

Central Area Revitalization And The Urban University



An Exploratory Study Of The Indianapolis Core Area Potentials

prepared for: The Metropolitan Plan Commission
by: Victor Gruen Associates architecture • planning • engineering



February 1967

CENTRAL AREA REVITALIZATION
AND THE URBAN UNIVERSITY

An Exploratory Study of the Indianapolis
Core Area Potentials

prepared for: The Metropolitan Planning Commission

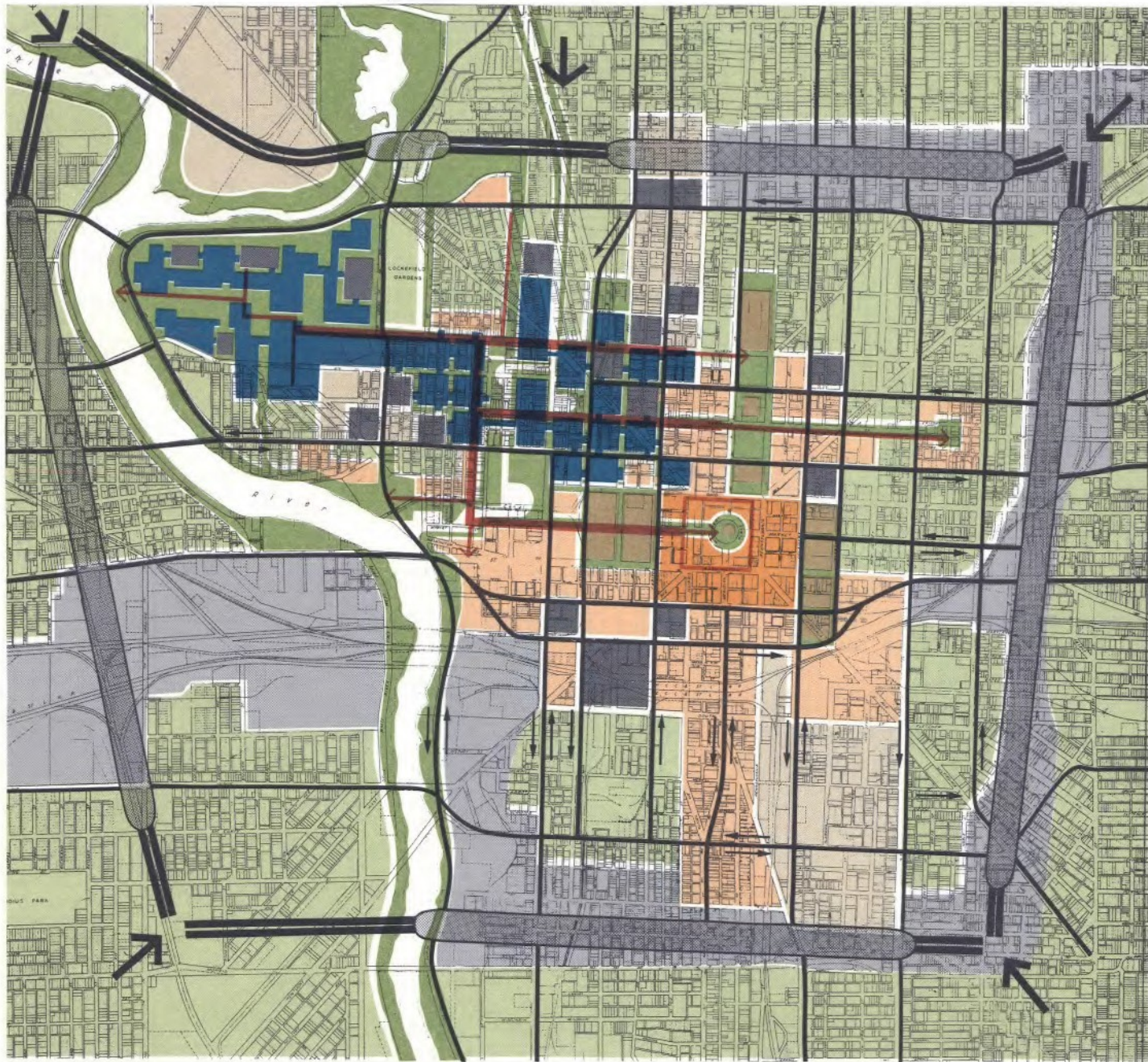
by: Victor Gruen Associates

architecture · planning · engineering

February 1967

TABLE OF CONTENTS

	<u>Page</u>
I. SUMMARY AND CONCLUSIONS	1
II. INTRODUCTION	9
III. PROBLEMS AND OPPORTUNITIES OF THE CENTRAL AREA	15
IV. GROWTH POLICIES OF INDIANA AND PURDUE UNIVERSITIES	35
V. THE URBAN UNIVERSITY	39
VI. THE UNIVERSITY AND CENTRAL AREA PLAN - TOWARD A SYNTHESIS	47
VII. IMPLEMENTATION	85
 APPENDIX I PROGRAM AND SPACE REQUIREMENTS FOR THE UNIVERSITIES	 97
APPENDIX II INTERACTION OF FUNCTIONAL RELATIONSHIPS	103
APPENDIX III CIRCULATION ANALYSIS AND TENTATIVE PROPOSALS	109



- | | |
|-------------------------|---------------------------------|
| Primary Commercial Core | Interchange - Underpass Complex |
| Support Commercial | Public Buildings |
| University | |
| Residential | |
| Research & Development | |
| Open Space | |
| Industrial | |
| Parking | |

DRAWING 1

LAND USE PLAN

CHAPTER I

SUMMARY AND CONCLUSIONS

1. This report presents a conceptual plan for an urban university within the context of a revitalized Downtown Indianapolis. It represents an attempt to reconcile and to mutually complement the goals and objectives of different groups and entities: Indiana University, Purdue University, the Indianapolis Redevelopment Commission, the Community Action Against Poverty of Greater Indianapolis, and the Metropolitan Plan Commission of Marion County.
2. The conceptual plan reflects the input of all the participating entities: it is molded, however, by Victor Gruen Associates' own experience with central area and campus planning.
3. The end product of this report is a conceptual plan, not a finished plan nor a finite set of proposals. The limited time and budget allocated have not made it possible for all aspects to be investigated in depth. Therefore the plan should be regarded as a point of departure and not as a point of arrival. As such, it establishes a framework for future coordinated planning and development by the entities concerned.

4. The main objectives of the plan are: to establish the location and general structure for the new university in Indianapolis; to provide a program and design approach for the revitalization of Downtown Indianapolis; to encourage the interplay and mutual benefits that, through a concurrent and coordinated planning and programming effort, can accrue to the community and to the university.
5. The basic concept of the plan is to link the City and the university by creating a compact, centrally located campus between the existing medical center and the downtown core, and by correlating the academic components of the campus with the correspondent and complementary elements of private and public activity that are an integral part of the metropolitan center.
6. The plan rejects the form of an enclosed, self-sufficient campus that turns inward from the surrounding city.
7. Conversely, the plan recognizes the university's expressed concern for compactness and efficiency of intercommunication: less land is used for the university than in previous proposals, and distance of inter-campus movements is minimized. The only exception is the connection between the medical center and the balance of the campus which is somewhat more extended

than in previous plans developed by the university's consultants. This, however, is more than balanced by greatly improved connections between the campus and those elements of the City that have close ties with university activities.

8. The plan establishes a structure through which the transformation of the central area of Indianapolis and the growth of the campus will produce a single complex and flexible urban organism. This implies the need for close cooperation and some loss of independence. These, however, should be balanced against improved interrelationships, probable overall economic advantages and increased opportunity for public service.
9. The plan provides an opportunity for imaginative urban and architectural design in connection with the physical plant of the university and the revitalization of the central area.
10. The concept recognizes the necessity (and the opportunity) for restructuring the entire central area in terms of clearly defined major circulation movements, with concurrent re-organization of existing and future major urban elements. The proposed central area circulation pattern includes an arterial road network and an independent pedestrian circulation system so

designed as to accommodate facilities for slow-speed high-capacity public transportation, especially suited for short movements within the central area.

11. The plan recognizes the complex and politically sensitive problems of residential location and relocation in the central area. For those areas--unfortunately quite vast--that discourage or defy rehabilitation, because of their physical condition, the plan proposes demolition and rebuilding. Nevertheless the plan includes provisions for a substantial increase of residential population in the central area, recognizing that the problem of relocation must be attacked forthrightly by early development of subsidized low-cost housing at a relatively high density within the central area and that, concurrently, middle- and high-income housing must be encouraged, to respond to the demand generated by the growth of the university and the increased vitality of the metropolitan center, and to accomplish the sociological and economic balance and diversity that are essential to the health of the central area.
12. Concerning access to the central area, the concept proposes a system that recognizes three major prerequisites:

- a. The entire central area must be viewed as a compact, interconnected urban complex. It must therefore be surrounded, and not split, by the freeway system.
- b. Adequate provisions must be included for transfer from the freeway system to downtown and for direct arterial connection with the areas surrounding the central core.
- c. The system must be designed so that through traffic (those movements that do not have downtown as their destination) can be routed around rather than through the central area.

The plan, therefore, proposes the completion of a freeway loop surrounding the central core, by adding a north-south element west of the White River, and extending the northern east-west element to complete the link.

- 13. Even though it was beyond the scope of this exploratory study to establish a precise economic evaluation, the concept proposed is, by intent, responsive to consideration of economics. Since the solution is conceived in terms of an overall synthesis, the evaluation must be made not in terms of individual specific

components, but in terms of ultimate community stability and economic benefit. Thus, the suggested allocation of land uses does not derive from considerations of present-day minimum cost of acquisition, but rather from a balanced assessment of initial costs and long-range maximum valorization. Development economy should not be equated with minimum acquisition costs; indeed, a system for comprehensive evaluation should be established taking into account the increased values on residual land created by university development and the benefits derived from compactness and close interrelationships. In the context of such an evaluation, appropriate compensatory adjustments can be made to offset possible inequities.

14. The plan presumes that urban renewal powers and financial assistance will be utilized in land assembly and disposition.
15. The plan, while proposing a solution for the regional campus that differs from earlier concepts developed by the university, does not require any delay or create any obstacle to the development of those first elements of the campus that must be immediately implemented.

16. The concept proposed cannot possibly satisfy all requirements and all preferences of each of the entities that have commissioned this initial exploratory study. It is an objective and impartial concept; and it is hoped that, by opening new perspectives, by presenting opportunities for new potentials of urban form and urban activity, it will generate the constructive debate and the exercise of community commitment that are essential for the future of the Urban Campus and the central area of Indianapolis.

CHAPTER II

INTRODUCTION

A. Purpose of Study

In August, 1966 Indiana University, Purdue University, the Indianapolis Redevelopment Commission, and the Community Action Against Poverty of Greater Indianapolis, entered into an agreement with the Metropolitan Plan Commission of Marioun County to support cooperative action in the planning and development of the university and the central area of Indianapolis. Victor Gruen Associates was authorized to undertake exploratory planning studies in order to define the potentials, develop the concept and establish a long-range program for the coordinated implementation of an urban university and revitalization of the central area.

The motivation for commissioning the study stems primarily from the community's realization that the impending development on the part of Indiana and Purdue Universities of a new campus located in Downtown Indianapolis and the concurrent determination of the City to face constructively and aggressively the problem of revitalization of the central area offer an unprecedented opportunity for coordinated evaluation, programming and planning.

Such an opportunity--the result of the concurrence of a number of independent circumstances--would rapidly pass by if substantial development on the part of either the City or the Universities were committed prior to, or without regard for, a plan and program for concerted and coordinated effort. At this time a number of individual but mutually related projects are under way or proposed: the IRTADS Study (Indianapolis Regional Transportation and Development Study); a 701 Urban Planning Assistance Program for comprehensive planning for the metropolitan area of Marion County; campus planning by Indiana University; a proposal for a General Neighborhood Renewal Plan, a housing program and related development plans; and a proposed convention center. All these elements can be properly correlated within an adopted framework of comprehensive objectives and policies. In authorizing the consultants to undertake the preliminary planning for the university and the central area, the City has recognized the urgency of the situation, especially as it affects imminent decisions on the part of the Universities and the community.

B. Objectives and Limitations

The objective of this report is to analyze the existing conditions of the central area of Indianapolis, the policies of the City and the policies of the two Universities and, on the strength of this evaluation, define a

conceptual approach upon which future planning and programming can be based. The fundamental assumption is that the Universities and the City could and should work together toward implementing their respective goals; for, although the university and the City serve different functions, the degree of overlap and interaction between their activities and responsibilities presents, at this time of decision, a challenge for coordinated effort that should not be defaulted.

The scope of this study is limited by budgetary and time considerations. Its findings must be seen as a guide for further action by the various entities concerned. As such, it presents a conceptual plan, a framework, but not a definitive and final statement.

C. Study Approach

The work program for the revitalization of the central area of Indianapolis must be undertaken in three distinct phases:

Phase I	Concept Development
Phase II	Detailed Planning
Phase III	Implementation

This report summarizes the work assignment related to Phase I, Concept Development. The subsequent phases of the work can be

initiated by the community and its consultants upon discussion and adoption of the basic concept developed in Phase I.

The approach to the planning work for Phase I has taken the following steps:

1. Assessment of existing problems and potentials of the region, city and central area, with specific reference to the proposed university development.
2. Establishment of tentative goals and objectives to guide the growth of the Universities and the determination of the programming requirements of the development.
3. Establishment of the characteristics of an urban university, recognizing recent trends and development of the urban university in the United States.
4. Tentative definition of a central area and university development plan, with emphasis to the areas of beneficial interrelationships.
5. Assessment of existing circulation plans for the central area and recommendations for a circulation concept for the central area.

6. Determination of immediate steps affecting the growth program of the university and of consequent steps relating to detailed planning for central area revitalization and to university expansion.

CHAPTER III

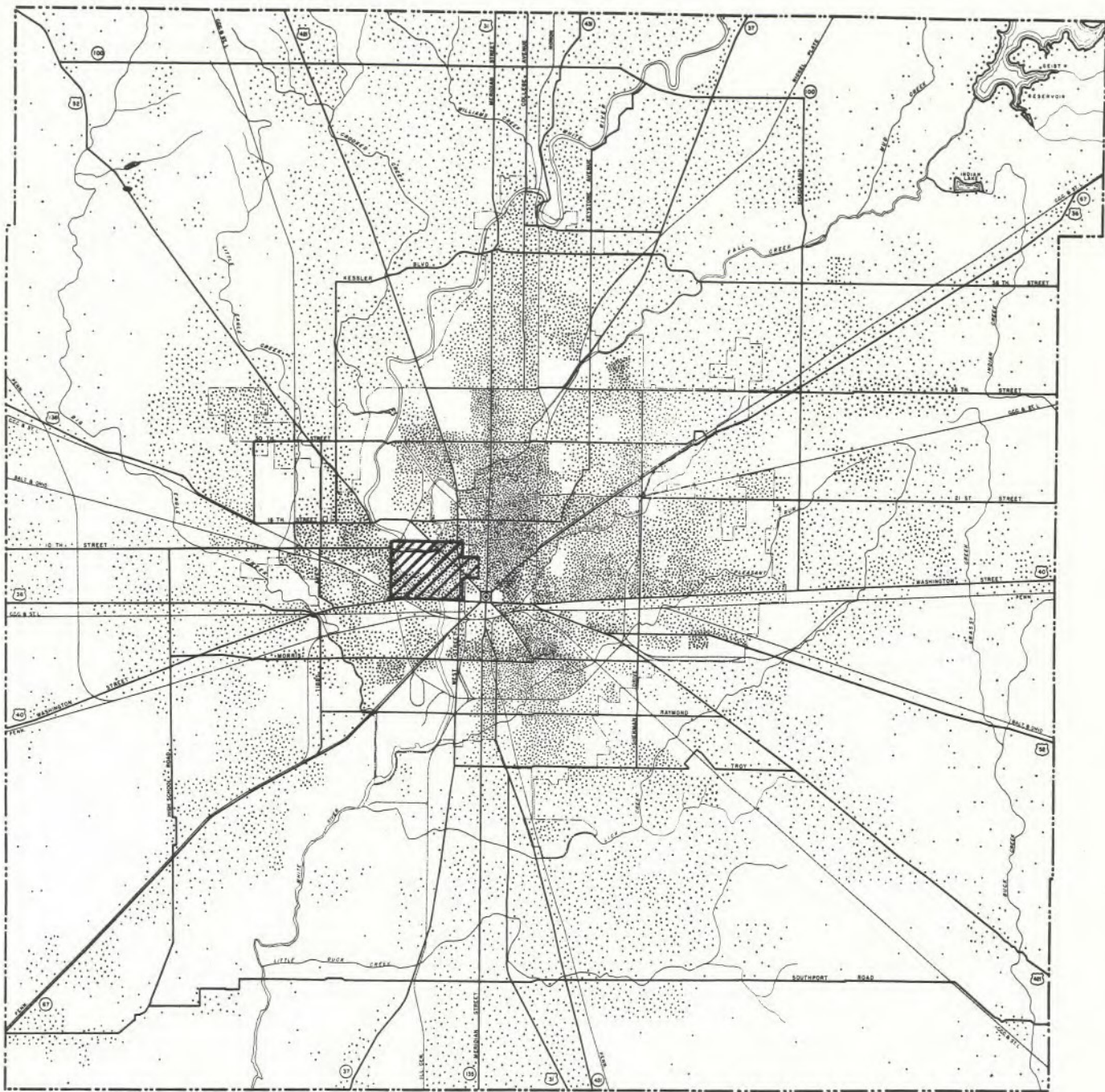
PROBLEMS AND OPPORTUNITIES OF THE CENTRAL AREA

A. Background of the Region

Unlike many American cities, Indianapolis was pre-planned. In 1820, the area alongside the White River where John McCormick had chosen to settle was selected as the site for the future state capital. The founding fathers were justified in their choice: the reasons for selecting the site--central location, proximity to the national road, open navigation, a river bank suitable for boat landings, the fertility of the soil--provided the basis for the development of the City we know today.

The accessibility of the city led to its emergence as a service and manufacturing center serving the surrounding agricultural area. Today, of course, the economic base has been broadened, and Indianapolis is now integrated with the national economy. However, the emphasis is still on manufacturing, service industries and transportation, together with government and administration functions.

The flat-to-rolling topography has encouraged horizontal growth of the city; growth, however has not been uniform in all directions.



(EACH DOT - 50 PEOPLE)

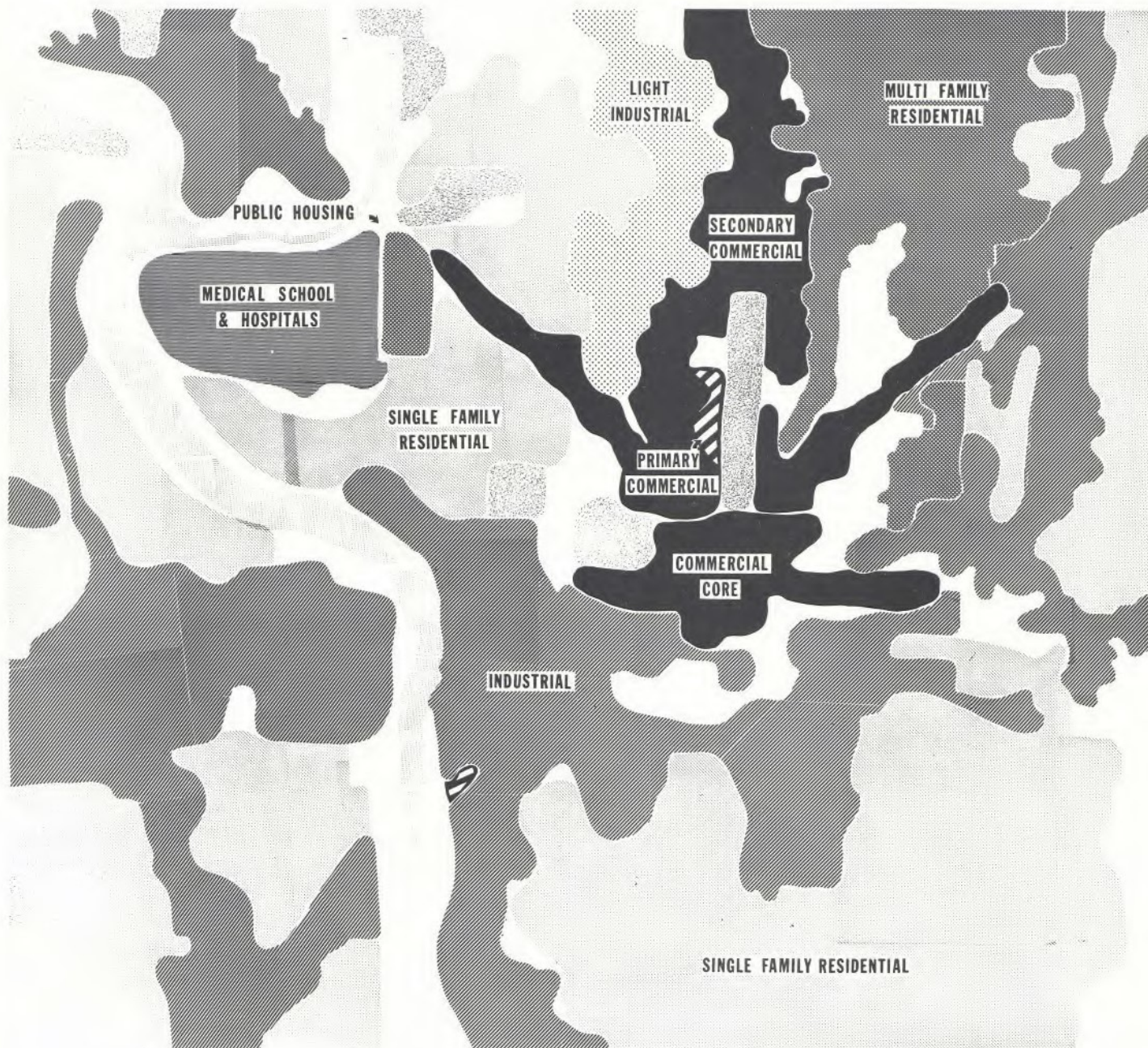
Most of the expansion has taken place to the north and northeast, while the White River and the industrial section have slowed down expansion toward the southwest. Nevertheless, Indianapolis presents fewer topographical barriers to horizontal expansion than most American cities, and the current increase of the suburban areas may be expected to continue. This trend will be stimulated further with the completion of the freeway network.

