

GEORGE MASON COLLEGE  
OF THE UNIVERSITY OF VIRGINIA

MASTER PLAN  
PRELIMINARY REPORT  
JANUARY 1968

JOHN CARL WARNECKE & ASSOCIATES  
ARCHITECTS & PLANNING CONSULTANTS  
WASHINGTON, D. C.



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John Carl Warnecke and Associates  
Architects and Planning Consultants  
3039 M Street, Northwest  
Washington, D. C. 20007

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I. Preface

A. Intention and Scope

George Mason College was established in 1956 as a two year community college to serve the rapidly increasing need for higher education in Northern Virginia. In 1966, the College was elevated to the status of a four year, degree granting institution and now has, by virtue of its proximity to the Nation's Capital, the unique opportunity of becoming a truly great regional university.

This report is a response to the concern expressed by the University Administration that the physical development of George Mason College be directed immediately on a course that would insure the proper accommodation of demands imposed by future growth.

This document represents the organization of an overall plan for the development of the campus to serve an estimated 15,000 students by the year 1985. The plan is a general guide to the land use and positional relationships of the major site demands including parking, circulation patterns and open space to be preserved. Since it is impossible to foresee precisely the



demands of the University as it will grow during the next two decades, the plan must be considered as a flexible guide which will be subjected to continuing refinement as individual projects are developed.

In 1956, the Board of Visitors authorized the establishment of a two year College of the University of Virginia in Northern Virginia which opened the following year at Bailey's Crossroads with 17 students.

The town of Fairfax purchased the present site of 147 acres and donated it to the University of Virginia in 1959. At approximately the same time, the University College at Bailey's Crossroads was officially established as a branch of the University, and became known as George Mason College of the University of Virginia.

A Master Plan was prepared in 1965 to accommodate the demands of a two year junior college serving 2,500 students. The first group of four buildings was completed in September of 1964 and George Mason College moved to its new campus on that date with a faculty of 36 and a student body of 137.

Early in 1966, the General Assembly, acting on reports from the



B. History of Development

George Mason College is the outgrowth of an extension center established some 20 years ago as the Northern Virginia branch of the Extension Division of the University of Virginia. In 1956, the Board of Visitors authorized the establishment of a two year College of the University of Virginia in Northern Virginia which opened the following year at Bailey's Crossroads with 17 students.

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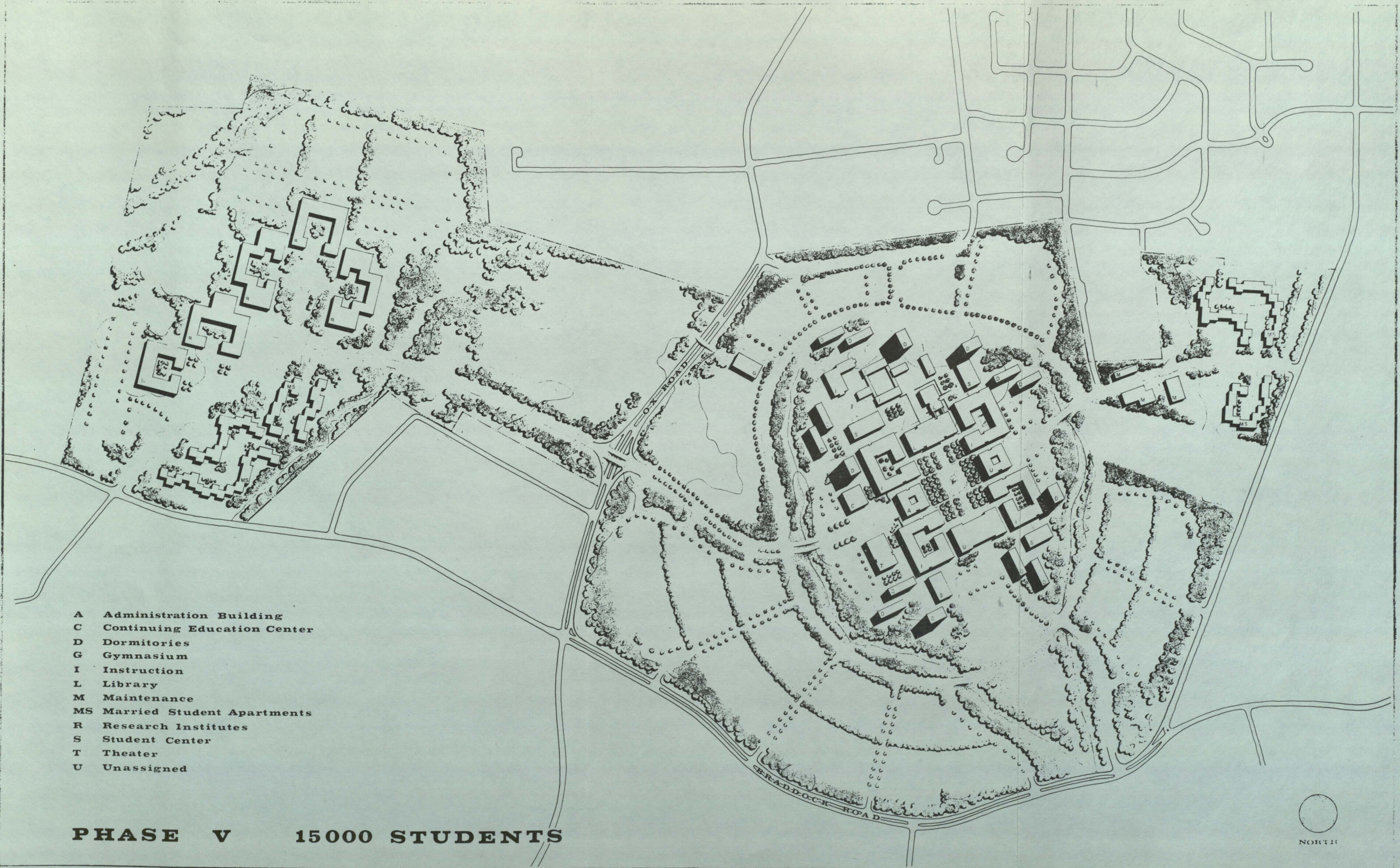
Early in 1966, the General Assembly, acting on recommendations



of the Board of Visitors and the Higher Education Study Commission, authorized George Mason College to become a four year college with the right to grant degrees and offer graduate study in various fields. Soon thereafter, the Planning Department of the University of Virginia worked out an expansion program and land requirement plan based on a projected enrollment of 15,000 students which recommended the acquisition of approximately 450 acres adjacent to the present site. Arlington County, Fairfax County and the cities of Alexandria and Falls Church have subsequently committed a total of \$3,000,000.00 for this acquisition which is now underway.

The present Master Plan Study was authorized in June of 1967 with the objective of providing an overall guide for the continuing expansion of the College in a logical and efficient manner.





- A Administration Building
- C Continuing Education Center
- D Dormitories
- G Gymnasium
- I Instruction
- L Library
- M Maintenance
- MS Married Student Apartments
- R Research Institutes
- S Student Center
- T Theater
- U Unassigned

**PHASE V 15000 STUDENTS**

**GEORGE MASON COLLEGE**  
OF THE UNIVERSITY OF VIRGINIA, FAIRFAX, VIRGINIA

**MASTER PLAN STUDY**  
SCALE: 1" = 200.00'

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C. Summary of Recommendations

The academic plan for George Mason College which has been approved by the Board of Visitors of the University of Virginia proposes to divide the student body of 15,000 into five Co-ordinate Colleges each serving approximately 3,000 students. Each College will be composed of academic space, residential dormitories and a student center. Each College will contain complete facilities to teach the basic courses in the lower division and specialized facilities for upper division and graduate work in the specific fields toward which each College will be oriented. Certain facilities such as the Library and Administration Building which cannot be economically or functionally decentralized will be provided for the University as a whole. Students in any one College may freely elect courses in any of the other Colleges.

Recognizing the Library to be the most significant central element in any university plan, it is recommended that the present Library be expanded to form one focal point of the new development.

The present buildings including the new Arts and Sciences



Building will provide adequate space to serve as the nucleus of the first College. The four remaining Colleges will be organized as independent quadrangles and will be grouped around a larger open space or 'Yard' extending south from the expanded library. Buildings serving common University functions such as the Library, Administration Building and Student Activities Center will separate the Colleges and provide major accents which give significance to the 'Yard'.

The main entrance to the Campus will be from Ox Road and the drive will terminate in an entrance plaza surrounded on three sides by the University Administration Center, the Northern Virginia Center for Continuing Education, and the Theater of the future College emphasizing the visual and performing arts. The Theater and Arts Center is strategically located to make it convenient and attractive as a center for the cultural life of Northern Virginia.

The vast areas of parking necessary to accommodate the bulk of the student body have been concentrated at three points on the periphery of the site and separated by areas of open land which can be utilized for athletic fields. The



central campus will be restricted to pedestrian traffic with only service vehicles and limited staff parking permitted within the inner ring road.

Parking requirements have been estimated from analyses of regional characteristics which point to the continued dependence upon automobiles as the major means of transportation.

Analysis of the topographical characteristics of the site indicates that the high ground in the center of the property is well suited to the expansion of the central campus and parking, circulation and open space can be developed while preserving the wooded ravines which are one of the most attractive natural features of the site.



