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ABSTRACT

This planning study was conducted in two major phases. Phase 1 included the investigation and analysis of the educational program and existing physical plant, a statement of policy and goals, determination of needs, and the delineation of conceptual ideas on future growth patterns and campus development. A summary of Phase 1 is included in this report. Phase 2 involved the development of a comprehensive campus plan from conceptual form into the various plan elements that form the framework of the plan and provide for its implementation. The campus plan is organized into three basic components--(1) Premises--the interpretation of goals and policies into assumptions for physical development, (2) Concepts--major form-giving ideas derived from the premises, and (3) Precepts--guidelines, rules and limits for implementing plan concepts. Graphs, maps, and sketches aid in understanding this study. (TC)

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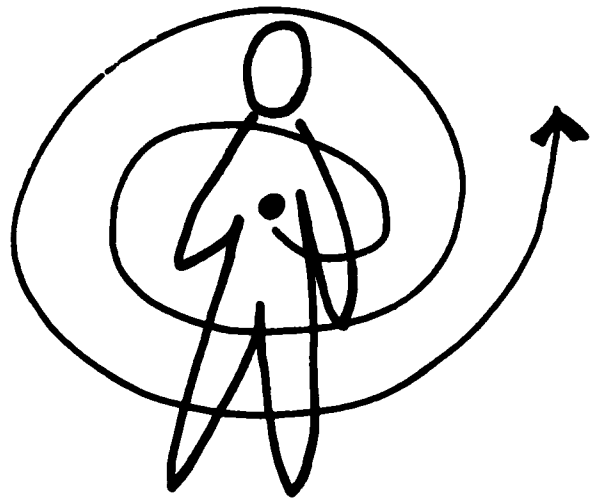
UNIVERSITY OF NORTHERN IOWA
COMPREHENSIVE CAMPUS PLAN

CAUDILL ROWLETT SCOTT
Architects Planners Engineers
Houston New York

November 1968



THE UNIVERSITY OF NORTHERN IOWA PLANNING STUDY

The University of Northern Iowa has experienced a period of rapid growth and is confronted with the problems that accompany an increasing number of students and an expanding and changing educational program. A projected doubling of the student body will place even greater demands on the educational program, available space, circulation systems, and community involvement. All of this comes at a time when rapid advances are being made in educational technology. The program and plan must respond to these advances and yet retain that environmental character desirable for a college campus.

The plan, although definitive, must contain a flexibility that will allow change and incorporation of those ideas that cannot yet be given a positive direction; as well as ideas that are yet to evolve in the educational and environmental program.

Although the plan must provide for the needs of a total university, it must also stress the importance and dignity of the individual. Educational excellence in an optimum learning environment at a level of the individual, his group and his university is the focus of this study and the challenge to the university and the university's planners and builders.

The planning study has been conducted in two major phases. Phase 1 included the investigation and analysis of the educational program and existing physical plant, a statement of policy and goals, determination of needs, and the delineation of conceptual ideas on future growth patterns and campus development. A summary of Phase 1 is included in this report, however, it would be impossible within these pages to adequately review all of the effort that led to the final policy and goal statements, and determination of needs. In brief, a comprehensive study of the existing and future focus of the university was made. This study involved the administration, department committees, general faculty and students. The result was a definite statement of policy and goals for the university's development, and an outline of environmental elements that would influence plan development.

The second step in this phase was the translation of the policy and goal statements into a set of program guidelines and the estimation of physical space needs. This included aiding the university in the development and implementation of computer assisted studies for curriculum, space utilization and projected space requirements. With the aid of these computer systems the university can periodically evaluate and update the statistical background of the plan.

Finally, alternative planning concepts and their program implications were developed for subsequent analysis by the university. This effort culminated in the establishment of a major concept for future campus development. Complete documentation of this phase can be found in the following reports available at the university:

"A Progress Report to the University and the Board of Regents," August, 1967. A report on the student and faculty questionnaires, and the process for Determination of Space Requirements.

"Space Requirement for 15,000 Students, University of Northern Iowa," October, 1967. A preliminary report on the criteria for space estimation, policy and goal statements, and space requirements.

"Program Summary and Alternative Development Concepts, University of Northern Iowa, Comprehensive Campus Plan, Phase 1," December 1967.

The university also has available the complete documentation of the computer programs used to analyze and project curriculum and space.

Phase 2 involved the development of a comprehensive campus plan from conceptual form into the various plan elements that form the framework of the plan and provide for its implementation. The documentation of this phase, as recorded in the following recommendations and plans, is to serve as a guide for the development of the university campus. It is not to be misconstrued as the finale, but rather a point of departure, a refinement of process, and a continuance of the long established practice of planning for university expansion.

ACKNOWLEDGMENTS

The development of the campus plan for the University of Northern Iowa has been a cooperative effort. It is impossible to properly acknowledge all of the individuals who have contributed freely of their time and assistance. A plan representative of the needs and aspirations of the university would not, however, have been possible without the concern for campus development expressed by the administration, faculty and students.

We extend special thanks to Dr. Marshall Beard, Director of Technical Services and Planning, and to Mr. Robert Porter, University Architect, for the great amount of time and work they have given the planning effort.

The continued interest in and attention given to the plan and planning process by the Board of Regents; the Planning Advisory Committee; the University Administration, especially by Dr. J. W. Maucker, President of the University; Dr. William C. Lang, Vice-President for Academic Affairs; Mr. Philip C. Jennings, Business Manager; and Mr. Melvin M. Manion, Director of Department of Physical Plant, is appreciated.

Our gratitude is also expressed to the numerous individuals of the business community who aided in plan development, and to the State Highway Department, Cedar Falls Planning and Zoning Commission and to Mr. Hugh Copeland, Director, Metropolitan Planning Commission of Blackhawk County.

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The university has a long history of educational evolution. Founded in 1876 as the Iowa State Normal School, it was renamed in 1909, Iowa State Teachers College. Between that time and 1961 when it was renamed the State College of Iowa, it attained and has held a national reputation as a leading institution in the field of teacher education. The next period of its evolution saw a growth in other academic areas with the strengthening of business, fine arts and humanities, the sciences, and other liberal arts disciplines. In 1967 by enactment of the Iowa General Assembly, the State College of Iowa became the University of Northern Iowa, joining the ranks of her two sister institutions, the University of Iowa and Iowa State University. The directive given to the university in that act is as follows:

> The university shall offer undergraduate and graduate courses of instruction, conduct research, and provide extension and other public services in the area of its competence to facilitate the social, cultural, and economic development of Iowa. Its

primary responsibility shall be to prepare teachers and other educational personnel for schools, colleges, and universities; and to carry out research and provide consultative and other services for the improvement of education throughout the state. In addition, it shall conduct programs of instruction, research, and service in the liberal and vocational arts and sciences and will offer such other educational programs as the State Board of Regents may from time to time approve.

It is timely then that the current planning activity coincides with the impending thrust into university-oriented activity; a consideration included in both the programming and planning effort.

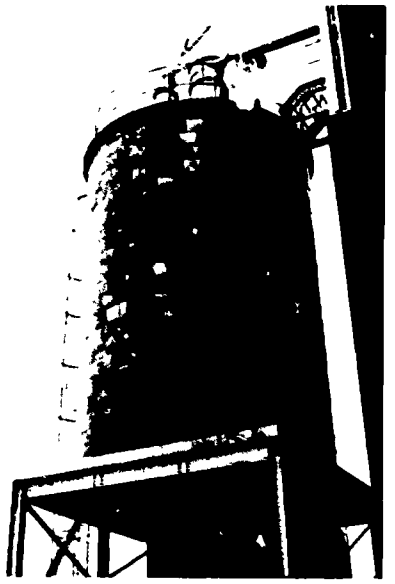
PLANNING HISTORY

At the time the present planning activity was initiated, there was already a firm foundation for academic, physical plant, and fiscal planning. Projection of students by discipline, estimation of physical building programs, and various studies of the existing physical plant had been established. The Campus Planning Advisory Committee was a functioning body, acquainted with the rudiments of campus planning. However, the evolution to the university status raised new questions concerning growth potential and needs. It was at this point that the current planning activity began.

One of the principal motivations behind the current planning effort was the realization that growth resulted in problems that could no longer be treated effectively as isolated elements. A process and plan direction was needed whereby all pertinent elements of the university would be considered, regardless of the decision to be made.

The problems of the campus were balanced by an almost equal number of assets. Under these circumstances, the problems were the first to be recognized and thus over-shadowed and ofter discounted the assets.



Problems

The major problems center around conflicts between pedestrian and vehicular circulation; awkward location of certain facilities on campus such as the heating plant and stadium; older buildings that would have to remain until the provision of new facilities could allow them to be phased out; the potential growth of the academic campus beyond the convenient 10—minute walking distance; the demand for vast amounts of parking and the lack of continuity in landscape and open spaces. A review of some of the more critical problems which must be overcome in the planning process follows.

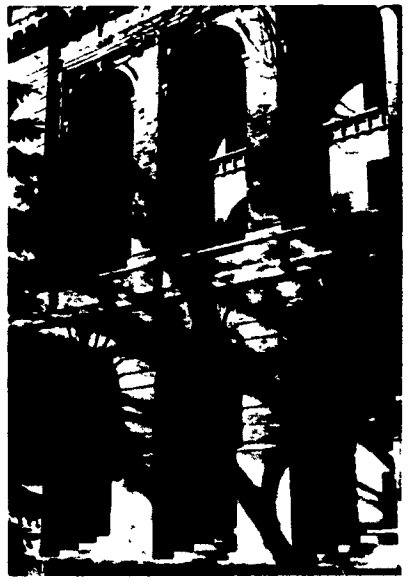
Phasing. A substantial amount of building space on campus has been marked for removal. Before the building can be removed, new buildings must be available to replace the space. These buildings are occupying prime building sites on the campus, compounding the problem of staged development.

Misplaced Facilities. Some non-academic facilities are occupying prime building sites. The major ones are the heating plant and stadium. The university, as a result of studies in Phase 1, will soon start construc n of a new heating plant and eventually phase out the old plant. This by itself is historically significant as growth has forced relocation of this facility for the second time. Removal of an eyesore from the core of the campus will also be accomplished in this relocation.

Circulation. The university property, even with the closing of 27th Street, will still be divided by two high—speed highways, Dike Road and Hudson Road. With the necessity of expanding beyond these barriers, ways must be found to minimize their effect. Pedestrian circulation also presents problems, such as the barrier created by the Lawther—Bartlett dormitory complex, and the lack of direct pedestrian corridors on natural origin-destination lines.

Community Relationships. Efforts to jointly plan for the integration of the campus/community environment have been negligible.



Assets

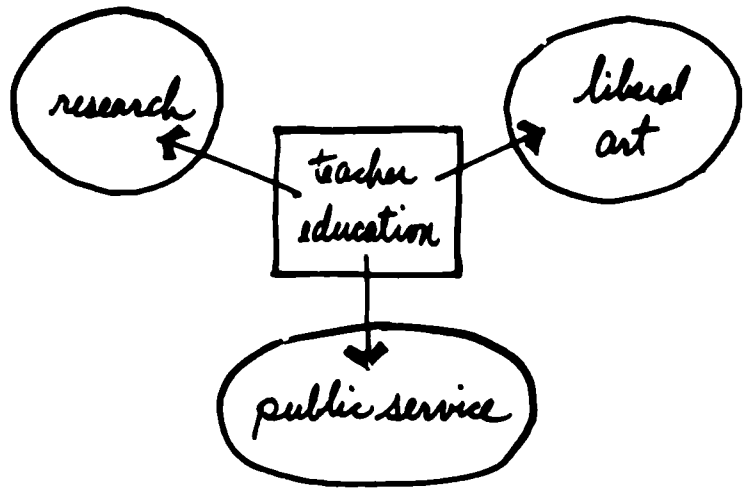
There are also numerous assets that must be considered. These include such things as land availability, a vehicle–free academic core, well located open spaces, and past decisions regarding building location.

Land Availability. There is abundant open land on both the south and west sides of the campus that can be acquired to fulfill land needs. The availability of this land makes it possible to plan the optimum in open space uses such as physical education and golf course, aboretum, parking, and married student housing.

Circulation. With the closing of 27th Street, the university will create a land area that falls within a 10–minute walking circle with relatively little conflict between pedestrians and vehicles. The ingredients for a pedestrian campus are available.

Open Space. The park-like area along College Street, the park in front of the Administration Building, and the mall leading from the library to the men's gym are all assets of the environment that lend continuity to the campus. Through the proper use of these spaces, a harmony between the urban and rural characteristics of northern Iowa can be achieved.

New Building. The new University Union is a significant campus development that sets the stage for the creation of spaces more urban in character. Its design is intended to stimulate interaction among people.

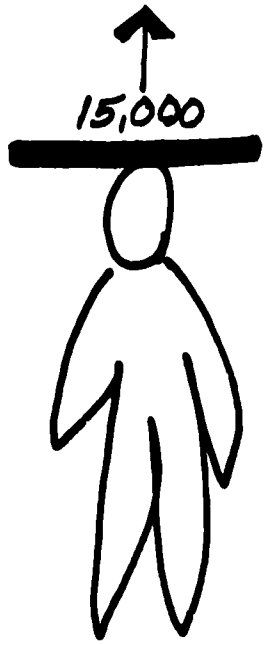


PHASE 1 SUMMARY

To provide a background for a more thorough understanding of the plan, a summary of the university's major goals and policies, the programmed space requirements for 15,000 students, and an analysis of the existing campus follows. The following goal and policy statements are those that have given major direction to the development of the program and plan.

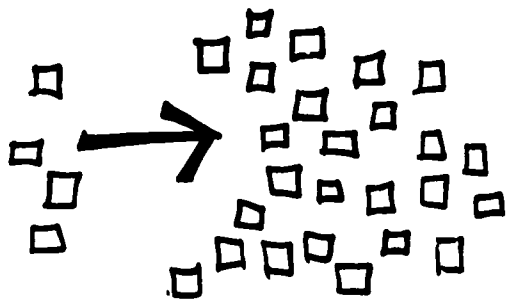
Role and Scope

The role and scope of the university, defined in the 1967 legislative act, specifies that its primary course shall be in teacher education, with an expanding role in the liberal arts, research, and public service in its area of competence to facilitate the social, cultural and economic development of Iowa.



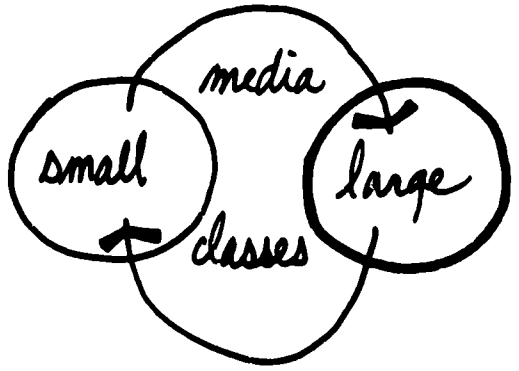
Growth

It is anticipated that the university will grow to 15,000 students, at which time enrollment will level off. However, the plan should provide outlets for growth beyond the 15,000 level.



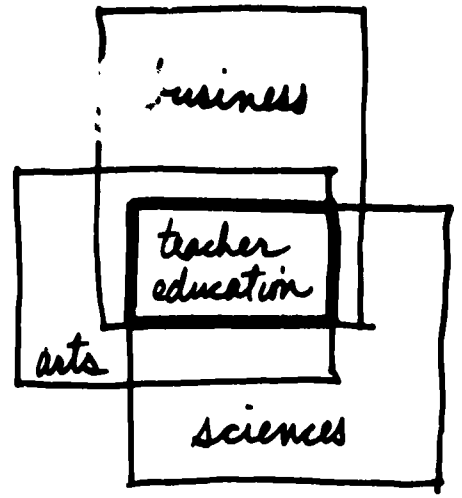
Academic Development

In the initial stage, the academic organization will consist of four colleges and a graduate school; however, provisions must be made for an eventual increase in the number of colleges. The initial colleges are Education, Fine Arts and Humanities, Business and Behavioral Sciences, and Natural Sciences.



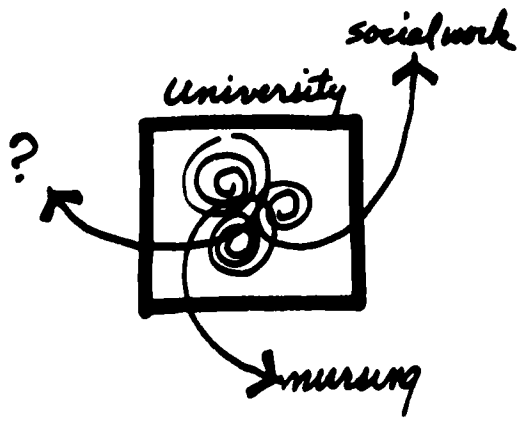
Instruction

There will be increased use and application of electronic instructional media. The student/faculty contact should be refined and broadened by seeking a balance in small and large class sizes and planning of facilities that will encourage both intellectual and social interaction. Large lecture sections will likely increase; however, they must not become the dominant pattern in instruction. Individual carrels and small study rooms, microfilm stations, and individual listening equipment in the library, lounges, and residence halls will support the intensification of independent study.



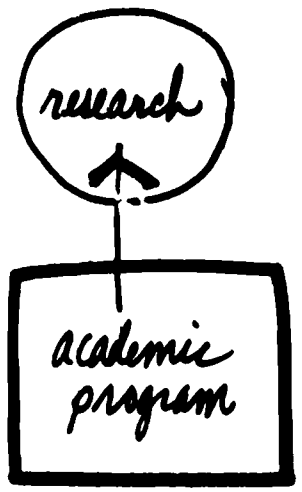
Affinities

Primary affinities will be found among those departments which are affiliated within a specific college. A particularly strong affinity exists between the Humanities and Behavioral Sciences disciplines in the interdisciplinary teaching of humanities. Teacher Education is a common objective of all departments and should result in close ties with the academic departments and those in professional education.



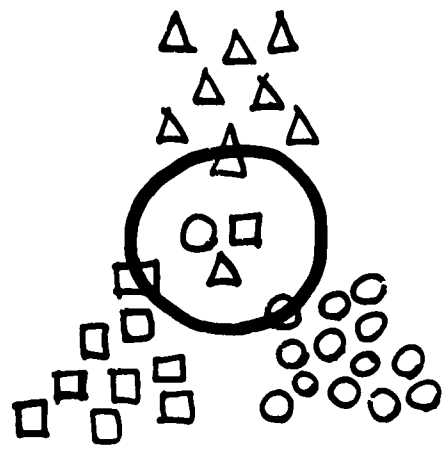
New Programs

New programs can be expected to evolve as the orientation to university activities intensifies. Therefore, space should be available for ultimate expansion of all areas within the university.



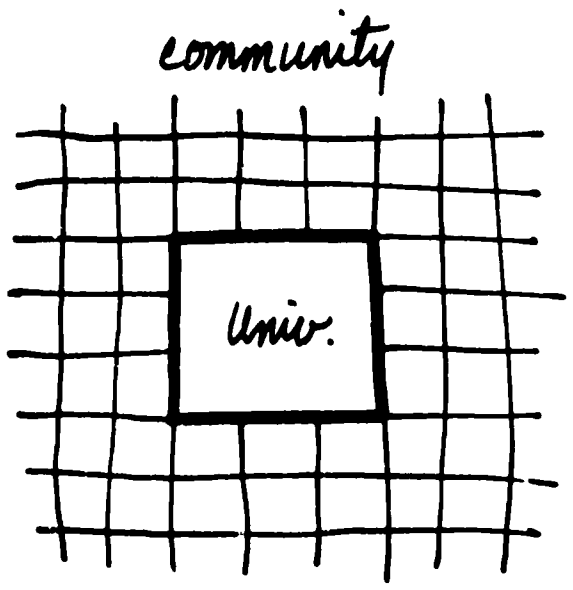
Research

Activities in this field will grow as a part of the academic program. The policy of the university will be to encourage research in all areas although, at this stage of development, the volume of future research is unpredictable. Priorities for research will be (1)academic, (2)institutional, and (3)contract.



Campus Life

A mixture of identification with specific disciplines and identification with broader units including the colleges and the total university is desirable. Residential and commuter students should have available places to which they can relate and which will encourage and stimulate the intellectual and social interaction of individuals and groups.



Community

The university should develop as one of the primary community centers of the Waterloo-Cedar Falls region. This development will have education as its focus in the form of a high quality instructional program, continuing education, and in public social and cultural activities.

Goals and Policies on Facilities

The following goal and policy statements relate directly to the establishment of criteria for determining space requirements, facilities planning, and site development.

Library. The university is committed to a central library of from 800,000 to 1,000,000 volumes and seating stations for 25 to 30 percent of the 15,000- student enrollment. It is anticipated that extensive automated and electronic equipment will be introduced into the library during the next decade or two.

Educational Media. A centralized audio-visual media center probably will be retained. Television production services, both open- and closed-circuit, will continue to grow. All departments will use audio-visual services and almost all of them will use television. Therefore, new academic buildings should be linked to this center. A central computer center should be developed for instruction and research. Other media services such as duplicating will continue to be centralized.

Single-Student Housing. The philosophy of the university is to operate single- student housing to aid the continuing intellectual and social growth of the student. Although the exact type and amount of future single-student housing needed is unknown, space for additional housing should be reserved, possibly for 60 to 70 percent of the undergraduate population. Housing should also be provided for 500 graduate students.

Married-Student Housing. For planning purposes, a goal has been set to provide from 800 to 1000 units of married-student housing at the 15,000-student level. Although the exact type has not yet been determined, the plan should make provisions for a wide variety of design.

University Union. The first stage of the University Union is now under construction. The plan should allow for considerable expansion of this facility to eventually include additional meeting rooms, bookstore, bowling and other activities.

Auditoria. A committee studying auditoria requirements of the university recommended that the following facilities be included in the program and plan for the campus:

Coliseum/Arena	10,000 seats
Auditorium	2,000 seats
Theater	800 seats

The committee also recommended that three small auditoria/multi-purpose lecture halls be provided. These should seat 300, 600, and 900 people.

Physical Plant Services. A system of central receiving and storage of all supplies will be initiated, except for large items and occasional quantity deliveries of one item ordered for a specific building. Distribution of supplies will be through this central receiving and storage facility. Although service vehicles on campus will be controlled, provisions must be made for service access, either on service drives or walks, to each building on campus.

