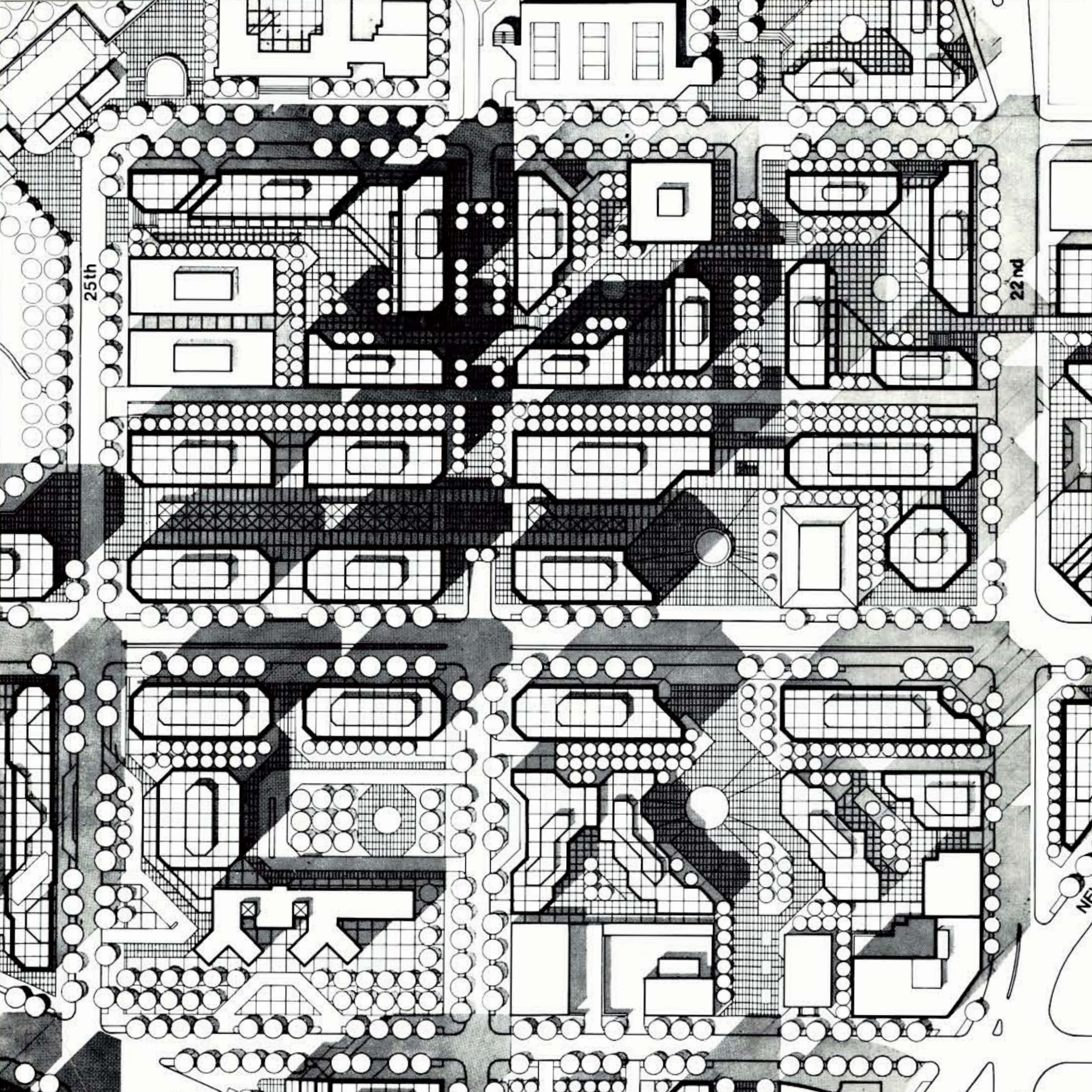


**The
West End
Washington, D.C.**



The West End Washington, D.C.

Prepared for West End Planning, Inc., by the Office of Angelos C. Demetriou, A.I.A.

WEST END PLANNING, INC.

West End Planning, Inc. is a non-profit organization which was incorporated under the laws of the District of Columbia in November, 1972. Its principal aim is to provide for the master planning of a neighborhood in northwest Washington, D.C., known as the West End.

By this time, it had become evident to the property owners and residents of the area that West End could no longer be allowed to lie dormant and burden the economies of the private sector and the City. The decision was made to create a responsible plan for the neighborhood which would enable West End to turn away from a condition of blight into a model community for this City. This effort has been the result of a seldom seen cooperation between property owners and residents in this City and has been conducted under the supervision of experts uniquely qualified to produce a buildable concept.

It was additionally recognized that without a master plan providing strong incentives for integrated development, the area would gradually develop in a piecemeal manner. To avert such sub-optimal development, West End Planning, Inc. committed itself to the realization of an integrated urban community of the highest possible quality and authorized the preparation of this study.

The chartered purposes for which the organization was incorporated were exclusively aimed at the civic betterment, social improvement and physical redevelopment of the West End. In fulfilling its directive to develop a master plan, the following elements were considered: building heights and floor area ratios; preservation features; street and alley modernization; and public facilities and services. The plan fosters a mixed-use concept with the purpose of developing greater efficiencies and compatibility in land use and the creation of desirable urban amenity and livability.

Whereas the principal business of the corporation is conducted by the Board of Directors, the membership comes from the complete range of West End groups. Everyone who lives, works or owns property in West End was invited to join the organization, and today membership represents a cross-section of the community. The Board of Directors includes large and small property owners and renters. Furthermore, besides reflecting the wishes of the membership, the organization and its staff has sought to ensure the participation of all of the private and public institutions which have expressed interest in the plan throughout the course of study.

The Zoning Commission
Government of the District of Columbia
The District Building
Washington, D.C.

Gentlemen:

The development plan which I, on behalf of West End Planning, Inc., am pleased to submit with this letter represents the possibility of a new beginning for the "West End" section of Washington, D.C. The plan might also serve as an important prototype for the renewal of similar sections adjacent to or a part of the central business district.

West End Planning, Inc. is a citizens' organization comprised of residents and property owners in the West End. Its members hold title to over 70% of the privately owned land in the area. All of the employees and tenants in the neighborhood as well as property owners were invited to participate in the planning process; and the interests of tenants, small and large owners are represented in the organizational structure of the group.

During the period of conceptualization, ideas were exchanged with persons representing churches, schools, medical services, social services, library, police, recreation, parks, and related agencies active in the community. Business people in the area were interviewed, and their views included in the composite articulation of need which is best expressed by the plan itself.

The cost of the preparation of the plan and the implementing regulations which were filed with the Zoning Commission on June 22, 1973, has been borne entirely by the citizens' group. Mr. Angelos Demetriou, chief project planner, has made personal contributions of time and skills far beyond that called for under his contract and should be considered a sponsor of the plan as well as a professional participant. The same statement holds true for Mr. Norman Glasgow and his associates.

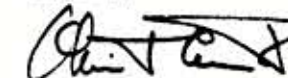
The goals of the plan are to:

- Create a vibrant, high-density, mixed-use urban neighborhood with a distinct identity and quality of life.
- Diminish the need for the use of the automobile in the West End and in the central business district by constructing residential units near the employment opportunities available in each area.
- Provide adequate economic incentives to ensure that the job of reconstruction will be promptly and effectively carried out by the private sector.
- Provide for diversity in both opportunities for employment and housing, especially with regard to those persons now residing in the area.
- Enhance the City's general economic health by adding substantially to the net revenues now received from the West End.

The above goals can only be realized if there is a prompt response to this proposal for action. The stagnation and disintegration of the past are rapidly giving way to a new kind of disintegration. Office structures are being built in disconnected parts of the sector in a manner that, if continued, will seriously affect the validity of the proposal that the emphasis for new development should be residential.

This non-subsidized plan for renewal documents an opportunity for action which, if responded to now by the private and public sectors, can give credence to the idea that the central part of our City can once again become vital and attractive. This idea deserves our best attention and yours.

Sincerely,



Oliver T. Carr, Jr.
President
West End Planning, Inc.

OTC,Jr.:bjw

LOCATION MAP

GOALS OF THE PLAN

The new zoning amendment for urban communities and the West End Master Plan that has resulted from its application have been designed to accomplish a set of specific goals and objectives with respect to primary urban issues: the quality of life-style, the unresolvable problems of transportation and movement, the shortage of contemporary central-city residential environments and their relationships to employment, cultural, recreation and entertainment facilities; finally, and of primary importance, the role of the private sector in large-scale redevelopment and the mobilization of private capital and know-how.

The study's final results were more specifically directed to accomplish the following:

- To achieve a quality of urban living consistent with the best contemporary concepts of an integrated, self-contained and multi-use environment. The proposed zoning amendment and Master Plan bring together, under a unified concept, housing, employment, shopping, recreation and entertainment facilities within walking distance from each other. Such models have been applied with success elsewhere in the U.S. and Europe; they have been studied by the consulting team so that the proposed concept has incorporated the cumulative experience.
- To help relieve the City's traffic and parking problems through efficiency in the movement of people and goods and the provision of a walk to work alternative for the central city employee.
- To enrich the housing range of choice with more advanced forms of collective living intermixed with employment and services of higher order. The density proposed by this Plan is a derivative of this goal.

- To create an employment opportunity available to a resident worker.
- To energize an otherwise inert central area and foster development under an integrated concept rather than piecemeal and parcel-by-parcel construction.
- To create a mixed-use zoning format as required for a vibrant district of livability prolonged beyond office hours. The array of uses permitted under the new zoning have been so structured as to create this type of vibrant environment.
- To create a model that could be followed in other segments within or immediately adjacent to the central business district of the City.
- To apply the best performance standards and design norms in the execution of the concept with respect to health, safety, convenience and service. Furthermore, to build an environment which is visually attractive and functionally articulate, combining the best qualities of contemporary architecture and urban design.

It is the intent of West End Planning, Inc., that these goals be accomplished by releasing the potential of the private sector through the provisions of incentives for comprehensive development.

THE WEST END NEIGHBORHOOD

Location

The West End District is located at the point of convergence of a series of powerful urban elements. Specifically it is situated

- Directly on the fringe of Rock Creek Park, which is the major north-south greenway of Washington, D.C.

- Tangent to the Massachusetts Avenue enclave of embassies and chanceries.
- Astride M and L Streets and Pennsylvania Avenue, all of which comprise primary corridors of the City.
- In close proximity to the Potomac River.
- Adjacent to important arterial routes such as:

The Rock Creek Parkway leading to many important segments of Washington north and south, including the National Airport.