## II. Regional Analysis

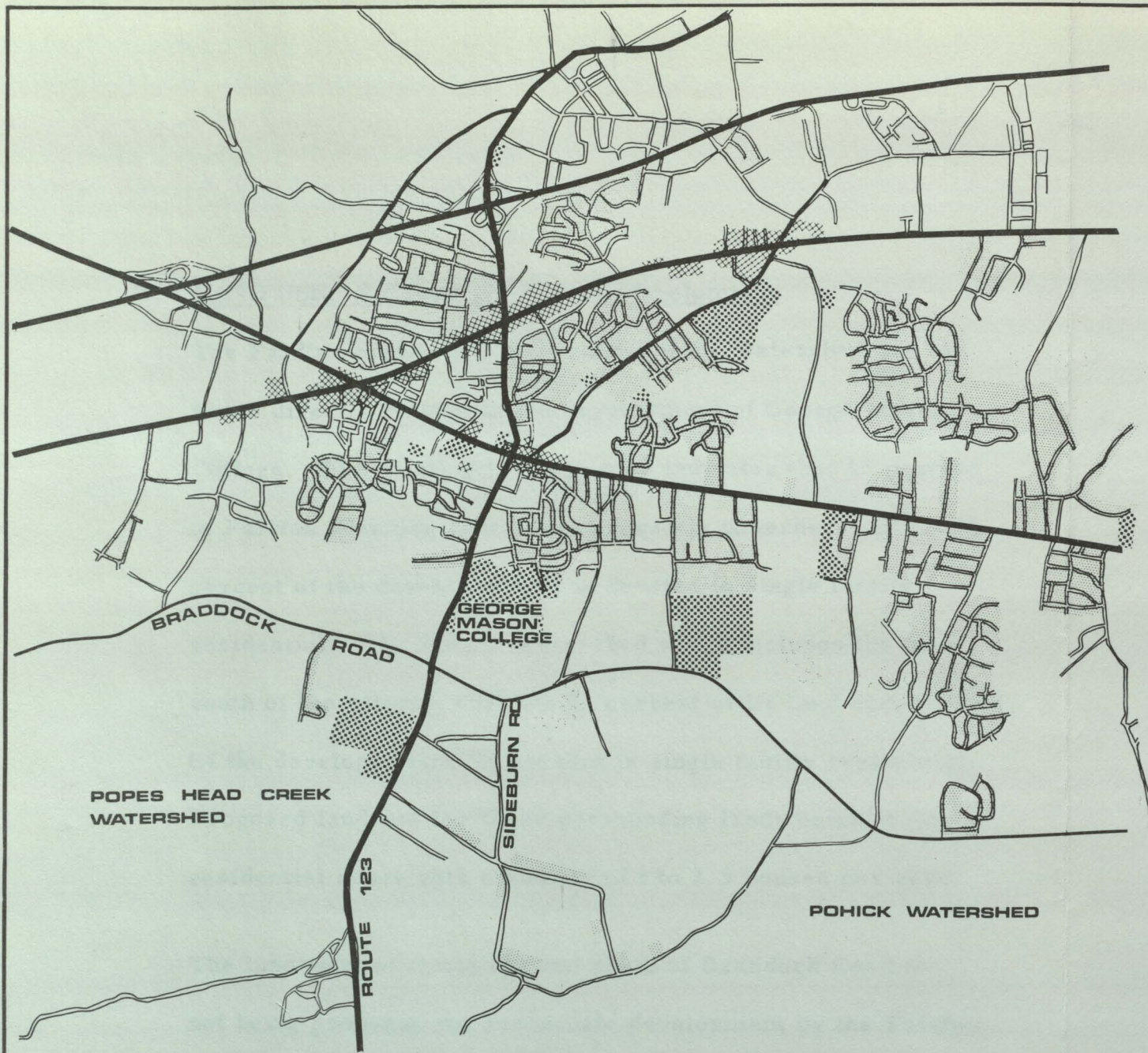
### A. Location and Character of Region

George Mason College is located in Fairfax County, part of the fast growing Washington Metropolitan Area. It will primarily serve Northern Virginia region which accounts for over one quarter of the Washington Area's total population.

This region had a population of 800,000 in 1966 and is expected to double this number by 1985. New growth will basically occur on the now urban fringe at increasingly greater distances from the downtown center. New transportation routes are planned which will provide convenient access to all points in the region.

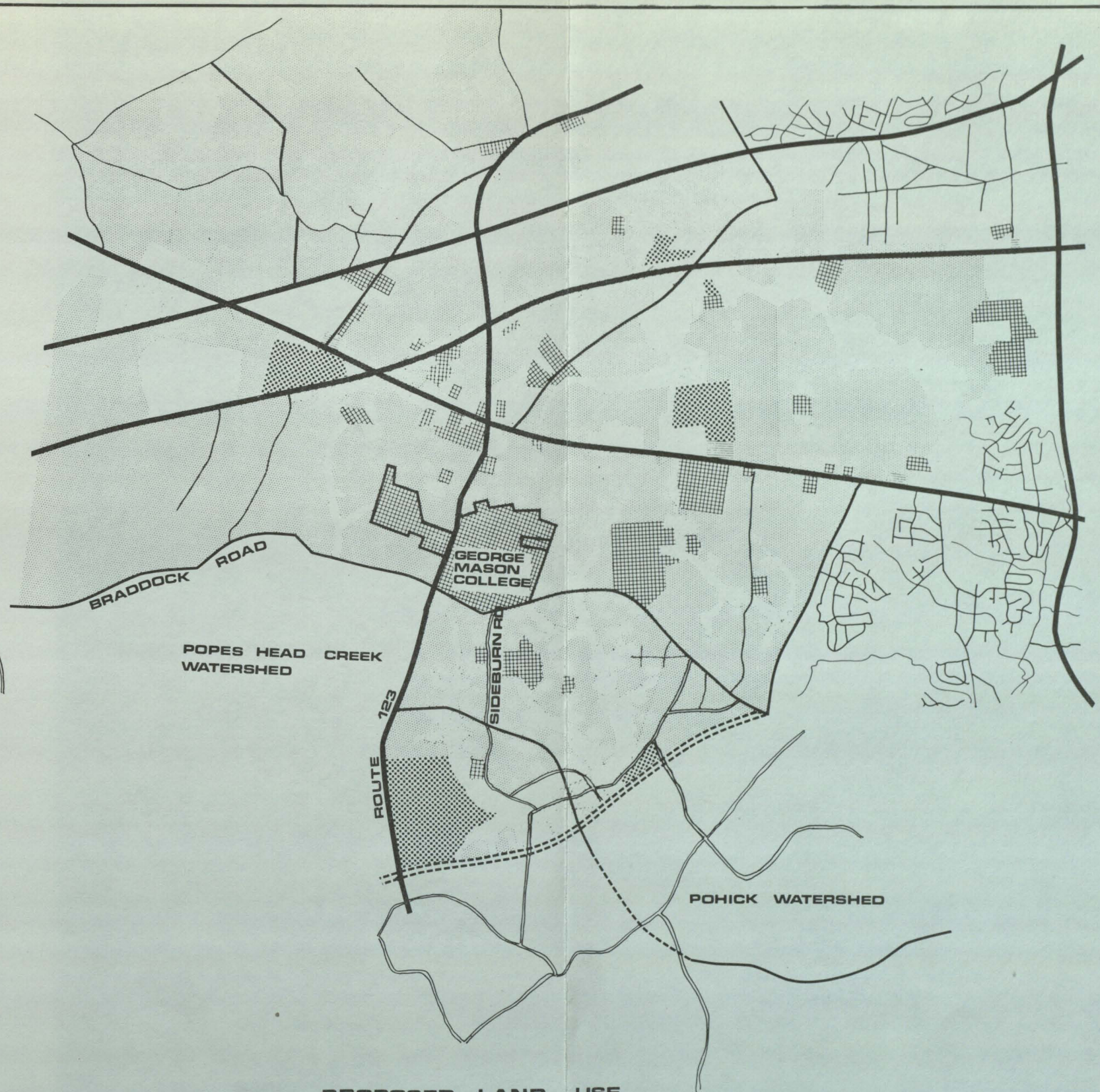
These trends are apparent in an analysis of the area immediate to the George Mason Campus. Located on the south boundary of the Fairfax Planning District, the campus is bordered by relatively undeveloped land. The District's population in 1966 was estimated at 38,000. The projected population in 1975 is 60,000 to 70,000. By 1985, if the projection for the district is realized, the District will have a population of 75,000 to 80,000. The following discussion of land use and transportation reflect this population growth.





**EXISTING LAND USE**

- RESIDENTIAL
  - SINGLE FAMILY
  - MULTIPLE FAMILY
- APARTMENTS
- DUPLEX HOUSING
- COMMERCIAL
- INDUSTRIAL
- INSTITUTIONAL
- PARKS



**PROPOSED LAND USE**

- RESIDENTIAL
  - SINGLE FAMILY
  - MULTIPLE FAMILY
- COMMERCIAL
- NEIGHBORHOOD
- HIGHWAY
- INDUSTRIAL
- INSTITUTIONAL
- PARKS



B. LAND USE: Existing and Future Development

The Fairfax Planning District and Pohick Watershed are the areas directly related to the development of George Mason College. The existing land use map indicates that 63 percent of Fairfax Planning District is presently underdeveloped. 93 percent of the developed land is devoted to single family residential. The Pohick Watershed which includes the land south of the campus still has 87 percent of its land undeveloped. Of the developed land 97 percent is single family residential. Proposed land use for these surrounding lands establishes residential zones with a density of 1 to 2.5 houses per acre.

The land west of Route 123 and south of Braddock Road is not being proposed for immediate development by the Fairfax County Planning Commission. This position is being taken due to the lack of sewage facilities and to insure the total development of the Pohick Watershed. Therefore, the lands north, east, and south of the campus will be more densely developed and be a major source of students.

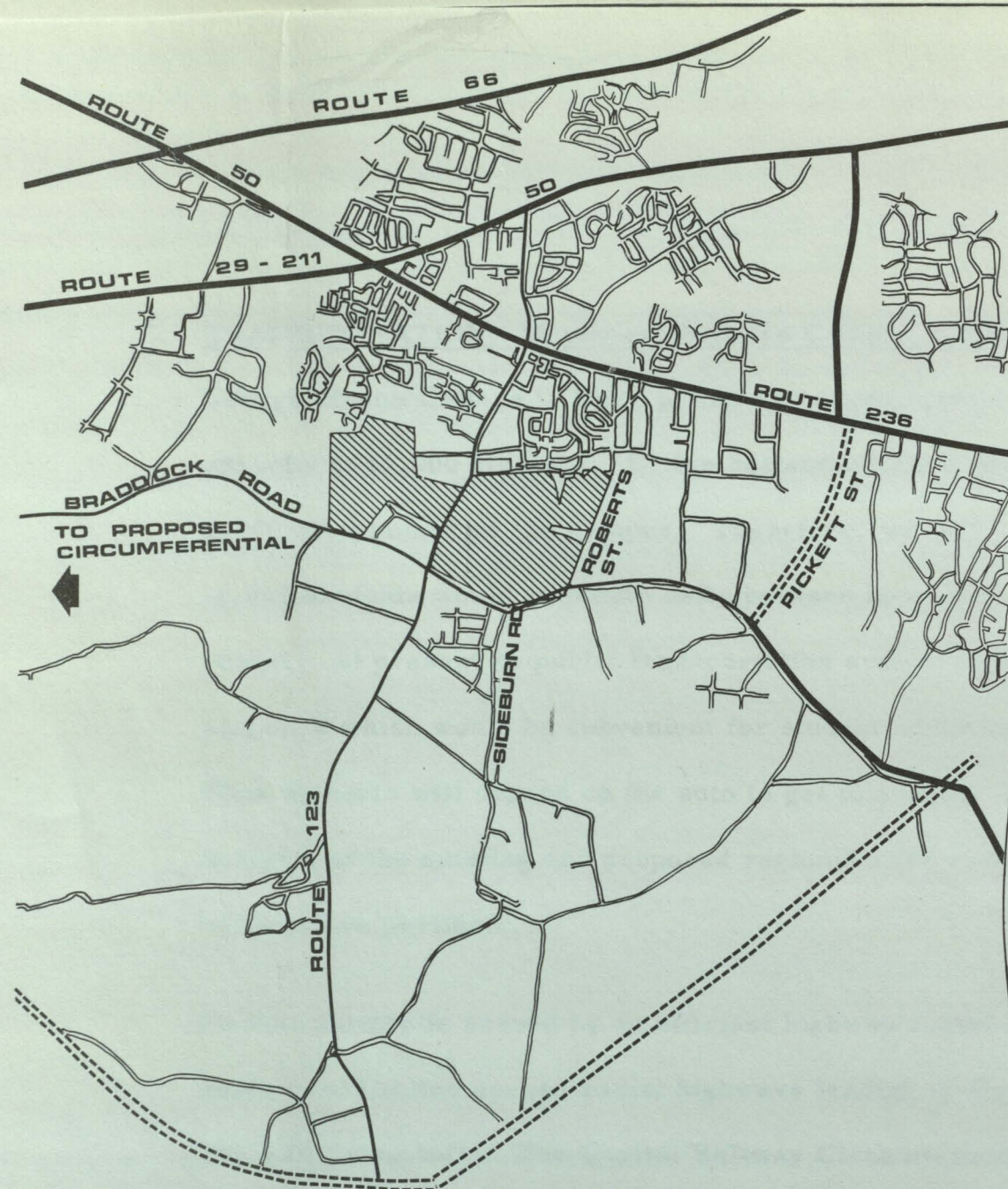
The residential growth of the undeveloped land near the College will generate significant commercial and institutional development. Because of the low density character, the automobile