Recent statistics for Marion County population projections indicate that in 1950, the population of the county and the region was 552,000 and that by 1975, the population will total over one million people. Thus the anticipated rate of growth (almost 100% in 25 years) exceeds the predicted national average (approximately 45%) for the same period of time. This reflects the general trend of metropolitan concentration, and more specifically, the favorable influences within the metropolitan region as well as Indianapolis' expected economic expansion and industrial growth.

B. The Central Area

1. Land Use Pattern (Dwg #3)

The pattern of land uses in the central area of Indianapolis consists of a few well-defined concentrations of complementary



and compatible functions. Examples:

- The retail shopping concentration along Washington Street, Illinois Street and a portion of Monument Circle;
- The business and professional office concentration along Market Street east of Monument Circle;
- The government office concentration west of Capital Avenue and north of Washington Street;
- The hotel concentration along Washington Street.

Although the core of the commercial area is basically a tightly knit retail center, much of the surrounding land is utilized in a fragmented and poorly related pattern of land use. As a result, some of the residential districts are surrounded by industry, and random parking areas further increase the fragmentation. Strip commercial has developed along the four main diagonal streets: Indiana, Massachusetts, Kentucky, and Virginia Avenues; the present Indianapolis zoning ordinance, based on the assumption that commercial uses would eventually replace all of the residential properties in the central area, has permitted and encouraged such sporadic and dispersed pattern of land development.

2. Population Changes

Like almost all large American cities, Indianapolis has experienced a growth and restructuring of the population. While the region as a whole has increased its population, the area immediately surrounding the central core has been losing people, as the table following indicates.

<u>1920</u>	<u>1930</u>	<u>1940</u>	<u>1950</u>	<u>1960*</u>
25, 227	14, 691	15, 620	14, 386	9, 028

While these figures apply to only the core of the entire central area portion, they are indicative of the prevailing trend. The decline has been accelerated in recent years through the demolition of older structures, principally residential, and their replacement by office or retail uses.

The character of the population in the central area is also changing. Most the the wealthier inhabitants have moved out to the suburbs. Their place has been taken by lower income and minority groups. Indianapolis does not have

* Source "Central Business District Plan for Metropolitan Indianapolis Marion County, Indiana" Metropolitan Plan Commission of Marion County, 1963

clearly definable Negro ghettos to the extent that Chicago, Boston or Los Angeles have; yet the problems of residential segregation--and their sociological consequences--still exist.

Prior to 1963, no new major high-density residential development had taken place to replace the population loss of the central area. The completion of the first phase of Riley Center represents a first symptom of reversal of the trend of decline; yet it is too early to evaluate the significance and impact of this project.

3. Building Conditions

Many of the older buildings in the central area are deteriorating. In some streets, structures that still support commercial uses on the ground floor have seen the apartments that occupy the upper floors become vacant and deteriorate. The decline of the central area's residential population has affected the economic health of the smaller stores on the fringe of the central business district, and their structures are likewise deteriorating.

Much of the housing presents a picture of dilapidation and deterioration. The following tabulation of statistics on housing in the central city area, taken from the IRTADS Study and a Social Characteristics Study made by CAAP in 1966, clearly defines the dimensions of the problem of residential deterioration in the central area:

Estimate total dwelling units in central city area, 1964	15,267
Acres of land in housing	583
Net density - dwelling units/acre	26.3
% of d. u. dilapidated or deteriorated	6,200
% of total d. u. rented	46%
Total population in central city area	53,400
Persons per d. u.	3.5

	<u>No. of Units</u>	<u>Net Acres</u>	<u>D. U. Acre</u>
Single-Family	4,017	345	11.6
2-Family	3,178	141	22.4
3 or more	6,740	87	78.0
Group	1,332	10	133.0

Of the housing facilities within the area bounded by Washington, Tenth, Illionis and the White River (the University Quarter), almost 50 percent are rated as substandard (2,400 dwelling units out of a total of 4,900). It is significant to note that a substantial portion of the substandard housing units are owner-occupied.

The eventual solution to the substandard housing problem in the central area, regardless of the specific method adopted, will involve a relocation problem of major proportions. Many of the persons presently living in the area are employed in the university medical complex or in retail and service facilities located in the central area; therefore, if the problem is to be resolved without creating unwarranted hardship and without rendering even more critical the problem of transportation, relocation within the central area must be considered as an essential element of the revitalization program.

4. Economic Factors

The decline of the central area is not only reflected in the deteriorating buildings. The central business district has

experienced a definite loss in retail activity. The percentage of the metropolitan area's retail sales attributed to the central business district declined in the four-year period between 1954 and 1958. During the same period of time, the volume of sales on a dollar value basis declined by 2.2 per cent in the CBD, while the metropolitan area experienced a 14 per cent increase. Several business enterprises have abandoned the CBD in recent years.

5. Traffic

Indianapolis is served by an extensive bus transit system, but patronage is relatively light. There is an extensive usage of private automobiles for commuting to the central area. The mixture of all forms of public and private transportation and pedestrians on the same right-of-way leads to inevitable conflicts between vehicular modes and between vehicles and pedestrians; this results in central area traffic congestion. Frequent intersections, driveway access and marginal friction further slow traffic movement in the central area.

A substantial amount of vehicular traffic uses central area streets, even though it has no central area destination, since there are no available alternate routes. The routing of major through traffic on State highways through the central area represents a significant proportion of current traffic volumes. In addition, there is a considerable amount of cruising and circling by vehicles seeking curb parking space; this further congests the principal streets.

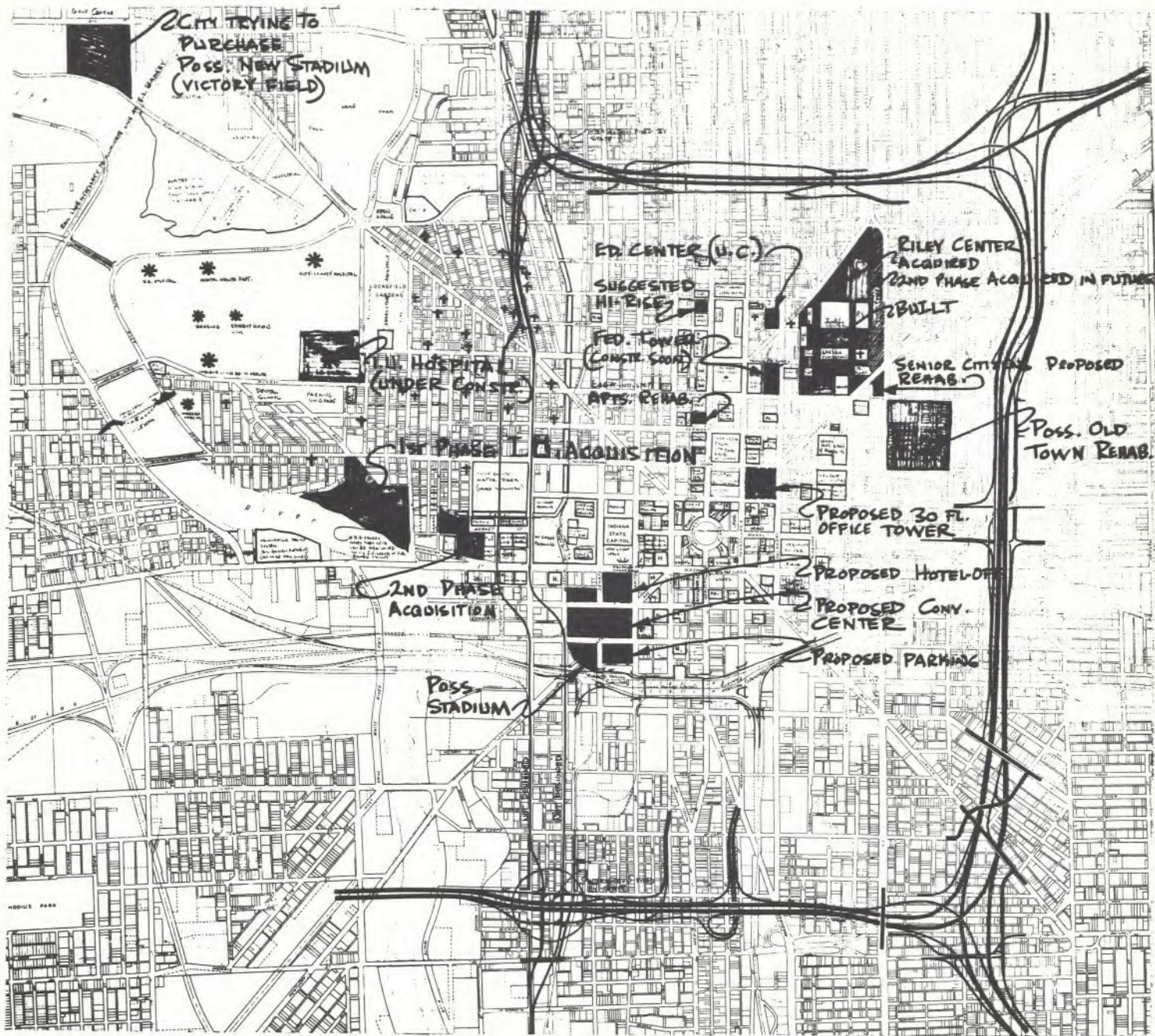
The physical layout of the central area street system is not conducive to efficient traffic movement; the diagonal streets create complex multi-legged intersections which require multi-phase signal operation and other traffic controls that drastically reduce the capacity and efficiency of the network. The relatively short blocks and frequent intersections also contribute to lower operating efficiency, due to frequent signalization and numerous intersectional conflict areas. The small blocks and numerous streets result in an inordinately high proportion of available land devoted to street purposes. With fewer but more

efficient streets, it would be possible to provide adequate circulation capacity and efficient operation utilizing less land.

Many of these problems are currently under study in the IRTADS Study, and some solutions will become available with the development of the proposed freeway system. However, a number of problem areas still remain to be resolved; these are covered more completely in the detailed analysis (attached as Appendix III).

6. Current Building Proposals

The existing face of downtown Indianapolis is already being radically changed by a number of projects financed by either government or private investment. (Some of the more significant projects proposed or underway are shown on Dwg. No. 4, "Current Proposals"). These projects cover a wide range of building types: the Riley Center introduces a high-density residential complex near the city core; the "old town rehabilitation" proposal continues residential and commercial uses; the



proposed convention center will introduce to the central city a new level of activity reflecting its regional function. In addition, a new Federal office building, several high-rise projects, expansion of the Riley Center, and other private and public projects are in process of implementation.

Most significant of all projects affecting the central area of Indianapolis is, of course, the new campus for Indiana and Purdue Universities. The activities already functioning - and especially the medical center - are essential ingredients of the vitality of Indianapolis. The proposed expansion to a full-fledged campus opens new perspectives of interaction of activities, of correlated design of physical facilities, of ultimate excellence of urban life that are probably unprecedented.

In the following chapters the requirements of the Universities, the potentials for development, and possible design approaches will be explored in some detail.

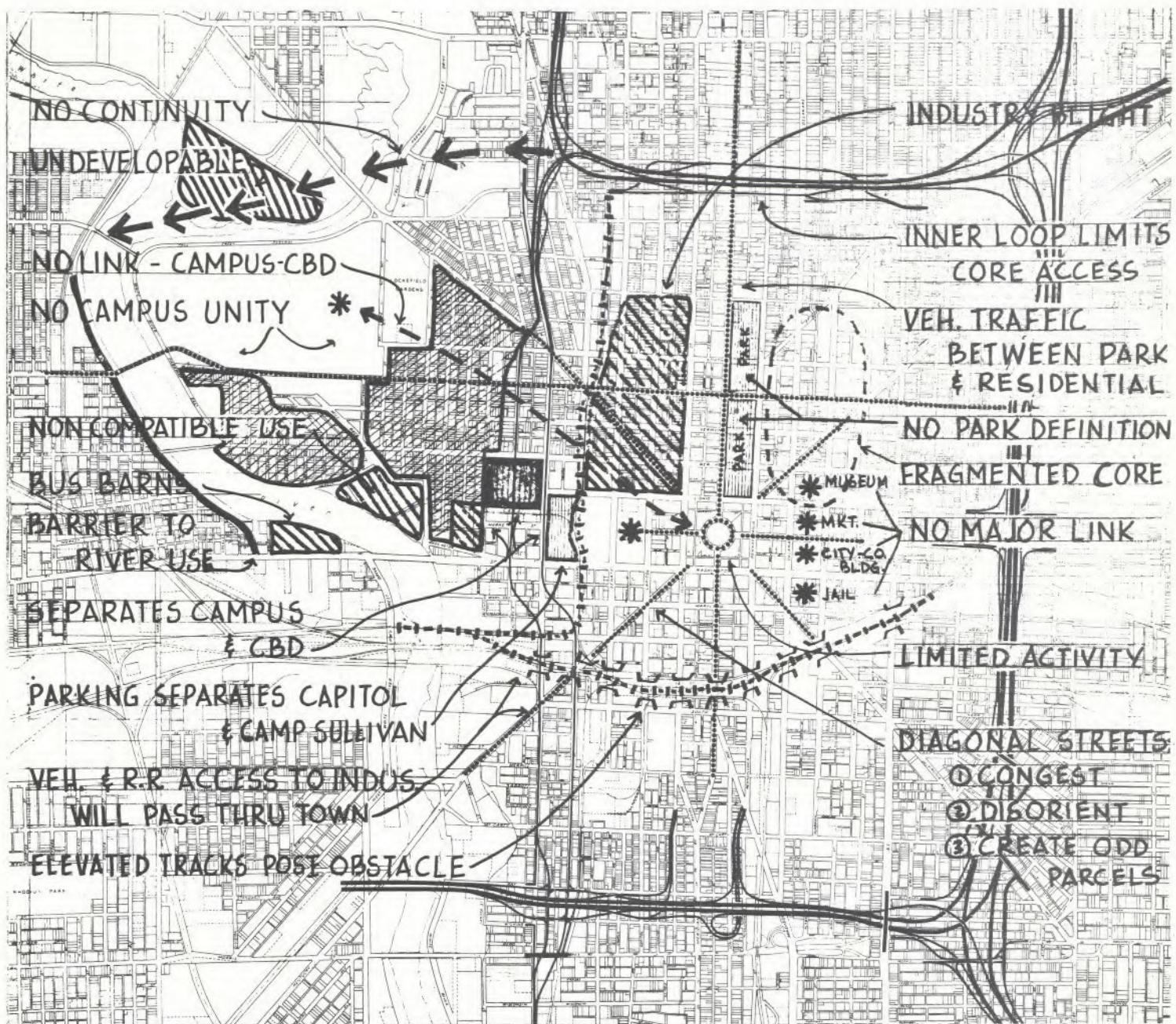
7. Summary

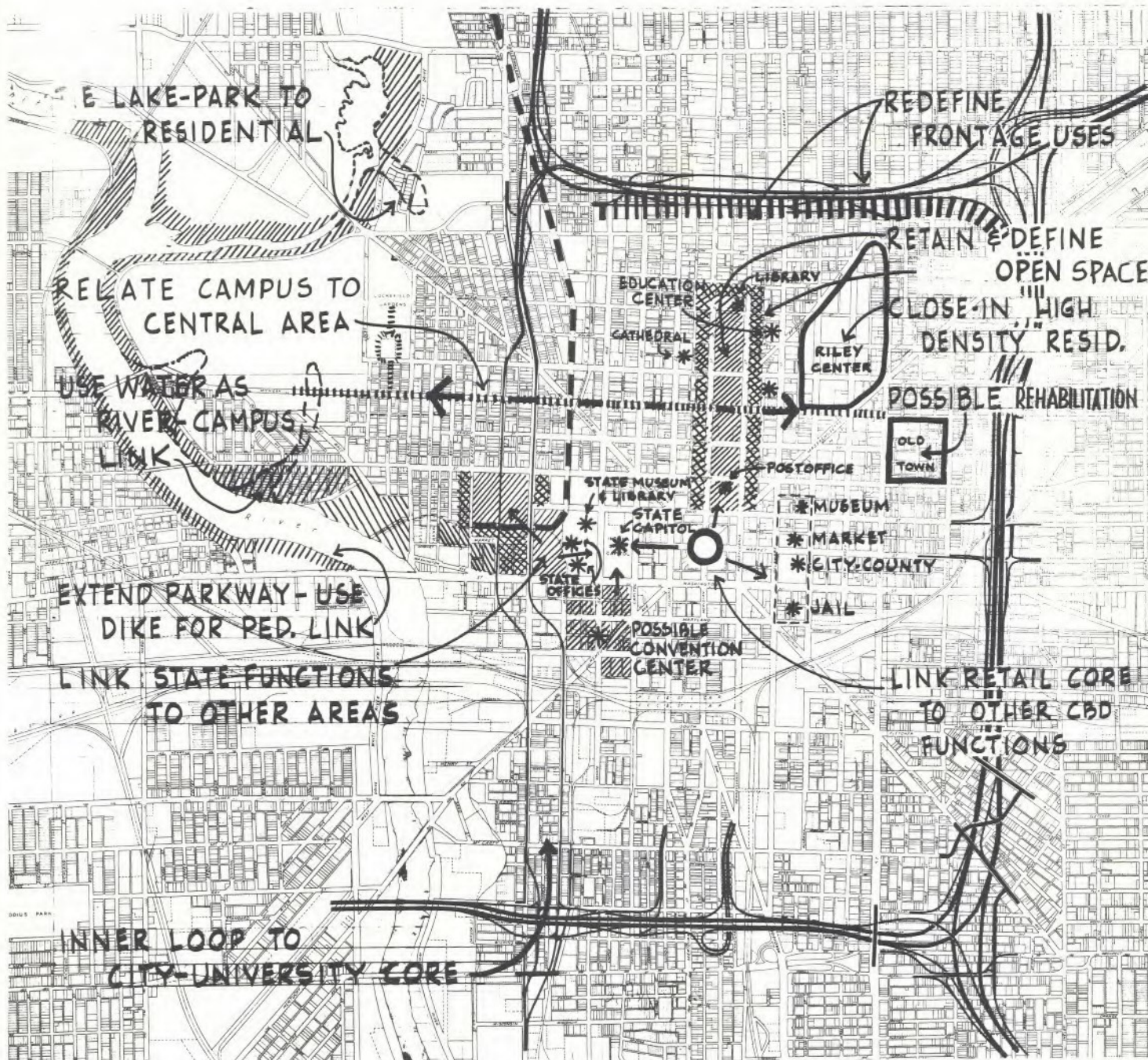
In summary, at the conclusion of the first exploratory studies it could be stated that Indianapolis is suffering from the same basic ills that are affecting almost all the larger cities of the United States: a decline in the population of the central core, coupled with increase of population for the region as a whole; a decline in retail activities in the CBD; traffic congestion and parking problems; deteriorating housing. If the finding is prosaic, and, to many of its citizens, self-evident, it is nonetheless relevant. The criteria, objectives, approaches, that have proven successful in other revitalization efforts will be of significance in developing a program for the revitalization of Indianapolis. In addition, the characteristics of Indianapolis that are unique, the opportunities that are unparalleled elsewhere should not go unrecognized, but must indeed become the dominant, the image-defining elements of the scheme and program that will best serve the community.