Parking. Space will be provided for students, staff, and campus visitors. Storage parking will be on the periphery of the campus for students in residence halls, parking areas for commuter students will be at points where accessways enter the campus, and limited parking for staff and the handicapped will be adjacent to instructional areas. Parking should be planned near those facilities expected to attract visitors. Parking garages may be constructed on campus as self-liquidating projects. It is anticipated, however, that due to land availability, parking requirements at the 15,000-student level can be accommodated in surface lots.

FACULTY & STAFF – 1,338	
Ratio, 1:1 @ 80% accumulation	1,070
STUDENTS	
Residence Hall – 9,450	
Ratio, 1:2 @ 100%	4,725
Married-Student Housing – 1,000	
Ratio, 1:1.5 @ 100%	1,500
Commuter – 4,500	
Ratio, 1:1.2 @ 70%	3,822
	11,117

Circulation. A pedestrian campus should be planned. Pending agreement between the university and the city, any of the campus and surrounding city streets may be closed, realigned, relocated, or modified, with the exception of Dike Road and Hudson Road.

Consideration must be given to provisions for loading and unloading students at various places around the campus, especially in residence hall areas.

Building Obsolescence. The following buildings and facilities should be considered obsolete and should be phased out by the time the 15,000-student level is reached:

Existing Heating Plant	15-20 years
Existing Stadium	10-15 years
Old Administration Building	10 years
Gilchrist Hall	10 years
Auditorium Building	15 years
Women's Gym	8 years
Old Hospital	5 years
Laundry Building	2- 5 years
Sunset Village (Married Housing)	2- 4 years
KYTC House	2 years
Deans House	2 years
Carriage House	1 year

Other buildings which may be replaced, depending on the need for land or on program alternatives, are:

President's House
Home Management House

"Sacred" Areas. No area need be considered "sacred" except possibly the area immediately surrounding the Campanile, and the mall from the Campanile to the Men's Gymnasium. Open space, such as the park-like area along College Street, should be retained where possible.

Neighborhood. The plan should be concerned with the environment created by the surrounding neighborhood and community. Neighborhood and university development should complement and supplement each other.

Space Requirements. The following tables summarize the estimated space needs at the 15,000-student level. All figures equal net square feet required for stated functions, and do not include allowance for stairs, halls, toilets, and mechanical rooms.

Instructional Space

	LECTURE	LABORATORY	OFFICES	SPECIAL FACILITIES	TOTAL
Accounting	3,828	0	4,111	0	7,939
Marketing	3,918	0	4,313	0	8,231
Secretarial	1,297	3,413	1,594	0	6,304
Business	11,476	0	8,591	6,450	26,517
Psychology	4,096	11,505	3,821	7,890	27,312
Education	12,985	20,086	13,518	57,770	104,359
Safety Education	384	416	345	200	1,345
Home Economics	2,189	11,251	2,165	6,060	21,665
Industrial Arts	3,693	16,294	5,164	13,280	38,431
Library Science	832	1,436	1,309	0	3,577
Health & Physical Education	1,502	0	2,308	0	3,810
Physical Education—Men	2,734	154,098	4,159	2,600	163,591
Physical Education—Women	2,692	136,643	3,510	560	143,405
Speech	10,477	617	7,967	25,500	44,561
Music	7,816	5,229	7,169	17,450	37,664
Art	6,186	35,235	8,520	3,360	53,301
English	11,194	0	8,788	1,950	21,932
Religion	939	0	1,535	0	2,474
Philosophy	1,457	0	1,820	0	3,277
Journalism	0	414	142	300	856
Humanities	19,118	0	9,996	0	29,114
Languages	60	75	476	400	1,011
French	1,869	2,293	2,070	0	6,232
German	872	972	773	0	2,617
Latin	287	212	142	0	641
Russian	334	249	285	0	868
Spanish	2,317	2,804	2,558	0	7,679
Mathematics	9,323	0	5,194	450	14,967
Science	356	784	345	10,000	11,485
Biology	2,170	11,851	3,278	50,000	67,299
Chemistry	1,604	18,059	2,427	30,880	52,970
Earth Science	835	5,124	1,594	9,780	17,333
Physics	1,810	15,390	2,713	30,000	49,913
Social Science	1,361	0	630	400	2,391
Economics	2,786	827	2,427	800	6,840
Political Science	1,943	0	1,939	0	3,882
History	4,747	0	4,254	600	9,601
Geography	2,751	6,490	1,939	900	12,080
Sociology	2,299	0	3,177	0	5,476
	146,537	461,767	137,066	277,580	1,022,950

Support Facilities

BUILDINGS

Library	272,000 square feet
Educational Media	52,300
Single-Student Housing	911,000*
Married-Student Housing	636,000
Student Center	123,750
Auditoria	
ARENA	150,000
AUDITORIUM	70,000
Administration	98,000
Physical Plant	146,500

*Single-student Housing: Additional area required

NON–BUILDING REQUIREMENTS

	ACRES
Men's Physical Education Fields	69.8
Women's Physical Education Fields	32.5
Parking	90
Arboretum	10+
Stadium	25
Golf Course	125

Space Analysis. This table summarizes the total net instructional space required by the university at the 15,000-student enrollment level. The academic space requirement will be 1,022,950 net square feet.

	EXISTING	ESTIMATED NEED	DEFICIENCY
Lecture	45,735	146,537	101,802
Laboratory	156,061	461,767	305,705
Office	49,773	137,066	87,293
Special Facilities	27,731	277,580	249,849
	279,300	1,022,950	743,649
Specs to be removed/ replaced	88,000		
Under Construction	68,000		
TOTAL DEFICIENCY	763,649 square feet		

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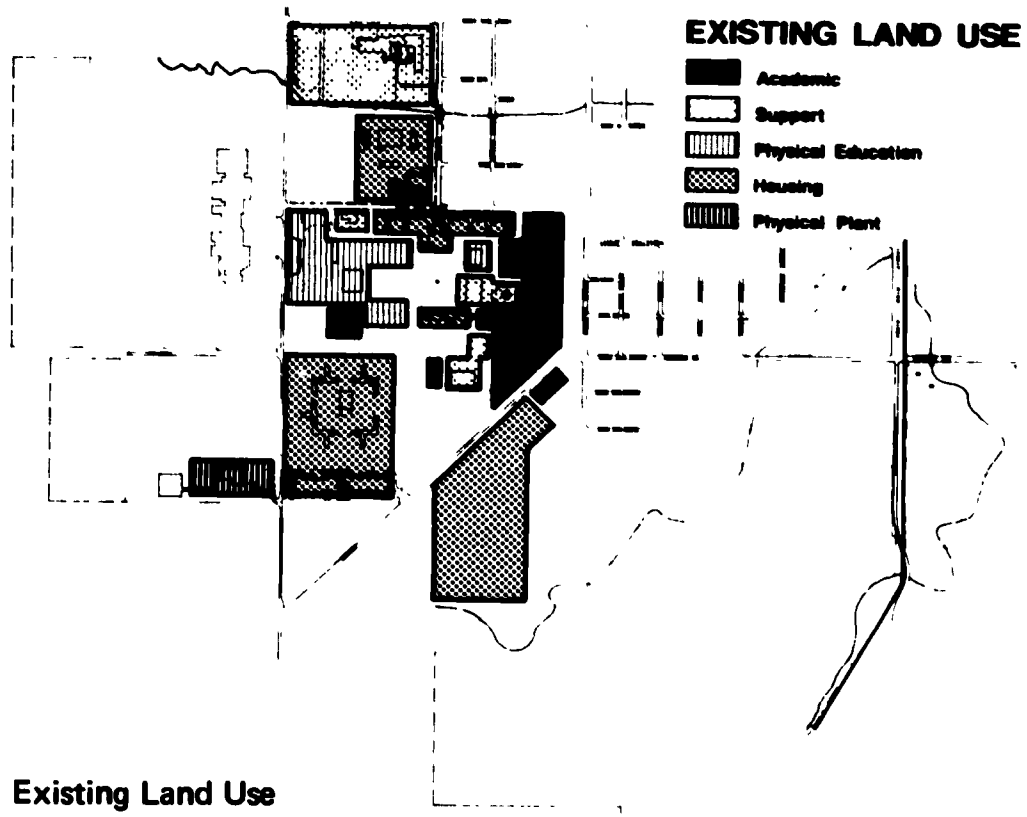
Site Analysis

The planners took into consideration all of the physical elements that might affect the design of the physical environment. This included climate, topography, soil conditions, existing landscape, utilities, existing building use and condition, building siting, relationships to the urban environment and other environmental characteristics.

The other significant background elements included an analysis of the existing land use, density and circulation patterns.



Existing Land Use

The university has only in recent years broken out of a rather compact, unified campus development. With the exception of Music, the academic area is highly centralized and generally developed around a facilities core containing the Library and new University Union. The academic area is flanked on the north and south by housing, and on the west by Physical Education. For convenience within the academic area and for the close physical relationship of housing to academic and support, the existing arrangement is excellent. This land use, although good for a college of 5,000 students, will pose problems for a university of 15,000. Baker Hall, a dormitory, is in the middle of the academic area, and the Lawther-Bartlett dormitory complex forms a fairly solid barrier on the north. The heating plant, originally on the campus perimeter, is being surrounded by academic and support facilities, resulting in a physical and esthetic barrier to campus development. Physical Education and athletics occupy land that is optimum for future centralized development. The Union-Library complex is good from the standpoint of its relationship to existing land uses; however, growth may shift the academic center of the campus. These and other land use characteristics were considered in developing the campus plan.

Existing Circulation

The choice of an access point is determined primarily by the geographical distribution of the population using the campus, the location of the various facilities on the campus, and the condition and convenience of the overall urban circulation system. Almost all of the Waterloo-Cedar Falls metropolitan area lies east of the campus, and the main route serving this area is 27th Street. It is via this access that the largest volume of traffic comes to the campus. There is some filtering into the campus from the immediate Cedar Falls area. Although urban development can be anticipated south and west of the campus, indications are that the center of the metropolitan area will remain well to the east. Twenty-seventh Street, to be developed to a much higher standard, will continue to be the primary access corridor. Urban circulation plans include a freeway-type thoroughfare in the vicinity of Main Street. This facility will interchange with 27th Street and Seerley Boulevard. This could make Seerley Boulevard an important access into the campus. Eventually, Hudson Road could become an important accessway on a regional scale.

Existing Density

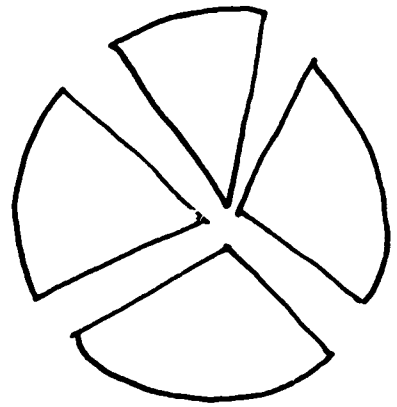
Density is measured in two different but related quantities: Floor Area Ratio (FAR), and Ground Area Coverage (GAC). Floor Area Ratio is the ratio of the gross square feet in a building or building group to the site it occupies. Ground Area Coverage is the percent of land area actually covered by a building. In both cases the site includes the building plus the surrounding land area that relates to that building, including its lawns, walks, service drives and other site features. These measures are used to examine (1)the efficiency at which available land is used for various purposes and (2)the general environmental character of existing development. Density is not only used to describe existing conditions, but is also an effective guide for plan implementation. For example, if the retention of large open space around buildings is desirable, then a low Ground Area Coverage would be used to guide development. If a more concentrated urban atmosphere is the goal, then the GAC ratio would be raised, allowing buildings to cover more land area. In both cases, rules governing the height, bulk and scale of buildings as they relate to the site and other buildings would be determined by the allowable FAR. The combination of the FAR and GAC will determine the type of density.

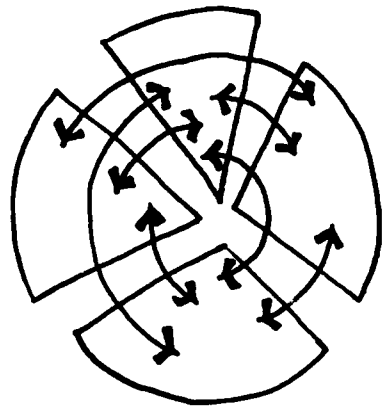
A Floor Area Ratio of 0 to .50 is generally rural, .50 to 1.0 is suburban, 1.0 to 1.5 approaches an urban character, and 1.5 to 2.0 begins to take on the character of a dense urban area. Corresponding Ground Area Coverages are rural, 0 to .10; suburban, .10 to .25; urban, .25 to .35; and high-density urban, .35 to .50.

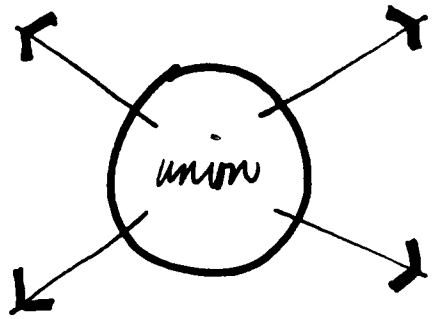
The developed areas of the university are generally in the lower density ranges. The presence of mostly low spreading buildings results in a low Floor Area Ratio and a relatively high Ground Area Coverage. The existing Floor Area Ratio in the academic area is .41, and the Ground Area Coverage is .19. The Floor Area Ratio could be doubled or even tripled and, with this Ground Area Coverage, maintain a good ratio of buildings to open space.

Density Matrix: Floor Area Ratio

	BUILDING AREA: GROSS SQUARE FEET REQUIRED	DENSITY: LAND AREA REQUIREMENTS				ACRES REQUIRED AT PROPOSED DENSITY
		Rural (.5)	Suburban (1.0)	Urban (1.5)	High-Density Urban (2.0)	
EDUCATION	182,000	364,000	182,000	121,000	91,000	4.2- 2.8
BUSINESS/BEHAVORIAL SCIENCE	228,000	456,000	228,000	150,000	114,000	5.3- 3.5
NATURAL SCIENCE	268,000	536,000	268,000	177,000	134,000	6.1- 4.0
FINE ARTS	332,560	665,120	332,560	221,700	166,280	7.5- 5.0
PHYSICAL EDUCATION	445,000	890,000	445,000	x	x	20.4-10.2
LIBRARY	436,000	871,000	436,000	290,000	218,000	6.7
MEDIA CENTER	87,000	174,000	87,000	58,000	43,500	1.5
SINGLE-STUDENT HOUSING	1,300,000	2,600,000	1,300,000	870,000	610,000	60.0-30.0
MARRIED-STUDENT HOUSING	1,040,000	2,080,000	1,040,000	694,000	520,000	48.0-24.0
UNIVERSITY CENTER	206,000	412,000	206,000	137,000	103,000	4.7
CONTINUING EDUCATION	160,000	320,000	160,000	106,000	80,000	3.8- 2.4
AUDITORIUM	100,000	200,000	100,000	66,000	50,000	2.3
ARENA	210,000	420,000	210,000	140,000	105,000	5.0
ADMINISTRATION	163,000	326,000	163,000	108,000	81,500	2.5
PHYSICAL PLANT	240,000	480,000	240,000	x	x	11.0







ARCHITECTURAL CONSIDERATIONS

The change from a single-purpose teachers college to a multi-purpose university results in a separation of disciplines and departments. However, it is necessary to retain unity with a strong emphasis on communication among disciplines.

Communication points can be established physically, by connections between disciplines; intellectually, by controlling the function of the spaces defining the connections.

For example:

Informal oratory/exhibit area between Media Center and Library.

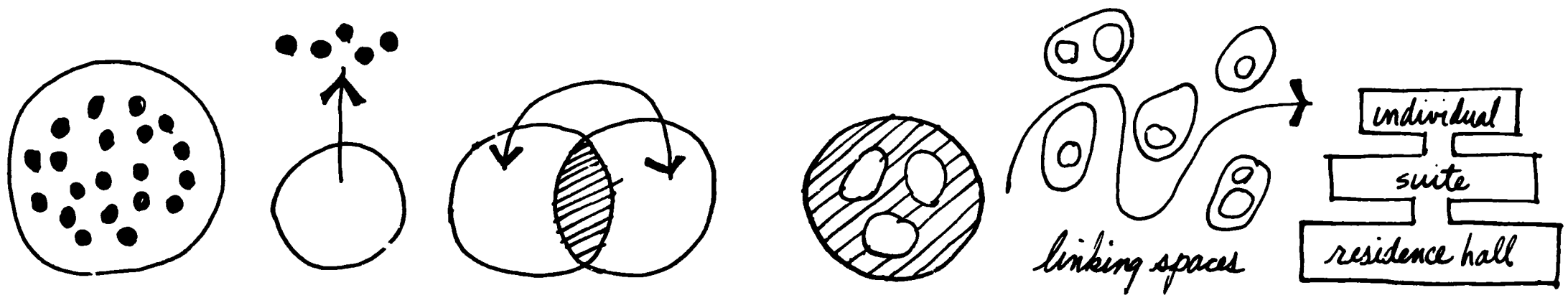
Snack bar associated with Union.

Graphic and sculptural display with fine arts.

Museum with natural sciences.

Forum with graduate center.

This is, in effect, an expansion of the concept of the new University Union, wherein the total university becomes a catalyst for interaction among the various people and groups belonging to the university.



Three levels of communication, identity, and involvement should be established:

Group – general identification and involvement in the total university, but with limited communication

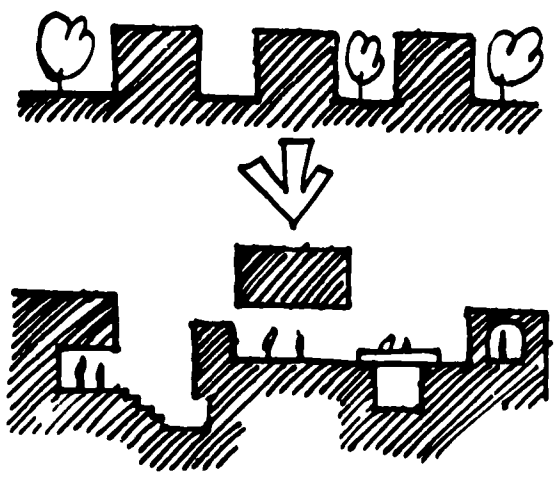
Sub-Group – one-way communication with limited involvement.

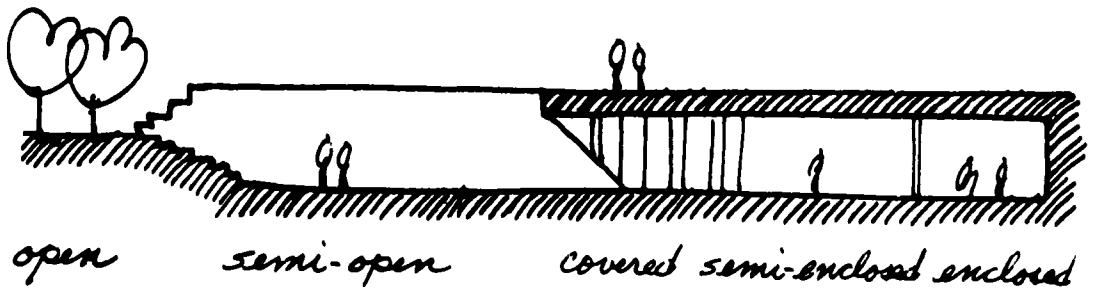
Individual – two-way communication with social and intellectual involvement.

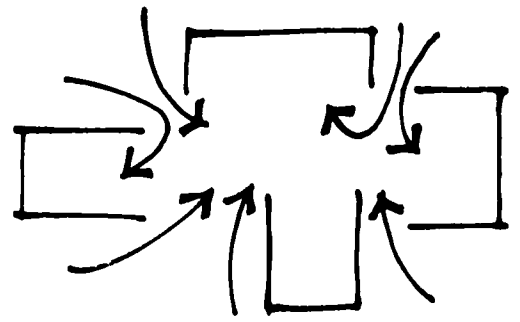
All academic entities remain part of the university structure, and include involvement at three of their own levels. Emphasis at each level will vary according to the program.

Groups and sub-groups can be broken out and included in linking spaces.

Small group identity is partially obtained through hall and corridor groups in existing residence halls. Group involvement can be enhanced by establishing a suite system, recalling the three-level hierarchy of university identification.





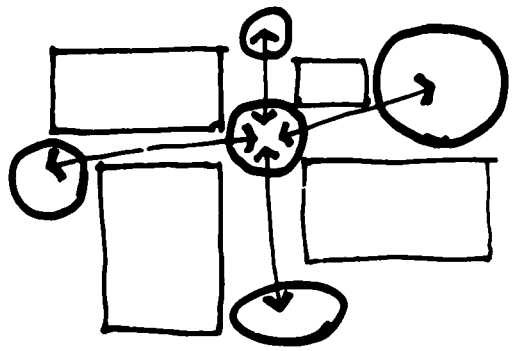


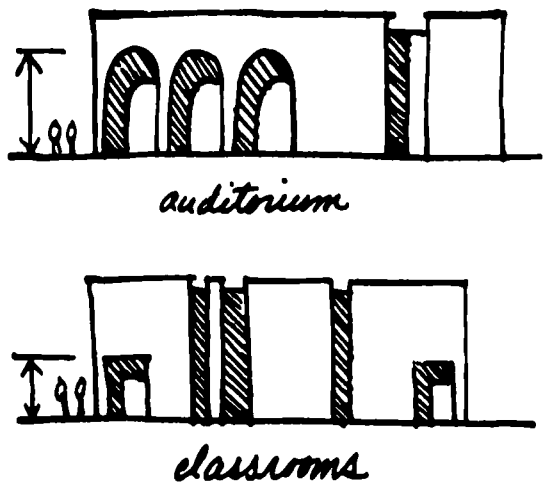
There is a strong direction at the University of Northern Iowa toward open spaces. However, these open spaces are seldom defined. Rather than spaces which become a part of the total environment and contribute to the understanding of the circulation between and around buildings, the spaces are too often fields divided by wall-buildings.

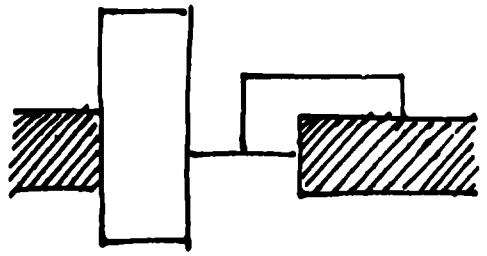
Building and open space should combine and mix to form transitional space between outside and inside. Rather than being separate entities divided by air, the buildings become a part of the total university environment.

