. 85% of the population playing organized indoor life sports are freshmen through seniors.

freshmen	15%
sophomores	23%
juniors	22%
seniors	24%

15% of the population playing organized indoor life sports are graduates and adult specials.

Of the freshmen, sophomores, juniors and seniors playing organized rec sports, 60% play indoor life sports:

freshmen	11%
sophomores	16%
juniors	16%
seniors	17%

40% of the freshmen through senior classes play organized outdoor rec sports.

The four graphs on Table IV, page c-11, indicate participation in organized rec sports for each class (freshmen through seniors).

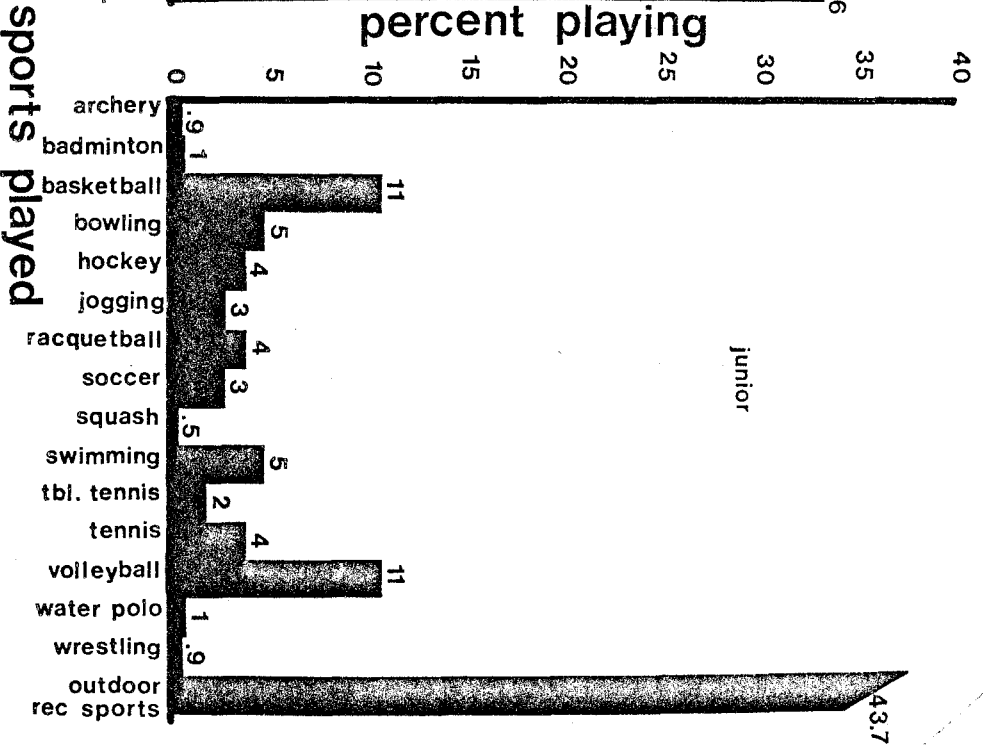
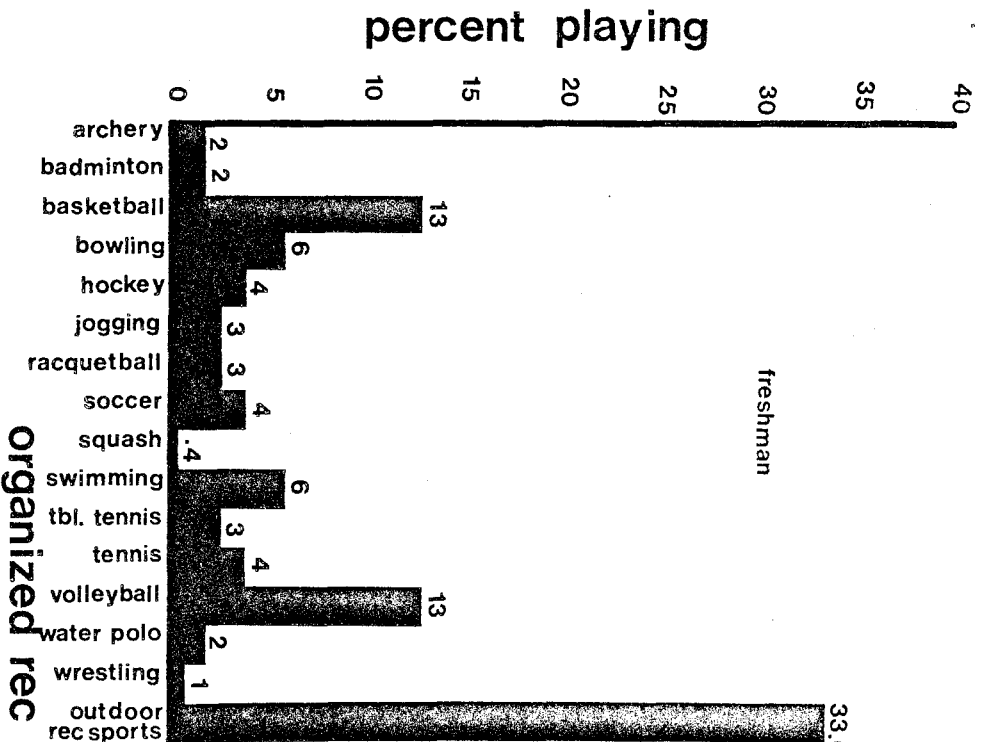
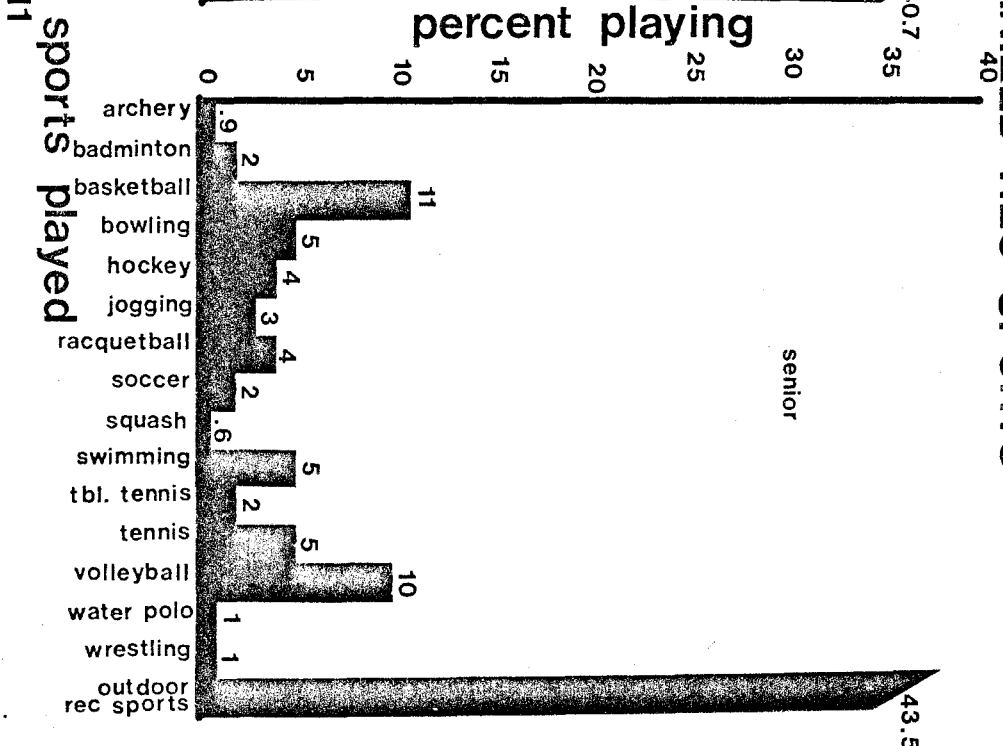
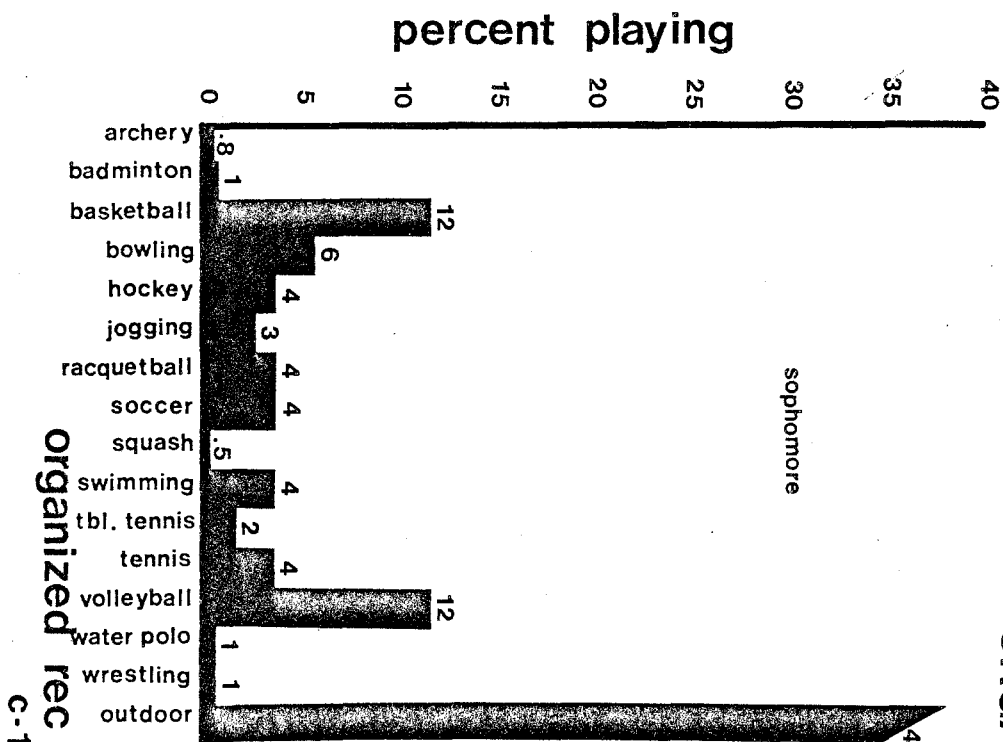