will be the primary means of movement within the region. Auto-oriented shopping presently is located along Routes 50-211. This is basically strip commercial development. Proposed land use locates regional commercial centers at or close to intersections of the road network. Since the majority of students attending George Mason College commute daily, they will use the auto-oriented community facilities. Pedestrian scaled commercial development might develop in time if closely related to the campus community. The growing student body provides an increasing population base.

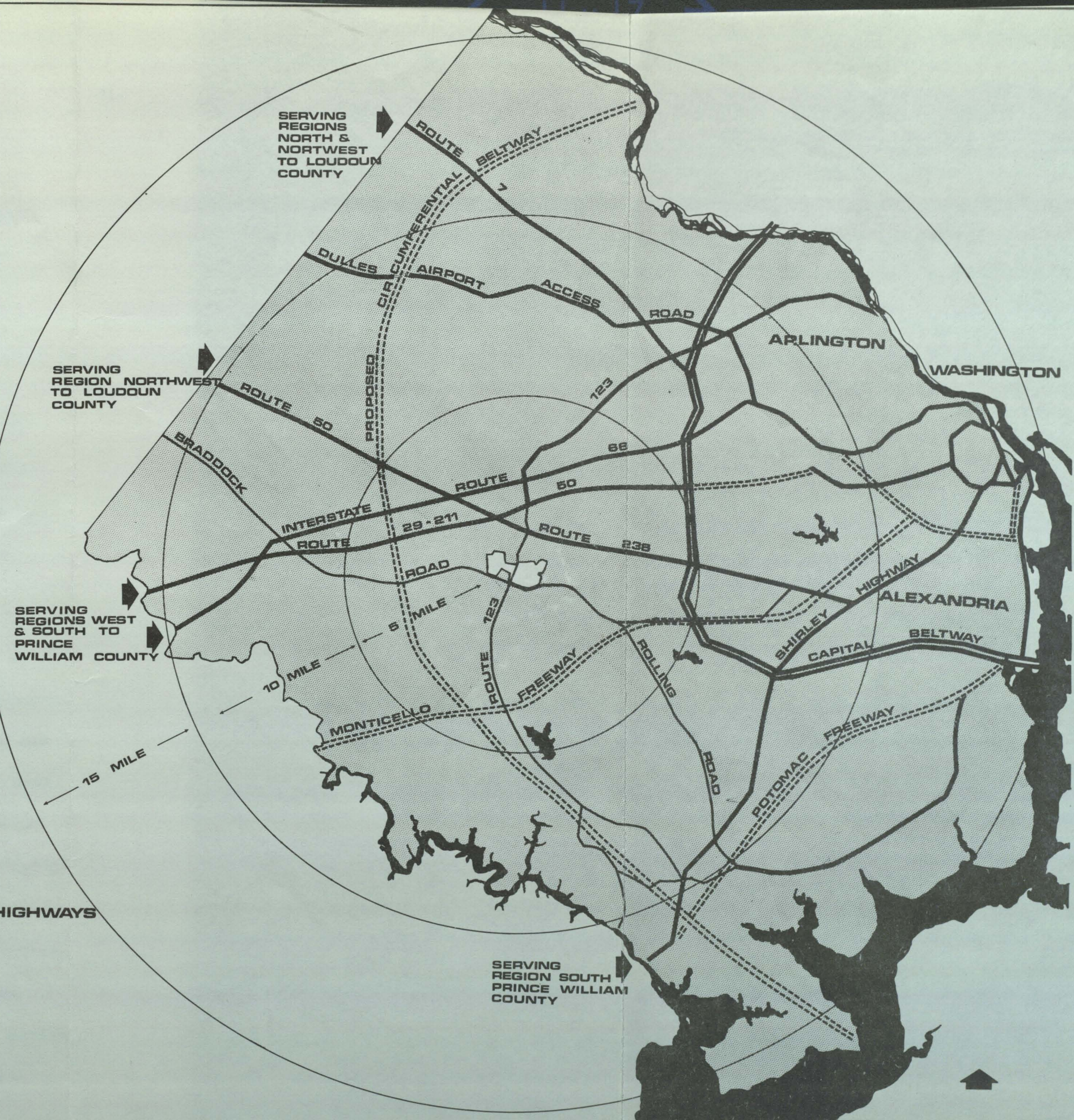
Community-scaled institutional uses will develop as area needs require. It appears that Sideburn Road will become a community street for the upper part of the Pohick Watershed. A number of sites for schools have been secured along this road. George Mason College will be a prominent institution in this area. It is well related to its neighbors and many of its facilities could be used by the non-student community. The new North Virginia State Hospital located on Braddock Road will co-ordinate with the College in the education curriculum.





MAP INDICATING ROADS WHICH ROUTE  
CARS BETWEEN CAMPUS PARKING  
AND REGIONAL HIGHWAYS

- EXISTING REGIONAL HIGHWAYS  
INTERSTATE FREEWAYS, PARKWAYS & ARTERIAL HIGHWAYS
- PROPOSED REGIONAL HIGHWAYS
- LOCAL MAJOR THOROUGHFARES





C. TRANSPORTATION: Movement Between Campus and Home.

George Mason College is being planned to accommodate a capacity of 15,000 students. Living accommodations for 3,000 are planned on the campus. Therefore, by 1985, 12,000 students would commute daily between home and school. At present no public transportation system is being proposed which would be convenient for student commutation. Thus students will depend on the auto to get to school. An analysis of the existing and proposed regional road system is therefore pertinent.

Fairfax County is served by an efficient highway system. A network of limited access radial highways leading to Washington are still being built. The Capital Beltway Circumferential and proposed outer circumferential provide fast movement perpendicular to the radial movement. This combination of the roads permit fast movement between any points in the county. Regional highways will bring students from all parts of Northern Virginia. Routes 7 and 50 serve Loudoun County and the region north and northwest of the campus. Interstate 66 and Route 29-211 serve Prince William County and the region west. Routes 50 and 236 bring student living to the east in the Arlington -



Washington area. Interstate 95 serves the region south towards Fredericksburg. The proposed Monticello Freeway and Outer Circumferential Beltway will also improve the efficient movement to the site when developed.

The problem of peak hour congestion should not effect auto movement to the College. Because it is sited on the Western edge of the suburban development, most students will live east of the campus. Thus students will move opposite the direction of rush hour traffic generated by commuting of the residential community to and from the District of Columbia.

The existing thoroughfares which link the regional highways to campus parking will in time become congested unless they are improved. Route 123 is the major link between the campus and Interstate 66, Routes 50, 211-29, and 236. To the south it will intersect the proposed Monticello Freeway. Braddock Road is the other thoroughfare which serves as a major link. It ties the campus to the Capital Beltway and will intersect the proposed outer circumferential. These roads have a capacity of approximately 500 cars per lane per hour. At present these roads are not used at capacity, however, as



surrounding land is developed into residential use, these roads will become inadequate. For this reason, the Fairfax Planning Commission in their Master Plan Study for the Pohick Watershed propose that both Route 123 and Braddock Road become divided four lane arterial highways. This will double the capacity of each road and help meet the requirements of the community and College.

There are other roads adjacent to the campus which will be affected by its growth. Roberts Road forms the eastern boundary of the proposed campus site. It will be an outlet for autos moving north to Route 50 for trips towards Washington. Sideburn Road south of Braddock Road will develop into an important road as the Pohick Watershed develops and the Monticello Freeway is constructed. It will link the campus with the Freeway giving the commuting student an alternative to Route 123 moving south. Both Sideburn Road and Roberts Road should in time be improved to handle increasing traffic.

At present 40 percent of the 1,000 at George Mason College arrive at 8:00 A.M. for classes. This is the peak hour.



III. The road system easily handles the 440 autos arriving at this time. In September, 1974, with a total enrollment of 5,660, approximately 1,800 students could arrive at the peak hour. This amount will use all of the capacity of the existing feeder road system. By 1985, when 12,000 students are commuting, the road system will have to be improved to handle 4,000 to 5,000 cars at peak hour. Further study is required to understand which roads will carry the bulk of student commuting. Origin and Destination studies of the present and projected student enrollment will help determine the highway requirements for the region in the next twenty years.