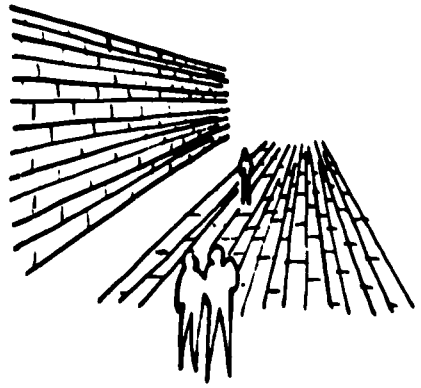
There is more than inside and outside. The inside and outside should be integrated. There should be transitional spaces that are a combination of the traditional open space and the totally enclosed space. An environment does not stop at a wall or a door; to be total, it must be continuous.

Directional spaces and focal spaces can be combined in a studied sequence to provide orientation and meaning to a space or a series of spaces.









Variety in space size and in the intensity to which a space is developed is the key to implementation of psychological and physical goals for the environment.

Buildings located by hierarchy of function should respond architecturally to their program and site. The hierarchy is defined more by relative scale and proportion than by relative size.

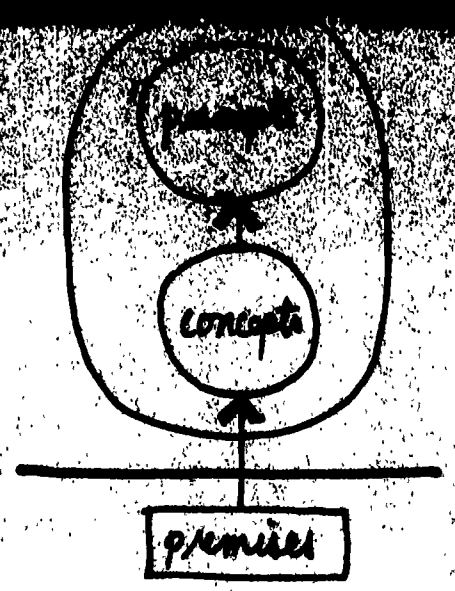
Density and orientation can be controlled by placement and proportion of additional buildings and complexes. A variety of three-dimensional spaces should be developed to define and enhance the total environment.

An important aspect of scale is material selection on both horizontal and vertical planes. The traditional brick in use on the campus is an excellent scale-giver, but should be more consistent in color and texture.

The campus plan must be more than just a map locating buildings, or the presentation of data and documents historically typical of a plan, or a collection of arbitrary decisions dictating the form of the future physical plant. All too often the result of the planning effort is no more than a rather antiseptic delineation of theoretical building blocks and site development. The effort to solve the basic and obvious problems often overshadow the equal challenge of creating an environment equal to the goals of the university.

During the development of the plan, Dr. J. W. Maucker, President of the University, asked, "How can the university's values be expressed; the quest for knowledge, a sensitivity to human values, and a recognition of individual rights and responsibilities?" Such ideals are difficult to portray in the campus plan report, yet the plan must give rise to a system of development that will allow response to these values.

To translate these values into the plan elements as physical entities, and at the same time to provide for the orderly growth of the university, the plan approach departs from the usual method. It concentrates on elements that together form a frame for environmental design and plan implementation. However, a plan can only be a documentation of these aims. Reality must be achieved through a conscientious approach to project programming and design, and a resolve to effectuate the environmental goals of the institution, sometimes even at additional cost.



ORGANIZATION OF THE PLAN

The campus plan is organized into three basic components: PREMISES, CONCEPTS, and PRECEPTS. These components are interdependent — and the key to successful planning is in understanding this relationship and maintaining its integrity.

Premises

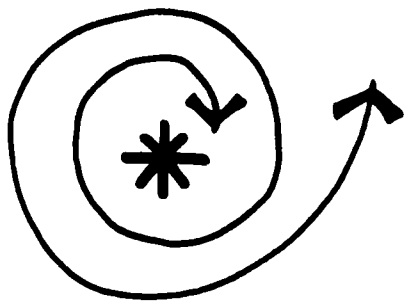
Premises are the interpretation of goals and policies into assumptions for physical development. These statements translate educational, administrative and social programs into functional relationships, circulation and space criteria, and environmental objectives. The premises, as stated on the following pages, are broad in nature; however, in essence they represent the entire spectrum of Phase 1. Any revision or evolution of goals or programs must first find expression in the plan premises, and from them into physical form.

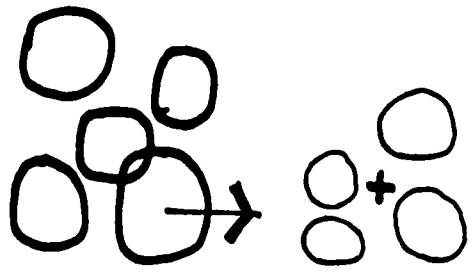
Concepts

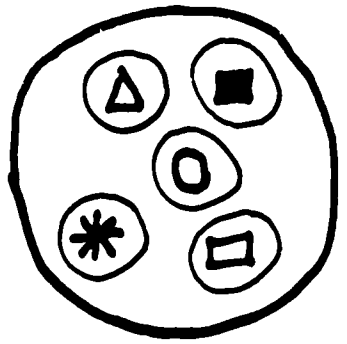
Concepts are major form-giving ideas derived from premises. They are the primary physical response to the plan premises and provide the hierarchy for decisions affecting the campus design. Decisions regarding land use, building location and massing, street and walk layout, and landscape design, should be evaluated on the basis of their effectiveness in implementing the plan concepts. These concepts are the basic determinants of the permanent physical character and image of the university.

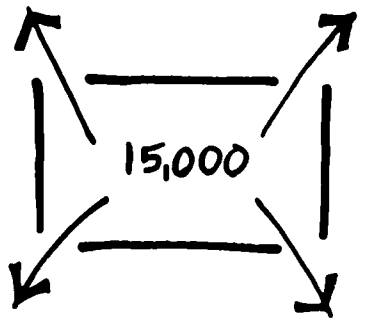
Precepts

Precepts are guidelines, rules and limits for implementing plan concepts. They might be thought of as being synonymous with the zoning and subdivision regulations used by municipal government to establish general control of physical development. The precepts are specific in establishing the parameters of concept implementation, yet leaving sufficient latitude for creative architectural and landscape design.









PREMISES

1/Unity

Emphasis should be given to university unity through the creation of order and continuity of facilities and environment. An instrument of unity should be a strong visual orientation to a core of central facilities.

2/Organization

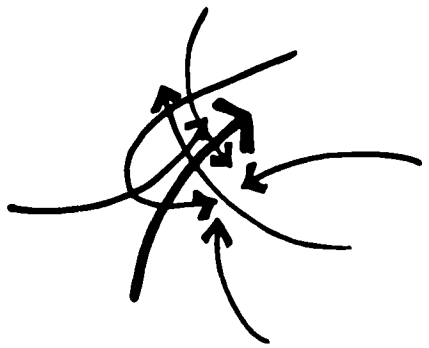
The academic organization (consisting of four existing colleges and the graduate school, with the possibility of an eventual increase in the number of colleges) should be provided for and expressed in the plan.

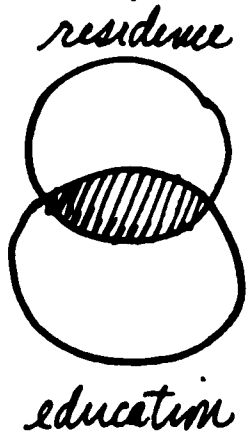
3/Identity

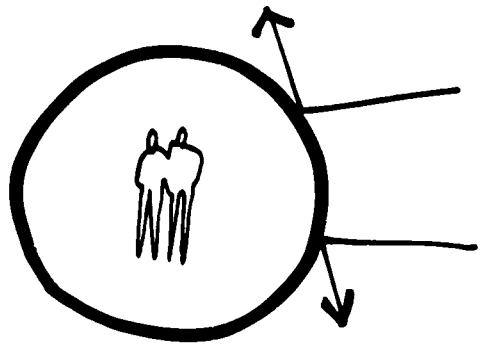
A physical identity should be established for each college and for other specific university functions. This identity should be of a nature that the function or activity would be identified and act as a point or frame of reference to the university as a whole. Opportunities should be provided to allow individuals to identify with various components of the university such as their department, living, or social group.

4/Needs

Land area, building space, and all other necessities should be provided for a university of 15,000 students. The plan should provide outlets for growth beyond the 15,000-student level.







5/Interactions

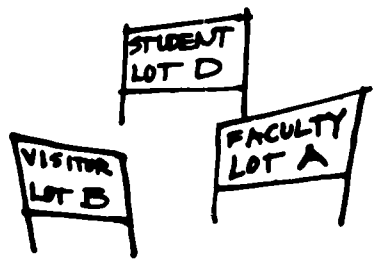
The plan should foster the creation of space and facilities that would encourage interaction among and between students and faculty as individuals and groups.

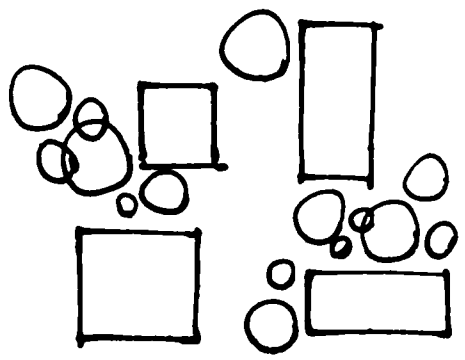
6/Living

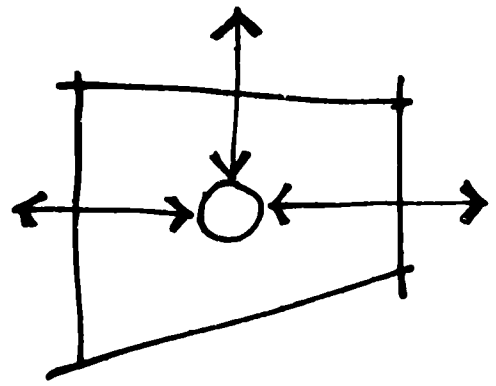
It is a goal of the university to provide the student with a residence experience that would complement and supplement his continuing intellectual growth. The plan should provide the means to accentuate this philosophy through the provision of housing facilities with a good living environment.

7/People

People should be given clear preference over vehicles in the academic area. Further, the pedestrian should have the opportunity of movement throughout the campus on routes with no major conflict with vehicles.







8/Cars

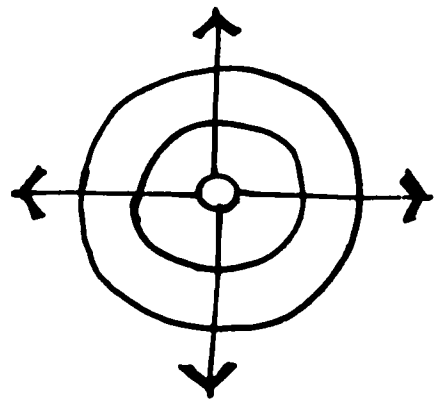
Parking facilities are to be made available for all students, staff, and visitors needing to operate cars on campus, within the framework of current and future regents' policy.

9/Site

There is a strong desire to maintain a generous amount of landscaped open space throughout the campus; an equitable balance between a rural and urban environment.

10/Community

The university will recognize its responsibilities to the community and participate in a coordinated effort to achieve an environmental harmony between the two.



CONCEPTS

The response to these premises for the planned development of the campus is expressed in four major concepts: The Concept of Concentric Hierarchy, the Concept of Identification, the Concept of Connection, the Concept of Accessibility. Each of these concepts provides the basis for expansion of that major planning idea into precepts which prescribe a system for development. Together they form the framework and foundation for campus development.

1/Concept of Concentric Hierarchy

The university land uses will radiate in concentric zones from a core containing the most intense and universally used facilities.

The hierarchy of circulation, from the core to the perimeter, is:

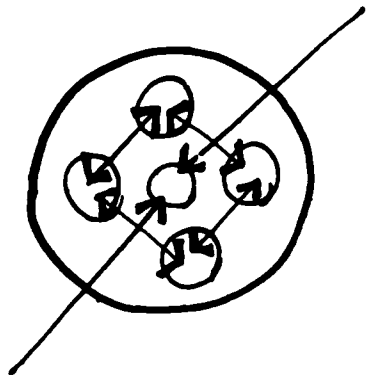
Zone 1: exclusively pedestrian
Zone 2: pedestrian sovereignty first priority
Zone 3: vehicular penetration and major access points, but with pedestrian sovereignty on corridors
Zone 4: major parking and urban vehicular circulation
Zone 5: minimum vehicular and pedestrian circulation generators

The hierarchy of land uses, beginning with Zone 1, or the core, is:

Zone 1: central educational and social facilities utilized by the entire university
Zone 2: the academic colleges, the graduate college and central administration
Zone 3: single student housing and physical education facilities
Zone 4: physical education playfields, major parking areas, physical plant and community-oriented facilities

Zone 5: married student housing, arboretum and golf course

This concept would provide space for orderly, systematic development and staging of all required facilities within their proper zones.

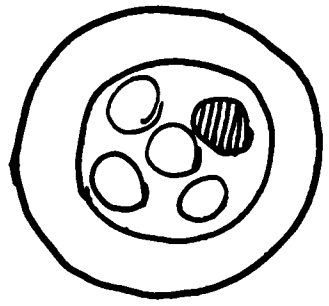


2/Concept of Connection

A visual awareness of the total university from any location on the campus, through vistas, landscape unity.

Uninterrupted pedestrian circulation among all elements of the university, with the capacity of the circulation system responding to the intensity of adjacent uses and generators.

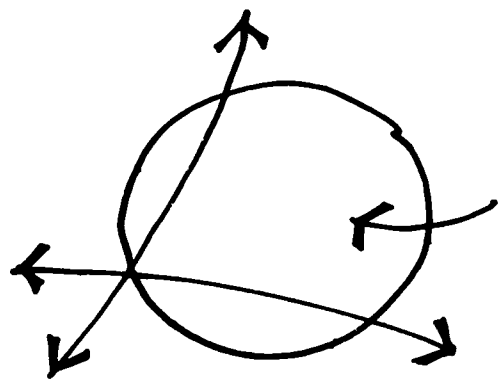
A continuity established through a landscape unification.



3/Concept of Identification

Visual and geographic identification of each major functional unit encompassed by the plan: university, college, residential, community.

Development of significant activity nodes and open spaces in conjunction with functional units and circulation corridors.



4/Concept of Accessibility

A sense of entrance and of arrival.

Provision of necessary vehicular access to certain facilities, with preservation of pedestrian sovereignty.

Continuity of university development within the frame imposed by the major urban circulation system, part of which passes through the university.

The overview of these concepts is an integration of communications as a unifying force — circulation, visual media, and the living/learning involvement; and through this, the creation of an environment that expresses the freedom, knowledge, and values of the university.

PRECEPTS/Plan Elements

The response to the concepts, or their translation into actual physical plan elements, is the precepts; rules for the implementation of the concepts. On the following pages are the precepts in text and graphic form. They are the Concept of Concentric Hierarchy - Concentric Zones, Land Use; Concept of Connection - Corridors; Concept of Identification - Places, Landscape; Concept of Accessibility - Circulation.

PRECEPTS for the Concept of Concentric Hierarchy — Concentric Zones and Land Use

Concentric Zones. The precepts for the Concept of Concentric Hierarchy are concentric zones and more definitive land use. The Concentric Zone rules are:

- Zone 1: Zone 1 shall be the core of the university and, in itself, shall be the symbol and point of orientation in the function of the university. This core shall contain the University Union, Library, Media Center, and significant plazas and malls. The ground area requirement is 16 to 18 acres. All vehicular traffic, except necessary service vehicles, shall be restricted from this zone.

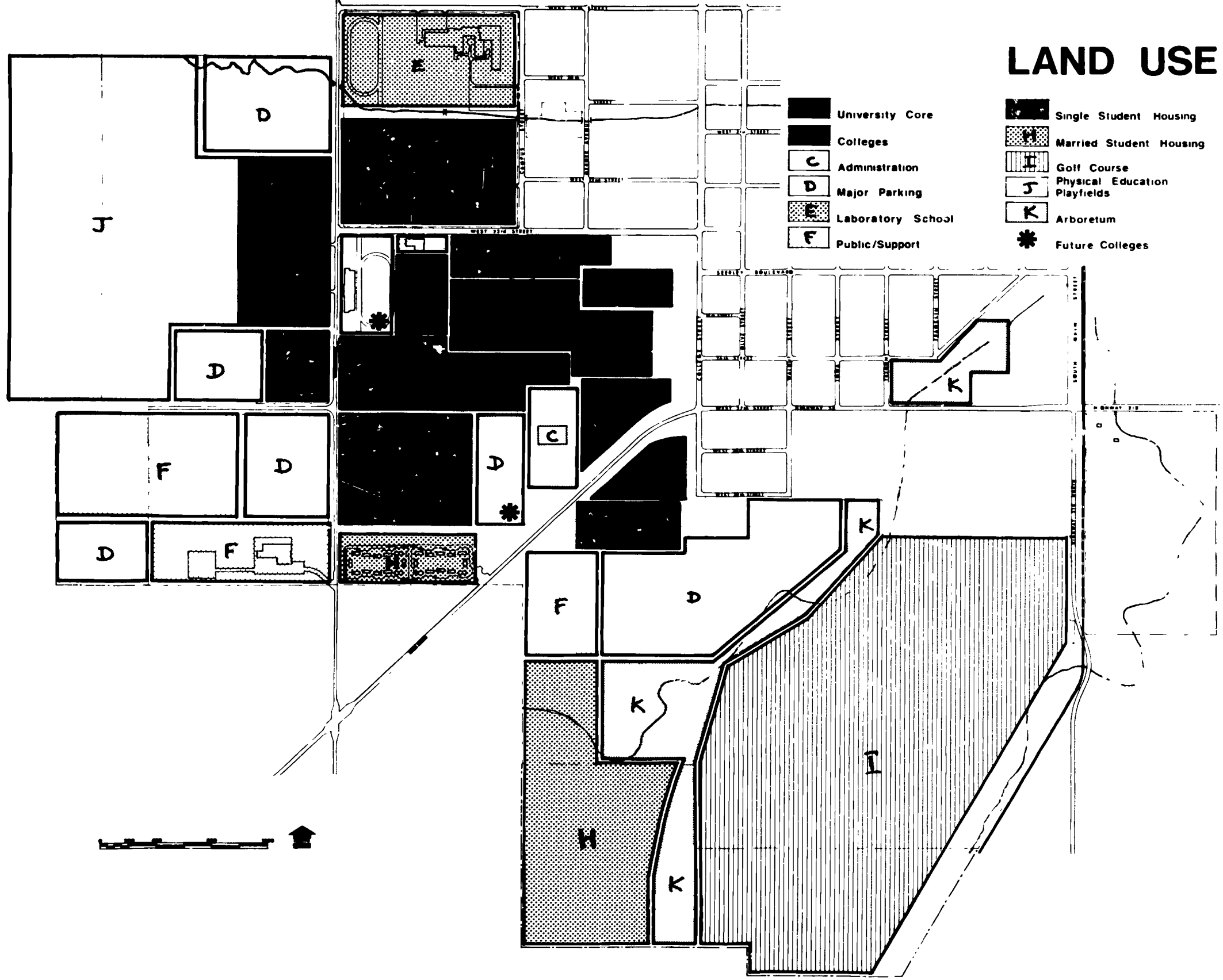
- Zone 2: The primary academic life of the university will be developed around the core. Zone 2 will contain the academic colleges, each one having a designated area. It shall also contain the central administration and graduate college. The maximum distance between facilities for scheduled classes shall not exceed a 10-minute walk. Pedestrian sovereignty will be maintained in this zone and pedestrian movement shall be uninterrupted by vehicular circulation.

- Zone 3: Zone 3 will contain all single student housing, physical education, and recreation. The radius of this zone shall not exceed a 10-minute walking distance from the core. The primary points of vehicular access are also contained in this zone. Uses that are separated from the academic area by major thoroughfares must have a pedestrian connection that would preclude any conflict between people and vehicles.

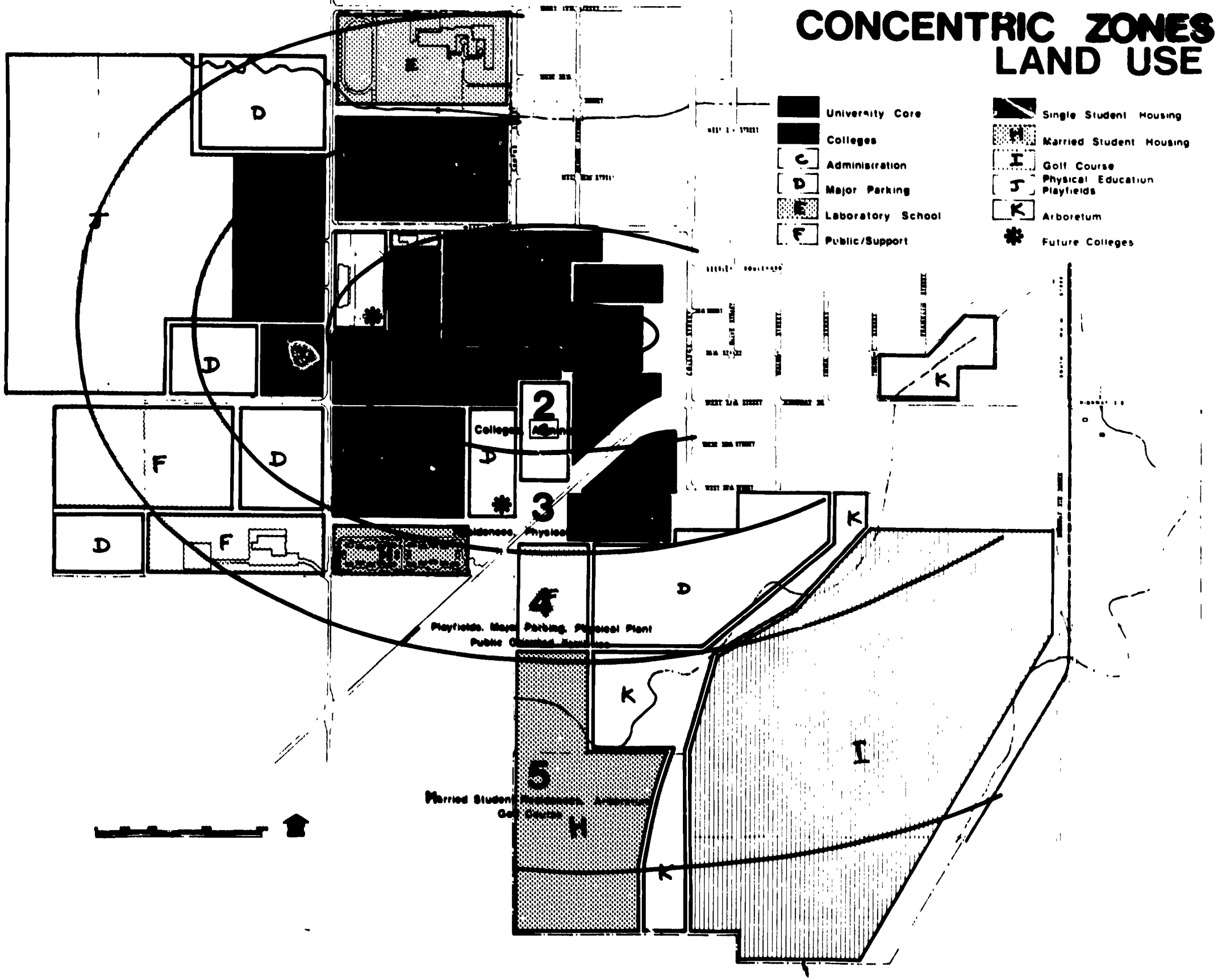
- Zone 4: Zone 4 shall contain the major support facilities for the campus as a whole including the public-oriented facilities. The major uses in this zone are playfields for physical education, Physical Plant shops and Power Plant, facilities for public assembly, and major parking. This zone is the most heavily penetrated by urban circulation routes, giving rise to the placement of the public-oriented facilities.