From many aspects, Indianapolis finds itself in a more favorable position than other American cities. To begin

with, the trends of deterioration emerged later in Indianapolis than elsewhere and, as a result, the problems do not appear as critical as those facing other metropolitan centers in the country; the downtown area may have declined, but it still retains substantial vitality and its compactness is a real asset; there have been no serious racial conflicts. However, these are in a sense, negative virtues. Far more positive and encouraging for the future growth of the city has been the recognition by the City Council, the Metropolitan Plan Commission and other organizations that problems exist and that they must be faced with determination. As a result, a vigorous and continuing planning program has been established to revitalize the central area and to integrate all proposals and projects with the plan for the region as a whole.

As far as the central area is concerned, problems and opportunities (see Drawings No. 5, "Problems", and No. 6, "Opportunities"), are concurrently forcing change and response; as long as each element of renewal, each response to crisis, each extraordinary chance is viewed





and solved as an isolated entity, the results are going to be meager. Disaster may be forestalled, but success, maturity, quality will prove elusive objectives.

Only through purposeful commitment to a comprehensive approach to solution of problems and response to opportunities will it be possible to transform the central area of Indianapolis - born and formed in the 19th Century - so that it will be prepared to both retain its historical identity and, by accepting the reality and responding to the demands of the 20th Century, fulfill its role for the future.

CHAPTER IV

GROWTH POLICIES OF INDIANA AND PURDUE UNIVERSITIES

This chapter outlines the growth policies for Purdue University and Indiana University. A more detailed description of their development programs is found in Appendix I.

Both Purdue University and Indiana University maintain campuses in Indianapolis at present. Purdue University Indianapolis Regional Campus is located at 1125 East 38th Street. Its current enrollment (February 1966) is 2,351. The major areas of instruction include agriculture, engineering, home economic, humanities, social science, education, industrial management, science technology, pre-veterinarian, pre-medicine and pre-pharmacy. The degree granted is an Associate in Technology.

Indiana University Downtown Campus is located at 518 North Delaware Street. Current enrollment (February 1966) is 3,700. Major areas of instruction are courses for the first two years of the university curriculum. No degrees are granted.

Indiana University's Board of Trustees have already taken steps to establish a regional campus in Indianapolis in the area now known as the University Quarter. (Approximate boundaries are Tenth Street on the north,

Washington Street on the south, and Illinois Street and the Harding Expressway on the east and west respectively--an area in excess of 500 acres.) The regional campus in Indianapolis is to be part of the General and Technical Studies Division of Indiana University.

Based on detailed research conducted over the last five years, the administration of Indiana University estimates that by 1990 the University in Indianapolis would encompass approximately 35,000 students, of which 750 would be related to the Law Campus, 800 to the Government Campus, about 30,000 to the Regional Campus, and 4,000 to the Medical Campus.

The regional campus system has been established by the Indiana University Board of Trustees, and includes similar programs in Fort Wayne, East Chicago, Jeffersonville, Kokomo, South Bend, Bloomington (main campus), as well as Indianapolis. Indiana University retained the firm of Eggers and Higgins, Architects, New York, to prepare a master plan of development of Indiana University Regional Campus in Indianapolis. A series of tentative plans have since been developed, and the University has purchased a considerable amount of land in the University Quarter. Detailed site plans have been prepared for the first stages of development of the regional campus, specifically in connection with the Law School,

with replacement of the downtown campus, and with development of a central power plant, various classrooms, lecture halls and ancillary uses.

In 1966, Indiana University invited Purdue University to participate in the development of the regional campus in Indianapolis. This joint participation has precedent in the Fort Wayne regional campus system, which includes facilities by both Purdue University and Indiana University. Joint participation has obvious advantages in that the two universities can offer complementary curricula and expand the facilities for continuing education and research, which are recognized as particularly significant in the operation of a "downtown" campus.

CHAPTER V

THE URBAN UNIVERSITY

A. Current Trends in the Evolution of Universities

In the preceding chapters reference has been made to the two significant developments affecting the future of Indianapolis as a regional center: an awareness, on the one hand, by the City of Indianapolis of the need to revitalize the central area; and a desire, on the other hand, by Purdue and Indiana Universities to expand their facilities to create a new campus near downtown Indianapolis. These trends are far from being incompatible; indeed, it seems most beneficial for all parties to act in cooperation if their respective goals are to be fully realized.

In order to establish a framework for cooperative action by the Universities and the City agencies, it is appropriate to first look briefly at the changes that are taking place in the university, for it is only through a clear definition of the university's role in the urban context that the best guidelines for action can be set.

The university in America is undergoing numerous and far-reaching changes, the impetus for which comes from diverse sources. Of prime importance is the pressure for growth and expansion. Research

has shown that over four million degree-credited students are now enrolled in colleges and universities in the United States. This figure will double by 1975 to over 8,500,000 students. The magnitude of the task can be best expressed by the realization that between now and 1975 new campus facilities will have to be provided equal in scope to the sum of all the campuses that have been constructed in the country from 1636 to the present time.

Second, the impact of scientific and technological advances has led to considerable changes in the organization and the physical structure of the university. New subjects are being taught that were unheard of ten years ago; new types of buildings are being constructed; university graduates find it necessary to return to school to keep abreast of the technical innovations in their particular field. The result has been a proportional increase in the size of graduate schools and a demand for more research facilities.

Third, the reduction in the working week and the increase in leisure time activities has brought a search for further knowledge and a desire to continue the education process far into adult life. The adult education course is becoming a familiar part of the university scene.

Finally, the university, with its abundance of skilled manpower, facilities and financial support, is penetrating fields to which it was alien until not long ago, and areas of activity that were restricted to other institutions. In the space and armament programs many universities are undertaking roles that complement, if not actually compete with, private industry. In addition, faculty members become government advisers, and university teams analyze, evaluate and plan existing communities.

One result of these pressures for growth and change has been a re-evaluation of the traditional concepts of the university, its role, its ideal size and its location. What we are witnessing, in effect, is a breakdown in the traditional barriers between the university and society at large, between town and gown. As the university professor of today joins or competes with private industry and government, the distinction between the "academic" man and the "practical" becomes harder to define. The university itself is unable to remain the enclave it sometimes was in the past, secluded in form and independent of the outside community.

B. The Significance of the New Urban University

If we accept this trend toward even closer links between university and community, it is important to examine how these linkages can

be implemented. To this end, one of the most significant concepts to emerge in recent years is a new approach to the urban university, a university located not at the outskirts, but right within the heart of the City. There is nothing new in the idea of a university situated in the center of a large city; in fact, this has been the common pattern in many parts of the world for centuries. Nor is there anything new in the joint participation of university and city in common endeavors. What is emerging as a new concept, however, is the recognition of the multiplicity of links between the urban university and the city; this recognition, in turn, becomes a conscious effort toward correlation and synthesis in the planning and design of the two entities. In the past, the connections between city and university had been built up slowly, in a haphazard way, the mutual benefits had largely been taken for granted, the inconveniences grudgingly tolerated. Students found lodging in the private homes surrounding the campus, retail facilities sprang up, often parasitically, to serve the university, and the city inhabitants might attend the performances at the university auditorium; these linkages were understood and expected. Today, however, the process of interaction becomes much more complex and challenging, not only at the technological level, but also at the sociological level as well; the dividing line between the institution of learning and the field of application of

knowledge, between the campus and the city, tends to become less distinct. The facilities of the city become extensions of the classroom, the city itself becomes the campus. The communication is a "two-way" system, however, for the university in turn can offer its services and facilities to the community at large; thus, in a sense, the campus tends to become the city.

The potential for realizing this concept is being opened as a unprecedented opportunity to the City of Indianapolis and the two Universities, for the creation of a new urban university in the heart of Indianapolis can offer a new dimension to the relationship between the university and the people. The university, which permeates into the city itself, can add to the richness and variety of the city life; in turn, from the city it can expect support, recognition and a new level of vitality.

C. Links Between City and University

The connections between city and university can be strengthened in many ways, in most instances just by giving new emphasis to existing practices or trends.

First, the university will be programmed to offer, in addition to its educational facilities for the young, a continuing opportunity for education to the adult throughout his life. The continuing education

courses provide one of the most effective links between the campus and the city. At the University of California, Los Angeles, for example, where adult education programs have been well established for many years, the number of persons registered for one or more courses of adult education totals four times the full-time student population.

Second, the university can draw on the city's resources for research and instruction, bringing together students and professionals with varied experience and background. This opportunity is especially available if the city happens to be both the region's growth center and the state's capital.

Third, the university can consciously prepare future leaders to meet the problems of the city itself. Research and instruction could focus on real projects dealing with current city problems.

Fourth, one of the most obvious advantages of locating an urban university in the heart of the city is the opportunity for the joint use of facilities by the university and city residents. This can avoid the costly duplication of structures that would not receive full-time use if restricted to exclusive service either as a campus or civic facility. If the city is to be the region's center for higher education, cultural

activities, commerce and business, there will arise innumerable opportunities to share specialized facilities under a controlled program to serve students, faculty, researchers and laymen alike.

Functions and facilities suitable for occasional or systematic sharing could include the following:

- The use of the university as a conference center.
- Libraries, general and specialized.
- Theaters, conventional and experimental.
- Cinemas--especially experimental, educational and non-commercial programs.
- Museums and special exhibitions.
- Medical facilities, for both treatment and research.
- Recreation--stadium, athletic facilities, exhibition fields.
- Industrial, research and development facilities.
- Parking and secondary transportation systems.

Finally, the university can offer direct service to the community through research, demonstration projects or action projects. The concept of a Center for Urban Affairs, examples of which already exist in some university cities, would polarize the many potential links between city and university. Programs can include and correlate activities in the fields of government, administration and legislation, social research and business assistance.

CHAPTER VI

THE UNIVERSITY AND CENTRAL AREA PLAN-- TOWARD A SYNTHESIS

A. Scope and Limitations of the Plan

The plan represents tentative goals and recommendations for the university and the central area. Together with the conceptual plan, certain specific policy recommendations in terms of courses of action to be taken by the City and the Universities are also submitted.

The basic plan is a bold concept, as it must be if it is to be carried into reality. However, its specific components--physical form, the exact distribution of land uses, the circulation elements--have, by intent, been left relatively open ended. This will allow greater flexibility and the ability to introduce changes during subsequent detailed stages of the work without compromising the concept and the objectives of the proposed approach.

B. Objectives for the University

The program for the development of an urban university in Indianapolis is geared to the following objectives:

1. The primary function of the university is to offer higher education to all the people of Indianapolis and all the students that attend the university.
2. It is desirable and necessary that the basic function of higher education be complemented by continued education for adults, opportunities for service to the community, and opportunities for coordinated research.
3. The planning for the university is to be developed in phase with the planning for the development and revitalization of the central area, so that the potentialities of city and university may complement rather than conflict with each other.
4. The location of the components of the university development will recognize the internal relationships of various schools and departments to minimize walking distance and time loss between classes.
5. The components of the university are to be so located and correlated as to produce maximum mutual beneficial interrelationship with complementary

urban functions (the State Office complex; research and industry; convention, recreational and cultural facilities; residential development; commercial and retail development; medical facilities).

6. The pedestrian circulation system for the urban university is an integral part of the pedestrian movements plan for the entire central area.
7. Residential development related to the Universities is to be part of a long-range housing program for the central area of Indianapolis.
8. The location of parking structures and local service roads within the campus is to be properly related to the system of arterials and streets planned for the central area.
9. The plans for the university will recognize opportunities for complementary development along the White River, Military Park, and other areas adjacent to the boundaries of the campus complex.

10. The amount of automobile storage serving the university facilities is to be established to meet the needs of the university; however, every opportunity should be sought to overlap the service range of off-street parking facilities and to take advantage of complementary demands of city and university.
11. Consideration is to be given to a secondary transportation system that will link the university to the medical center and to the downtown core, as well as to residential areas, research and development centers, civic center, and other major elements of the central area. The secondary transportation system is to be so conceived as to discourage vehicular recirculating demand with the central area and to reduce parking demand.
12. A system of open space, parks, pedestrian ways and plazas is to be established within the university to form the framework for a wide range of urban design opportunities.

13. The planning program must be geared to minimum disruption of existing facilities and to optimum development by stages, especially taking into account the requirements for immediate construction of specific facilities.

C. Objectives for the City

The orderly process of renewal of the central area depends for its success upon vision and discipline, upon private initiative and public efforts, all applied to a well-conceived and accepted program of change. A successful plan for revitalization of the central area will seek to accomplish the following:

1. Encourage the most productive and intensive land use in the central area.
2. Provide an adequate circulation network connecting the entire metropolitan area to the central core.
3. Make adequate provision for traffic circulation, ease of movement, and vehicular storage within the central area.
4. Create clearly defined and separate areas of pedestrian, vehicular, service, and parking activities.

5. Provide proper inducement for private and public investments.
6. Establish mutually beneficial interrelationship between university development and central core activities, encouraging the most productive use of land and taking into account the changing role of the university.
7. Establish a commercial core, which through its vigor, wide range of activities, efficient organization of space and superior physical character, will satisfy the needs of Indianapolis, of its trade area, and of its region.

D. An Evaluation of Alternative Campus Concepts

The development of the planning concept for a university in an urban setting must face and resolve a number of issues which can influence the design to a considerable extent. Perhaps the most significant is the question of the identity of the university itself. Even if the concept that the university should relate to its urban surrounding is accepted, opinions differ as to how this should be done. Should the university merge completely with the surrounding area so that in scale and appearance it becomes indistinguishable from the city scene?

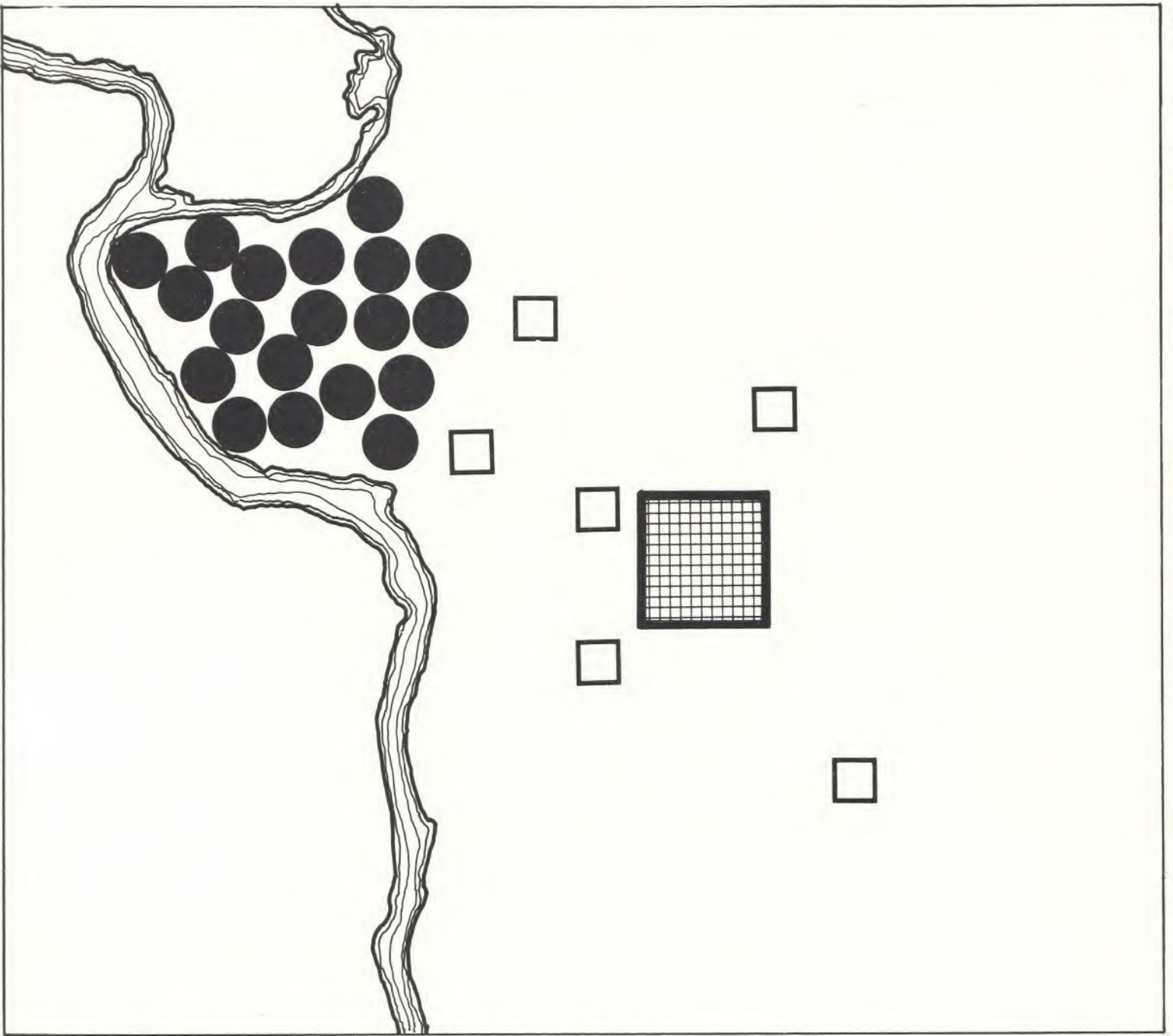
Or should it be totally self-assertive, an island within the city, readily identifiable? Should the links between city and university be implicit-- by accepting the fact they exist anyway? Or should an effort be made to physically and visually express these linkages in the form of connecting circulation systems, compatible architecture, consistent urban scale?

In our opinion, the plan concept must reflect two basic objectives: First, since the unique strength of the urban university rests with its potential for close ties with the city and its ability to share facilities and activities, the linkages between the city and the university should be clearly defined and expressed. Second, the urban university should still retain its own clearly recognizable identity. The reconciliation of the inherent elements of conflict between the two concepts--as well as the realization of the potential afforded by the inherent elements of complement--is the obvious challenge to the planning and design task.

Toward the development of the proposed concept, three different concepts were considered and evaluated:

1. The "Island" Campus (Dwg 7)

This concept derives from the classical tradition of the self-sufficient inward-oriented, visually



CAMPUS FUNCTIONS



CITY CORE



CITY FUNCTIONS



DRAWING 7

THE ISLAND CAMPUS

and functionally walled-in campus. To a degree, all previous schemes developed by the Universities, with the campus tucked "west of West Street," alone in the peninsula formed by the bend of the river, were variations on the concept of the "island" campus. Within this concept the large open spaces between existing buildings at the medical center would be developed and additional land would be acquired in the immediate proximity only. The result would be a typical campus in an urban setting. It could be easily identified. Its master plan and its architectural character could reflect the urban location (if nothing else, by virtue of the higher density demanded by the limitations of the site). The links between university buildings would, of course, be very good, but the connections to the corresponding elements of the city would be more tenuous, accidental, and the distance of interconnections much greater. Although parking and road circulation could be handled, the complete self-sufficiency of the campus may require widening of the roads to carry the traffic loads; and the demands for adequate parking, unsup-

ported by complementary uses, unrelieved by a secondary transportation system, might add to the improvement costs for the campus.