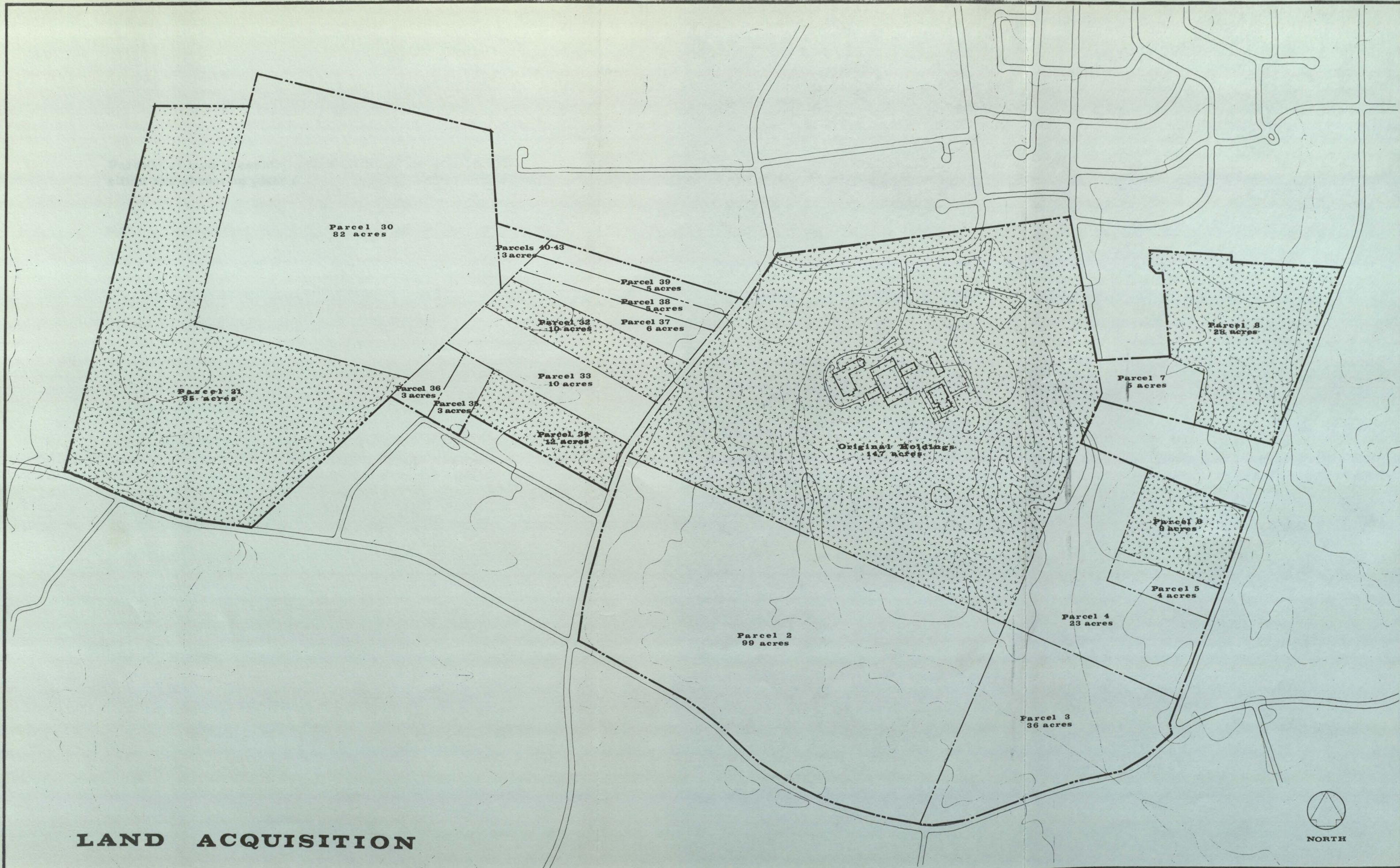
III. Site Analysis

A. Size and Acquisition of Parcels

In the rapidly growing area of suburban Fairfax County it is extremely fortunate that land adjacent to the original campus is available at this time. In the near future this land would certainly not be available at a favorable price if, in fact, it would be available at all.

These factors were recognized by the University in 1966 when the Board of Control requested the Northern Virginia Regional Planning and Economic Development Commission to prepare recommendations concerning acquisition of land to accommodate the growth of the College. Professional appraisal indicated that \$3,000,000.00 would be required to purchase the necessary land. The counties of Arlington and Fairfax, and the cities of Alexandria and Falls Church were asked to contribute a proportionate share according to current population estimates. These communities acted favorably on bond issues supporting George Mason College and the Board of Control was able to take steps toward the acquisition of the land.





## LAND ACQUISITION

**GEORGE MASON COLLEGE**  
OF THE UNIVERSITY OF VIRGINIA, FAIRFAX, VIRGINIA

**MASTER PLAN STUDY**  
SCALE: 1" = 200.00'

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- B. Parcels of land presently owned or in the process of acquisition are shown on plate 4.

Topographically the property east of Ox Road is bisected by two ravines formed by the uppermost reaches of Pohick Creek. The present buildings are situated on the high ground between these ravines and some 100 acres of buildable land are available for the development of the central building complex.

Across the ravines, and adjacent to Ox Road, Braddock Road and Roberts Road, the land varies in elevation and is considered to be well suited for parking and open space.

To the west of Ox Road, there are approximately 20 acres of relatively open land between the road and a swampy stream that forms another natural barrier. Beyond the stream to the west there are approximately 150 acres of relatively high land which slopes upward toward the east and west.

It should be noted that the land west of Ox Road is within the Pope's Head Creek Watershed and will require treatment for sewerage in the immediate future.

Most of the land is covered by a dense growth of deciduous



B. Topography and Vegetation

Topographically the property east of Ox Road is roughly trisected by two ravines formed by the uppermost reaches of Pohick Creek. The present buildings are situated on the high ground between these ravines and some 100 acres of buildable land are available for the development of the central building complex.

Across the ravines, and adjacent to Ox Road, Braddock Road, and Roberts Road, the land varies in elevation and is considered to be well suited for parking and open space reserve.

To the west of Ox Road, there are approximately 60 acres of relatively open land between the road and a wooded ravine that forms another natural barrier. Beyond the ravine to the west there are approximately 160 acres of relatively high land which slopes toward ravines on the east and west.

It should be noted that the land west of Ox Road is included in the Pope's Head Creek Watershed and has no provision for sewerage in the immediate future.

Most of the land is covered by a dense growth of deciduous



trees and efforts should be made to take advantage of this natural resource to screen the large areas of parking and to separate functional areas of the campus.

#### Soil Conditions

Soil conditions on the land presently being acquired by George Mason College are being investigated by Mr. Clarence Coleman, Fairfax County Soil Scientist, and his findings will be summarized in this report when completed.

#### Climate

Fairfax County is located at the edge of the Piedmont Plateau east of the Appalachian Mountains.

George Mason College will occupy land at an elevation varying between 350 and 450 feet above sea level.

The area enjoys a moderate climate with short winters and long summers. Total precipitation has averaged approximately 40 inches over the past 13 years with an average snowfall of 15 inches including sleet and hail. Occasional heavy snowfalls interrupt the activity of the region but snow seldom remains on the ground for more than a few days.



Summer temperatures frequently reach 90 degrees and are usually accompanied by extensive periods of high humidity.





I Instruction  
L Library

**PHASE I 2500 STUDENTS**

**EXISTING CONDITIONS**



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#### IV. Space and Facilities Requirements

##### A. Program

The most significant factor in the development of George Mason College will be the unique educational plan which has been prepared by the University. Briefly summarized it provides for the decentralization of the campus into a series of Co-ordinate Colleges, each of which have a distinct physical as well as intellectual identity. The objective of this plan is to develop a framework within which the benefits of a large university with its great library and an eminent faculty can be combined with the advantages of a small college with its compact student group and opportunities for closer student - teacher contact.

##### B. Space Requirements

Building space requirements have been generated and related facilities have been grouped together as a means of reinforcing the educational concept. Each College will be composed of academic space, residential dormitories and a student center.

General academic space requirements for a typical college of 3,000 students have been developed utilizing the best available



criteria.

These areas include classrooms, laboratories, and faculty office space for the various disciplines.

Residential space requirements have been developed on the assumption that 40 percent of the students will choose to live on the campus.

The Student Center in each College is one of the most important elements which can strengthen the Co-ordinate College concept at George Mason and help the non-resident student develop a deeper sense of identity with the institution. Each center will contain features generally found in a student union. These will include dining facilities for both resident and commuting students, recreation and social facilities serving 3,000 and study rooms available for the use of commuters.

General Space requirements have also been developed for University-wide facilities including the Library, Administration Building, Theater, Faculty Club, and Center for student organizations.

These space requirements are summarized as follows:



Estimate of Gross Square Feet of non-residence space required by George Mason College based on State University of New York planning standards.

Full Time Equivalent Enrollment 12,500

Gross Square Feet Needed by Category

	GSF X	FTE	=	TOTAL GSF
Lower Division	180	5,000		900,000
Upper Division	250	5,000		1,250,000
Non-Science Masters	250	1,060		265,000
Science Masters	300	240		72,000
Non-Science Doctors	240	1,000		240,000
Science Doctors	360	200		72,000
Non-Science Faculty	150	671		100,650
Science Faculty	500	158		79,000

Total Gross Square Feet of Non-residence Space - 2,978,650

Average Gross Square Feet/FTE Student - 250

Percentage of Total by Category of Use

Instruction	Physical Education	Library	Student Activity	Administration	Service
65%	9%	10%	8%	4%	4%
1,950,000	270,000	300,000	240,000	120,000	120,000



	Average College Gross Sq. Ft.	Total	University Gross Sq. Ft.	Total
<u>ACADEMIC</u>				
English	21,000		105,000	
Foreign Lang.	13,000		65,000	
Soc. Science	46,000		230,000	
Psychology	7,600		38,000	
Bus. Admin.	24,000		122,000	
Education	41,000		205,000	
Fine Arts	30,000		150,000	
Other	42,000		210,000	
Natural Science	145,000		725,000	
Math.	20,000		100,000	
		390,000		1,950,000
<u>RESIDENTIAL</u>				
Single Men (500)	110,000		550,000	
Single Women (500)	125,000		625,000	
		235,000		1,175,000
<u>STUDENT CENTER</u>				
Dining	30,000		150,000	
Union	40,000		200,000	
		70,000		350,000
<u>TOTAL FOR EACH COLLEGE</u>		<u>695,000</u>		
<u>LIBRARY</u>				300,000
<u>ADMIN. BLDG.</u>				120,000
<u>PHYS. EDUCATION</u>				270,000
<u>STUDENT AFFAIRS</u>				40,000
<u>MARRIED STUDENTS APTS. (500)</u>				350,000
<u>SUPPORT FACILITIES</u>				120,000
Police & Fire				
Maintenance				
Heating Plant				
<u>TOTAL FOR UNIVERSITY (including residential)</u>				<u>4,675,000</u>



## Master Plan Proposals

### A. Concept

The concept of the Co-ordinate College will be fundamental in the development of George Mason. The Academic Plan has described in detail the organization of a University based on this concept. The purpose of this report is to indicate how this concept can be achieved in terms of physical development.