The Whitehurst Freeway leading into Rosslyn Square and Arlington County via Key Bridge and, through that point, connecting to the George Washington Memorial Parkway, the Beltway, Dulles Airport and suburban communities in Virginia and Maryland.

- In between two special segments of central Washington:

The primary office sector of Washington, D.C., which evolves along Pennsylvania Avenue and K, L, and M Streets.

Georgetown, with its unique village character, its fine residential sections and intense nightlife.

The West End district by its location and character stands the chance of rising to the full potential of its urban position to accomplish the transition of two distinctly different areas—Georgetown and Downtown—into one another.

The West End District is located at the point of convergence of a series of powerful urban elements.



District Boundaries

Because of its locational importance, the West End neighborhood was delineated in a number of different ways by former plans. All past delineations were basically similar as far as the main body of the area is concerned—the differences occurring at its periphery.

The boundary delineation proposed by this plan (see illustration on facing page) covers the minimum area required to develop a community of this significance and to modernize its subsidiary parts.

The extension of the district up to P Street was made essential by the requirement of a better road design at that point and the resulting corrective measures on 22nd and 23rd Streets. The inclusion

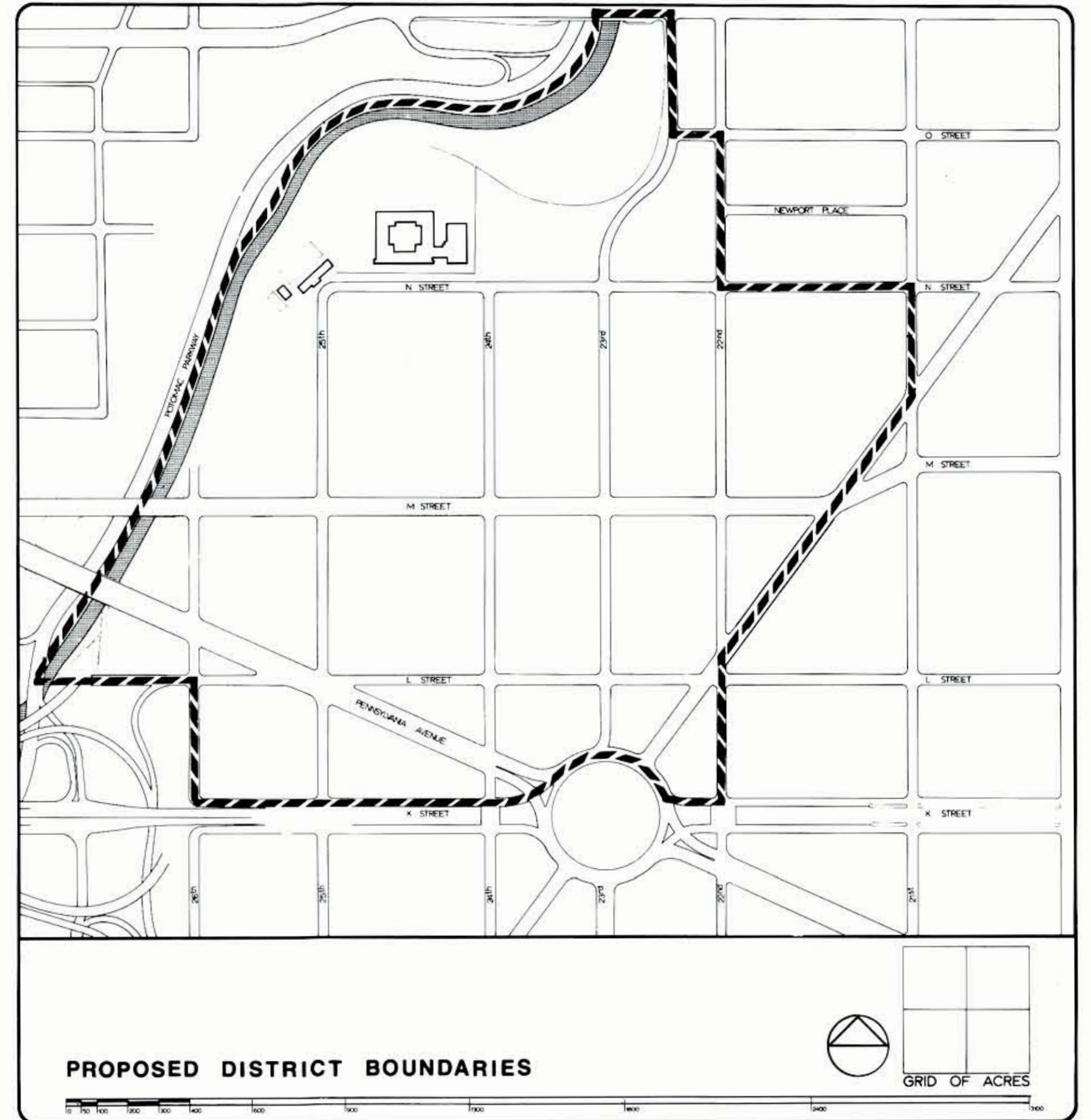
of the Rock Creek Park up to the outer bank of the creek was considered essential in developing appropriate design relationships between this park and the proposed neighborhood. As seen from the plans presented later in this report, the park was sensitively augmented into the design concept, and a major northwest pedestrian concourse was appropriately directed towards it.

In accordance with the provisions of the proposed zoning amendment, the West End is eminently qualified to be treated as a C-R District, as described in Section 5105.1 of the Proposed Zoning Amendment.

The West End development district was legally defined in the proposed zoning amendment as follows:

"Proceeding at the northeastern corner of the district as follows: Beginning at the intersection of 21st and N Streets, N.W., in a line proceeding southward along 21st Street to its intersection with New Hampshire Avenue, N.W.; thence in a southwesterly direction along New Hampshire Avenue to its intersection with 22nd Street, N.W.; thence in a southerly direction along 22nd Street to K Street, N.W.; thence in a westerly direction along K Street to Washington Circle proceeding westerly around the northern line of Washington Circle to K Street, N.W.; thence westerly along K Street to its intersection with 26th Street to its intersection with L Street, N.W.; thence westerly into Rock Creek Park to the western edge of Rock Creek; thence northerly along the western edge of Rock Creek to P Street, N.W.; thence easterly along P Street to 23rd Street, N.W.; thence in a southerly direction along 23rd Street to O Street, N.W.; thence easterly along O Street to its intersection with 22nd Street, N.W.; thence in a southerly direction along 22nd Street to its intersection with N Street, N.W.; thence in an easterly direction along N Street to its intersection with 21st Street, N.W., which is the point of beginning.

The boundary delineation proposed by this plan covers the minimum area required to develop a community of this significance and to modernize its subsidiary parts.



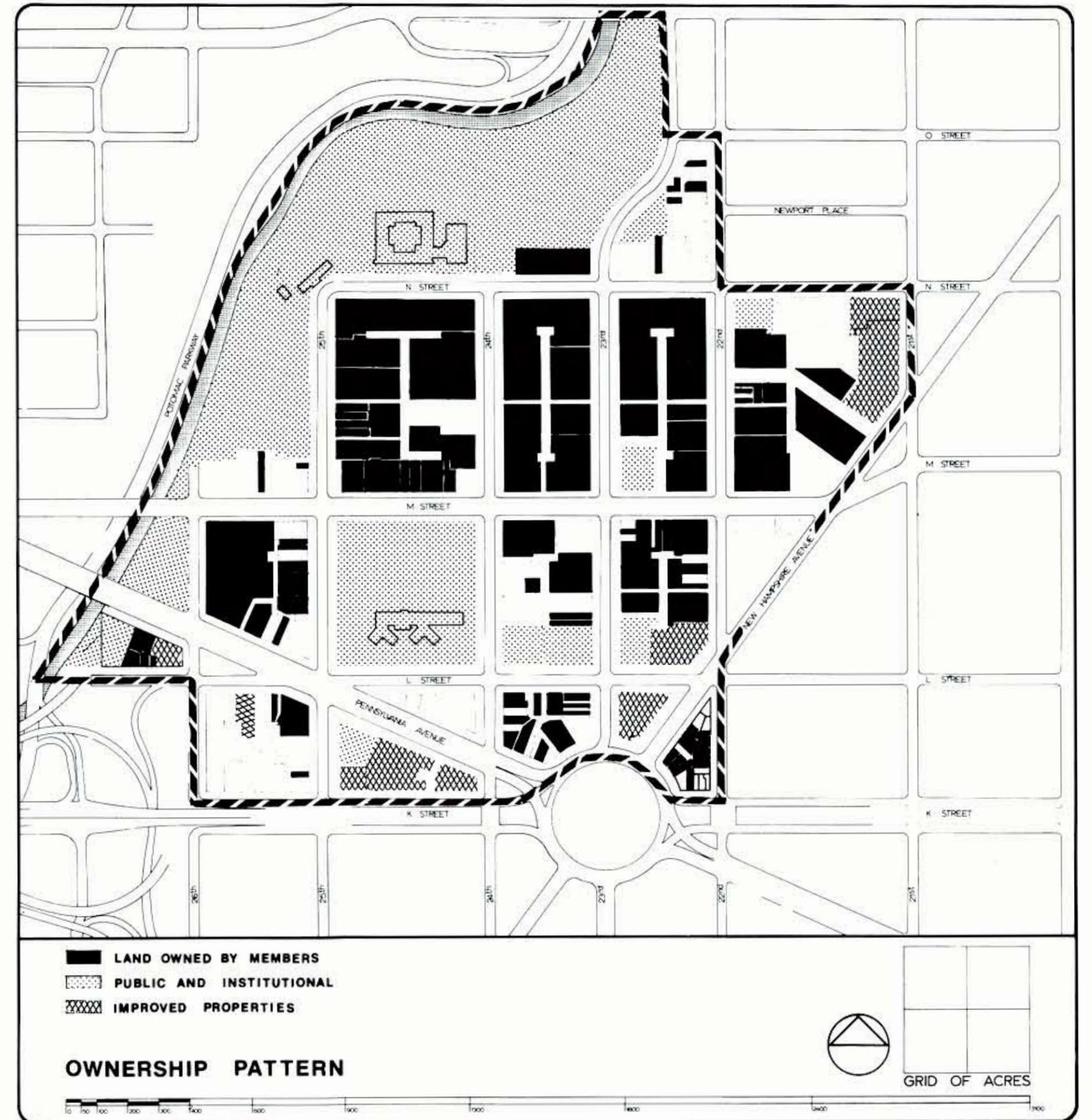
Ownership Patterns

The graphic on the facing page categorizes land into four classifications:

- Land owned by West End participants.
- Private land developed in the recent past and therefore excluded from redevelopment.
- Publicly owned land occupied by public buildings.
- Public lands retained as open space.