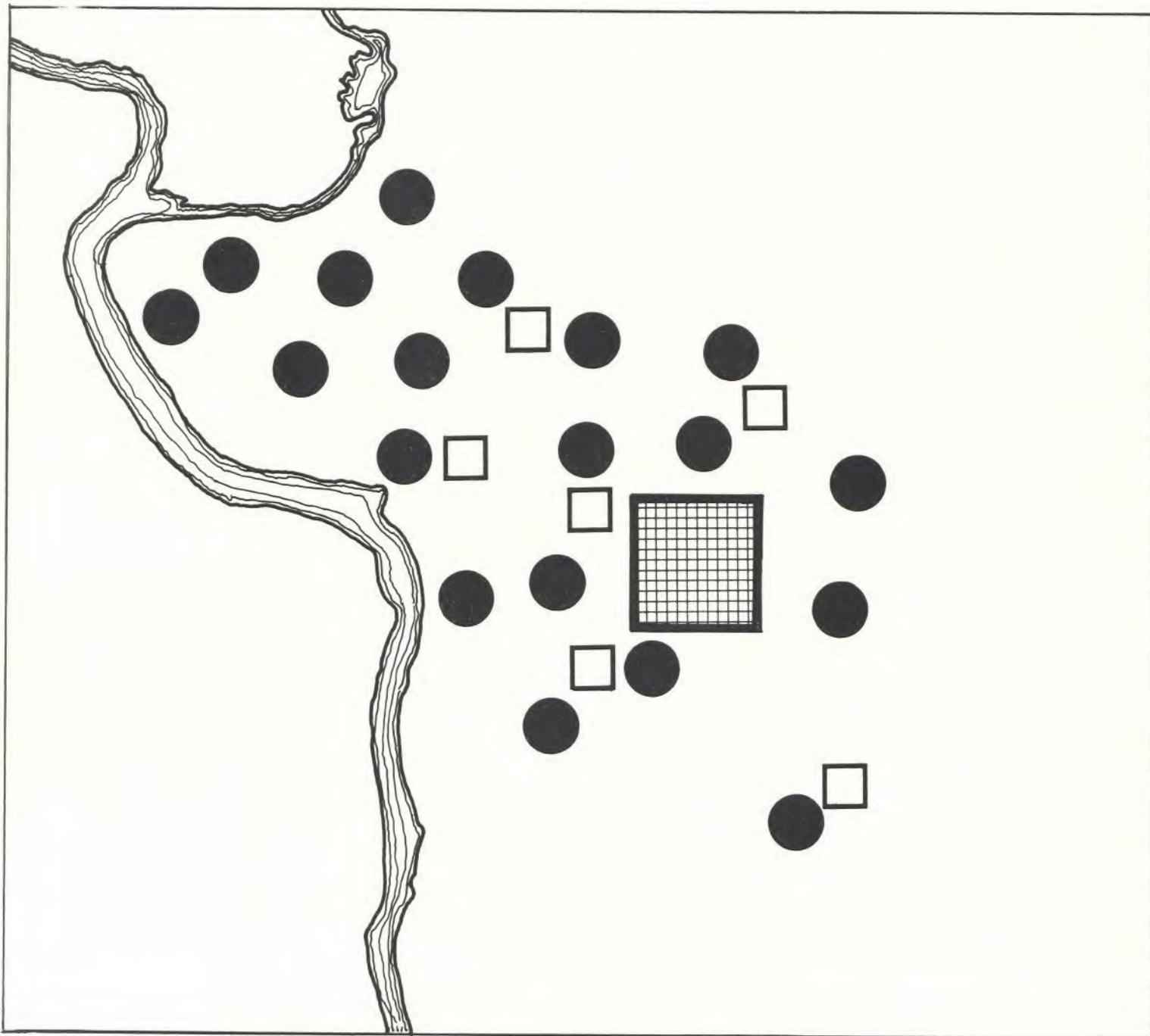
Yet the main shortcoming of the "island" campus is not to be identified with the difficulties, problems or costs that the concept might entail, but rather with its failure to recognize and respond to the unique opportunity that timing, circumstances, and the available tools for revitalization can make available. The opportunity will be missed if the attitude toward campus development remains oriented to the past rather than the future.

If the concept of the "island" campus should prevail, Indianapolis' new university may well develop as one of the great campuses of the country; but it will have failed to grasp the fleeting chance of becoming the forerunner of the new university, the first truly "urban" campus of tomorrow. For this reason, as much as in recognition of the opportunity of which the community as a whole would be deprived, we cannot support the "island" campus concept.

2. The "Dispersed" Campus (Dwg #8)

For extreme contrast with the "island" concept, we have examined the alternative concept of the "dispersed" campus. This concept would provide easy and immediate communication with city facilities, deriving from the strategic location of the university buildings--Law School near the courts, humanities near museums and art galleries, science and technology near research and development plants. The identity of the university would clearly be weakened with this plan: while the use of a consistent architectural vocabulary for the university building could ensure that at least key elements in the university would be recognizable, awareness of the campus as a whole would be lost.

The concept, has, however, a number of advantages. The decentralization could assist greatly in the relief of traffic and parking problems; the dispersion of parking facilities would minimize the overloading on roads in the vicinity of the university--a very real problem in most large commuter campuses. It is also conceivable that the "dispersed" campus could have some advantages in phasing and land acquisition--the compact urban



CAMPUS FUNCTIONS



CITY CORE



CITY FUNCTIONS

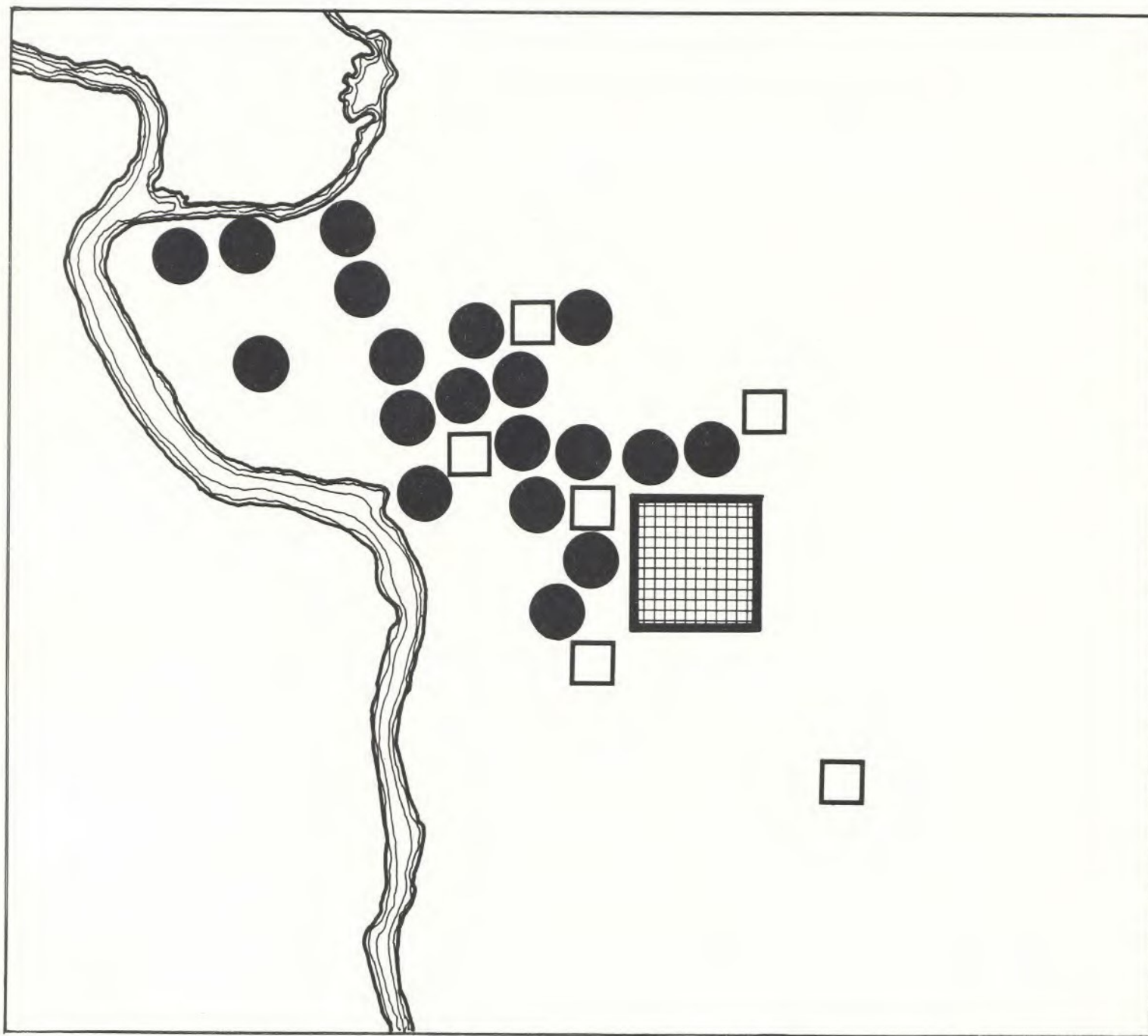


campus, desiring to expand, is virtually forced to seek land immediately adjacent to the periphery. The "dispersed" campus would have much more flexibility to negotiate since theoretically, it could look farther afield in the city and be in a position to avail itself of greater range of alternative sites. In practice, if certain linkages are to be maintained, this advantage may prove elusive.

On balance, we do not favor this approach, partly because of the lack of strong identity for the university, but mainly because of the extended circulation links between the diverse campus elements. The concept might work in a smaller city, but in trying to relate the proposed university to key existing uses in Indianapolis, the pattern would become too dispersed for satisfactory operation within the campus itself.

3. The "Urban" Campus (Dwg #9)

The third concept is an attempt to express more consciously the twin design objectives of a clear identity for the university and close links with the downtown.



CAMPUS FUNCTIONS



CITY CORE



CITY FUNCTIONS

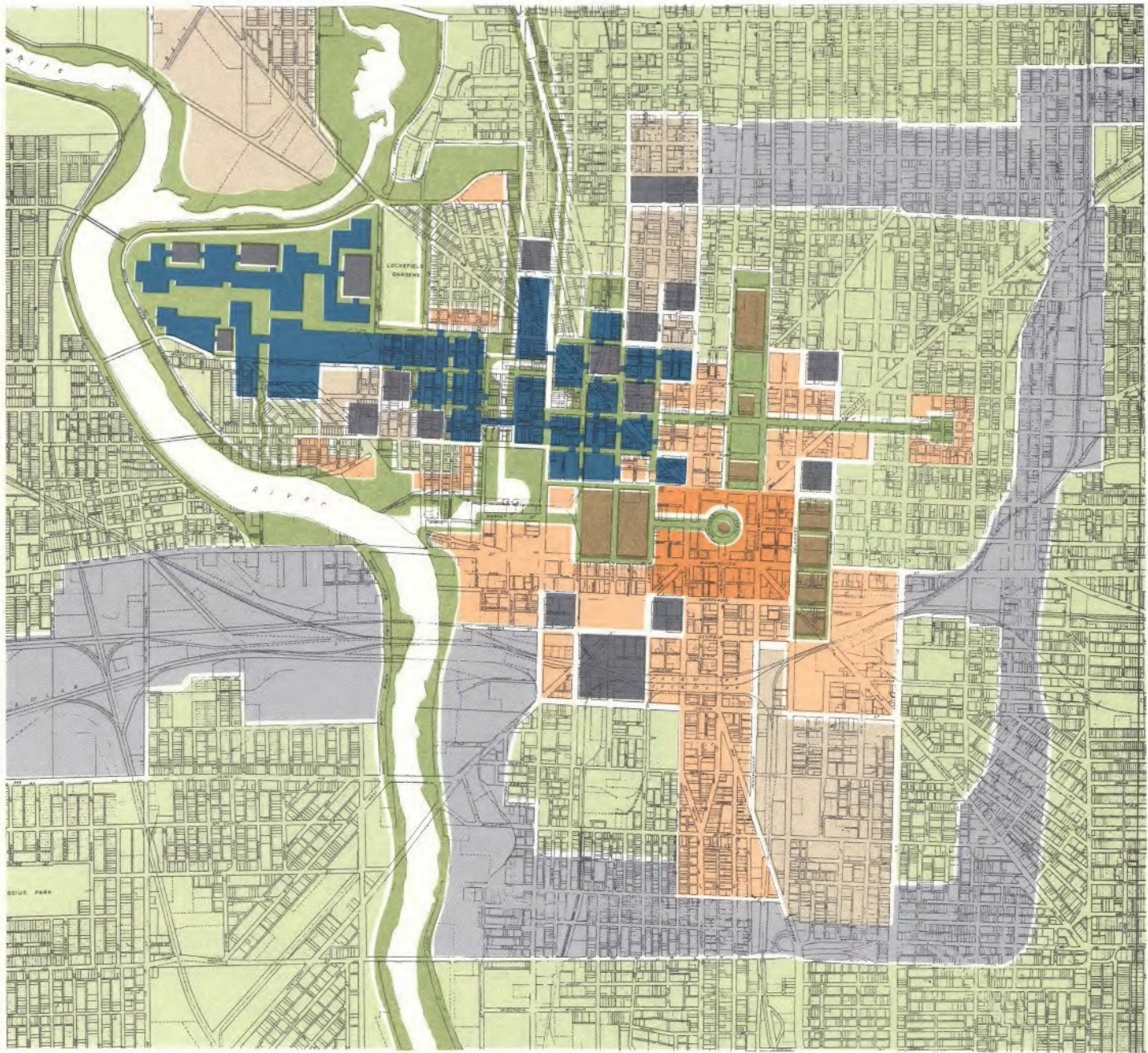


DRAWING 9

THE URBAN CAMPUS

From this intent comes its definition as the "urban" campus. The concept takes the form of an essentially cluster campus--organized around a main spine connecting the existing medical center with the core area around Monument Circle. By grouping the campus buildings along a major pedestrian circulation system, we can achieve excellent communication between university buildings, as well as links to key buildings in the downtown. The campus itself has adequate density and depth of development to establish a strong identity of its own without being divorced from the surrounding city. The open spaces, around which the building elements are organized, are linked to the public spaces of the central city; yet, within the campus limits, they can acquire and maintain identity with the university. Expansion and growth can take the form of "fingers" extending at right angles from the main spine and interpenetrating with diverse elements of the central area (residential, research and development, civic, etc.).

Generally, we believe this concept can fulfill the basic objectives without any serious compromises. As submitted, it does not represent an actual solution, but



DRAWING 10

LAND USE PLAN

rather provides the basis for further, more detailed design and planning studies to be made. The concept should be seen as open ended, making possible a variety of alternative design solutions and not as dictating a set pattern of development. As an indication of the kind of approach we foresee, we are presenting a basic tentative land use plan, followed by an examination of alternate potential design approaches based on the suggested land use plan.

E. Tentative Land Use Plan

Based on the "urban" campus concept for the university, a tentative land use plan has been developed (see drawing #10). The plan includes tentative proposals for the city's central area, as well as for the university itself. Taking the central area first, the plan includes the following suggestions:

1. The retention of all substantial existing improvements wherever possible and the incorporation of all retainable physical assets within the context of the proposed concept.
2. The grouping of the retail facilities in a compact nucleus in the vicinity of Monument Circle, arranging

for expansion of existing retail facilities and providing space for new retail construction.

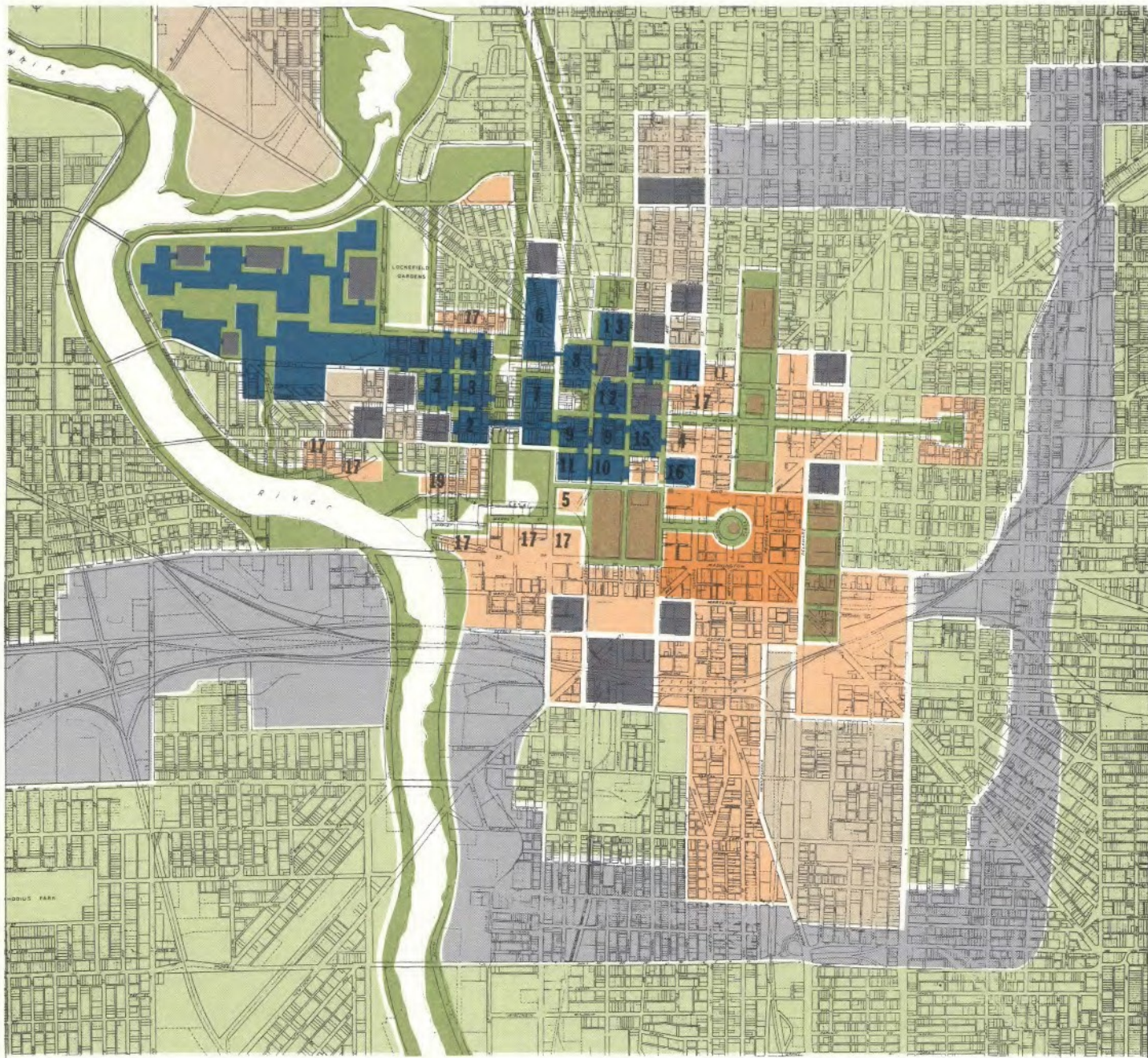
3. The strengthening of the commercial core by redefining areas for office use, convention facilities, arena, City administrative buildings, and taking into account the trends in present development.
4. Re-establishment of the light industrial and research and development areas in the vicinity of the proposed freeway alignment, in order to provide direct truck access and industrial employee access and to minimize conflicts with the commercial area functions.
5. The recognition of the task of redeveloping and rehabilitating obsolete residential areas by: providing new areas for residential development; reorganizing poorly designed neighborhoods into more harmonious close-in residential groupings conveniently located in relation to commercial activities, and taking advantage of the potential visual amenity of the White River and the Fall Creek Park. The plan recognizes the advantages of a higher density residential area close to the core and

university, as well as the opportunities for variety of residential development, including apartments and town houses. The plan also recognizes the opportunities for introducing university-oriented housing for married students, single students and faculty. This can, of course, be intermingled with non-university residential.

F. Location of University Facilities

Drawing #11 illustrates a tentative location plan for the university facilities. It represents a more precise definition of the "urban" campus concept, by indicating specific locations and land allocations for individual academic elements of the campus. The university, in essence, becomes a "system" of facilities linking the existing medical center to the downtown core. The specific university facilities were located so as to recognize desired linkages both in terms of intra-campus contacts and in terms of relationships with public and private functions related to the city core. Distances between closely related activities are designed to be kept to a minimum.