- Zone 5: Located within this zone shall be the married student housing, golf course, and arboretum. The arboretum can be designed to serve as part of the open space setting and as a buffer between married student housing and the golf course. If the designated area is not developed as an arboretum, it shall still serve as a buffer between the two uses. It shall incorporate natural features of the site, such as the creek running through this zone.

LAND USE


University Core
Colleges
C Administration
D Major Parking
E Laboratory School
F Public/Support
Single Student Housing
H Married Student Housing
I Golf Course
J Physical Education Playfields
K Arboretum
Future Colleges
WEST 32nd STREET
STADIUM BOULEVARD
WEST 30th STREET
SOUTH MAIN STREET

CONCENTRIC ZONES
LAND USE



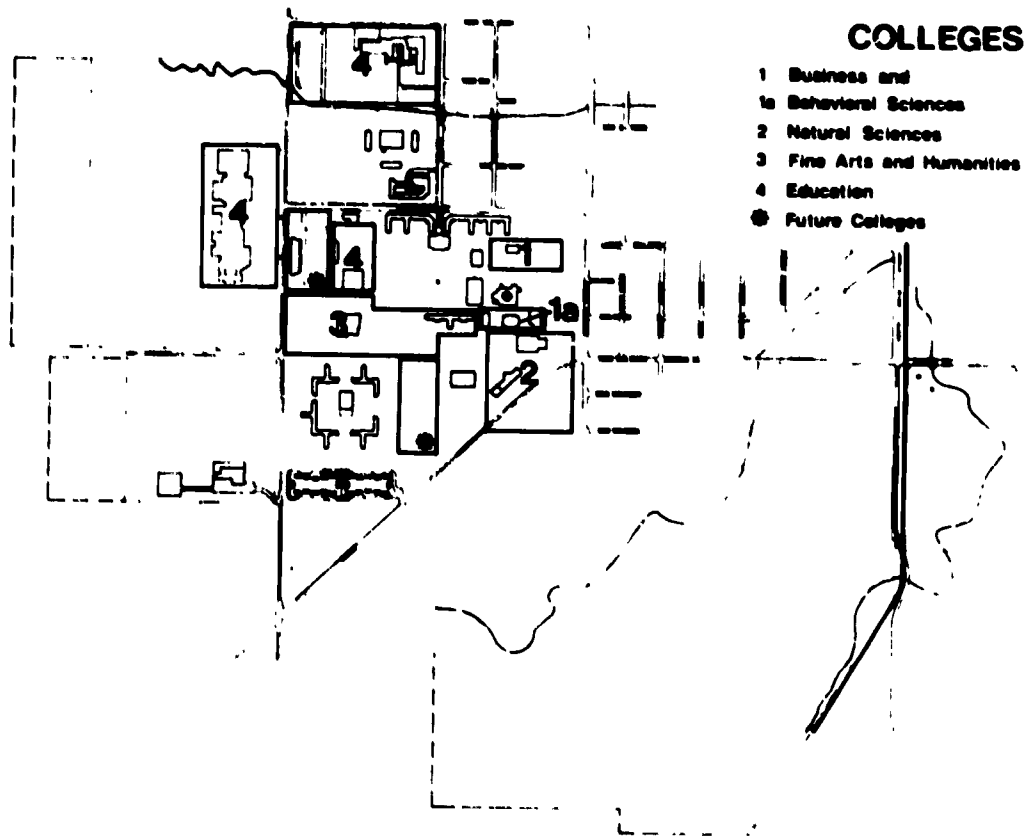
Land Use. Because of the limitations of existing campus development and the more realistic land use needs for future activities, the actual land use pattern cannot be as pure in form as suggested by the concept. However, in the hierarchy and location of facilities and land uses, it does respond to the Concept of Concentric Hierarchy.

The land use pattern reveals some inconsistencies in the response to the concept. Most notable of these are married student housing, south of the Regents complex, and the Lawther-Bartlett single student dormitory complex in Zone 2. This inconsistency is caused by their projected life span extending beyond the time encompassed by the planning period. Any new facility beyond the 15,000-student level should honor the precepts of the land use. The color showing physical education and the laboratory school as academic uses is to indicate that these facilities are adjuncts to the College of Education.

Two specific areas have been set aside for future development of academic colleges. One is located just east of the Regents dormitory complex and is designated as parking on the land use plan. The other is the site of the existing stadium. It is assumed that, at the 15,000-student level, the stadium will have been or will soon be phased out. The future college site east of Regents complex is now available and will therefore be the first area in which expansion might take place. Until that time, it can be used for surface parking. At the time of its development, consideration must be given to either the replacement of this parking on another site or the construction of parking garages. The latter would be necessary if close-in parking is to be provided.

A possible third future college location would be all or part of the site now occupied by the Lawther-Bartlett dormitory complex. This is not shown on the map because of the permanency of these facilities during this phase.

Provisions have also been made for additional single student housing beyond the 15,000-student level should it be needed. This area is west of the new towers and Campbell Hall. In the interim, it is to be used for parking and recreation. The additional areas for single student housing are shown on the west side of Hudson Road and south of Dike Road.



The public areas, shown on the land use map, contain continuing education, auditorium, stadium, and arena. The stadium and arena are to be located in the area west of Hudson Road and south of 27th Street. The continuing education and auditorium will be located south of Dike Road and north of the married student housing area. The Physical Plant shops, shown as support on the land use map, are to be expanded westward from the existing facility. This area will also contain the new heating plant.

The remaining land uses are identifiable on the map. The land areas shown for each use were determined from a study of projected land needs based on facility type and desired density.

To further identify the academic area, the location of the colleges within this area is shown in detail on the accompanying map. The administrative unit, special classrooms and labs, faculty offices, and special facilities of each academic college shall be located within their designated land use zones.

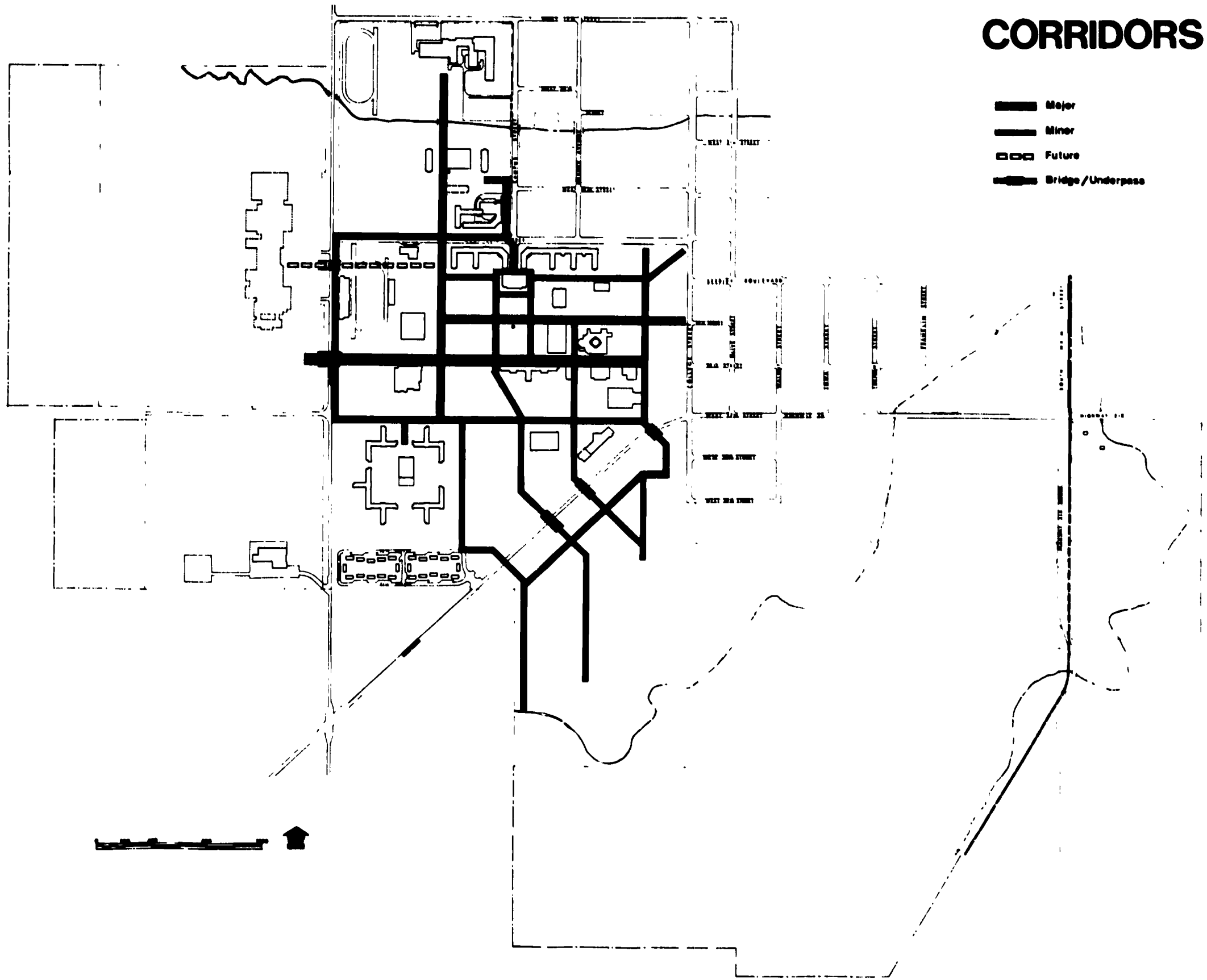
The College of Business and Behavioral Sciences will occupy sites on either side of the University Union. New facilities for Business will be constructed on the site of the Auditorium Building while the Behavioral Sciences will occupy Wright, Seerley and Sabin. The College of Natural Sciences will occupy the new science and the Arts and Industries Building. Expansion of this college will occur on either side of Dike Road in the area shown on the map. The College of Fine Arts and Humanities will encompass the area south of the core between Wright Hall and Hudson Road. Fine Arts will be developed on the western portion of this site and Baker Hall, plus any needed additions, will house the Humanities. Baker Hall is the ideal location for the Humanities in that it becomes the link between Fine Arts and the Behavioral Sciences and responds to the affinities of these disciplines. The College of Education, exclusive of its physical education, library science and laboratory school functions, will be located in the area west of Minnesota Street.

PRECEPTS for the Concept of Connection – Corridors

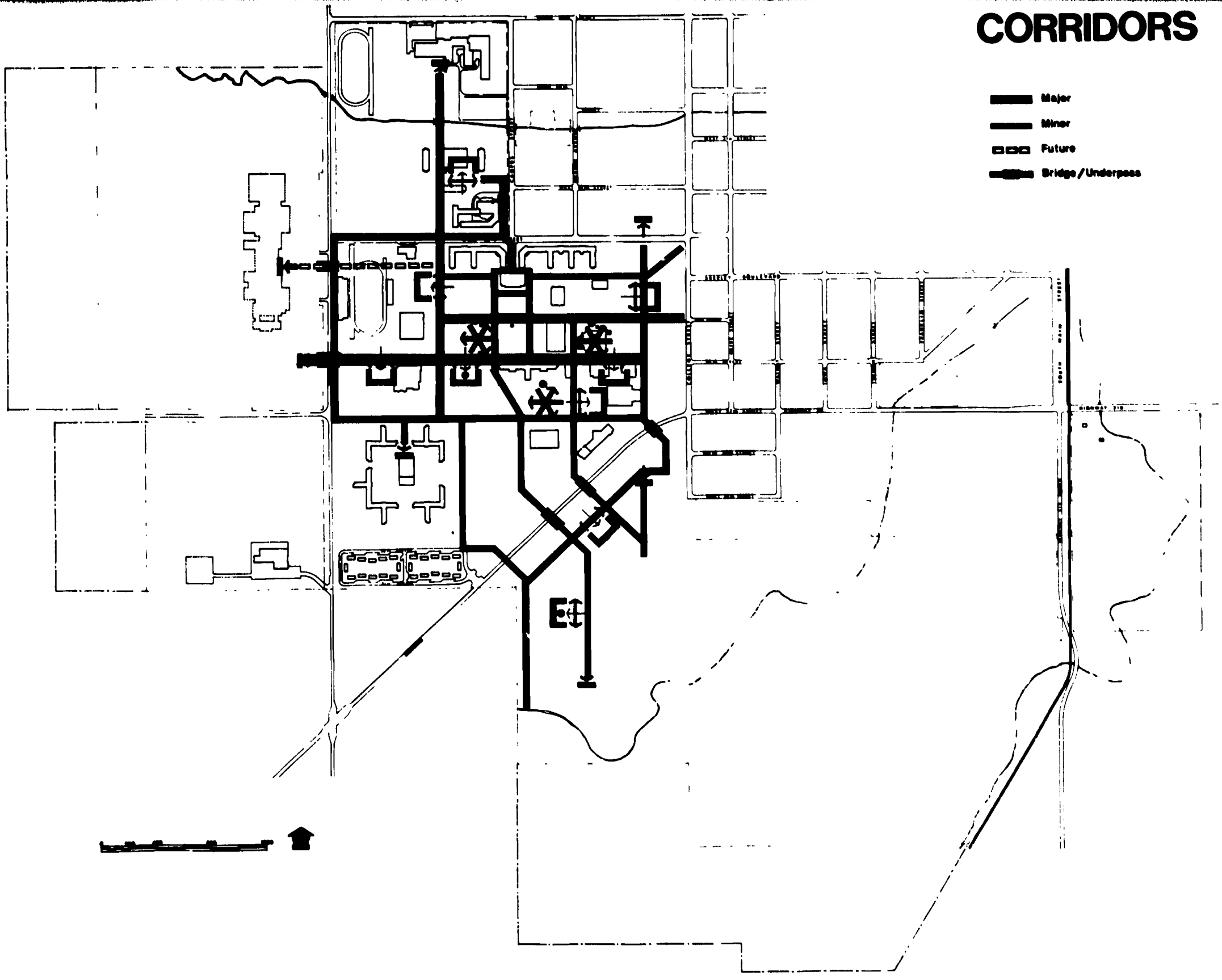
The corridors are responses to the desire to connect the colleges and provide access to all parts of the campus. They are the primary pedestrian ways, and indicate routes on which absolute pedestrian sovereignty would be established. These corridors have degrees of importance which is indicated by line width on the map. They are also action links. By connecting similar uses and providing access between zones, they will give overall unity to the campus. Furthermore, they are communication links established on the premise that ready access between activities will promote interaction and, through exposure to all facets of university life, will stimulate the intellectual senses. The precepts for the development of these corridors are as follows:

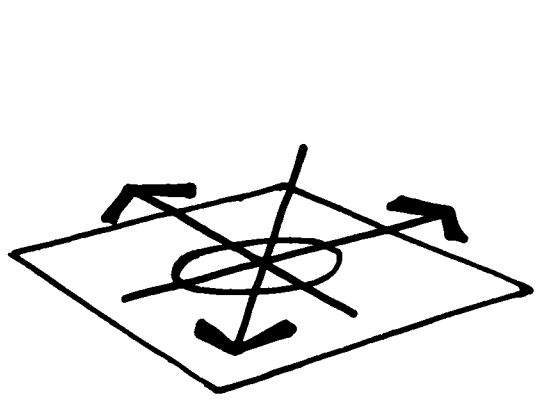
- Corridors shall be located and designed to emphasize the connection between colleges and other major elements of the university.
- Corridors shall be designed to give visual unity to the university.
- The corridors shall incorporate significant activity nodes, open spaces, exhibit space, art objects, and encourage other exposure to the educational and cultural aspects of university life.
- Corridors shall respond to the need for shelter from the elements by utilizing enclosed bridges, tunnels, and screening where suitable.
- Corridors shall relate to "places" at points where they may be adjacent to or cross an area so designated.
- All corridors will terminate in a "place".
- The design of the corridor will be unique to the other pedestrian circulation elements in its pavement type, landscape, and activities which may take place thereon.
- Pedestrian sovereignty will be maintained on the corridor, and the corridor will express this sovereignty at any point where it is challenged by vehicular traffic. This may be accomplished by the separation of this traffic or continuance of the corridor material across an interrupting element.
- Service vehicles may use certain corridors for access to facilities; however, the corridor must be designed to make it clear that the vehicle is an intruder.
- A building site may include a corridor, but the design of the building must recognize the corridor concept.

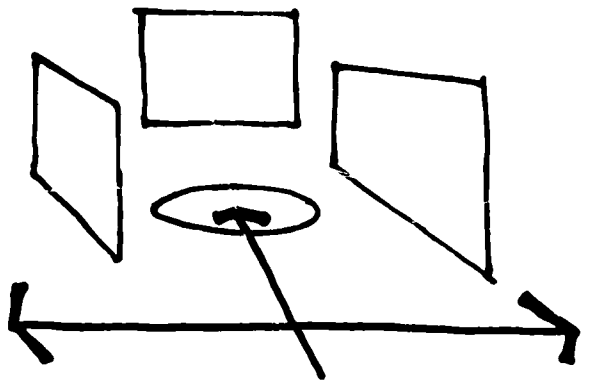
CORRIDORS

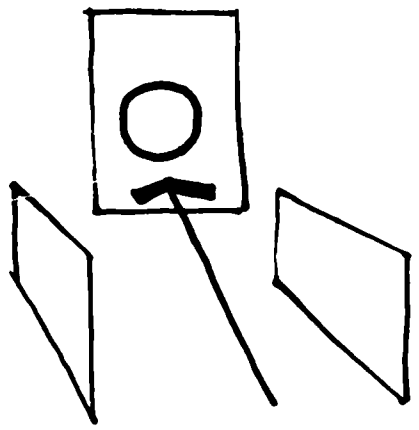


CORRIDORS









PRECEPTS for the Concept of Identification — Places and Landscape

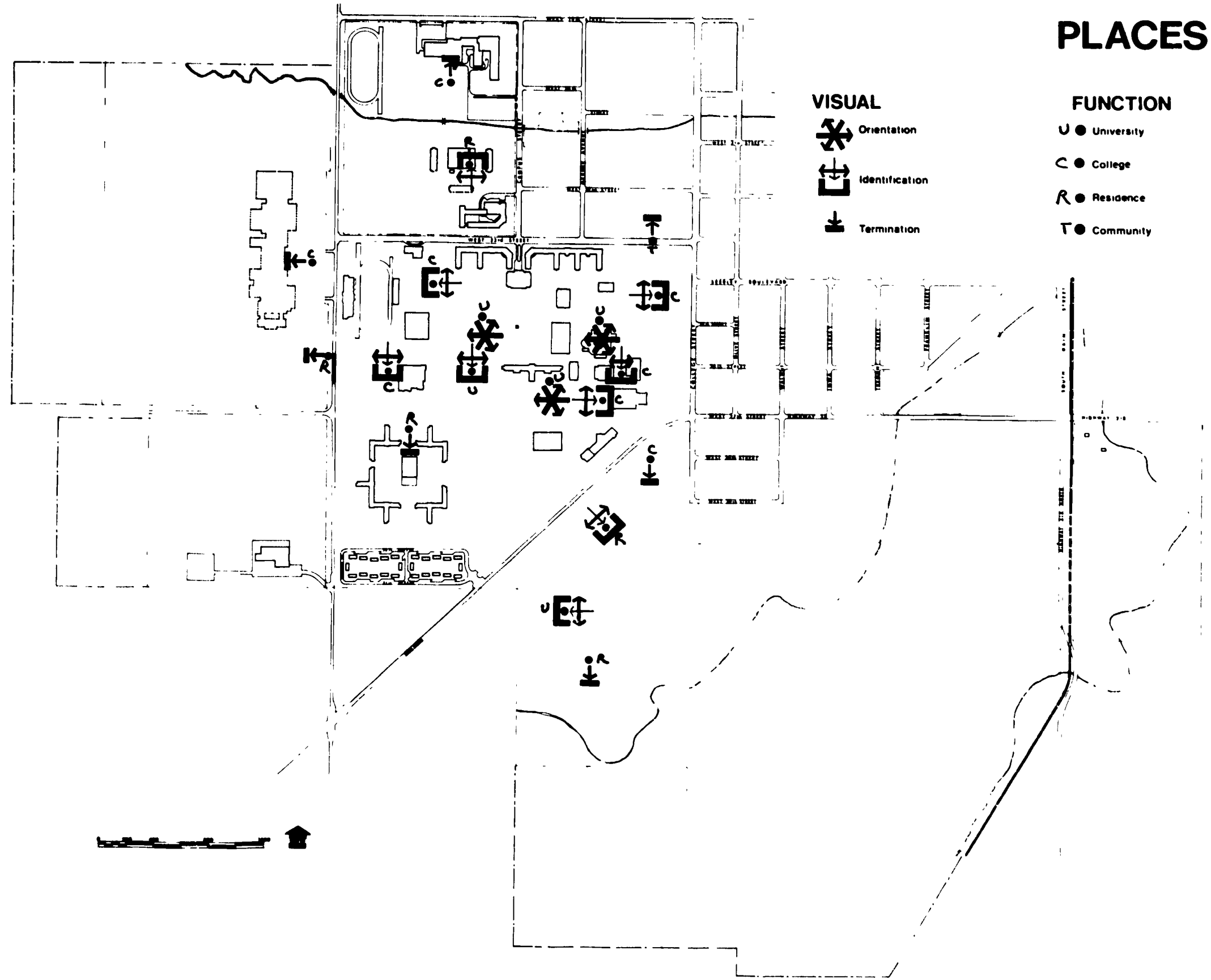
Places. Places identify and provide areas of activity. Just as a building becomes identified through its use, so must places be identified. They must be of a nature that people relate to them and identify with them. The design must be sensitive to activities unique to each place, yet maintain unity among places of similar type. The places, more than any other planning element, are centroids of interaction among individuals and university groups. The idea of places combined with the corridors is the basic ingredient for that environment which will foster the basic ideals: sensitivity to human values, and to individual rights and responsibiltiies. The achievement of these values is not guaranteed by the concepts or precepts; but by insuring freedom of communications made possible by these elements, we set a course toward these values.