A true assessment of owner's participation in this plan can be derived from the comparison of black and white parcels representing respectively participating and non-participating owners. In terms of area extensiveness, the West End Planning, Inc. participation represents 70% of the land available for development. The non-participating property owners do not necessarily oppose the objectives of the plan but are merely disinclined or for other reasons unable to participate. Those who actively participate in the corporation have borne the expense of this study and stand firmly behind its conclusions and recommendations.

In terms of area extensiveness, the West End Planning, Inc. participation represents 70% of the land available for development.



Existing Conditions

West End occupies approximately 80 gross acres of land in the northwest section of Washington, D.C. Of this total, 40.5 acres are held in private ownership, 26 are in streets and alleys and 13.5 is public parkland. Its most distinguishing feature is the large percentage of land—over 35%—utilized for incidental surface parking. For the most part, the neighborhood supports older, low density structures, some of which have been abandoned and is generally underutilized.

Private development is limited to a few elements. The offices of the Bureau of National Affairs, U.S. News and World Report, Capitol Cadillac, the Lewis Hotel-Motel Training School and a few others are in good condition. Blackie's House of Beef and the Washington Theatre Club are relatively new structures. Contrasting these are the vacant structures of the Chestnut Farms Dairy, the Sorenson Cooper-smith, and extensive clearings of total unused land.

Along Pennsylvania and New Hampshire Avenues, one finds some of the last highrise apartment buildings built in northwest in the form of the Circle One, the Saint George, 1100 22nd Street and a few others. There are six mid-rise apartments which are in relatively poor condition, and there are nearly one hundred row houses scattered around the area of West End, a few of which have been renovated.

These townhouses are remnants of an old fine neighborhood which, unlike Georgetown, has lost its cohesive environment and community atmosphere. Furthermore, these older architectural prototypes were predicated on cleaner and less polluted environmental conditions. Presently, the street noise level and the intensity of pollution render such housing types unhealthy and demand air conditioned structures with noise-insulating external features.

The public investment is far more complete. Located in West End proper are fire and police stations, a hospital, church, library, and a junior high school. These physical elements, coupled with the park along the Rock Creek, present to the neighborhood what amounts to a nearly complete public infrastructure.

Analytic surveys and field inspections indicate that West End is lying stagnant as a community. Further investigations of market economics and present zoning restrictions lead to a future of small-scale and piecemeal development well below the potential and the expectations of an area of this central significance. Private investment and development has passed the area by, and yet the City has nearly completed its potential responsibility here. It only remains to produce a model which will precipitate development designed to take advantage of all of these opportunities.

The most distinguishing feature of West End is the large percentage of land utilized for surface parking.



ZONING

Existing

Today, development in West End is regulated by five zoning districts as follows:

- R-5-B low-medium density residential, F.A.R. 1.8, height limit 60 feet.
- R-5-D high density residential, F.A.R. 6.0, height limit 90 feet.
- C-2-A community business center, F.A.R. 2.0, height limit 60 feet.
- C-2-B community business center, F.A.R. 3.5, height limit 90 feet.
- C-M-2 commercial-light manufacturing, F.A.R. 4.0, height limit 60 feet.

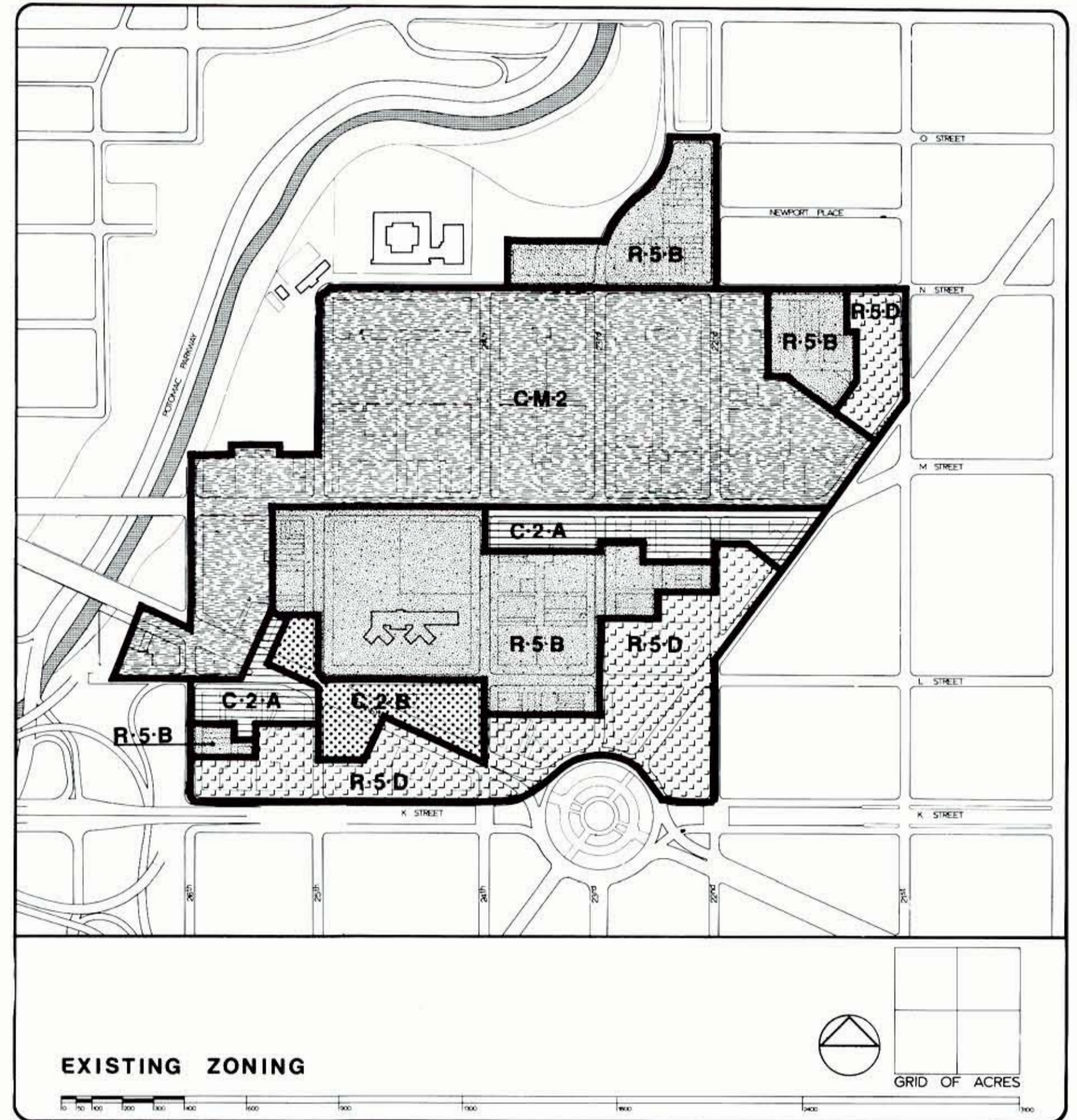
As a result of present zoning delineations, West End is virtually divided in two separate halves: one, north of M Street, available for medium density office development and the other, south of M

Street, available for low-medium and high density residential development. This type of division and density regulation is not conducive to a community-type organization or the arrangement of urban activities in an optimal form.

Whereas the office sector, as provided by current zoning, will be able to stand alone, there will be too little residential development to make up an identifiable community that can be serviced with contemporary amenities. A comparative evaluation of the impact of the two zoning situations—existing and proposed—is presented in Table A of this section.

It is recognized that the present Zoning Ordinance of the City of Washington, D.C. does contain certain provisions under article 75 for the development of organized urban areas. These provisions, however, are not directly applicable to comprehensive urban communities and the absence of specific housing and amenity provisions (which have become important elements of new legislation) made the preparation of a new, more complete zoning classification necessary.

This type of delineation is not conducive to community-type organization or the arrangement of urban activities in an optimal form.



Proposed Zoning

For the realization of the full potential of this area, a new zoning amendment was drafted to include a combination of existing zones and two new districts, C-R-1 and C-R-2. This new zoning guide will provide the framework necessary to implement the Master Plan completed for this neighborhood. The recommendation is that development in West End be guided by the following districts, (see plan on facing page):

- C-R-1 high density residential, first floor optional retail, F.A.R. 8.0, height limit 130 feet.
- C-R-2 high density mixed office/residential, F.A.R. 8.0, height limit 130 feet.
- R-5-C medium density residential, F.A.R. 3.5, height limit 90 feet.
- C-2-B community business center, F.A.R. 3.5, height limit 90 feet.

By changing the commercial-light manufacturing district to a mixed-use zone and by providing for higher densities and height limits in general, it will then be economically feasible for the private sector to develop West End under the guidelines of a Master Plan including ample provisions for pedestrian and open space systems.

The newly devised zoning districts, C-R-1 and C-R-2, are more fully described in Section 5105. The composite format proposed hereabove is expected to create a "growth model" which is considered prerequisite to the development of a unified and coordinated urban district.

Comparative Development Impacts

Under current zoning, West End will grow primarily as an office enclave supplementary to the central business district. Current provisions allow for the construction of 3,000,000 square feet of new office space and only 1,300,000 square feet of residential space. Should the area be developed under the existing zoning provisions, the net effect on development would be:

- An increase of residential floor area from 850,000 to 1,300,000 square feet.
- An increase of office floor area from approximately 500,00 to 3,000,000 square feet.

The ratio of residential office space is considered weak and the employment opportunity will be, by necessity, captured by commuters. Such a situation will increase the transportation burdens of the City and will prove one of modern technology's primary findings: that transportation will never be resolved unless residences are intermixed with employment, entertainment, cultural, recreational and health facilities and that the exchange between these uses is within walking capability.

The West End proposal calls for the readjustment of this balance through the additional rights to build residential space. This plan calls for the retention of the office potential at 3,000,000 square feet and an increase in the residential potential to 6,000,000 square feet. Construction of the proposed plan would cause a shift from a predominantly office enclave into a balanced mixed-use community.

Not only would the plan cause the population figures to shift, it would change the overall character of the neighborhood. Instead of being predominantly a mid-rise office district, West End would become a high density residential community with enough internal services to be partially self-sufficient. It would serve as a new "in-town" housing supply, and at the same time, as a legitimate transition from the high-rise office enclave to the east, to the special residential areas of Georgetown and Foggy Bottom.

In addition to the above considerations for a healthy community, increasing the building rights of owners constitutes the only realistic incentive for good contemporary design and integrated development.

The development impacts of the two situations, existing and proposed, are summarized in Table A.