With reference to location of the main academic functional groups, it should be noted that the key functions that relate to the university as a whole have been located toward the center of the campus, along the main circulation spine: the administration complex, the student



- Primary Commercial Core
- Support Commercial
- University
- Residential
- Research & Development
- Open Space
- Industrial
- Parking

- Public Buildings
- 1 Science
- 2 Engineering
- 3 Science - Engineering Library
- 4 Auditorium
- 5 Art Museums - Galleries

- 6 Stadium - Recreation
- 7 Administration
- 8 Student Union
- 9 Humanities, Education, Sociology
- 10 Law
- 11 Urban Studies - Law Expansion
- 12 Main Library

- 13 Power Plant - if required
- 14 Technology - Industrial Management
- 15 Business Administration - Adult Education
- 16 Special Programs
- 17 Shops - Entertainment

DRAWING 11

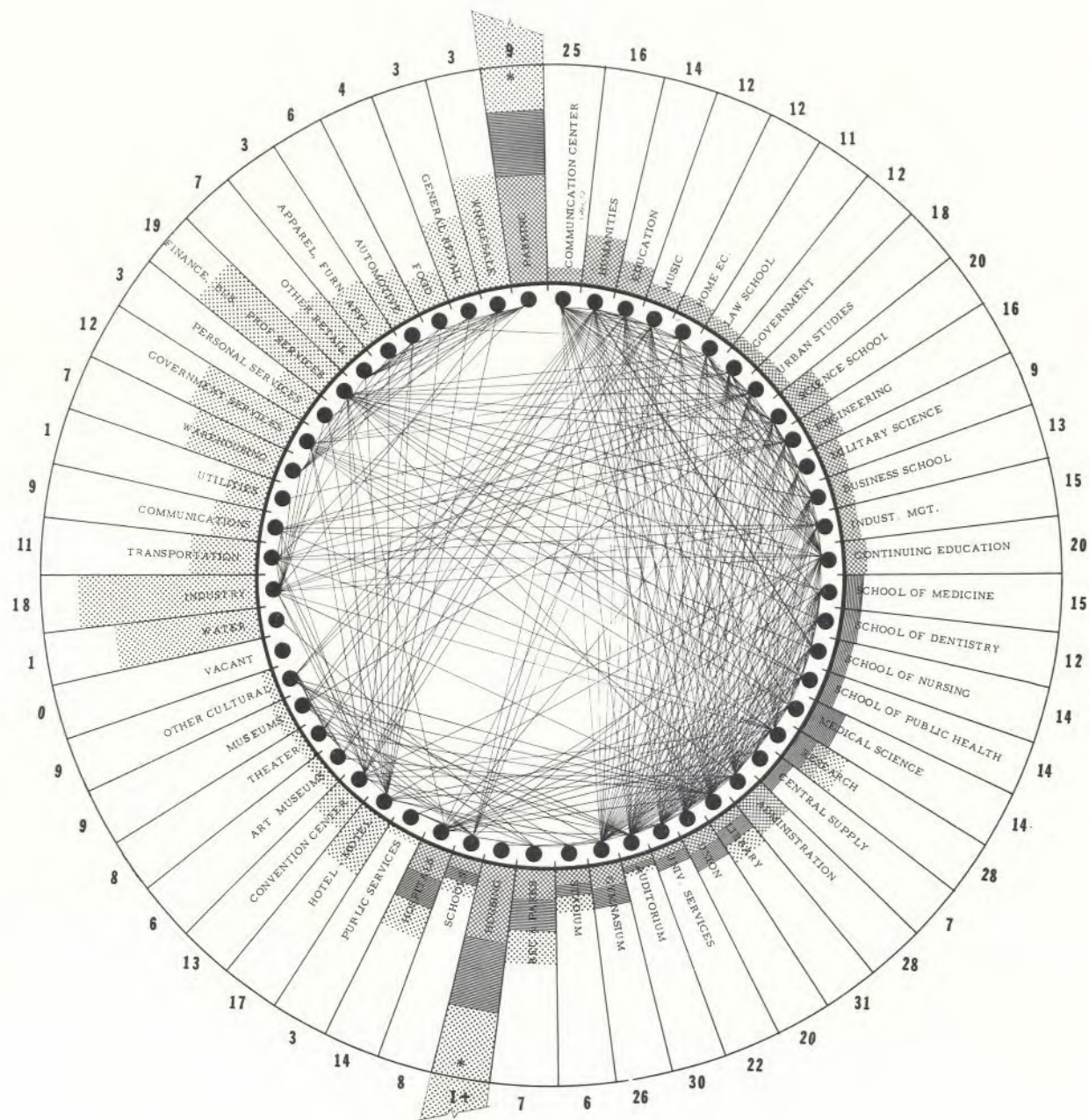
UNIVERSITY FACILITIES

union, the main library. Other facilities have been located so as to reflect linkages with the city: Law School near the courts, Adult Education near the downtown core, Technology and Industrial Management near sites allocated to development of research and development facilities. Parking areas are provided throughout the campus, but always adjacent to a major access road. To link all the campus facilities together into a complex of varied urban scale and perspective, a system of parks and pedestrian walks (and a waterway utilizing the existing canal) become an integral part of the proposed concept.

Approximately 350 acres of land are expected to be devoted to university uses, including academic and non-academic functions.

It may be of interest to evaluate the effective pattern of intra-campus and campus-city linkages provided by the proposed concept in comparison with the equivalent pattern provided by earlier development plans developed for the university.

On Drawing #12 is shown a "Diagram of Activity Interactions," as determined by evaluation of present and probable future university functions. While admittedly the diagram does not reflect quantitative intensity of linkages nor evaluate their relevance to administration of



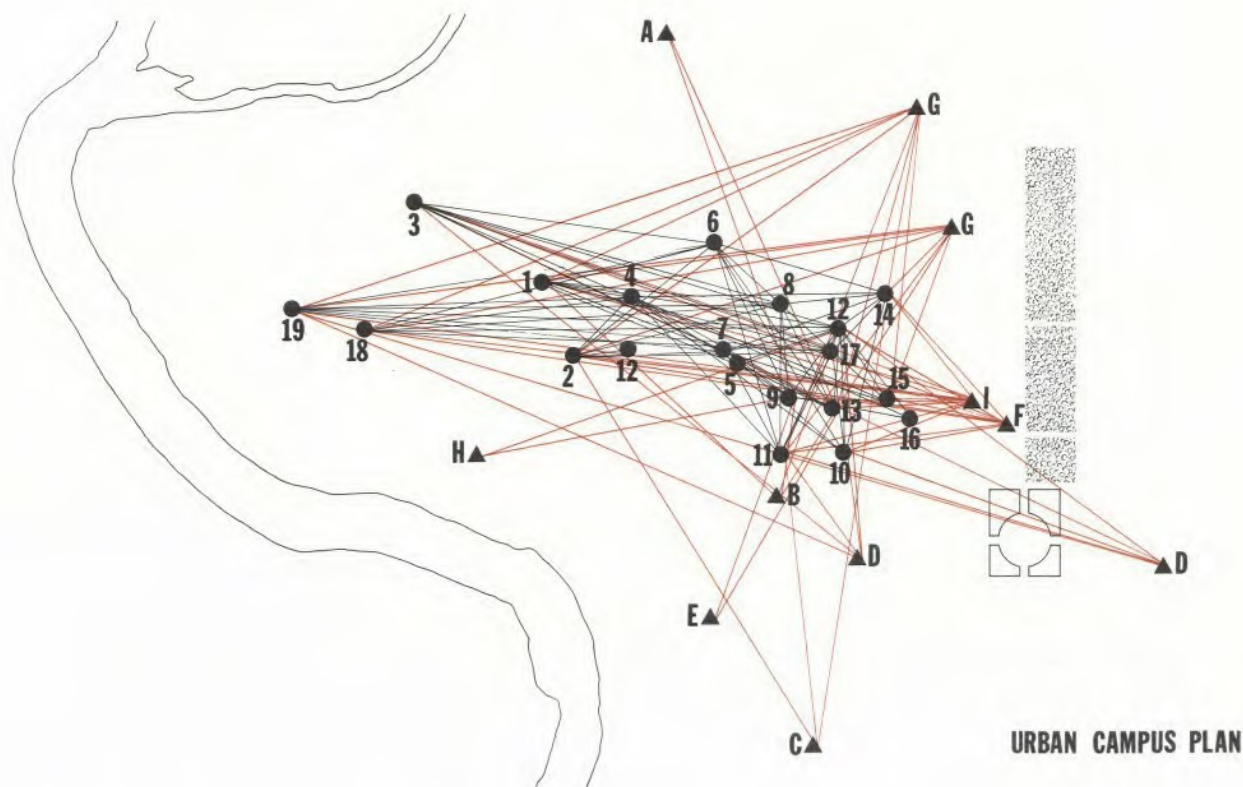
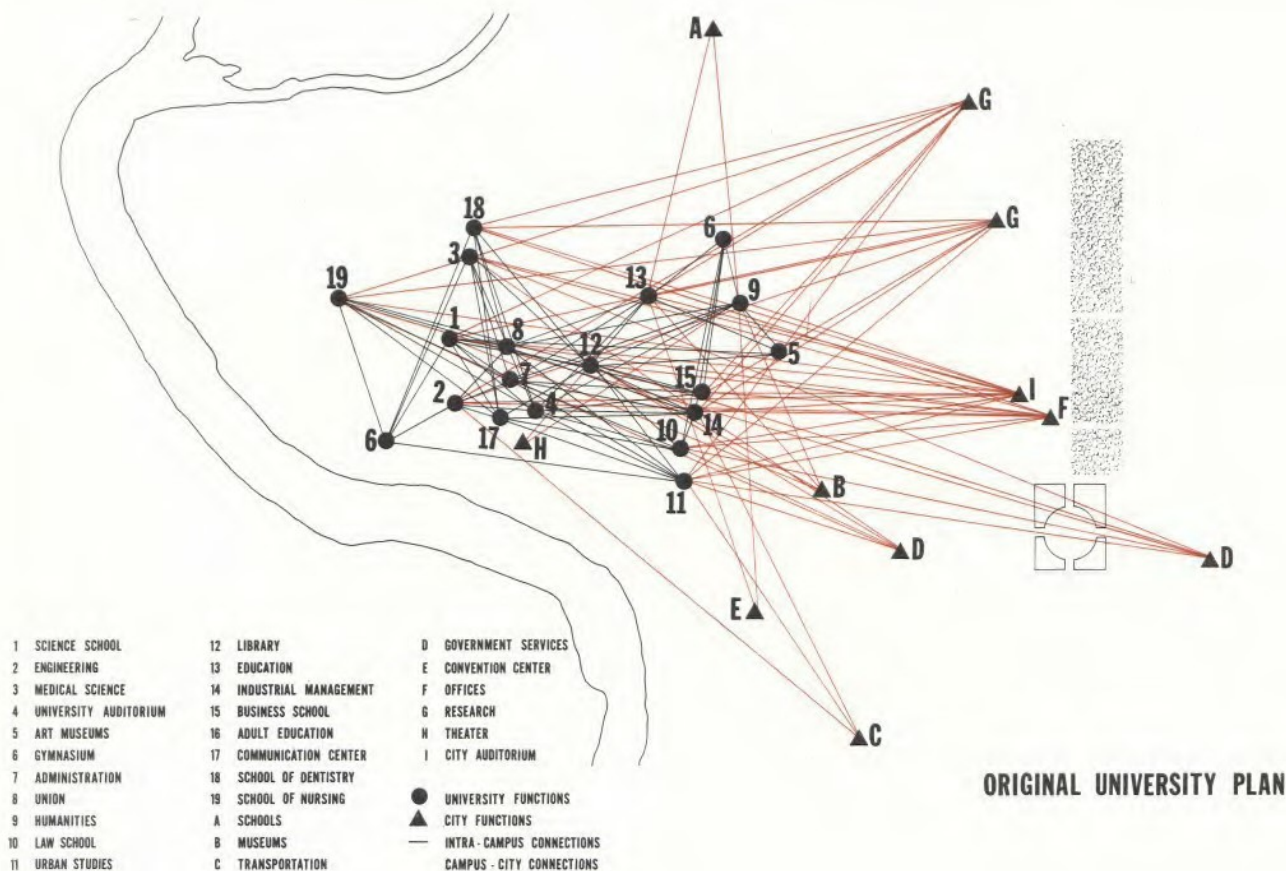
DRAWING 12 DIAGRAM OF ACTIVITY INTERACTIONS

campus functions (a more refined analysis of this aspect is recommended as a basis for more precise development of the "urban" campus plan), they still give a relevant image of the complex and multiple set of connections and confrontations that relate elements of the campus to each other and to correspondent elements of the city core.

When the schematic diagram is related (drawing #13) to two alternate concepts (the original university plan and the "urban" campus plan), it is evident that, as far as intra-campus connections are concerned, the "urban" plan, with one exception, ^{1/}provides as good or better connections between campus elements.

As far as campus-city connections are concerned, the "urban" campus plan provides far better, shorter and more relevant linkages than the earlier concept.

^{1/} The one exception is the linkage between the medical center and the rest of the campus. While it is recognized that communication between the two will occur, it would seem that this disadvantage is more than offset by the greatly improved system of links between the central campus and other elements of the city.



DRAWING 13

**ACTIVITY INTERACTION APPLIED TO ALTERNATE
UNIVERSITY CONCEPTS**

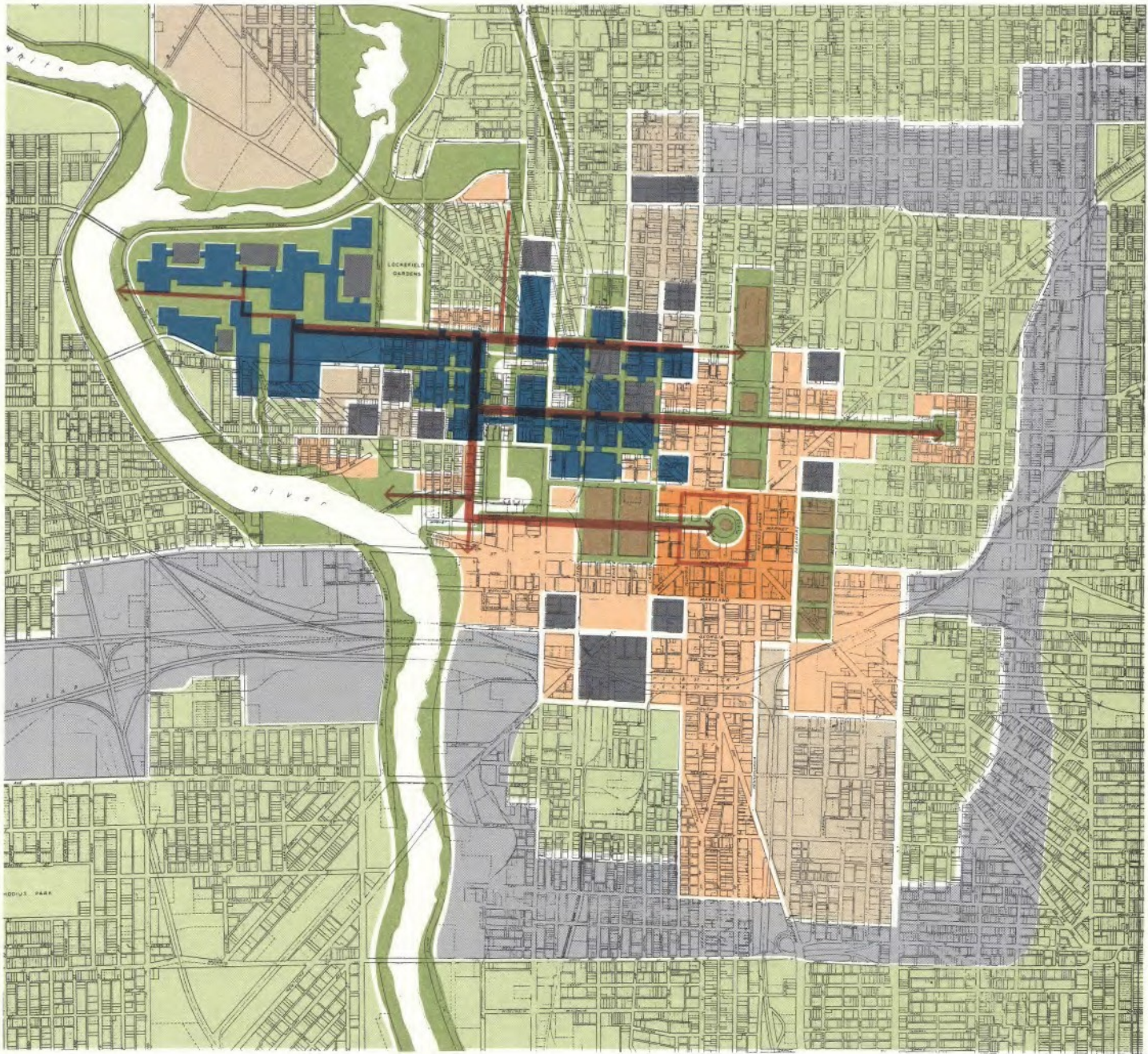
G. Design Potentials for the University Plan

The tentative land use plan indicated the basic distribution of land uses, their interrelationships and some of their characteristics.

To illustrate the design potential of the plan, we are showing possible directions upon which the more detailed design studies could be oriented:

1. Scheme A (Drawing #14)

The essence of this concept is the linking of the university to the downtown core through a system of pedestrian walks. The main spine of the pedestrian system would comprise both covered walks and a series of open courtyards, malls and parks. Existing cross streets would either be closed off to through traffic at their intersection with the pedestrian links or, if they are main arteries, be depressed by means of underpasses. The purpose of the pedestrian spine is to provide a continuous link that links buildings together and also acts as a symbolical (and functional) connection with the downtown core and with other elements of the central area.



- Primary Commercial Core
- Support Commercial
- University
- Residential
- Research & Development
- Open Space
- Industrial
- Parking
- Public Buildings

DRAWING 14

PEDESTRIAN CIRCULATION 'A'

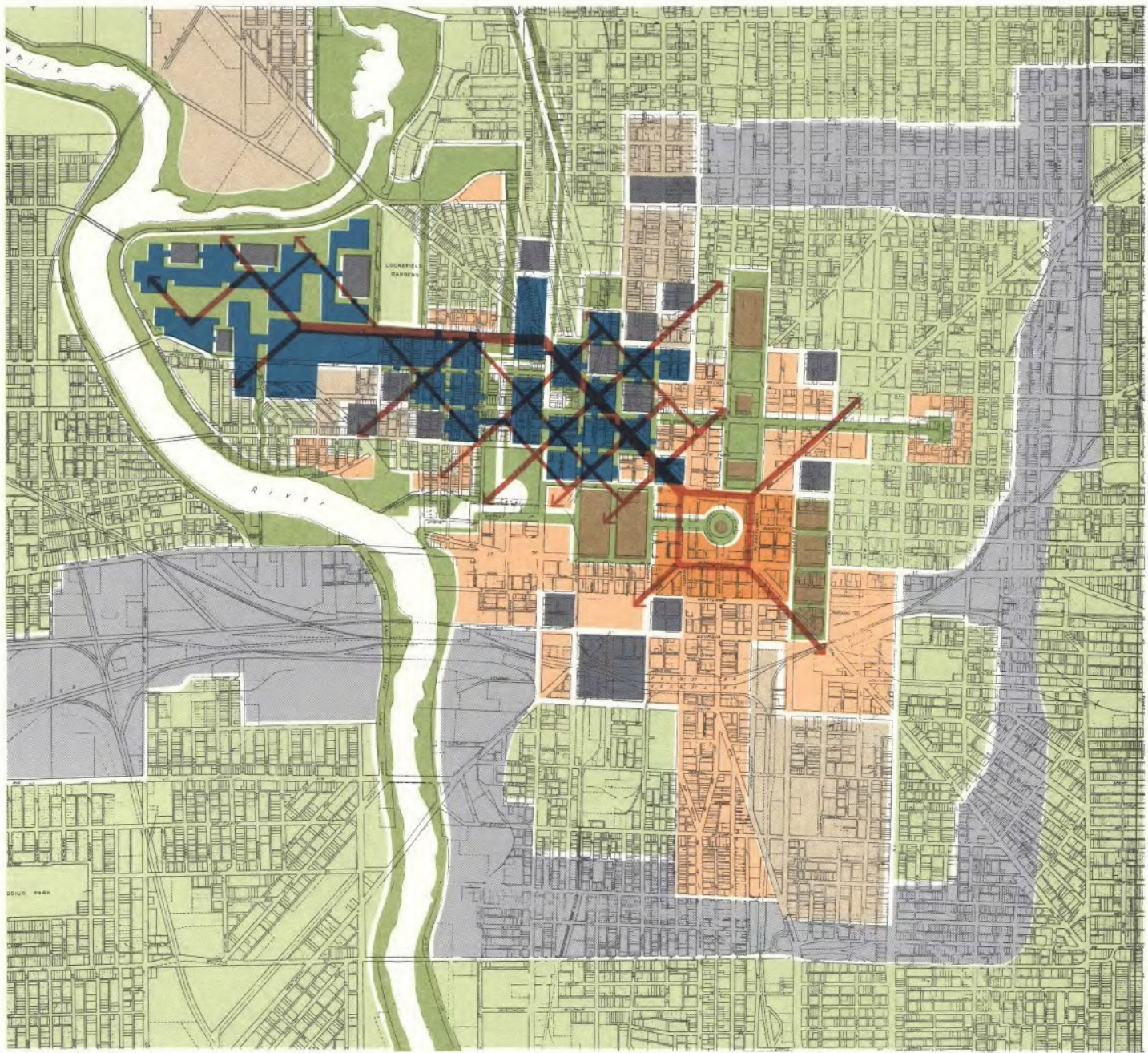
The pattern of university buildings follows the pedestrian links. The buildings themselves can interconnect (through canopies or bridges) so that movement from one part of the campus to another could take place under protection from weather.

