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THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

MONTGOMERY COUNTY PLANNING BOARD

APPROVED AND ADOPTED SECTOR PLAN
JULY 1986

Four Corners Sector Plan

KEMP MILL-FOUR CORNERS PLANNING AREA

ABSTRACT

TITLE: Approved and Adopted Sector Plan for Four Corners and Vicinity

AUTHOR: The Maryland-National Capital Park and Planning Commission

SUBJECT: Approved and Adopted Sector Plan for Four Corners and Vicinity, Montgomery County, Maryland

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ABSTRACT: This publication contains the text with supporting maps for Approved and Adopted Sector Plan for Four Corners and Vicinity, which is an amendment to the Master Plan, Kemp Mill-Four Corners and Vicinity, 1967, as amended, Montgomery County, Maryland; to the General Plan for the Physical Development of the Maryland-Washington Regional District; and to the Master Plan of Highways within Montgomery County, Maryland. Developed by the Montgomery County Planning Board, with the assistance of the Four Corners community, this Sector Plan discusses the history of the area and analyzes its population, housing, and environmental characteristics. The Plan makes recommendations for future land use, transportation, public facilities, and zoning.

APPROVED AND ADOPTED

SECTOR PLAN FOR FOUR CORNERS AND VICINITY

JULY 1986

An amendment to the Master Plan, Kemp Mill-Four Corners and Vicinity, 1967, as amended; the Master Plan of Bikeways, 1978; the Master Plan for Historic Preservation, 1979, as amended; the General Plan for the Physical Development of the Maryland-Washington Regional District; and the Master Plan of Highways within Montgomery County, Maryland.

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

8787 Georgia Avenue
Silver Spring, Maryland 20907

14741 Governor Oden Bowie Drive
Upper Marlboro, Maryland 20870

CERTIFICATE

OF

APPROVAL AND ADOPTION

The Four Corners Sector Plan, being an amendment to the Master Plan, Kemp Mill/ Four Corners and Vicinity, 1967, as amended; the Master Plan of Bikeways, 1978; the Master Plan for Historic Preservation, 1979, as amended; the General Plan for the Physical Development of the Maryland-Washington Regional District; and the Master Plan of Highways within Montgomery County, Maryland, has been approved by the Montgomery County Council, sitting as the District Council, by Resolution No. 10-2066 and has been adopted by The Maryland-National Capital Park and Planning Commission by Resolution 86-22 on July 9, 1986 after a duly advertised public hearing pursuant to Article 28 of the Annotated Code of Maryland, 1983 (1984 Supplement).

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THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

The Maryland-National Capital Park and Planning Commission is a bi-county agency created by the General Assembly of Maryland in 1927. The Commission's geographic authority extends to the great majority of Montgomery and Prince George's Counties: the Maryland-Washington Regional District (M-NCPPC planning jurisdiction) comprises 1,001 square miles, while the Metropolitan District (parks) comprises 919 square miles, in the two Counties.

The Commission has three major functions:

(1) the preparation, adoption, and from time to time amendment or extension of the General Plan for the physical development of the Maryland-Washington Regional District;

(2) the acquisition, development, operation, and maintenance of a public park system; and

(3) in Prince George's County only, the operation of the entire County public recreation program.

The Commission operates in each county through a Planning Board appointed by and responsible to the county government. All local plans, recommendations on zoning amendments, administration of subdivision regulations, and general administration of parks are responsibilities of the Planning Boards.

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

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8787 Georgia Avenue, Silver Spring, Maryland 20907
14741 Governor Oden Bowie Drive, Upper Marlboro, Maryland 20772

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PLAN HIGHLIGHTS

This Plan was developed with the help and the active participation of the Four Corners community. The Plan's framework is based upon the following generalized concepts:

- to retain and enhance the existing character of the neighborhoods that make up the Four Corners community;
- to improve the visual "image" of the Four Corners business area; and
- to improve circulation for both local and "through" travel.

LAND USE

The Plan:

- recommends that the predominantly low-density residential character of the area be maintained and protected;
- proposes a mixture of residential, office, and commercial uses on the "Kay Tract"; and
- proposes sites for elderly housing.

TRANSPORTATION

The Plan:

- recommends short-term and long-term operational improvements for the Colesville Road/University Boulevard intersection;
- proposes improvements to facilitate safe traffic flow; and
- recommends a network of bicycle and pedestrian routes.

NATURAL ENVIRONMENT

The Plan:

- recommends measures for stormwater management and for the protection of future development from adverse noise impacts.

ZONING PLAN

The Plan:

- recommends reconfirmation of the existing residential and commercial zoning;
- recommends the Mixed-Use Planned Development Zone on the "Kay Tract"; and

- recommends the Planned Development Zone for larger sites on University Boulevard.

HISTORIC PRESERVATION

The Plan:

- recommends an Historic District (the five "Polychrome" houses).

URBAN DESIGN STUDY

The Plan:

- recommends improvements to the visual environment, which include the planting of trees and landscaping and the design of storefronts and signs;
- recommends sidewalks and pedestrian crossings; and
- recommends stabilization of the transition between commercial and residential uses.

INTRODUCTION

Montgomery County guides growth through a comprehensive land use planning progam to assure orderly, efficient, safe, and effective use of the land. With increasing recognition of constraints of energy, clean air and water, and available living space, planning directs and balances growth with the environment. Planning -- with its companion activities of zoning, subdivision control, reservation of public land, and public improvement programming -- provides ways to manage growth. Planning contributes to managing growth by recommending public facilities such as water, sewer, and roads early in the development process in areas where growth is desired, by restricting such facilities in areas where growth is not desired, and by establishing performance standards to assure the quality of the natural and man-made environment.

The Sector Plan for Four Corners and Vicinity is an amendment to the MasterPlan, Kemp Mill-Four Corners and Vicinity, adopted in 1967, and to The General Plan for the Physical Development for the Maryland-Washington Regional District. Figure 1 shows the relationship between this Sector Plan Area and planning areas in the County.

The General Plan provides policy guidance at a broad County-wide level for future patterns of development in the County. It was first adopted by The Maryland-National Capital Park and Planning Commission in 1964 and updated in 1969. The General Plan recommends that:

- future growth be channeled into the I-270 Corridor and the Montgomery County portion of the I-95 Corridor as well as into existing, established down-County activity centers (such as Silver Spring, Wheaton, and Bethesda);

- future transportation needs be met through the development of a rapid rail transit system supported by an extensive network of local bus routes, with rapid transit stations located at places conducive to multi-use development within walking distance of those stations;

- a mixture of housing and employment opportunities be developed in Montgomery County; and

- new development be channeled to preserve and protect existing communities from adverse impacts and undesirable non-residential instrusion resulting from commercial growth, the placement and operation of Metro-related facilities, and other public and private land use decisions.

In October 1974, the Montgomery County Planning Board published its first annual Growth Policy Report, Framework for Action. While this report recalled many of the goals of the General Plan, it also noted that economic and social trends are suggesting that future metropolitan growth will tend to occur in older inner-suburban areas. The report pointed out the need to develop mechanisms both to monitor and to direct these trends. Subsequent Growth Policy Reports have analyzed specific aspects of alternative patterns of County-wide growth.

The Kemp Mill-Four Corners Master Plan contains broad policy, land use, and circulation recommendations for an approximately 6.7 square-mile area roughly bounded by Northwest Branch Creek on the east, Sligo Creek on the west, Randolph Road on the north, and Piney Branch Road on the south.

The Four Corners Sector Plan, a 1,054-acre area, is bounded generally by the Capital Beltway on the south, Sligo Creek on the west, Dennis Avenue and Eisner Street on the north, and Northwest Branch on the east.

A sector plan elaborates and details the General Plan, master plan, and growth policy recommendations for a small area of the County. It serves as a guide to the Planning Board and the County government in the programming of public works, in the adoption of zoning and other development controls, in the acquisition of land, and in the construction of facilities. A sector plan covers a smaller geographic area and a shorter time period than either the General Plan or an area master plan, and carries out its recommendations to a greater level of detail. Because of its greater detail and shorter planning horizon, a sector plan must be periodically reviewed and adjusted to reflect future decisions, trends, or events not anticipated at the time of its adoption. Such a process includes a major re-evaluation of the sector plan when the passage of time or changing circumstances warrant.

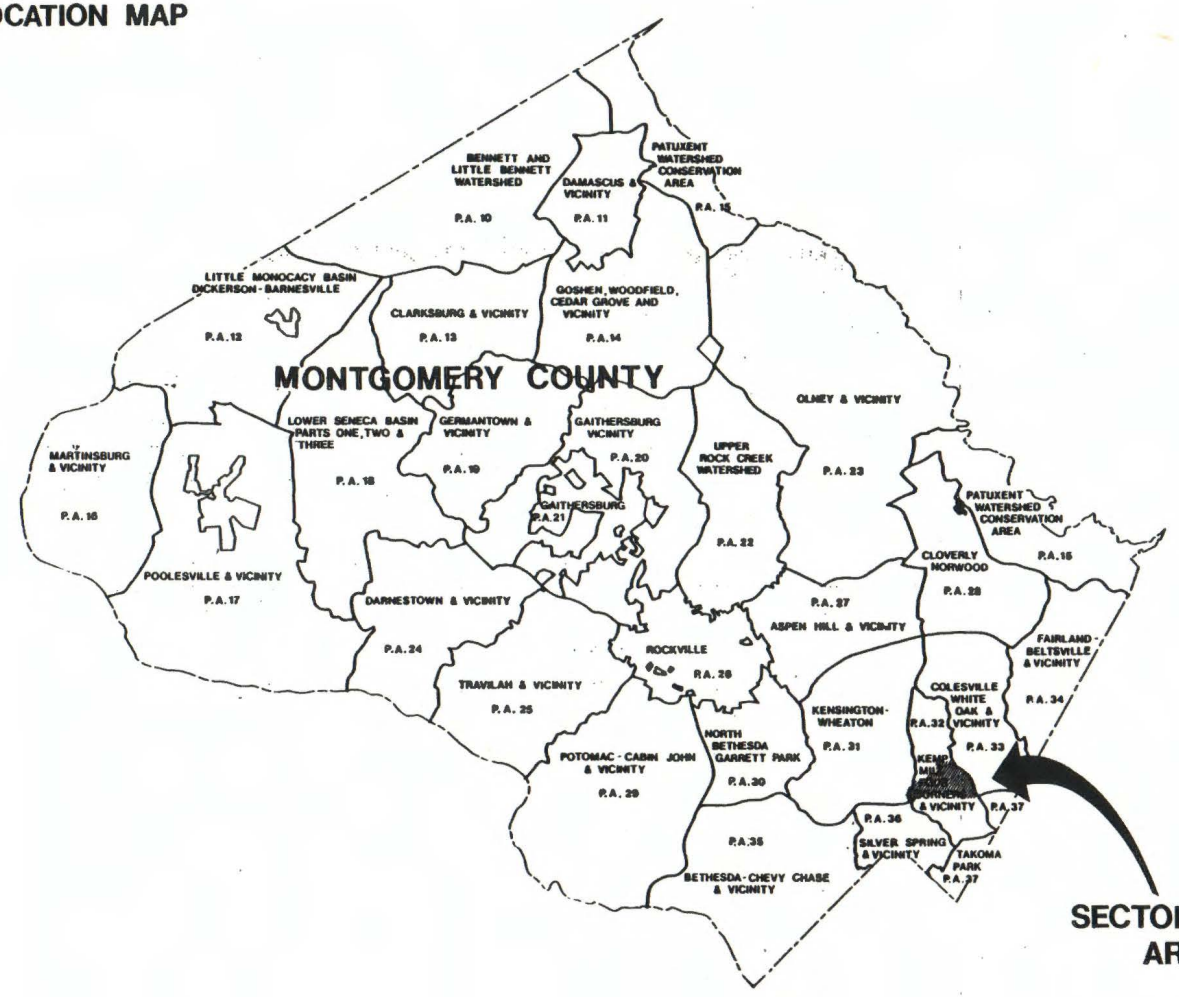
The Planning Board's staff developed a "Staff Draft" Sector Plan with the participation of the Four Corners community. It contained recommendations for the area's future based on comments from community participants, analyses of existing conditions and trends, and the staff's best professional judgment.

After public worksessions on the "Staff Draft," the Planning Board developed a "Preliminary Draft" Sector Plan. The Board conducted a formal public hearing on the Plan in July 1985. After the hearing and subsequent worksessions, the Board is transmitting this "Final Draft" Sector Plan to the County Executive and the Montgomery County Council, in corporating changes based on the public hearing testimony and comments from the Executive. The County Council conducted its own hearing on the "Final Draft" document in April 1986. Following Montgomery County Council approval of the Sector Plan in July 1986, The Maryland-National Capital Park and Planning Commission adopted the Plan in the form approved by the Council. The approved and adopted Sector Plan will be implemented by a comprehensive rezoning by sectional map amendment, amendments to the County's capital (construction) improvements program, and the staging of public services.

Four Corners Sector Plan

KEMP MILL–
FOUR CORNERS
PLANNING AREA

LOCATION MAP



THE COMMUNITY

HISTORY

Historically, Four Corners started out as a crossroads at the intersection of Old Bladensburg Road (University Boulevard) and Old Columbia Pike (Colesville Road). It was a location of convenience to travelers and residents in the sparsely settled agricultural countryside between Washington and Baltimore.

Suburban growth did not reach the Silver Spring area until the years following World War I. E. Brooke Lee first began development in 1921, when he subdivided 19 acres of the Gist Blair property. In the 1920's, Lee's North Washington Realty Company developed Sligo, Sligo Park Hills, South Woodside Park, Highland View, and North Hills, all adjoining Sligo Creek Park; and Club Park and Indian Spring Park, adjoining the former Argyle and Indian Spring Country Clubs.

After World War II, Montgomery County and the Four Corners area began a generation of unprecedented growth. The County's population nearly doubled during the years 1946 to 1950. The following description of Montgomery County after the Second World War was taken from A Grateful Remembrance - The Story of Montgomery County, Maryland, by Ray E. Hiebert and Richard K. MacMaster.

> "Suburban growth was both a regional and nationwide phenomenon in the post-war decade. In every section of the country, American cities spread into their surrounding counties as farms gave way to subdivisions. In the 1940s, only the San Francisco and Houston regions grew more rapidly than the Washington area. In the 1950s, only the Houston and Los Angeles areas grew faster. In the 1960s, the Washington area's growth rate was second only to that of Houston.
>
> " 'The suburbs' took on a new connotation in the United States after World War II; they became more a way of life than a geographic expression. Crabgrass, outdoor grills, low downpayments, and split-level houses became part of American culture. No longer the preserve of the upper middle class, the suburbs came within reach of everyone after 1947, thanks to F.H.A. and Veterans' benefits.
>
> "Just as Detroit designers elongated their standard models in the 1940s to match the long low silhouette of the luxury cars of the 1930s, builders and developers laid out "manors" and "estates" with 40' x 120' lots. They surrounded many American cities with tracts of small, inexpensive houses, often more cramped for space than ordinary urban rowhouses. Their "model homes" were endless variations of the same basic design.
>
> "Many new developments sprang up distant from existing markets, shops, and schools. Automobiles, no longer a luxury for Sunday afternoon drives, became a necessity. The first post-war shopping centers, with one or two chain stores and offstreet parking, were the precursors of vast malls and "miracle miles" that carried downtown retail outlets to the furthest reaches of suburbia. Major highways and lateral roads proved inadequate to the increased traffic, and state and local authorities launched a massive road-building campaign to provide easier access from suburb to city. School districts strained to provide facilities for whole communities of young families. Property taxes began climbing upward in most localities.

"Montgomery County shared in this nationwide suburban trend, but with a difference. Most of its homeseekers were new to the region as well as to the County. Returning County veterans and city residents moving to the suburbs constituted only a small portion of the demand for Montgomery County housing after 1946.

"The first wave of suburban growth after the Second World War brought new government workers from all over the nation to Montgomery County. They worked in Washington and commuted to their jobs by automobile, train, streetcar, or bus each day. The older suburbs attracted higher echelon employees and professionals. The newer suburbs drew younger families starting careers.

"A few downtown stores moved across the District line to the suburbs in the early 1950s, and small shopping centers in the outer suburbs began to serve the newer communities. New and used car dealers, gasoline stations, restaurants, nurseries, and sod farms increased the retail trade of the County; doctors and dentists moved their shingles.

"But all of these people depended on Washington. Montgomery County in 1950 differed from other suburban counties in that it was a bedroom for Washington, a company town with only one basic industry, the federal government."

Montgomery County experienced a second wave of homebuilding in the late 1950's and early 1960's. The second wave differed considerably from the post-war boom. From 1946 to 1955, inexpensive houses averaging $10,000 each were mass-produced in the County. Changes in federal financing policies shifted the emphasis to more expensive housing for larger families in the past 1955 period.

In the 1950's, development centered in the Silver Spring-Wheaton area where 25,000 units were constructed, more houses than had been in the entire County in 1940. In the 1960's, the Silver Spring-Wheaton area continued to be the major growth area location in the County for new construction, where an additional 22,000 units were built.

The general setting for contemporary development in the Four Corners area was established with the adoption in 1967 of the Master Plan for Kemp Mill-Four Corners and Vicinity. Specifically, the Plan:

- reconfirmed existing high-density residential zoning on the "Kay Tract" adjacent to the newly constructed Capital Beltway interchange;
- established limits for the commercial concentration at the "Four Corners" intersection; and
- proposed low-density residential and institutional uses along University Boulevard and Colesville Road.

Since the Master Plan was adopted, the planned "new town" of Columbia on US 29 in Howard County has largely been built. Columbia has attracted substantial residential, commercial, and industrial growth and has spurred interest in new housing and commercial development in eastern Montgomery County. Columbia's growth, and growth adjacent to

the US 29 corridor in northwestern Prince George's County, have generated a significant amount of traffic through Four Corners with destinations in Washington, along the Capital Beltway, and along I-270 in western Montgomery County.

THE PEOPLE

For purposes of this demographic and housing profile, the Four Corners study area is larger than the area for which the Sector Plan is to be prepared. Figure 2 shows the boundaries of the study area compared with the Sector Plan area. The Four Corners study area comprises Census tracts 21.02, 30.02, 31.00, and 32.10. Basically, these tracts constitute a mature, single-family home neighborhood which is served by convenience shopping clustered at the University Boulevard and Colesville Road intersection. In 1980, 90.5 percent of the housing was owner occupied; only 9.5 percent was renter.

The 1980 Census reported 4,213 occupied units, virtually identical in amount to the 4,254 units reported in the 1970 Census. The median age of housing in the study area is calculated at approximately 25 years, as of 1983.

The units are generally in a good state of repair and maintenance. In terms of value, these units are below median value of all County ownership units. In 1980, the median value for all County non-condominium ownership units was reported at $97,400; in the study area, the counterpart median value was $80,470. The same relationship existed in 1970, when the median value in the study area was approximately $27,000, as compared to the approximately $33,000 median value for the County.

The study area has shown better than average home value retention during the last decade. For the County as a whole, median value of non-condominium owner-occupied housing increased by 196 percent between 1970-1980; for the study area, the percentage increase amounted to almost 201 percent.

Population in the study area fell by 20.3 percent between 1970-1980, from 15,348 to 12,240. This decline is compared to an 11 percent gain for the entire County during the same period. The County's mature urban/suburban area, however, which consists of areas inside the Beltway, witnessed an approximately 8 percent population decrease.

The housing inventory of the study area has remained relatively unchanged during the decade. The population loss, therefore, stems from reduced household size, both among householders living in the area in 1970 and 1980 and also among those households who moved into the area during this decennial period. The reduced household size is shown in the following table.

Percentage Distribution: Number of Persons Per Household
1970 - 1980

No. of Persons/Household	Percent 1970	Percent 1980
1 person	5.4	11.9
2	24.6	36.5
3	20.8	22.7
4	24.1	16.0
5	14.4	7.7
6 or more	10.8	5.3

In 1980, 48 percent of the households in the study area were one and two persons in size, as compared to 30 percent in 1970. In 1970, almost half of the households contained four or more persons; by 1980, the percentage had dropped to 29 percent.

The foregoing reflects the maturation of a suburban neighborhood, from child-rearing to a more mature condition. This is shown in the comparison of age structure for the study area between 1970-1980.

Percentage Distribution: Age of Persons
1970 - 1980

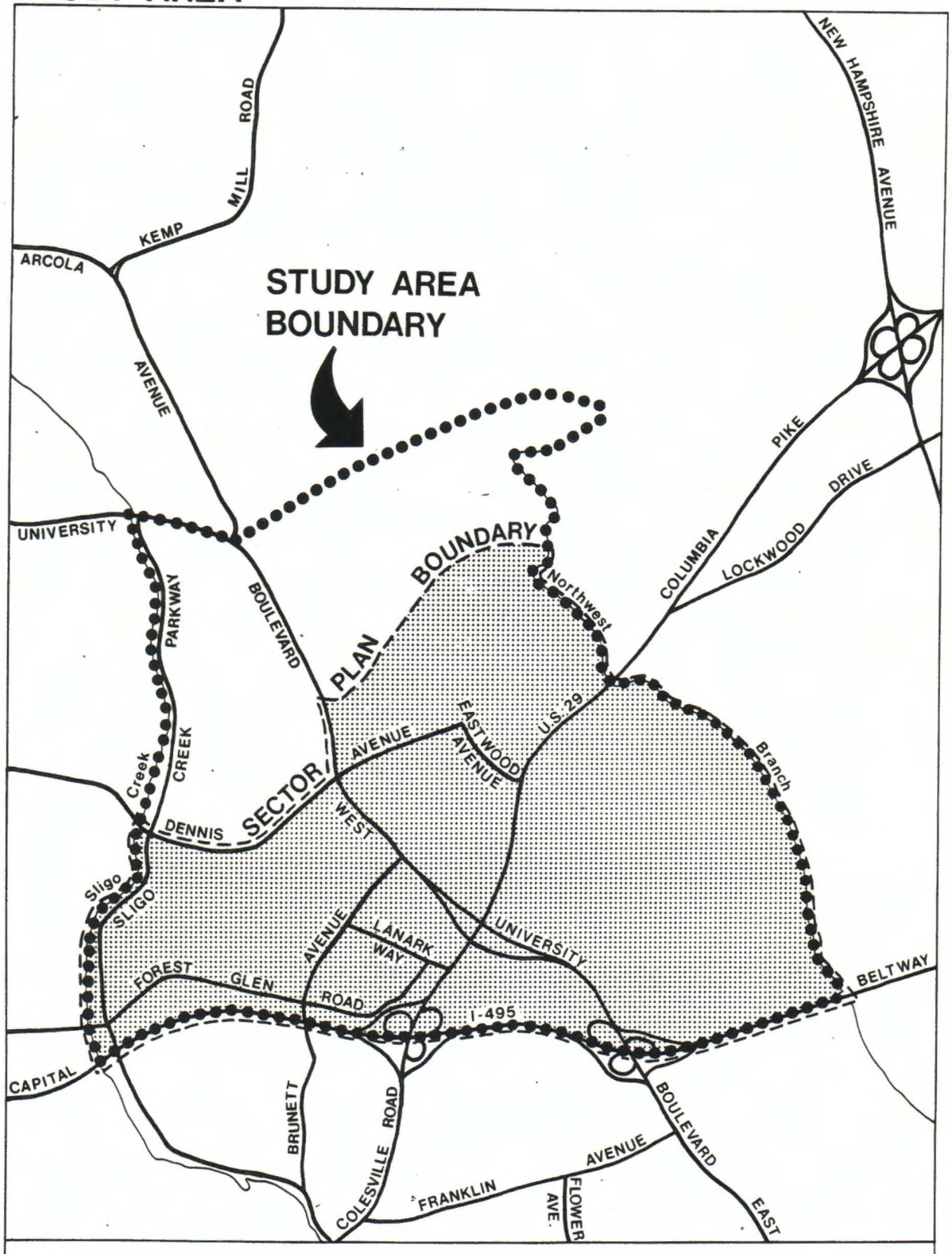
	Percent	
Age	1970	1980
Under 9	16.7	10.7
10-19	22.3	15.2
20-24	5.4	7.2
25-34	10.5	16.7
35-44	12.3	11.4
45-54	16.5	12.4
55-64	10.6	14.7
65 and over	5.7	11.7
Median	30.3	35.2

Median age in the study area increased by almost five years between 1970 and 1980. Pre-school and school age population decreased from 39 percent to approximately 26 percent. The "greying" of the population is shown by the substantial increase in the number of persons age 55 and over. A significant increase is registered in the 25-34 age group, suggesting that residential mobility in the area has been age-selective, attracting newer and younger households which would appear to be taking advantage of the more affordable housing prices in the area. This also may suggest the beginning of a gradual turnover of neighborhoods from original owners to younger purchasers.

When compared to the County as a whole, the study area in 1980 contained fewer pre-school and school age children than the County as a whole. This is not unexpected, since total County figures would include the large, younger populations in the suburban growth area. The study area also contained a higher proportion of the near elderly; the 55-64 age group constituted 14.7 percent of the study area population, as compared to 10.1 percent of the entire County.

Median household income in the study area moderately exceeded that for the County as a whole, $31,678, as compared to $28,994. The Planning Board's 1977 Census Update Survey showed the County renter median household income to be approximately 53 percent of the median homeowner household income. The modest study area income advantage appears to be almost entirely attributable to its 90.5 percent homeownership character, as compared to 65 percent for the County. It is likely, therefore, that study area homeowners, in fact, have somewhat lower incomes than counterpart owners for the County as a whole.

STUDY AREA



Four Corners Sector Plan

KEMP MILL-FOUR CORNERS PLANNING AREA

EXISTING LAND USE

The majority of the developed land within the Four Corners Sector Plan boundaries is used for residential purposes. About 552 acres, or 52 percent of the total land area, is devoted to residential use. Over 99 percent of the total residential land is occupied by single-family dwellings. Townhouses occupy less than one percent of the remaining residential land. These dwelling units are located along Kinsman View Circle, in the northern portion of the planning area.