TABLE A: COMPARATIVE DEVELOPMENT IMPACTS

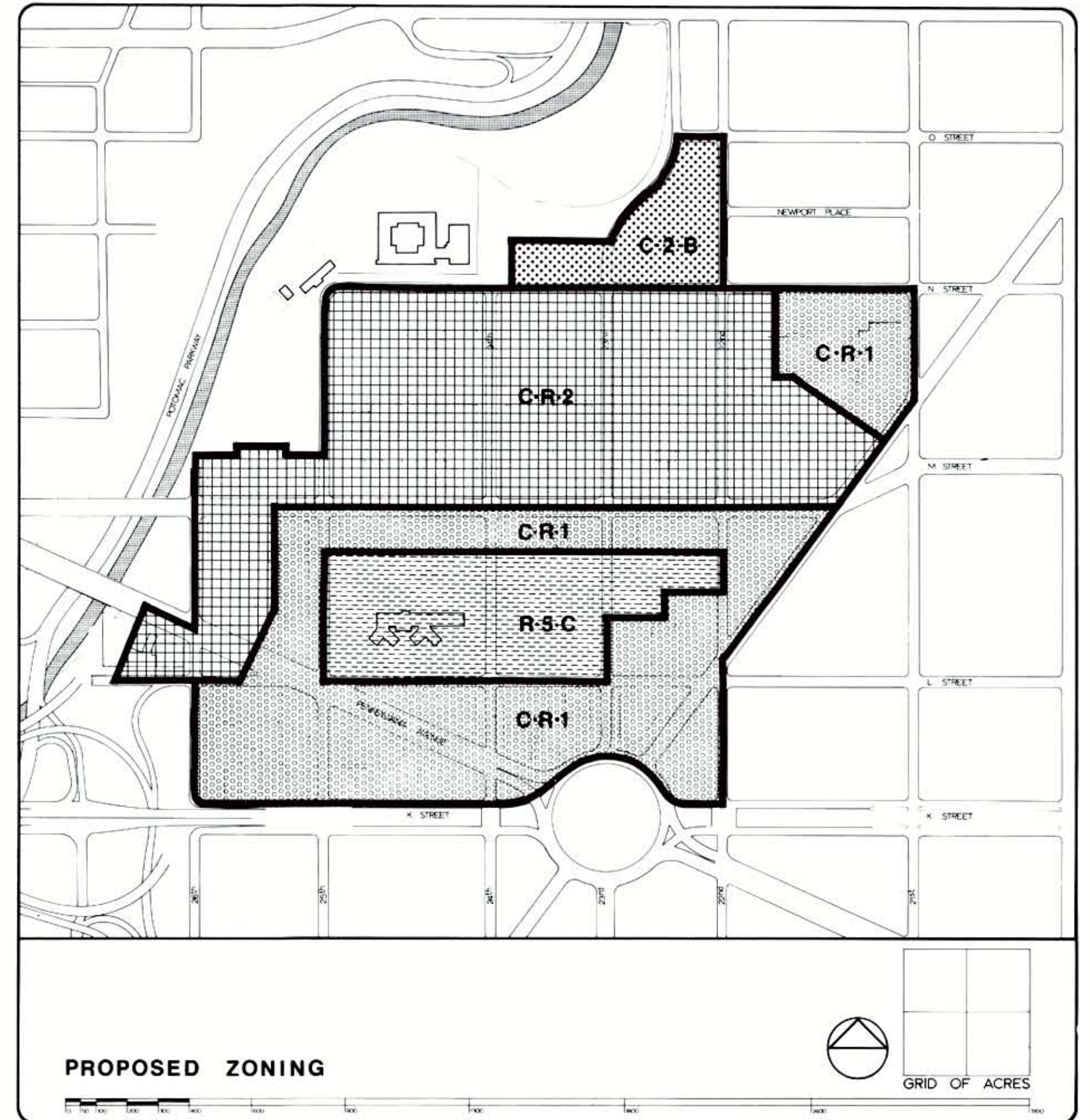
Existing Potential

	C-M-2	C-2-A	C-2-B	R-5-B	R-5-D	TOTAL
Office	2,899,492	73,629	26,651			2,999,772
Residential		73,629	53,302	511,110	641,754	1,279,795
Retail		73,629	26,651			100,280

Proposed Potential

	C-R-2	C-R-1	R-5-C	C-2-B	TOTAL
Office	2,754,518				2,754,518
Residential	2,754,518	2,839,596	273,304	262,802	6,130,220
Retail	289,949	149,452		17,520	456,921

The composite format proposed is expected to create a growth model which is considered prerequisite to the development of a unified and coordinated urban district.



A CONCEPT FOR WEST END

Economic factors and development objectives were converted into physical design parameters (F.A.R., Height, Land-Coverage and other variables) and were tested through mathematical space modeling and design. The adopted parameters and their conversion into zoning, compose a tested system that ensures a high quality of contemporary design.

In addition to the resolution of this category of problems, much design effort was focused upon the creation of an urban environment; the mechanics, function, and performance, of which was predicated upon contemporary standards of design innovation. The definition of good contemporary design was thereby expanded beyond forms and visual aesthetics into matters of superior livability and service. Additionally, a balanced program of uses, ensuring their proper organization and interrelationships, was among the primary objectives of the design.

Utilizing optimally sized superblocks to the extent possible, the new environment is fused together by a complete array of urban sub-systems, including an elaborate system of pedestrian ways and bicycle paths; optimum vehicle service and parking; and sequences of plazas, courts, arcades, malls, esplanades and similar appurtenances.

The designers elected to avoid types of community models or megastructures the designs of which are untested and which are associated with exorbitant difficulties in detailing, construction and economy. Instead, the design concept presented in these proposals is of a type viewed to be realistic, workable and constructible under present-day Washington conditions. A presentation of the concept's pertinent components follows, commencing with the element of transportation planning.

Transportation

The study was commenced with the examination of this component since transportation is among the primary elements of urban articulation and the generator of city-geometry and capacity. Initial investigations indicated that West End is overly bisected by roads that create city-blocks of relatively small dimensions and that inhibit larger-scale modern development and make pedestrian movement a relatively dangerous and unpleasant experience. West End, however, and particularly its segment north of M Street is not a *through* neighborhood; its dead-end position at the edge of Rock Creek Park carried with it the initial hope of being turned into an auto-free zone surrounded—though not bisected—by through traffic.

Under these terms, the transportation analyses and studies were focused on modernizations which would accomplish a set of major design objectives and amplify both the system of movement in the area and its land-use potential.

Existing Transportation Plan

Currently, the system is made up of four types of streets which in ascending order of importance are:

- A number of local collectors—24th, 25th, 26th and N Streets and Ward Place.
- Two major one-way pairs—L and M and 22nd and 23rd.
- Three major arterials—New Hampshire Avenue, Pennsylvania Avenue, and the K Street Freeway.
- A set of interchanges terminating at the periphery of the area in a presently inconclusive

manner—Whitehurst Freeway and the Rock Creek Parkway.

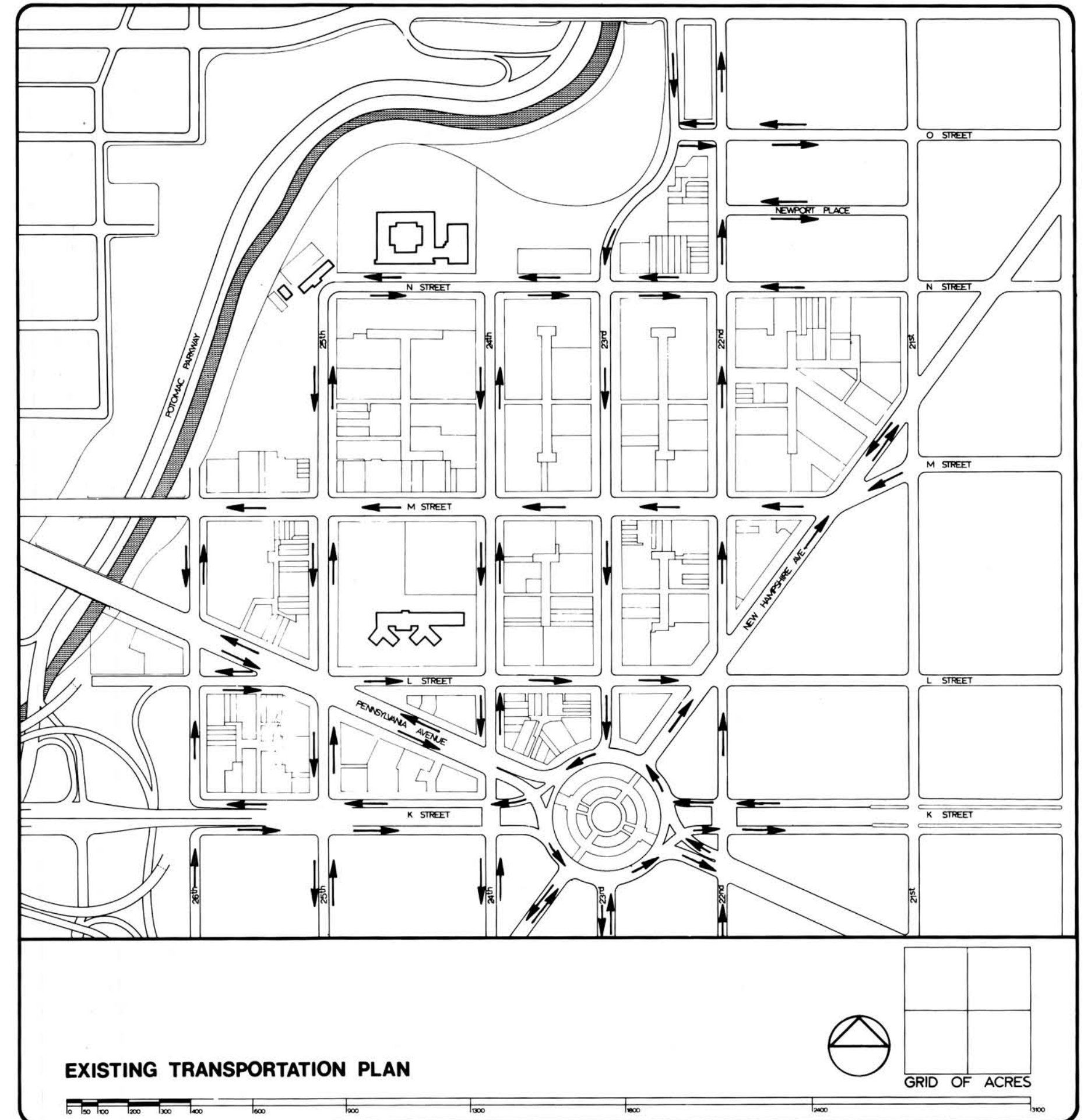
None of these streets are operating over capacity; in fact, for the most part, the local collectors could be closed individually with no impact on the overall traffic system except a reduction of local service.