In reconciling the program requirements of George Mason College to the physical characteristics of the site, the following objectives have been considered.

1. Maximum advantage should be made of the natural features of the site including the wooded ravines and the existing tree cover.
2. The educational objectives inherent in the Co-ordinate College should be supported and encouraged by the physical location of buildings on the site.
3. The growth of the University should be accommodated in a compact grouping of buildings which will conserve increasingly



valuable land, and minimize time which must be spent walking between buildings.

4. The automobile must be recognized as the major means of transportation to the University and provision made for its efficient accommodation by adequate road and parking.
5. At the same time it must be recognized that the University Campus is essentially a pedestrian sanctuary and that the proper separation of pedestrian and vehicular traffic is to be desired.

B. Land Use

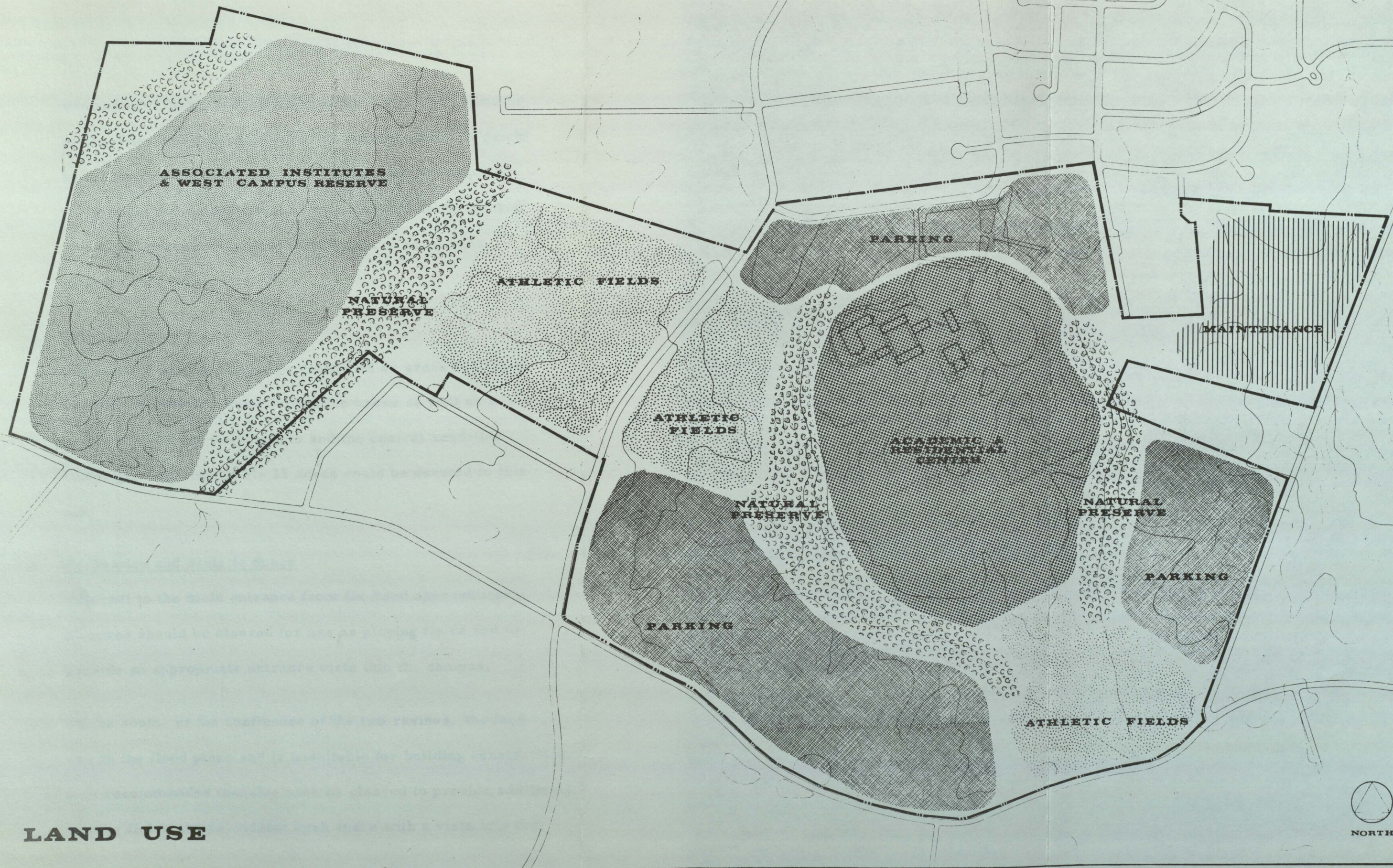
1. Building Areas

In accordance with the educational plan and the natural features of the site, it is recommended that the academic and residence facilities for 15,000 students be grouped on high ground extending to the south of the existing college buildings. Approximately 100 acres are available between the ravines for the central academic group.

2. Parking Areas and Screening

Parking should be accommodated on the perimeter of the site





## LAND USE

**GEORGE MASON COLLEGE**  
OF THE UNIVERSITY OF VIRGINIA, FAIRFAX, VIRGINIA

## MASTER PLAN STUDY

SCALE: 1" = 200.00'

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where it will be most convenient to the students arriving by automobile, and separated from the central academic group by the wooded ravines. 100 acres of land will be required for parking and an additional 50 acres should be designated as natural preserve and landscaped area to screen the large paved parking lots.

3. Natural Preserve

The wooded ravines should be developed as areas of natural preserve serving as quiet recreation areas as well as a buffer between the parking lots and the central academic buildings. Approximately 35 acres could be devoted to this use.

4. Recreation and Athletic Space

Adjacent to the main entrance from Ox Road approximately 20 acres should be cleared for use as playing fields and to provide an appropriate entrance vista into the campus.

To the south, at the confluence of the two ravines, the land lies in the flood plane and is unsuitable for building construction. It is recommended that this area be cleared to provide additional playing fields and permanent open space with a vista into the



campus from Braddock Road.

5. Service Areas

The property composed of 35 acres in the northeast corner of the site is partially wooded and is conveniently located for the establishment of the maintenance and storage facilities.

6. West Campus Reserve

The land to the west of Ox Road is included in the Pope's Head Watershed and has no provision for sewerage in the foreseeable future. It is therefore recommended that it be considered for purposes requiring very little development of the utilities.

The 50 acres of relatively open land between Ox Road and the wooded ravine are considered well suited for additional athletic fields.

Beyond the ravine it is recommended that the 160 acres of land be held in reserve for a number of possible contingencies such as a major medical or technical center, intercollegiate athletic center, or other use which cannot presently be



anticipated. In the immediate future an economic study should be made to determine the feasibility of developing the land for short term leases to independent research institutions associated with George Mason College.

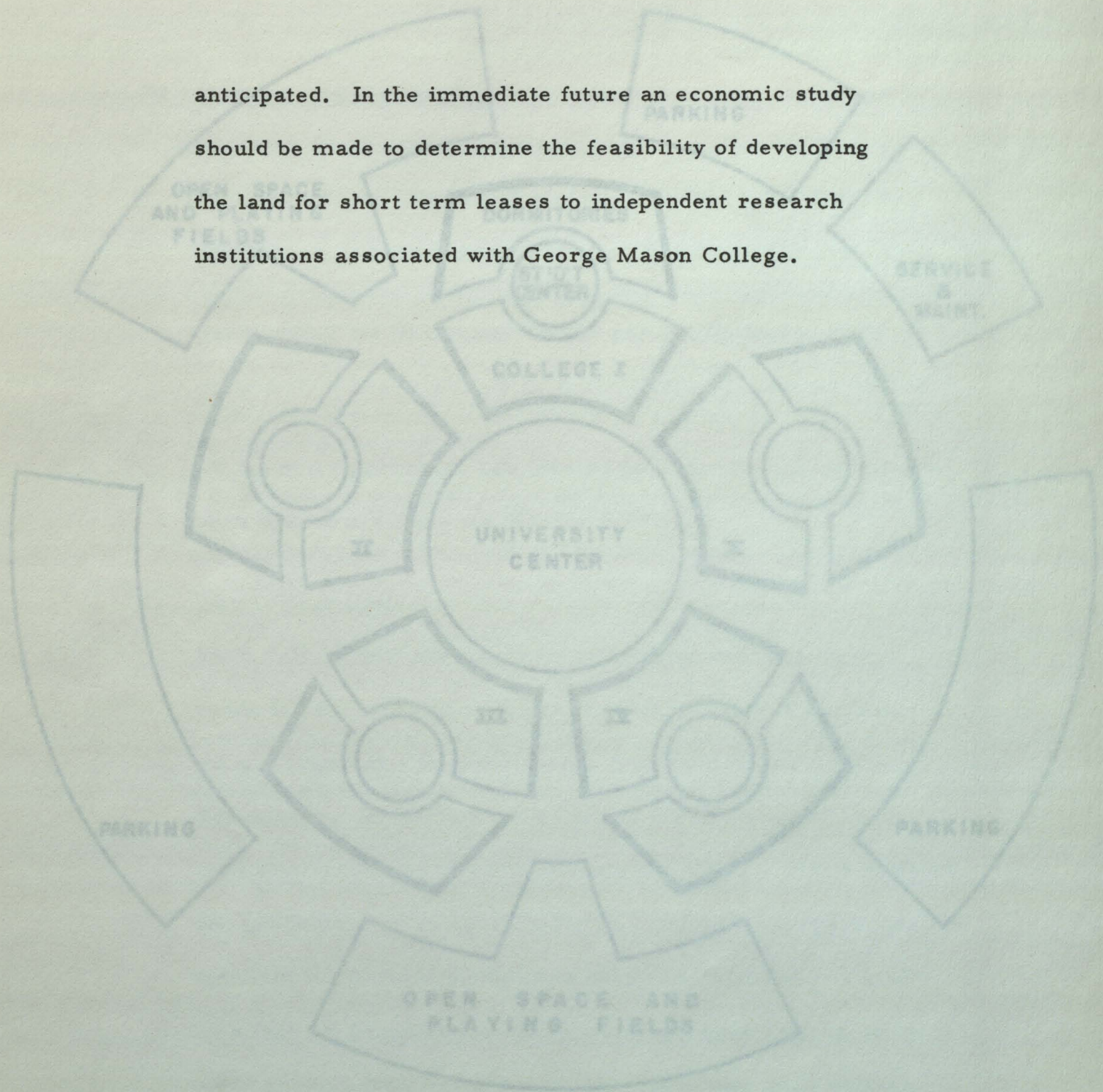
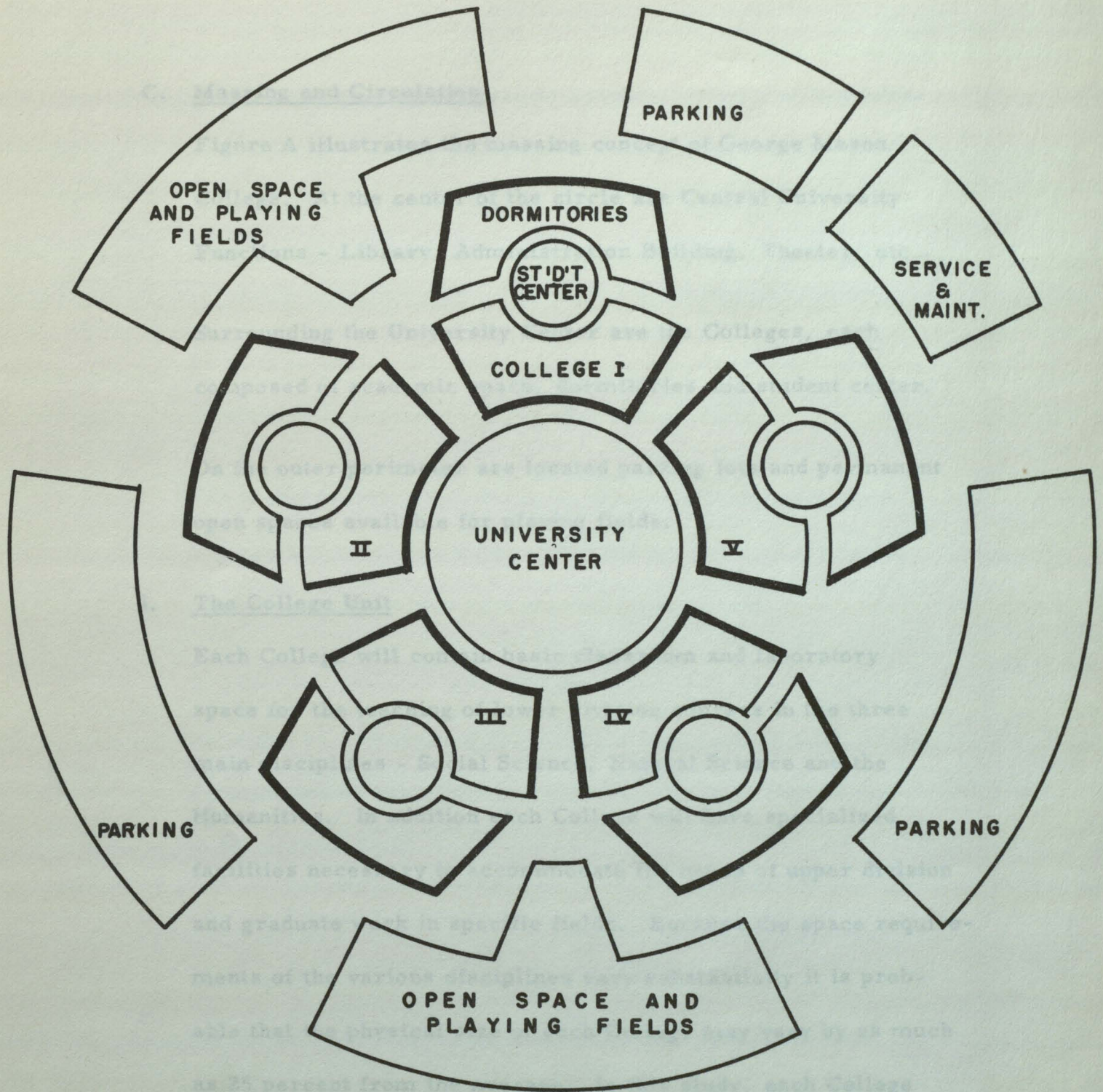