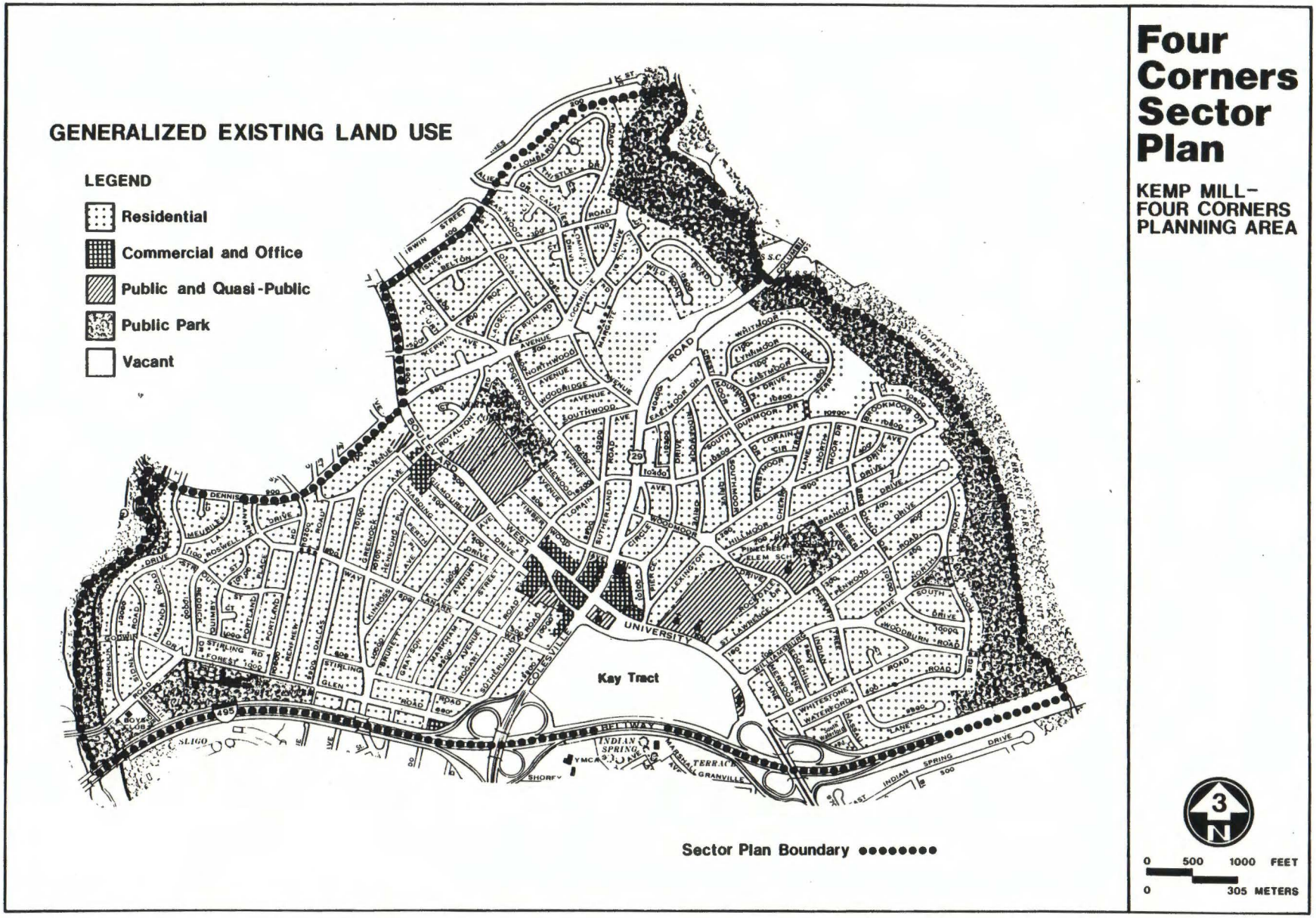
Less than 2 percent (16 acres) of the total land is devoted to commercial uses. These uses are concentrated at the intersection of University Boulevard and Colesville Road. The Four Corners business area provides "neighborhood" goods and services to residents of the general community. Uses include convenience and shoppers goods, services, automotive related businesses, offices, and eating establishments. Gross floor area of the business center totals approximately 175,000 square feet.

The planning area also contains a school (Pinecrest Elementary School); the site of the closed Four Corners Elementary School; Pinecrest, North Four Corners, and Argyle Recreation Centers and Local Parks; Margaret Schweinhaut Senior Center; and Sligo and Northwest Branch Stream Valley Parks. In addition, there are institutional uses which include the Silver Spring Boys Club, a private school, and a number of churches.

Approximately 5 percent (48 acres) of the land in the planning area is vacant or underdeveloped. The major vacant parcel (the 44-acre "Kay Tract") is located north of the Capital Beltway between Colesville Road and University Boulevard. Generalized existing land use is shown on Figure 3.

Four Corners Sector Plan
Existing Land Use

Use	Acres	Percent of Total Area
Residential	552	52
Commercial	16	2
Parks and Open Space	149	14
Public	12	1
Institutional (Quasi-Public)	23	2
Right-of-way	254	24
Vacant	48	5
Total	1,054	100


GENERALIZED EXISTING LAND USE
LEGEND
Residential
Commercial and Office
Public and Quasi-Public
Public Park
Vacant
Kay Tract
Sector Plan Boundary
Four Corners Sector Plan
KEMP MILL–FOUR CORNERS PLANNING AREA
0 500 1000 FEET
0 305 METERS

THE ENVIRONMENT

Existing development patterns in the Four Corners Sector Plan area have been influenced by the physical characteristics of the land. In many instances, the fact that certain areas have had water problems, have steep slopes, or have poor soils has been a constraint on the man-made development that has taken place.

NATURAL SYSTEMS

The Land

Most of eastern Montgomery County is located on the Piedmont Plateau. At the "fall line" near the Montgomery-Prince George's Counties line, the Atlantic Coastal Plain begins. Rolling hills and steep-sided narrow valleys characteristic of the Piedmont Plateau change at the "fall line" to more gently sloping hills and broad open streams. Most of the planning area is underlain by gneiss and mica schist rock formations. Some alluvium is found near the streams in the eastern and western portions of the planning area. Some areas contain bedrock that is less than 20 feet from the surface. This condition could cause problems for utility and foundation construction.

Predominant soils in the area are Glenelg, Manor, and Chester. These are moderately deep to deep soils found in over two-thirds of the County. These primarily upland soils are well drained and generally well suited to suburban development. The primary constraints to development on these soils relate to potentially severe erosion on the very steep slopes. This is especially true when vegetated slopes are cleared for building. It is also true in areas where the water table is close to the surface.

The topography of the planning area is characterized by rolling hills and steep slopes adjacent to Northwest Branch and Sligo Creek. This condition has resulted in areas of greatest relief remaining undeveloped. Land surface slopes of 35 to 50 percent are prevalent in many areas near Northwest Branch.

The predominant vegetation in the Four Corners area are coniferous and deciduous trees. In the developed neighborhoods, these trees provide landscaping. In the stream valleys and other undeveloped areas, the woods prevent soil erosion and decrease storm-water runoff. The aesthetic, cooling, and recreation benefits to the community also support the need for preservation of wooded areas.

Water

Four Corners is situated in the Anacostia River watershed. This watershed contains particularly sensitive water resources. The three main Anacostia tributaries in the area are Sligo Creek, Long Branch, and Northwest Branch. A comprehensive watershed analysis, completed in May 1982, identified problems of flooding, erosion, and water quality within the watershed. The following problems are associated with the Sector Plan area:

Flooding

- US 29 at Northwest Branch (10-50 percent chance of flooding in any year)

- Forest Glen Road at Sligo Creek (4-10 percent chance of flooding in any year)

Erosion

- Erosion and sedimentation problems throughout the stream courses of Sligo Creek and Long Branch.

Water Quality

- High fecal coliform bacteria levels in all streams in the area. Leaking or overflowing sewers and washoff from urban land surfaces are probable sources.

Stormwater is the water runoff produced by rain and snow. Stormwater management is the mitigation of the negative effects of uncontrolled stormwater. There are two general types of stormwater management: preventive and remedial. Preventive stormwater management solutions are those techniques which are planned, designed, and implemented to avoid unnecessary damage to stream systems. Remedial solutions are corrective measures implemented after watershed problems become evident.

Uncontrolled stormwater runoff poses several interrelated watershed problems. These problems can be categorized as:

- flooding;
- soil erosion and sedimentation in streams; and
- degradation of water quality.

Uncontrolled stormwater runoff can increase the occurrence and magnitude of flooding, especially downstream of developed and developing areas. As the percentage of impervious land increases, on-site infiltration (or absorption) of rainfall decreases. This results in higher volumes and higher peaks of stormwater runoff in stream channels over relatively short periods of time. Flooding occurs more frequently because the channel capacity is exceeded more often, generally leading to flood damage.

If stormwater runoff is left unmanaged, accelerated soil erosion and in-stream sedimentation may also result. Besides the potential loss of valuable topsoil, many other adverse impacts result from the transport and deposition of sediment in natural waterways. These include accelerated erosion of streambanks, increased turbidity, increased treatment costs at water filtration facilities, and the destruction of aquatic habitat.

The quality of stormwater runoff is affected principally by the type of land over which the runoff flows. This land can be characterized as either "urban/suburban" or "rural/agricultural." In the "urban/suburban" areas, stormwater flows over sidewalks, streets, parking lots, and other highly impervious areas, washing off polluting substances such as petroleum derivatives (e.g., gas, oil, grease), road salt, heavy metals, deicers, litter, pet animal wastes, lawn and garden products, and disintegrated asphalt. In "rural/agricultural" areas, stormwater flows over cultivated fields, feedlots, and pastureland, washing off pesticides, fertilizers, and livestock wastes. Once these substances are carried into natural watercourses in various concentrations, they become in-stream polluting agents. These substances are responsible for the subsequent deterioration of water quality.

UTILITIES

The Four Corners area is completely served by the Washington Suburban Sanitary Commission (WSSC) water and sewerage system. The area is in water service category W-1 and sewer service category S-1[1] Future hookups would involve attaining the necessary permits and connecting to these systems.

Sewage service is provided by the Long Branch and Sligo Creek trunk sewers. Transmission capacity is under investigation as part of the "Sligo Creek Sewerage Facility Plan" (WSSC Project #S-98.10). Transmission constraints have been indicated by sewer overflows in the Sligo Creek trunk sewers.

NOISE

Excessive noise is an environmental health problem which disrupts speech, interferes with sleep, and causes psychological stress in the human body. The degree of annoyance varies among individuals and by type of noise. Annoyance also depends on loudness or intensity, on frequency of occurrence, and time of day.

Highway noise is the single most pervasive noise source in the area. There is almost continuous traffic noise along major roads with effects extending several hundred feet from the road. Highway noise levels vary with traffic volume and vehicle type. Although individual vehicles can be loud enough to startle a person, a greater volume of traffic can result in less of a difference between background and peak noise levels. At very high volumes, however, such as occur on the Capital Beltway, an almost constant peak level can lead to continuous annoyance.

Although the federal government and the State of Maryland have adopted regulations governing the noise emitted from individual vehicles, the cumulative effect of many vehicles may still exceed acceptable noise levels beyond the right-of-way of the roadway. Normally, only the first or second row of structures fronting on a street are affected by noise, since the first two rows act as noise barriers for the rest. Truck traffic, however, can be heard many blocks away, but at that distance the peak occurrences are usually not enough to cause distraction or annoyance.

There are several measures which can alleviate traffic noise problems near roadways, including:

- quieting the source;
- blocking the path from source to receiver;
- moving the receiver farther away from the source; and
- incorporating site design or acoustical construction practices in buildings.

During the preparation of this Sector Plan, the staff analyzed noise conditions by examining major noise sources. From this analysis, noise impact zones were determined. Figure 4 illustrates noise impact areas along major roads in the Four Corners area. Noise

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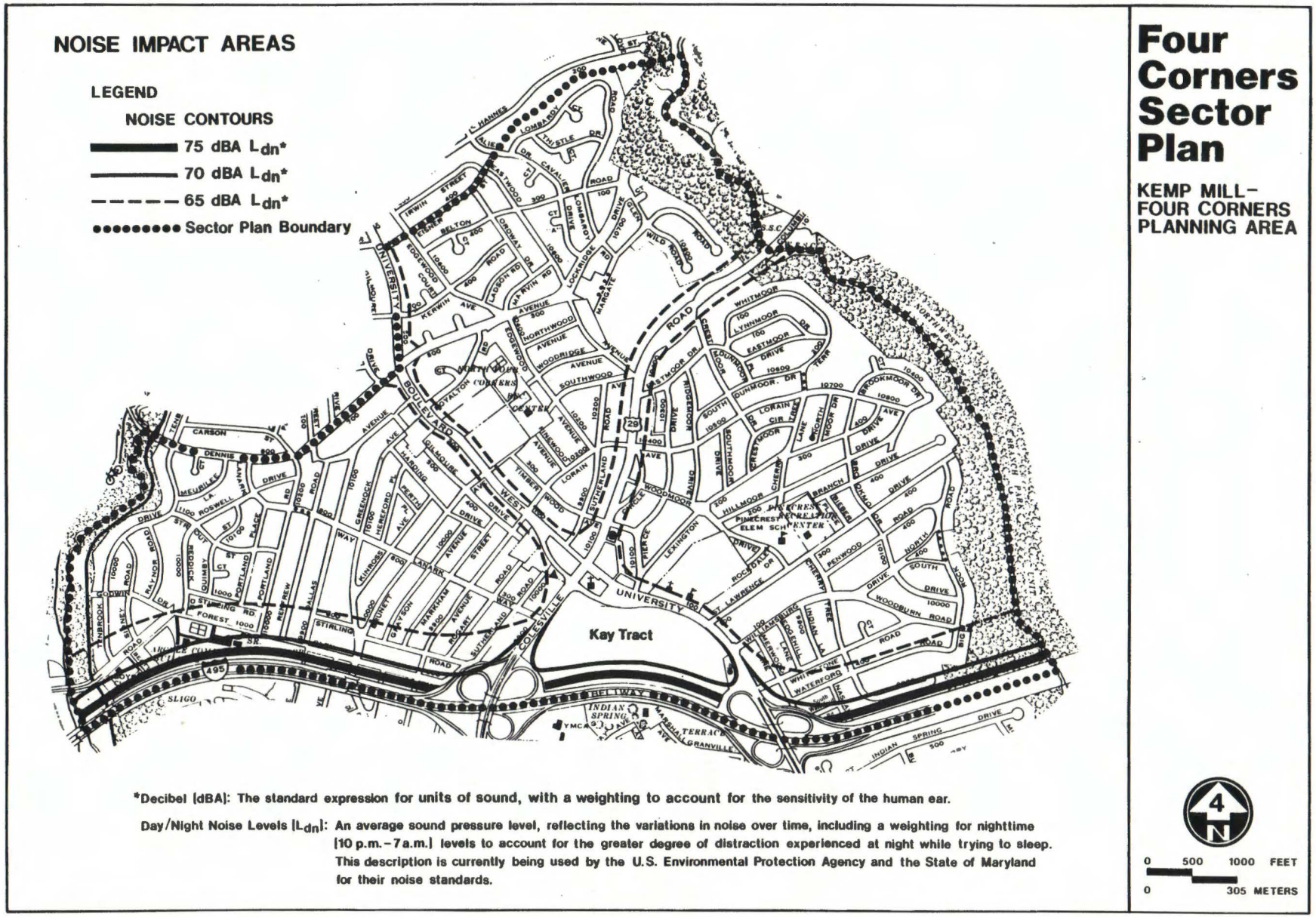
1 Categories W-1 and S-1 indicate that the area is served by community and multi-use systems which are either existing or under construction.


NOISE IMPACT AREAS
LEGEND
NOISE CONTOURS
75 dBA Ldn*
70 dBA Ldn*
65 dBA Ldn*
Sector Plan Boundary
Four Corners Sector Plan
KEMP MILL–FOUR CORNERS PLANNING AREA
Kay Tract
*Decibel (dBA): The standard expression for units of sound, with a weighting to account for the sensitivity of the human ear.
Day/Night Noise Levels (Ldn): An average sound pressure level, reflecting the variations in noise over time, including a weighting for nighttime (10 p.m.–7 a.m.) levels to account for the greater degree of distraction experienced at night while trying to sleep. This description is currently being used by the U.S. Environmental Protection Agency and the State of Maryland for their noise standards.
0 500 1000 FEET
0 305 METERS

levels currently exceed federal guidelines which recommend 65 dBA Ldn[2] as the maximum acceptable level for residential use. In some locations, levels currently reach 75 dBA Ldn, which exceeds the maximum acceptable level by 10 dBA, an increase that would be perceived as twice as loud.

In 1980, the Federal Interagency Committee on Urban Noise concluded that noise levels above 65 dBA Ldn are "normally unacceptable" for residential use. Due to the severity of noise impacts on the frontage of major roads, a number of techniques should be utilized in combination for the purpose of reducing noise impact. Appendix 1 is a list of noise abatement techniques presented in order of preference. In residential areas, noise should be below levels that would cause health effects or speech and sleep interference. Within noise-impacted areas, new residential development should incorporate noise attenuation measures. These measures may include setbacks, site layout, physical design, and structural approaches to reduce the noise impact. If such measures do not adequately reduce noise, then acoustical treatment should be incorporated into the building design to protect indoor areas from excessive noise intrusion.

Noise attenuation measures should be designed to meet or exceed exterior noise standards in effect at the time of development. Noise standards will be based on federal, state, and local regulations regarding noise levels necessary to protect the public health and welfare from the effects of noise.

AIR QUALITY

The quality of air affects human health and well being. Mandated automobile pollution control equipment and efforts to reduce regionwide pollution levels will reduce future area air quality problems. Background carbon monoxide (CO) levels in the southern portion of the planning area indicate possible localized violations of pollution standards near major roadways, particularly along the Capital Beltway (I-495) and at the Colesville Road/University Boulevard intersection.

As with noise, air quality problems in Four Corners stem from vehicular traffic on major roadways. Vehicle exhaust is the primary source of air pollution. Most of the Sector Plan area currently meets federal air quality standards for background carbon monoxide levels. The highest concentrations and potential localized violations occur near roadways where extensive queueing from traffic congestion occurs. These levels are expected to improve by 1987 with transportation system improvements and continued implementation of air pollution controls on vehicles.

Since CO readily disperses, excessive levels rarely occur more than 300 feet from a roadway. To avoid the possibility of adversely affecting people, sensitive land uses ideally should not be located near major intersections, nor where many vehicles operate with engines idling for long periods of time. Examples of sensitive receptors include residences, schools, and nursing homes.

To determine where carbon monoxide "hot spots" may occur, further studies should be conducted. To the extent feasible, sensitive land uses should not be located near major intersections where conditions favorable to the formation of carbon monoxide "hot spots" occur.

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2 dBA is the standard expression for "decibels," with a weighting to account for the sensitivity of the human ear. Ldn stands for the 24 hour "day/night" average noise level.

TRANSPORTATION SYSTEMS

EXISTING HIGHWAY SYSTEM

The Four Corners Sector Plan area is traversed by three principal roadways -- the Capital Beltway (I-495) and University Boulevard (MD 193) both of which run east-west, and Colesville Road (US 29), which runs north-south. The Capital Beltway, which serves primarily interstate and regional trips, is a major 8-lane circumferential freeway. Colesville Road (Columbia Pike), a 6-lane divided highway, is a major north-south radial extending from Howard County to Silver Spring and downtown Washington. University Boulevard, also a 6-lane divided highway, is a major continuous east-west route extending from Connecticut Avenue in Kensington to beyond the University of Maryland campus in Prince George's County. Average daily traffic (ADT) volumes for 1983 were 120,000 vehicles per day on the segment of the Beltway between University Boulevard and Colesville Road and over 132,000 vehicles per day on the segment of the Beltway between University Boulevard and New Hampshire Avenue. ADT volumes exceed 49,000 vehicles per day on segments of Colesville Road, and range from 35,000 to 42,000 vehicles per day on segments of University Boulevard. Specific ADT volumes are shown on Figure 5. Within the Sector Plan area, these principal roadways are supplemented by Brunett Avenue for north-south movements, and Dennis Avenue, Forest Glen Road and Lanark Way for east-west movements.

The Level of Service[1] of a roadway system is a measure which describes its performance as a traffic carrier. Typically, this level of service is determined by analysis of the peak hour traffic demands at critical intersections and expressed as an alphabetic scale

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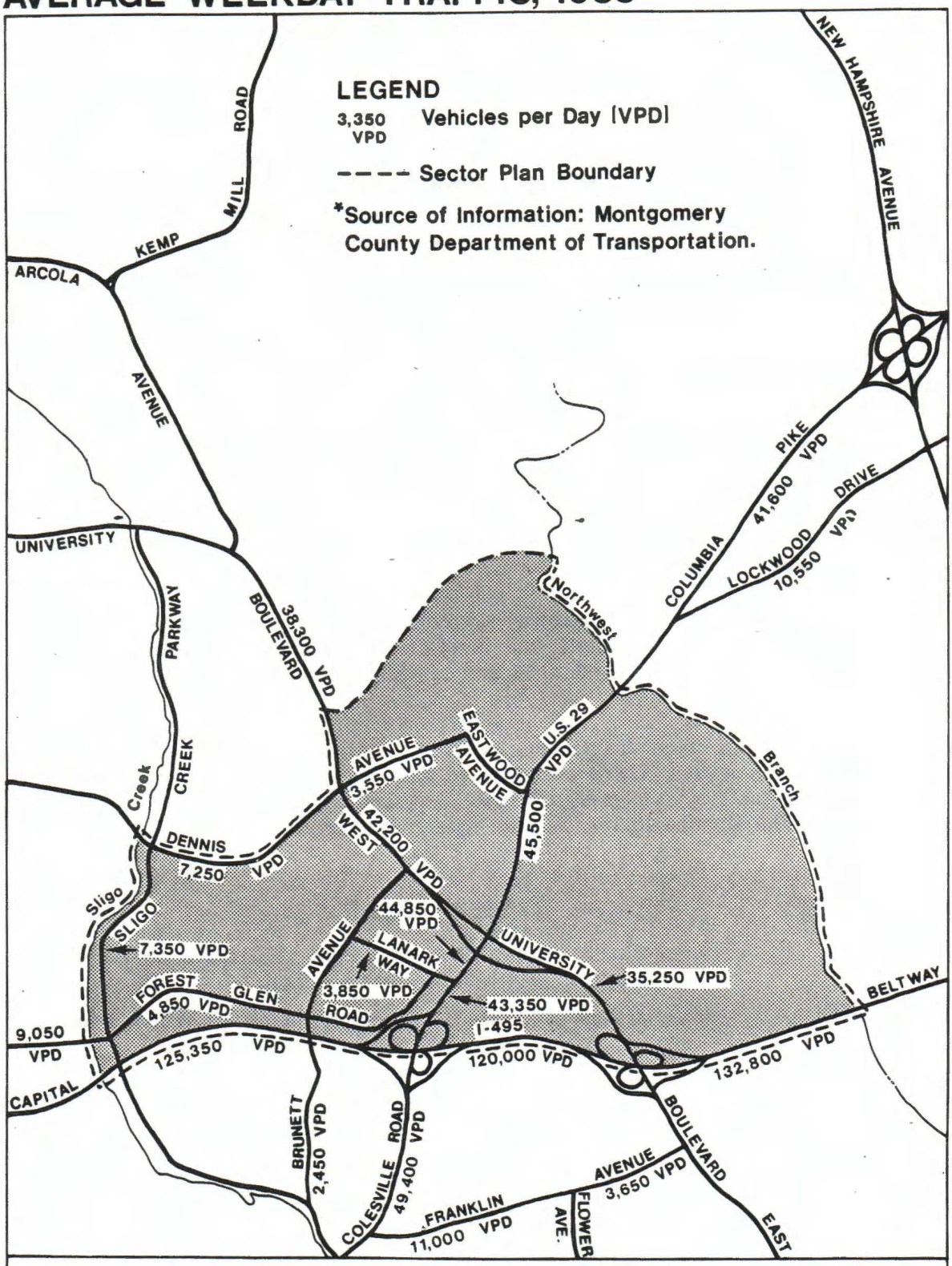
[1] Level of service is a traffic engineering term which describes conditions on a segment of roadway. There are six levels, ranging from free flowing conditions to very heavy traffic, extremely unstable flows, and long delays. Level of service is characterized alphabetically. The terms are described as follows:

Level of Service	Characteristics
A	Free unobstructed flow, no delays. All traffic signal phases sufficient in duration to clear all approaching vehicles.
B	Conditions of stable flow, very little delay. A few signal phases are unable to handle all approaching vehicles.
C	Conditions of stable flow, delays are low to moderate, full use of peak direction signal phase(s) is experienced.
D	Conditions approaching unstable flow, delays are moderate to heavy. In a significant number of signal phases during short durations of the peak traffic period, traffic will not clear a signalized intersection.
E	Conditions of unstable flow, delays are significant, signal phase timing is generally insufficient. Congestion exists for extended duration throughout the peak period.
F	Very long delays. Jammed traffic conditions.