There are two roles to which places must respond — visual and functional. The visual aspect has three forms: orientation, identification, and termination. A place of orientation is a space from which the individual has a sense of the university as a whole. As an area, it is a place for which no one group has claim. Its function is to serve as an arena of activity, the centroid of university life — socially, intellectually, and culturally.

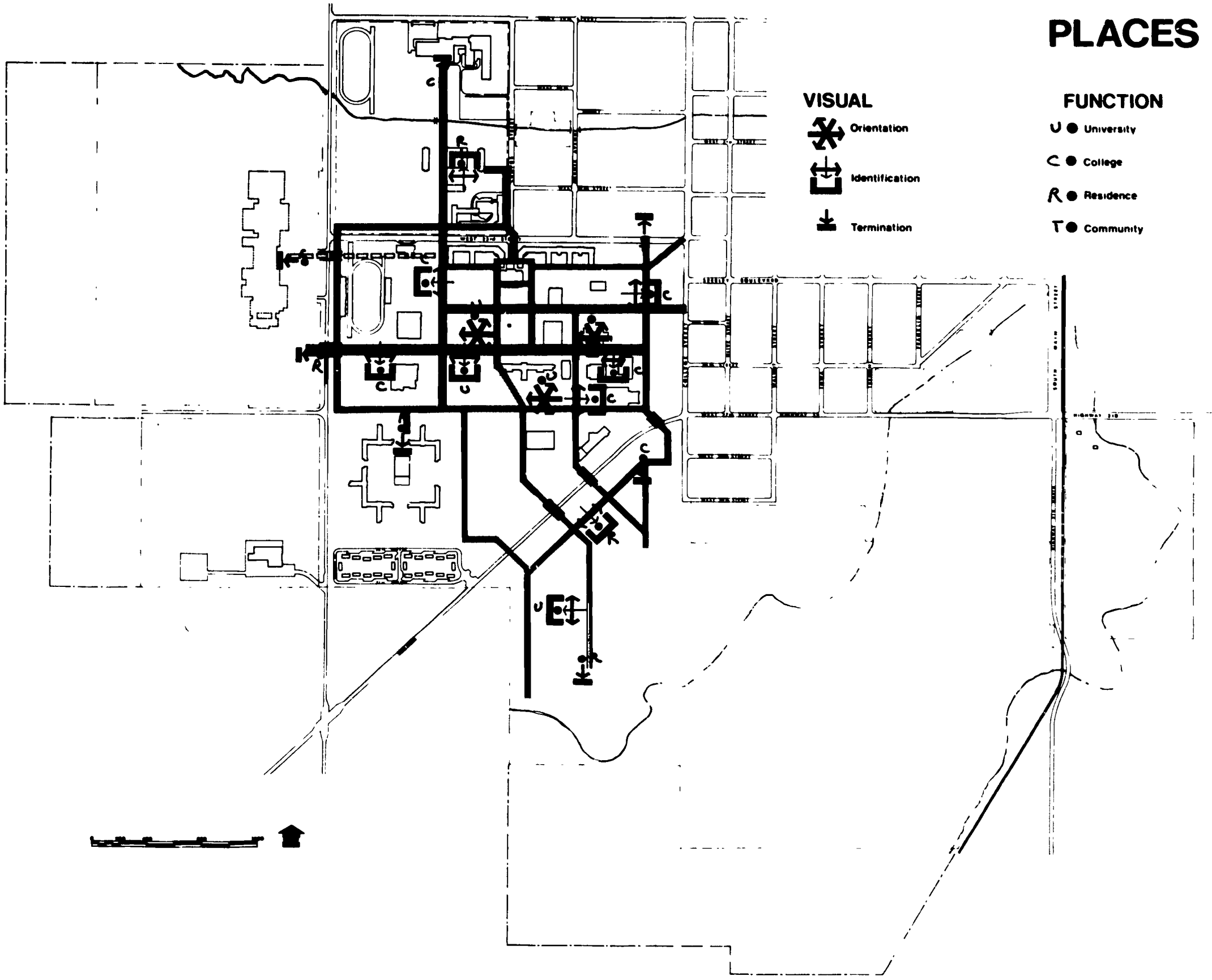
A place of identification has a more limited visual and functional role. Its visual role is to identify it as a place of specific activity. Functionally and visually, it is to relate to the use of the facilities which it serves, whether it be college, residential, or community. It is a place where someone operating outside the realm of that specific activity can enter and identify with that activity. Potential is given to each individual to develop an awareness of the various activities on the campus.

A place of termination relates more to the establishment of vistas that would suggest activity at a potential destination. At the point of termination, there would be a place to support the activity therein, not unlike those of identification.

PLACES


VISUAL
Orientation
Identification
Termination
FUNCTION
U University
C College
R Residence
T Community

PLACES


VISUAL
Orientation
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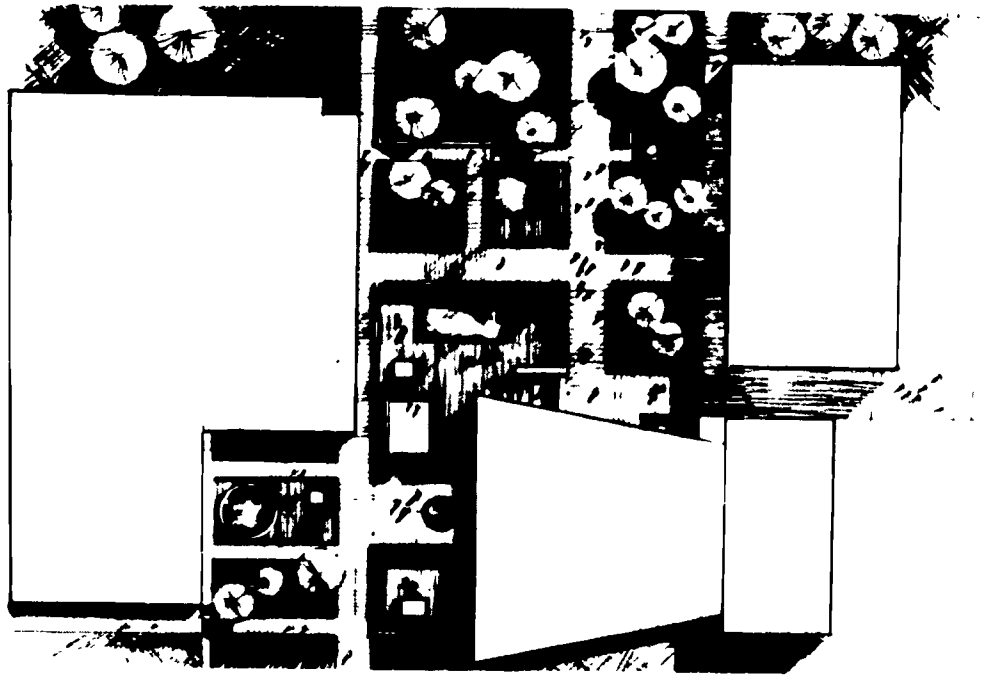
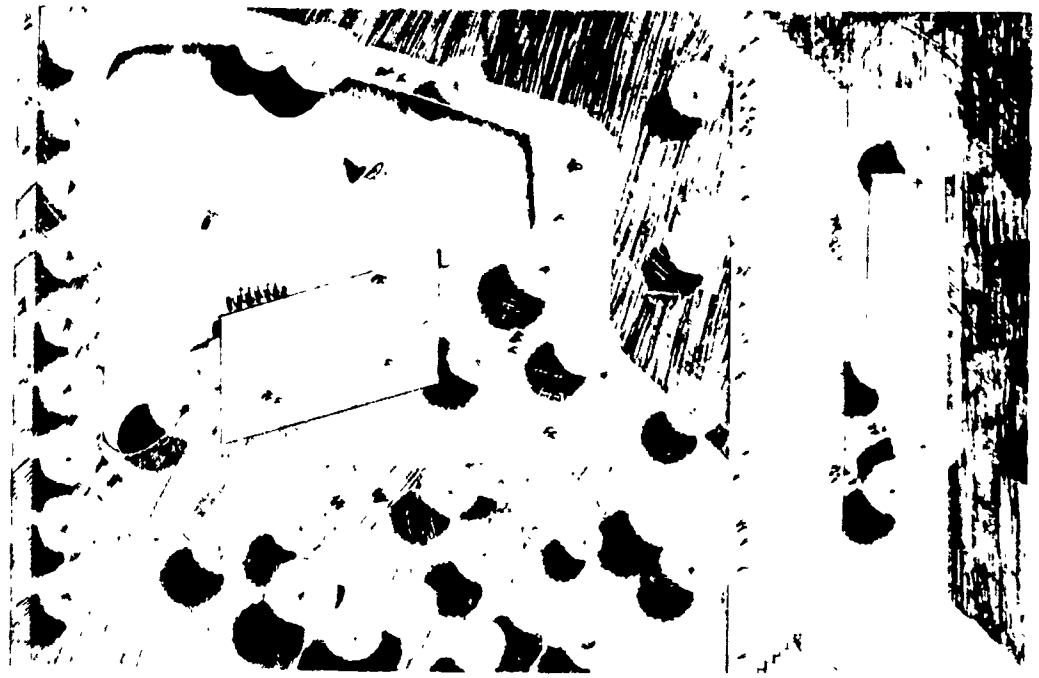




The precepts for places are:

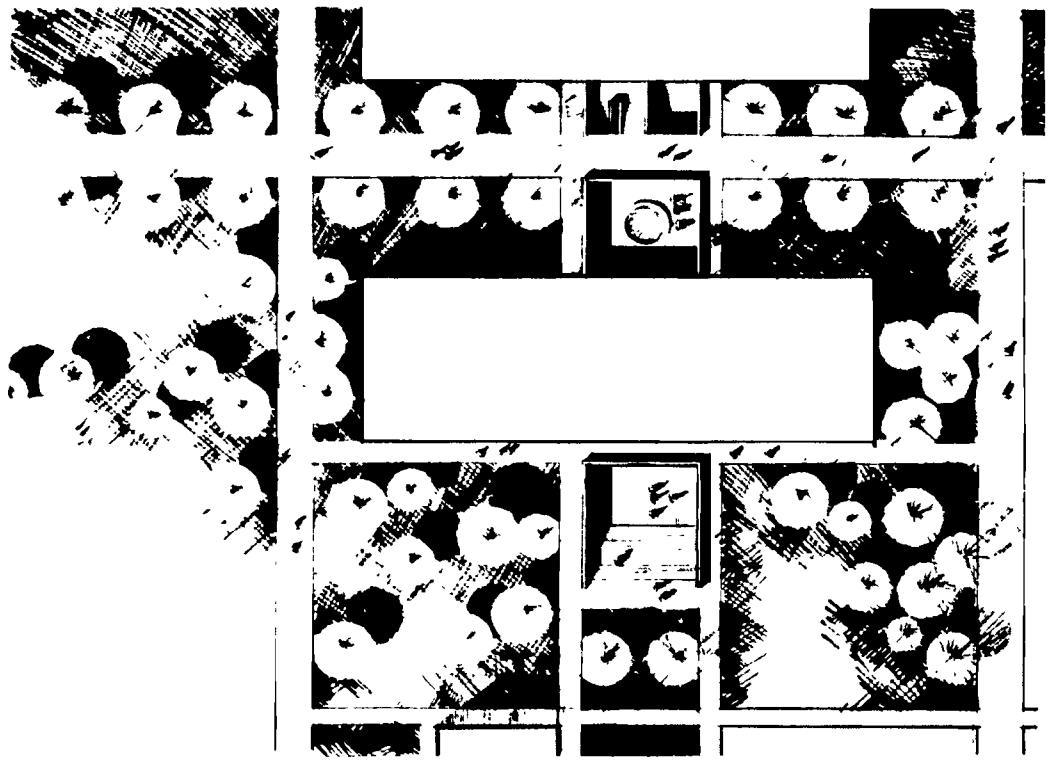
- The design of a place must establish a major visual and functional identity of that place as seen from a pedestrian corridor. A place should include some identifying element representing its functional activity, such as an exhibit space, a unique sculpture or fountain, or another significant feature.

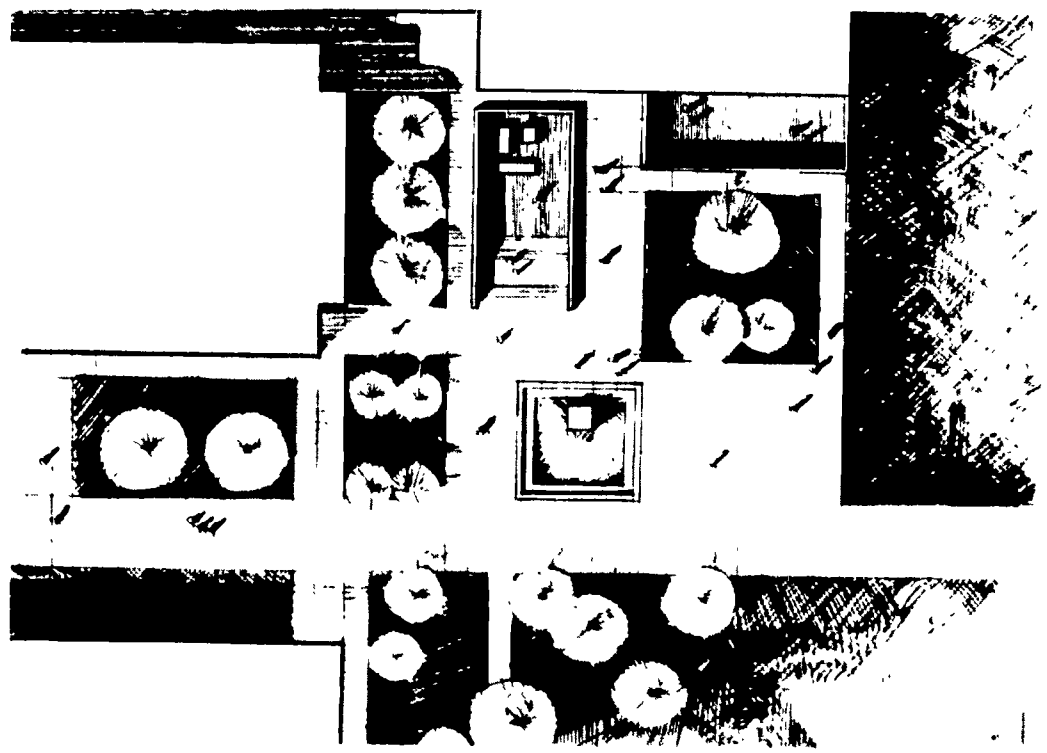
- Places should incorporate connections within building groups. This may be accomplished through the use of tunnels, bridges, or common plazas and walks.

- The environment within a place should be diverse – that is to say there should be areas for individual activity as well as group activities. Places should, depending on their function, be developed to express either the intensity of activity or the more quiet, passive type of activity.

- Places are not to be in themselves self-contained but should incorporate the total environment, including buildings and existing landscape features.

- Places are the nodes for action. They are not merely to be viewed but are to incorporate some facilities for human activity. A snack bar, a classroom or study carrel is just as much a part of the place as is the significant feature.

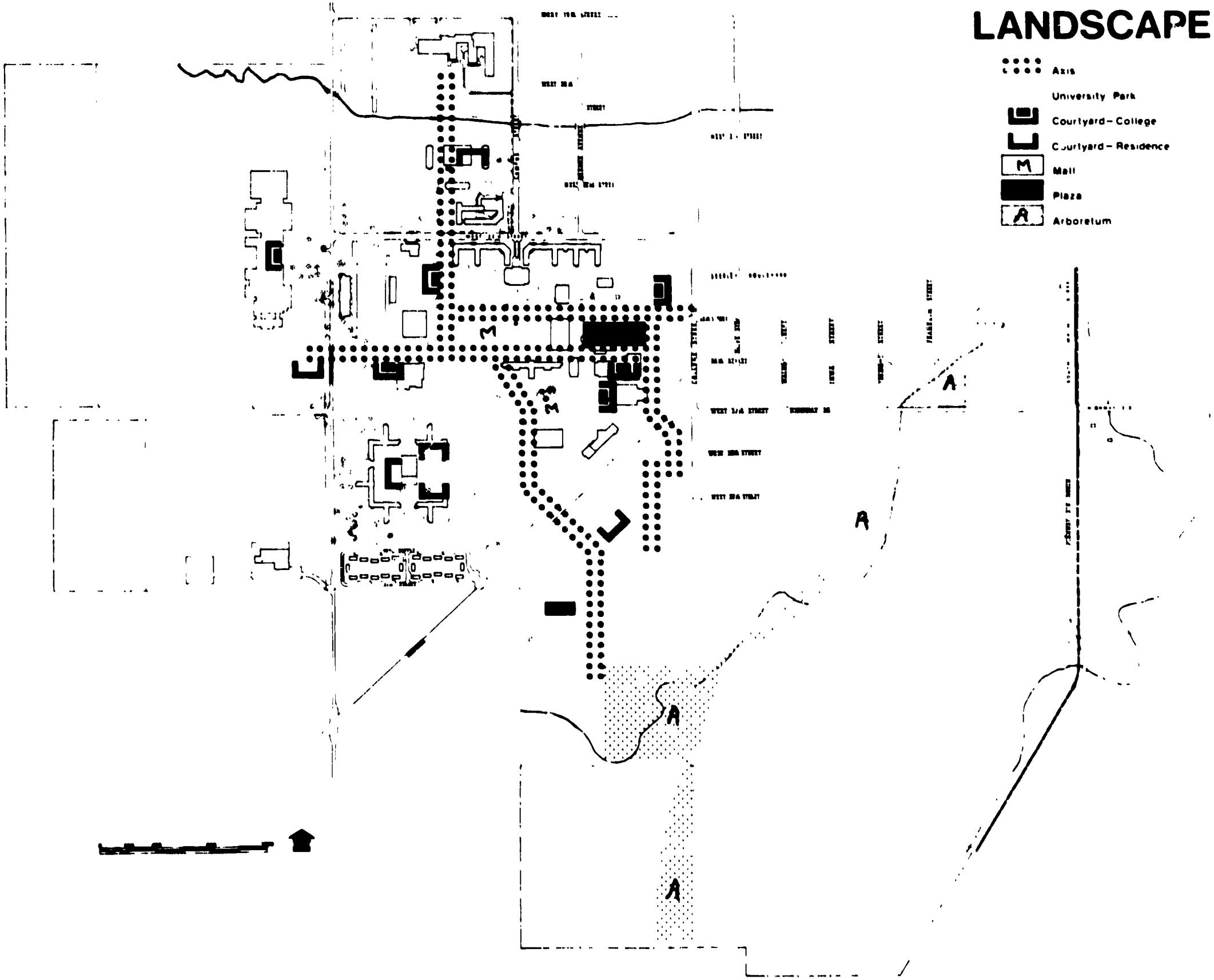


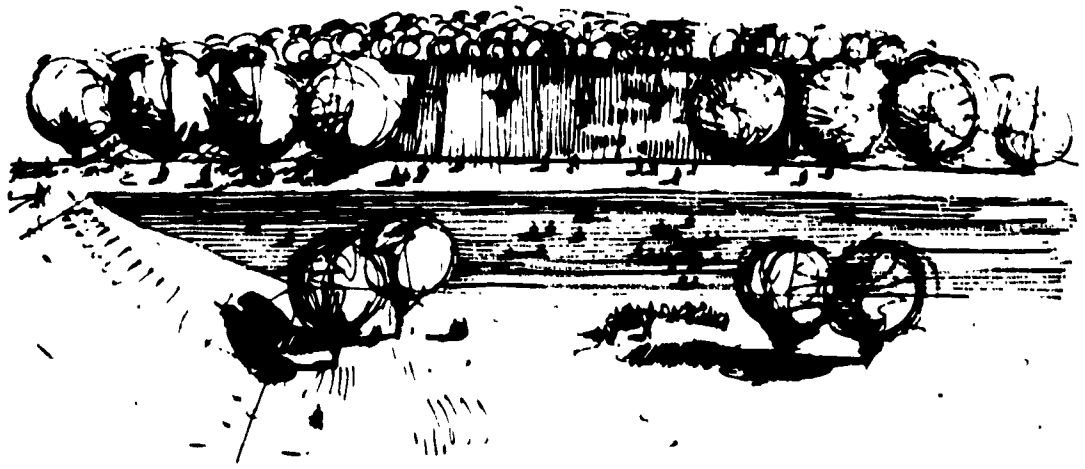


Landscape. The landscape design shown schematically on the accompanying map is a response to the concept of identification and is in itself a precept. It must not only serve as an identifying element, but also as a unifying element. It is a method of using the environmental components — trees, shrubs, walks, and other amenities of the site.

The landscape proposal responds to and incorporates the established plan elements -- corridors, places, and vehicular circulation. The malls, plazas and courtyards are, in effect, an interpretation of the treatment of each place. The corridors, providing major routes into and through the core, are to be treated as more formal axis in their landscape development; other corridors shall be more informal, similar in character to the University Park. Places of orientation are larger open spaces taking on the character of a mall or plaza, as indicated on their landscape map. All identification places, with the exception of Prexy's Pond area, are to be more intensely developed in courtyards corresponding to their activity and location. Prexy's Pond is a special identifying feature for the entire university. All places of termination in the residence hall complexes are to be developed as courtyards, also corresponding to their activity and location. Precepts for each of the landscape elements are described on the following page. The accompanying sketches depict possible development of the various elements.