FIGURE A - MASSING CONCEPT





**FIGURE A • MASSING CONCEPT**



C. Massing and Circulation

Figure A illustrates the massing concept of George Mason College. At the center of the circle are Central University Functions - Library, Administration Building, Theater, etc..

Surrounding the University Center are the Colleges, each composed of academic space, dormitories and student center.

On the outer perimeter are located parking lots and permanent open spaces available for playing fields.

1. The College Unit

Each College will contain basic classroom and laboratory space for the teaching of lower division courses in the three main disciplines - Social Science, Natural Science and the Humanities. In addition each College will have specialized facilities necessary to accommodate the needs of upper division and graduate work in specific fields. Because the space requirements of the various disciplines vary substantially it is probable that the physical size of each College may vary by as much as 25 percent from the average. In this study, each College is indicated as containing an average amount of space for planning purposes.



The largest amount of space in a typical College is devoted to academic and faculty office space. This requires approximately 390,000 gross square feet. In addition, dormitories for 1,000 single students will require 235,000 gross square feet. The Student Center which provides facilities for dining as well as social and recreational opportunities for 3,000 students will require 70,000 gross square feet.

The Student Center will serve as the social center for each College and should be made attractive as a common meeting ground for the resident and non-resident student.

In order to conserve land it is recommended that the academic buildings be constructed at least four stories high and that the dormitories be considered as medium rise buildings of eight to ten stories high.

The Student Centers, which ideally should be located between the academic buildings and the dormitories may vary in height according to the functional demands of the facilities they contain.

Each College should be organized so that the academic buildings



form a quadrangle giving each College a major open space which can have its own distinctive character.

2. The University Center

The intellectual character of George Mason College will be determined by the quality and diversity of the faculty of the combined colleges. The physical character of the Campus will be determined by the diversity of the College Facilities combined with the quality of the special University Buildings.

The Master Plan recognized the existing buildings, augmented by the new Arts and Sciences Building, as adequate to accommodate the academic space needs of the first College.

The present Library is well located and can easily be expanded to form an important focus in the University Center.

The four new Colleges should be organized to define a major open space or 'Yard' which will be recognized as the center of the University.

The most significant University buildings will be located on the Yard and four locations have been indicated as appropriate





**TRAFFIC & PARKING**

**GEORGE MASON COLLEGE**  
OF THE UNIVERSITY OF VIRGINIA, FAIRFAX, VIRGINIA

**MASTER PLAN STUDY**  
SCALE: 1" = 200.00'

JOHN CARL WARNECKE & ASSOCIATES  
ARCHITECTS & PLANNING CONSULTANTS  
WASHINGTON, D.C. JOB NO. 67-024



for these special structures. At the present time only two of these locations have been assigned - one for the Library and one for the Administration Building. Other functions to be considered for these locations are: A Computer Assisted Learning Center and a major assembly hall seating 5,000 to 10,000 people.

Special buildings serving Community as well as University functions have been located at the terminus of the entrance drive and convenient to large areas of parking. These include the Theater and Gallery, and the continuing Educational Center.

Gymnasiums which will be used for both physical education training and intramural sports have been located adjacent to the open spaces available for playing fields.

D. Circulation and Traffic

One of the fundamental objectives must be to separate vehicular and pedestrian traffic in the center of the campus. This has been accomplished by establishing an inner ring road to organize vehicular traffic within the campus and distribute automobiles to the perimeter parking lots. The inner ring



road will also serve the various dead end drives which provide service access to the buildings.

No vehicles will be permitted in the University Yard or the College Quadrangles except for emergencies. Traffic in the area between the central buildings and the inner ring road will be limited to service vehicles and restricted staff parking.

As the planning objective of 15,000 students is approached, the traffic on the surrounding public roads will reach a point where major improvement will be called for. Ox Road will carry a particularly heavy traffic volume and it is recommended that it be depressed with a grade separation overpass established at the main entrance to the campus.

This separation of Ox Road and the main entrance will minimize the effect of this major barrier between the east and west campus, and will contribute to the visual and functional unity of the University as the West Campus is developed.

A pedestrian bridge north of the main entrance would greatly improve access to additional athletic fields on the west side of Ox Road.



E. Phasing of Development

In general it should be the policy of the University to construct one College as a complete entity before beginning work on the next.

Buildings such as the Library, Administration Building and Gymnasium, serving the needs of the entire University will be developed in increments to keep pace with each new college.

Roadways and parking will also be developed in increments to serve the needs of the growing University.

The opportunity to grow by a series of planned increments is an advantage that George Mason shares with few other institutions. It contains an unparalleled opportunity to create an outstanding physical environment of great significance.

The common practice of building an infinite number of relatively small separate buildings seldom results in the creation of the most attractive environment. Even with the best of intentions the results are usually an assembly of conflicting styles and inflexible spaces.



Some of the greatest American College Campuses have grown from a truly significant group of buildings. Thomas Jefferson's original group at Charlottesville is perhaps the most memorable. Other examples would include the original quadrangle at Stanford University which has been completely remodeled on the inside several times to meet changing academic requirements.