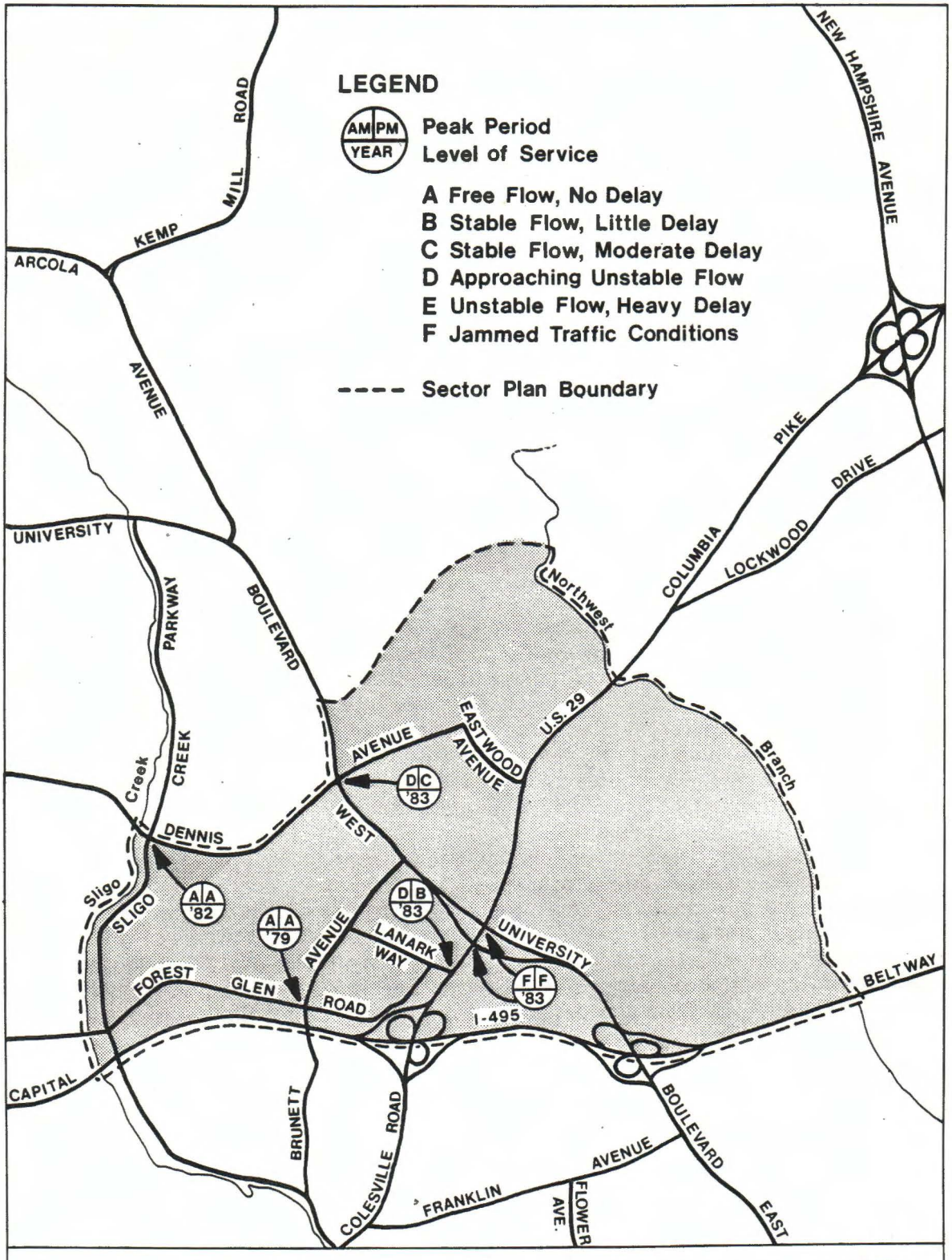
AVERAGE WEEKDAY TRAFFIC, 1983*



Four Corners Sector Plan

KEMP MILL-FOUR CORNERS PLANNING AREA

PEAK PERIOD OPERATING CONDITIONS



Four Corners Sector Plan

KEMP MILL-FOUR CORNERS PLANNING AREA

from A (best) to F (worst). For example, Level of Service D can be described as a predominantly stable traffic flow condition with an occasional instability of the flow. At this level of service, vehicle delays are moderate to heavy, signal time deficiencies are experienced for short durations within the total peak period, and drivers may find that more than one signal change is required for them to pass through the critical intersection. However, the traffic flow is such that periodic "valleys" occur, thereby preventing unacceptable traffic backups and congestion. Based upon current peak hour volumes at principal intersections within the Four Corners Sector Plan area, calculations indicate the following Levels of Service:

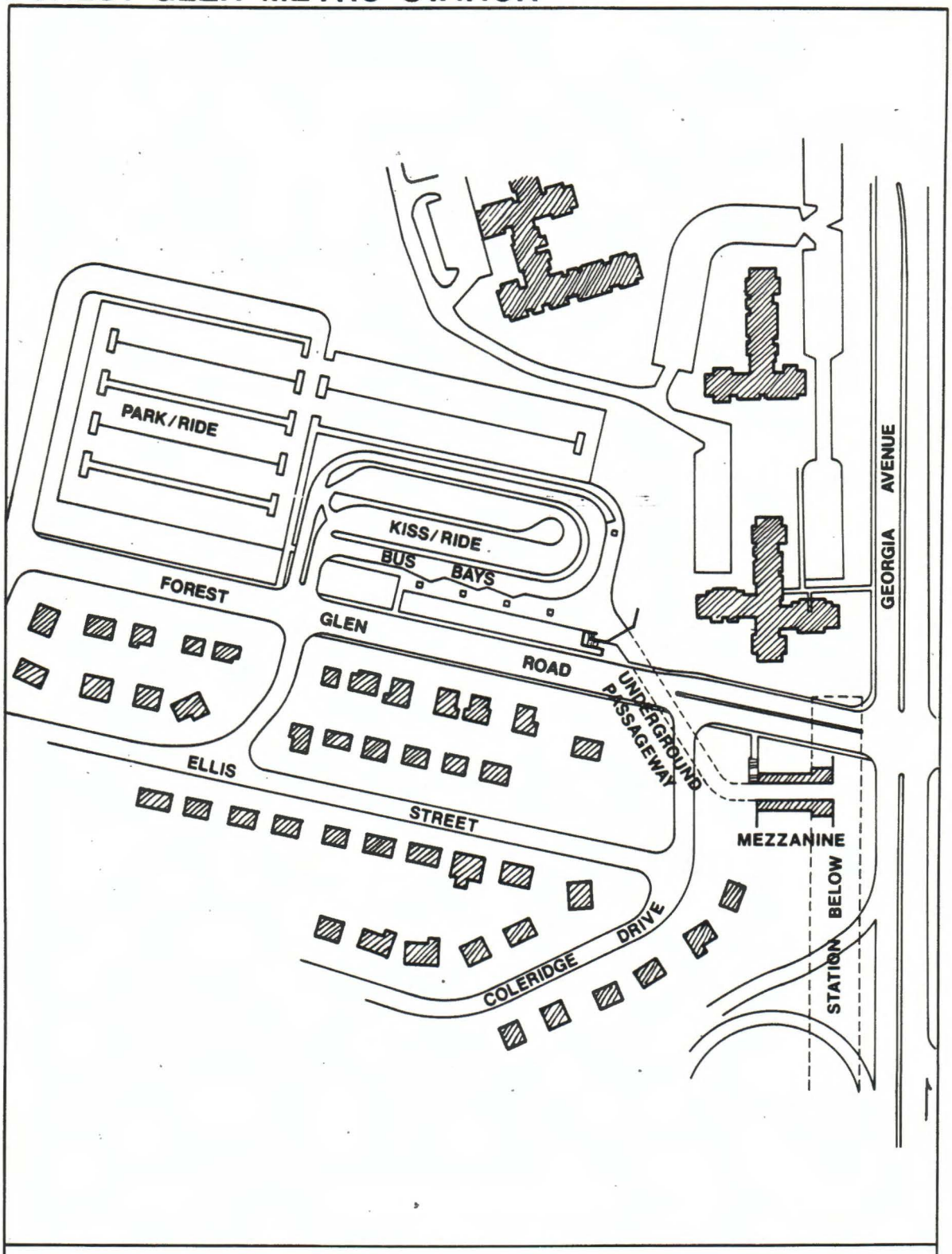
Intersection	Level of Service
Colesville Road University Boulevard	F
Colesville Road Lanark Way	D
Colesville Road Lorain Avenue	C
University Boulevard Dennis Avenue	D
University Boulevard Williamsburg Drive	A
Brunett Avenue Forest Glen Road	A
Forest Glen Road Sligo Creek Parkway	C
Sligo Creek Parkway Dennis Avenue	A
Lanark Way Sutherland Road	A
Lexington Avenue Pierce Drive	A

EXISTING TRANSIT SERVICE

Metrobus service operates in the area on Colesville Road and University Boulevard. Local and express routes from Wheaton, White Oak, and beyond into Silver Spring combine to produce an overall frequency of 14 buses per hour in the peak direction. In addition, Montgomery County provides local Ride-On service on Colesville Road, University Boulevard, Brunett Avenue, Dallas Avenue, Forest Glen Road, Reddick Road, Tenbrook Drive, and Dennis Avenue, linking the area with Langley Park, Wheaton, Kensington, and Silver Spring. The Ride-On routes provide service with 20 to 30 minute headways in the peak direction during peak hours. Existing bus routes are shown on Figure 13.

The Forest Glen Metro station is under construction on Forest Glen Road, a short distance west of Georgia Avenue. Station surface facilities, according to plans developed by the Washington Metropolitan Area Transit Authority and approved by the Montgomery County Council, include 5 bus bays, 20 bicycle storage racks, 45 kiss-'n'-ride spaces, and approximately 500 park-'n'-ride spaces. The station platform will be located 200 feet beneath the intersection of Georgia Avenue and Forest Glen Road. A high-speed elevator system is included in the station design to transport patrons from the surface mezzanine to the platform (see Figure 7).

FOREST GLEN METRO STATION



Four Corners Sector Plan

KEMP MILL-FOUR CORNERS PLANNING AREA

SECTOR PLAN FOR
FOUR CORNERS AND VICINITY

THE PLAN

PLANNING FRAMEWORK

Several planning policies have been identified for the purpose of developing this Plan and for the basis of the recommendations contained in this document. These policies have been developed by the planning staff and are based upon:

- the recommendations contained in The General Plan, the Kemp Mill-Four Corners Master Plan and other adopted documents which are statements of public policy;
- the concepts put forth in the various Growth Policy Reports, which identify potential impacts on communities in the mid-County area and discuss approaches to future County policy to deal with them;
- the advice and comment of the members of the Four Corners communities at meetings held with them; and
- the staff's best professional judgment in providing a framework within which the future of the Four Corners area can best be directed in the context of existing public policy, locally expressed preferences and concerns, and the natural and man-made environment which currently exists.

GOALS AND OBJECTIVES

While the starting point for developing a statement of planning policies for the Four Corners Sector Plan was in adopted statements of public policy, this starting point needs to be examined in a setting which reflects the concerns and attitudes of the people most directly affected by what happens in Four Corners. The goals of local residents, institutions, and property owners, therefore, need to be ascertained. At the same time, the Plan must assure that persons in Montgomery County as a whole -- future as well as current residents -- are well served by the recommendations contained in the Plan. This Plan attempts to balance these wide ranging and often diverse interests and concerns.

What is desired for an area is expressed through the goals and objectives -- stated or implied -- of those who live, work, play, attend religious institutions or schools, or share some other concern or interest in the Four Corners area. The task of identification of goals and objectives was approached in a number of ways.

Planning goals were developed from statements of "issues," desires," or "aims" of a number of separate community and interest groups, all of whom share some common concern for the area.

These generalized planning goals include:

- Preserving and protecting the Four Corners "community" as a stable, predominantly single-family residential community. The Plan should reflect a recognition of the permanence of the existing residential character and these uses should support a sense of community;

- Assuring a high degree of public safety to residents and users of the area;

- Assuring that future development is sensitive to both the man-made and the physical environment; and

- Assuring that existing and future residents of the community are protected from intrusions of traffic, noise, and pressures to redevelop existing stable, low-density uses.

Over 90 percent of the Four Corners Sector Plan area is developed with single-family detached dwellings, townhouses, or large institutional or public uses. While a number of undeveloped or underdeveloped parcels will eventually be developed, the basic land use framework of the area is already established.

What can "planning" achieve in such a setting? The staff's view has been to point out the major concerns of which the community should be aware in already built-up areas, but also to concentrate on the areas where potential development is likely to take place in the immediate future. Scattered throughout the area are a number of vacant, previously subdivided lots, which should, and can generally be expected to be developed with housing of the same character as that of the immediate community. In the southern portion of the area is a large vacant parcel (the "Kay Tract") that, in spite of it currently being zoned for multi-family residential development, has been the subject of a number of different development proposals over the years.

Left to usual forces, this sensitive land resource could be developed to the detriment of the surrounding community. Trees could be indiscriminately cut, natural beauty destroyed, historical perspectives altered, and the physical "character" of the whole area irretrievably changed. This future is not preordained, however, and it is the basis of the Sector Plan that imaginatively conceived land development controls, reinforced by support from the community, can control development pressures, preserve open space and natural features, and preserve and enhance the character of the Four Corners area.

The following concepts are the framework upon which the Plan itself is built:

- The predominantly low-density residential character of the Four Corners area should be maintained. Recommendations for land use and zoning should support the existing character of the residential community and prevent the intrusion of disruptive land uses.

- Any future development must preserve and enhance the desirability of the Four Corners community as a place to live. New development must take into consideration the visual and physical environment that has been established over the years.

- The Four Corners community should provide a full range of housing and services for all of its residents.

- Traffic and circulation improvements should facilitate smooth, safe traffic flow for both local and "through" travel. Such improvements should be directed mainly toward assuring safe and orderly circulation. Improvements should not encourage through traffic to use local streets. Moreover, circulation improvements should facilitate local pedestrian movement throughout the community.

- Commercial areas should be upgraded in appearance. They should continue to serve community shopping needs.

- Environmentally sensitive areas should be protected and preserved. Land use and zoning recommendations should prevent building in undesirable locations and protect existing natural resources.

The foregoing represents the basic "framework" which guided the development of the Sector Plan. Detailed studies and discussions of the basic concepts culminated in the formulation of specific recommendations.

In the developed areas of Four Corners, the many existing conditions -- both natural and man-made -- have, of necessity, limited the planning options. The locations and character of existing residential and commercial development, for example, are established facts subject only to changes in specific details, such as landscaping and improvements to existing physical appearance. Future development potential and alternatives were thus considered only for the areas remaining undeveloped or underdeveloped -- areas whose future can be shaped by direct public action or by public regulation of private action. These areas include vacant land, existing homes on large lots that have additional subdivision potential, and existing uses that staff has determined may be subject to change in the future.

The "opportunities and constraints" on future development in the Four Corners Sector Plan area were developed within the context of analyses and other studies conducted by the staff during the planning program. The "opportunities" for new development were examined in terms of public policies and of local and areawide goals and objectives. These, together with the "planning framework" and the community's input in the planning process, form the basis for the specific land use, transportation, community facilities, and zoning recommendations which are expanded upon in the text which follows.

LAND USE PLAN

RESIDENTIAL LAND USE

Residential land uses account for the majority of land occupied by private development. Within the Sector Plan area there is a variety of housing types from detached homes on both large and small lots to townhouses. Both the staff and the community recognize the need for, and the desirability of, maintaining a range of housing, both in type and price. The Plan also recognizes the established low-density character of Four Corners, and the desire of the community to maintain this character and to preserve the many attributes that set Four Corners apart from other areas.

The Plan (shown on Figure 8) recommends that existing single-family residential areas should be retained in their current use and density. The residential communities in the Four Corners area are zoned R-60 and developed at approximately 4± dwelling units per acre. Scattered throughout the Sector Plan area are several small vacant parcels and oversized single-family lots. It is possible that a number of these parcels could be subdivided or developed in the future. The Plan recommends that any infill residential development should be similar in character and compatible in density with the immediately surrounding low-density, single-family development.

Within the Sector Plan area there are also a number of large vacant and underdeveloped sites (e.g., the "Kay Tract" and "Tumble Inn Tract"). The Sector Plan attempts to rationally and intelligently capitalize on the locational advantages and the attractiveness of the existing Four Corners commmunities. A variety of housing types would meet the needs of the residential housing market and would provide built-in purchasing power for local retail uses.

The future development of various types of housing (i.e., single-family, townhouses, garden apartments, condominiums) to keep up with residential demand will be determined by a large number of interrelated factors. Land availability, price of land, zoning and building regulations, the cost of money, energy costs, material costs, access to transportation, utilities, municipal services, the level of taxes, and nearness to shopping and other community facilities are all important factors which will influence the nature of residential construction.

In the built-up communities of Montgomery County, many of these factors indicate an increasing rate of townhouse and multi-family construction. The resistance of most homeowners to multi-family and townhouse development can be traced in some measure to the uninspired character of most buildings and the tendency of many developers to crowd the land with buildings without providing suitable open space, play areas, and landscaping.

Recent trends in townhouse and apartment development, however, show encouraging signs that many developers have recognized the need to offer more attractive housing, which would be more compatible with the character of the areas in which they seek to build. Some of the multi-family developments being built today, including those for middle income families, offer sophisticated architecture in attractively landscaped settings. It must be recognized that a proper ratio of multi-family housing is essential to provide adequately for the housing needs of all residents of the community. There are many types of multi-family units, ranging from the four-unit apartment house to mid-rise

structures, whether of the rental, condominium, or cooperative type. Each serves a specific function and has a different effect upon the character and economy of the area.

Traditional zoning has tended to create a distinct compartmentalization based on the largely obsolete concept that the introduction of any two distinct types of residential uses into a given area creates automatic conflict. Newer thinking in this respect is beginning to encourage a diversity of housing types, including various necessary services as an integral part of the development. This serves to avoid areawide segregation of people by age, family composition, and income. Under this concept, the fear of adverse effects upon property values usually associated with "multi-family" development would simply become irrelevant, since such development would be a designed part of the community to begin with. An ideal neighborhood would include an appropriate range of housing types designed to serve a well-balanced population structure. The use of the Planned Development concept is a major attempt to achieve this goal. (See discussion of mixed-use development on the "Kay Tract.")

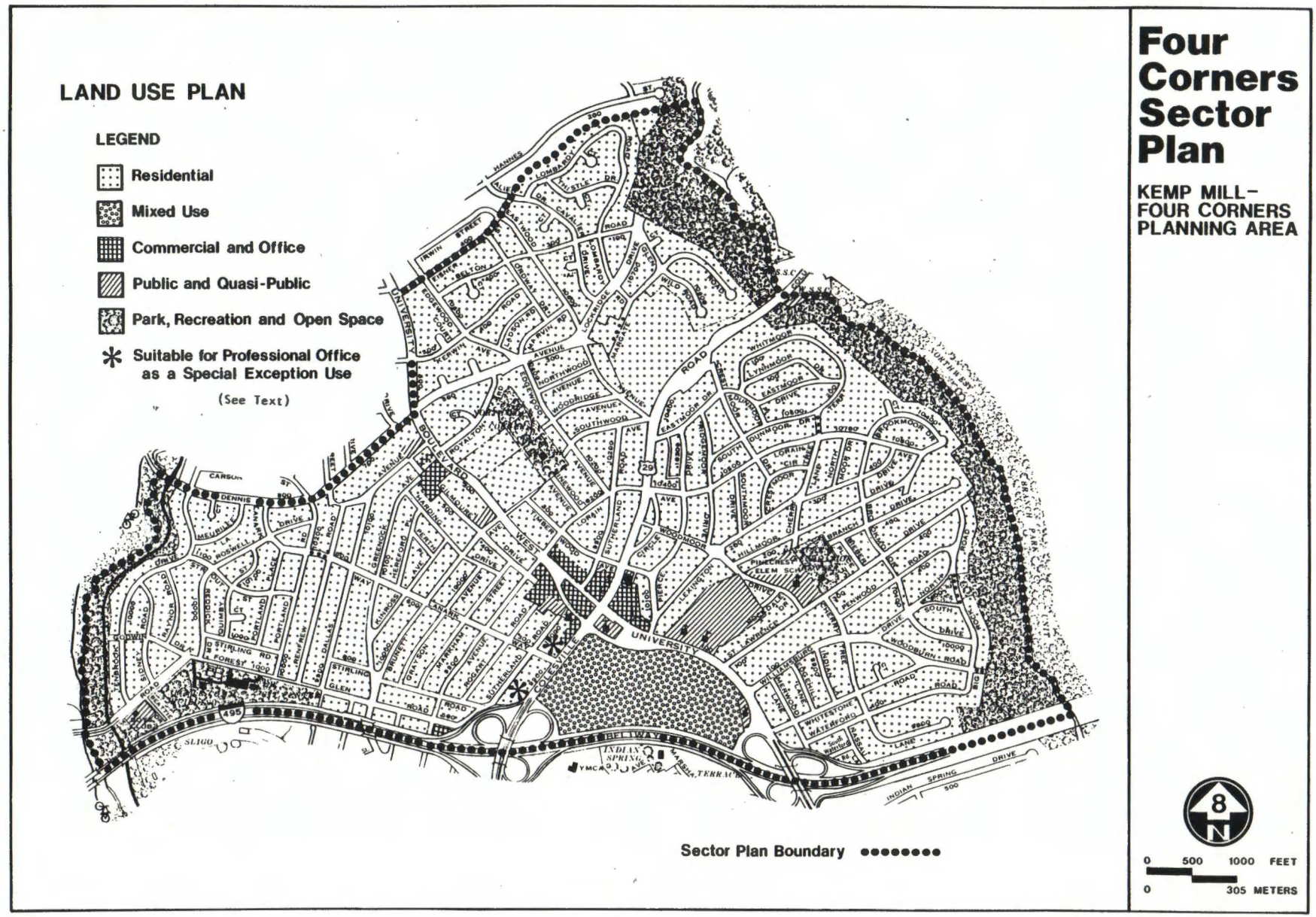
This Sector Plan proposes a density of 7 dwelling units per acre of land on the "Tumble Inn/Alexander School" site if the whole site is redeveloped. Since the total number of units on the site would be less than 50, Moderately Priced Dwelling Units would not be required. If the owners of the school decide to develop only part of the property (i.e., a school and housing), then the cluster provisions of the R-60 Zone would be a better method for developing this site. Townhouses are not recommended for an R-60 cluster development. The major advantages of Planned Development are as follows:

- A buffer of detached homes or undeveloped land, or a combination of the two, can be located adjacent to existing detached homes.

- A greater choice of housing types can be provided. Where conventional development tends to produce street after street of the same type of dwelling, the Planned Development encourages single-family houses, townhouses, and clustered homes, all of varying sizes, and built as part of the same development. This means a greater variety of housing types in any given area, and allows families, if they so desire, to move from one type and size of house to another without leaving their old neighborhood.

- Natural features can be preserved. Instead of developing a whole area with paved streets and fenced-in yards, Planned Development would encourage a portion of the land to be left in its natural state while housing the same number of families as conventional development. This means that natural features such as streams, ponds, and trees can be preserved near the places where people live, for their common enjoyment. At the same time, all houses can have their own private open space. The land saved for open space is land that would ordinarily have been devoted to unusable yards and unnecessary streets.

- Safe pedestrian ways, bikeways, and safer streets can be provided. The open space created by Planned Developments can also be used to create pedestrian greenways and bike routes. Such greenways can be designed so that they cross few or no streets, provide safe routes for children to walk or bike ride, and serve as play areas.


LAND USE PLAN
LEGEND
Residential
Mixed Use
Commercial and Office
Public and Quasi-Public
Park, Recreation and Open Space
* Suitable for Professional Office as a Special Exception Use
(See Text)
Sector Plan Boundary
Four Corners Sector Plan
KEMP MILL–FOUR CORNERS PLANNING AREA
0 500 1000 FEET
0 305 METERS

ELDERLY HOUSING

While many dwelling units in the Four Corners area are occupied by elderly residents, there are no existing facilities specifically for elderly or infirm persons. Several proposals have been made by private, semi-public, and public organizations and agencies to build elderly housing in the area. The Sector Plan supports elderly housing on a number of sites.

Elderly housing is recommended as a reuse of the former Four Corners Elementary School site. This site is close to transportation, shopping, and services. The site plan for the development of elderly housing (a special exception in the R-60 Zone) should address the following conditions and standards:

- New development should utilize the existing developed area of the site (the footprint of the existing school and paved areas).
- Building massing should be similar to the existing structure utilizing changes in the topography.
- Future development of the site should be limited to a density in the range of 20 dwelling units per acre (100 to 120 units). This density assumes a 3-story building with a 33,000 square-foot footprint and 37,500 square feet for parking.
- The tree-covered area in the northwest corner of the site should be maintained.
- The wooded slopes adjacent to the single-family homes, at the western edge of the property, should not be disturbed.
- The development of elderly housing on this site must also include transportation arrangements for shopping, visits to doctors and dentists, and recreational activities.
- A path system should be developed from the site to the North Four Corners Park and Recreation Center.

If elderly housing is not developed on this site, a number of other uses would be appropriate. A religious use (generating most of its traffic during non-peak periods) would be compatible with surrounding land uses. A private school would also be a compatible use, if it does not otherwise conflict with public policy. Any private school should attempt to provide bus service to the site.

The Plan also recommends elderly housing as part of any development on the "Kay Tract." A mixed use project, including elderly housing, would provide an environment in which residences, shopping, and life-cycle services (doctors, dentists, day-care, and recreation) would be developed to encourage ease of access and pedestrian movement. Elderly housing should be located in close proximity to new retail uses and public transportation on Colesville Road and University Boulevard.

An elderly housing project has been proposed adjacent to the Margaret Schweinhaut Senior Center in Argyle Park. While the Sector Plan clearly recognizes changing community needs as a result of changing demography (particularly the need for elderly

housing in the older urban, down-county communities,) it does not recommend a housing project in Argyle Park. The Sector Plan has attempted to strike a balance between the needs and wishes of the diverse population that makes up the Four Corners community. Argyle Park is used by all segments of the community. As presently built and used, there is a balance between users of the play equipment, fields, open areas, ball diamonds, tennis and basketball courts, and the Senior Center. The construction of housing, utilizing parkland and removing park facilities, would alter this balance and a part of the population would be deprived of recreational opportunities that are obviously needed in this area. In addition, the park's proximity to the Capital Beltway makes this a less than desirable site to increase housing densities.

Given the degree of use of Argyle Park by all segments of the community and the proximity of this site to the Beltway, the Sector Plan cannot support the removal of parkland for other public purposes, no matter how desirable, at this location. While there may be some advantages for the residents of a project being adjacent to the Margaret Schweinhaut Center, the staff feels that the needs of the elderly could be better served as part of a new development on the "Kay Tract." In addition to being further from the Beltway and its associated noise and pollution, it would be within walking distance of shopping, services, and transportation.

MIXED LAND USE

The approximately 43 acre former Indian Springs Country Club (also known as the "Kay Tract") is located in the triangle formed by the Capital Beltway, Colesville Road (US 29) and University Boulevard (MD 193). This site is the largest parcel of undeveloped land in the Four Corners Sector Plan area. The "Kay Tract" has been by-passed by development which now extends from Silver Spring to Burtonsville. This parcel is one of the few large vacant sites still available for development adjacent to the Beltway in Montgomery County. As such, its development potential is high. However, it is limited by the physical and man-made constraints on the site, by the adopted recommendations of this Sector Plan, by the conditions of the market, and by the general state of the economy.

Staff analysis indicates that there are a number of major problems associated with the site's future development. Any development must address the constraints presented by the following factors:

- The environmental problems associated with noise, air pollution, and storm-water runoff;
- Traffic capacity of the existing roads and of the transport system as it might be reasonably expected to be improved in the future; and
- The relationship of new development to the existing Four Corners community.

Environmental Constraints

Noise Impacts

The combined effect of traffic noise from the three highways surrounding this property create noise levels which currently exceed federal guidelines which recommend 65 dBA Ldn as the maximum acceptable level for residential use. In some locations, levels

currently reach 75 dBA Ldn, which exceeds the maximum acceptable level by 10 dBA, an increase that would be perceived as twice as loud.

In 1980, the Federal Interagency Committee on Urban Noise concluded that noise levels above 65 dBA Ldn are "normally unacceptable" for residential use. Due to the severity of noise impacts and the extensive frontage of this property on major roads, a number of techniques should be utilized in combination for the purpose of reducing noise impact. Appendix 1 is a list of noise abatement techniques. On this property, the combined use of maximum setbacks, noise-compatible uses in affected areas to buffer more sensitive uses, berms, barriers, and optimum orientation of buildings appear to offer the best opportunities for abating noise.

Air Quality

The location of this site adjacent to three major highways, and one of the most congested intersections in Montgomery County at Four Corners, raises a concern about the effect of auto-related air pollutants (particularly carbon monoxide) on adjacent land uses. Recent studies by the Maryland-National Capital Park and Planning Commission (M-NCPPC) and Council of Governments (COG) for the 1982 Metropolitan Washington Air Quality Plan show possible violations of 8-hour carbon monoxide standards (9 parts per million (ppm)) through 1985-96 in areas near the roadway where extensive queueing from traffic backups occur.