The road pattern forms a separate network, geared closely to service a number of parking structures strategically placed about the campus.

2. Scheme B (Drawing #15)

Scheme B, like Scheme A, is based on a pedestrian system connecting the university to the downtown area. However, in this case, the diagonal of Indiana Avenue is used as the main pedestrian spine, and from this an entire sub-system of pedestrian walks is established, also based on the diagonal pattern. The result is a pedestrian network entirely separated from the road system, and retaining the pattern of the historic gridiron.

The pedestrian system could be handled in a number of different ways. One solution would be to raise the entire system above the road level. The pedestrian



- Primary Commercial Core
- Support Commercial
- University
- Residential
- Research & Development
- Open Space
- Industrial
- Parking
- Public Buildings

DRAWING 15

PEDESTRIAN CIRCULATION 'B'

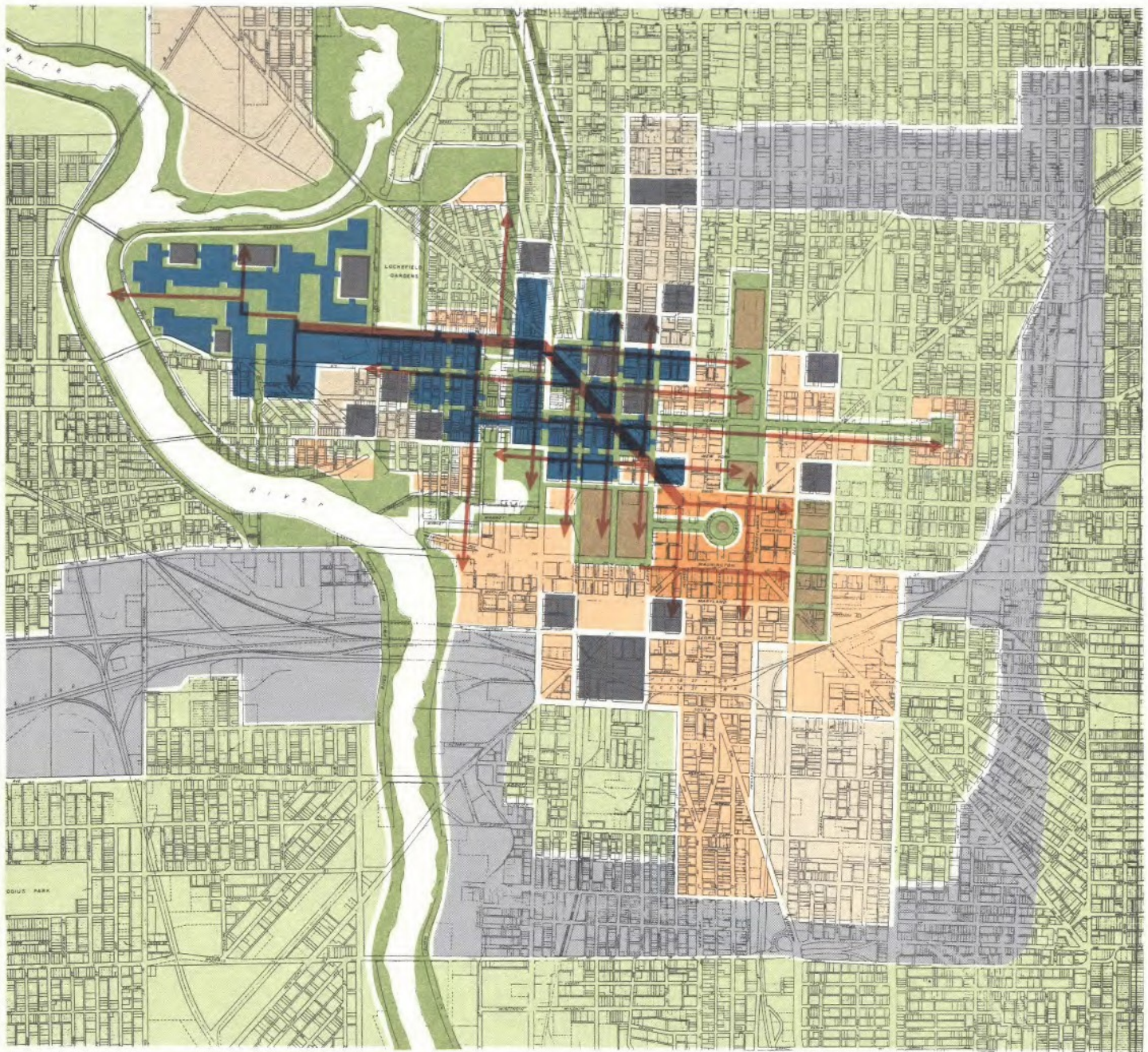
paths would become galleries and corridors running alongside or through buildings, and the streets would be crossed by simple bridges. All buildings on the campus would be interconnected, permitting weather-controlled access to all facilities. To provide contact with the ground, there would be courtyards and parks at grade level which could serve the various buildings and be visible and accessible from the elevated pedestrian walks. Indiana Avenue would be dedicated to pedestrian use and transformed into a series of parks, courtyards and malls. In essence, what this design approach proposes is to turn the corridors and walks that normally serve each building into a circulation system that unites the campus and, at the same time, provides the linkage to downtown.

Scheme B has some significant advantages. In the first place, Indiana Avenue is retained as a major circulation route, and its use as the main pedestrian link will give it added importance. This solution also goes a long way toward solving the problem of the conflict imposed by the problem of the diagonal superimposed on the grid plan. The diagonal avenue

often a feature of many American cities laid out in the 18th and 19th centuries, was conceived purely for formal and monumental reasons. In the days of the horse and buggy, its drawbacks were probably never felt; today, in the age of the automobile, the complex intersections produced by the diagonal road have proved to be the bane of every motorist and a headache for the traffic engineer. It is possible that, by turning Indiana Avenue into a pedestrian way, the problem of traffic circulation can be improved while still retaining the uses or structures along its frontage. In this case, the uses would gradually be phased out to be replaced by the university development.

3. Scheme C (Dwg #16)

A third approach might be to develop Indiana Avenue into the main pedestrian spine but retain for secondary circulation for pedestrians sidewalks following the existing grid. To avoid pedestrian-vehicle conflicts along Indiana Avenue, the intersection streets could be carried on an underpass below the avenue; or the pedestrian paths along the avenue could be elevated.



- Primary Commercial Core
- Support Commercial
- University
- Residential
- Research & Development
- Open Space
- Industrial
- Parking
- Public Buildings

DRAWING 16

PEDESTRIAN CIRCULATION 'C'

One advantage of this scheme is a greater retention of the existing road network than with the two previous schemes.

H. Comments on Three Design Schemes

The three alternative design approaches are all structured around the concept of a pedestrian system. This is not an attempt to preclude other alternatives but is simply a realization that any university plan (except for the totally dispersed campus) will depend for its internal circulation almost solely on the pedestrian. A commuter campus will, of course, find a large percentage of the student body and faculty arriving by car; but once the car has been parked, it would be impossible to depend on it for circulation within the campus. The "pedestrian system" does not imply that students will have to walk long distances on foot. The system includes the services of a secondary transportation system, possibly consisting of small electric vehicles or buses, traveling along the pedestrian paths and providing a supplementary means of transportation within the campus itself, and throughout the central area of the city.

In describing the pedestrian system, a number of ways to achieve separation from automobile traffic has been mentioned--bridges, underpasses, and the diversion or dead-ending of roads. Many of

these items will be costly. However, it is not suggested that all pedestrian traffic should be segregated from all streets within the university complex. When the next phase of planning and design is entered, an analysis should be made to establish a hierarchy of pedestrian and traffic routes. Only those routes with a high traffic volume should require segregation of movements. The actual method of separation used (bridge, underpass, etc.) would be recommended after a detailed evaluation of grades, utilities, service convenience and, of course, relative costs.

I. Housing and Relocation

The limitations of time and scope have precluded a thorough investigation of all aspects and side issues generated by the plan. However, some consideration has been given to the complex, often frustrating and politically sensitive problem of residential uses in the central area.

If the proposed university is to become reality, a considerable amount of additional land must be acquired. This is true whether the university remains entirely west of West Street or whether it is developed farther east, as a link to the downtown area. Much of this land is at present residential, and thus the problem of

displacement of people and of relocation. (In fact, the physical conditions of a major portion of the residential neighborhoods in the downtown area are so critical that, regardless of the university expansion, total urban renewal would appear to be the only long-term solution. Thus, the university expansion must be viewed only as an accelerating factor to a process and a problem that the community, sooner or later, would have to face with determination.)

At the same time it can be anticipated that the new university plus a revitalized city core will provide substantially increased employment for low- and medium-skilled labor. These people are precisely the most likely to be displaced. It follows that any plan for the central core must take into account the twofold problem of population displacement and replacement housing.

If such replacement housing is not provided, the consequences will be not only increased economic hardship on those who are less able to cope with the costs of commuting to the central area but also, unavoidably, increased traffic congestion, since the short-distance link between residence and employment will have been destroyed. Thus, low-rent housing, subsidized if need be, is an essential ingredient of the process of downtown revitalization. The plan makes no specific recommendation as to locations; a much more

detailed study of relative availability, costs, priorities, and other relevant factors must precede a detailed program for housing relocation. The concept, however, presumes that relocation housing will be located within the central area, preferably in the form of medium-density projects, each of limited scale and appropriately distributed in response to employment opportunity, access, land availability, and other factors.

Conversely, it is essential that housing in the central area be not limited to low-cost subsidized projects if the critical social stratification that plagues the central areas of most American cities is to be avoided, and if the present pattern of exodus to the suburbs is to be reversed. Indianapolis has already expressed the will and the ability to initiate this reversal: the Riley Center is a courageous and significant beginning. The proposed plan, by increasing the level of amenity, vitality and urban order in the central area, should provide inducement to additional private investment in medium- and high-income housing at relatively high density levels. The added stimulus provided by the growth of the university should strengthen and accelerate the movement toward a pattern of diversified and balanced residential development in the central area.

It is interesting to note that, just for that portion of the central area generally defined as the "University Quarter," the proposed plan

provides accommodation for residential units (without depending on too high density) in the range of 8,000 to 10,000, while at this time the total number of dwellings in the same area does not exceed 5,000 units.

In conclusion, the housing problem in the central area will not easily be solved; if precedents hold true, it will prove to be one of the most difficult aspects of central area revitalization.

It is our recommendation that a detailed study of housing problems and opportunities in the central area be undertaken as soon as feasible. The study should address itself, among other aspects of background research and evaluation to the following:

- Appropriate techniques for development of low-cost housing (urban renewal, special low-interest financing, etc.)
- Long range development sequence to provide maximum early stage relocation relief and optimum long-range solutions.
- Encouragement and support for private development of middle- and high-income housing.

- Definition of university-generated housing demand,
and techniques for development of university-
oriented housing.
- Techniques for cooperation between private, public
and university sectors toward development of
central area housing.

The relevance of the housing aspect of central area revitalization cannot be over-emphasized: intensive housing in the central area is the best device for relief to traffic congestion and parking scarcity; a varied housing pattern is the best deterrent to problems of social or economic stratification; yet, conversely, only commitment to a courageous and far-sighted program of central area revitalization will nourish the demand for downtown living and thus encourage investment in central area residential development.

CHAPTER VII

IMPLEMENTATION

A. Introduction

Without citizens' support and without the endorsement of the public and private entities that are affected, no plan can succeed. Thus the first step toward implementation consists of establishing the necessary basis of support for the concept proposed, and of translating the support into formal adoption of plan and program.

We have no illusion that the concept as proposed will satisfy all the demands and reflect all the preferences of the five entities that have sponsored the preliminary study; yet we trust that, as an objective and impartial effort, the study will generate the impetus, debate, and constructive cooperation that may lead first to consensus and, ultimately, to enthusiastic support by all parties; and that, by opening new perspectives, by highlighting unexpected potentials for both the city and the university, the concept may become the instrument through which differences of opinion, of emphasis, of responsibility, may be constructively resolved.

The plan--as with any concept that departs from "conventional wisdom"--raises new problems and demands new levels of collaboration,

coordination and mutual confidence; yet we trust that the opportunities that it reflects and the ultimate excellence of urban form that it envisages will justify and motivate the will to attack new problems and to establish new techniques that is the main ingredient of success.

B. The Initial Steps

Unfortunately, as it has already been stated, the completion of this study represents only a mid-point of the effort required to establish a comprehensive program for Indianapolis' central area: the limitations on scope that have been imposed have precluded the development of the concept and of the presentation material to the extent necessary to embark upon the aggressive program of information and public exposure that is necessary to secure broad citizens' support.

Thus, if reasonable consensus of the five parties that have supported the study is established, the first step to be undertaken is the continuation of the planning studies--and of the supporting evaluation--that is necessary to translate the basic concept into a general plan.

Concurrently, several independent and correlated activities should be initiated:

1. Resolve, within the framework of the accepted concepts, areas of discrepancy or disagreement that will emerge from critical evaluation of the proposal on the part of the five entities involved.
2. Initiate, through the Metropolitan Plan Commission, a detailed revitalization study for the entire central area.
3. Initiate, through the Indianapolis Redevelopment Commission, application for funds to the Department of Housing and Urban Development to start a General Neighborhood Renewal Plan for the entire University Quarter.
4. Initiate, through the Indianapolis Redevelopment Commission, the steps necessary to implement a first Urban Renewal Project so that sites for required university expansion can be made available without delay.
5. Initiate, through Indiana University and Purdue University, more detailed plans and programs for phased growth of the campus within the framework of the proposed concept and in close cooperation with the Metropolitan Plan staff and their consultants. Specifically, initiate precise plans for the Law School and the Adult Education facilities.

6. Initiate, through the Metropolitan Plan Commission-- and as part of the Comprehensive 701 Survey-- a long-range study of housing and relocation requirements and opportunities within the central area.
7. Submit the proposed scheme of internal circulation to review by IRTADS, and modify and refine as necessary on the basis of the findings of such survey.
8. Conduct negotiations with the State Highway Department and other agencies to resolve the problems of major access to, and circulation around, the central area.

Concurrent and expeditious work in these areas will allow the early formulation of a general plan and the implementation of the most urgent campus facilities without delay, and without compromise of opportunities and potentials of the proposed ultimate concept.

As far as the immediate requirements of the university, it should be noted that the proposed concept recognizes the necessity of early implementation of certain specific facilities. Drawing 11 indicates the proposed location for the first new development increments of the campus: the Law School and the Adult Education facilities. Of

these, the Adult Education facilities are located on land already purchased by Indiana University; thus its construction can precede the implementation of the first urban renewal project and yet would not preclude the City from receiving credit under Section 112 of the Housing Act for land previously privately purchased. The proposed location for the Law School is on land not yet acquired and reflects the desirability of proximity between the Law School and the State Government complex (a new Federal court building has recently been announced as an addition to such complex). Should the time of acquisition of the proposed site create unacceptable delay, it would be possible to locate the Law School west of West Street (on land already acquired for the purpose), without substantially impairing the overall concept of campus development.

C. Land Costs and Urban Renewal

The proposed concept shifts the regional campus from its original location "west of West Street" to a site more centrally located in relation to Downtown Indianapolis.

Two questions have been raised in this connection:

- What will happen to the land that Indiana University has already assembled for the original site?

-Would land east of West Street prove more expensive to acquire than the balance of the land west of West Street?

The answer to these questions is rendered in the context of the purpose of the study, namely, the formulation of a concept oriented to maximum interplay of activity and functions between city and university and to maximum mutual benefit.

Undoubtedly, from the standpoint of land acquisition costs per se, the assembly of an adequate site west of West Street would be the most economical solution; and--if the university was to acquire the land by direct action and no subsidy--this would be the least expensive site. However, in the context of the economics of the central area as a whole--of the total benefits of interaction--this approach would prove the least beneficial since the inducement of complementary development along the campus boundaries (and the corresponding land value appreciation) would be minimal as compared with the potential that becomes available when the campus is shifted eastward.

Thus the proposed approach is conceived in terms of maximum overall benefit, and not in terms of minimum initial costs. This approach, without a compensatory device, would prove unfair to the university

since it would be expected to acquire more expensive land and, at the same time, relinquish the benefit generated to the community by the influence of campus development on its surroundings. To avoid such inequity, the concept has from its inception presumed that land acquisition for the development of the entire University Quarter will be accomplished through the process of urban renewal, and that therefore there would be no direct relationship between cost of acquisition resale price of specific parcels. Furthermore, it assumes that cost differentials will be partially absorbed through the Federal subsidy to which the urban renewal process is entitled. Thus, the cost of the proposed site to the university should not exceed the costs that the university would have incurred in acquiring land in the original location. Conversely, the concept presumes that the community would acquire--as part of the urban renewal process--those portions of land west of West Street that the university has already in its possession and that are not required for campus development. These would be re-assembled and made available for complementary development (housing, research and development, or required public facilities).

In this broader context, the relative cost of acquisition of specific parcels is not as relevant as the differential between the total cost of

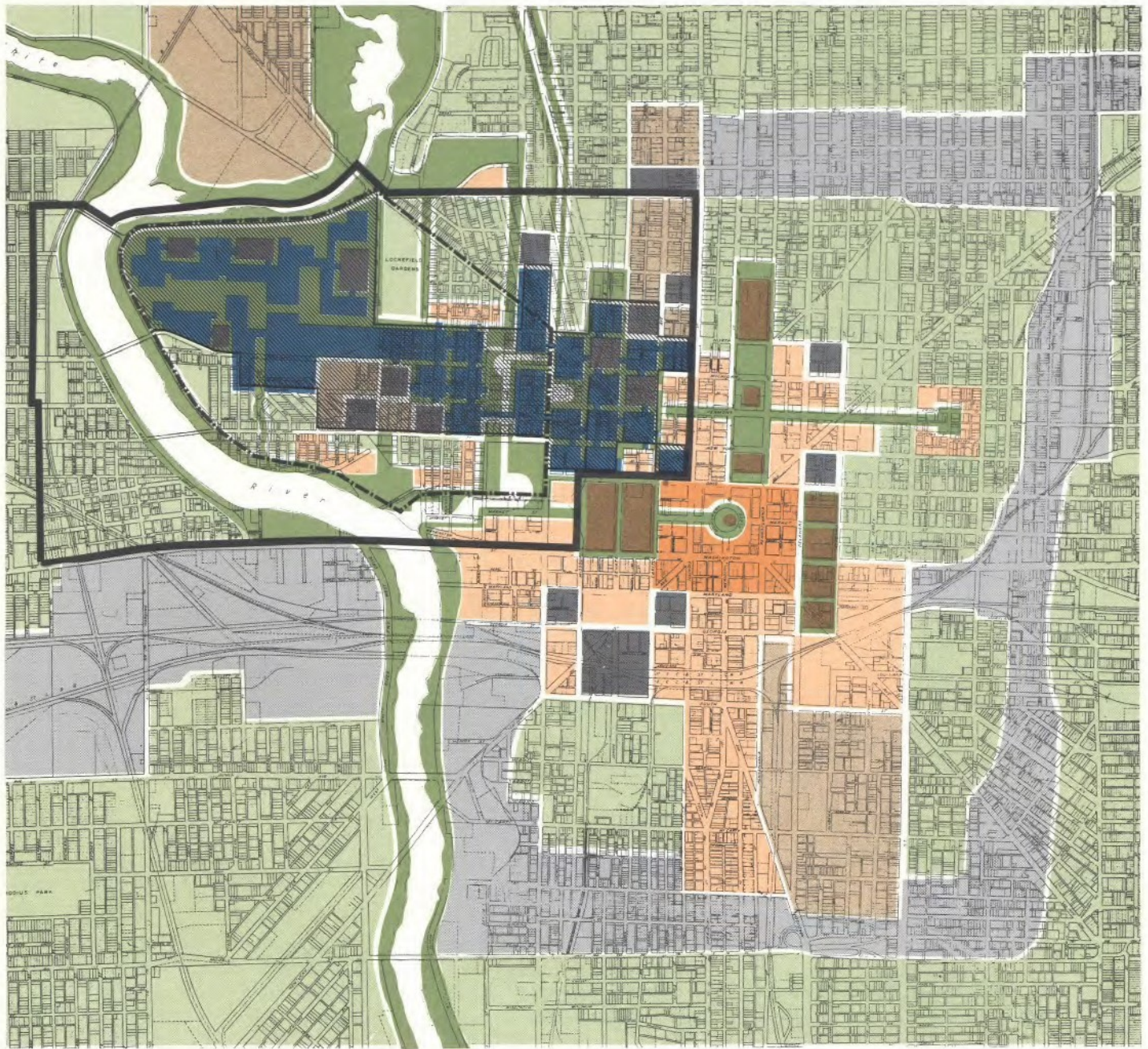
acquisition and the total value to the community, measured in terms of resale price and in terms of general revitalization and increased property tax.