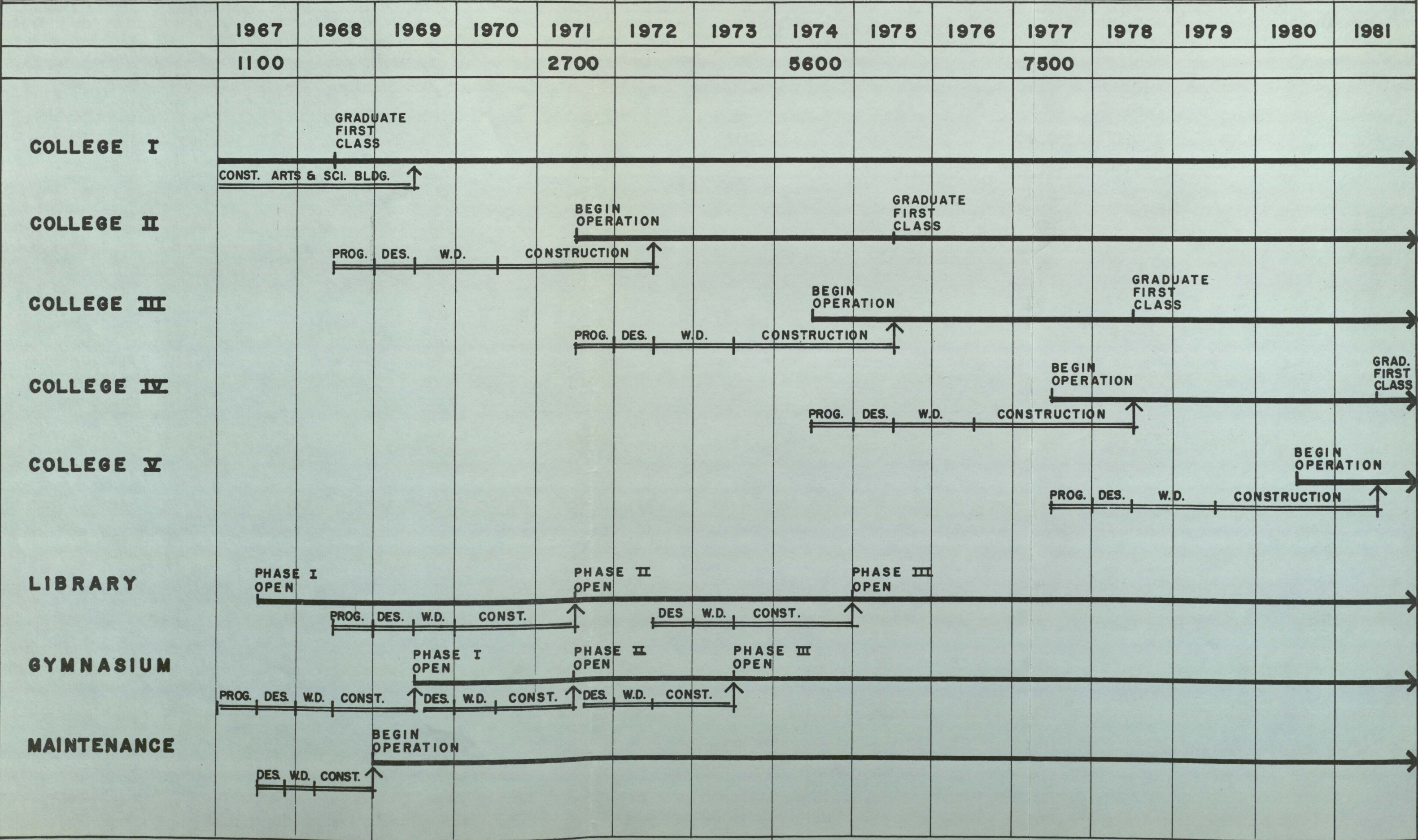
At this point in the development of George Mason College, it is particularly important to establish a standard of excellence which will identify the institution and be an inspiration to the continuing development of the University.

Each College, if designed as an integrated composition of academic space, residential dormitories and student center, can stand alone as a significant entity. Five such Colleges, combined with the Library and other special University Buildings can very well develop into one of the finest University Campuses in the country.

It is recommended that College II be considered as the next increment to be constructed. Since the present buildings, augmented by the new Arts and Sciences Building, will provide



FIGURE B - PHASING OF DESIGN AND CONSTRUCTION OF PROJECTS





academic space for College I, those projects included in the current capital outlay request should be integrated into the development of College II.

According to the timetable included in the Educational Plan, College II is scheduled to open for the 1971-72 academic year. In order to have facilities ready at that time it will be necessary to begin planning now.

Figure B indicates in graphic terms the minimum lead time necessary to achieve the basic goals now recognized for George Mason College. For a project of the magnitude of one complete College, an absolute minimum of four years must be allowed for design and construction. Two years will be required for construction alone. This must be preceded by at least one year for the preparation of working drawings and specifications. Programming and design of the complex will require an additional year at the least.

It is recommended that immediate attention be given to the problem of defining the academic character of College II and steps be taken to develop a detailed space and equipment



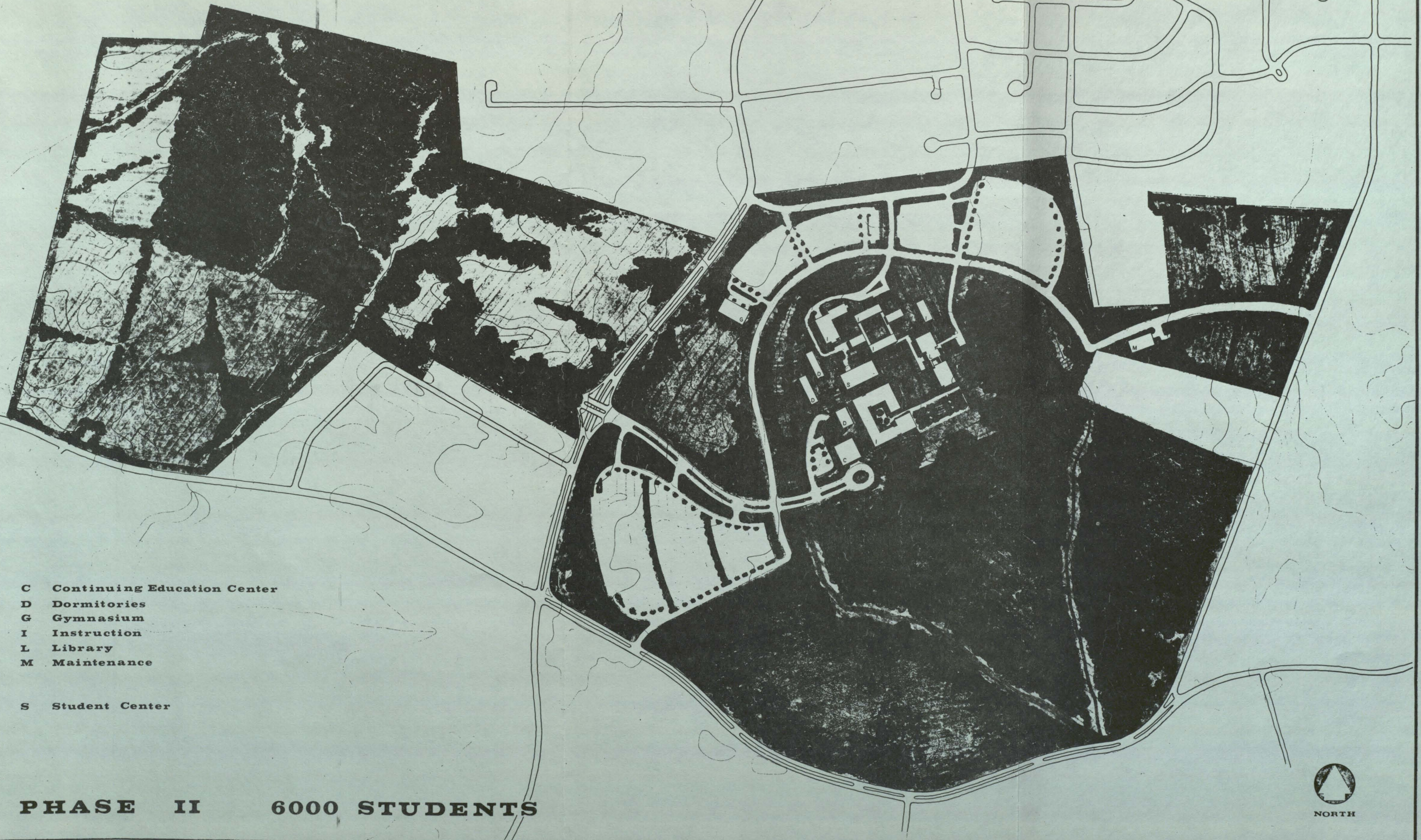
program to meet these academic requirements. This would be essential to lay the groundwork for the detailed planning of the physical environment of College II.

Because of the lead time of four or more years between concept and completion of construction, the utilization of the existing buildings as a staging area for the formation of each new College is an attractive possibility.

Rather than attempting to anticipate the requirements for College II without the advice of the faculty who will occupy it, the present faculty should be considered the eventual occupants of College II, and that increment of construction tailored to their specific needs.

As the buildings of College II are completed and occupied, the space vacated in the present buildings will become available for the formation of the faculty who will ultimately occupy College III. As the Dean and faculty of College III clarify their educational objectives, the planning process would begin again to determine the program for their particular requirements.





- C Continuing Education Center
- D Dormitories
- G Gymnasium
- I Instruction
- L Library
- M Maintenance
  