TABLE IV
CLASS PARTICIPATION IN ORGANIZED REC SPORTS

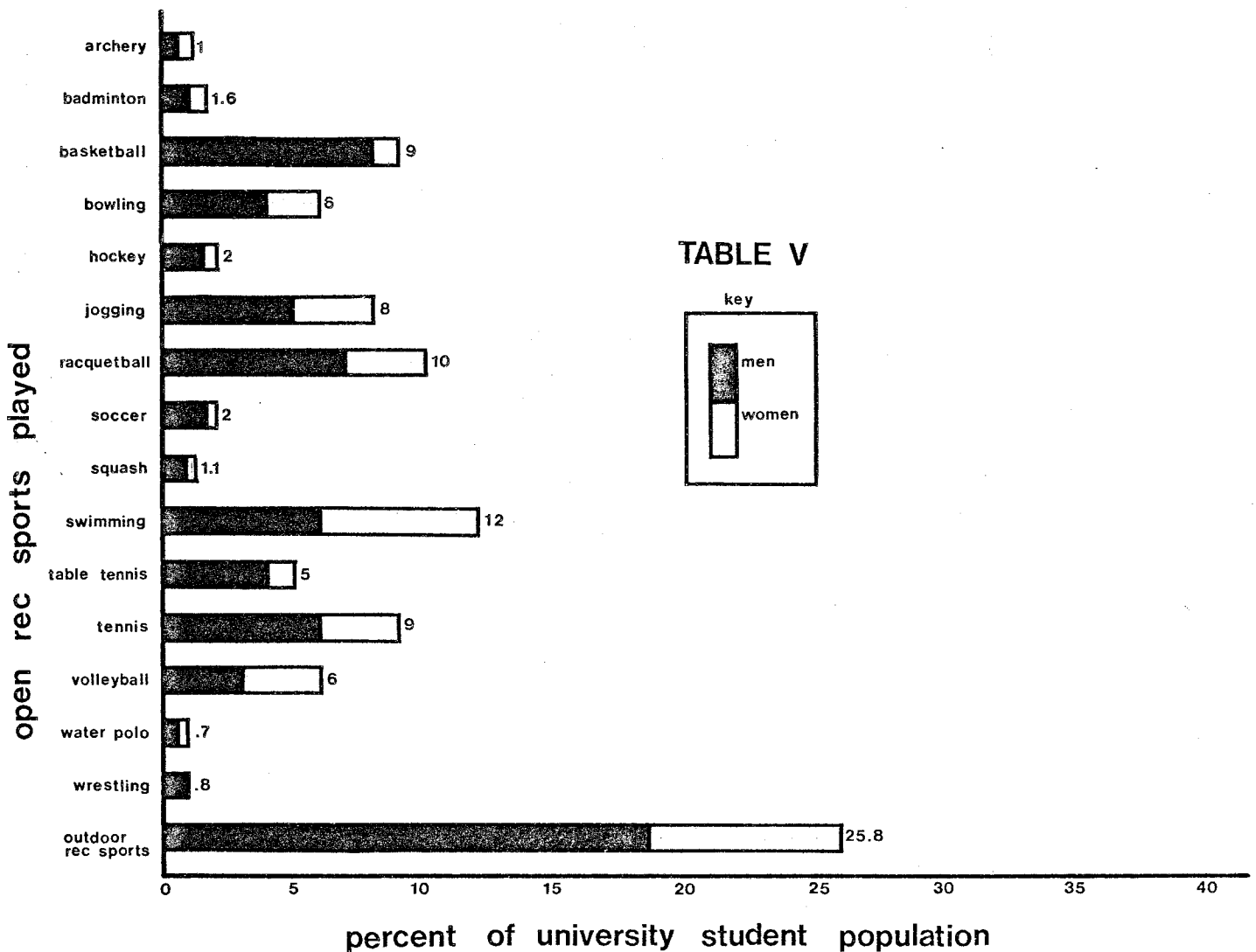


Open Rec Sports Played

74% of the individuals playing open rec sports play indoor life sports; 26% play outdoor rec sports. Of the individuals playing open rec sports, 69% are men and 31% are women. Of the individuals playing open indoor rec sports 67% are men and 33% are women.

Table V below indicates the indoor life sports played according to what percent of the University student population plays each one. It also indicates the proportion of men to women playing each sport.

**UNIVERSITY STUDENT PARTICIPATION IN
OPEN REC SPORTS**

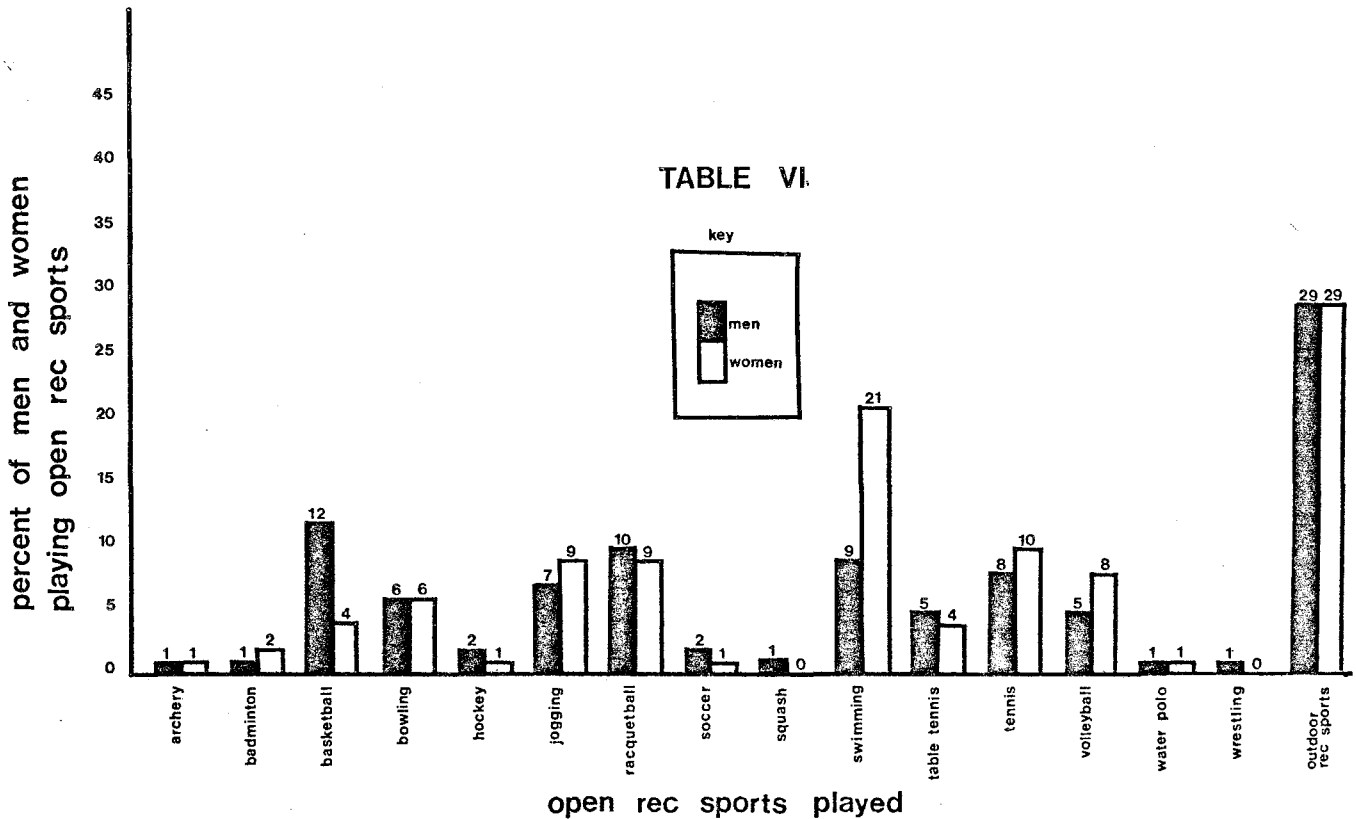


The breakdown on the following page presents the same information as Table V; however, it ranks each indoor life sport played.