In this context we are confident that the proposed approach will produce a far more significant total benefit differential than would be generated if the campus was to remain isolated west of West Street.

D. A New Definition of the University Quarter

Originally the "University Quarter" was defined as the area bounded by the White River, Indiana Avenue, West Street and the Canal. With the action of the Metropolitan Plan Commission the boundaries have been extended to encompass the area bounded by Miley Avenue, Tenth Street, Illinois Street and Washington Street. The original area was 422 acres; with the new boundary definition the area included in the University Quarter is approximately 1,000 acres. (See Drawing 17)

However, while originally the "University Quarter" was to be devoted substantially in its entirety to accommodate the new campus, within the extended boundaries it is expected to include a variety of auxiliary and subsidiary facilities such as housing, research and development, diverse university-oriented facilities, and light industrial development.



- Primary Commercial Core
- Support Commercial
- University
- Residential
- Research & Development
- Open Space
- Industrial
- Parking
- Public Buildings

- New University Quarter
- Original Campus Area (422 Acres)
- New Campus Area (350 Acres)

DRAWING 17

COMPARATIVE AREAS

The acreage dedicated to the campus proper (inclusive of the medical center) is in fact reduced from a total of 422 acres to a total of 350 acres, to reflect the more compact and intensive use of the land inherent in the "urban" campus concept.

The main purpose of extending the boundaries of the University Quarter beyond the limits of the area required for the campus proper, and to make it substantially coincident with the site of the proposed General Neighborhood Renewal Plan, is to provide a most desirable tool for land acquisition, zoning, design control and financial subsidy as made available through the urban renewal process.

This should prove most beneficial to the ultimate development of the new campus, since the university would be assured that (through the cooperation of the Metropolitan Plan Commission as the logical coordinator of the planning activities within the University Quarter) its surroundings will be developed harmoniously and consistently with the plans and concept of the university itself. Such items as appropriate land use and zoning, architectural controls, staging of development, provision for circulation, for continuity of pedestrian linkages, setbacks, parking, would fall within the province of the development coordination for the entire University Quarter.

APPENDIX I

PROGRAM OF SPACE REQUIREMENTS FOR THE UNIVERSITY

In November, 1966, Purdue University and Indiana University were presented a questionnaire prepared by Victor Gruen Associates to determine their interpretation of the function and structure of the urban campus and their estimates of growth requirements. The questionnaire listed the proposed academic functions by Schools and Departments, by Non-Academic and Central functions, and City-University functions. The following charts (I and II) indicate a summary and reconciliation of the surveys returned by Purdue University and Indiana University.

On the last columns of Chart II, land requirements based on the ultimate growth projection (1990) have been tabulated on the basis of three alternate assumptions of development density (25%, 40% and 60% coverage).

The summary indicates that approximately 350 acres will be adequate to accommodate the entire Campus, on the basis of a 40% land coverage — a higher factor than normally found on a suburban campus, but one that should be considered as appropriate for the Urban University.

The academic program anticipated by the University assumes expansion of the existing four-year bachelor programs, a graduate program for all schools, and facilities for adult education. The total population

resulting from adult education is difficult to ascertain in terms of full-time equivalent; provisions for space in the new university should allow for ever-expanding adult education programs.

CHART I
SPACE PROGRAM
INDIANAPOLIS - URBAN UNIVERSITY

Academic Functions (by departments)	1970		1980		1990	
	F.T.E. Students ^a	Total S.F. Area ^b	F.T.E. Students	Total S.F. Area	F.T.E. Students	Total S.F. Area
Engineering						
Agriculture	80	7,296	196	17,875	335	30,552
Aeronautic	103	20,428	300	38,250	512	65,272
Chemical	75	9,563	284	26,010	346	44,115
Civil	75	9,563	204	26,010	346	44,115
Electrical	184	23,460	508	64,770	865	110,287
Mechanical	221	28,177	608	77,520	1,030	131,325
Other	71	9,052	200	25,500	341	43,478
Home Economics	91	9,550	289	30,940	490	54,390
Humanities	2,902	79,256	6,981	198,928	11,870	338,295
Industrial Mgt.	158	6,262	463	19,446	800	33,600
Physical Ed.	967	77,360	2,327	186,160	3,957	316,560
Science	1,018	61,854	2,217	140,168	3,778	239,437
Technology	1,513	183,938	3,730	464,385	6,337	788,958
Business	1,163	43,390	2,800	108,250	4,760	183,260
Law & Urban Studies	871	115,335	1,150	148,350	1,500	200,000
Music	---	26,000	---	52,000	---	78,000
	8,525	710,584	19,850	1,624,562	33,310	2,711,644
Non-Academic Functions						
Research - Gen.		5,872		14,880		25,000
Library		117,450		297,600		500,580
Administration		23,490		59,520		100,110
Union		39,150		99,200		166,850
Service & Other		86,130		218,240		364,070
Shops		10,000		20,000		30,000
Auditorium		20,000		20,000		40,000
Research - Engr.		62,640		158,720		266,000
" - Science		62,640		158,720		266,000
" - Life Sci.		46,980		119,040		197,000
Storage		78,300		198,400		330,700
Arena - Indoor		---		150,000		150,000
Communication		28,971		73,408		125,000
Lecture Halls		5,000		10,000		15,000
Theater		10,000		---		20,000
Power Plant		30,000		40,000		50,000
Stadium		---		350,000		350,000
Parking - @325	4,688(P.S.)	1,523,600	10,917(P.S.)	3,548,000	18,320(P.S.)	5,954,000
Housing - Single	1,666(Apt.)	383,180	3,333(Apt.)	766,590	5,000(Apt.)	1,150,000
" - Married	333(Apt.)	283,050	666(Apt.)	566,100	1,000(Apt.)	850,000
" - Faculty	166(Apt.)	199,200	333(Apt.)	399,600	500(Apt.)	600,000
Museums (3)	---	15,000	---	30,000	---	45,000
Parking - Housing	1,082(P.S.)	351,650	2,166(P.S.)	703,950	3,250(P.S.)	1,056,250

Academic

^aF.T.E. Students - projected by University.

^b(F.T.E. Students x sq.ft. per student) + (No. Faculty x sq.ft. per faculty)
includes classrooms, teaching labs, faculty office, and academic administrative space.

Non-Academic

-Total S.F. Area is based on F.T.E. x sq.ft./F.T.E.

-Parking is based on 1 space/2 students and faculty at 325 sq.ft./space.

-Housing is based on 230 sq.ft./single student

850 sq.ft./married student and staff

1,200 sq.ft./faculty

-Parking for housing is based on ratio of 1 car per student or faculty.

Source of Information

Unit space allocations per student or faculty based on:

1. Richard P. Dober, Campus Planning, 1963.
2. Edward L. Preston, Space Needs and Functional Relationships, 1962.
3. University of California Standards.

TABLE I

CHART II
SPACE PROGRAM
INDIANAPOLIS - URBAN UNIVERSITY

Building, Structure or Facility	Total Floor Area - Sq. Ft.			No. of Stories	Ground Floor Bldg. Area - Sq. Ft.			1990 Sq. Ft. Building & Parking	1990 Ground Area in Acres		
	1970	1980	1990		1970	1980	1990		@ 25%	@ 40%	@ 60%
Engineering	170,179	434,655	735,153	3	56,726	144,885	245,050	490,100	45.00	28.10	18.75
Home Economics	9,590	30,940	54,390	3	3,916	10,313	18,129	36,258	3.33	2.08	1.38
Humanities	79,256	213,808	338,295	3	26,419	71,269	111,276	222,552	20.43	12.78	8.51
Industrial Mgt.	6,262	19,446	33,600	2	3,131	9,723	16,800	33,600	3.08	1.92	1.28
Science (w/research)	102,550	260,108	436,437	3	34,183	86,702	145,479	290,958	26.70	16.69	11.13
Technology (w/research)	224,740	623,105	1,054,958	4	56,185	155,776	263,739	527,478	48.43	30.27	20.18
Business	43,390	108,250	183,260	3	14,463	36,083	61,086	122,172	11.22	7.01	4.67
Law - Urban Studies	115,335	148,350	200,000	3	38,445	49,449	66,666	133,332	12.24	7.65	5.10
Music	---	39,000	78,000	2	---	19,500	39,000	78,000	7.16	4.47	2.98
Library	117,450	297,600	500,550	3	39,149	99,199	166,849	333,698	30.64	19.15	12.76
Administration - Central	23,490	59,520	100,110	2+8	11,745	21,322	21,322	42,644	---	---	---
Union	39,150	99,200	166,850	3	13,049	33,066	55,616	111,232	10.21	6.38	4.25
Services - Storage	86,130	218,240	364,070	---	---	---	---	---	---	---	---
Auditorium	20,000	---	40,000	1	20,000	---	40,000	80,000	7.34	4.59	3.06
Shops	10,000	20,000	30,000	1	10,000	20,000	30,000	60,000	5.50	3.44	2.29
Arena - Indoor	---	150,000	150,000	1	---	150,000	150,000	300,000	27.55	17.21	11.48
Communications	28,971	73,408	125,000	3	9,656	24,469	41,666	83,332	7.65	4.78	3.18
Lecture Halls	5,000	10,000	15,000	1	5,000	10,000	15,000	30,000	2.75	1.72	1.14
Theater	10,000	---	20,000	1	10,000	---	20,000	40,000	3.67	2.29	1.53
Power Plant	30,000	40,000	50,000	1	30,000	40,000	50,000	100,000	9.18	5.74	3.82
Stadium	---	350,000	350,000	1	---	350,000	350,000	700,000	64.28	40.17	26.78
Parking (Student, Faculty)	1,523,600	3,548,000	5,954,000	---	1,523,600	3,548,000	5,954,000	---	---	---	---
Museums	15,000	30,000	45,000	2	7,500	15,000	22,500	45,000	4.18	2.58	1.72
Physical Education	77,360	186,160	316,560	1	77,360	186,160	316,560	633,120	58.14	36.33	24.22
Circulation - Open Space @ 15%	---	---	---	---	---	---	---	---	474.00	296.00	195.70
Housing - Single	383,180	766,590	1,150,000	---	127,726	255,529	383,333	---	---	22.00	---
- Married	283,050	566,100	850,000	50% in towers	94,350	188,700	283,333	---	---	16.26	---
- Faculty	199,200	399,600	600,000	3 and 12 flrs.	66,400	133,200	200,000	---	---	11.48	---
Housing - Parking	351,650	703,950	1,056,250	---	---	---	---	---	---	---	---
	3,954,533	9,396,030	14,997,483	---	---	---	---	---	---	345.74	---

APPENDIX II

INTERACTION OF FUNCTIONAL RELATIONSHIPS

The location of the components of the university is influenced by the functional relationships between university activities, central area activities and the medical area activities. This relationship is expressed by plotting the pattern of interactions which take place within and between university, central area and medical center.

Drawing No. 12 (opposite page 69) illustrates the major links of interaction and serves as a guide to the preliminary grouping of university-city activities.

Table III illustrates the functional relationships by degree of interaction. Major elements of University, Medical Center and City have been indicated by approximate area and arranged in order of degree of interaction. The elements with the greatest number of interactions are shown on the top of the chart. In arranging functional groupings, the elements with highest rate of interaction should form the central element of such grouping. (Parking and housing are excluded from the chart, since they relate to all elements of the campus.)

Thus, the central elements of the university group should be the functions of administration, student union, library, auditorium, communication centers. The chart indicates also a high degree of interaction between the university functions and those of the central city as well as between the university and the medical center. Thus

it follows that the university complex should be located conveniently both to the medical center and to the central business area. The form and organization of the university should, in turn, reflect the relationships of academic areas and non-academic areas to each other.

Table IV, "Major Relationship by Activity Groups", is a tentative scheme for optimum grouping of the university, medical center, and central area functions, as determined by space needs, functional relationships, and pattern of interaction.

Assuming the university core (administration, library, student union, auditorium and communications center) as the central element, all other functions were plotted at distances (from the center and from each other) proportional to the appropriate interaction factor. Thus the relationships between university and city core emerge by recognition of the proximity of related activity groups (humanities with cultural facilities, law and government school with government services, technology group of science and engineering with private research, industry and the medical center). These major groupings have formed the base for the preliminary concept plan for the entire central area.

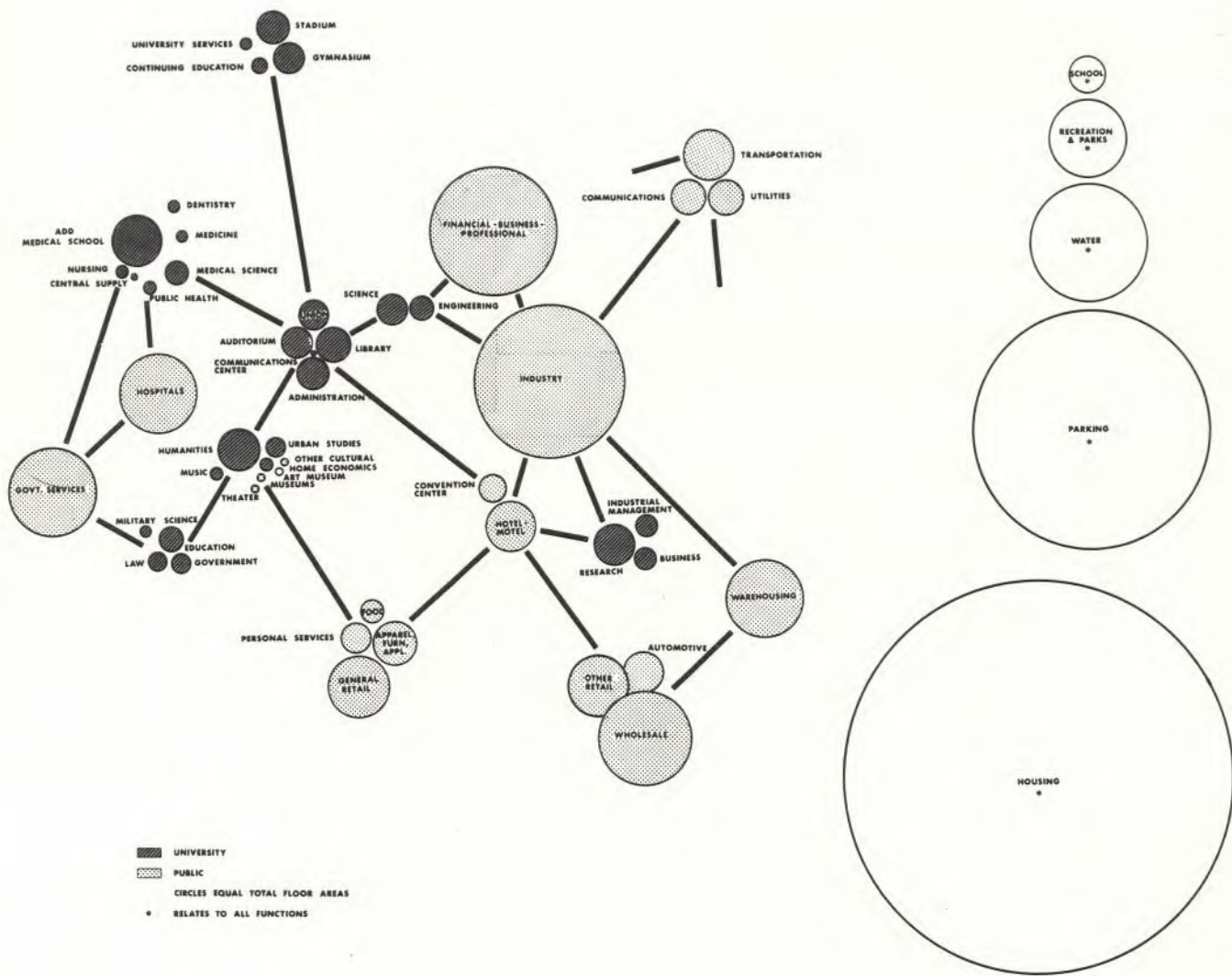


TABLE IV

MAJOR RELATIONSHIPS BY ACTIVITY GROUPS

APPENDIX III

CIRCULATION ANALYSIS AND TENTATIVE PROPOSALS

CIRCULATION

A. Introduction

The scope of the exploratory study for the development of planning concepts for the central area of Indianapolis as they relate to the establishment of an urban campus for the universities of Indiana and Purdue must include consideration of circulation concepts for the central area.

In this chapter are summarized circulation planning criteria, a discussion of the circulation system as it related to these criteria, and a suggested approach to a circulation system developed concurrently with and directly related to the formulation of the central area planning concepts.

B. General Criteria

The primary criteria which must be met in the development of a central area circulation system fall into five categories:

1. External approaches:

There must be adequate external approaches joining the central area with its environs and the surrounding region. External approaches would consist of two basic elements. The first would be a freeway network

connecting all of the regional facilities and residential areas to the central area. The freeway network would generally take the form of a radial system converging toward the central area, with interconnection to redistribute and bypass some of the traffic movements accomplished by an outer-loop freeway. For shorter distance travel an arterial network of surface highways would connect the central area to its environs. The arterial network generally consists of a limited number of surface highways, often in a grid pattern, to accomplish the function of traffic movement over moderate distances.

2. Through traffic movement:

Traffic movements that have no association or destination to the central area should be diverted from or discouraged within the central area. Through traffic movement on arterials in the central area greatly increases the traffic loads on those streets and thereby interferes seriously with traffic having destination in the central area. In addition, the through traffic itself is severely interfered with by the congestion generally encountered in a central area. Thus, through traffic movements on central area arterials

acts to the detriment of both the traffic destined within the central area and the through traffic itself.

The provision of desirable alternate routes, conveniently reached and well located, would be of prime importance in the development of the circulation plan. In most instances, the freeway loop around the central area would be provided with such access as to encourage its use by through traffic.

3. Circulation and access:

Circulation and access facilities for the central area distribute the incoming traffic loads so that they may reach their desired destination with minimum interference from congestion and conflict and also provide access to specific destination facilities and parking structures within the central area.

The interface between the external approaches and the internal circulation system would normally take the form of a loop freeway surrounding the central area, with the external freeway network feeding into the loop and the internal circulation system being fed from the

loop at interchanges. This loop should be located closely enough to the central area destination points to minimize surface street travel to any element of the central area. It should further be located so as to avoid dissection of any portion of the central area by any element of the loop, and it should provide an adequate perimeter to permit the heavy interchange movements of traffic on and off the loop freeway from and to the central area to occur with as little delay and inconvenience as possible. Lastly, the loop should provide an interchange to the surface street system as frequently as possible without interfering with the proper operation of the loop itself in order to maximize distribution of the heavy concentrated loads and the number of alternative entry or exit points on the loop.

The arterial highway system within the central area would consist of two elements. One involves the distribution system from the freeway interface, while the other would be the extension of the external approach arterial system. In order to avoid excessive utilization of land for streets, these two elements can often overlap if adequate capacity for expected demands can be achieved. Both types of arterials act to distribute

the approach leads to local streets, which then provide access to terminal facilities. The arterials, however, often permit some property access although such direct access should be minimized.

4. Public transportation:

In parallel with and supplementary to the provisions for private vehicular approach, circulation, and access, all reasonable provisions for public transportation should be encouraged, especially within the central area but, insofar as possible, also approaching the central area from external residential concentrations. The characteristics of compactness and interaction of elements within a central area are detrimentally affected by excessive use of private vehicular transportation for short distance circulation. Non-automobile transportation within the central area is an essential and integral ingredient of an optimum central area program.

5. Pedestrian circulation:

Wherever intensive short distance movement demand is anticipated within the central area, major pedestrian circulation routes should be provided. In a compact

and interactive central area the quantity of short distance trips is greatly increased. The provision of a complete system of pedestrian routes with minimized discomforts due to traffic interferences and maximized directness of contact between destinations would tend to eliminate a great many internal circulation (and recirculation) vehicle trips and reduce parking space requirements.