The alley system is a local, block-serving system designed to provide access to the buildings as they were originally constructed earlier in this century. As such, the alley system is very extensive and lends itself to easy modification.

The city planning geometry resulting from the existing transportation plan provides for extremely small city blocks which afford minimal developments and minimal internal environments. The cluttered street scene of today constitutes a negative environment. It is therefore necessary to provide within the interior of the city block, secluded internal environments with a greater aesthetic quality and usefulness. For this to be feasible, there is a need to provide for a new city planning geometry predicated on super-blocks. This matter was pursued in the proposed design by all reasonable means available. The planning team has carefully measured the stress involved in the changes versus the resulting benefits, and has concluded that the benefits by far exceed the hardships of change.

An analytic presentation of traffic patterns and counts within the West End area is presented in a supplementary report.

The city planning geometry resulting from the existing transportation plan provides extremely small city blocks which afford minimal internal environments.



Proposed Transportation Plan

The proposed thoroughfare plan is part of a far more elaborate concept of movement including transportation, internal vehicular circulation, service and emergency access, parking and the associated entrance and exit points, and bicycle and pedestrian movements. This expanded system of movement is further associated with the subway stops at Dupont Circle and Foggy Bottom (23rd and I Street intersection in the George Washington University area.)

The complete rationale in support of the proposed plan is presented in the supplementary report, while in this summary, only the results of the study are explained.

The recommendation of this plan is that the arterial system retains its current capacity, plus any additional capacity needed to service the new neighborhood, but be reasonably modified so that both vehicular efficiency and pedestrian safety achieve optimum levels of operation. Such a new design would provide for a more efficient use of the land and a higher quality local environment.

The present proposal outlines a seven-point program for the organization of a new movement system for West End, the major recommendations of which are:

- The closing of 23rd Street and from Washington Circle to P Street and the transfer of its capacity into the 22nd Street right-of-way, changing 22nd Street to a two-way boulevard. The existing 23rd Street right-of-way, from P Street to Washington Circle, would be converted into the primary north-south pedestrian concourse of West End. This change would occur only upon agreement by the adjacent property owners.

Initial examinations of the feasibility of widening 22nd Street conclude with positive results: with minor modifications to sidewalks, 22nd Street can be widened to 55-feet from its present 33-foot surface to include 5 active lanes of traffic without damage to the abutting properties.

The only damage to be caused by this street widening is that associated with the loss of trees. Along the edges of the impacted portion of the street there are today 31 trees about half of

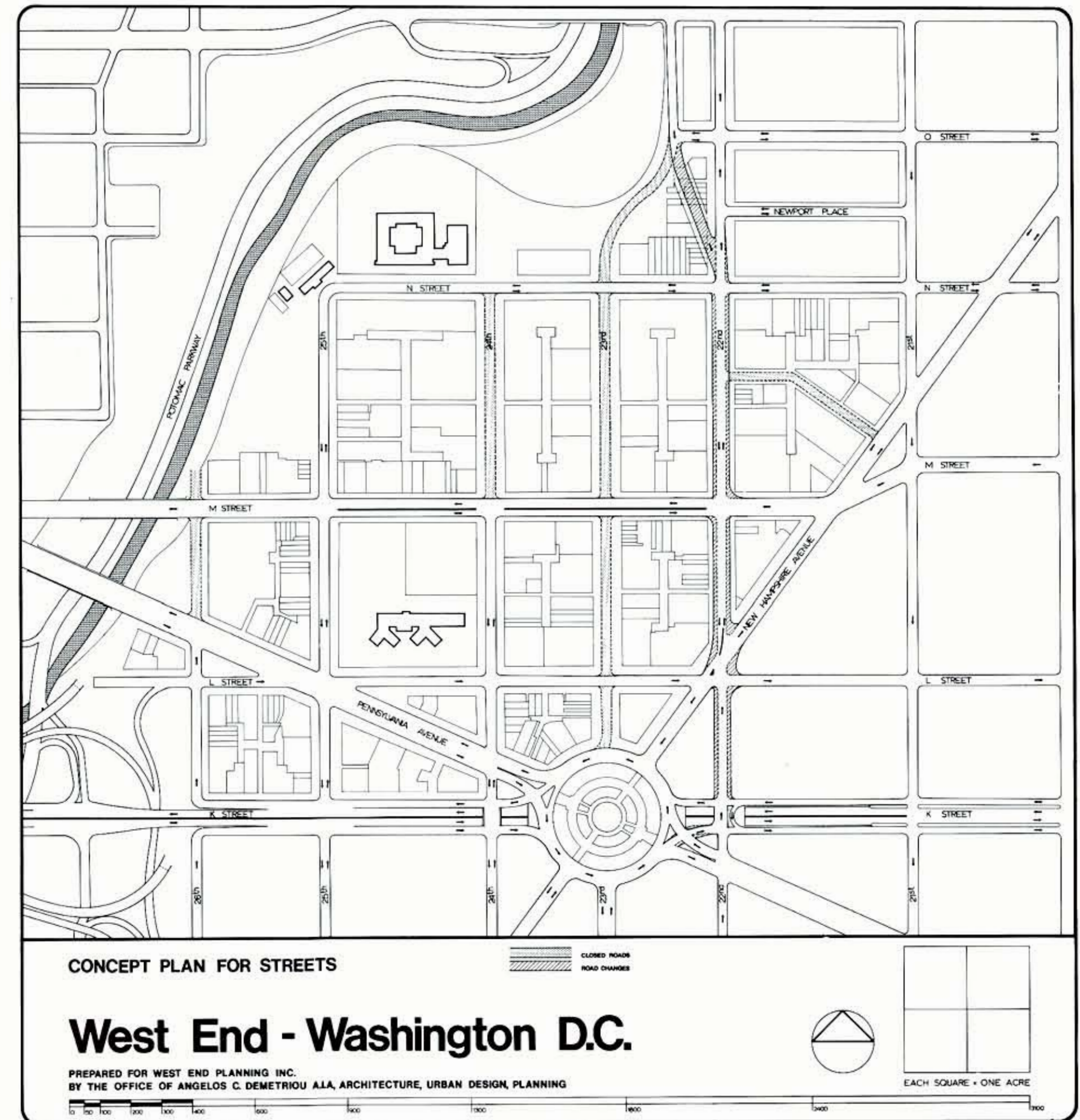
which are medium in size and the balance small. This loss seemed to be more than offset by the extensive landscaping plan of the project and the splendid esplanades and greenways resulting from the proposed street closing program.

- The conversion of M Street into a two-way carrier from 22nd to 25th Street, and the inclusion of a median strip between the two-way stretch.
- Elimination of all unnecessary streets, with the provision that all property owners shall agree and have adequate access to private land; 26th Street north of Pennsylvania Avenue and 24th Street north of M Street would be converted into pedestrian environments.
- Reduction of alley spaces to relax some of the restrictions on development, with the provision of reasonable access to all private property.
- Development of a system of bike trails to provide for safe travel within the neighborhood, and designed to complement the comprehensive bike trail system for the City.
- Development of a complete pedestrian system including a primary system tying the neighborhood together north-south and east-west, and a series of secondary links from residential clusters to the primary system.
- Elimination of all on-street parking, and the provision for all new parking spaces within individual projects.

Such a program, when implemented, would provide the maximum level of pedestrian access to the Metro stations, the park and the community elements. West End would be effectively linked to the bordering neighborhoods internally, and with the rest of the City externally. Metro service will be available at Foggy Bottom, and Dupont Circle, while Metrobus service will be available along Pennsylvania Avenue, K and 22nd Streets.

The plan on the facing page illustrates the road network. The pedestrian and bicycle networks have been presented in a separate section of this report.

Such a transportation plan would provide for a more efficient use of land and a higher quality of local environment.



Structure Plan

The integrated composition as presented on the facing page, is, in reality, made up of many small units which can be constructed independently and developed with complete individuality. The strength of the plan, however, lies in its ability to integrate these units into larger complexes of superior autonomy and diversity. This very element of integration makes possible the creation of an intricate system of arcades, esplanades, plazas, and courts of all kinds and endows the environment with superior visual and functional organization.

The composition consists of five large blocks—two of which may be characterized as super-blocks—five normal city blocks and four enclaves as delineated on the map.

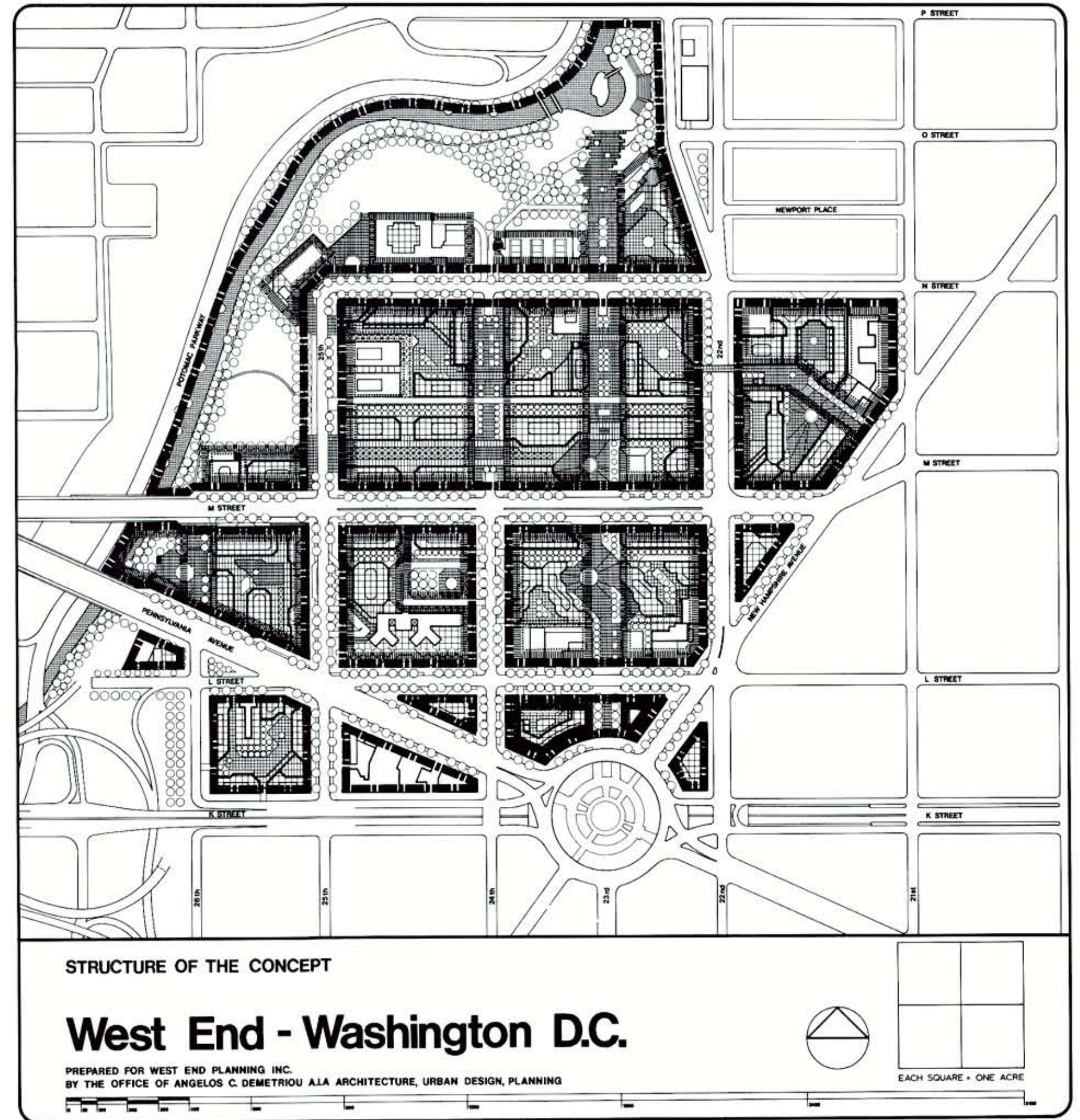
The super-blocks are subdivided into smaller districts which are further subdivided into the smallest units of the composition as illustrated on the facing page. The overall concept is composed of twenty-two small units most of which are autonomous at their level and particular land-use designation.