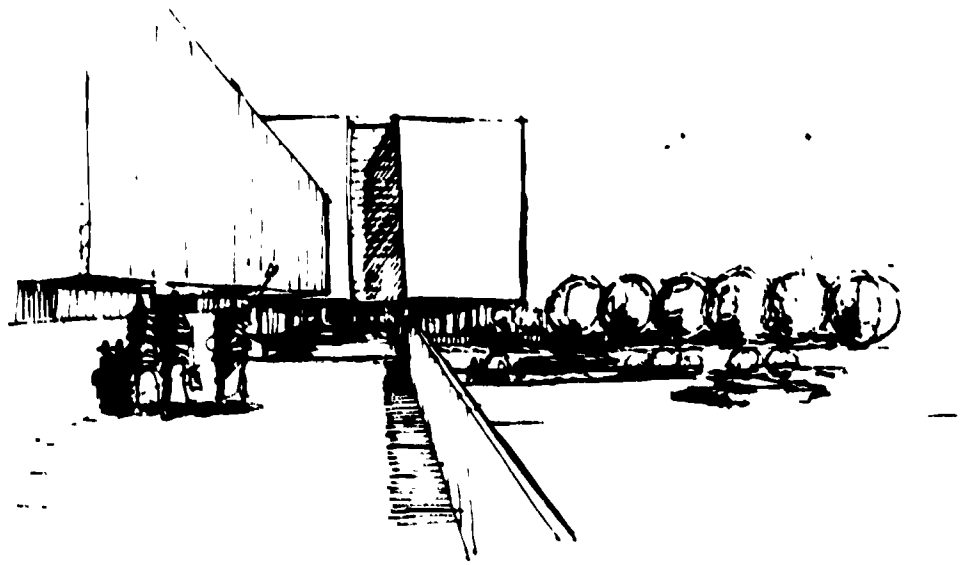
LANDSCAPE


Axis
University Park
Courtyard – College
Courtyard – Residence
M
Mall
Plaza
A
Arboretum
A
A
A



University Park.

- Shall be developed to give the university identity
- Shall serve as the transition between campus and community
- Shall be an informal type of development similar to the existing College Street Park

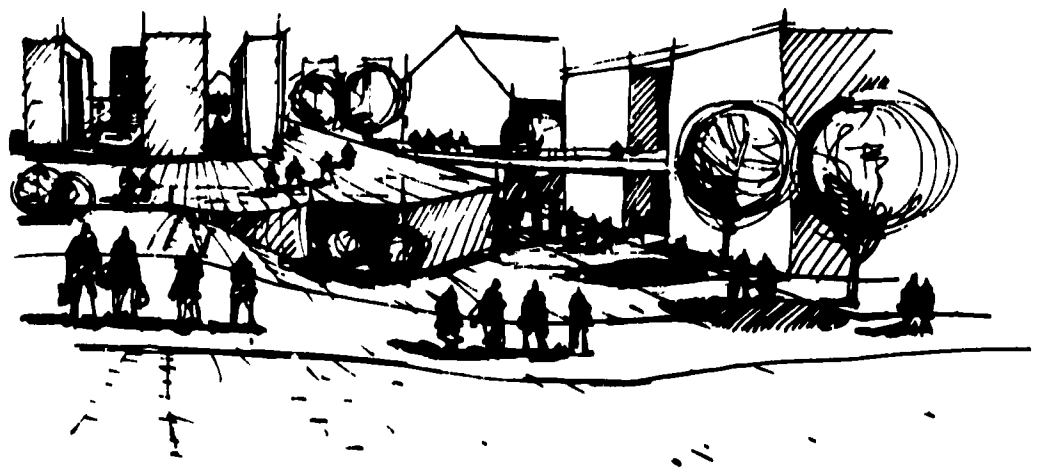


Axis.

- Shall enforce the major pedestrian corridors
- Shall be of a formal development
  - Shall be defined by specific species of trees in combination with specific paving materials
  - Supporting this more formal development shall be appropriate outdoor furniture, lighting, and graphics

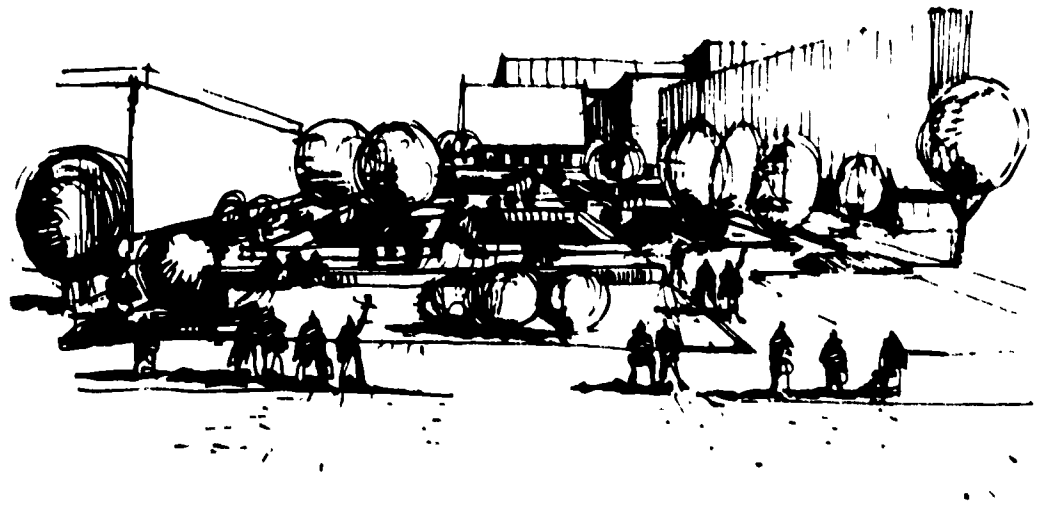
Plaza.

- Shall be designed as a more urban place
- Shall be an area of hard surface materials with landscape elements interspersed



Mall.

- Shall not be restricted from pedestrian access, but grass shall serve as the paving material
- Shall retain a traditional value
- Shall maintain the character of open space by limiting planting
- Shall serve to open vistas and therefore become a place of orientation
- Access to these areas shall be by the corridors which define them
- Shall serve as an activity space



Courtyard.

- Shall be activity areas developed at an intimate scale
- Shall possess the same elements of landscape and paving material as a plaza
- Shall serve to identify entrances to a building or a building group
- Features such as fountains, sculpture, and seating areas shall be incorporated in the development of these areas
- Shall be designed for group activity in places of college identity and, in places of residential identity, be designed for more individual activities

PRECEPTS for the Concept of Accessibility – Circulation

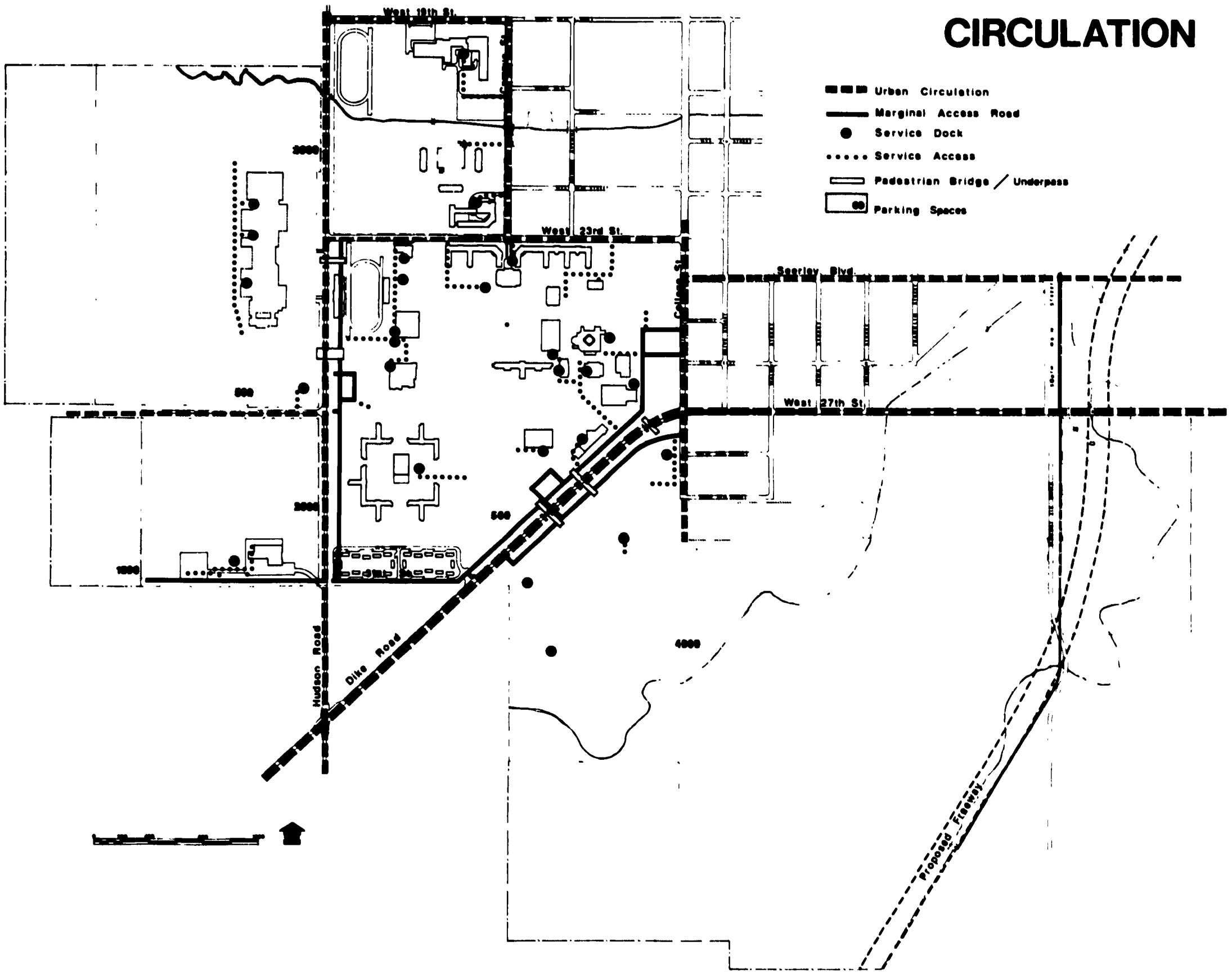
In our society the automobile is a positive force in the environment and must be considered realistically as to the massive requirements made by it. Although perhaps desirable, the automobile cannot be eliminated from the campus. It is the most common method of transporation to all people involved with the university. Provisions must therefore be made for convenient access, circulation, and parking for the students, staff, and campus visitors.

The solution to circulation must be developed within the framework of certain components of the urban circulation system which must remain and the fulfillment of established parking and service requirements. The most important element will be the continued existence of the two major highways, Dike Road and Hudson Road. Marginal access roads shall be incorporated along the major roads bisecting the campus. The marginal access road west of the existing stadium, between the Fine Arts entrance drive and 23rd Street, would not be constructed until such time that the stadium is moved.

A system must be established preciuding any vehicular-pedestrian conflicts and providing the necessary access and entrance routes into the campus.

- Storage parking will be located on the periphery of the campus for students in residence halls. Parking areas for commuter students will be at points where accessways enter the campus, and parking for staff and handicapped people will be adjacent to instructional areas. Visitor parking should be planned near those facilities attracting visitors.
- A pedestrian campus should be planned. Pending agreement between the university and the city, any of the campus and surrounding city streets may be closed, realigned, relocated, or modified.
- Establish primary entrances to the campus and identify them as such.
- Provide service access to all buildings. Access within Zones 1 and 2 will be primarily over pedestrian walks which will be designed to also serve as service drives.
- Provide direct access to public-oriented facilities.

CIRCULATION

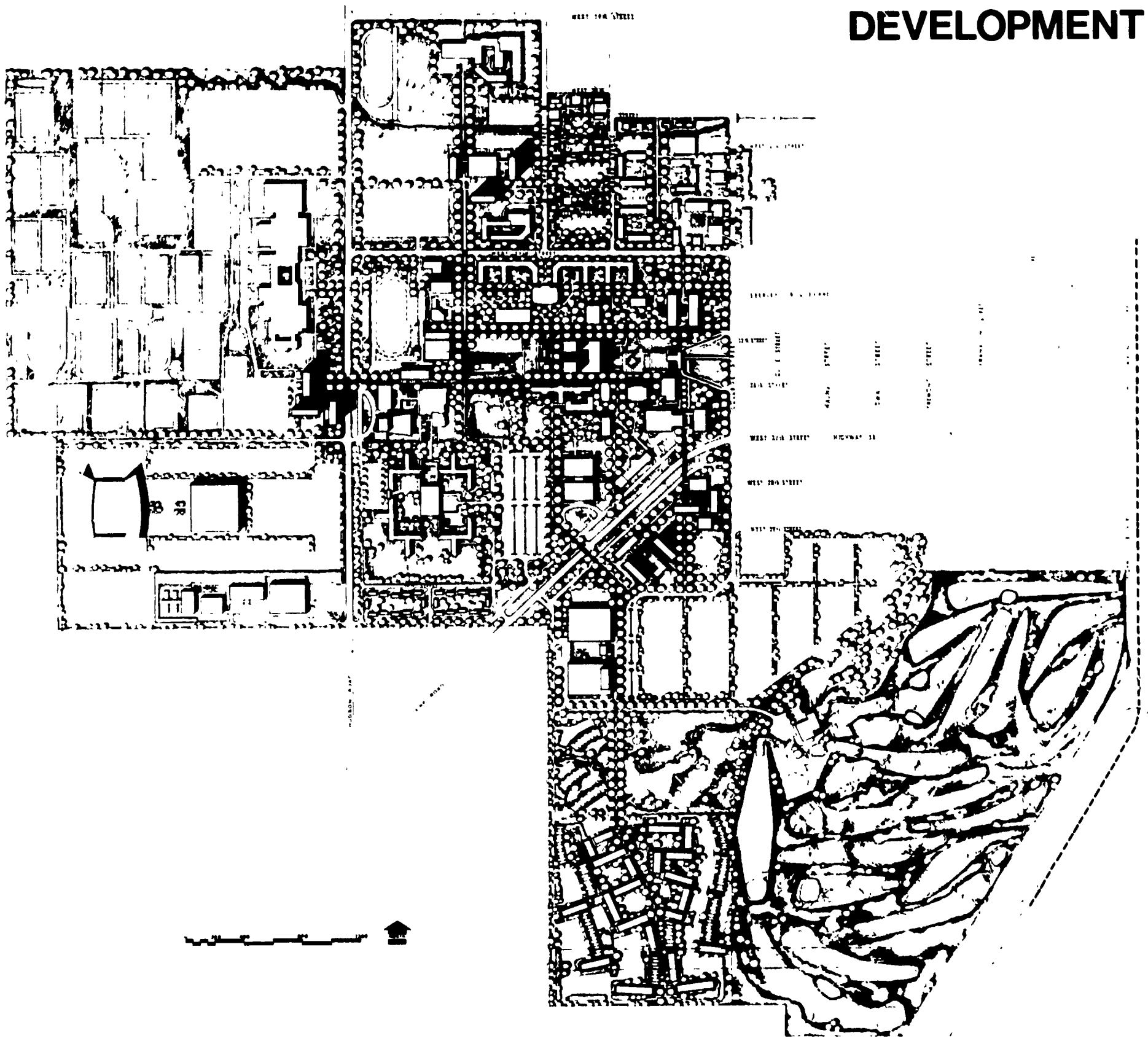


DEVELOPMENT STUDY 1

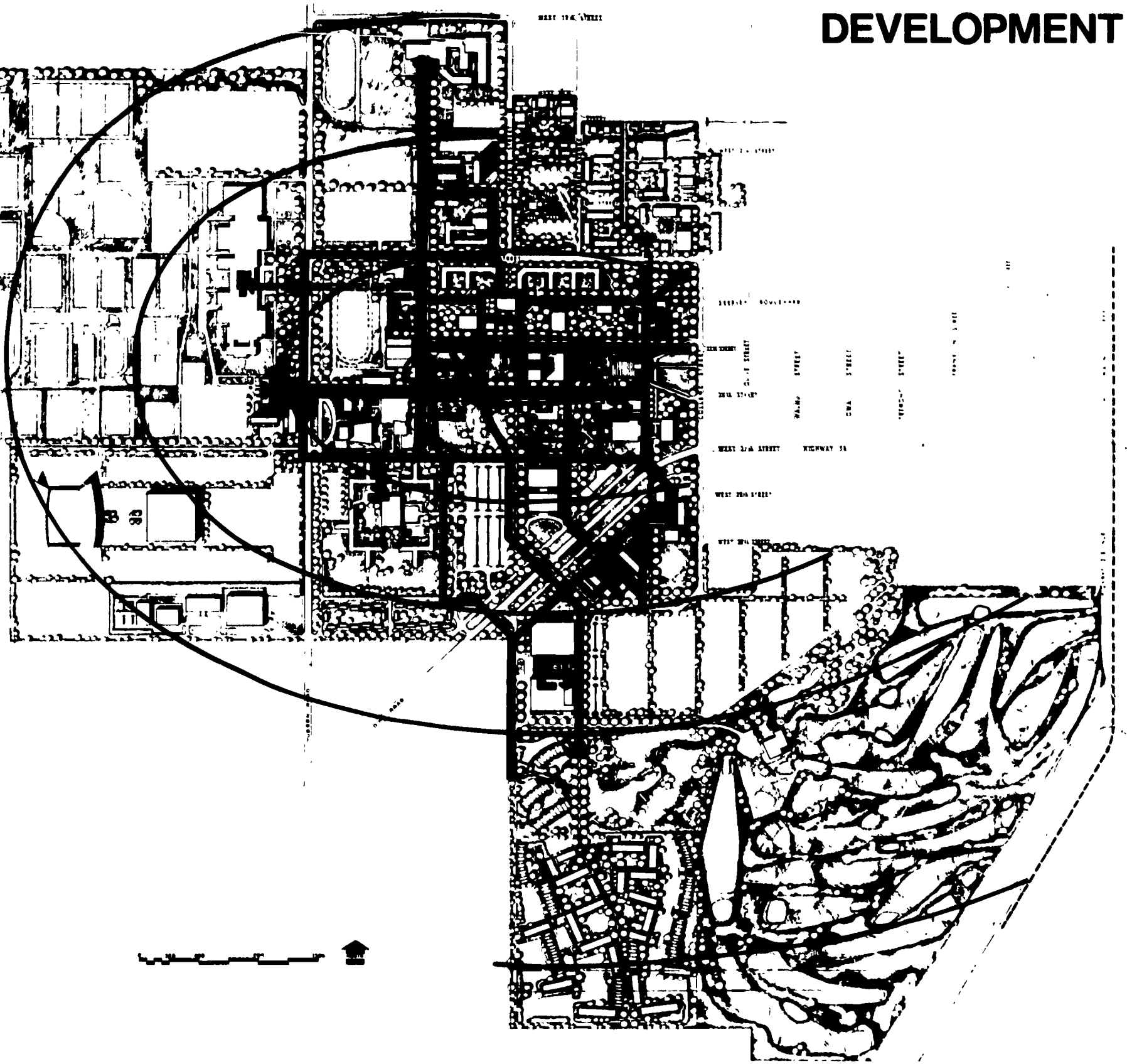
Actual site design must respond to the premises, concepts and precepts of the plan. The Development Study illustrates the incorporation of these elements and shows in typical fashion how the campus might look at the 15,000-student level of development. This is not necessarily the final or ultimate design study of the campus, but rather one response to the dictates of the campus plan. Detailed studies of each building, site and campus element may result in a somewhat different configuration of buildings, places, or corridors; however, the basic guidelines outlined in the premises, concepts, and precepts must be observed in each of these studies and must relate to the campus as a whole. It is the conscious interpretation of the plan elements that will create an environment effecting university goals.

The overlay combines the graphic delineation of the concepts of concentric hierarchy, connection and identification. The Concept of Accessibility, while not shown on the overlay, is self-evident in the study. The plan elements which enforce the concepts are general with regard to location and therefore may be slightly altered in subsequent studies. Their purpose is definite and unalterable.

DEVELOPMENT STUDY 1



DEVELOPMENT STUDY 1



CA
COMMU

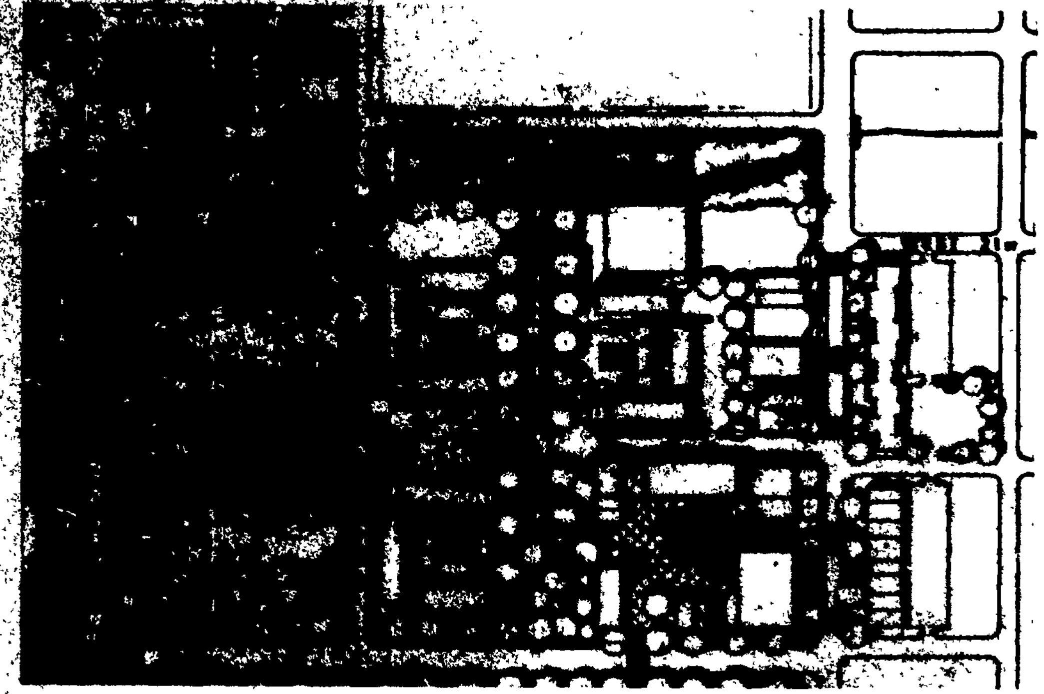
The campus and the community have a vested interest in the well being and development of one another. Achievement of balance and harmony in the relationships between these two diverse land uses is important to the establishment and preservation of a desirable total living environment. The impact of the campus on the community and of the community on the campus is great. This impact can complement and supplement or, if not given positive direction, can result in autonomous entities with conflicting images.

The full potential of the resources offered by each must be realized. The university is a focal point in the community. It is an educational center, but it is also a major employment, cultural, social and recreational center. The community offers vital support in the provision of housing, shopping, transportation and entertainment services to the university population. These forces for interaction reinforce the need for the university and community to work together to fulfill common goals.