Stormwater Management

The property is in the headwaters of the highly-urbanized Long Branch, a tributary of the Anacostia River. A study completed by consultant CH2M Hill for M-NCPPC in May 1982, entitled the "Anacostia Technical Watershed Study" includes recommendations for storage requirements and water quality considerations in this area of the Long Branch sub-watershed. These recommendations include a proposal for a medium-scale impoundment in the East Wayne Drive/Oak View Elementary School area. However, recent discussions on the Pickwick Village site plan in that area evaluated this recommendation and found it infeasible. As a consequence, on-site stormwater management may be necessary for the "kay Tract."

Another stormwater management concern is the State Highway Administration's policy for protecting its highways from damage during 100-year storm events. The use of appropriate on-site facilities for this purpose may be land-intensive and would presumably be located near the drainage structure under the Capital Beltway.

The primary consideration in selection of stormwater management alternatives should be to prevent worsening of the existing severely-eroded condition of Long Branch. Urban runoff management practices should also be considered to reduce the need for stormwater control and improve water quality.

Traffic Constraints

An analysis based on a 1983 count of turning movements determined that the intersection of Colesville Road with eastbound University Boulevard has critical lane volumes that exceed 1800 cars in both the morning and evening peak hours. Similarly, the intersection of Colesville Road with westbound University Boulevard has critical lane volumes of 1750 in the morning peak hour and 1935 in the evening peak hour. These critical lane

volumes correspond to Level of Service F, which is an unacceptable degree of congestion. The midpoint of Level of Service E, with a critical lane volume of 1525, is presumed to be the condition under which the transportation facilities as a total system are operating at maximum capacity. Critical lane volumes that exceed the midpoint of Level of Service E reduce the overall efficiency of the road network and are to be avoided. Consequently, any proposed development on the "Kay Tract" must link all site generated vehicles to corresponding transportation improvements. This is intended to ensure that any increases in critical lane volumes attributable to development of the site are adequately accommodated by necessary improvements, thus preventing any further deterioration of operating conditions.

Access to the site is potentially a constraint for two reasons. First, a major improvement, such as a grade separation at Colesville Road and University Boulevard, could conflict with an access point opposite Lanark Way. The extent of such a conflict depends on the design and scope of the grade separation as well as an analysis of weaving movements on Colesville Road. Accordingly, site development should avoid anything that would limit construction of a grade separation at this location should be avoided.

Any access point, particularly on Colesville Road, may have to incorporate physical features or restrictions that impose turning limitations on vehicles entering or exiting the site. Such restrictions would be intended to limit the effect of site generated vehicles on traffic operations and safety. It is likely that any access point on Colesville Road would need to be offset from the existing median break at Lanark Way. In addition, the access point may be restricted to right-turn in/ right-turn out to reduce conflicting traffic movements.

Another concern and potential constraint is the relaitonship between site development and traffic on local streets. Some use of residential streets by commuters has been observed by the community and documented by Montgomery County Department of Transportation. The transportation plan proposes several strategies for reducing this activity. It is unacceptable for site development to proceed on the assumption that local streets will be used as access. However, it is appropriate to assume that residential streets such as Lorain, Lanark, Lexington, and Williamsburg will be used to accommodate bicycle and pedestrian access to the site.

Mixed Use Planned Development

To encourage a more creative solution and a more flexible approach which will address the environmental concerns, traffic problems, and recognize that this parcel is the forth quadrant of the Four Corners community, the Sector Plan recommends a mixed use development on the "Kay Tract." The design of such a project should include residences, employment, and shopping in a compatible environment that encourages both internal and external pedestrian movement. Recreation, cultural, and other public uses should also be included. A mixed use development would provide a focal point for the Four Corners community and help to create that elusive sense of place and of human scale that is found in a successful man-made environment.

The large acreage and single ownership of this site make it suitable for development through the use of the Mixed Use Planned Development (MXPD) Zone, which encourages large scale, comprehensively planned projects staged over a period of time and controlled by the site plan review process administered by the Planning Board. The comprehensive development standards in this zone provide the necessary public controls to ensure internal and external compatibility of a mixed use planned development project.

The Mixed Use Planned Development Zone is intended to provide flexibility in the long-term development of mixed use projects. The zone encourages the orderly, staged development of comprehensively planned projects which intergrate a mix of uses, an internal circulation system, and unique design features such as lakes and recreation areas. The zone requires the submission of a concept plan for the entire site and subsequent development plans for each stage of development, as identified on the concept plan. The MXPD Zone also requires that any application be compatible with the guidelines contained in the applicable master or sector plan. This requirement increases the significance of a plans' standards and recommendations from a guide, to a requirement that must be satisfied before the zone can be approved.

Approval of an MXPD application on the "Kay Tract" would be conditioned on the proposed development addressing the constraints on the site and a number of conditions and standards (see Figure 9). These conditions and standards should include, but are not limited to the following:

- Traffic standards for MXPD zone application will be provided by future amendment to the Four Corners Sector Plan.

- The Sector Plan encourages a mixture of commercial, employment, and residential uses (including elderly housing). A mixed use project could include:

  Retail - up to a maximum 125,000 square feet.

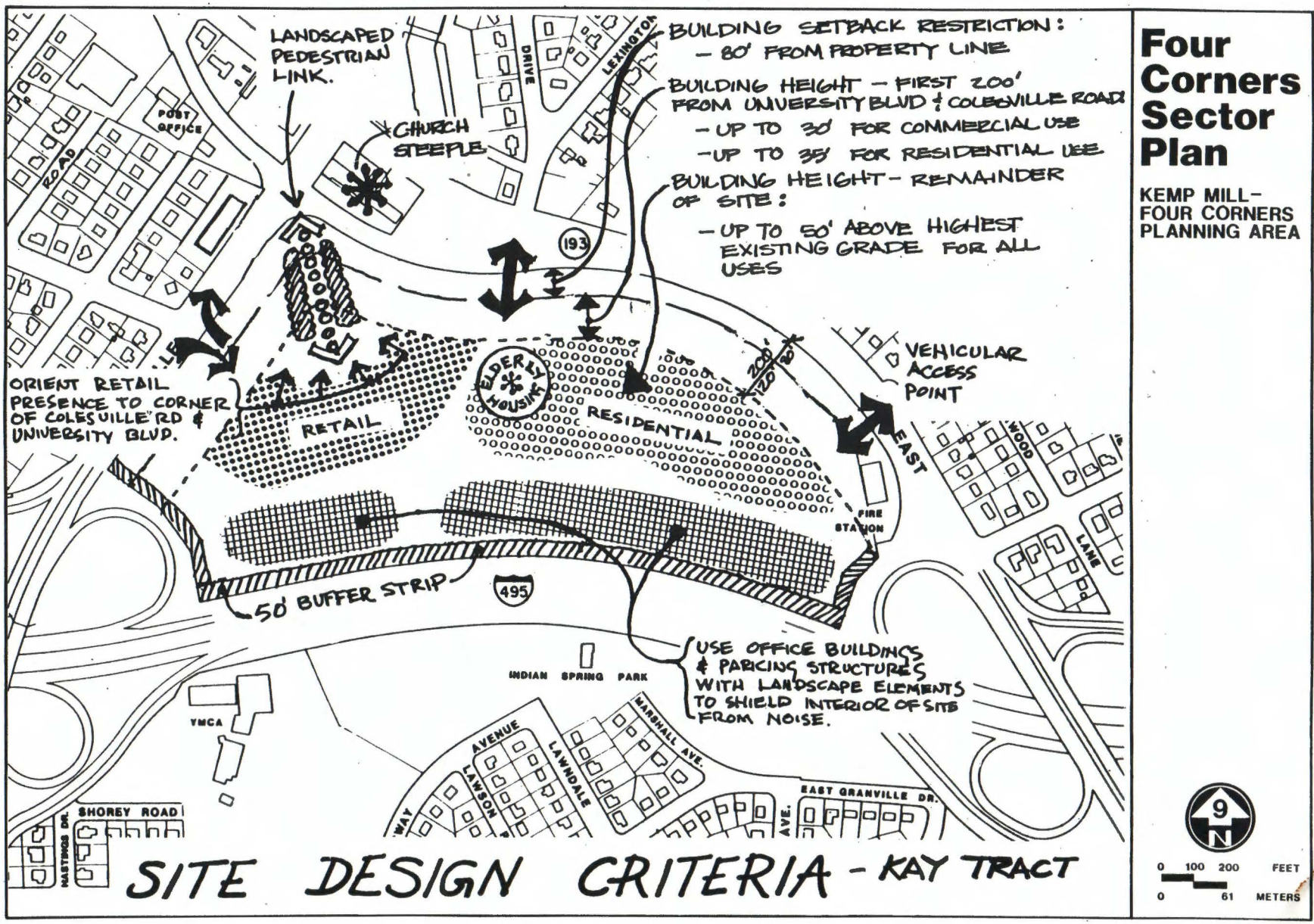
  Office - up to a maximum 300,000 square feet.

  Residential - 200 - 400 units (including elderly housing and Moderately Priced Dwelling Units).

  In order to meet the development standards included in the Sector Plan and the MXPD Zone, it may not be possible to achieve the maximum intensity of development.

- Retail uses on the site should be chosen for positive peaking characteristics in terms of traffic generation, and should reflect the needs of the Four Corners community and other nearby areas. Retail mix should be carefully chosen to provide complementary services. It is the intent of the Sector Plan that the proposed commercial uses be similar to those permitted in the C-1 Zone.

  Commercial uses and services should be located so as to be visible from the intersection of Colesville Road and University Boulevard. The shopping facilities should be designed to visually and functionally "round out" the Four Corners shopping area, and generally should face the corner rather than be concentrated internally to the site.



Four Corners Sector Plan

KEMP MILL–
FOUR CORNERS
PLANNING AREA

9
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0 100 200 FEET
0 61 METERS

- A diversity of housing on the site may offer an opportunity for a more vibrant community and the ability to participate in daily activities with reduced auto use. Residential uses would help to provide the opportunity for on-site shopping, employment and recreation in an environment that would encourage pedestrian movement. A variety of housing types, as part of a mixed use development, may appeal to those people who seek convenience and diversity in living accommodations.

- Adding a hotel/motel to the development program may complicate the site planning and could lead to a structure too tall for compatibility with surrounding areas. A hotel/motel may also affect the intensity of other land uses on the site.

- Land Use Relationships: Generally, office buildings and parking structures should be so located as to shield noise from I-495 from residential and retail uses. Elderly housing and support facilities should be closely associated with retail uses in order to derive the benefits of public amenities, but should not be located close to retail service functions. Outdoor space for the elderly should be provided in a manner that allows interaction of elderly with the public. A separate, secure outdoor space for the elderly should also be considered.

- Pedestrian Circulation: Attractively landscaped pedestrian connections from the site to other areas of Four Corners should be made where functionally effective and where traffic signals will allow safe pedestrian crossing of roads. A well-designed and attractive pedestrian link between the proposed retail shopping area and the intersection of Colesville Road and University Boulevard, including landscaping, lighting, and seating should be provided. Within the site, pleasant paved and lighted walkways should be constructed to connect all uses, and wherever possible should be separate from high volume vehicular circulation paths. A system of pathways for bicycle circulation should also be developed to serve internally and should connect to the community wherever possible.

- Vehicular Circulation and Parking: Vehicular access to the site should be primarily from University Boulevard at Pierce Drive and at Williamsburg Drive next to the fire station. Convenient and safe vehicular circulation should be provided on-site to connect all uses. Structured and underground parking is strongly recommended and should be used wherever feasible. Parking should not be allowed on the primary vehicular circulation pathways. Residential traffic circulation may be accommodated by use of drive-through parking areas near residential units, in the interest of conserving green area. Long rows of cars without substantial landscaping relief should be avoided. Careful attention should be given to landscaping of commercial parking lots, particularly in terms of shade trees. Housing for the elderly and office buildings should have modest drop-off areas in front of the buildings, with vehicular service areas separate and screened from view.

- Building Height: Topographical variations in the site should be used to minimize the effect of building height on the surrounding community. Taller buildings should be located in lower parts of the site. No buildings should be permitted to exceed the height of the tree mass (interpreted to be 50 feet), measured from the highest point of the site. The steeple of the nearby Marvin Memorial United Church should continue to be the most prominent vertical feature of the Four Corners area. A building set back line of 80 feet should be established along University Boulevard and Colesville Road. A height limit of 30 feet for commercial uses and 35 feet for residential uses should be established for any construction within 200 feet of the University Boulevard/ Colesville Road rights-of-way. An exemption to this condition may be granted for elderly housing if it is determined the exemption is necessary to meet other conditions and standards in the Sector Plan.

- A water feature, such as a small lake or a series of terraced ponds, should be considered as a site amenity if feasible in terms of topography and the development program. The water feature should be designed so as not to exascerbate noise into the site from I-495.

- As much existing tree cover as possible should be retained. A landscaped buffer strip at least 50 feet wide should be developed along the I-495 property line, to include existing healthy trees, new trees, and earth berms where appropriate. A tree survey should be required for site plan review, and specimen trees or healthy hardwood clusters should be preserved wherever possible.

- Noise: Site design, building methods and materials and building relationships should be used to lessen the environmental impact of noise from I-495, University Boulevard, and Colesville Road on sensitive uses such as residential and elderly housing, including outdoor living areas typically associated with such uses. Residential buildings should be grouped to create small scale courtyards in order to ameliorate noise penetrating the site. Unit types should be chosen to provide one quiet side to each unit along edges that are likely to be highly noise impacted (for example, along University Boulevard).

OFFICE LAND USE

Most office development in the Four Corners area has taken place by converting existing single-family houses to office uses (the major exception is the new "townhouse" office on Colesville Road at University Boulevard). Many residential streets (e.g., Timberwood Avenue, Lorain Avenue, Pierce Drive) have been under pressure to continue this piece-meal conversion from residential to non-residential use. Rezoning applications have had a negative impact on the stability of residences in the immediate area. The Sector Plan does not support any change in use in these areas that are "internal" to the existing residential communities and would change the character of an existing residential

street. Existing single-family homes on both sides of Timberwood Avenue, Lorain Avenue, and Pierce Drive should be retained as residences to maintain the residential character of these streets.

On major roadways (Colesville Road and University Boulevard), it may be appropriate, on specific parcels of land, to provide for a change from residential land use to a limited type of office function. This type of conversion would be appropriate for those large homes that are impacted by heavy traffic, noise, and pollution. To maintain the existing residential character, it would be desirable to renovate and maintain the existing structure for office use rather than allow the construction of new buildings. A number of existing structures fronting on Colesville Road, on lots of sufficient size to provide well landscaped parking and adequate access, are suitable for office use (by special exception) which would be compatible with adjacent residential uses. Designation for office use should not, however, preclude their continued use as residences or for other special exception uses. Two areas are identified on the Land Use Plan as being suitable for professional office use as a special exception. The first area are those properties fronting on the west side of Colesville Road, between the Beltway ramp and Lanark Way. The second location is the remaining residential property on the northwest corner of Lanark Way and Colesville Road.

The intensity of office use on each property should be limited and controlled in regard to parking and traffic. Most of the residences have a 25-foot front yard which is an insufficient depth for parking. Grassed and landscaped front yards should be retained. Required parking should be placed at the rear of the lot. The rear lot parking should be landscaped and screened so that adjoining residences are completely protected.

Traffic generated by the conversion of residences to offices should not create additional operational probelms on Colesville Road. Common entrances and exits would help to reduce the number of driveways and minimize disruption to the flow of traffic.

COMMERCIAL LAND USE

Throughout the United States, a major revolution in marketing has been taking place since World War II. The resulting changes and adjustments have had a major effect upon the total urban picture. One of the most significant of these changes has been the steady trend of the supermarket chain replacing the small neighborhood grocery store. Another is the development of the "shopping center" as a planned and often syndicated group of shops and services. In some communities, the impact of the shopping center with its attractive new stores, pleasant pedestrian environment, and convenient parking have dealt the older neighborhood commercial areas a serious economic blow.

The Commercial Land Use Plan and the Urban Design Study (see Appendix 2) attempt to promote an environment that will stabilize the Four Corners shopping area by improving the variety of services, the "image" of the shops, and the vehicular and pedestrian access from the immediate community. The Plan is an attempt to relate the various types of commercial uses to the size and type of market to be served and to the land use and traffic implications of the types of commercial activity. The Plan also indicates those land uses (see discussion of "Kay Tract") which would support and strengthen the commercial base by increasing the magnitude of purchasing power within the trade area. (The trade area is the geographic area from which customers are drawn.)

Some types of commercial activity, such as gasoline stations or lumber yards, are much less compatible with residential areas than are pharmacies, movie theaters, variety stores, bakeries, and eating establishments. Within the Four Corners business area, where land is at a premium and usually very costly, low-density uses, such as auto sales lots, are not appropriate, whereas retailing, offices, and professional services, doing a high volume of business per square foot, would be desirable.

An underlying principle of the Sector Plan is the proper grouping of new commercial uses by their primary functions and land use requirements. Wherever possible, they should be consolidated into compact areas so that retail strength would not be diluted by an elongated "strip" similar to what exists on University Boulevard. Concentration also facilitates the making of proper provisions for loading and off-street parking, which, by eliminating frequent curb cuts and curb parking, will help to reduce traffic frictions along stretches of Colesville Road and University Boulevard.

Commercial activities can generally be divided into two categories, convenience commercial -- those which serve a direct, fairly frequent, repetitive demand generally placed upon them by nearby areas -- and comparison commercial -- those which service a more specialized shopping demand to which people travel some distance for relatively infrequent purchases and for which customers generally "shop around." Convenience commercial establishments include food and grocery, produce, dairy, meat, drug establishments, and stationery stores. Comparison commercial establishments include "pedestrian" establishments such as clothing, apparel, gift and department stores, and "non-pedestrian" establishments such as appliance, radio and TV, and automobile showrooms.

Convenience establishments usually serve nearby residential areas, and their number and size correspond to the size of the residential area. Comparison establishments tend to centralize and select locations based on regional transportation access. Even here there is some variation, since comparison establishments may be "local," i.e., serving a portion of a metropolitan area, or "regional", such as White Flint and Wheaton Plaza, i.e., serving the entire metropolitan area. Specific types of establishments frequently cluster to create a pool of shops in which many customers can be attracted to compare; in such cases the drawing powers of the component stores benefit from one another's proximity and the enlarged size of the total product selection. Locations are selected for ease of access to the regional market, for ease of service, or any of the several non-market reasons peculiar to the establishment.

The Four Corners business area consists of the retail, service, and specialty shops at the intersection of Colesville Road and University Boulevard. The strength of this area has been diminished by the age of most of the stores, physical unattractiveness, and traffic congestion in parking areas and on adjacent streets. Any expansion of commercial development is limited by the depth of the existing lots since there are stable residential areas immediately to the rear of most properties. Even though obsolete by modern standards, this type of shallow strip development, facing major traffic arteries, will continue to provide a needed retail and service function in the foreseeable future. The Urban Design Study (see Appendix 2) analyzed the existing physical and design problems along Colesville Road and University Boulevard. It makes a number of recommendations for a more attractive and better functioning physical environment which would be an asset to the Silver Spring and Four Corners community.

A major catalyst to the upgrading of the existing commercial area could be competition from new commercial uses on the "Kay Tract." The local market would also benefit from an increase to the residential population and the work force. Improvements to the existing business area will come about through a strengthening of the "market" and increased purchasing power of an expanded population base within close proximity to commercial establishments. New residential and office development on the "Kay Tract" is a major opportunity to accomplish this goal.

TRANSPORTATION PLAN

The transportation plan proposes a balanced and coordinated network of transport facilities which will improve mobility throughout the community while increasing access to regional activity centers. Transportation objectives include the following:

- improving major roadways, where necessary, to provide adequate and safe traffic flow and satisfactory levels of service;
- integrating both short-term and long-term highway improvements into the existing Four Corners community with a minimum of disruption to residents;
- adjusting traffic controls to discourage through traffic from using residential streets;
- improving transit services to satisfy community needs; and
- developing a pedestrian and bicycle network for recreation, and to provide alternatives to the automobile for short local trips.

Recommendations to achieve these objectives are discussed below.

PROPOSED HIGHWAY SYSTEM

During the development of the Four Corners Sector Plan, staff analyzed transportation alternatives designed to improve traffic circulation in the area. The analysis evaluated existing and forecast travel conditions, intersection capacity, roadway geometrics, field observations, discussions with the community, and the potential traffic impacts of the 43-acre undeveloped "Kay Tract." Additional data were obtained from County and State transportation agencies.

Staff developed traffic improvement alternatives designed to alleviate current congestion and accommodate projected travel demand. These alternatives also examined the potential community impacts resulting from these improvements. The less expensive improvements are short-term recommendations; the more expensive and operationally complex improvements are long-term projects. Improvements focusing on enhanced transit service and ridesharing are also recommended. Most of the proposed improvements would improve travel conditions on US 29 so that forecast traffic volumes can be accommodated. Volumes on US 29 are expected to increase from the current 40,000 vehicles per day to 60,000 by 1995. Short-term and long-term improvements are discussed below.

Short-Term Improvements

The short-term improvements (Figure 10) are intended to address problems such as the following:

- "cut-through" traffic from commuters using residential streets to bypass congested intersections;

- access control complicated by excessive and unsafe turning movements caused by frequent curb-cuts, inadequate driveway geometrics, and poor on-site circulation; and

- inadequate intersection capacity at the Colesville Road/University Boulevard intersection due, in part, to high peak-hour through and turning volumes.

Most of the proposed short-term improvements could be implemented quickly with a minimum of disruption to traffic operations and to the Four Corners community. The Sector Plan recommends the following:

- Eliminate "Cut-through" Traffic

  One component of the high daily volumes on US 29 is substantial morning and evening peak-hour approach volumes at University Boulevard. The consequent poor level of service at the intersection results in substantial queues and travel delays, which encourage commuters to divert to residential streets in search of less congested routes. Right turn restrictions from US 29 during the morning peak period are recommended at Southwood Avenue, Lorain Avenue, and Timberwood Avenue to solve this problem. The Sector Plan does not recommend internal one-way streets to solve this problem. One-way streets would impose a 24-hour, seven-days-a-week inconvenience on residents of this area, in order to control a traffic situation that takes place only during the peak period.

- Access Control

  A plan for consolidation of access requires a more detailed study by the State Highway Administration to develop a comprehensive access management program. Such a study should include evaluations of engineering feasibility, operational effectiveness, and economic viability and should result in detailed recommendations for specific locations. In advance of the study, however, it is possible to identify locations where access management techniques should be applied. The techniques are intended to accomplish the following:

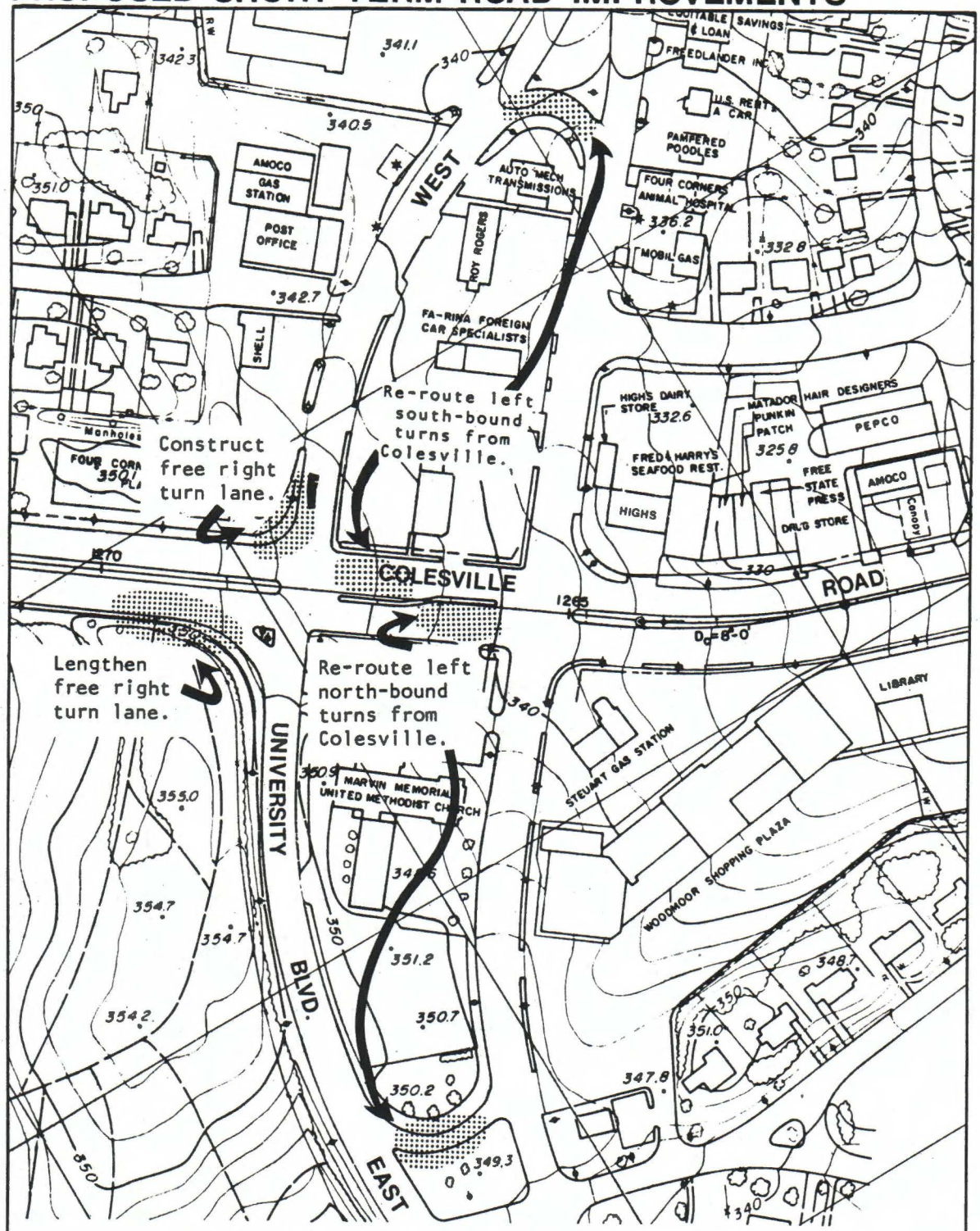
  - reduce the number of conflict points by consolidating access for adjacent properties, modifying the operations of driveways, and installing regulatory and directional signs;

  - remove turning volumes of queues from sections of through lanes; and

  - improve substandard driveways to allow for safer, more efficient entry and exit of vehicles.