A system of pedestrian routes with grade separated crossings of major traffic flows connecting as directly as possible from destination to destination would be provided.

C. Existing and Proposed Improvements

1. External approaches:

The outer loop, encompassing virtually all of the City of Indianapolis and some of the future urbanized area, is approximately half completed as Interstate Route 465 Freeway. Nineteen Interstate, U.S., or State highways radiate from this outer loop in all directions. Within the outer loop most of these highways continue generally

toward the central area of Indianapolis, although some of them change their directional characteristics to start the formation of a grid highway system within the city limits. By the time the central area itself is reached only eight of these U. S. highways or State highways remain. These highways coincide with Washington Street west and east, West Street north and south, Sixteenth Street west, Meridian Street north, Madison Avenue south, and Kentucky Avenue south. In addition to these numbered highways, streets such as Michigan, Indiana, Capitol, Illinois, Massachusetts, and New York also provide arterial service to and from the central area.

The "Official Thoroughfare Plan for Marion County, Indiana" (Page 116) shows additions to and modifications of the streets and highways currently existing, and also shows the proposed interstate highway system for the Indianapolis region. The proposed freeway system would complete the outer loop via Interstate 465 and include six interstate highways radiating from this outer loop. Of these six radial freeways, four (I-65 north and south and I-70 west and east) continue to the central area and form the north, east and south legs of an inner freeway loop around



DRAWING 18

OFFICIAL THOROUGHFARE PLAN

LEGEND

	FREEWAYS	RIGHT-OF-WAY
	EXPRESSWAYS	200-400 FEET
	PRIMARY THOROUGHFARES	120-165 FEET
	SECONDARY THOROUGHFARES	90-110 FEET
	PARKWAYS	90 FEET
	NEW CONNECTIONS	
	INTERCHANGES	
	GRADE SEPARATIONS	
	SPECIAL INTERSECTION AT-GRADE	

the central area. As presently proposed, the inner loop would be completed by a pair of one-way surface arterials in the vicinity of State Highway 37 (West Street).

In addition to these freeways, the Thoroughfare Plan shows a grid system of expressways and primary thoroughfares covering the region within the outer loop and generally joining into the existing external State and U. S. highways.

2. Through traffic:

The Indianapolis Regional Transportation and Development Study (IRTADS) currently underway provides much of the basic traffic and transportation data that is necessary to evaluate current conditions and potential future characteristics. Current through traffic is composed of long distance travel and shorter distance through traffic which passes through the central area. The heaviest through traffic facility carrying trips entirely across the IRTADS study area is Washington Street, U.S. 40. However, at no point on Washington Street is this long distance through traffic volume in excess of 2,600 vehicles per day, or about 7 per cent of the 36,000 crossing White River.

The vast majority of through trips are relatively short in length. A great deal of short distance through traffic is presently using central area streets to reach destinations in the West Indianapolis and Haughville areas of employment. In addition, the general pattern of arterials leads through the central area for destinations southerly.

An IRTADS analysis was made of anticipated 1985 traffic demands based upon the completion of the three freeway legs adjacent to the central area and construction of the one-way pair of arterials called the west connector in the vicinity of West Street. Over half of the northerly I-65 traffic would desire to transfer to the west connector, and at least 60 per cent of the traffic on the west connector north of Washington Street would desire to go westerly toward White River along Washington Street. This large quantity of 30,000 vehicles per day is through traffic so far as the central area is concerned. In addition, it appears that a moderately heavy through traffic flow across the central area would occur on the Michigan-New York one-way arterial pair.

3. Circulation and access:

The Central Area is a large traffic generator which is the origin or destination of 16 per cent of all of the person trips

occurring in the IRTADS survey area. The central area thus involves almost one-third of a million person trips every day.

The central area street system is composed of many small blocks with a few primary arteries (either State or U.S. highways), complicated by four diagonal streets radiating 45 degrees to the standard grid from the center of the downtown area, Monument Place. Although somewhat mitigated by turning move prohibitions and one-way street operation, the multiple junctions with the diagonal streets reduce traffic-carrying capabilities of the primary arteries. There is also a great deal of circulatory traffic moving from one point to another within the central area further loading the arterials and intersections.

The Metropolitan Planning Department has developed a street system plan related to the freeway alignment and interchange pattern. This is a four-element thoroughfare plan with the Interstate freeways forming the first level. The second level involves completion of the inner loop by the use of a pair of one-way streets approximately along the alignment of West Street, and two freeway access streets leading from the central core (the 16-block area

around Monument Circle) to each of the freeway legs and the west leg connector. These freeway access streets would form the distribution system between the regional freeway system and the local access street system in the central area.

Simultaneously, the approach surface highways would be developed as a system of one-way arterials connecting the central area with its environs. The fourth level involved a system of two-way arterials and local access streets. This plan was adopted prior to the availability of factual travel data from the IRTADS, and is therefore subject to review and modifications.

4. Public transportation:

The IRTADS Transit Inventory presents a clear picture of existing public transportation usage in the Indianapolis region. Although 77 per cent of the IRTADS population resides within one-quarter mile of a city or suburban transit route, transit accounts for only 4 per cent of the almost two million daily person trips made in the IRTADS area. Further, although transit routes exist on virtually every major street leading to the central area, the total number of seats provided to the central business district during the

the peak hour is never exceeded by the number of passengers. Only about 20 per cent of the total person travel to the 16-block retail and office core area of downtown Indianapolis is by transit.

From these data it would appear that the conditions in Indianapolis are not conducive to transit riding at this time. Public transportation can be an important aid to a compact and well-integrated central area and will warrant additional study as the planning process develops.

Regional public transportation needs, however, are considerably different from central area public transportation requirements in routing, vehicle, and level of service. At present the same bus transit vehicles and routes which serve the Metropolitan area also attempt to serve the central area. Such routings are generally inefficient for central area circulation.

5. Pedestrian movements:

There are presently no special accommodations for pedestrian movement within the central area other than as provided by typical sidewalk and at-grade street crossings. The heaviest pedestrian movements and conflicts in the

central area occur in the vicinity of the primary commercial core - along Washington Street and around Monument Circle. Integration of the various interrelated functions of the central area will be very difficult unless significant changes are made to free pedestrian travel from vehicular conflict.

6. Analysis:

The freeway system currently proposed for the central area is an incomplete rectangle with I-65 forming the north leg and I-70 forming the east and south legs. Such a pattern superimposes the combined traffic loads of I-65 and I-70 on the east leg. Although long distance through traffic is quite small, the freeway system will be serving a very large amount of moderate distance through traffic as well as large amounts of traffic destined to the central area itself.

Whereas demands on the north leg range from 45,000 to 75,000 vehicles per day, and on the south leg from 65,000 to 85,000, the demand on the east leg is from 100,000 to 140,000 vehicles per day - well in excess of the capacity of a six-lane freeway. At the same time,

traffic demand on the west connector, a pair of one-way surface arterials, is in excess of 60,000 vehicles per day north of Washington Street, a volume exceedingly difficult to accommodate on even the best surface highways.

Thus, the present proposal appears to offer adequate north and south legs for the central area route but inadequate east and west legs, primarily due to the double loading of the east leg and the use of surface arterials for the west leg. Experience in other areas has shown that a complete freeway loop around a central area tends to result in more even distribution of traffic loads on all legs. From this aspect, the lack of a freeway level closure of the central area loop appears an inadequate provision in the regional highway system. Should capacity failure occur anywhere on the three freeway legs, but particularly on the east leg, it would result in blockage of movement on the entire system. On the other hand, a freeway closure of the loop would provide an alternate, a choice of routing to better distribute the traffic demands.

In relation to the planning concept for the Indianapolis central area, the traffic demand pattern resulting from

the presently proposed highway system is extremely detrimental. The basic concept is of a great university complex as an integral and functional part of the central core. It is apparent that the large quantities of through traffic demand projected for the West Connector and for the Michigan-New York one-way pair would create serious barriers to the environmental linkage essential to an integrated central area.

D. Central Area Circulation Plan

The traffic planning objective of Central Indianapolis comprises the twin aspects of circulation and environment. The first is concerned with freedom for vehicles to penetrate to destinations and to stop on arrival. Environment is concerned with the provision of acceptable standards of safety, anxiety, noise, fumes, and visual intrusion. One principle whereby these often conflicting aspects can be reconciled is the concept of the "network" serving "environmental areas". The network is the linked series of highways dedicated to the efficient movement of vehicles, while the environmental areas are localities freed from extraneous traffic as a result of the functioning of the network, and within which considerations of environment predominate.

The central area of Indianapolis is too large and generates too many person and vehicle trips to form a single, physical environmental area.

On the other hand, the multiplicity of interrelated and complementary functions existing and planned for the central area make it necessary to link all of the physical elements of the central area to form a single functional environmental area. By establishing primary goals and criteria, such a functional integration of the central area can be achieved. The goals of the central area circulation plan include the following:

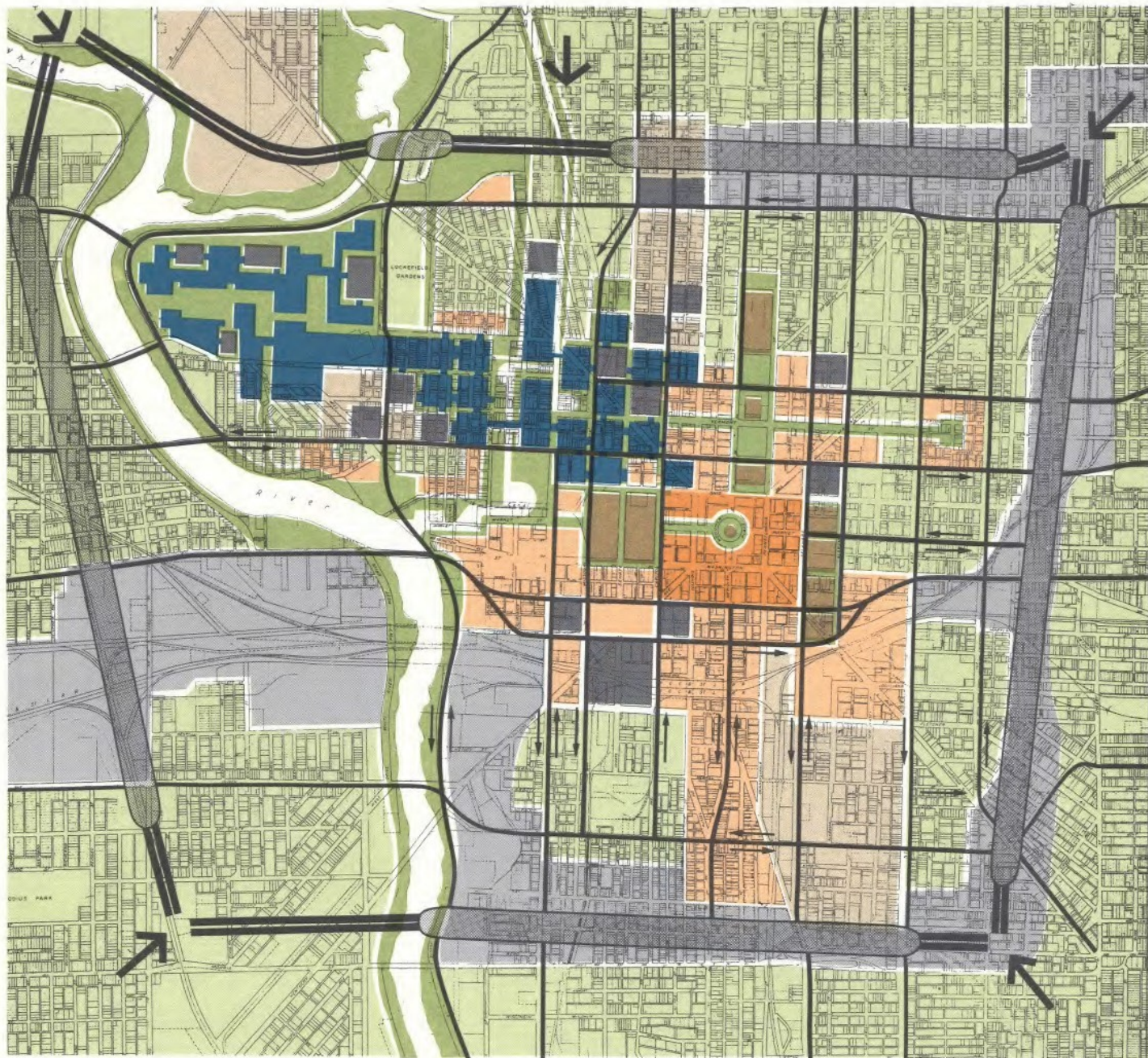
1. Provide optimum freeway accessibility to the central area from the Indianapolis region.
2. Provide adequate freeway interchange service to meet the access needs of the central area.
3. Provide convenient access from major radial arterial streets for traffic with destinations in the central area.
4. Discourage unnecessary through traffic which has no central area destination from passing through the central area.
5. Provide a circumscribing freeway loop and ramps to intercept non-central area traffic and divert it around the central core.

6. Provide peripheral bypass streets within the central area freeway loop as a secondary system of distribution and to discourage through traffic movement within close proximity of the central core.
7. Provide 16-block integrated central area core centered around Monument Place, surrounded but not penetrated by major streets.
8. Provide maximum circulation capacity with minimum utilization of land by utilizing a minimum number of high-capacity street facilities.
9. Provide maximum street efficiency by elimination of unnecessary intersections and access conflicts with minimum utilization of expensive grade separations.
10. Provide adequate internal circulation and service facilities for all central area destinations.
11. Provide an optimum distribution of parking facilities which serves all elements of the central area with minimum surface street travel.
12. Provide adequate parking within acceptable walking distance of major generators.

13. Provide safe and convenient pedestrian circulation facilities with minimum traffic conflicts.
14. Create large super-blocks and activity areas having minimum internal traffic conflicts.
15. Provide maximum opportunities for redevelopment by elimination of awkward land parcelization by diagonal streets and permitting the combining of smaller land parcels.

Drawing 19 illustrates one possible central area circulation plan that will accomplish the objectives enumerated above. The central area would be circumscribed by a closed freeway loop. The north, east and south legs of this loop would include the current proposals for Interstate Highways I-65 and I-70. In addition, the north freeway leg would be extended westerly to join a new north-south freeway to be developed westerly of the White River, which would then close the loop.

Major perimeter distributory highways would be developed inside the freeway loop. On the north side of the central area a major route would be developed along Fall Creek Parkway and Tenth Street. On the south side a major facility would be developed along Oliver Avenue and McCarty Street. On the east side, major perimeter highways would



- Primary Commercial Core
- Support Commercial
- University
- Residential
- Research & Development
- Open Space
- Industrial
- Parking
- Interchange - Underpass Complex
- Public Buildings

DRAWING 19

VEHICULAR CIRCULATION

be developed along East Street and along College Avenue. On the west side a major facility would be developed in the vicinity of Agnes Street, continuing southerly along the easterly bank of the White River. These perimeter highway facilities would provide bypass facilities for short-distance through traffic which desires to cross from one side of the central area to the other, but has no immediate destination within the central area. They would also act as collector and distributor facilities for central area traffic between the freeway and the central core area and would tend to equalize the traffic load more uniformly, relieving other central area access streets closer to the central core.

Another set of circulation facilities would consist of pairs of one-way streets circumscribing the 16-block central core centered around Monument Place. These would include Delaware and Alabama Streets to the east; Michigan and New York Streets to the north; Missouri Street and Capitol Avenue to the west; and Maryland and Georgia Streets to the south. These principal access and circulation streets would provide for the immediate needs of the central core area. They would generally have continuity beyond the central area and connect with principal regional highways beyond. In addition to these major facilities continuing through the central area, there would be additional access streets along Meridian Street and Market Street leading to the central core area but not continuing through it. Another principal street would be developed along West Street leading southerly

from the University complex. A surface arterial loop would be developed around the westerly university and medical area, consisting of White River Parkway East, Fall Creek Parkway, Locke Street and New York Street. These major street facilities would utilize existing rights-of-way and existing bridges wherever feasible, although some improvements might be necessary to develop adequate roadways, eliminate discontinuities and jogs, and to provide other operational improvements with regard to traffic controls, channelization, etc.

Other existing streets in the central area would be utilized for property access, loading, parking, and other supplemental uses where necessary to serve existing properties. Where it would best serve the requirements of adjoining developments, some streets would be converted to pedestrian use or to multi-purpose use for slow-speed public transit vehicles. Non-essential street rights-of-way would be converted to productive development to make possible the integration of smaller land parcels into larger, more developable units. In some instances it will be desirable to provide a separation of grade between principal pedestrian corridors and major traffic streets. In less critical locations, pedestrian crossings would be retained at surface street levels and concentrated at controlled intersections.

The reductions in the number of street intersections resulting from this circulation plan would vastly improve traffic movement by spacing intersections at greater distances and reducing the number of traffic controls. Traffic efficiency on the major streets would also be enhanced by restricting the number and locations of access points along these streets. Direct driveway access would preferably be located on subordinate service streets rather than directly off major circulation streets. With provision of adequate off-street parking facilities it would be possible to eliminate curb parking on major thoroughfares, which would vastly improve the capacity of the major street system. The combination of all of these techniques would greatly increase the traffic efficiency of the central area street system and make it possible to provide greater access and circulation capacity with many fewer streets.

Another major element that will contribute to the improvement of central area circulation is the anticipated effect of the circumferential freeway system and improved perimeter highway facilities. It is well known that possibly half of the traffic loads on central area streets in most communities are of a through traffic nature having no central area destination. In most instances such traffic is forced to travel through the central area in the absence of alternative routes bypassing the center. At such time as the interstate highway system and freeway

loop are completed, it will be possible to divert the vast majority of through traffic to the bypass freeways and highways, which would have the net effect of reducing the volumes of central area traffic by as much as 50 percent. The exact quantities of through traffic currently utilizing central area streets can be determined from the IRTADS Study, from which it would be possible to estimate the relief from through traffic that may be anticipated.

The anticipated revitalization of the central area and the development of an urban university complex, plus additional new facilities currently being planned, will provide many new traffic generators which will intensify the traffic generation potential of the central area. Thus, the relief of current traffic loads anticipated by the diversion of through traffic will be counterbalanced by the anticipated increase of traffic generation through redevelopment of central area facilities.

E. Traffic Analysis

The central area circulation system suggested in the conceptual plan represents one possible pattern of circulation that could serve the redeveloped central area of Indianapolis. This conceptual plan has not been tested with regard to anticipated future traffic loads. The next step would be an analysis and quantification of anticipated traffic generated by such a plan, with an assignment of traffic loads to the

components of the circulation system. This system could be readily tested by the IRTADS Study. Based upon the results of such a traffic analysis, the system could be adjusted and further detailed with regard to traffic lane capacity needs.

The plan suggests a freeway interchange complex around the four sides of the central area. The interchange system could be specified at such time as the IRTADS traffic analysis is completed for the modified street circulation network. The traffic analysis would assign specific traffic loads to each of the intersecting major streets, which would provide a quantitative estimate of interchange traffic that must be accommodated. These volumes would provide the basis for specific design elements of the interchange system, including number of interchange ramps required and types of interchange design necessary.

The current study has concentrated primarily upon central area traffic requirements. The needs for regional freeway and highway connections and other major street facilities beyond the central area will be evaluated by the regional traffic study underway by IRTADS. It is anticipated, however, that whatever system of external freeway and highway connections may ultimately be needed beyond the central area freeway loop, it could readily be accommodated within the conceptual plan suggested for central area circulation. Some modification of this

suggested plan will satisfy the traffic capacity requirements of the Indianapolis central area, and will also offer many planning opportunities and advantages to further the objectives of traffic accessibility, pedestrian freedom, transportation convenience, and planning compatibility.

F. Public Transportation

Public transportation within a central area has significantly different characteristics from a regional transit system, just as the distributory streets in the central area have different characteristics from the regional freeway system. The potential user of the central area public transportation distributory system is not involved in a long travel distance, probably not in excess of one or two miles, but one for which walking would be excessive. The objective is to provide, at reasonable cost, a public transportation system for relatively short trips.

By linking environmental areas, and specifically the primary destinations within those areas, as directly as possible with paths usable by relatively few small transport vehicles, the travel distance and time between desired destinations can be greatly reduced, even with relatively low-speed vehicles. The pedestrian pathway system need not be limited to pedestrians. By design, portions of this system can

be made to accommodate both pedestrians and small numbers of public transport vehicles. A system established along these lines would give improved mobility to central area users, reduce traffic loads on the street due to circulation, and reduce parking facility needs.