The following recommendations are made as a measure to work toward compatibility between the university and the community and to establish appropriate guidelines for orderly growth and change of the land use.

General Land Use. The land use pattern proposed in the Comprehensive Plan for the Waterloo–Cedar Falls Metropolitan area is, in general, compatible with plans for university development. Except for specific points brought out in the following paragraph, those patterns should be followed. Recommendations for general land use surrounding the campus are that the vacant land west and south of the campus be developed as single family residential. At the intersection of Dike Road and Hudson Road development will be more [illegible] and will include high-density residential and commercial areas. The major commercial area adjacent to the campus will be concentrated in the Hill area. Older residential areas will be [illegible] and the better residential area east of the campus will be [illegible] as a single/two-family neighborhood.

[illegible] It is recommended that the block facing the campus [illegible] university-related facilities. [illegible] off-campus faculty [illegible] professional affiliated agencies or similar [illegible] should not be developed commercially. [illegible] include adequate open space and off-street [illegible] should be similar to and compatible with the [illegible] side of the street.



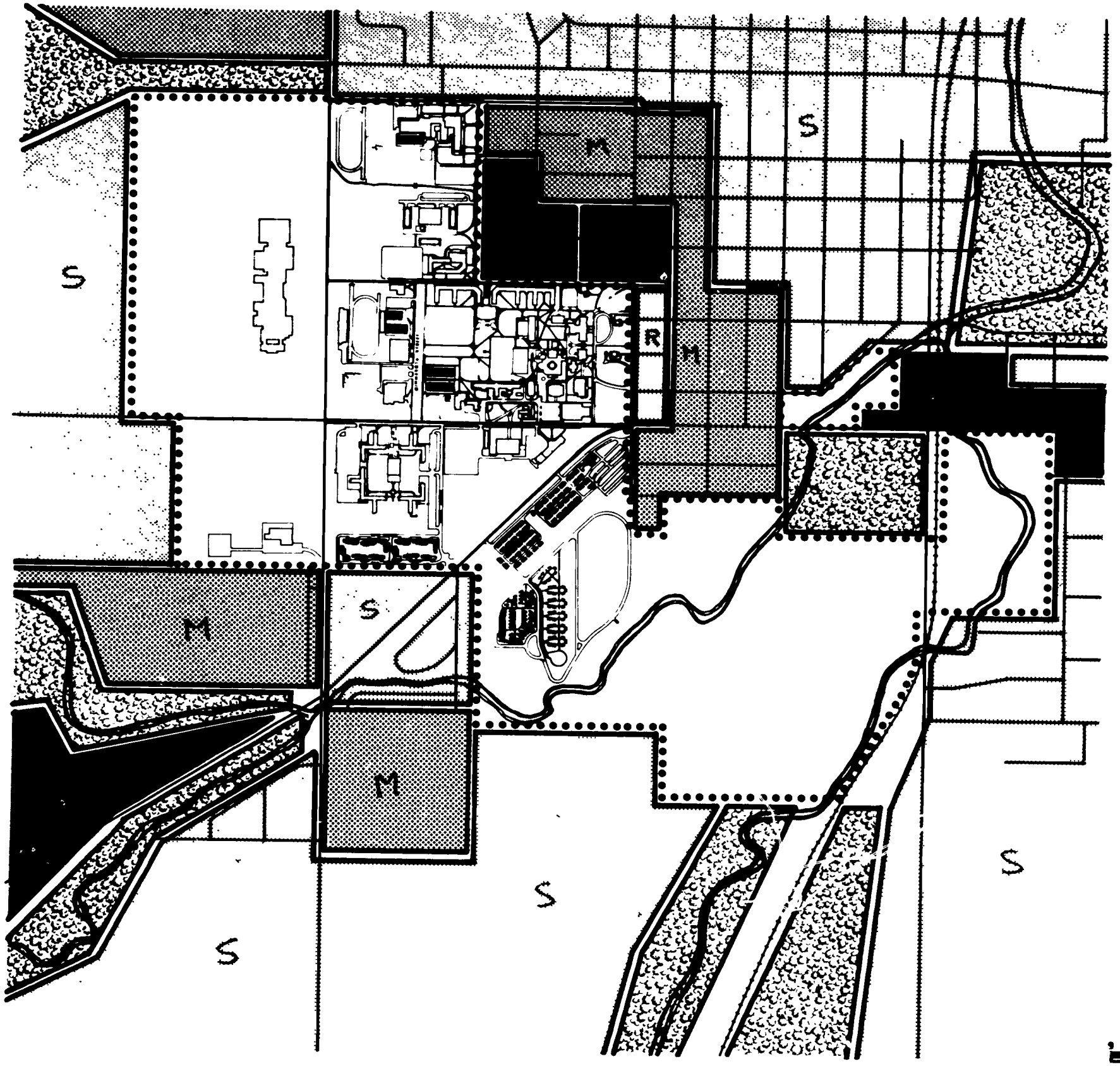
The Hill Area. Commercial expansion in the Hill area should be contained approximately within the existing west and south boundaries. Expansion can occur on vacant properties within the area. There is great potential for the development of the Hill as a "place," relating to the places and corridors of the university. As shown on the design study, a place could be established within the community by developing additional business facilities on the roof of a parking structure that would be built between the Bookstore and the College Street businesses. The corridor would cross 23rd Street, penetrate and end in this place. Such a solution would not only provide valuable and convenient sites for commercial expansion, but would also carry the environmental theme of the campus into the community, creating a strong sense of unity between the two.

Twenty-third Street. The residential area west of the business area and north of the campus should be developed in apartments of various types. Here, again, adequate open space, parking and recreation facilities should accompany development. One means of insuring the redevelopment of this area in accordance with university and community goals is for the university to purchase property as it becomes available and assemble tracts of suitable size for high-density development. Special deed restrictions would give the

university an option of reviewing and working out development plans with private developers. Should large enough areas be assembled, a redesign of the street system would be possible. This could improve vehicular and pedestrian circulation as well as increase the amount of useable land area. It is recommended that the university reserve 100 feet of the property north of 23rd Street as a buffer between the university and community, and to extend the park like area of College Street into this area. This will provide additional open space for the dormitories in the vicinity as well as an area for additional informal recreation for the residence hall students.

Land Use

The campus is located on the fringe on the urban area. Areas north and east of the campus are fully developed, while the areas south and west of the campus are primarily vacant. There is scattered development along Dike Road and Hudson Road southwest of the campus. The availability of open land has been an asset in that adequate land could be easily acquired for future expansion. With the exception of the Hill commercial area and a few university-related facilities such as the religious centers, the developed area is primarily residential. The residential area north of the campus between 23rd and 19th Streets, has a mixture of housing, both old and new, some well kept and some deteriorated. The area contains many student rooming houses and faculty homes. Essentially, the same can be said for the blocks east of the campus from College to Walnut. There is probably more deteriorated housing east than north. Although there are several sound units and some of the older houses have been rehabilitated, most of the houses are beginning to deteriorate due to age and lack of maintenance. Beyond the areas defined above, there is a substantial amount of faculty housing in good condition.



LAND USE

- R — University Related Facilities
- University Related Housing
- Commercial
- M — Multi-Family Residential
- S — Single-Family Residential
- Public / Open Space

NORTH

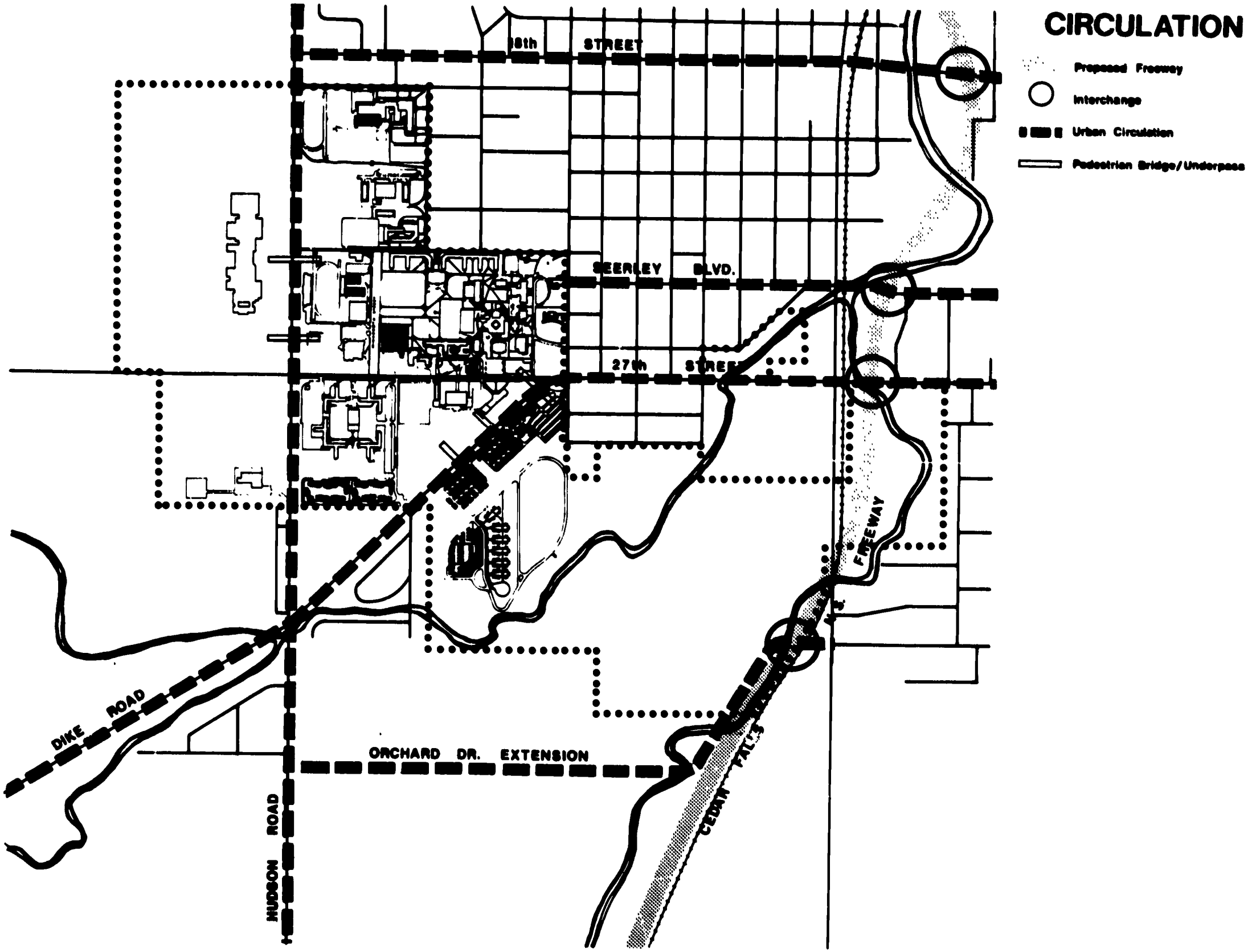
Circulation

Urban circulation has been an important factor in the design of the campus plan. The condition of permanence and continuing improvement of State Highways 57 and 58 required giving special consideration to these thoroughfares in the design solution of the campus vehicular and pedestrian circulation. These highways provide the primary access to the campus, and from them major access points into the campus are taken. These highways not only influenced basic circulation patterns, but also were a factor in the location of certain land uses, especially those with public/community orientation.

At some time in the future a freeway system will be developed to replace the system of state highways. These freeways are expected to reduce traffic on the two highways which pass through the campus. However, with these freeways from 10 to 15 years away from completion, they cannot be considered in the solution of circulation during the immediate planning period.

Seerley Boulevard is a potential accessway to the campus. This street should be finished throughout to the standard existing in its central portion.

The remaining urban thoroughfares are College, 23rd and 27th Streets. College Street should remain primarily as it exists today. It can provide access to the University Union complex and to areas in the northeast campus area. It will also be the main street for the Hill. Twenty-third Street should be de-emphasized to minimize pedestrian/vehicular conflicts in the Hill area and between the two campus areas it divides. East/west traffic should be directed to 27th Street, or to the proposed improved 18th Street.


CIRCULATION
Proposed Freeway
Interchange
Urban Circulation
Pedestrian Bridge/Underpass
18th STREET
BEERLEY BLVD.
27th STREET
FREEWAY
DIKE ROAD
ORCHARD DR. EXTENSION
HUDSON ROAD
CEDAR FALLS

This report is but another tool to help guide the evolution and growth of the university. Goals, policies, programs and plans must be altered as growth proceeds and must respond to the most current educational philosophy and technology. As the university moves through various time frames, the basic concepts must not be lost.

An excellent procedure for updating assumptions and projections has been established in the course of this study. The administration, planning committee, faculty and students, through appropriate channels, should periodically ask themselves the questions that determine basic goals and policies. Computer programs for analysis of academic student composition and requirements should be reviewed periodically. The results should aid the administration in daily decision-making regarding university development. They will also provide a sound basis for the continuing planning function of plan review and adjustment.

One of the best means of insuring proper implementation of the plan is to maintain responsibility at a high administrative level. The implementation of the plan will, to a large degree, depend upon continued administration of planning functions and processes. The university should continue to use the Planning Committee to advise on all matters relating to planning. The university should also retain competent planning and institutional research staff members to research and serve in an advisory capacity on these matters. It is strongly recommended that the university, under the division of

Planning and Research (Technical Services and Planning), include a planner, architect and landscape architect on its staff to assist in the implementation of the campus development plan. These people could attend the everyday administration of planning matters, and direct their professional backgrounds toward the study and solution of university facility and environmental problems. Because of the size of the institution and realization of limited staff funds, the planner should also have the responsibility and capability of implementing the system of computer programs. This team, under the direction of the designated university planning official, should perform the following advisory and administrative functions:

Detailed programming of buildings and other physical plant facilities.

Review all projects for conformity to the principles of the plan.

Be instrumental in the preparation of capital budgets and staging of campus development.

Selection of consultants as needed.

Coordination with city, county, metropolitan and state agencies in planning and other cross-jurisdictional matters.

Analysis and projection of trends in educational program, student composition and total university needs for the target enrollment.

The effectiveness with which the physical environment is made to respond to the precept of *the optimum learning environment* will depend not only on the organization of space but also on the quality and sensitivity of the components to the whole. This can be equated as a function of the design quality of each project. Unity of the campus must be obtained without sacrificing the variety needed to stimulate the senses and the possibility of people interaction. Permitting variety in architectural expression can result in the most creative and functional building solutions. But, without an accompanying demand for the highest quality design, it can also result in chaos or a monotony of environmental ineptness. Every project must be considered as a part of the total campus. Great care must be taken to avoid signature and monument architecture that would contrast to the point of conflicting with that of existing buildings.

Balance and harmony must prevail in the combination of plan elements. The university should initiate, as needed, more detailed studies to guide in the phasing and implementation of the plan. The studies should include overall landscape and graphic guidelines. Landscape development of the campus is critical to achieving the desired unity, balance and harmony. It must go beyond the field of plant materials to include material usage, outdoor furnishings, lighting, parking lot design and graphics of various kinds.

A final consideration in the implementation of the plan is the reinforcement of a working relationship between the university and the community. A great opportunity for the creation of certain environmental aspects that would greatly benefit both parties is present. The acceptance of appropriate responsibilities can turn these opportunities into realities.

The university and local urban authorities should form an implementation procedure similar to the following:

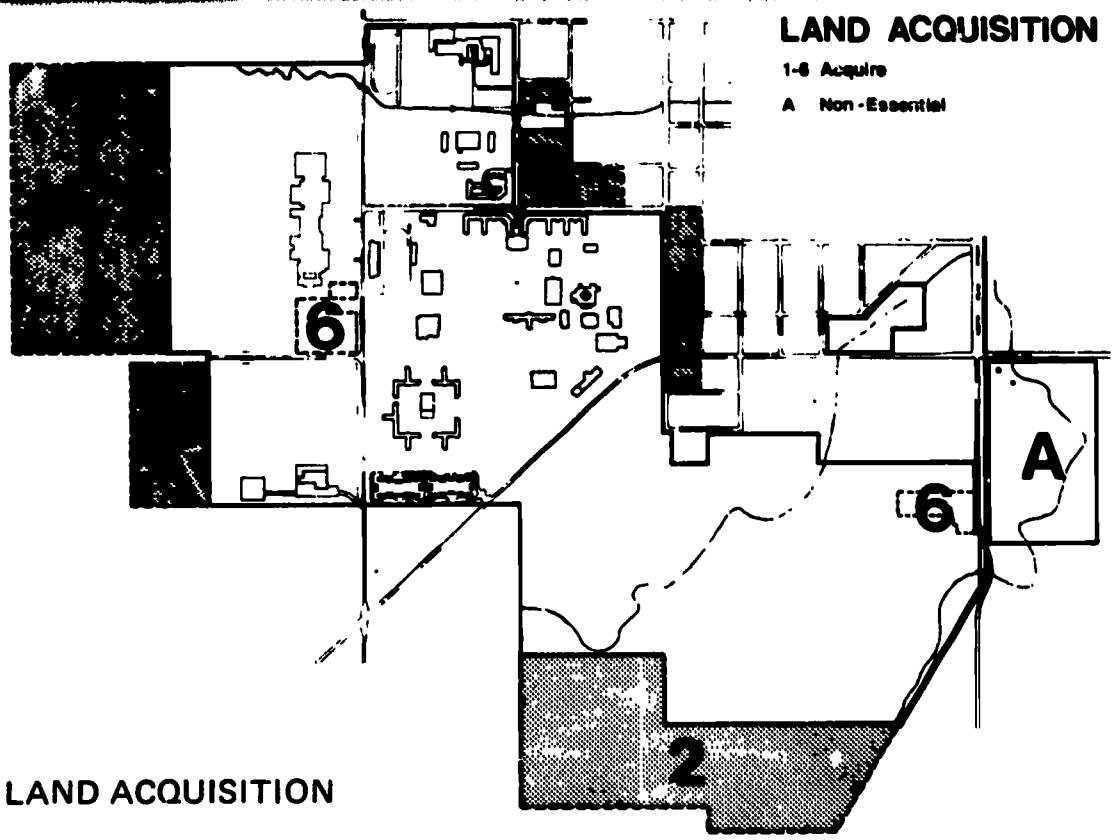
Cooperation in the establishment of traffic control methods where conflicts exist between urban and university traffic.

Development of special zoning districts and land use regulations to implement development of the Hill area with its proposed commercial and high-density residential, as well as an area of university-related facilities along College Street.

Development of urban access, freeways and new roads and highways in and around the university.

Development of facilities for common university/community use.

These are just a few of the areas where coordination and cooperation will be required. These, plus all problems relating to both campus and urban areas, must be attacked in the spirit of knowing that a greater university leads to a greater community and a greater community leads to a greater university.



LAND ACQUISITION

Property now owned by the university and available for development equals approximately 550 acres. Assuming that the allowable density guidelines will be followed, the campus would occupy 545 acres. However, due to the location of certain land uses and proposed freeway development, purchase of additional land is necessary. Forty acres (1) must be purchased on the west to fulfill the physical education requirement. Twenty acres (3), in the vicinity of the Physical Plant shops, should be acquired for the future stadium-arena complex and required parking. Approximately 80 acres (2) will be necessary on the south in order to meet the requirements for the golf course and married student housing. As a hedge against the possibility that future programs would develop displacing some of the proposed land use, the university should consider purchasing approximately 40 additional acres (4) to the west. In order to insure some measure of control over the community area north of 23rd Street, the university should acquire various parcels of land as they become available (5). This land may be resold later after a use determination has been made and appropriate development guidelines have been established. The two small parcels (6), surrounded by university property, should be acquired as soon as feasible for continuity of university development.

If arrangements can be made to carry out the trust accepted when the land was given to the university, the existing golf course (A) should be made available for purchase. The reasons dictating this are that 300 feet will be lost on the west to the proposed freeway, and that the freeway will isolate the remaining land area from the university.

DENSITY

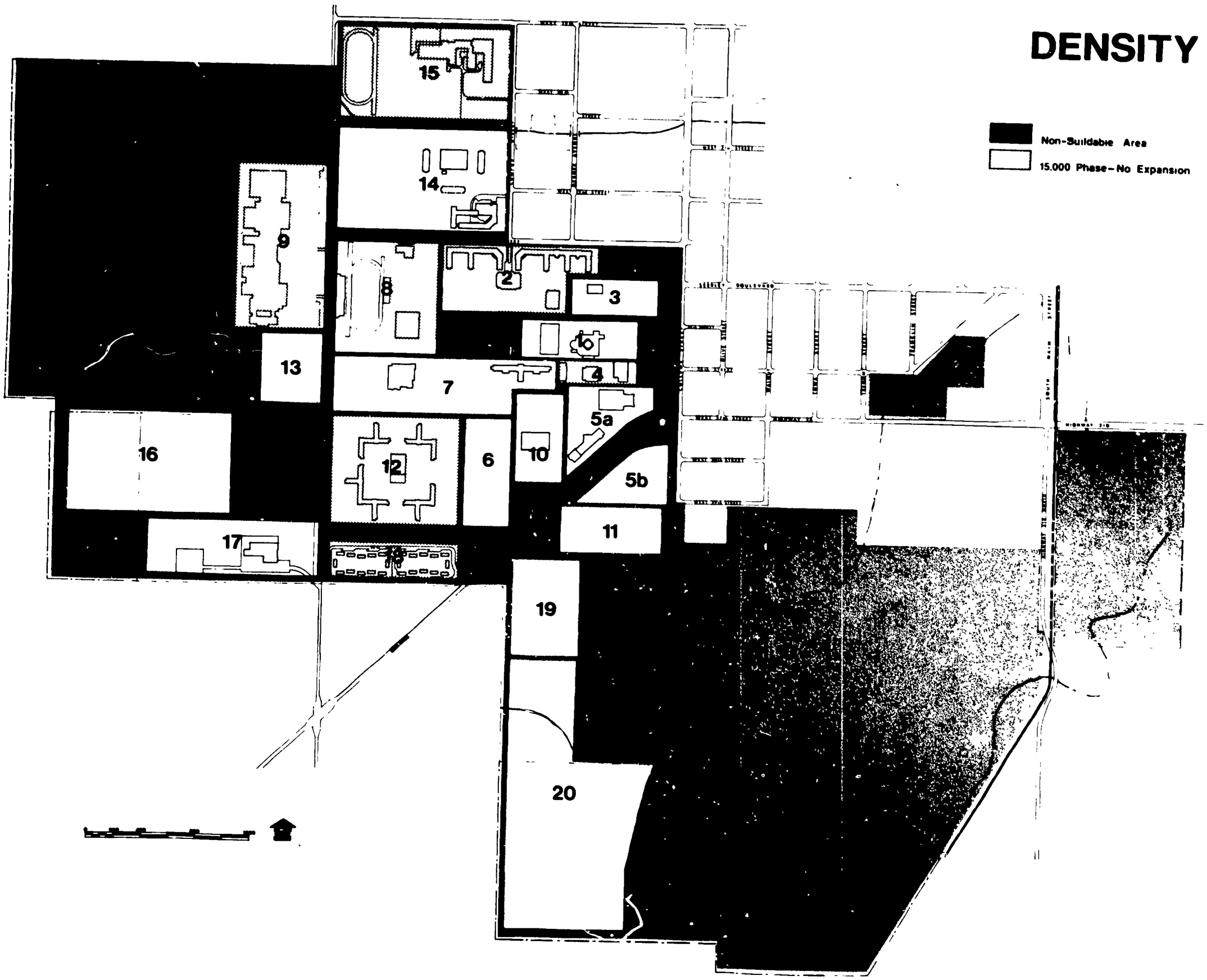
Density is a device of implementation used to control buildings and their relationship to land area. The recommended densities were selected in accordance with the environmental objective for each area.