Access control in the northeast quadrant of the Colesville Road/University Boulevard intersection (at the Woodmoor Shopping Center) will significantly improve traffic operations. The numerous driveways on Colesville Road allow turning movements that result in reduced capacity and unsafe conditions. For example, field observations indicate that vehicle queues at gas pumps at the gas station in the Woodmoor Shopping Center spill back onto Colesville Road, impeding traffic. Other vehicles, entering and exiting the shopping center, further impede through movement on Colesville Road. Some access

PROPOSED SHORT-TERM ROAD IMPROVEMENTS



The base map was provided by the Maryland Department of Transportation/State Highway Administration.

Four Corners Sector Plan

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points should be eliminated and internal circulation and parking at the shopping center should be modified.

The westbound segment of University Boulevard (west of Colesville Road) contains an excessive number of driveways which provide access to a variety of uses: convenience stores, fast food restaurants, gas stations, and automotive repair shops. To the extent possible, a service drive should be constructed that will permit access to these uses.

Finally, eastbound University Boulevard, near the Post Office, contains driveways with inadequate turning radii. This results in extremely poor access to the Post Office and results in a through lane being used for storage of vehicles making right turns. Reconstruction of this driveway, incorporating a concrete island to channelize turning movements, would rectify this problem. Proposed access management measures are indicated on Figure 11. The Street and Highway Plan is shown on Figure 12.

- Increase Intersection Capacity

  The following intersection improvements are recommended to reduce critical lane volumes and improve levels of service:

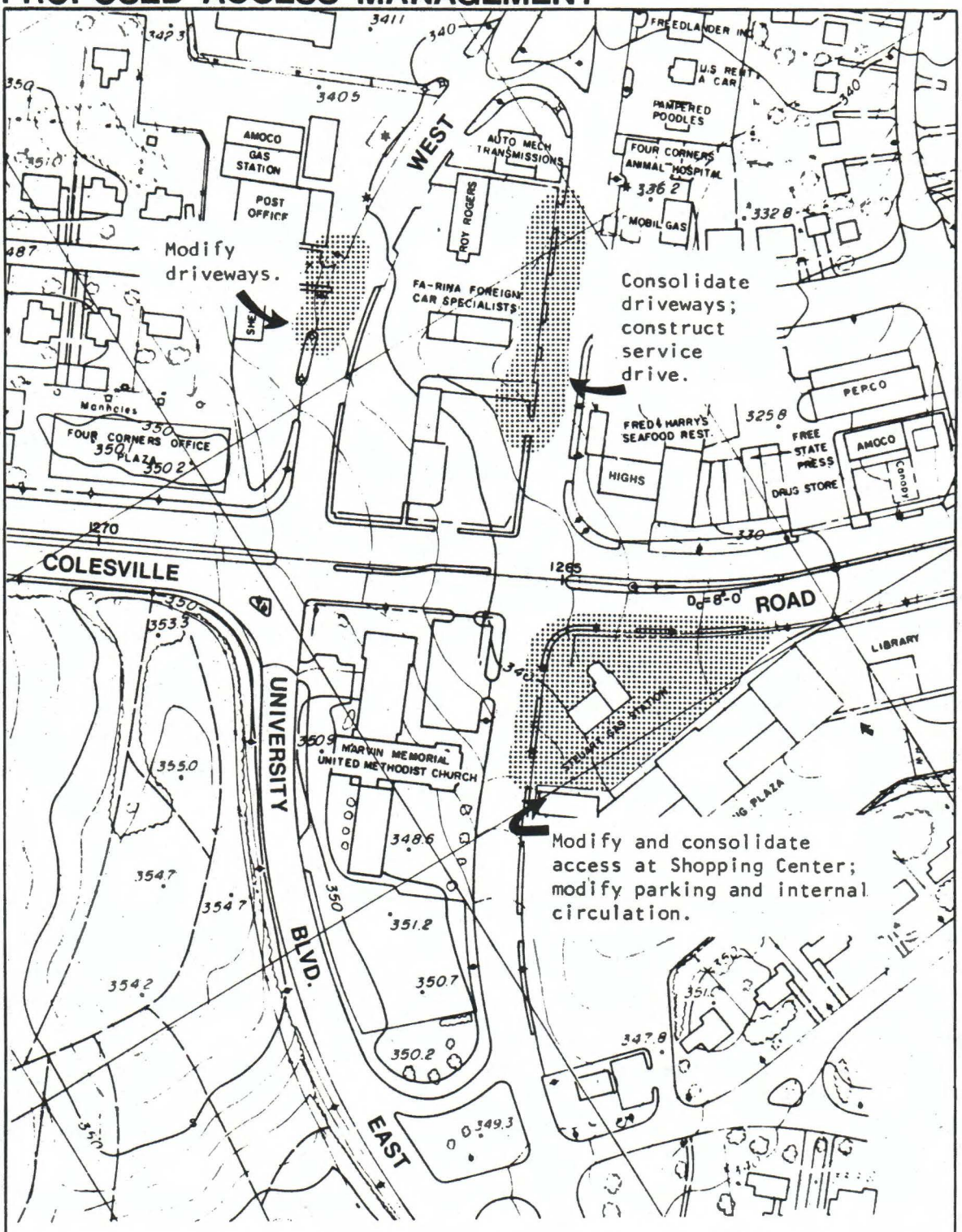
  - provide a free right-turn lane from eastbound University Boulevard to southbound Colesville Road;
  - lengthen the free right-turn lane from northbound Colesville Road to eastbound University Boulevard; and
  - relocate northbound and southbound left turns from Colesville Road onto University Boulevard by a right turn (onto University Boulevard), then a U-turn using the existing ramps on University Boulevard.

Long-Term Improvements

The major long-term improvement, currently under study by the Maryland State Highway Administration, is a grade separation that would carry Colesville Road under the east and westbound lanes of University Boulevard. A grade separation at this location has been under consideration for a number of years. The 1967 Kemp Mill-Four Corners Master Plan proposed an alternative which would have placed University Boulevard under Colesville Road. The alternative retained existing University Boulevard for local traffic and proposed a relocated University Boulevard to the south with an underpass at Colesville Road for through traffic. This proposal would have required extensive taking of existing commercial property and would have complicated any future development of the "Kay Tract."

A grade separation can be an effective way to accommodate large volumes of traffic safely and efficiently. The design of such a facility is dependent on many factors, however, including forecast travel demand, design speed, economic feasibility, terrain, available right-of-way, and impact on an existing community. The design of a grade separation for a developed area, such as Four Corners, becomes problematic given the limited right-of-way and location of existing businesses and residences adjacent to the road. Thus, a major issue is whether a grade separation can be designed in accordance with two basic criteria: provide adequate capacity for safe and efficient traffic

PROPOSED ACCESS MANAGEMENT



The base map was provided by the Maryland Department of Transportation / State Highway Administration.

Four Corners Sector Plan

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movement in a given design year, and design a cross section that can be integrated into the existing and proposed land use pattern with a minimum of disruption to the business and residential communities. The high monetary cost and community impacts of this type of improvement suggests weighing the end result against the means necessary to accomplish it.

The most quantitative justification for a grade separation would be a traffic volume warrant. However, a specific volume of traffic at an intersection cannot, in itself, justify a grade separation, although traffic volume is a useful guide. The high crossing volumes at Four Corners exceed the capacity of the existing at-grade intersection, resulting in extremely poor morning and evening peak-hour levels of service. Traffic forecasts indicate that this problem will get worse supporting the argument for a grade separation. It is questionable, however, whether forecasts adequately evaluate how other transportation improvements and land use changes may affect the need for a grade separation in the future. New cross-County roads and changes in employment locations, among other factors, can affect the distribution of travel and could reduce the need for a grade separation.

The Maryland State Highway Administration (SHA) is working on a project planning study for US Route 29 (Colesville Road) between Interstate Route 70 in Howard County and the Capital Beltway in Montgomery County. The Colesville Road/University Boulevard intersection is included in the study. The SHA is studying a number of alternatives for the intersection. Generally, these alternatives fall into three categories: "no build," Colesville Road underpass within the existing right-of-way, and Colesville Road underpass requiring additional right-of-way. These general alternatives are discussed below.

Also discussed is a fourth alternative which concentrates on high occupancy vehicle (HOV) lanes, transit, and paratransit rather than extensive road reconstruction. This alternative is consistent with current County policy for the Route 29 corridor which emphasizes alternatives to the automobile including public transit, ridesharing, carpooling, and vanpooling. The State should include an HOV/transit/paratransit alternative in its US 29 project planning study.

"No Build"

The first alternative, basically a "no build" approach, envisions no improvements to the intersection beyond those short-term improvements recommended in the Sector Plan. Thus, with no substantial increase in intersection capacity, level of service can be expected to remain poor, especially since traffic volumes are expected to increase. Average daily traffic volumes on US 29 are forecast to increase by approximately 50 percent by 1995, with volumes on Colesville Road north of University Boulevard estimated to be nearly 60,000 vehicles per day (vpd), and volumes on University Boulevard estimated to exceed 50,000 vpd.[1] With no increase in intersection capacity, vehicle delay is likely to increase and commuters may seek alternate routes, or spreading of the peak period may occur if commuters adjust their time of travel to work.

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1 Source of information: Montgomery County Department of Transportation.

Colesville Road Underpass Within the Existing Right-of-Way

The second general alternative proposes the construction of a grade-separated interchange within the existing right-of-way. One-way frontage roads cantilevered over the depressed roadway wide enough for two lanes of traffic would provide access to existing land uses. The frontage roads would also be used to accommodate vehicles turning onto University Boulevard or onto I-495 (Capital Beltway). This approach would minimize long-term disruption of the business and residential communities, although short-term inconvenience would occur during construction. A major shortcoming of this proposal is that it may not provide sufficient capacity for long-term traffic needs. The possibility of not providing needed future capacity must be weighed against the high cost of any underpass and the physical disruption that will take place during construction. In addition, access from US 29 to certain local streets such as Timberwood Avenue and Lanark Way would have to be modified or eliminated. Existing travel patterns within the residential communities may be significantly altered.

Colesville Road Underpass Requiring Additional Right-of-Way

The third general alternative proposes a grade separation with a wider cross section (that is, more lanes) perhaps incorporating a reversible High Occupancy Vehicle (HOV) lane. This design would require additional right-of-way and could require the removal of existing businesses and houses along Colesville Road. This proposal would provide adequate capacity for projected traffic in the design year 2010. It would also have a direct and substantial impact on the existing Four Corners community by removing both businesses and housing.

HOV Lanes/Transit/Paratransit

A fourth alternative emphasizes high occupancy vehicle (HOV) lanes, transit, and paratransit. This alternative has the potential to accommodate travel demand while providing flexibility, lower capital cost, and less physical disruption in a manner that is consistent with existing public policy.

Preliminary forecasts by both the State and County indicate the need for additional travel lanes throughout the US 29 Corridor. In the older established communities, the ability to satisfy projected travel demand by constructing additional lanes on US 29 is limited by the pattern of existing development. This significant constraint may dictate a solution that would increase the person-carrying capacity of the corridor while minimizing both capital costs and community impact.

Provision of adequate fringe parking facilities (as recommended in the Eastern Montgomery County Master Plan) together with a priority HOV treatment, expansion of bus service, and marketing of ridesharing, could provide a flexible, easily staged, and relatively low-cost transportation improvement. Specific travel time reductions will depend on the final operational and geometric features of the facility. This alternative has the potential of being a flexible solution that would provide benefits to commuters without significantly disrupting the Four Corners community.

One way to accomplish this would be to provide a structural improvement - "queue jumper,"[2] bypass facility, or transitway - that would enable HOV's to bypass the Four Corners bottleneck during peak periods. This type of facility must be designed to allow priority vehicles to enter the facility prior to the point of major queuing and then re-enter the through lanes at an appropriate location downstream. One or two travel lanes for HOV's, with adequate shoulders to accommodate disabled vehicles, would be desirable. This lane (or lanes) would be constructed in the median of Colesville Road, and then could proceed as a depressed section at the University Boulevard intersection. The facility could begin south of Northwest Branch and terminate below I-495. This alternative presents operational questions that will require a more detailed feasibility analysis. However, this type of improvement would reduce travel time and increase travel reliability for users of public transportation, carpools, and vanpools. If successful, it would result in shifts to transit and ridesharing, which maximizes "person flow." The magnitude of the shift to transit and ridesharing and the effect of this on levels of service at the critical intersections should be analyzed, along with operational questions.

Any alternative studied by the SHA for the Colesville Road/University Boulevard intersection must be sensitive to the Four Corners and Silver Spring communities. An alternative should not function as a barrier, disrupting local access and circulation. Convenient and safe access must be provided to businesses and residences fronting on Colesville Road. Movement of vehicles and pedestrians among the communities that surround the intersection must be provided. Pedestrian crossings to connect the various shopping areas in Four Corners (existing and proposed) are particularly important and must be carefully planned.

In the event that a Colesville Road underpass is recommended by the SHA, it is possible that the current Four Corners "bottleneck" will be displaced farther south to Colesville Road intersections with Sligo Creek Parkway, Dale Drive, and Spring Street. The relocation of traffic congestion to these intersections would have undesirable impacts on communities south of the Capital Beltway. The SHA US 29 study should thoroughly evaluate this potential problem.

A Colesville Road underpass would be very costly, disruptive both during and after construction, and may not be flexible enough to respond to changing transportation and land use patterns in the future. Examples of changing transportation and land use that may have implications with regard to the Route 29 corridor and improvements to Colesville Road include new cross-county roads, continued development of employment in various locations in the County, displacement of the Four Corners "bottleneck" to another location in Silver Spring, and the effect of Transportation Systems Management initiatives on traffic operations on US 29. Many of these questions may be answered when the State Highway Administration releases its study on the US 29 Corridor.

PROPOSED TRANSIT SYSTEM

Although Metrorail service is not planned for the Four Corners/US 29 corridor, Colesville Road is considered to be the eastern primary service area boundary for the Forest Glen Metro station. This station will be located approximately two miles west of Four Corners.

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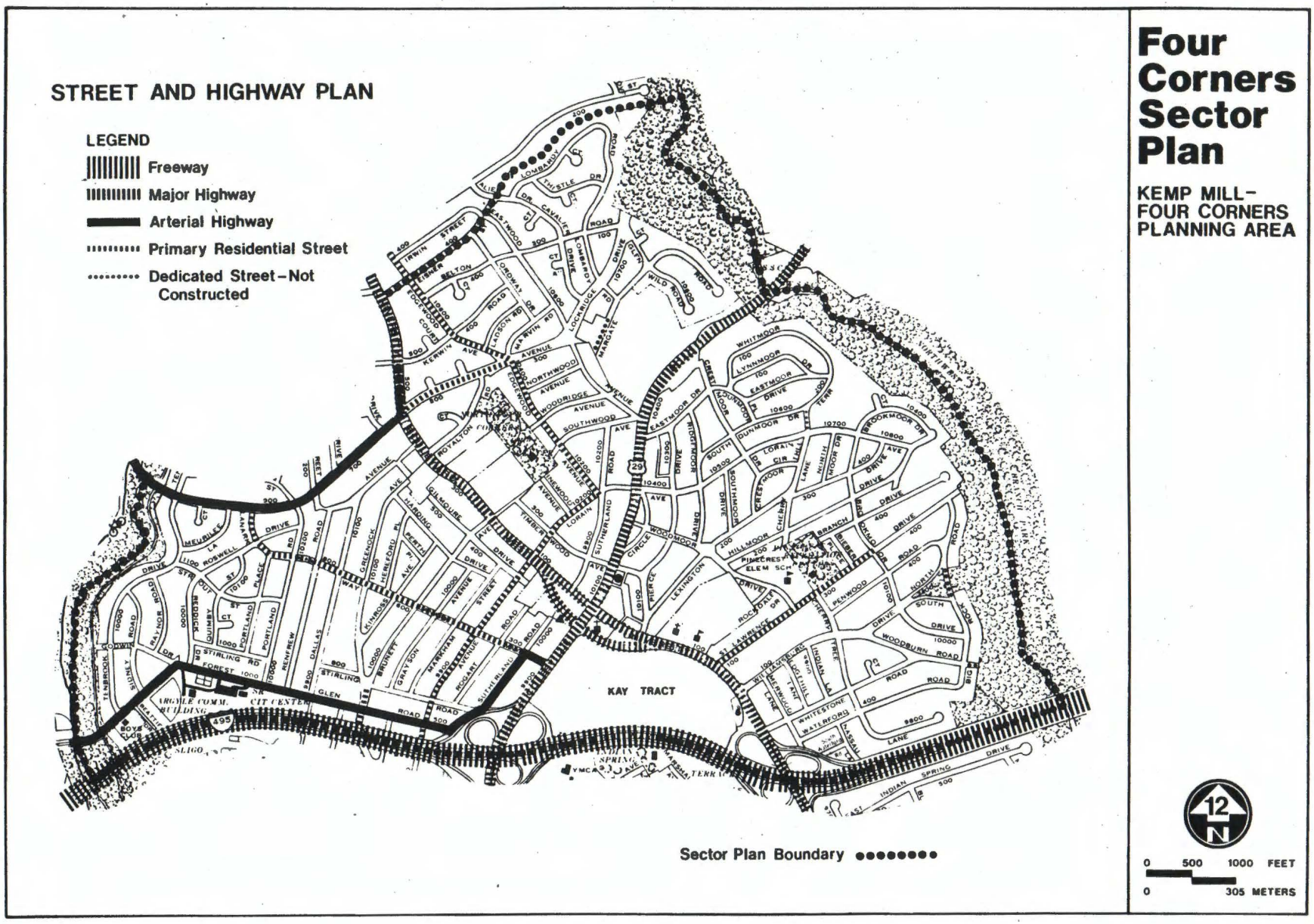
2 A queue jumper would give priority to one or more lanes of traffic.


STREET AND HIGHWAY PLAN
LEGEND
Freeway
Major Highway
Arterial Highway
Primary Residential Street
Dedicated Street – Not Constructed
KAY TRACT
Sector Plan Boundary
Four Corners Sector Plan
KEMP MILL–FOUR CORNERS PLANNING AREA
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The Forest Glen Metro Station, scheduled to open in 1989, is to be located on Forest Glen Road, a short distance west of Georgia Avenue. Station surface facilities, according to plans developed by the Washington Metropolitan Area Transit Authority and approved by the Montgomery County Council, include 5 bus bays, 20 bicycle storage racks, 45 kiss-'n'-ride spaces, and approximately 500 park-'n'-ride spaces. The station platform will be located 200 feet beneath the intersection of Georgia Avenue and Forest Glen Road. A high speed elevator system is included in the station design to transport patrons from the surface mezzanine to the platform (see Figure 7).

The primary service area of the Forest Glen Metro station extends from the Capital Beltway on the south to Plyers Mill Road on the north, and from Connecticut Avenue on the west to Colesville Road on the east. Ridership projections indicate that about 10,000 persons per day will enter the Metrorail system at this station, with more than 2,000 persons boarding during the morning peak hour. It is estimated that 13 percent of the peak hour boarding passengers will walk to the station, 70 percent will use the feeder bus system and 17 percent will use kiss-'n'-ride facilities. Kiss-'n'-ride trips to the station will primarily use Georgia Avenue from the north and Forest Glen Road from both the east and west. The park-'n'-ride facilities at the station, due to the projected demand and the number of spaces provided, are expected to be full before the start of the morning peak hour. Metrorail service is currently available in Silver Spring. The Four Corners community can conveniently reach this station by Metrobus Routes "C" and "Z" and Ride-On Routes "8," "9," "10," "19," and "22."

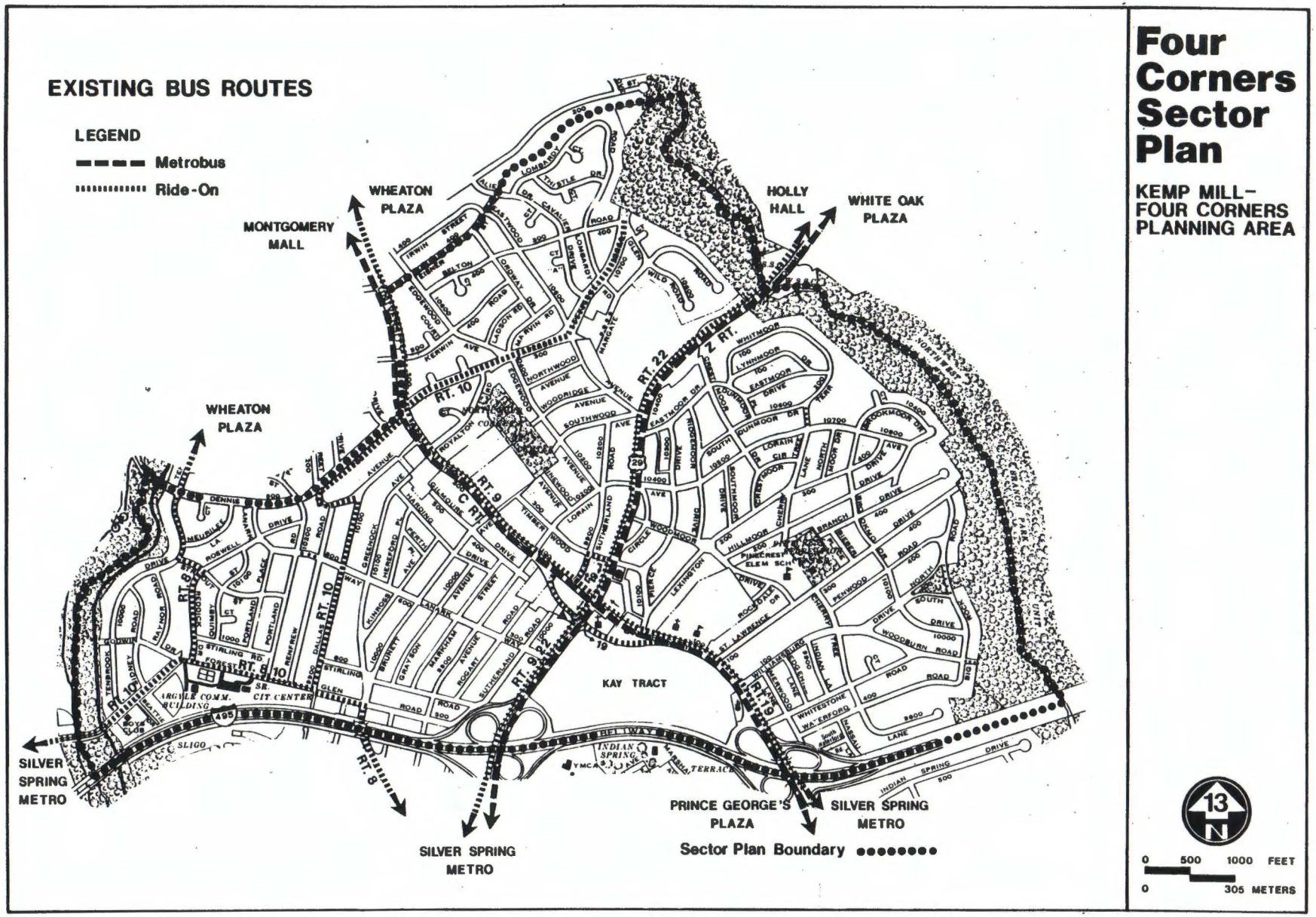
In conjunction with the opening of each phase of Metrorail, the bus system will be restructured to complement and supplement the service provided by the rapid rail system. Existing bus routes are shown on Figure 13. Restructuring of these routes should consider the following guidelines:

- increase residential area service by using Ride-On vehicles on arterial streets;
- provide a choice of destination (e.g. Forest Glen or Silver Spring METRO stations);
- provide frequent peak service;
- locate bus stops to minimize the impact on traffic operations; and
- provide bus shelters at heavily used bus stops.

PROPOSED PEDESTRIAN AND BICYCLE SYSTEM

Walking and bicycling have long been recognized as desirable travel modes. Unfortunately, in the Four Corners community, walking and bicycling are difficult due to the lack of sidewalks and shoulders. Staff, together with members of the community, have developed a proposed network of bike and pedestrian ways to meet many of the varied needs of the area.

These bicycle network proposals incorporate the existing bicycle system, a proposed network identified by the Commission's Master Plan of Bikeways (July 1978), and the suggested network identified by the Montgomery County Department of Transportation's Bicycling Routes in Lower Montgomery County (Spring, 1980).


EXISTING BUS ROUTES
LEGEND
Metrobus
Ride-On
WHEATON PLAZA
MONTGOMERY MALL
HOLLY HALL
WHITE OAK PLAZA
WHEATON PLAZA
SILVER SPRING METRO
SILVER SPRING METRO
PRINCE GEORGE'S PLAZA
SILVER SPRING METRO
KAY TRACT
Sector Plan Boundary
Four Corners Sector Plan
KEMP MILL–FOUR CORNERS PLANNING AREA
0 500 1000 FEET
0 305 METERS

The Master Plan of Bikeways sets forth the following criteria for bikeway planning:

- Continuity: Bikeways should be developed as part of the continuous County-wide system, providing connections to adjacent jurisdictions.
- Access: Bikeways should be located to provide convenient access to serve residential areas, shopping centers, schools, and recreation centers where bicycle usage is anticipated. Bicycle parking facilities should be provided where needed as integral components of the bikeway system.
- Safety: Bikeways should be located to provide protection for cyclists by minimizing conflicts with pedestrians and motor vehicles.
- Purpose: Bikeways should be developed to serve the variety of trip purposes and the age and skill levels of the users.

These criteria were used during the development of the bikeway plan for the study area. Figure 14 presents the proposed bikeway system for the Sector Plan Area, and illustrates its relation to the Master Plan of Bikeways. The proposed bikeway system is intended to complement the existing system, as well as provide a linkage to the "Kay Tract." A trail serving the "Kay Tract" should be constructed as a Class I facility,[3] providing the highest bikeway standard. Construction of the proposed trail will provide a loop around the community, giving cyclists access to retail and residential uses in any of the four quadrants.

The proposed pedestrian system incorporates existing sidewalks and recommends that missing sidewalks in the network be constructed as part of the County's sidewalk improvement program. In addition, the Colesville Road and University Boulevard sidewalks should be widened and landscaped to provide a more pleasant pedestrian environment in this area of high vehicular activity. (See Urban Design Study for details.)