Indoor Sports	% of "U" Pop. Playing Each Sport	% of Men in "U" Pop. Playing Each Sport	% of Women in "U" Pop. Playing Each Sport
1. Swimming	12%	6%	6%
2. Racquetball	10%	7%	3%
3. Basketball	9%	8%	1%
Tennis	9%	6%	3%
4. Jogging	8%	5%	3%
5. Bowling	6%	4%	2%
Volleyball	6%	3%	3%
6. Table Tennis	5%	4%	1%
7. Hockey	2%	1.7%	.3%
Soccer	2%	1.6%	.4%
8. Badminton	1.6%	.9%	.7%
9. Squash	1.2%	.9%	.3%
10. Archery	1%	.7%	.3%
11. Wrestling	.8%	.8%	0%
12. Water Polo	.7%	.5%	.2%

Table VI below indicates what percent of the male respondents and what percent of the female respondents participate in each organized indoor life sport.

PARTICIPATION IN OPEN REC SPORTS



1. Of all the men participating in open rec sports, 71% play indoor life sports; 29% play outdoor open rec sports.

The following indicates the rank order of open indoor life sports played by men:

1. Basketball	12%	6. Bowling	6%
2. Racquetball	10%	7. Table Tennis	5%
3. Swimming	9%	Volleyball	
4. Tennis	8%	8. Hockey	2%
5. Jogging	7%	Soccer	
		9. Archery	1%
		Badminton	
		Squash	
		Wrestling	
		10. Water Polo	.7%

2. Of all the women participating in open rec sports, 76% play indoor life sports; 24% play outdoor open rec sports.

The following breakdown indicates the rank order of open indoor life sports played by women.

1. Swimming	21%	6. Basketball	4%
2. Tennis	10%	Table Tennis	
3. Jogging	9%	7. Badminton	2%
Racquetball		8. Archery	1%
4. Volleyball	8%	Hockey	
5. Bowling	6%	Soccer	
		Water Polo	
		Squash	
		9. Wrestling	.06%

Of the population playing open rec sports, 83% are freshmen, sophomores, juniors and seniors, and 17% are graduate and adult special students. Sixty percent of the population playing open indoor life sports are freshmen through seniors.

freshmen	10%	juniors	16%
sophomores	15%	seniors	19%

40% of the population playing open indoor life sports are graduates and adult specials.

Of the freshmen, sophomores, juniors and seniors playing open rec sports 73% play indoor life sports:

freshmen	12%	juniors	20%
sophomores	19%	seniors	22%

27% of the freshmen through senior classes play open outdoor rec sports.

The four graphs on Table VII, page c-15, indicate participation in open rec sports for each class (freshmen through seniors).

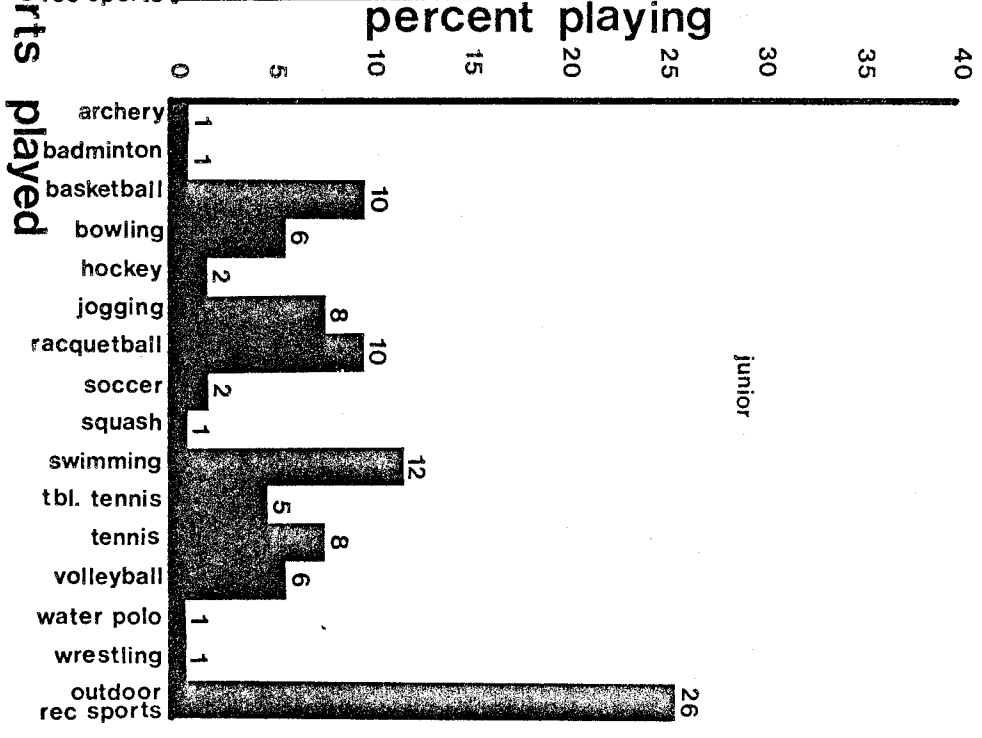
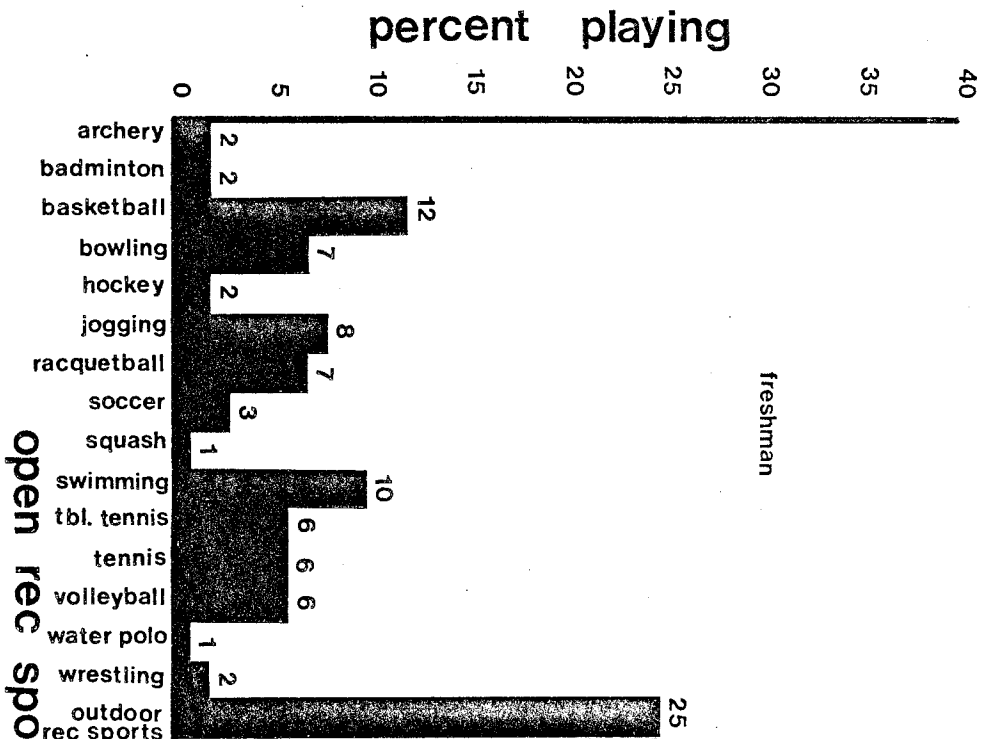
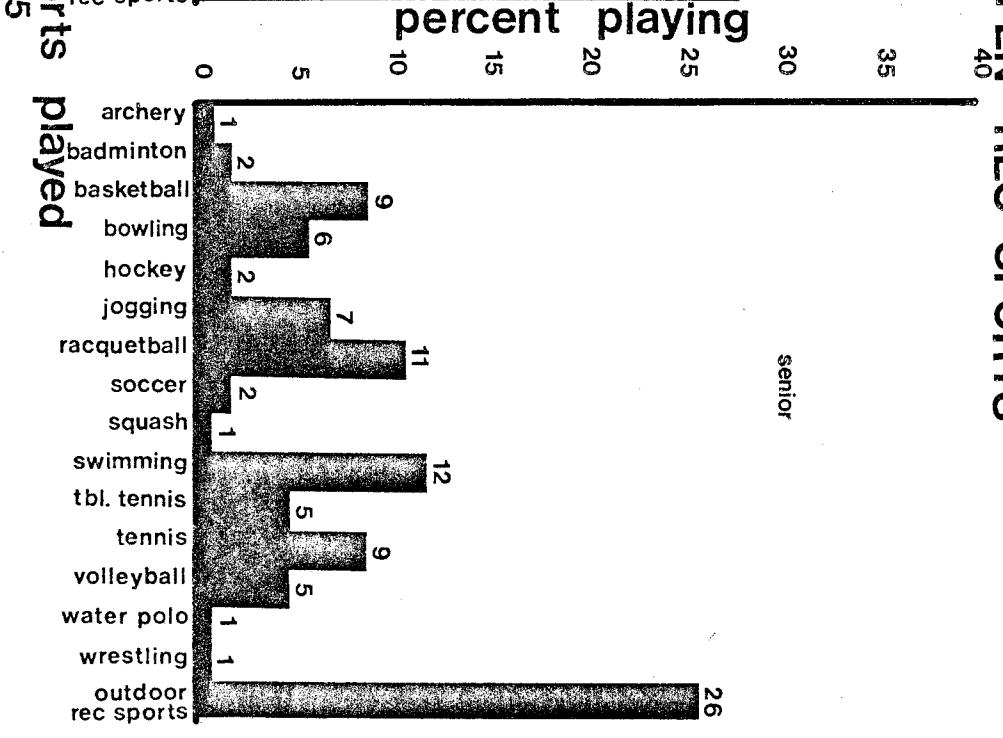
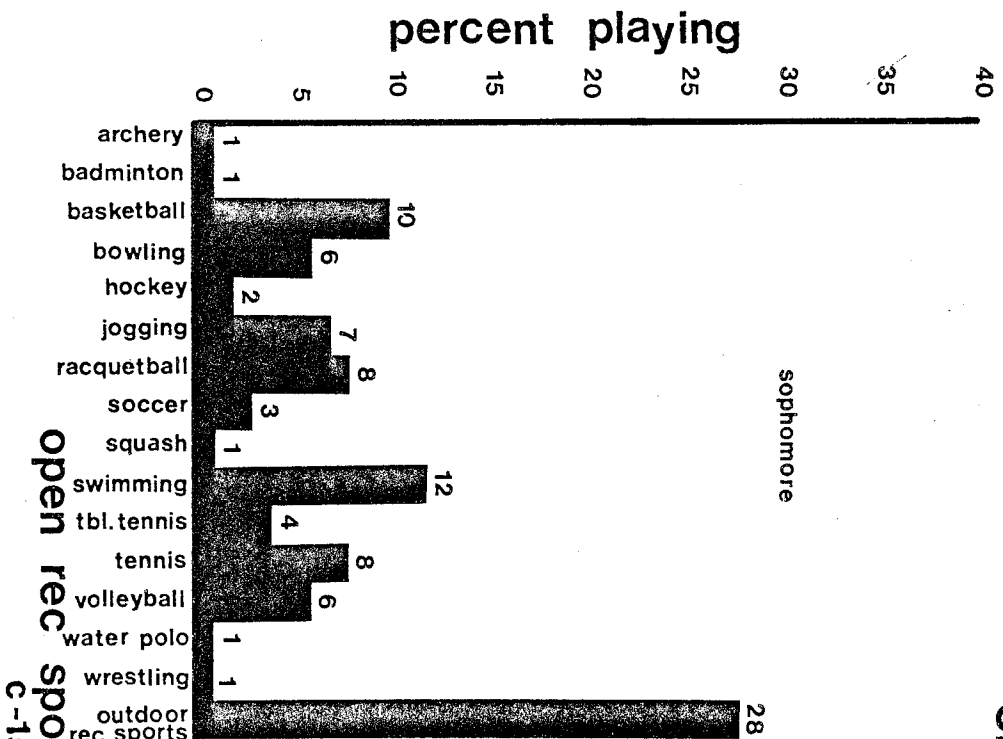