The structuring of the concept in this cellular form was the result of many practical considerations such as the staging of development over a period of time in a manner that will not disrupt the function of the area, as well as the consideration that completed parts would not unduly be disturbed by surrounding construction. In addition to this type of organization, the plan was structurally and aesthetically keyed to a 20-foot grid along which the geometry of the entire plan is generated. The modular organization of the plan in addition to its construction economy, is expected to synthesize the rhythms of design and create a sense of unity.

The modular structure is further articulated by means of pedestrian concourses and esplanades that bring together rather than tear apart each component unit. Pedestrian circulation under the terms of the plan, has been optimized and movements have been programmed along intensely active frontages of buildings both for pleasure and for security. These concourses, some covered and some open-air, provide the decisive linkages to the composition and bring together the component parts.

The requirements of public safety and security from intrusion or criminal activity have been pursued with similar structural means of design. Each unit, while surrounded by streamlined and active urban spaces, contains within its interior its own private environment with controlled entrances and exits.

The modular organization of the plan is expected to synthesize the rhythms of design and create a sense of unity.



Built Fabric

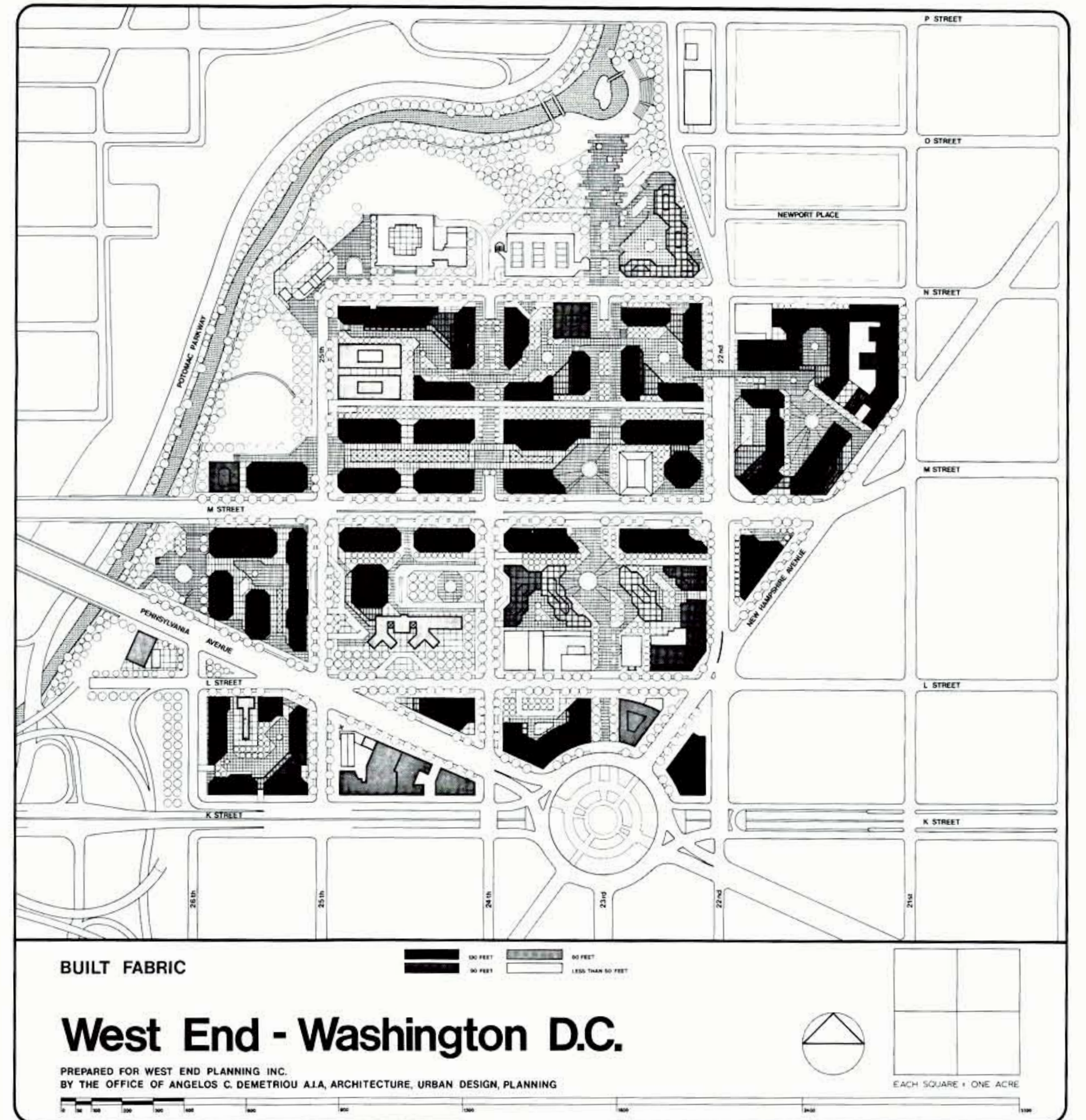
The built fabric of the environment is generated by the interplay of three factors; the maximum permissible building area (FAR), the permissible building heights and the articulation of these elements through design. In the case of West End, the built intensity of the environment and the relationship of the built masses (height and bulk) versus open space became the subject of analytic architectural design and urban aesthetics.

The West End—like most districts of Washington, D.C.—is characterized by wide streets (M Street—90') and large plazas (Washington Circle—450'). To create a sense of urbanity along these large streets, the height of abutting facades should optimally be at least 1.5 times the width of the street. In addition to these considerations relating to the scale of urban spaces, Washington is characterized by intense sunshine. Under these terms, the creation of an environment producing contrasts of light and shadow could justify even taller structures. In this sense, the proposed building height of 130 feet over parts of the complex is expected to create spaces of substantial urban quality and is consistent with the scales originally conceived by Pierre L'Enfant.

In the illustration on the facing page, the tallest structures are indicated in black. The tones of the design are scaled downwards to lighter shades in order to illustrate lower structures and give a clear visual impression of the built fabric. As seen from this plan, M Street was lined on both sides with buildings of a uniform height of 130 feet. To the extent possible, the same concept was followed along Pennsylvania Avenue, with the exception of existing, lower structures. The architects believe it necessary to define these major avenues with appropriate building masses in order to contain their extraordinary width. Today, these major streets and places are surrounded by building masses that are too low to create any sense of enclosure. The same is true of Washington Circle.

Lower structures are intermixed with taller in order to intensify the plasticity of architecture. Additionally, an intricate network of pedestrian-ways unifies the space and the land-use sequences at the more active sidewalk level of the City. Other design features such as the transparency of the lower level, and its permeability could not be expressed at this scale of graphic presentation. These qualities, nonetheless, contribute to the life and vibrance of the street scene.

The plan is expected to create a space of substantial urban quality and is consistent with the scales originally conceived by Pierre L'Enfant.



Bicycle and Pedestrian Ways

The vehicular network, in this concept, has been developed as part of a more elaborate system of movements including bicycle paths and pedestrians ways. Both these latter systems are well-connected and integrated into the greenways and parks of the complex.

Bicycle movements from the east and south urban sectors of the City will unavoidably follow the existing streets that lead to the complex and from that point onwards, they will use the ample pedestrian ways of West End. From the complex, the Rock Creek Park becomes accessible by bicycle using a specially designed pathway that descends into the Park and moves along the east side of the Creek, crosses over and connects to the already established bicycle way at that point. It is anticipated that the new office buildings will provide, at their ground floors, appropriate spaces for the parking of bicycles.

Bicycle movements on the West End segment of M Street can be accommodated on the long and uninterrupted sidewalks of the super-block, and the same is valid to a certain degree along Pennsylvania Avenue. A further extension of the bicycle network would certainly focus on the design ramifications of the paths under the two bridges and their connection to the tow-path canal and the Potomac. These extensions, though beyond the project boundaries, are of such significance as to merit the attention of the appropriate City Departments as the city-wide bike trail network is completed.