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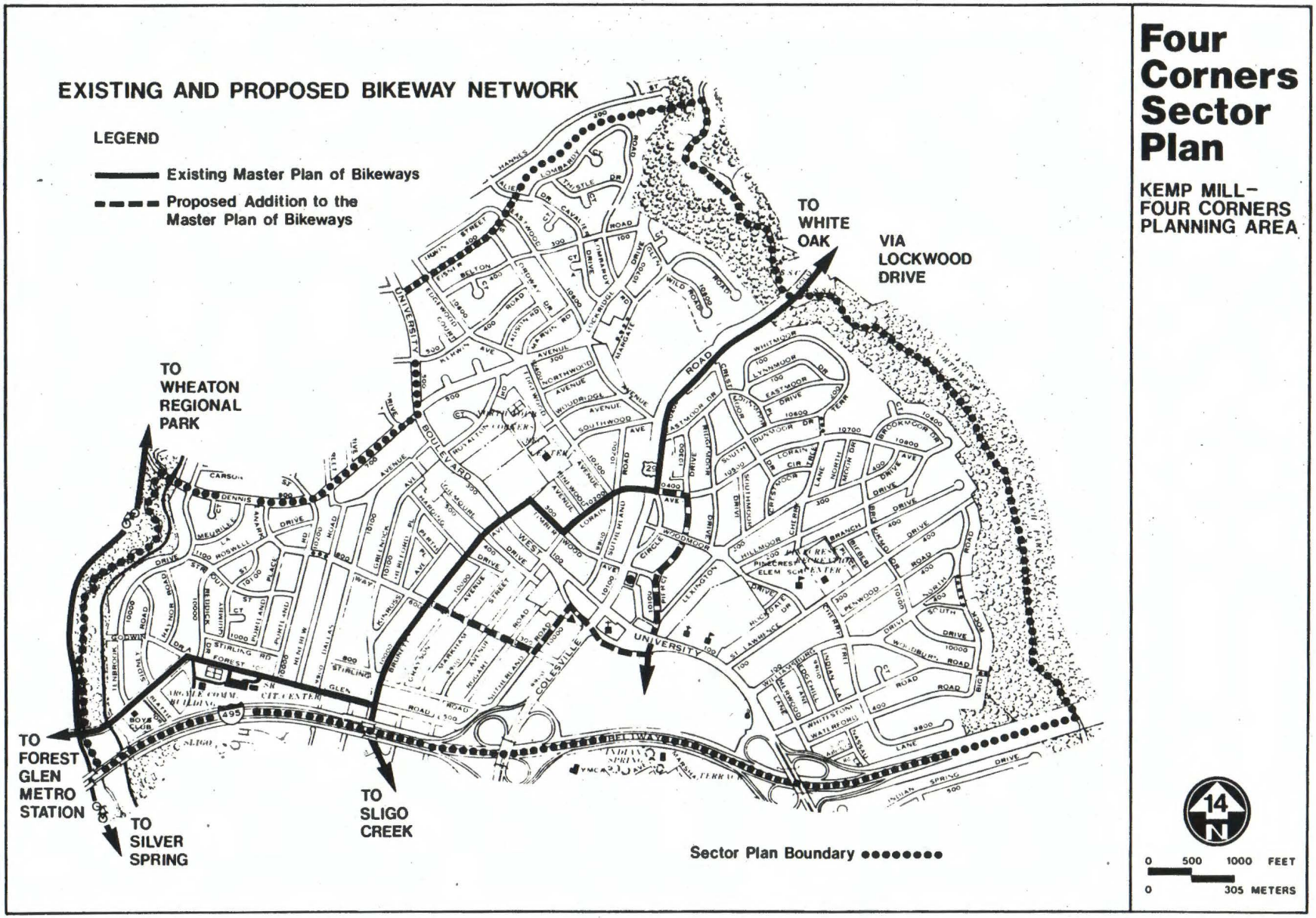
3 Bikeway classifications are defined as follows:

- Class I - bike path/trail -- An independent bikeway on a separate right-of-way or easement (combined with a pedestrian walkway where suitable).
- Class II - bike lane -- A restricted lane on a roadway designated by painted stripes and signed for the exclusive or semi-exclusive use of bicycles.
- Class III - bike route -- A roadway shared by motor vehicles, bicycles, and/or pedestrians and designated by signing only.


EXISTING AND PROPOSED BIKEWAY NETWORK
LEGEND
Existing Master Plan of Bikeways
Proposed Addition to the Master Plan of Bikeways
TO WHITE OAK VIA LOCKWOOD DRIVE
TO WHEATON REGIONAL PARK
TO FOREST GLEN METRO STATION
TO SILVER SPRING
TO SLIGO CREEK
Sector Plan Boundary
Four Corners Sector Plan
KEMP MILL–FOUR CORNERS PLANNING AREA
14
N
0 500 1000 FEET
0 305 METERS

COMMUNITY FACILITIES PLAN

Many of the older parts of Montgomery County came to full bloom in a period of rapid growth, unlimited resources, and high optimism. The period of the 50's and 60's were dominated by the problems of "more" -- more house, more people, more children crowding more schools, and more parks and swimming pools. There seemed to be no limit to the new roads, schools, parks, and government programs. Structures, roads, and programs were planned to be "oversized." Something to grow into.

In the last decade, parts of Montgomery County have undergone a dramatic change. Residents have become older, have fewer children, have smaller families, and are more heterogenous than in the 50's and 60's. Signs point to areas of the County that are suddenly up against problems of "less" -- less population growth, less housing, fewer schools and parks, and fewer tax dollars for government programs begun at a time when there was "more."

Many of these changes will require a rethinking of priorities in how we spend our tax dollars. As households age and composition changes, so will the types of facilities and services demanded. Schools and playgrounds may become less important to a major segment of the population. Changes in household composition may require the adaption of public structures for new uses such as conversion of school buildings to facilities for the elderly.

Changes in the population will also require the reordering of priorities in the delivery of public services. Parks and recreation may lose "dollars" to senior centers, adult day care, and home-delivered meals. Maintaining existing parks may become more important than building new ones. The public may have to "pay" to use facilities that they had previously come to think of as "free."

COMMUNITY FACILITIES

A necessary part of the land use in the Four Corners Sector Plan area is the array of community facilities provided to the residents of the area. Community facilities such as parks, recreation, schools, fire and police stations, libraries, and other government buildings, are a major element in a community's ability to provide its residents with a desirable "quality of life."

In an area such as Four Corners, which is predominantly built-up and which already has a range of community services, the Sector Plan is primarily concerned with the following:

- provision of expanded facilities in parts of the Sector Plan area that are deficient;
- provision of new facilities to service new growth;
- re-design of facilities that are obsolete or unable to meet future current and demands; and
- broadening of the range of facilities and services provided to meet the demands of a varied population.

PUBLIC SCHOOLS

Like much of the down-County area, Four Corners has experienced a declining enrollment in its schools. Four Corners Elementary School, on University Boulevard, has been closed. Proposed new residential development has a potential to provide approximately 200 additional dwelling units within the Sector Plan area during the sector planning period. Additional students from new development will be accommodated within the existing schools and student assignment policy arrangements.

PUBLIC SAFETY

Fire and rescue services are provided to the Four Corners area by the Silver Spring Fire Department and the Wheaton Rescue Squad. The nearest fire station is located on University Boulevard, opposite Williamsburg Drive. Rescue service operates from both Silver Spring and Wheaton.

Police protection is provided by the Silver Spring District Station for Montgomery County Police which is located at 801 Sligo Avenue in Silver Spring.

LIBRARY

The Four Corners Library, on Colesville Road and Pierce Place (in the Woodmoor Shopping Center), provides library service to the Four Corners community. The library is heavily used by residents of Four Corners and in conjunction with its traditional role, provides a "meeting place" for the community. Additional service is provided by such regional facilities as the Silver Spring Library on Colesville Road, the White Oak Library on New Hampshire Avenue, and the newly renovated Wheaton Library on Georgia Avenue and Arcola Avenue. While these regional facilities are not within walking distance of the Four Corners area, bus service is available and all have convenient parking.

POST OFFICE FACILITIES

Postal services are available at the Four Corners Post Office on University Boulevard. Access and parking functions poorly and contributes to traffic problems on University Boulevard. The Urban Design Study (Appendix 2) recommends both vehicular and pedestrian improvements for this site.

COMMUNITY SERVICE CENTER

The Wheaton Community Service Center is located on Reedie Drive, west of Georgia Avenue. The Center is designed to serve an area generally from the Beltway to Aspen Hill and between Rock Creek and Northwest Branch. This structure houses the second of the County's decentralized service centers and is patterned after the successful facility in Silver Spring. The building contains approximately 29,000 square feet and provides a range of governmental services including information referral, complaint intake, basic health care, mental health services, general social services, and general governmental office space.

PARKS, RECREATION, AND OPEN SPACE

Open space in any community can serve a number of important functions. In addition to providing space for outdoor recreation, open space also makes the community a more attractive place in which to live. Most people desire some degree of natural beauty and a sense of spaciousness in their environment. While many homeowners are unable or unwilling to purchase large pieces of property, they are agreeable to sharing expenses (through taxes) to maintain publicly owned open land. Because open space can make the environment more attractive, it helps to enhance the value of private property.

Another function of open space is the preservation of natural and geologic resources. Stream channels, ponding and retention areas, steep slopes, and wetlands must be protected from the encroachment of future development. Finally, open space is a major component in the elimination of overcrowding of the residential environment. The desire of people to live where they can have some of the advantages of the country is one of the major pressures that has shaped the Silver Spring area over the years. The Four Corners community derives much of its existing character and attractiveness from its uncrowded character.

Park and recreation facilities serving Four Corners Sector Plan area residents are provided by public park and school facilities. Residents are served by facilities within the Four Corners Sector Plan area as well as facilities located in areas immediately adjacent to it.

Within two miles of the planning area are the following regional facilities:

- Sligo Creek and Rock Creek Parks are linear stream valley parks. Sligo Creek Park has a large number of recreation facilities. Both parks have hiker/biker trails.

- Sligo Park Public Golf Course is a 9-hole course adjacent to Sligo Creek Stream Valley Park at Forest Glen Road.

- Wheaton Regional Park has extensive picnic and recreational facilities including the Wheaton Ice Rink, the Wheaton Tennis Bubble, a miniature train, a carousel, and "Old McDonald's Farm."

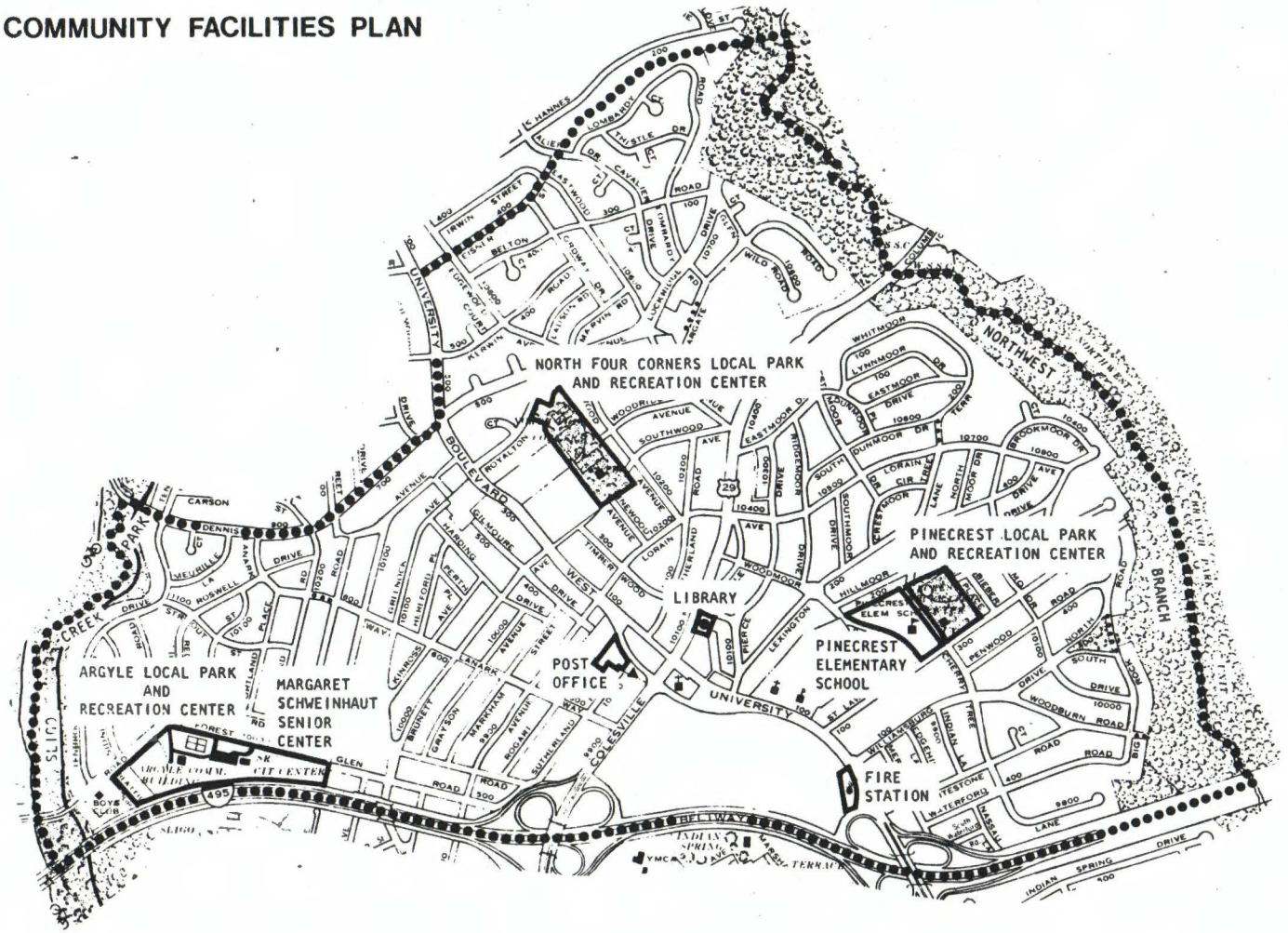
Passive recreation is provided primarily by both Northwest Branch and Sligo Creek Stream Valley Parks. Northwest Branch is predominantly undeveloped except for an unpaved hiker/biker trail. In Sligo Creek, adjacent to the Sector Plan area, there is a paved hiker/biker path, picnic areas, and two developed local use parks. (Forest Grove Neighborhood Park and Sligo/Dennis Avenue Local Park.)

Within the Sector Plan area, local parks provide active recreation opportunities. The local parks contain a variety of recreation facilities: from picnic and playground areas to courts and ballfields. In the Four Corners area, there are six existing local use parks which include four small recreation center buildings used for a variety of activities. These activities range from nursery schools, senior lunch programs, and summer recreation program centers to various types of recreation classes. No park acquisition or construction is proposed in the area over the next six years.

Four Corners Sector Plan

KEMP MILL–
FOUR CORNERS
PLANNING AREA

COMMUNITY FACILITIES PLAN



Sector Plan Boundary ●●●●●●●●

15 N

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0 305 METERS

The need for future local park facilities was estimated in the 1982 Park, Recreation, and Open Space Plan Update. Projections indicate that no additional tennis courts or ballfields will be needed by 1990 for the Sector Plan area. Existing facilities now available to the Four Corners Sector Plan area residents are: 4 recreation buildings, play equipment, 6 basketball courts with 3 lighted, 1 basketball practice court, 1 baseball field, 2 softball fields, 2 football/ soccer overlays, 1 playfield, 8 tennis courts with 2 lighted, picnic areas, parking, and hiker/biker trails.

Most of the existing parks were built years ago and some are in need of rehabilitation. Argyle Local Park is in particular need of renovation, and specific recommendations regarding needed park improvements at this park will be made by this summer. Improvements may include new play equipment, repair of recreation building patio, improvements to tennis and basketball courts, sitting areas, and landscaping.

PARK AND RECREATION FACILITIES

	Acreage	Existing Facilities
LOCAL USE PARKS Developed and/or Proposed Development		
- Argyle Local	17.0	Recreation building, play equipment, basketball court, baseball field, tennis courts, football/soccer overlay, picnic area, parking.
- Forest Glen-Dallas Avenue Neighborhood*		Play equipment.
- Forest Grove Neighborhood**		Play equipment, basketball court, play field.
- North Four Corners Local	8.2	Recreation building, softball field, play equipment, 2 tennis courts, basketball court, football/soccer overlay, parking, hiker/biker trail.
- Pinecrest Local	5.6	Recreation building, play equipment, 2 tennis courts, softball field, basketball practice court, parking.
- Sligo-Dennis Avenue Local**		Recreation building, play equipment, play field, 3 lighted basketball courts, 2 lighted tennis courts, picnic area, parking.

* Acreage included in Argyle Local Park.
** Acreage included in Sligo Creek Stream Valley Park.

Additional recreation and community services are also available to the Four Corners community at the Silver Spring Boys and Girls Club and the Silver Spring YMCA. The Boys and Girls Club is located at Forest Glen Road and Sligo Creek Parkway. In addition to organized sports and leagues, the Club offers a range of leisure time activities.

The Silver Spring YMCA is located on Hastings Drive, south of the Capital Beltway. The YMCA provides a full range of recreation, sport, and fitness facilities and programs. It also provides child care programs, camps (both day and over-night), and youth services such as counseling and tutoring.

HUMAN SERVICES AND LAND USE ISSUES IN THE FOUR CORNERS COMMUNITY

The Four Corners community is a diverse one, in a geographic area which has experienced the growth and changes characteristic of the older parts of Montgomery County. The housing stock, consisting primarily of single-family detached homes, was built after the Second World War during a period of rapid growth. This development met the market requirements of the time and the common needs of a relatively homogenous population seeking suburban homes. Since the fifties, the Four Corners Community has experienced significant demographic and social changes. The average age of the population has increased due to increase in longevity, retention of homes after the children are gone, and fewer and later children of new, younger families. Household size has decreased due to divorce and smaller family sizes. The racial and ethnic composition of the population had broadened to include a larger percentage of both American-born and foreign-born minority groups. More women are working in the paid labor force outside the home.

Meeting the new needs generated by these demographic and social changes is crucial to the future stability and attractiveness of older communities in Montgomery County. This chapter examines the change in needs of the Four Corners Community in terms of the traditional sector plan elements, housing, transportation, and community facilities. Special emphasis is given to the facility and service needs of the very young and the very old. While they do not represent the full spectrum of human service needs in the area, they are emphasized in this plan because it is is possible to identify significant shifts in these demographic groups and because there are specific land use and structural changes that can be made in response to their needs.

Demand for services for the elderly can be expected to grow among homeowners who are becoming the "frail" elderly[1] in post-war suburbs such as Four Corners. Demand can also be expected to grow among young parents who are recycling into post-war suburbs; increasing numbers are two-career households or single parents -- both groups needing day care for their children. The degree to which the Four Corners area and other similar areas face this dual demand for new services is indicated by some statistics from Holy Cross Hospital, which is immediately adjacent to the planning area. In 1983, Holy Cross had the second highest number of admissions of elderly in the state, and also the second highest number of live births.

HOUSING

The housing stock in the Four Corners area was designed primarily to meet the privacy needs of a nuclear family. The elderly were not a major component in the suburban population when this housing stock was built. They now represent one of the major groups needing to be accommodated as the average age in the community continues to increase.

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1 The term frail elderly refers to people who are still in good health but at an age where they are susceptible to rapid changes in their health, and are less physically able. The number of people aged 75 and over is generally taken as an index of the number of frail elderly. All people over 75 are not frail.

There will be growth in frail elderly homeowners in the Four Corners area as the area's initial postwar occupants of about forty years ago reach their seventies and eighties. During the decade 1970 to 1980, there was a rapid growth in the elderly in the 65-74 age group, and somewhat lower rates of growth in the 55-64 age group. That wave of people will continue to age, and the decade from 1980 to 1990 will see a large growth in people over age 75. The increase of the 65-74 age group in the Four Corners area between 1970 and 1980 was 96 percent. That rate of increase suggests that the 75 and over population may double during the current decade. In 1980, 382 people, or 3 percent of the population of the Census tracts wholly or partially included in the Four Corners area, were 75 and over.

The housing choices of the elderly are influenced by affordability, a loss of physical stamina which may affect the ability to maintain a single family home, and a desire to maintain their social and community support system in the face of ongoing losses in their circle of friends due to death. For many elderly homeowners, even if they are willing to sever neighborhood ties, the cost of alternative housing arrangements is or appears to be overwhelming in proportion to increased services. The data and the experience of the Department of Family Resources suggests that the number of frail elderly living in single-family homes will continue to increase, and many of these will be living alone.

Other factors influencing changes in the use of the housing stock in the Four Corners area are the entry of women into the paid labor force and the increasing number of single parent families. The proximity of the area to job markets and the existence of stable communities encourages the entry of younger families as the housing recycles. These new families will affect the demand on public schools and will incrase the need for child day care facilities. The availability of public school capacity and of child care facilities will have a distinct effect on the continued viability and stability of the single-family communities.

Finally, the original development of housing in the Four Corners area did not address the shelter needs of groups with special requirements including the chronically mentally ill and the handicapped. Whereas these needs were frequently accommodated in an institutionalized setting in the fifties, recent state and federal legislation and Court rulings have required that these individuals be cared for in the least restrictive environment, ideally home communities.

The primary land use need of disabled people is for housing. Group homes and apartments are effective and efficient means for meeting housing needs. As described in the Department of Family Resources 1985 Update of Group Home Needs and Resources, group homes serve anyone who, "... because of emotional, mental, familial, or social differences, has a need for supervision or assisted community living ..."

The "Update" on group homes goes on to define four categories of group homes which are in greatest need. The categories are homes for the mentally retarded/developmentally disabled, the mentally ill, the multiple handicapped, and the elderly.

There are currently within the Four Corners area homes for the mentally ill and the mentally retarded/developmentally disabled.

While the occasional controversy over these homes makes it inadvisable to detail locations or numbers, it is significant that as with the other 88 homes in the County in 1985, the ones in the Four Corners area apparently go essentially unnoticed. It is sufficient to state that the number of homes in the Four Corners area does not indicate an over concentration in the area. It should also be noted that the Four Corners area has relatively good public transportation, particularly to Silver Spring where there are job opportunities appropriate for the developmentally disabled.

One further point should be made. In 1986, there were not any group homes for the elderly in the Four Corners area. Given the statistics given earlier, it would seem to be an appropriate area for such homes. Group homes for the elderly will offer at least some elderly an alternative, especially in their own neighborhoods.

Given the increasing variety of housing needs of residents in Four Corners, tools must be found to allow for more flexible uses of the single-family home without threatening the stability of single-family neighborhoods. The greatest resource in Four Corners is the existing single-family housing stock. In the short term, tools which allow for modifications and alterations to the single-family home will have the most immediate use. In the long term, tools to encourage development of housing that may have multiple uses over its lifetime and to address eventual redevelopment of the single-family housing stock also need to be developed.

Shared housing and accessory apartments can provide income, services, and human contact for older persons and also provide needed housing opportunities for young families, especially single parent families. In the Four Corners neighborhood, however, use of the accessory apartment ordinance is limited since a minimum lot size of 7,500 square feet is required to apply for an accessory apartment use. Further experience with accessory apartments may indicate the possibility of modifying it to accommodate accessory apartment uses in Four Corners while still maintaining the stability of the neighborhood.

Another use of the existing housing stock to meet these human needs may be the adaptation of single-family houses for day care services for the elderly as well as for children. Much of the County's present child day care service is now being provided in single-fmaily homes, and this appears to be a distinct possibility to provide services for the frail elderly while enabling them to stay in their homes and communities.

TRANSPORTATION

An increase in transportation needs has paralleled the differentiation of shelter needs. A neighborhood designed on the assumptions of easy access to either an automobile or to a driver limits the mobility of the elderly, children, the handicapped, those who cannot afford cars, and others. Transportation systems keyed to a home-to-work trip for a head of household fail to provide for trips by other family members for other equally valid purposes such as day care, food shopping, volunteer work, social meetings and others.

The continued livability of communities such as Four Corners depends in part on the County's ability to plan for and meet a range of transportation needs. In the case of the existing housing stock in the Four Corners community, the mobility problems created by the dependence on the automobile may only be solved by increasing the amount and type

of transportation services available. The initiation of the Ride-On bus program was an early recognition that transit service must extend into the neighborhoods. Paratransit solutions being developed in response to road congestion problems experienced by the commuter must also be evaluated in terms of applicability to neighborhood service.

Beyond additional transportation services, zoning must be evaluated in terms of an adequate land use mix that provides needed neighborhood services easily accessible by a range of transportation modes and not just the automobile The finding required for a special exception for elderly housing that the housing be located so as to be accessible to transit needs to be broadened for other special exceptions that serve populations with special transportation requirements.

COMMUNITY FACILITIES

Community facilities offer another opportunity to respond to the changing service needs of the Four Corners community. As noted in the Community Facilities Plan "as households age and composition changes, so will the types of facilities and services demanded. Schools and playgrounds may become less important to a major segment of the population. Changes in household composition may require the adaptation of public structures for new uses such as conversion of school buildings to facilities for the elderly."

Community facilities provide a flexible, responsive tool which can be used in the short term to accommodate new human service needs. The development or redevelopment of community facilities, which is generally under the control of the government more than the private redevelopment of the housing stock, also offers the County the opportunity to lead by example. In the overall process of shaping the evolution of the Four Corners community to better reflect and accommodate its residents, public facilities will continue to be the County's front line response because they enable the County to provide services to special groups in a responsive fashion and also allow the County to develop examples of structures reflecting concepts which may eventually be used to regulate private development.

In particular, additional facilities are needed to provide housing for the elderly. The Key Tract offers an opportunity for such a facility, possibly in combination with a child day care facility. The former Four Corners Elementary School site is being developed for housing for the elderly. Other proposals for such facilities must be carefully reviewed to avoid adverse impact on existing neighborhoods.

ZONING PLAN

It is important to distinguish between the planning process and the zoning process. A sector plan may recommend the type and density of land use, or propose a specific zone as desirable for a particular area or for a particular tract of land. But the plan's land use recommendations can be implemented only through the zoning process, i.e., by a separate legislative act of the Montgomery County Council, which places the recommended zone or zones on the land.

The power to zone land is derived from the police powers of the State, and is delegated to the Montgomery County Council under the terms of the Regional District Act, a part of the Annotated Code of Maryland. Zoning is a legislative action which can be taken only by the County Council. It involves the imposition of specified conditions regulating the development and use of a particular parcel or parcels of land. The Montgomery County Zoning Ordinance, adopted by the County Council, defines and describes various zones which can be applied and specifies detailed procedures governing a change of zoning.