TABLE VII

CLASS PARTICIPATION IN

OPEN REC SPORTS

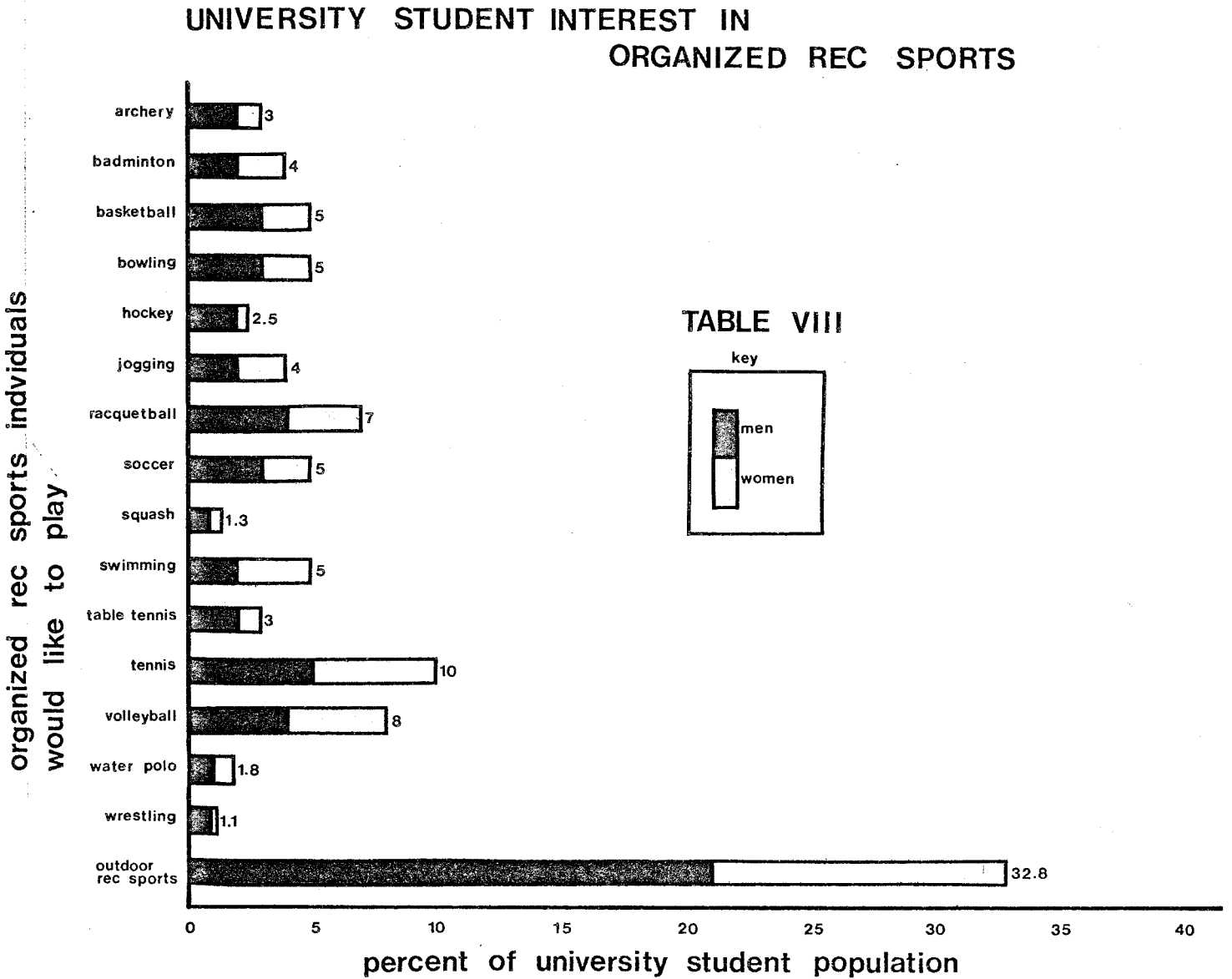


open rec sports played
c-15

Organized Rec Sports Individuals Would Like To Play

67% of the individuals interested in playing organized rec sports would like to play organized indoor life sports; 33% would like to play organized outdoor rec sports. Of the individuals who would like to play organized rec sports, 58% are men and 42% are women. Of the individuals who would like to play organized indoor rec sports, 55% are men and 45% are women.

Table VIII below indicates the indoor life sports which individuals would like to play. The breakdown is based on the percent of the University student population indicating they would like to play each sport. The breakdown also indicates the proportion of men to women.