The pedestrian movements are accommodated by a system of spinal and subsidiary elements as discussed here below:

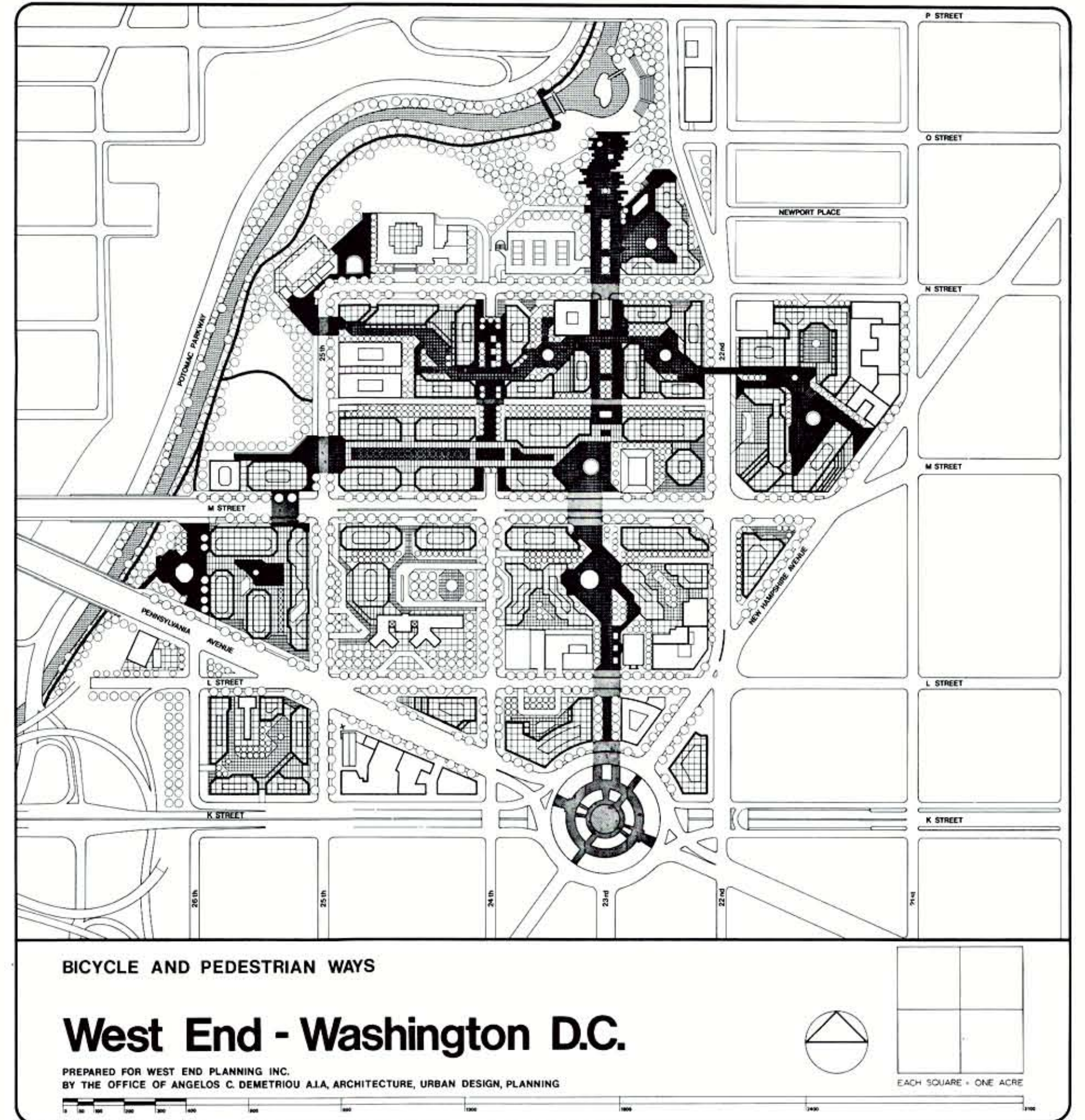
- North-south movements are accommodated by the esplanade from Washington Circle to the P

Street Beach linking the important George Washington University area, the Washington Circle, the theatre and the library at West End, and through many other plazas and landscaped spaces terminating at Rock Creek Park.

- From the side of downtown, pedestrian flows over M Street that originate from the east are received at West End by two esplanades: one concourse over the closed Ward Place that leads into the northern sectors of the complex; and one flow picked up by an enlarged sidewalk along M Street which is subsequently drawn inward by the main plaza of the complex over the old 23rd Street easement. From this entrance plaza pedestrians are funneled in two directions: one, north toward the park, and one, west via the main concourse of the complex. M Street has been treated as a boulevard space, properly landscaped and lighted, and is expected to be appealing to pedestrians. Furthermore, the newly proposed island in the middle of M Street would make its crossing easier and more safe.
- From Georgetown, pedestrian flows are expected to approach West End via M Street and be augmented into the pedestrian system at the point of the Chestnut Farms Dairy site. Because of the gateway qualities of this location, the plan calls for the elimination of 26th Street and the development, over its easement, of a public plaza descending into the Rock Creek Park.

In addition to the above primary pedestrian ways, an elaborate system of subsidiary esplanades complete the penetration of the complex in an optimum way. The plan on the facing page illustrates these systems which, combined with courts, plazas, parks and greenways, complete the open space program and movement system of West End.

The vehicular network has been developed as part of a more elaborate system of movements including bicycle paths and pedestrian ways.



Parks and Recreational Space

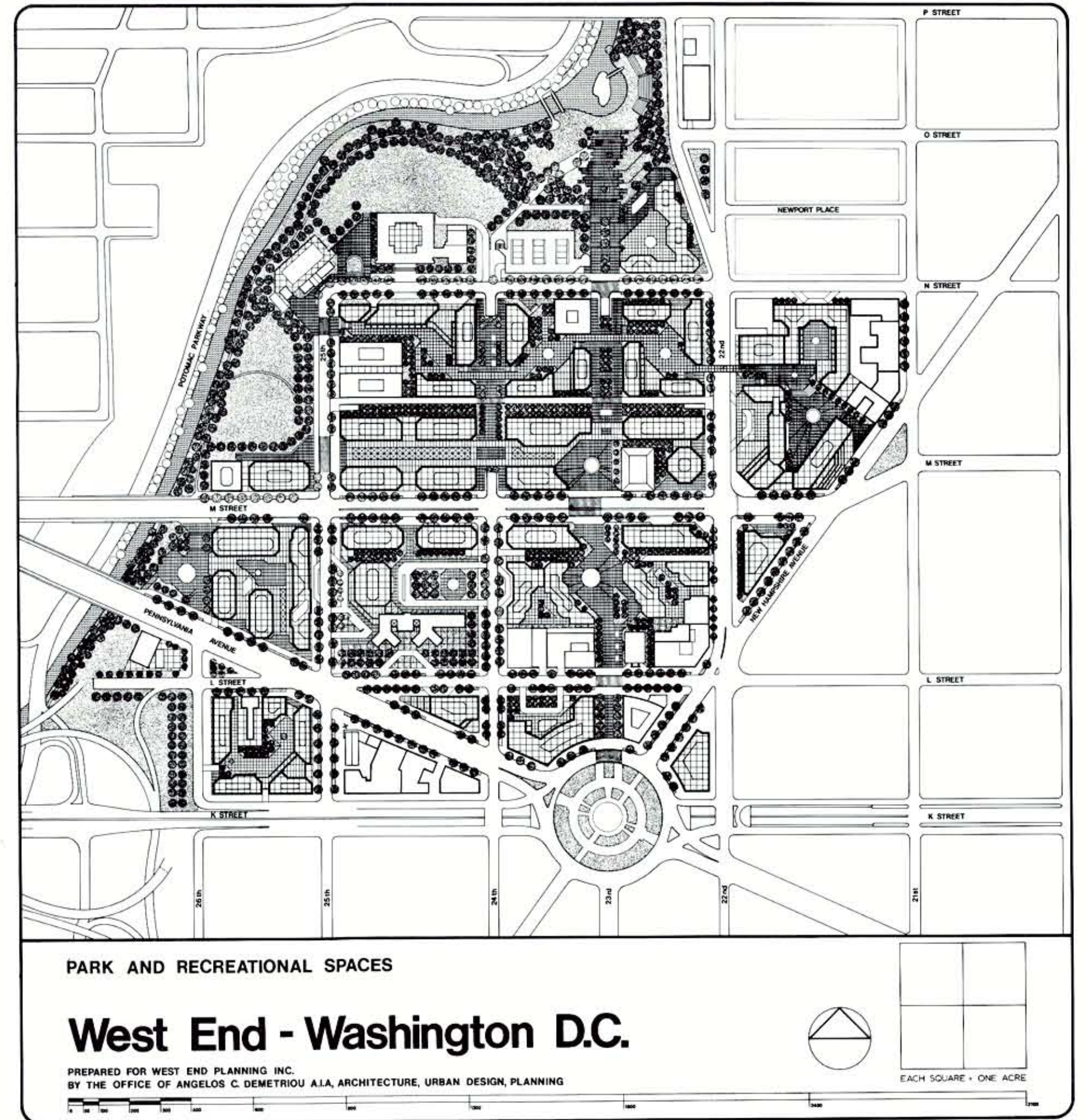
One of the justifications for super-block development is the inability of small-sized, conventional blocks to contain open spaces amenable to appropriate utilization and treatment. The deterioration of the street scene as a living environment, due to traffic and pollution, forces the architectural concept to turn inwards for livable open spaces. The West End Plan, with its super-block geometry, affords open space development of optimum quality.

The green system in all of its forms was used as one of the primary elements of urban integration. The built fabric of the complex was punctured throughout with a complete variety of open spaces, parks, recreational plazas and courts for passive and active recreation as described below:

- Open parks in their natural state, such as the Rock Creek greenway. This significant element is fully recognized by the plan which approaches the park with sensitivity. The main inlet to the park is provided by the 23rd street pedestrian concourse, and the descent to the park is made so that the transition from urban to natural state is smooth.
- Developed grounds for active recreation under which the swimming pool by the junior high school is further complemented by the community tennis courts at the northern end of 24th Street.
- The secluded interior spaces of each enclave developed with landscaped courts and completed with swimming pools, sitting areas, playgrounds and similar amenities.
- A number of terrace and roof gardens developed over many of the structures.
- Urban public plazas well connected to the parks, and the intensely landscaped pedestrian ways.

These elements, combined with the landscaped pedestrian ways and the arcades, the bridges, and the other open structures of the complex are expected to create a sense of urban spaciousness and a strong occurrence of nature within the architectural environment.

The West End Plan, with its super-block geometry, affords open space development of optimum quality.



Illustrative Design Concept

The lifestyle underlying the design concept is that of a self-contained, multi-use, urban community in which a variety of facilities, such as residences, offices and commercial establishments, are inter-mixed with cultural, recreational and entertainment facilities fused together to form a vibrant, twenty-four hour environment.

The creation of such a concept was predicated upon auto-free super-blocks, each capable of accommodating a complete architectural environment, and each containing substantive uses and recreational open spaces. The auto-free super-blocks were achieved through the appropriate elimination or diversion of streets in a manner that optimizes the performance of automobile movements and creates opportunities for the expansion of movement systems into other missing modes, such as bicycle and pedestrian ways. The super-block was the only device through which a superior architectural environment could be created consistent with contemporary scales of architecture, convenience and service.