- S Student Center

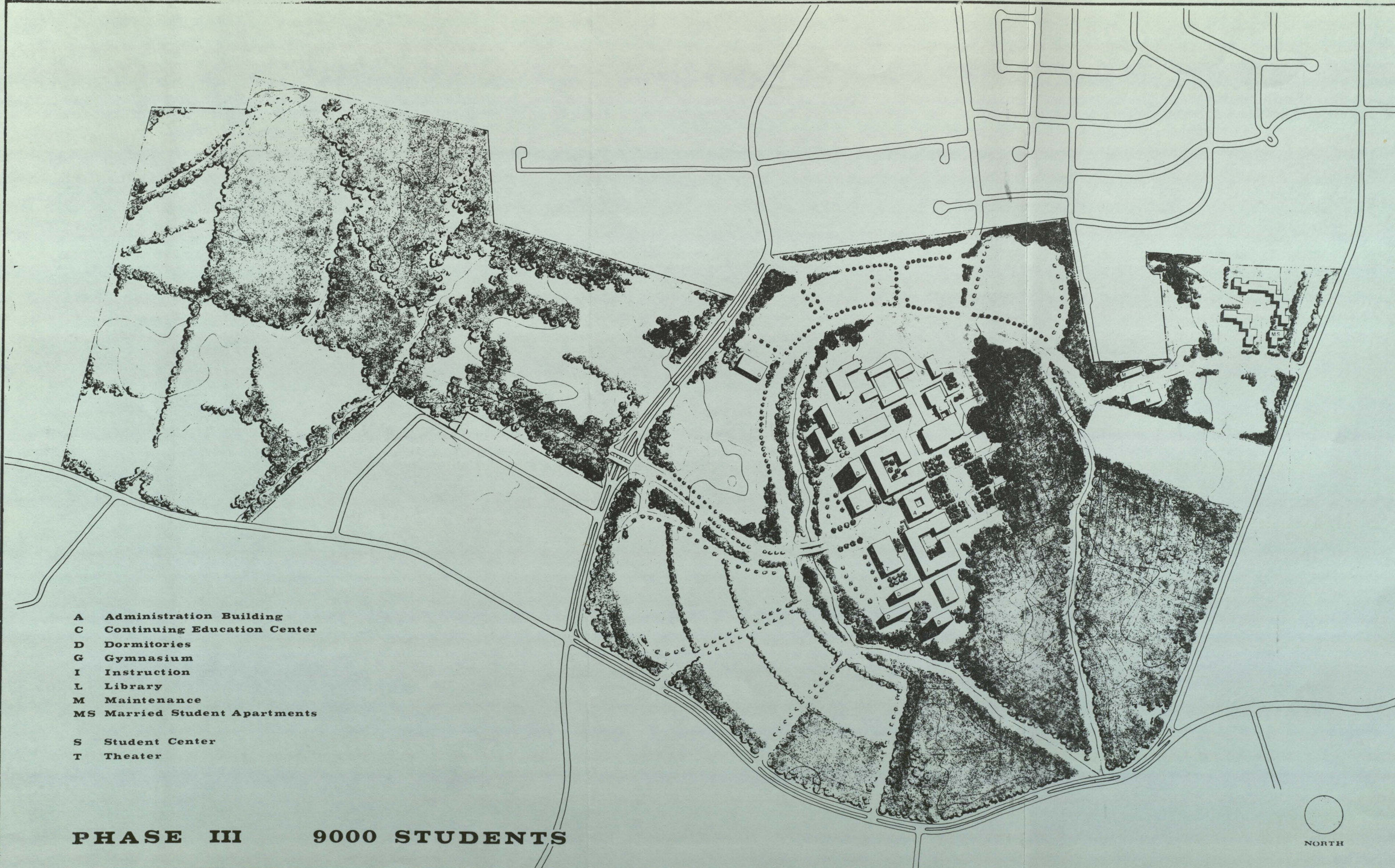
**PHASE II 6000 STUDENTS**

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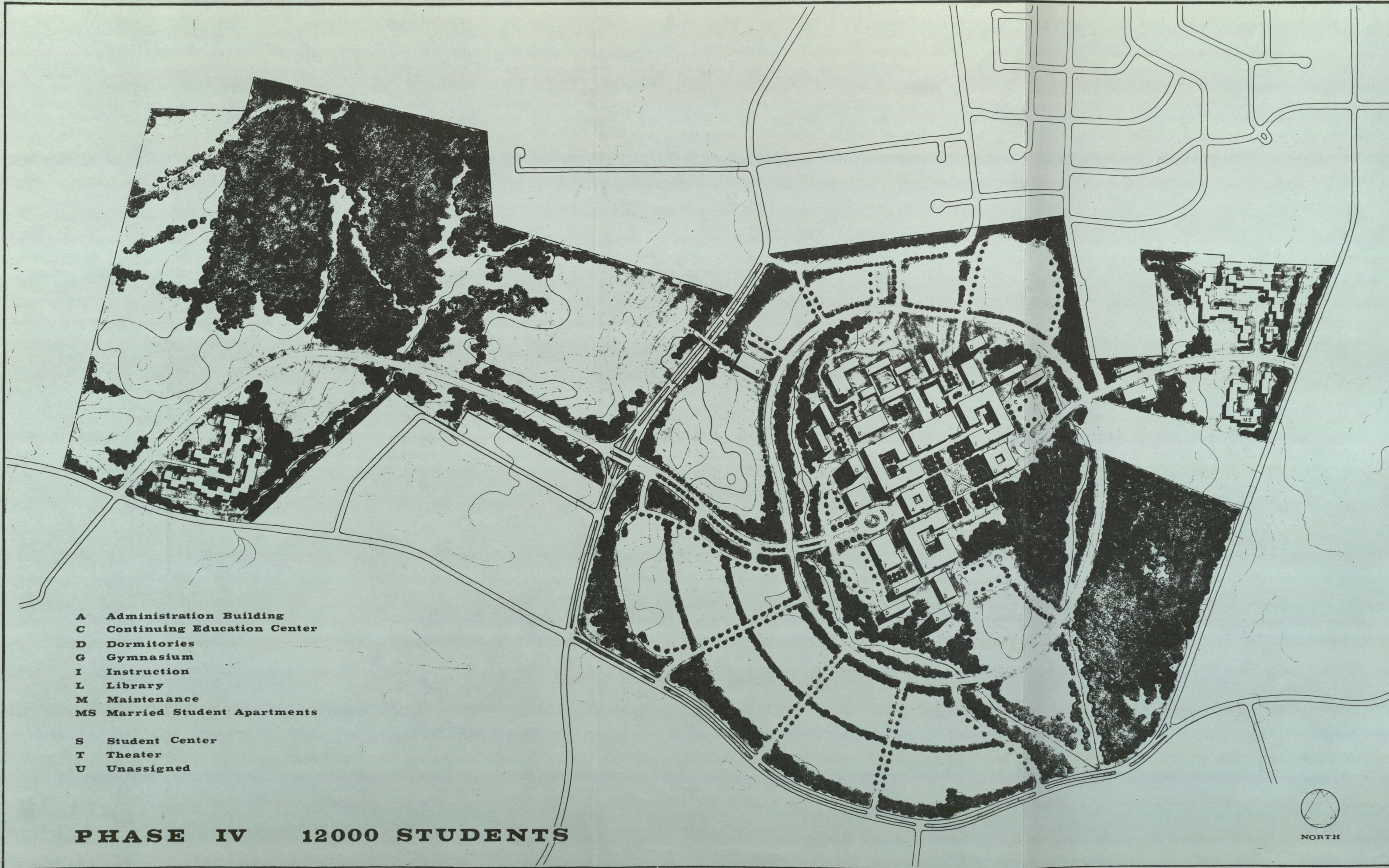
**PHASE III      9000 STUDENTS**

**GEORGE MASON COLLEGE**  
 THE UNIVERSITY OF VIRGINIA, FAIRFAX, VIRGINIA

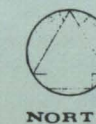
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- A Administration Building
- C Continuing Education Center
- D Dormitories
- G Gymnasium
- I Instruction
- L Library
- M Maintenance
- MS Married Student Apartments
- S Student Center
- T Theater
- U Unassigned





VI. Subsequent development of College III, IV, and V will follow a similar pattern, with each group designed to accommodate the space needs for the special requirements of the College.

Since the Library will occupy such a significant position on the University campus, it is important that great care be taken to relate the immediately projected, rapid expansion to the ultimate requirements of the Library and of the University.

B. Drainage

Programming should begin now to determine more clearly the needs of a major university library serving the needs of 15,000 students and a diverse faculty. A Master Plan for the construction of the Library should be developed which will guide its expansion in a series of co-ordinated increments.

C. Roads



## VI. Site Engineering

### A. Grading

The main sources of water for the Pollock-Pope's Creek Watershed are the Delacorte Reservoir which serves water to the upper Potomac River, and the impoundment of Upper Creek. The major distribution for the City of Fairfax Water Authority and the Fairfax County Water Authority. Both have indicated that the system will be expanded as the county grows. Therefore, the water supply for the campus is

### B. Drainage

### C. Power

The land being acquired for development is located in the watershed, the Potomac, and the Pope's Creek. The Potomac Watershed is to be serviced by a dam on the Potomac River. It is expected to be completed in 1965 and will serve the campus site now being developed.

### C. Roads

The existing buildings are now served by water from the Potomac Watershed into the Aqueduct, which has a major trunk line.

The campus is now being developed on land now in the



## Mechanical System Requirements

### A. Water

The main sources of water for the Fairfax Planning District are the Dalecarlia Reservoir which draws water from the upper Potomac River, and the impoundment of Goose Creek. The major distributors are the City of Fairfax Water Authority and the Fairfax County Water Authority. Both have indicated that facilities will be expanded as the county grows. Therefore, the water supply for the campus is adequate.

### B. Sewer

The land being acquired for development is located in two watersheds, the Pohick and the Pope's Head Creek. The Pohick Watershed is to be serviced by a major trunk line up the Pohick Creek. It is scheduled to be completed during 1968 and will serve the campus site now being developed.

The existing buildings are now served by pumping effluent from the Pohick Watershed into the Accotink Watershed which has a major trunk line.

The campus is now being developed on land east of Route



VIII. Future 123 which is in the Pohick Watershed. The Master Plan has all major development sited on this land so it will have adequate sewer facilities. The land west of Route 123 (in the Pope's Head Creek Watershed) will not be easily developed as no sewer lines are planned at this time.

The land adjacent to Route 123 can use the sewer facilities in the Pohick Watershed.

C. Other Utilities

Most parts of the site are adequately served by gas and electricity. These facilities can be easily extended to all parts of the site. A new 12 inch gas line is now being extended along Braddock Road to Route 123.



VIII. Financing the College Unit

Section V of this report described the Master Plan Concept for the development of George Mason College. It discussed briefly some of the architectural and planning advantages to be gained by the construction of the Colleges in large scale increments as an alternative to constructing a number of individual building units each year.

Certain economic advantages may also be gained and a brief review of important factors in the design and construction of buildings is pertinent at this point.

Briefly stated, the cost of construction is the cost of materials and the labor necessary to assemble them, plus the overhead and profit which the construction contractor considers satisfactory under competitive bidding situations.

Other factors which must be considered as part of the project cost are professional fees for architectural and engineering services, and administrative costs to the institution including development of the building programs, review of documents, co-ordination with government agencies, legal fees, etc..



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From the standpoint of architecture and engineering, a larger project allows for the design of significantly greater efficiency in the mechanical and electrical equipment which now amounts to almost 40 percent of the cost of a building. In addition, a larger project will utilize the total amount of space more efficiently and can provide for an infinitely greater flexibility in accommodating future demands.

Substantial economies will be reflected in the construction because the contractor will be able to operate more efficiently and purchase his materials in greater quantities. His start up costs and overhead can be spread over a larger base which will be reflected in a lower bid price.

In view of the increasing requirements for co-ordination with public agencies, it will greatly simplify the work of the responsible administrators and speed the process of approval if the total number of projects can be minimized.

An additional factor of no small significance is the escalation of building construction costs which are presently increasing at the rate of 4 percent annually.



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On the basis of these considerations, the differential between building a complete College as one unit, compared with building a group of independent buildings would be in the neighborhood of 5 percent or \$1,000,000.00 for a College costing \$20,000,000.00, exclusive of site development and utilities.

A number of states, faced with the necessity of expanding their educational resources, have developed new methods to finance the efficient development of large projects. Most of these involve the creation by the Legislature of one or more public benefit agencies which are empowered to issue bonds for the necessary construction. These bonds are repaid by money collected by the University from tuition and fees, and by periodic appropriations from state funds.



### Possible Growth Beyond 15,000 Students

If, in the course of events, it becomes necessary to expand George Mason College beyond the planning objective of 15,000 students, certain compromises must be anticipated.

While the Master Plan allows for a certain amount of expansion within each College, major expansion should reflect the Educational Plan by adding new Colleges serving approximately 3,000 students each.

Since the Central Campus will be densely developed at 15,000 student level, additional buildings can be constructed only at the expense of the open space or at the expense of parking space. A limited amount of open space can be eliminated without seriously hampering the requirements for athletic fields. The amount of land necessary for parking can, however, be greatly reduced by the construction of multi-level parking structures. While these are considerably more expensive than surface parking lots, the increasing cost of land will substantially reduce the differential and make parking structures increasingly attractive.



Another alternative would be the removal of certain specialized Graduate and Professional Schools from the central campus and the relocation of them on the west campus.