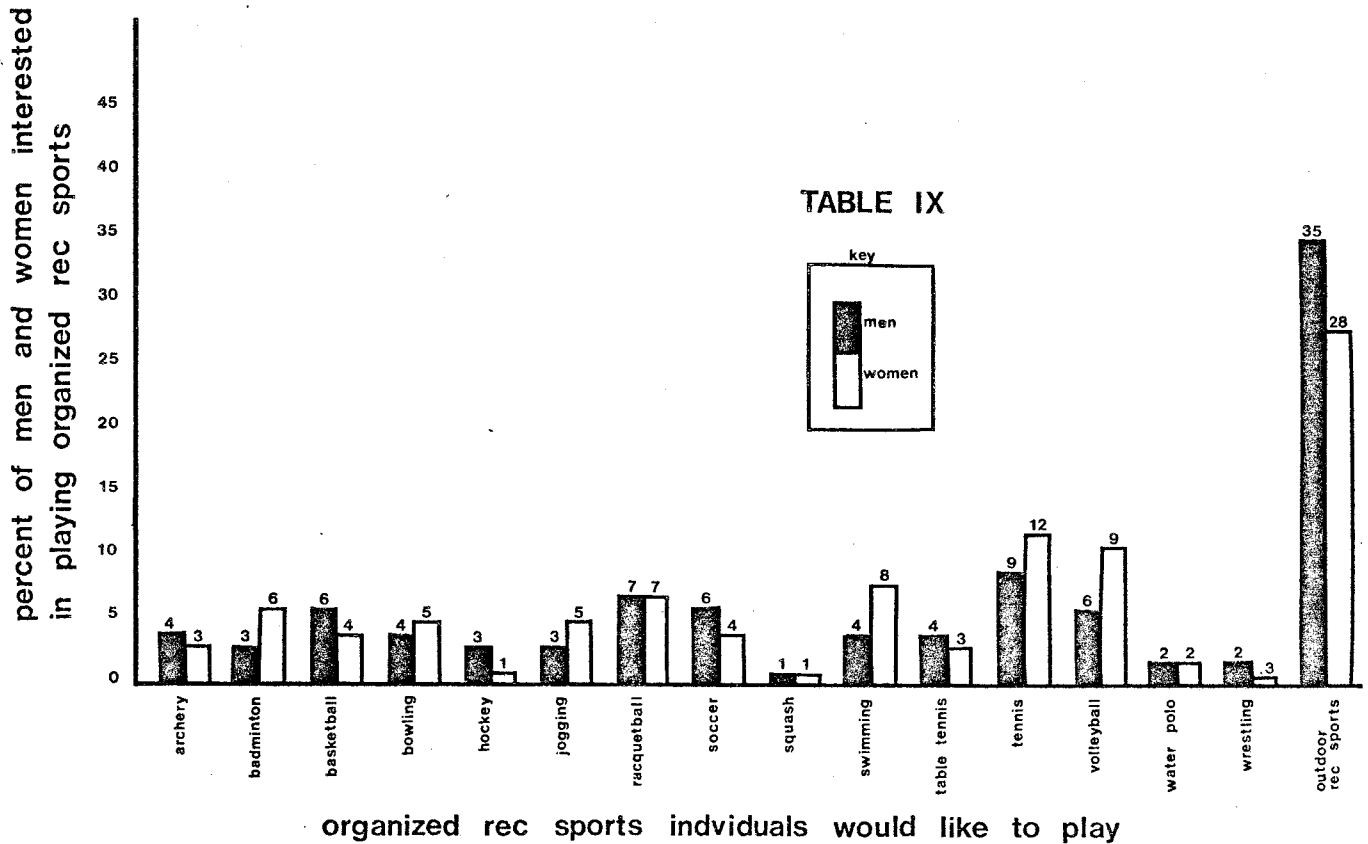


The breakdown on the following page presents the same information as Table VIII; however, it ranks each indoor life sport played.

Indoor Sports	% of "U" Pop. Interested in Playing Each Sport	% of Men in "U" Pop. Interested in Playing Each Sport	% of Women in "U" Pop. Interested in Playing Each Sport
1. Tennis	10%	5%	5%
2. Volleyball	8%	4%	4%
3. Racquetball	7%	4%	3%
4. Basketball	5%	3%	2%
Bowling	5%	3%	2%
Soccer	5%	3%	2%
Swimming	5%	2%	3%
5. Badminton	4%	2%	2%
Jogging	4%	2%	2%
6. Archery	3%	2%	1%
Table Tennis	3%	2%	1%
7. Water Polo	2.2%	1.4%	.8%
8. Hockey	2%	2%	0%
9. Squash	1.3%	.8%	.5%
10. Wrestling	1.2%	1.1%	.1%

Table IX below indicates what percent of the male respondents and what percent of the female respondents are interested in participating in each organized indoor life sport.

INTEREST SHOWN IN PLAYING ORGANIZED REC SPORTS BY MEN AND WOMEN



1. Of all the men indicating an interest in organized rec sports, 65% would like to play indoor life sports; 35% would like to play outdoor organized rec sports.

The following breakdown indicates the rank order of organized life sports which would like to be played by men:

1. Tennis	9%	5. Badminton	3%
2. Racquetball	7%	Hockey	
		Jogging	
3. Basketball	6%	6. Water Polo	2%
Soccer		Wrestling	
Volleyball		7. Squash	1%
4. Archery	4%		
Bowling			
Swimming			
Table Tennis			

2. Of all the women indicating an interest in open rec sports, 71% would like to play indoor life sports; 29% would like to play outdoor organized rec sports.

The following breakdown indicates the rank order of organized indoor life sports which would like to be played by women:

1. Tennis	12%	7. Basketball	4%
		Soccer	
2. Volleyball	9%	8. Archery	3%
		Table Tennis	
3. Swimming	8%	9. Water Polo	2%
4. Racquetball	7%	10. Squash	1%
5. Badminton	6%	Hockey	
6. Bowling	5%	11. Wrestling	.3%
Jogging			

Of the population indicating an interest in organized rec sports, 88% are freshmen, sophomores, juniors, and seniors and 12% are graduate and adult special students. 83% of the population interested in playing organized indoor life sports are freshmen through seniors.

freshmen	27%
sophomores	25%
juniors	19%
seniors	15%

9% of the population interested in playing organized indoor life sports are graduates and adult specials.

Of the freshmen, sophomores, juniors and seniors interested in playing organized rec sports, 64% are interested in indoor life sports.

freshmen	21%
sophomores	20%
juniors	11%
seniors	12%

33% of the freshmen through senior classes are interested in playing organized outdoor rec sports.

The four graphs on Table X, page c-19, indicate interest in organized rec sports for each class (freshmen through seniors).

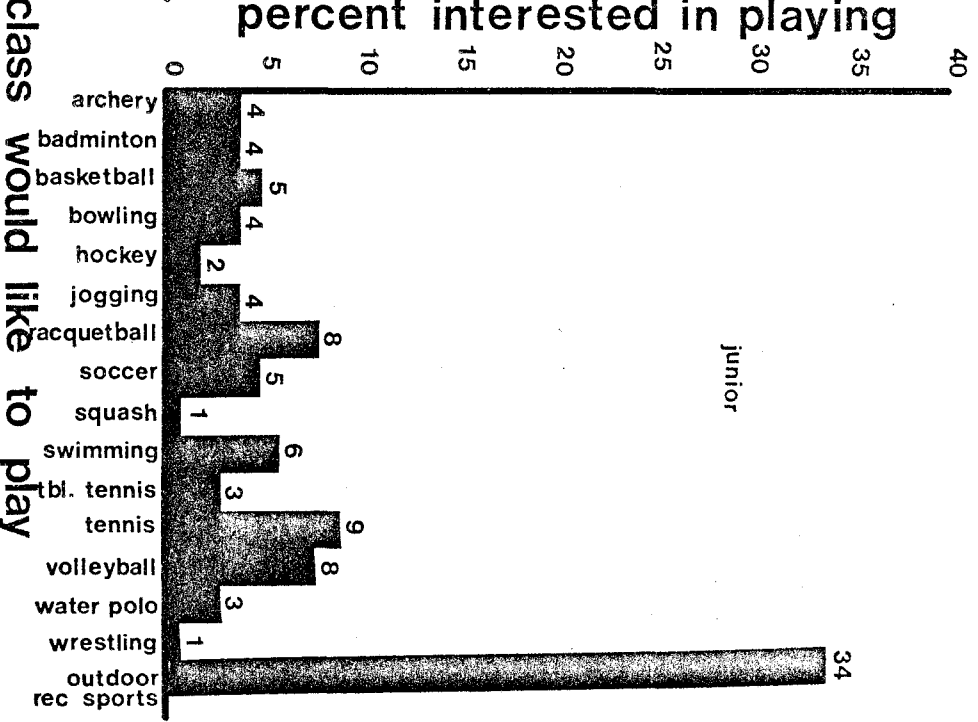
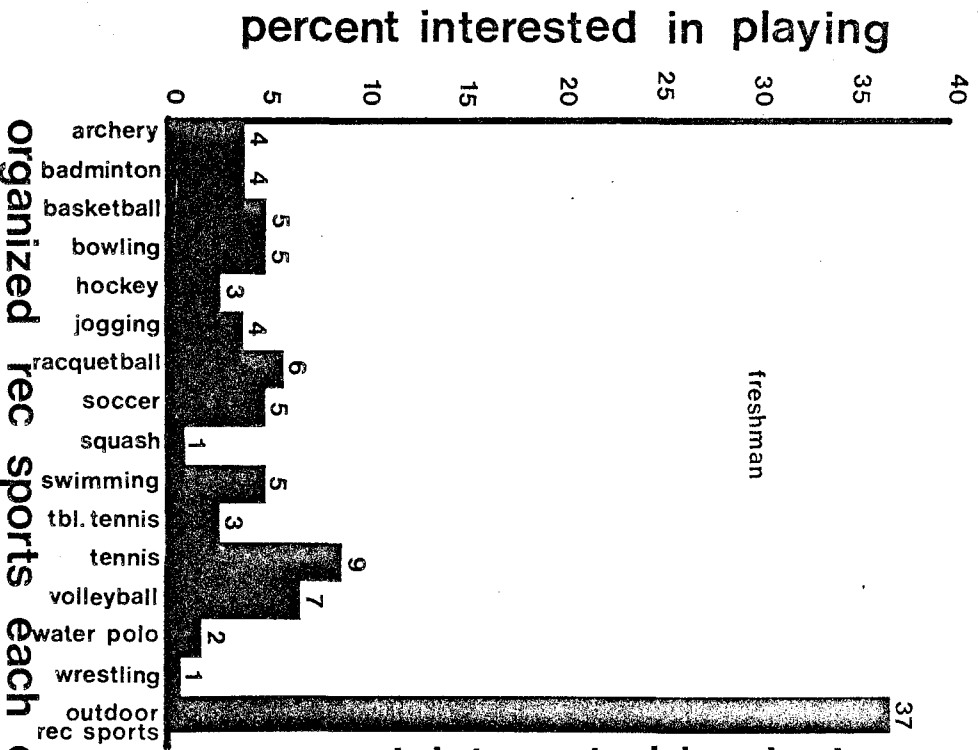
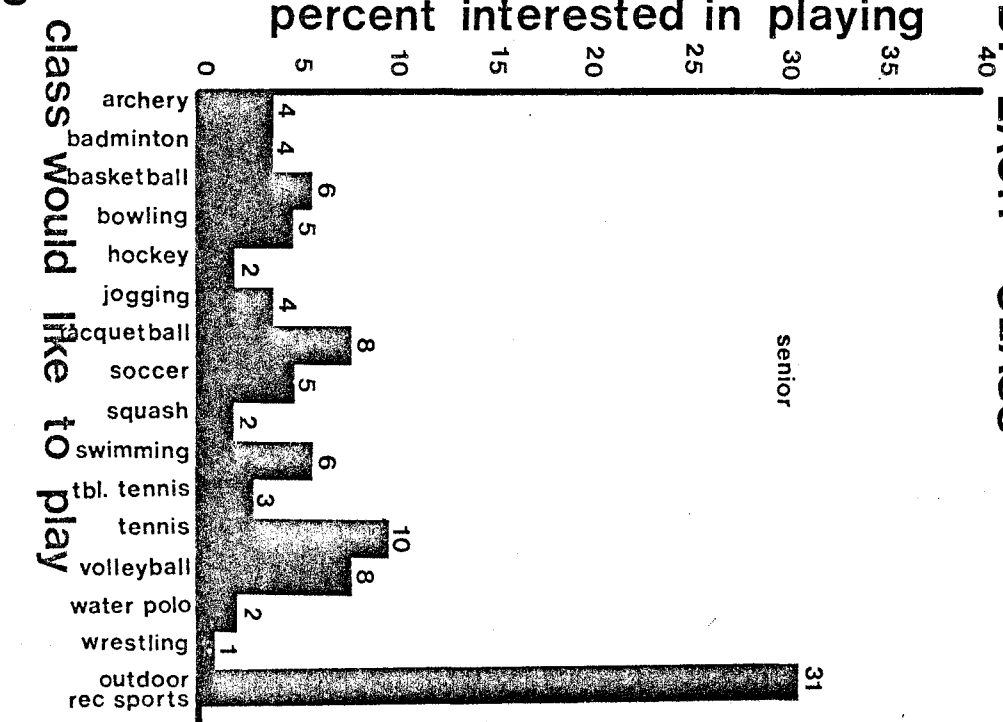
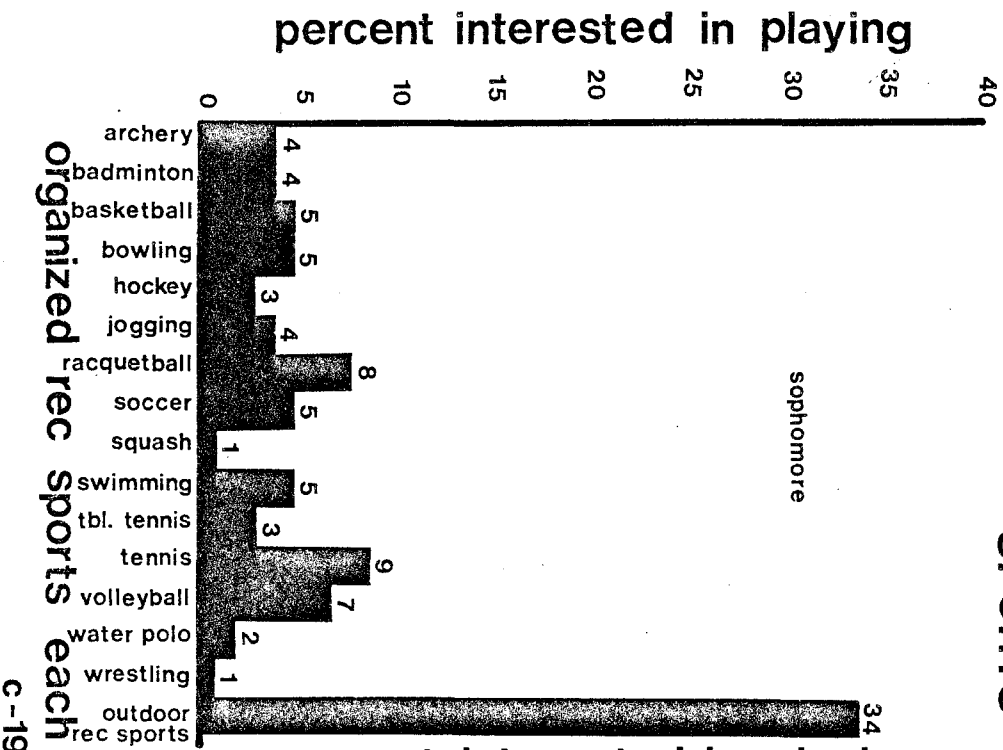