The Illustrative Design Concept on the facing page presents the integration of all the sub-components of the environment into a final composition. The shadows cast from buildings are intended to convey the plasticity of the resulting urban environment. At the ground level, the complex allows for maximum pedestrian penetration through a series of formal gateways, plazas, esplanades, and arcaded concourses. All of these elements, whether open or covered, are abutted by active, retail frontage to

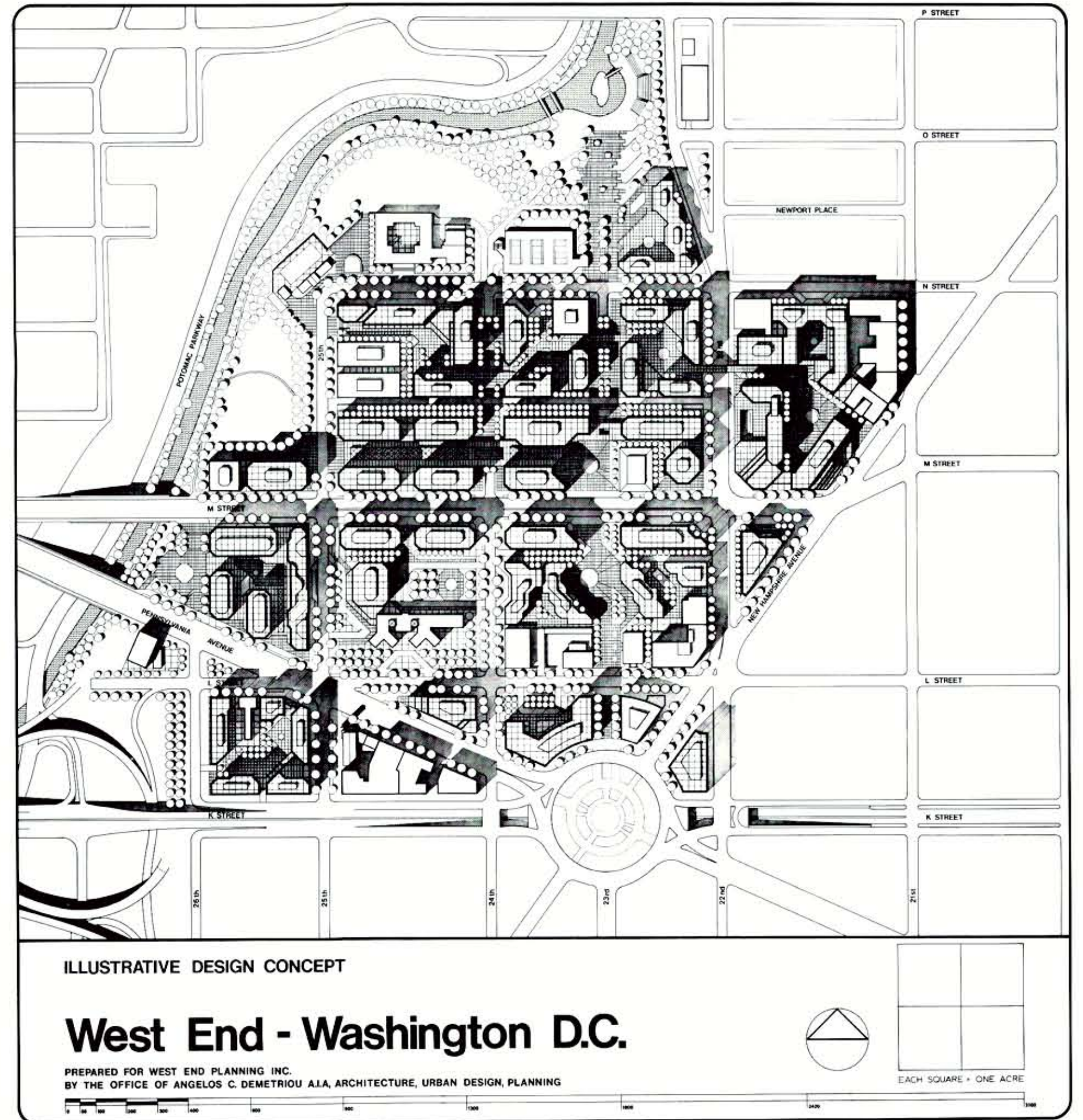
make walking a pleasant and safe experience.

The overall concept is comprised of a number of smaller units, each of which maintains the necessary degree of autonomy and privacy. Each unit evolves around a landscaped open court with swimming pool, sitting areas, and similar amenities. The inter-connection of these secluded enclaves is accomplished through an elaborate system of pedestrian ways, bridges, and gateways designed to give a sense of variety and intricacy.

The design concept was structurally and aesthetically modulated to a 20-foot grid (and its simple subdivisions) for homogeneity and the creation of a unifying rhythm of design.

The complex is tied strongly to the adjoining Rock Creek Park by means of a north-south pedestrian concourse stretching from Washington Circle to the P Street Beach. This intensely landscaped element becomes softer as it enters the Park and it descends with the naturally sloping grounds to terminate at a small lagoon and waterfall. The natural edge of the park is maintained in its present condition while on the east side of the lagoon a naturally formed amphitheater may be considered as an optional possibility. The fact that the Creek is presently polluted to an extent analyzed in the Supplement is recognized and caution should be taken in its use. This fact, however, is not sufficient to cancel out the beautification of the Creek in an anticipation of plans for its de-pollution.

The lifestyle underlying the design concept is that of a self-contained, multi-use, urban community.



Housing Program

In recognition of the importance of having a positive strategy for the provision of housing units for a broad economic range of residents, the staff of West End Planning, Inc., has undertaken a study of the alternatives available under present socio-political and economic conditions. The conclusions which have been reached are based on economic analysis, consultations with Housing and Zoning attorneys, and the District's Office of Housing Programs, Office of Planning and Management and the Assessor's Office.

These efforts have been undertaken to provide an adequate response to the needs and desires of those people who live in West End today and who will wish to live in West End in the future, as expressed by membership of West End Planning, Inc., local citizen's groups and the Government of the District of Columbia.

The recommendations, which have become an integral part of the Zoning Amendment, are the following:

- Ten (10) percent of all rental units, in structures of fifty (50) units or more, shall be provided by the property owner at a rent twenty-five (25) percent below that of the standard rent of the building.
- Ten (10) percent of all condominium units, in structures of fifty (50) units or more, shall be provided by the property owner at cost, plus an overhead allowance.
- In the event that hotels or motels are constructed in West End, the property owner shall be assessed a lump sum to be contributed to the Community Rent Supplement Fund.

It is the opinion of West End Planning, Inc., that this program will have a profound effect on the

economic and social composition of West End and will be a major step towards providing a better housing mix for the City. However, recognizing that this program will not solve all of the city's housing problems, the staff is continuing with the District of Columbia to produce public programs which will complement and complete the proposals contained herein.

Environmental Considerations

Although it is not currently a specific requirement for a plan to complete an environmental analysis, the Corporation and the consultants felt that such an analysis was necessary to ensure the credibility of an exercise as comprehensive as this.

With respect to the air, water and noise impact, the existing environment will have a more negative effect on the proposed West End Development than the proposed development on the environment.

Measured ambient noise levels at Washington Circle and along Pennsylvania Avenue, M and L Streets are borderline cases when compared to the criterion levels set in the Department of Housing and Urban Development Circulars. In general, the traffic generated by the new development will have an insignificant effect. However, the change at 22nd Street will increase L50 peak hour noise levels by approximately 5 to 7 decibels (dba) at existing property lines. This impact is significant, and design criteria for single-family residential development are exceeded. It is recommended that structures built along this route be noise insulated with glazings of appropriate properties (thermopane), and that they rely on filtered and conditioned air rather than natural ventilation.

Aircraft noise analysis reveals existing peak single overflight noise levels from 70 dba to 84 dba. The established frequency of overflight places West End in the 23.8 to 26.9 NEF (Noise Exposure Factor)

zone. This meets HUD standards but is still noisy. If overflights approach or exceed 500 per day in the future, the *discretionary* 30 NEF zone may encroach into the West End, and thermopane and central air conditioning would again be recommended.

Ambient air quality in the West End is very bad, presumably because of its proximity to the CBD.

Concentrations of carbon monoxide and nitrogen dioxide along M, 22nd and 23rd Streets, Pennsylvania Avenue and at Washington Circle exceed Environmental Protection Agency standards. While the changes in West End will do very little to aggravate this, it should be noted that new development should try to relieve the effect of this pollution as much as possible.

In light of these conditions, environmental technology is in favor of taller structures since pollution intensity decreases as one moves further above the source (street level.)

Present levels of coliform bacteria in the Rock Creek (7000 MPN) greatly exceed D.C. standards (200 MPN) and render it useless for water activity. However, in recognizing that other areas of the Park with equal levels of contamination are enjoyed, it is recommended that caution be taken with the water use until such a time as the pollution can be treated at its source (the National Zoo).

In light of the analyses, which are included in the Supplement, it is concluded that the completion of the West End Development under the guidelines of the proposed master plan will greatly improve the overall quality of the environment in this area. However, it is beyond the capability of the community to reduce the effects of the automobile commuter, and it must rely on the area-wide enforcement of federal standards to achieve a completely pleasant living environment.

Cost/Revenue Analysis

A cost/revenue analysis was conducted to determine the fiscal impact of a development such as West End on the City of Washington, D.C. It should be made clear that this type of study should not be misconstrued as a typical *cost/benefit* analysis, and is, of necessity, a unique type of investigation which employs rather narrow definitions of *costs* and *revenues*. It is the purpose of this study to provide the public decisionmaker with direct, concise, comprehensible information that is indicative of the minimum ratio of revenues to costs that is likely to result from the development of West End. Figures, which can be found in the Supplement, are intended to establish quantitative limits and should be interpreted as qualitative information.

For the purpose of this study, revenues have been calculated from five primary sources; real estate property taxes, retail sales receipts from the additional retail sales floor area in West End, retail sales receipts from the additional population contained herein, retail sales receipts resulting from the commercial office and retail workers expenditures in the West End, and estimates of personal income taxes receipts generated by the new population of the West End. Other revenues were dropped because of data inadequacy and in an attempt to underestimate revenues.

Cost estimates were obtained by normalizing the 1973 District of Columbia population and employment to reflect relevant characteristics of the West End population. Estimated budget expenses were obtained for specific cost of service categories for the year 1973, and were modified to respond to the development model. All categories which were financed from user charges were deleted, and others were modified after having obtained certain information through personal interviews.

In general, the effort was to underestimate revenues and to overestimate costs. A revenue/cost ratio of

5.0, even after these attitudes, is very encouraging, but not especially surprising, given the income-generating potential and the modest service requirements of the proposed development and the excess capacity present in several major public facilities. If the entire West End Proposal were to be developed in 1973, a conservative estimate of the revenues would be in excess of \$12 million annually, and a liberal estimate of the costs would be less than \$3 million annually.

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THE WEST END / WASHINGTON, D.C.

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