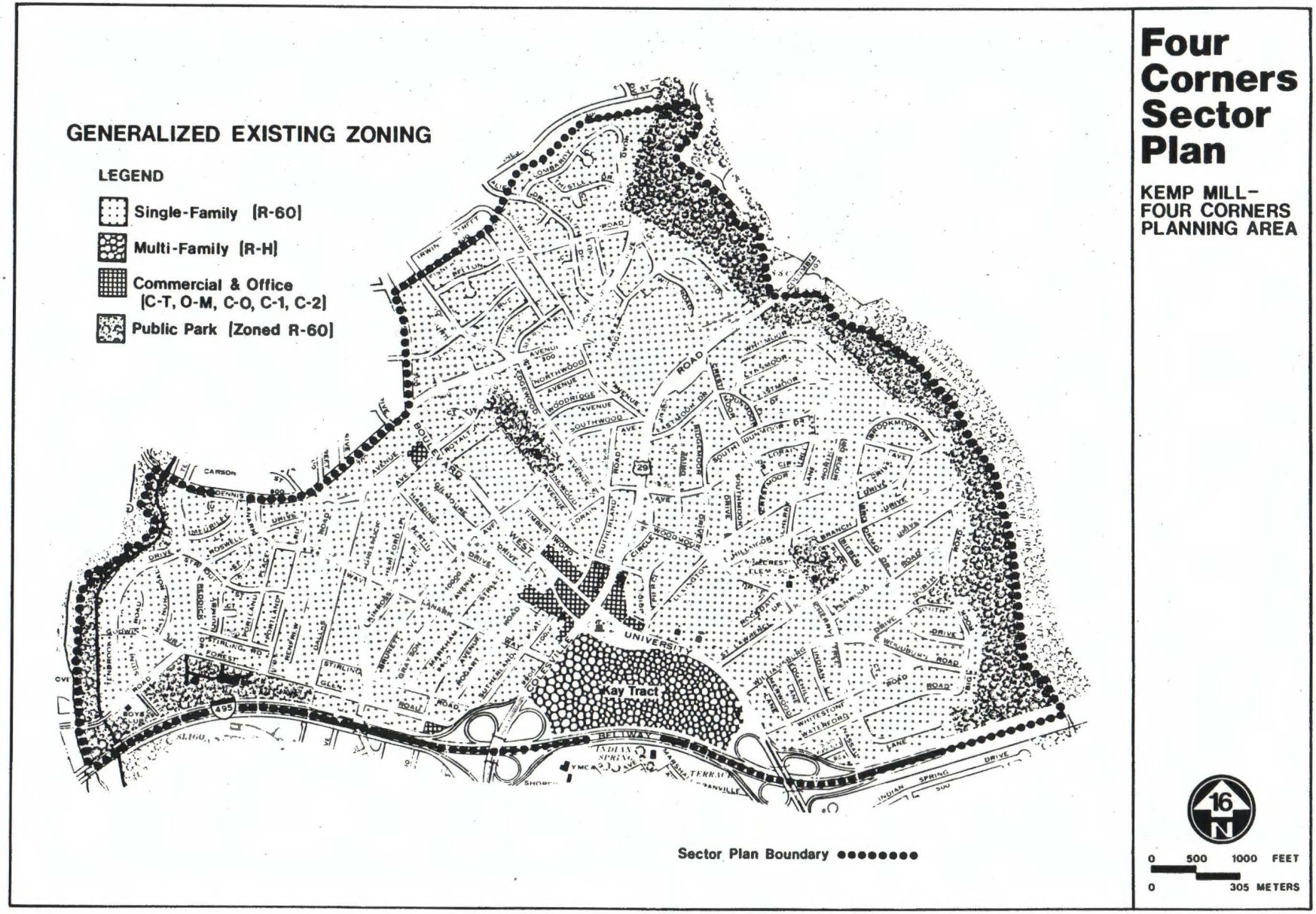
A change of zoning may be effected through a local Zoning Map Amendment sought by the owner or contract purchaser of a particular property, or by means of a comprehensive Sectional Zoning Map Amendment, which covers more than one tract and can be initiated only by the County government.

Applications for local map amendments may be filed only during the months of February, May, August, or November, and are considered according to procedures specified in the zoning ordinance. A local map admendment covers a single tract, all portions of which are proposed for classification in the same zone, or in one of two alternative zones.

A Sectional Map Amendment, on the other hand, may be filed at any time on initiative of the Council or the Planning Board. It is a comprehensive action covering a section of the Regional District usually including several tracts, and it may propose various zones to be applied to various individual tracts. The County Council must hold a public hearing on a proposed Sectional Map Amendment.

The zoning proposed in this Plan is intended to implement the recommendations of the Sector Plan by regulating private land development activities. The zoning controls will be initiated through the filing of a Sectional Map Amendment (SMA) for the Sector Plan area immediately following final approval of the Plan by the Montgomery County Council and adoption by The Maryland-National Capital Park and Planning Commission. The SMA implements euclidean (base) zones and those floating zones having the owners' concurrence and which do not require a development plan at the time of rezoning.

It should be recognized that if new development is to be encouraged within the Sector Plan area and if that development is to be directed onto specific sites such as the "Kay Tract," several additional factors are important in addition to the appropriate zoning category. Foremost among these are density and use sufficient to provide an economic yield which is attractive and economically feasible to the private market. The ability to achieve that level of development must be scaled to a framework of available or programmed public services. The zoning proposed in this Plan ought to be reviewed within


GENERALIZED EXISTING ZONING
LEGEND
Single-Family (R-60)
Multi-Family (R-H)
Commercial & Office (C-T, O-M, C-O, C-1, C-2)
Public Park (Zoned R-60)
Kay Tract
Sector Plan Boundary
Four Corners Sector Plan
KEMP MILL–FOUR CORNERS PLANNING AREA
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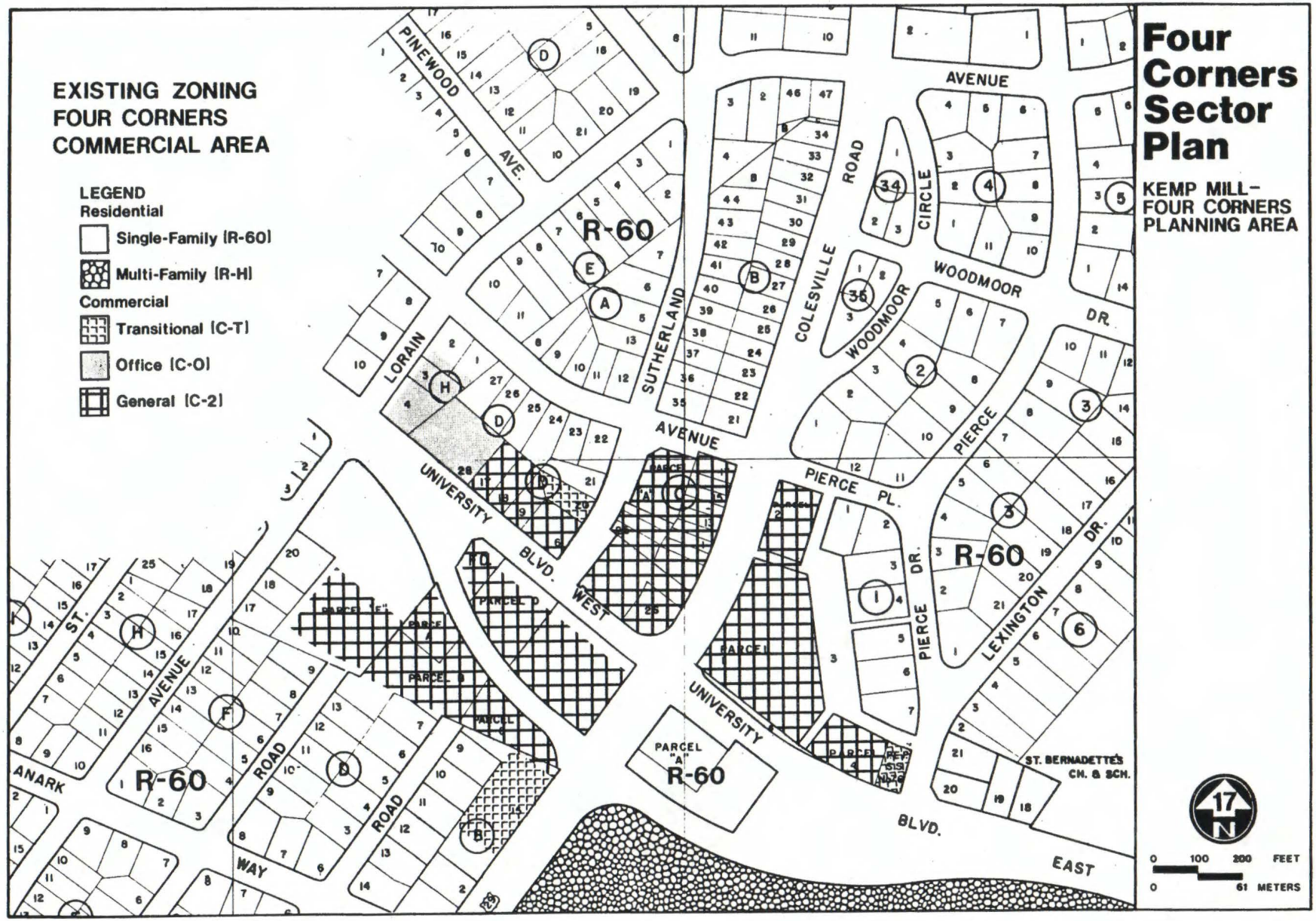
EXISTING ZONING
FOUR CORNERS
COMMERCIAL AREA
LEGEND
Residential
Single-Family (R-60)
Multi-Family (R-H)
Commercial
Transitional (C-T)
Office (C-O)
General (C-2)
Four Corners Sector Plan
KEMP MILL–FOUR CORNERS PLANNING AREA
R-60
PINEWOOD AVE.
SUTHERLAND ROAD
COLESVILLE ROAD
CIRCLE
WOODMOOR DR.
LORAIN AVENUE
UNIVERSITY BLVD. WEST
PIERCE PL.
PIERCE DR.
LEXINGTON DR.
ST. BERNADETTES CH. & SCH.
ANARK WAY
ROAD
PARCEL "A"
PARCEL "B"
PARCEL "C"
PARCEL "D"
PARCEL "E"
PARCEL 1
PARCEL 2
PARCEL 3
UNIVERSITY BLVD. EAST
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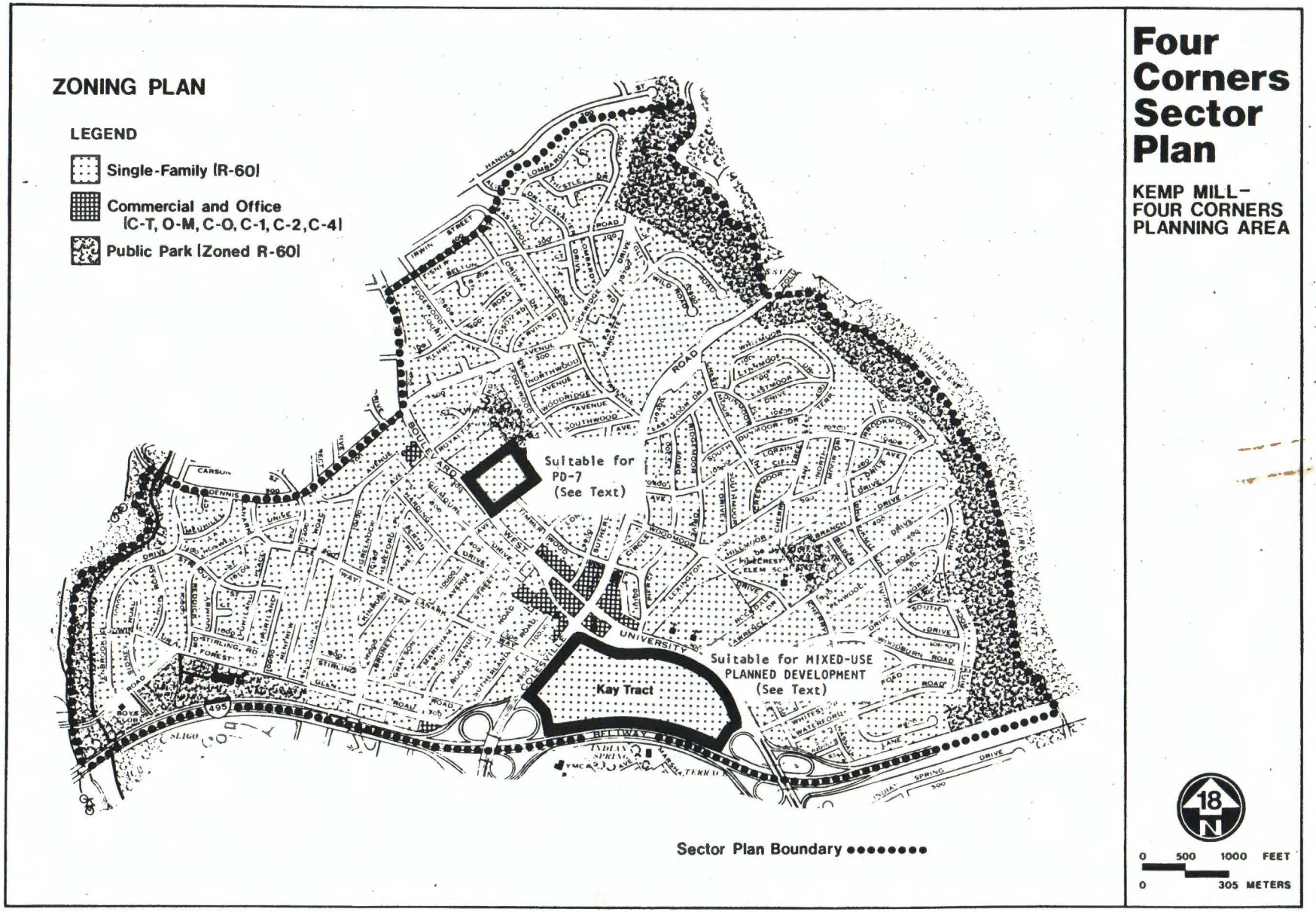
0 61 METERS


ZONING PLAN
LEGEND
Single-Family (R-60)
Commercial and Office (C-T, O-M, C-O, C-1, C-2, C-4)
Public Park (Zoned R-60)
Suitable for PD-7 (See Text)
Suitable for MIXED-USE PLANNED DEVELOPMENT (See Text)
Kay Tract
Sector Plan Boundary
Four Corners Sector Plan
KEMP MILL–FOUR CORNERS PLANNING AREA
18 N
0 500 1000 FEET
0 305 METERS

the same time limits as the other elements of the Plan, namely, a period of six to ten years. Such a review would have several advantages, chief among them the opportunity to compare actual development to the land use and zoning recommendations, the opportunity to review private development in relation to programmed public capital improvement projects, and the opportunity to review the impact of improvements to the road network and the opening of Metro service to Forest Glen and Wheaton.

Figure 18 shows the zoning proposed for the Four Corners Sector Plan area (Figures 16 and 17 show the existing zoning). It is proposed that the existing single-family and commercial zoning in the Sector Plan area be reaffirmed as it presently exists with the exception of the zoning changes discussed in this chapter.

The Sector Plan recommends the use of the Mixed-Use Planned Development (MXPD) Zone on the "Kay Tract" and the Planned Development (PD 7) Zone on the "Tumble Inn/ Alexander School" if the whole site is redeveloped. (See Land Use Plan.) These zones would encourage the development of a variety of uses and housing types on these parcels. The land use element of the Sector Plan recommends conditions and standards for these properties. The Sectional Map Amendment, to be filed upon adoption of this Sector Plan, will indicate a base zone (R-60, Single-Family Residential) for these two properties. This zone is the dominant residential zone in the area. The owners of the individual properties would then apply for the Planned Development Zone (PD or MXPD) recommended by the Sector Plan in the form of a separate application (local map amendment). Each application could then be reviewed in relation to such criteria as programmed road improvements, Metro construction, variety of uses and housing, compatibility with the existing Four Corners community, and open space. In this way, the individual zoning applications would be reviewed on their own merits and appropriateness, not only in terms of site development, but also in terms of timing in relation to recommended and programmed public projects. An element of staging can then be introduced into the implementation of this Plan which is responsive both to the needs of the community, to the specific proposals for each parcel, and to recommended public improvements.

The Plan recommends C-4 zoning for the parcel of land occupied by the Marvin Memorial United Methodist Church. If the church were to relocate, this site could be developed with a mixture of low-density offices and commercial uses.

The Zoning Plan recommends the reconfirmation of the C-O, O-M, and C-T (Commercial Office) zoning that currently exists on Sutherland Road, University Boulevard, and Lorain Avenue. Most of these properties are single-family houses that have been converted to office use. Any new development should be limited to existing lots. Assemblage of lots is not recommended.

HISTORIC PRESERVATION

Historic preservation offers an opportunity to the people of Montgomery County and the Four Corners community to protect the remaining vestiges of a rich, local heritage. Some of these resources are significant by themselves and some significant as a group, whether in suburban communities or in rural settings. The challenge is to weave protection of these historical resources into the County's planning program to maximize community support for preservation and minimize infringement on private property rights.

In 1978, the Montgomery County Council enacted an interim ordinance on alteration or demolition of historic resources. A critical first step toward a County-wide preservation plan, this ordinance was designed to extend some protection to historic resources until a permanent preservation ordinance could be passed. The interim ordinance worked in concert with the Locational Atlas and Index of Historic Sites. Each of the resources included in the Atlas was subject to the review procedures specified in an anti-demolition ordinance. In addition, the resources on the Atlas were included in the State Inventory of Historic Sites and were subject to protection through a review process.

In 1979, the County Council adopted the Master Plan for Historic Preservation and the Historic Preservation Ordinance. At that time, a County-wide Historic Preservation Commission was established to administer the Master Plan and ordinance and to become a central clearinghouse for County historic preservation activities. The Commission evaluates and recommends historic resources for inclusion in the Master Plan for Historic Preservation, based on criteria defined in the ordinance and described below:

1. Historical and cultural significance

   The historic resource:

   a. has character, interest, or value as part of the development, heritage or cultural characteristics of the County, State or Nation;

   b. is the site of a significant historic event;

   c. is identified with a person or a group of persons who influenced society; or

   d. exemplifies the cultural, economic, social, political, or historic heritage of the County and its communities.

2. Architectural and design significance

   The historic resource:

   a. embodies the distinctive characteristics of a type, period, or method of construction;

   b. represents the work of a master;

   c. possesses high artistic values;

d. represents a significant and distinguishable entity whose components may lack individual distinction; or

e. represents an established and familiar visual feature of the neighborhood, community, or County due to its singular physical characteristic or landscape.

Following the Commission review and recommendation, the Montgomery County Planning Board holds a public hearing to make its determination, considering the purposes of the ordinance and balancing the importance of the historic resource with other public interests. If the Planning Board decides to place the historic resource on the Master Plan For Historic Preservation, it then recommends a Master Plan Amendment to the County Council. As in the case with any master plan amendment, the County Council may hold a hearing before it acts. Upon approval by the Council and adoption by the Planning Board of the proposed amendment, the historic resource would then become designated on the Master Plan, and, thus, subject to the protection of the ordinance.

To assure that alterations to designated historic sites or historic resources within a historic district are compatible with their historic and cultural features and are consistent with their protection, a historic area work permit is required. This permit system is administered by the Historic Preservation Commission. An applicant for a historic area work permit must demonstrate that the permit should be issued. In granting the permit, the Commission may include provisions to ensure that the work done is consistent with the historic or cultural value of the historic resource. Historic area work permits may be required for new construction, alteration, or repairs and would not be limited to any one period or architectural style. Historic area work permits are required for public as well as private development, using design review guidelines prepared by the Historic Preservation Commission. If there is a conflict between the Building Code and the work permit, the latter would prevail, so long as basic health and safety requirements of the building codes are met.

Before a historic resource which is not on the Master Plan for Historic Preservation can be demolished or substantially altered, the resource must be reviewed by the Planning Board after receiving the recommendation of the Commission. If the Planning Board finds that the resource should be placed on the Master Plan, it will then initiate a Master Plan Amendment. The demolition permit would then be withheld for six months, or until the Council acts on the Amendment. If the Council does not adopt the Amendment, the demolition permit would be issued. If it is adopted, a work permit would be required.

When the Commission finds that the exterior architectural features of a historic site or a historic resource within a historic district listed on the Master Plan become deteriorated to a point which imperils their preservation as the result of "willful neglect, purpose or design," the director of the County Department of Environmental Protection may be directed to issue a written notice to the property owner about the conditions of deterioration. The owner may request a public appearance before the Commission on the necessity of repair of the structure. If, after the hearing, the Commission finds that the improvements are necessary, a Final Notice is issued, and if corrective action is not undertaken within a prescribed time, the director of the County Department of Environmental Protection may have the necessary remedial work completed and hold the expenses incurred as a lien on the property.

A site within the sector plan area has already been designated as part of the Master Plan for Historic Preservation. This site is:

Site	Name	Location	Designated As Part Of
32/2	Holly View	Colesville Road (Silver Spring) Kinsman Farm Subdivision	September 1979, Master Plan for Historic Preservation

- Late 18th century -- large 2-story frame building with unusual "ship lap" siding and four bay "salt box" features.

- Combining both primitive and sophisticated elements in its construction, it has been associated with the Kinsman family for a century.

Polychrome Houses Historic District #32/5

This Sector Plan recommends the designation of the five contiguous polychrome houses located at 9900 and 9904 Colesville Road, and 9919, 9923 and 9925 Sutherland Road, Silver Spring, as a Historic District to be protected under the County's Historic Preservation Ordinance, Chapter 24A of the Montgomery County Code.

The Polychrome Houses Historic District, in its entirety, meets the following Ordinance criteria for designation:

#1d - "Exemplifies the cultural, economic, social, political or historic heritage of the County and its communities;"

#2a - "Embodies the distinctive characteristics of a type, period or method of construction;" and

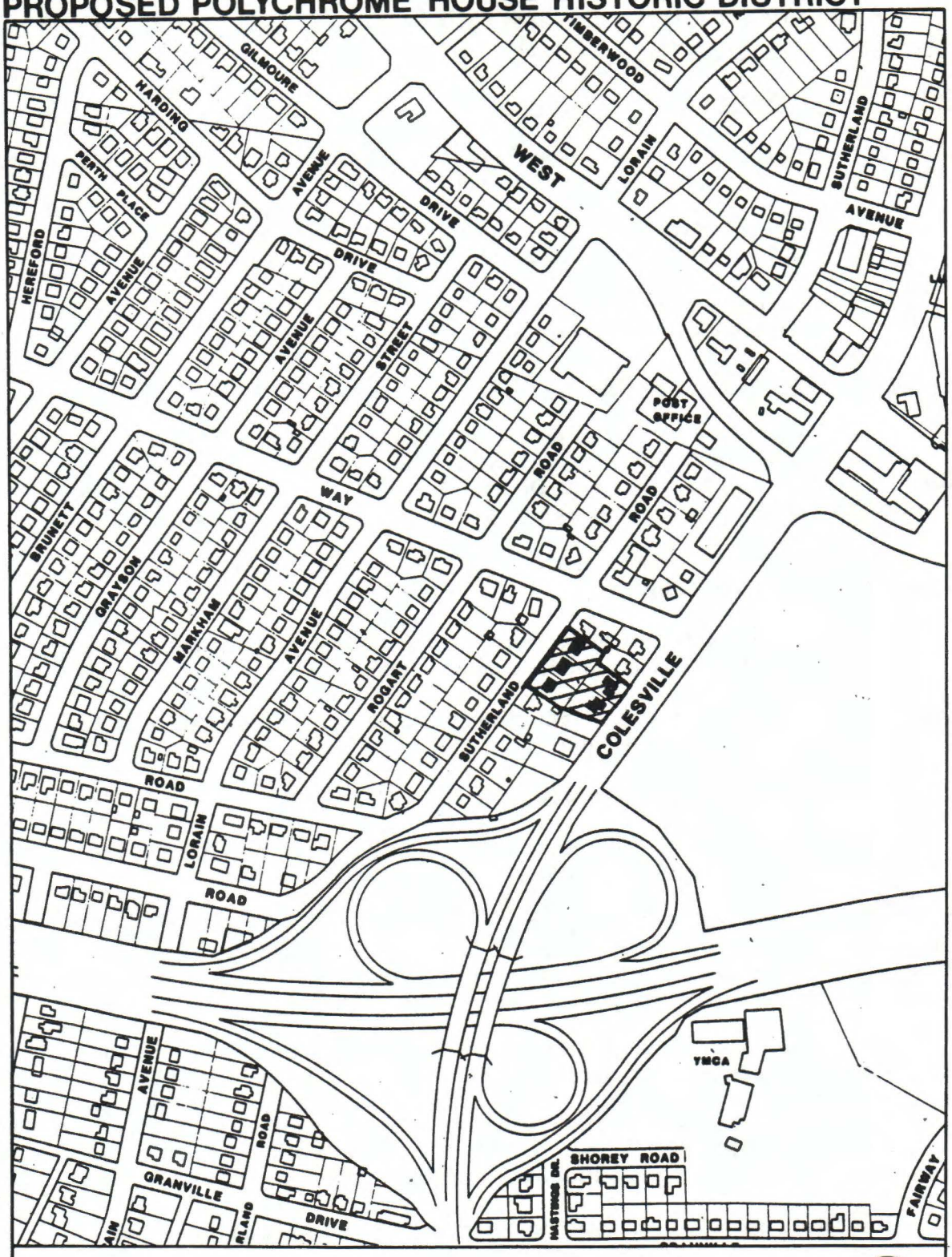
#2b - "Represents the work of a master."

Erected in 1934 and 1935 these single-family homes are constructed of prefabricated, concrete mosaic panels colored by a process developed by their designer and builder, John Joseph Earley (1881-1945). By combining superb craftsmanship with the scientific advances of their day, Earley and his associates refined the "polychrome" process which exposed the natural colors and beauty of concrete aggregate by removing the gray cement plaster from its surface. The result was a warm and attractive finish which could be varied in color from brilliant white to jet black.

Earley's practical application of the polychrome process led to the invention of the concrete mosaic panel. Initially, the Earley Studio applied the panels as a decorative art form to the exterior of buildings. Later, with the invention of additional patents, entire buildings were produced from panels which were precast in the factory for later assembly at the building site. It is this phase of Earley's work in precast concrete panel construction which began a revolution in building architecture which continues today.

The Silver Spring polychrome houses represent an early and relatively rare example of precast concrete panel construction in single-family housing. The first two houses constructed, 9900 and 9904 Colesville Road, make extensive use of both color and relief patterns and illustrate Earley's superior craftsmanship as well as the potential of concrete mosaic for decorative detailing. The three houses along Sutherland Road, although less

PROPOSED POLYCHROME HOUSE HISTORIC DISTRICT



Four Corners Sector Plan

KEMP MILL-FOUR CORNERS PLANNING AREA

19 N

rich in coloring and detail, are more representative of the well built, low cost housing promoted by Earley as part of the "social vision" which motivated his residential work.

As the largest single concentration of that work, these houses demonstrate the potential of the polychrome process -- a process largely lost with Earley's death in 1945 -- as a decorative and functional building material and constitute a rare architectural resource for the County and the metropolitan region.

IMPLEMENTATION

A sector plan is a guide to the public and private sectors. It sets forth policies and recommendations, but it is not automatically self-fulfilling. The recommendations contained in a sector plan must be undertaken and carried forward by the combined efforts of the public and private sectors. It is the responsibility of the public sector to take the lead in implementation and to guide the direction of the private sector. Moreover, a plan, to be effective, must be current. Therefore, it must provide for its own periodic review and update to assure that guidance is both valid and positive.