TABLE X
INTEREST SHOWN IN PLAYING ORGANIZED REC SPORTS BY EACH CLASS

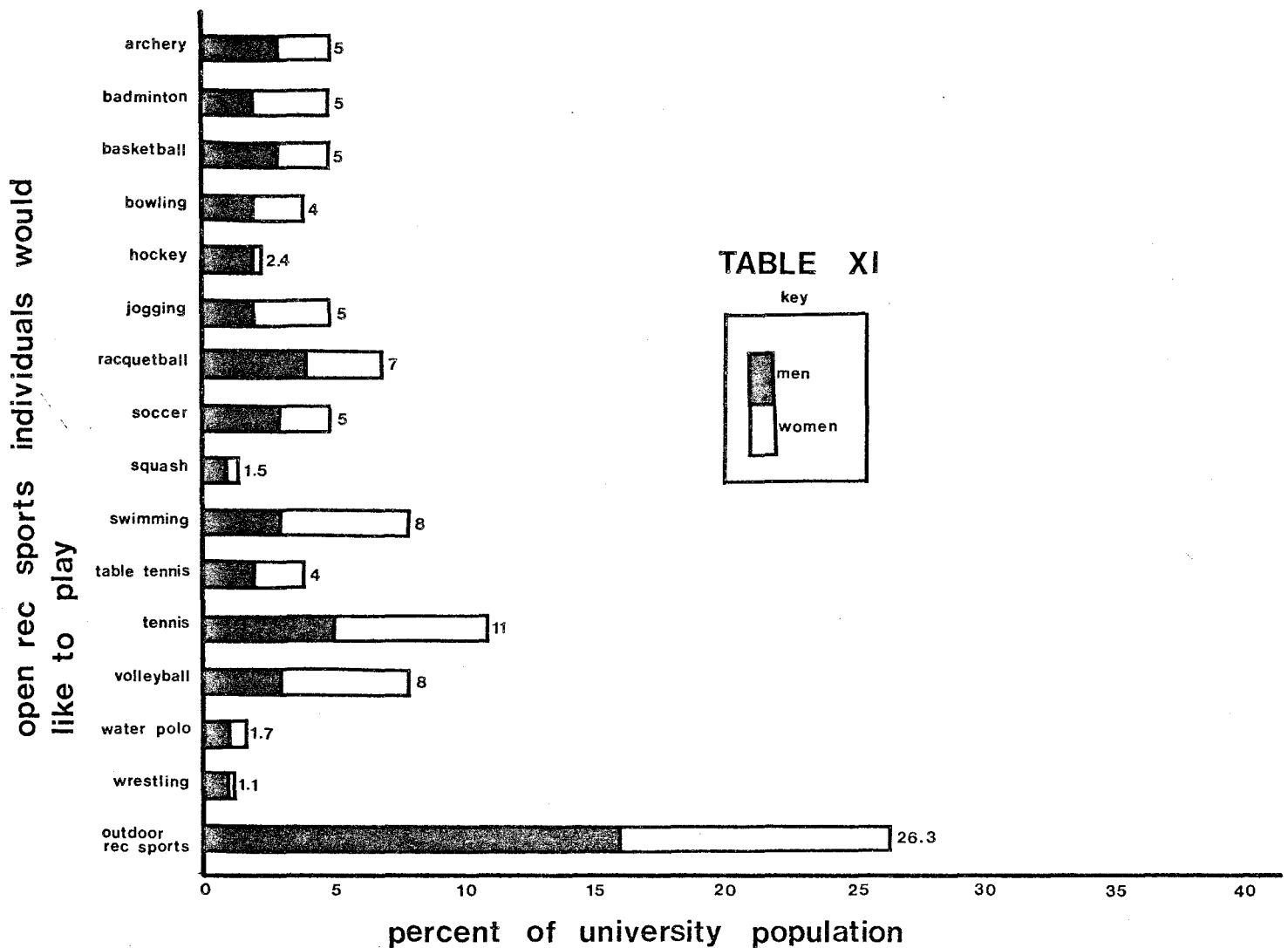


Open Rec Sports Individuals Would Like To Play

69% of the individuals interested in playing open rec sports would like to play indoor life sports; 31% would like to play outdoor rec sports. Of the individuals who would like to play open rec sports, 51% are men and 49% are women. Of the individuals who would like to play open indoor rec sports, 49% are men and 51% are women.

Table XI indicates the indoor life sports which individuals would like to play. The breakdown is based on the percent of the University student population indicating they would like to play each sport. The breakdown also indicates the proportion of men to women.