Floor Area Ratio (FAR) and Ground Area Coverage (GAC) are terms used to describe the measurement of density. FAR is the ratio of gross floor area within buildings to the land area in the zone in which they are located. GAC is the ratio of land covered by buildings (i.e., by the first floor of a building) to the total land area in the zone.

On the accompanying map the colored area indicates the no-building zones within the university's property lines. The dotted area represents those areas wherein the building development will not change significantly during the planning period. The numbered areas correspond to the accompanying chart. Although the figures are not absolute, they indicate the relative efficiencies of utilization of various areas and the saturation levels for different activities. The four single student housing areas are notable in that the existing areas will maintain a relatively low FAR, while the proposed areas are shown at a much higher FAR and demand vertical development.

ZONE		EXISTING GAC	ALLOWABLE GAC	EXISTIN FAR	ALLOWABLE FAR
1	CORE	.25	.60	.55	3.00
2	RESIDENCE/ MEDIA	.20	.40	.65	1.00
3	BUSINESS	.05	.25	.15	1.50
4	BEHAVIORAL SCIENCE	.65	.65	3.10	3.10
5a-b	NATURAL SCIENCES	.15	.50	.25	1.50
6	FUTURE COLLEGE	.00	.40	.00	1.00
7	FINE ARTS & HUMANITIES	.10	.35	.20	.45
8	EDUCATION/ FUTURE COLLEGE	.15	.35	.15	1.25
9	PHYSICAL EDUCATION	.00	.40	.00	.60
10	ADMINISTRATION	.15	.50	.25	1.00
11	RESIDENCE	.00	.25	.00	2.50
12	RESIDENCE	.15	.15	.40	.40
13	RESIDENCE	.00	.25	.00	2.50
14	RESIDENCE	.10	.20	.30	2.00
15	LABORATORY SCHOOL	.10	.20	.15	.30
16	STADIUM/ARENA	.00	.25	.00	.70
17	PHYSICAL PLANT	.05	.30	.05	.50
18	MARRIED-STUDENT RESIDENCE	.15	.15	.15	.15
19	AUDITORIUM/ CONTINUING EDUCATION	.00	.50	.00	1.50
20	MARRIED-STUDENT HOUSING	.00	.25	.00	.75

DENSITY


Non-Suitdable Area
15.000 Phase – No Expansion
15
14
9
8
2
3
10
13
7
4
5a
16
12
6
10
5b
11
17
19
20

UTILITIES

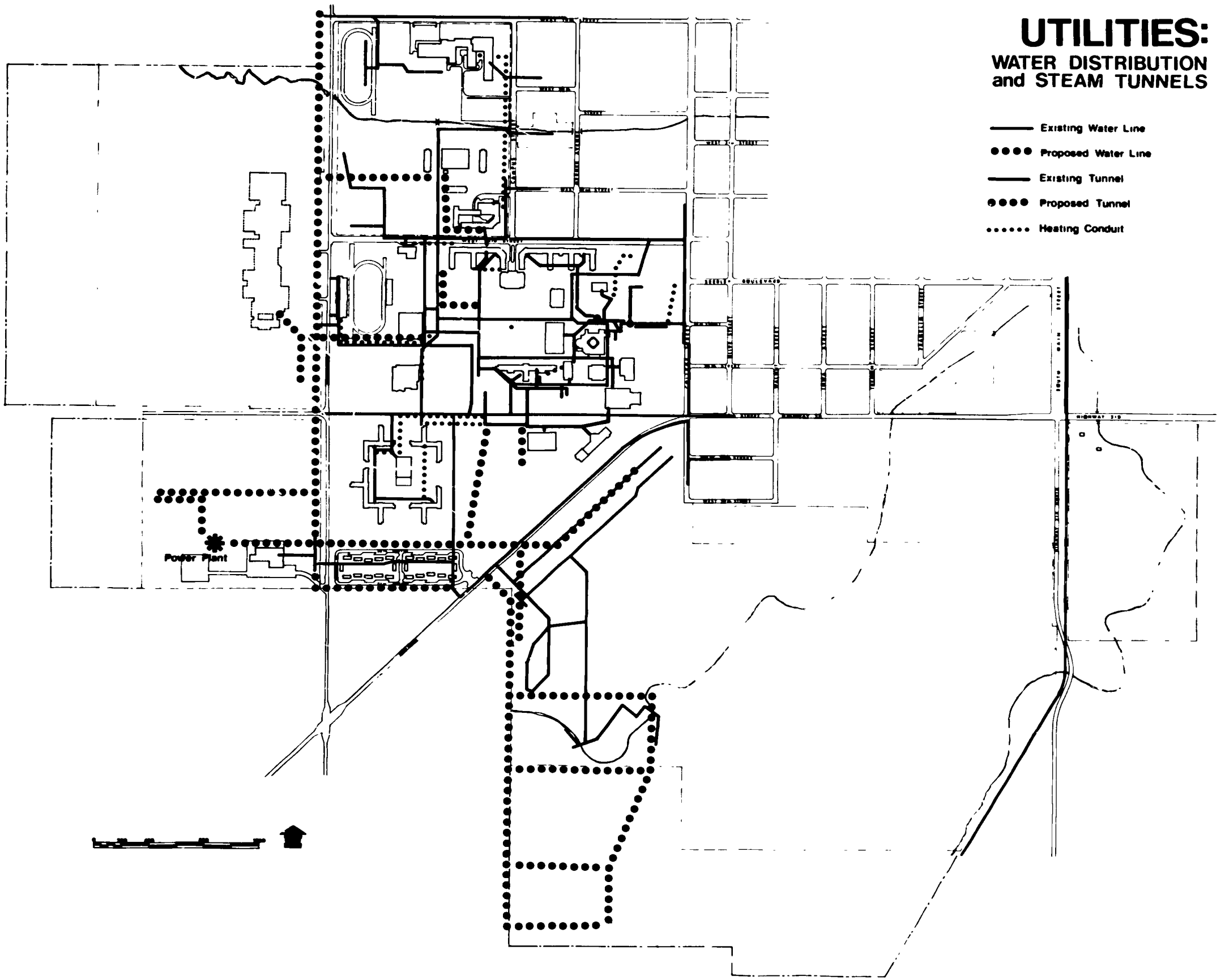
The utility plans, as shown in this study, are conceptual in their attempt to lay out the general routing and extent of lines required to serve both the existing and future development. These plans must be studied in depth and designed at the time various buildings and site development are programmed for construction. It was not within the scope of this study to undertake preliminary utility engineering with loading, line sizes, grades, pressures, and other related engineering calculations. It is not intended that these maps be used as implementation documents, but rather to serve as checks to prevent conflicts within the plan. The university should initiate detailed engineering studies of each utility system.

Water Distribution and Steam Tunnels

Steam Tunnels. Having realized numerous problems resulting from the location of the existing heating plant, the university commissioned a special study to determine the feasibility of relocation. The engineers' recommendation was to site all future expansion west of the Physical Plant shops building and phase out the existing plan over a period of several years. Continued use will be made of all existing tunnels. The expense of tunnels has been a determinant in their location to help minimize the required length of new lines. Where possible, extension will be made to an existing tunnel to expand its service area.

Water Distribution. The addition of north/south lines is required to completely loop the system around the central campus. Extensions from these lines will be made to areas that are presently not served.

UTILITIES:
WATER DISTRIBUTION and STEAM TUNNELS



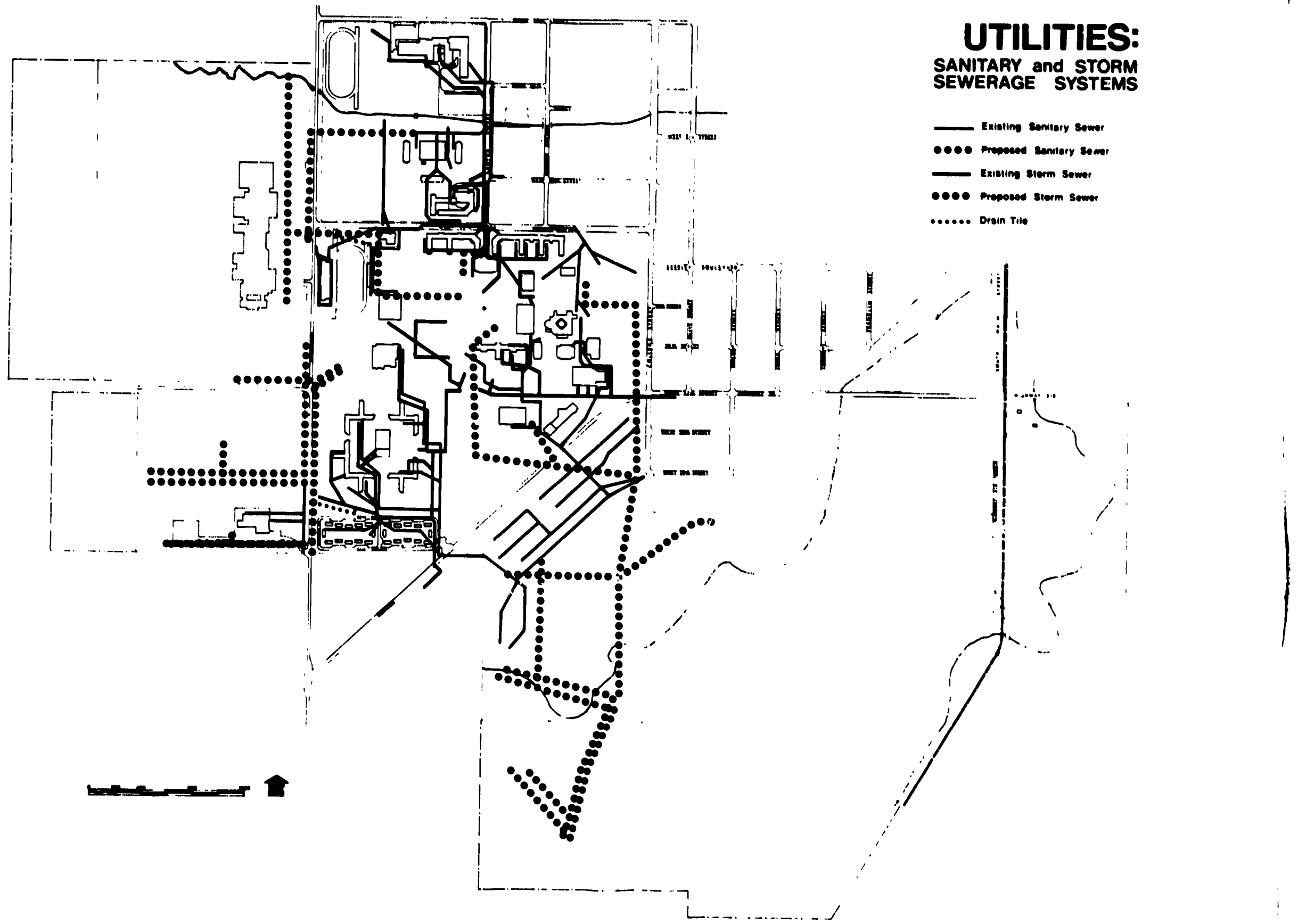
Sanitary and Storm Sewerage Systems

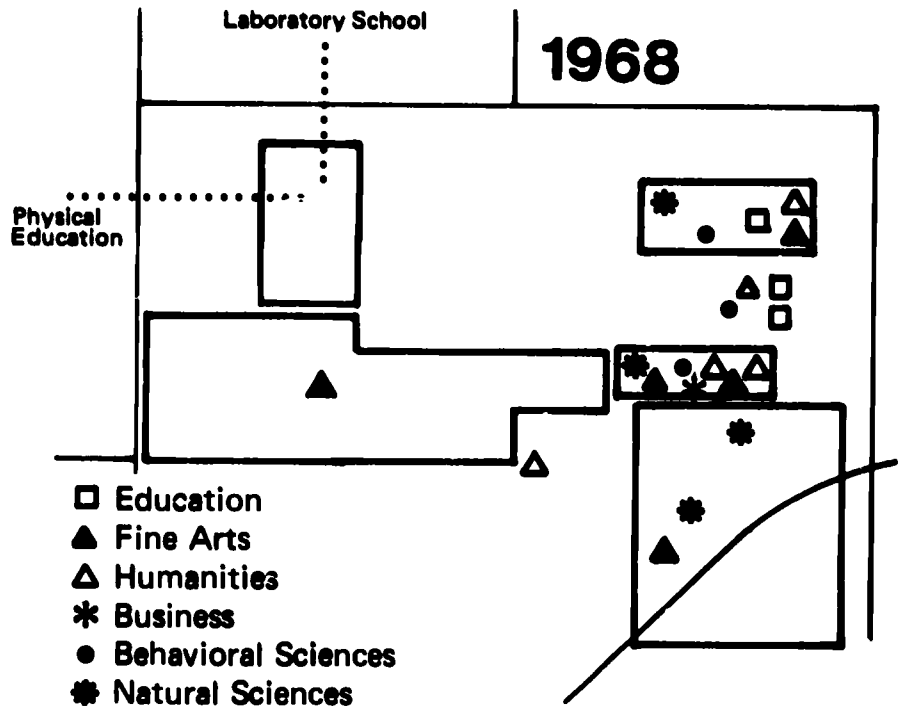
Sanitary. The existing sanitary system, shown on the accompanying map, will accommodate anticipated growth in the main campus area. Major lines and their collection trunks have been shown in areas of future development.

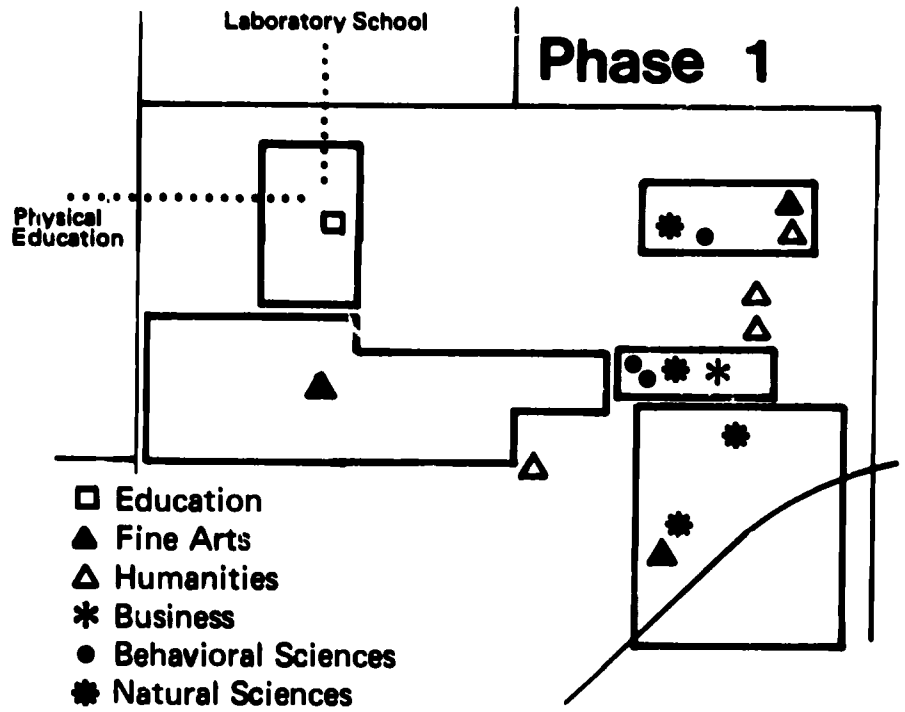
Storm. Storm sewer collection lines into the main campus area and future development areas have been added to the existing system. Major lines to handle the runoff of the proposed areas of surface parking will be necessary.

UTILITIES:

SANITARY and STORM SEWERAGE SYSTEMS





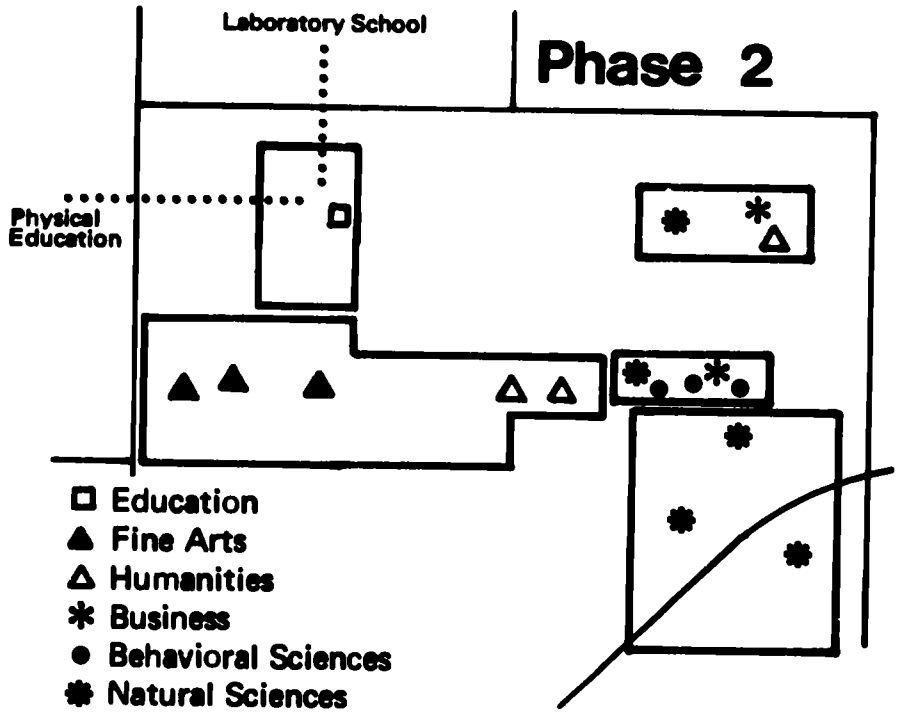


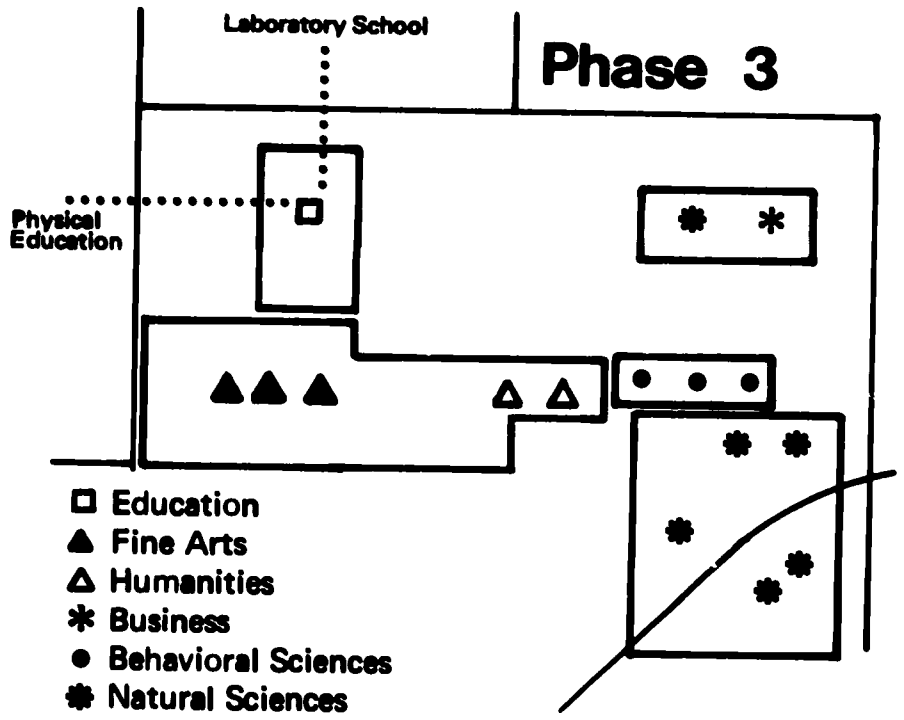
STAGING

Successful implementation is dependent upon a planned and orderly transition of the existing campus to that planned for an ultimate enrollment. The plan will not be realized overnight, however, as the university grows, there will be a continuous program of construction, some of which will require the removal of existing facilities. Careful staging of new facilities can be an effective tool for both physical implementation of the plan and fiscal planning of new facilities.

The accompanying graphics show schematically the evolution of the colleges in stages between now and the 15,000-student level. The circulation system, landscape development, and rehabilitation of existing facilities must necessarily accompany the construction of new buildings. The university's planning staff and administration should study the plan elements with a view toward the priority that would best fulfill current needs and, at the same time, be most effective in progressive implementation of the plan.

In staging, priority is probably the most important consideration. It would be quite possible to establish a pattern for phasing into and out of buildings at this time. It is without doubt an exercise that would be repeated many times before complete plan implementation is accomplished. As the educational program is reviewed and updated, today's needs may be deferred as others become more pressing.





The following table indicates the total net square footage required at each phase of growth in the academic, support, and housing categories:

TOTAL PROJECTED NEEDS AT EACH PHASE

Number of Students	Academic	Support	Housing
8,000	496,640	486,640	824,000
10,000	620,800	608,300	1,030,000
12,500	776,000	760,375	1,287,500
15,000	931,226	912,550	1,546,000

These graphics are concerned primarily with the main academic core. However, the laboratory school and new physical education facilities are a part of the College of Education. Physical education will continue to develop in all three phases on the site west of Hudson Road and will phase out of its present location. The laboratory school, located north of the core, will continue to grow in that location