**UNIVERSITY STUDENT INTEREST IN
OPEN REC SPORTS**

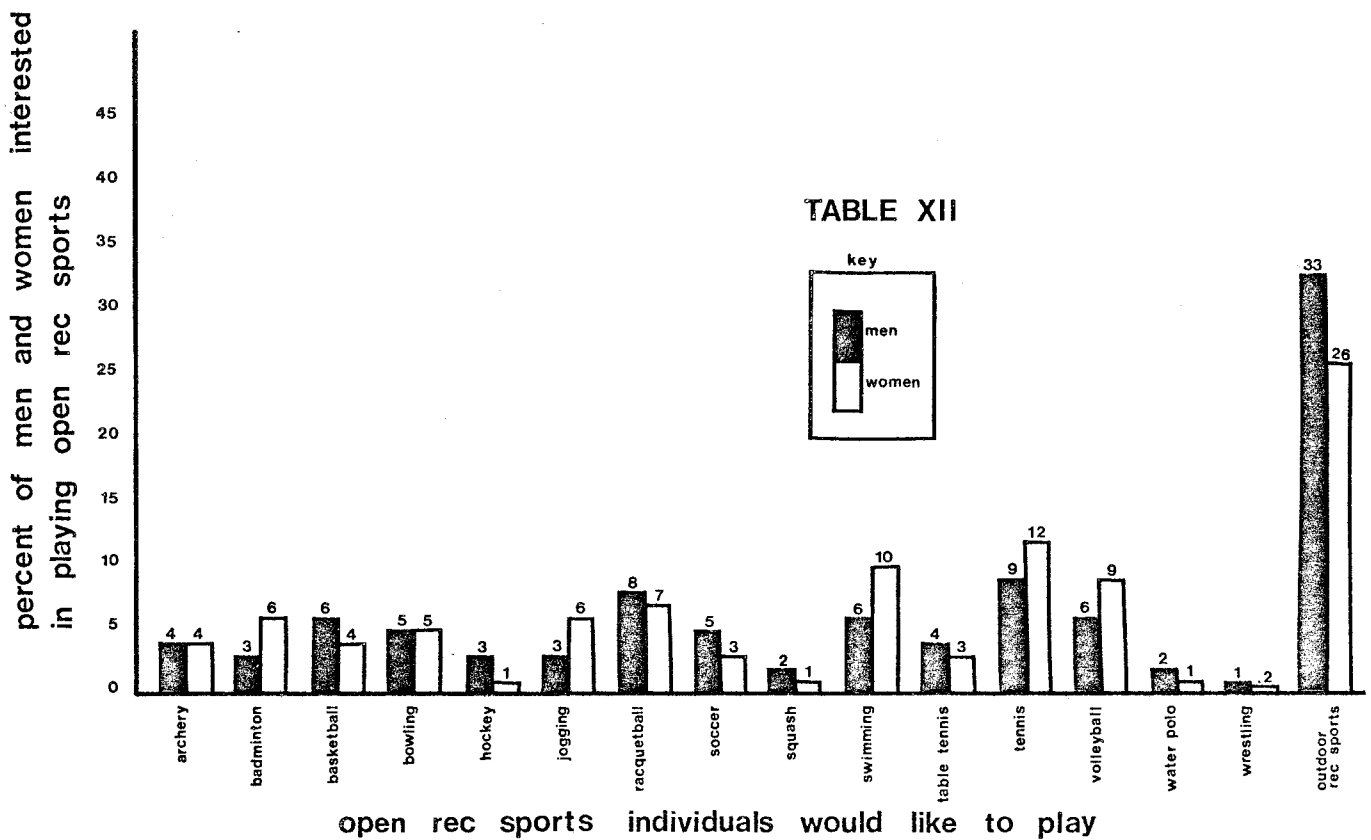


The breakdown on the following page presents the same information as Table XI; however, it ranks each indoor life sport played.

Indoor Sports	% of "U" Pop. Interested in Playing Each Sport	% of Men in "U" Pop. Interested in Playing Each Sport	% of Women in "U" Pop. Interested in Playing Each Sport
1. Tennis	11%	5%	6%
2. Swimming	8%	3%	5%
Volleyball	8%	3%	5%
3. Racquetball	7%	4%	3%
4. Archery	5%	3%	2%
Badminton	5%	2%	3%
Basketball	5%	3%	2%
Jogging	5%	2%	3%
Soccer	5%	3%	2%
5. Bowling	4.7%	2.3%	2.4%
6. Table Tennis	4%	2%	2%
7. Hockey	2%	1.5%	.5%
8. Water Polo	1.7%	1%	.7%
9. Squash	1.4%	.9%	.5%
10. Wrestling	1%	.9%	.1%

Table XII below indicates what percent of the male respondents and what percent of the female respondents are interested in participating in each open indoor life sport.

INTEREST SHOWN IN PLAYING OPEN REC SPORTS BY MEN AND WOMEN



1. Of all the men indicating an interest in open rec sports 67% would like to play indoor life sports; 33% would like to play outdoor open rec sports.

The following breakdown indicates the rank order of indoor life sports which would like to be played by men:

1. Tennis	9%	5. Archery	4%
2. Racquetball	8%	Table Tennis	
3. Volleyball	6%	6. Badminton	3%
Swimming		Hockey	
4. Bowling	5%	Jogging	
Soccer		7. Squash	2%
		Water Polo	
		Wrestling	

2. Of all the women indicating an interest in open rec sports, 74% would like to play indoor life sports; 26% would like to play open rec sports.

The following breakdown indicates the rank order of indoor life sports which would like to be played by women:

1. Tennis	12%	7. Archery	4%
2. Swimming	10%	Basketball	
3. Volleyball	9%	8. Soccer	3%
4. Racquetball	7%	Table Tennis	
5. Badminton	6%	9. Hockey	1%
Jogging		Squash	
6. Bowling	5%	Water Polo	
		10. Wrestling	.2%

Of the population indicating an interest in open rec sports, 86% are freshmen, sophomores, juniors, and seniors and 14% are graduate and adult special students. 85% of the population interested in playing life sports are freshmen through seniors.

freshmen	26%	juniors	19%
sophomores	25%	seniors	15%

15% of the population interested in playing open indoor life sports are graduates and adult specials.

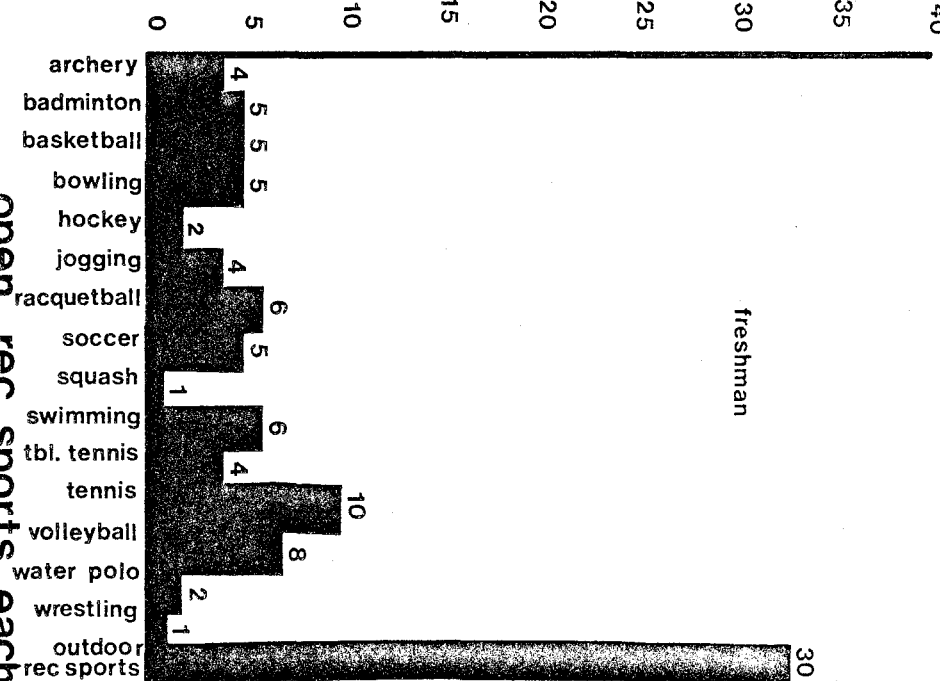
Of the freshmen, sophomores, juniors and seniors interested in playing open rec sports 68% are interested in indoor life sports:

freshmen	21%	juniors	15%
sophomores	20%	seniors	12%

32% of the freshmen through senior classes are interested in playing open outdoor rec sports.

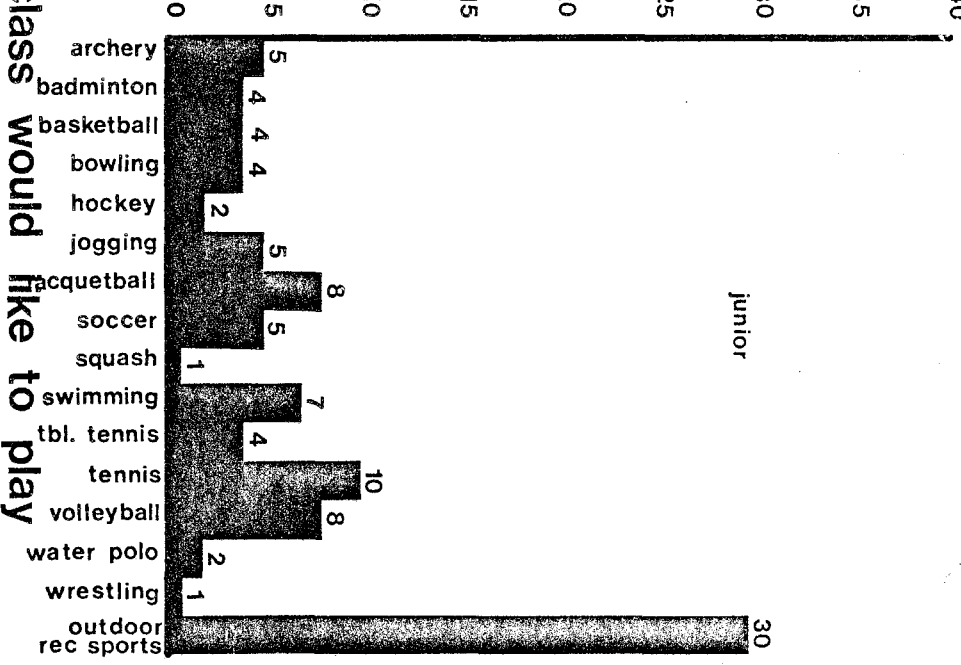
The four graphs on Table XIII, page c-23, indicate interest in open rec sports for each class (freshmen through seniors).

percent interested in playing



freshman

percent interested in playing

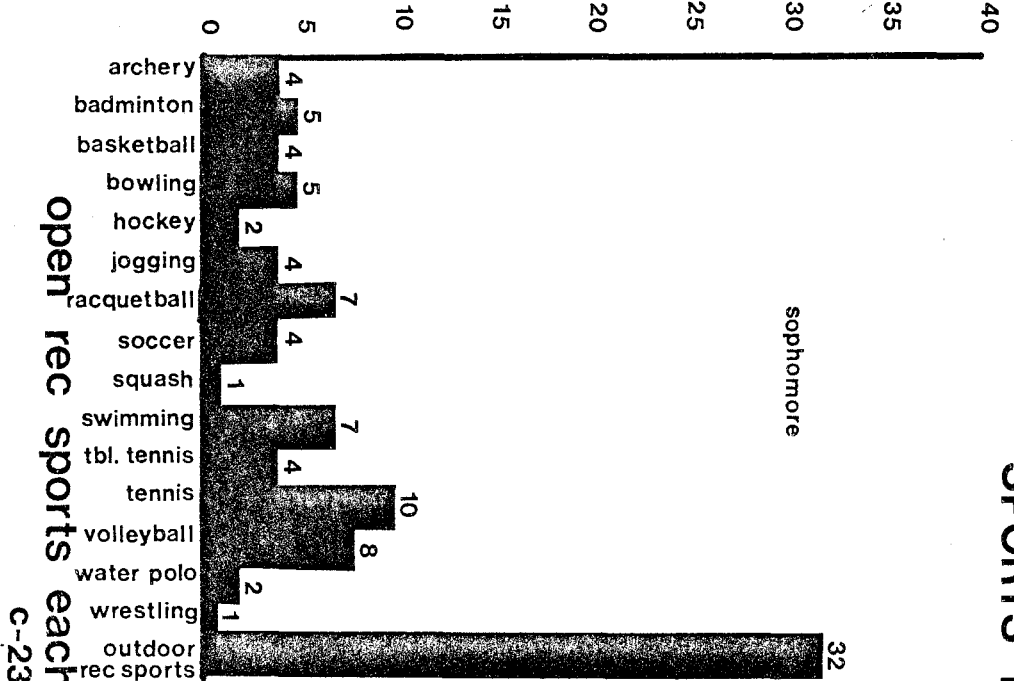


junior

TABLE XIII

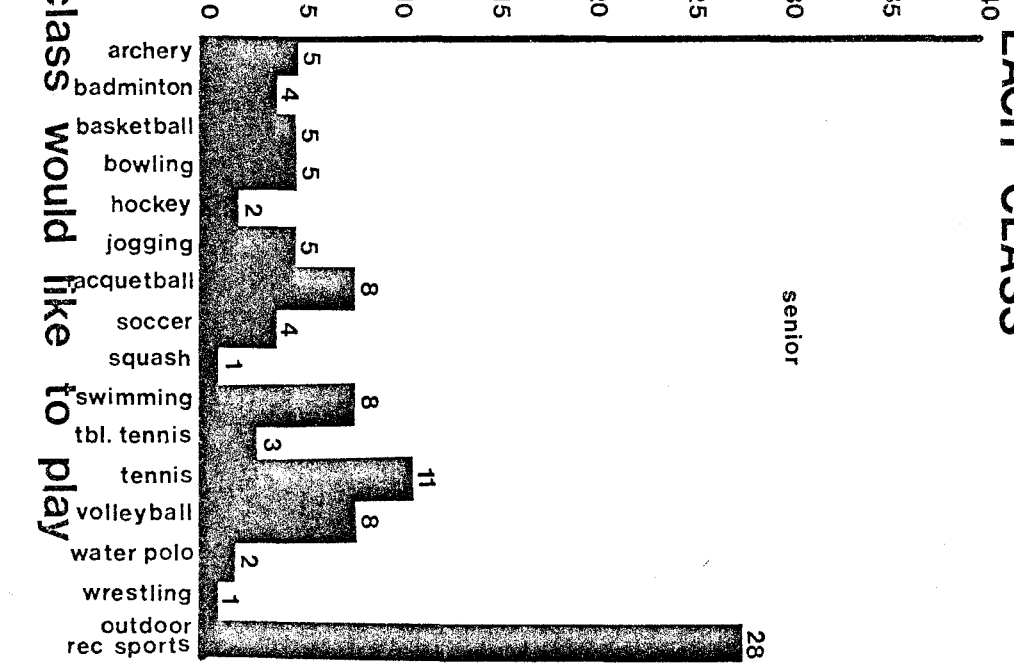
INTEREST SHOWN IN PLAYING OPEN REC SPORTS BY EACH CLASS

percent interested in playing



sophomore

percent interested in playing



senior

open rec sports each class would like to play

ATHLETIC BUILDING - COSTS AND VALUES *

801 11 1977

BLDG. NO.	YEAR ERECTED	FACILITY BUILDING NAME	FUNDED BY	AREA SIZE (SQ. FT.)			VALUE	
				GROSS	USABLE	ORIGINAL COST	BOOK VALUE 6/30/72	ESTIMATED-Sept. '72 REPLACEMENT VALUE
045	1924	Memorial Stadium	Contributions Ath. Dept. Fund	195,739	148,923	\$ 572,000.00	\$1,254,972.17	\$ 3,825,000.00
	1925	---Stadium 2nd Floor				99,000.00		
050	1927	Williams Arena	Ath. Receipts	279,119	198,061	\$ 630,302.00	\$1,881,636.36	\$ 7,553,000.00
	1948	---New Roof	Ath. Reserve			210,000.00		
	1950	---Remodeling	Ath. Reserve			1,032,867.00		
	1955& 1957	---2nd Deck Hockey	Ath. Reserve			125,892.51		
						\$1,999,061.51		
056	1934	Cooke Hall	W.P.A. Ath. Dept.	118,239	96,953	\$ 350,096.00	\$ 462,799.69	\$ 2,669,000.00
	1936	---Terrace & Tunnel				73,700.00		
067	1948	U of M Fieldhouse	Ath. Reserve	83,073	80,458	\$ 641,728.00	\$ 693,077.14	\$ 2,151,000.00
	1963	Tartan Surface & Courts	Ath. Reserve			74,858.68		
						\$ 716,586.68		
072	1948	Delta Field Clubhouse	Ath. Reserve	2,042	1,686	\$ 15,704.25	\$ 15,905.86	\$ 50,000.00
138	1971	Bierman Field Baseball Stadium	Consolidated Fund 9500-9680-02	2,590	2,286	\$ 197,460.11	\$ 197,460.11	\$ 212,000.00
349	1955	Golf Shops & Storage	Athletics	3,150	2,480	\$ 27,118.23	\$ 36,650.39	\$ 59,000.00
354	1931	Golf Clubhouse	Ath. Dept.	9,286	7,859	\$ 28,449.00	\$ 35,564.79	\$ 180,000.00
	1939	Tennis Court Refectory & Toilets	Ath. Dept.- Tennis Court Budget	450	360	\$ 1,932.03	\$ 3,554.36	\$ 10,000.00
	1948	Delta Field Footbridge	Ath. Reserve			\$ 48,525.28	\$ 47,952.73	\$ 150,000.00
	1949	Golf Course Short Course Control Bldg.	Golf Course Budget	288'	230'	\$ 8,186.48	\$ 9,912.27	\$ 25,000.00
	1953	Golf Course Starters Building	Athletic 6'x8 1/2'	51'	41'	\$ 1,289.62	\$ 1,289.62	\$ 3,000.00
TOTALS				694,027	539,337	\$4,139,109.19	\$4,640,775.49	\$16,887,000.00

Maria Gynn Support Services

*Note: of the original costs I.C. funds contributed \$3,019,553.08 excluding stadium,

Cooke Hall, Baseball Stadium or 73%

62

*St. Paul Gynn No information
Playis Fields (W.B. & St. Paul) - Legislative Aid*