The public implementation tools available to carry out the plan include zoning, subdivision regulations, and public capital improvement construction programs.

SUBDIVISION REGULATIONS

Subdivision regulations govern the process of dividing land into parcels, blocks, and lots. They prescribe specific standards for streets, street connections, open space, and the size and configuration of building lots. The subdivision regulations are part of the Montgomery County Code. Methods of subdivision development are defined in the County's zoning ordinance. The zoning ordinance also prescribes variations and options to the standard regulations. Such variations include density control, cluster development, and the bonus provisions which accompany moderately priced dwelling unit development. The purpose of these options is to permit additional flexibility in site development as an incentive to meeting public goals. Cluster provisions permit smaller size lots and less rigid lot configurations in return for providing common open space and site plan controls. These controls provide greater protection for natural land forms, more usable open space, and more environmentally sensitive patterns of development.

ZONING

Zoning regulates the use of land. All land in Montgomery County (except public rights-of-way) is zoned. Within each zone, the County zoning ordinance permits certain uses by right and permits others conditionally. The ordinance also excludes certain uses from each zone. This Sector Plan recommends a zoning category for each parcel of land within the planning area. For the majority of these properties, existing zoning is reconfirmed.

SECTIONAL MAP AMENDMENT

A Sectional Map Amendment is a procedure where the County files for a zoning change for a number of properties. The justification for the recommended changes is the sector plan. The sector plan examines a geographic area and makes comprehensive proposals for the area's future zoning and development. The Sectional Map Amendment helps to implement the sector plan by assuring that development is governed by the base zones recommended by the plan. In addition, since the government rezones the land, the amount of "red tape" and delay for the landowner in rezoning is reduced.

After adoption of this Sector Plan, the Planning Board will file a Sectional Map Amendment to effectuate most of the recommended zoning changes contained in the Plan. Zones which require a development plan at the time of zoning, such as the Planned Development zones, will not be included in the SMA. The County Council is empowered to adopt the Sectional Map Amendment following an advertised public hearing.

LOCAL MAP AMENDMENT

The owner or contract purchaser of a particular property may file for an individual rezoning, known as a local map amendment. Applications for local map amendments may be filed only during the months of February, May, August, and November. They are considered according to procedures specified in the zoning ordinance. A local map amendment may cover a single tract or group of tracts. An application may request consideration of two alternate zones, although most applications request only one. Approval of a local map amendment requires a public hearing and the affirmative vote of a majority (four of seven members) of the County Council. However, if the requested rezoning is contrary to the zone recommended in an adopted area sector plan, approval requires the affirmative vote of five council members (unless the Planning Board has recommended in favor of that approval, in which case a four-vote majority of the Council is sufficient for approval).

THE CAPITAL IMPROVEMENTS PROGRAM (CIP)

The executive branch of County government is responsible for planning, programming, and budgeting for the County's mid-range needs. It does this through two interrelated six-year programs. One is the annually updated Capital Improvements Program (CIP), which funds construction of all public buildings, roads, and other facilities planned by the County. The other is the Comprehensive Six Year Public Services Program and the Operating Budget, which funds County programs and coordinates them with capital expenditures.

Projects that are either currently scheduled or which are recommended for future inclusion in the CIP are identified in a master or sector plan. Those recommended by this Sector Plan, in addition to those currently scheduled, are described in the following table. The County or State agencies responsible for design and development of each project are indicated in the table. The CIP assures that the projects necessary to fulfill the needs of the community, providing for orderly growth and development, are built at the appropriate time and in the proper location. The timetable for planning and construction of these projects should be coordinated with private development.

The initial CIP description is generally "sketchy" as to the scope of a project, its cost, and its construction timetable. Each project is reviewed annually by the citizenry and public officials. During this review, projects can be deleted, modified, or added. This procedure allows the flexibility needed to balance available resources and public priorities.

HISTORIC SITES PRESERVATION

There are two mechanisms in Montgomery County to protect historic resources. The first is the Locational Atlas and Index of Historic Sites in Montgomery County. The second of these is the Master Plan for Historic Preservation. Various state and federal protections also exist for sites which achieve historic registration. (See chapter on Historic Preservation for explanation of programs.) The Master Plan for Historic Preservation provides for the identification, designation, and regulation of those sites of historical, archeological, architectural, or cultural value which merit protection, preservation, or continued use. This is to preserve and enhance the quality of life in the County and safeguard its historical and cultural heritage.

PROPOSED CAPITAL IMPROVEMENTS PROGRAM

Project	Funded By	Estimated Expenditures	Completion
Transportation Improvements			
University Boulevard Intersection improvement on eastbound University Boulevard; construct free right turn lane onto southbound Colesville Road, near the existing office condominiums.	State	$ 125,000	1987
Colesville Road (1) Intersection improvement; lengthen free right turn lane on northbound Colesville Road onto eastbound University Boulevard, near the Kay Tract.	State	$ 125,000	1987
(2) Relocate left turns from northbound Colesville Road via a "Jug-handle" on University Boulevard near the Methodist Church.	State	$ 150,000	1987
Access Control Study in the Four Corners area.	State	$ 75,000	N/A
Grade separation at the intersection of University Boulevard and Colesville Road.	State	$10,000,000 to 20,000,000	N/A
Lanark Way/Sutherland Road Bikeway	County	$ 25,000*	N/A
Pierce Drive Bikeway	County	$ 25,000*	N/A
Sidewalk construction in locations specified in the Urban Design Study.	County/State	$ 100,000*	N/A
Community Facility Improvements			
Argyle Local Park Rehabilitate playground basketvall, tennis courts, and recreation building patio.	M-NCPPC	N/A	1988

N/A - Not Available.

* Estimate does not include right-of-way or easements which may be required when detailed plans are developed.

Properties listed in the Atlas are afforded limited, interim protection from destruction by demolition as the County will not issue such permits until the significance of the historic site has been reviewed. When a demolition permit is requested on a structure or site in the Atlas, the site is reviewed to determine whether it should be added to the Master Plan for Historic Preservation. If a determination is made to add the site to the Master Plan, it receives the Master Plan's protection. If a site is not added to the Master Plan, alterations or demolition frequently are then permitted to proceed. Listing in the Master Plan for Historic Preservation requires an owner to obtain a "historic area work permit" before making any changes to a site or structure.

The County encourages preservation by such methods as historic site density transfer, subdivision, development plan and site plan review, planned development zoning, flexible application of the County's building code, sensitive design of public facilities in the vicinity of historic resources, property tax credits, facade and scenic easements, and "recycling" of historic structures through adaptive reuse.

STRATEGIES FOR NEIGHBORHOOD PRESERVATION

Neighborhoods, such as Four Corners, have both a physical and a social fabric. Healthy neighborhoods are well-maintained and attractive physically and have strong social cohesiveness. To preserve the long-term stability of the planning area's neighborhoods, there are both County government and private citizen responsibilities.

THE PHYSICAL ENVIRONMENT: PUBLIC RESPONSIBILITIES

The physical environment of a neighborhood is more than the result of private decisions regarding the design and maintenance of privately owned buildings and grounds. It is also affected by public actions: the design and maintenance of public spaces and buildings; the level of public services such as safety and sanitation; the maintenance of sidewalks, streets, and street trees; land use and zoning policies; and the presence or absence of traffic hazards, pollution, or other dangers.

THE PHYSICAL ENVIRONMENT: PRIVATE RESPONSIBILITIES

However, the physical appearance of a neighborhood consists, in a large measure, of the aggregate of the appearance of homes and lots. A neighborhood's character is determined by the scale of the buildings, the relationship of yards to buildings, the density of population, and the adequacy of parking. At the time of new construction, these are all regulated by County ordinance.

Following construction, major responsibility for the physical environment passes to the landowner. Although neighborhood and homeowner associations and peer pressure help maintain neighborhood standards, they cannot guarantee results.

HOMEOWNERS' AND NEIGHBORHOOD ASSOCIATIONS

When development occurs under the cluster provisions of the subdivision regulations, a homeowners' association is frequently required to assure the maintenance and operation of private open space, recreational facilities, private streets, or other common space in the subdivision. The homeowners' association generally levies a fee in the form of a property assessment to maintain these facilities. It also must provide a management structure to supervise their orderly maintenance.

In almost all new subdivisions, neighborhood associations spring into being because of common needs. In existing neighborhoods without homeowners' associations there are usually no such continuing forces for interaction. It is in the County's interest to assure that the planning area continues to be served by well-organized, representative neighborhood associations. Communication between the neighborhood and County government is essential to the continued maintenance and strength of communities.

Both homeowners' and neighborhood associations can provide continuing input to the decision-making process to influence decisions and assure that, once decisions are made, the follow-through meets the standards of performance deemed appropriate to the community.

PLAN REVIEW AND UPDATE

Once the County Council has approved and The Maryland-National Capital Park and Planning Commission has adopted the Four Corners and Vicinity Sector Plan, it becomes an official guide to the development and use of the land area involved. The Plan will inform residents and business owners about the overall pattern of development and the amount and types of facilities that will be available in the future.

The Plan is informally reviewed on a yearly basis through the County's CIP and budget process. It is periodically amended by local zoning map amendments, or sector plan amendments. The Planning Board and citizenry will periodically judge the effectiveness of the Plan. Should policies and conditions change, the Board and Council should schedule a comprehensive review and possible update of the Sector Plan so that it can continue to reflect and provide for the needs of the area.

APPENDICES

APPENDIX 1

NOISE ABATEMENT TECHNIQUES

A. Site Design -- Noise-conscious site design seeks to take advantage of any natural features of the site or the facilities planned for it to minimize noise impacts. The primary concern is the proper location of noise-sensitive areas relative to sources of noise. It may involve the preservation of noise-attenuating topographic features, retention of a belt of existing trees, or determination of an appropriate setback, or all three.

Active recreation areas, stormwater management ponds, or open space may be advantageously located in noise-impacted areas since these areas are less noise-sensitive than the residential units they are designed to serve. Noise-tolerant site uses, such as garages or sheds, may also be placed in noise-impacted areas to form a partial noise barrier. Site-design measures often have the greatest potential for reducing noise impacts at little or no cost, depending on the zoning requirements. This is especially true when noise is considered as an integral element in the earliest site design.

B. Berms -- Berms are elongated mounds of earth which can be used to block a line of sight (LOS) between a noise source and the sensitive receiver. They are capable of providing approximately 5 to 23 dBA noise attenuation, although significant (5 dBA) attenuation does not occur unless the LOS is broken. This noise-attenuating capability also applies to walls, fences, and other types of noise barriers, although the theoretical maximum noise-attenuating capability of wall-type barriers is 20 dBA.

Berms have a number of advantages for attenuating noise. They mimic natural land forms, thereby avoiding the harsh lines or "prison wall" effect sometimes associated with other (often poorly designed) wall or fence types of noise barriers. In contrast to fence type barriers, which may deteriorate over time, a landscaped berm can improve with age if properly designed and constructed. They provide privacy as well as noise attenuation and often give a more aesthetically pleasing view from the road as well as from the houses, especially when attractively landscaped. Berms are essentially permanent and maintenance needs are generally low depending on the slope and type of ground-cover used. In addition, berms are somewhat more effective (by approximately 3 dBA) than other barriers of the same height. The primary limitation of berms is that they require considerable amount of space, which is not always available, and they may be expensive if sufficient fill material is not available on-site.

C. Acoustic fences, walls, or barriers -- Acoustic fences, walls, or barriers can be highly effective in attenuating high levels of noise. To be effective, they must break the LOS and be solid and continuous without gaps at ground level or at joints in the structure. Good design necessarily involves both acoustic and aesthetic considerations. Barriers can be attractively designed to achieve compatibility with various architectural styles. Like berms, they offer improved privacy as well as noise protection for both indoor and private outdoor areas. Landscaping can be used to enhance their attractiveness and may also improve their effectiveness from a psychological standpoint. Because barriers require very little room, they offer flexibility of placement and may allow the preservation of trees or other attractive features of the site. A variety of materials may be used singly

or in combination. Design and material choices should reflect consideration of long-term maintenance needs.

D. Landscaping -- Landscaping has long been a part of good site design. It has been used to screen out unwanted views or create attractive ones and to improve the appearance and thereby increase the marketability of new developments. Landscaping can play an important role in mitigating the adverse impacts of transportation noise. While seldom capable of physically attenuating noise to a great extent (maximum of 10 dBA reduction for a 200+ foot belt of tall, dense woods with a substantial proportion of evergreens), it can be used to form a visual barrier which is psychologically effective at reducing the perception of noise. Dense evergreens are generally more effective in this regard because of the year-round protection they afford. In addition, landscape plantings greatly enhance the attractiveness of other noise attenuation measures (berms, fences, walls, barriers) by adding variety of color and texture to the scene and breaking up harsh lines or monotonous expanses.

E. Acoustical Design and Construction -- Acoustical design and construction techniques seek to prevent high levels of exterior noise from entering buildings and interfering with noise-sensitive indoor activities. Exterior noise enters buildings in two basic ways: direct transmission through materials of the building shell and leakage through openings and cracks around such areas as windows, doors, and ventilation ducts. In poorly constructed buildings, the amount of noise which enters through air leaks is great in spite of the small area involved. An acoustically effective design takes these facts into consideration and minimizes the opportunity for noise entry by its design features, choice of materials, and quality of construction. The following is a partial list of techniques used in acoustic design and construction:

- Elimination of features which may cause sound to reverberate between different parts of a building.
- Construction with masonry or other materials that transmit little sound.
- Use of air conditioning to allow year-round internal ventilation.
- Location of balconies and noise-sensitive rooms away from major noise sources.
- Minimizing of door and window areas facing the dominant noise source
- Use of fixed pane or double-glazed windows, solid, tight-framed doors, and storm doors.
- Use of weather stripping and caulking around such areas as doors, windows and vents.
- Use of carpeting and acoustical ceilings to absorb noise which penetrates the building shell.

It should be noted that a number of these measures are also energy efficient and are frequently employed for that reason alone.

URBAN DESIGN STUDY

TABLE OF CONTENTS

INTRODUCTION

The Four Corners commercial center plays two different roles within the community. First, it serves as a commercial convenience shopping center for local residents as well as for those who just drive through Four Corners. Second, the commercial center has become a front door to the neighborhoods surrounding the Four Corners intersection. The impression one receives while driving through Four Corners is reflective of the entire community, even parts unseen. These dual roles suggest an environment that has to work for the pedestrian and the automobile as well as maintain a visible sense of the community it is a part of.

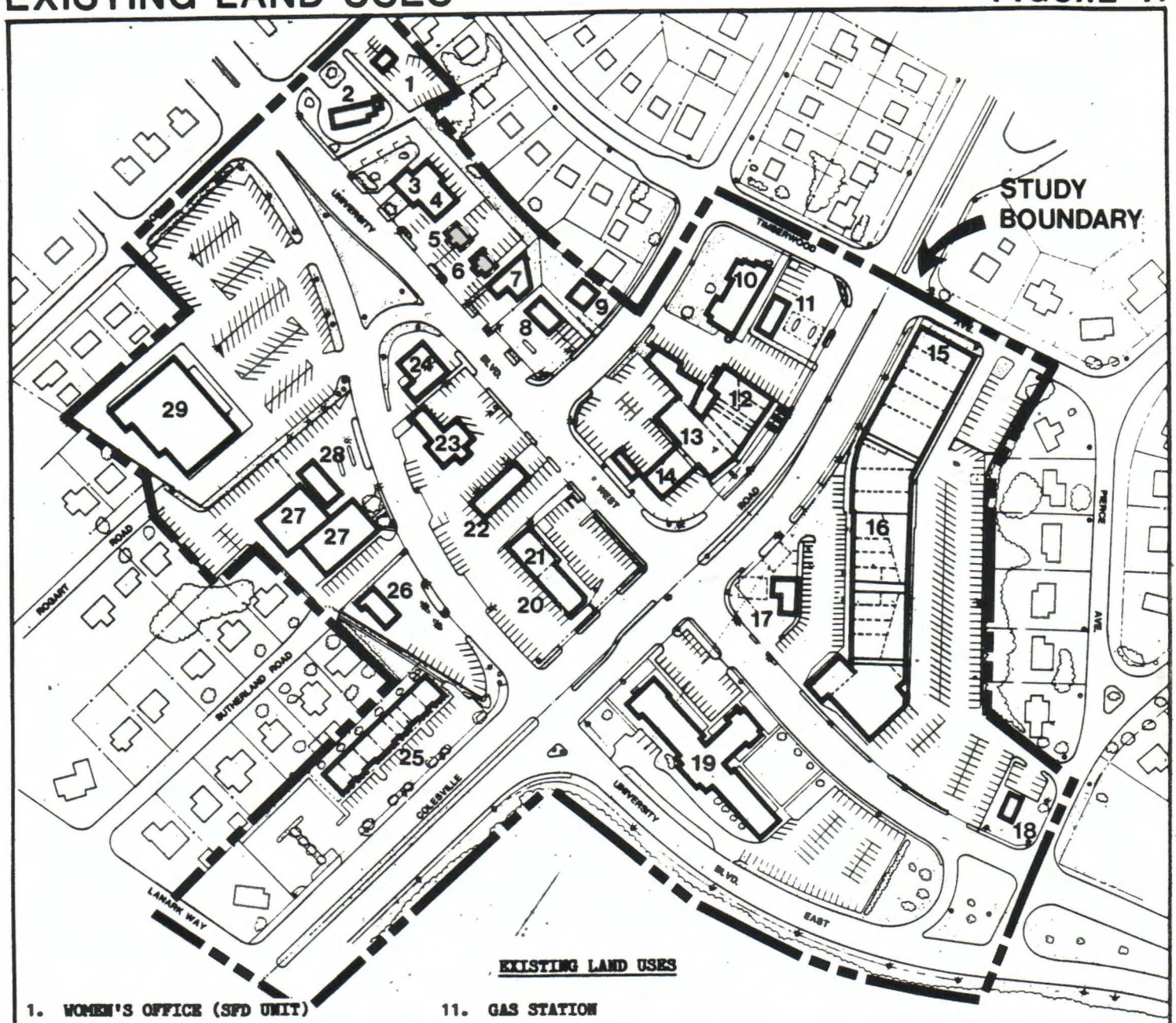
The Four Corners commercial center developed along with the postwar housing boom as it expanded north of Silver Spring. Consistent with the incremental application of the commercial zoning surrounding the crossroads of Colesville Road and University Boulevard, development has also come forth in an incremental, parcel-by-parcel fashion. See figure 1. Each parcel (see figure 2) has developed autonomously, meeting individual functional concerns for parking, access, and signage. The conglomerate effects now result in excessive paving, convoluted traffic flow, and a visually undifferentiated environment. A similar erosion of the quality of the public right-of-way has occurred. The road widenings and repavings have eaten up the width of the right-of-way incrementally, allowing no room for sidewalks or planted strips or other amenities. Here, where roads were widened, no improvements were made in the remaining right-of-way or beyond the right-of-way. The results are nearly 100 percent paved rights-of-way blending into 100 percent paved parking lots and businesses. Sidewalks are either undersized in relationship to the now wider roads, or they are non-existent.

The key to addressing the issues of Four Corners, however, lies in the land ownership patterns. A realistic schedule for improvements in Four Corners is an incremental implementation that follows the design concepts as set forth in an Urban Design Study. This approach relates well to the scale of improvements that could address a majority of the issues in Four Corners. Publicly owned land can be improved with community and public sector initiative and backing. The ability to achieve improvements on privately owned land, of course, starts within the purview of the individual owner. Incentives and financial assistance for the private sector, however, can be supported by the community and local public officials, and has been done with notable success elsewhere in the County.

The Urban Design study for Four Corners will analyze the problematic issues at hand and pose suggestions for improvements. The first section of this study will discuss the urban design elements for Four Corners that will become the building blocks for its improvements. The next section will identify these elements and show how they contribute to the problems of Four Corners' circulation and image. A set of goals will be established, and proposed recommendations for improvements will be discussed. A list of implementation possibilities will conclude the study, offering suggestions for ways to turn Four Corners around.

EXISTING LAND USES

FIGURE 1.



EXISTING LAND USES

1. WOMEN'S OFFICE (SFD UNIT)
2. FOOT CARE OFFICE
3. BANK
4. MORTGAGE LENDER
5. SHOE REPAIR (SFD UNIT)
6. PHOTO STUDIO/PET STORE (SFD UNIT)
7. ANIMAL HOSPITAL
8. GAS STATION
9. REAL ESTATE OFFICE (SFD UNIT)
10. PEPCO SUB-STATION
11. GAS STATION
12. PRIVATELY OWNED STORES, CAFES
13. FRED AND HARRY'S RESTAURANT
14. HIGH'S CONVENIENCE STORE
15. MONTGOMERY COUNTY LIBRARY
16. WOODMOOR SHOPPING CENTER (ONE OWNER)
17. GAS STATION
18. CONSTRUCTION OFFICE (SFD UNIT)
19. CHURCH
20. 7-11 CONVENIENCE STORE
21. JERRY'S SUB SHOP
22. FA-RINA AUTO REPAIR
23. ROY ROGERS
24. AUTO REPAIR
25. TOWNHOUSE OFFICES
26. GAS STATION
27. POST OFFICE
28. GAS STATION
29. SAFEWAY GROCERY STORE

Four Corners Sector Plan

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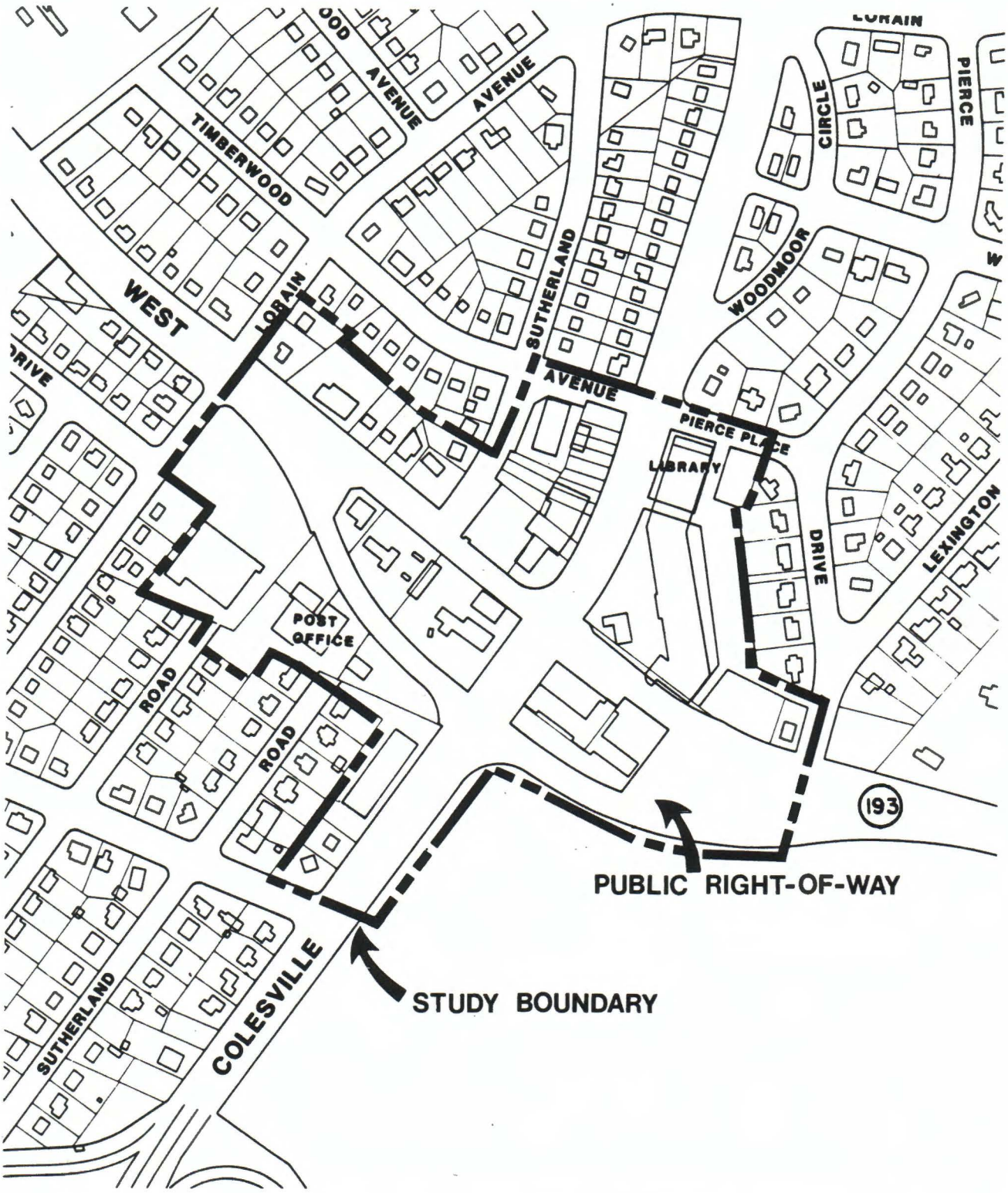
PARCEL CONFIGURATION

FIGURE 2.



Four Corners Sector Plan

KEMP MILL-FOUR CORNERS PLANNING AREA URBAN DESIGN STUDY

THE URBAN DESIGN STUDY

Why an Urban Design Study?

The basis of an Urban Design Study is to pull together the disciplines of planning, design, and engineering within the context of a built environment to create new development. The distinction of an Urban Design Study is that it also includes the subtleties of the aesthetics of the environment. The arrangement of buildings, rows of street trees, or the pavement patterns in a sidewalk are design elements that are all integrated into the proper functioning of the environment. An environment that works well for the pedestrian or motorist, that has a pleasing visual appearance and ties into existing sidewalks, streets or utilities is the generalized goal of urban design studies.

To achieve this, an Urban Design Study keeps the "big picture" goals and the smaller scale design elements in balance. In Four Corners, the "big picture" goals are to provide adequate pedestrian and vehicular circulation. These concerns also tie into the community's goals for a better-looking commercial center. The way to achieve these goals is through the proper use and arrangement of the design elements, the elements that structure the physical environment. A close study of these design elements show they are both part of the problem and part of the solution. The following list of design elements for Four Corners will become the building blocks for its improvements. They are grouped here with the "big picture" goals for the Four Corners Urban Design Study. A key element of the implementation of this plan is that the improvements may be incrementally executed. The goals provide the overall guidelines for improvements and should be followed with each new development in Four Corners.

DESIGN ELEMENTS OF FOUR CORNERS

1. **GOAL:** TO PROVIDE PEDESTRIAN CIRCULATION THAT IS SAFE, CONTINUOUS, ATTRACTIVE, AND PRACTICAL FOR THE NEEDS OF FOUR CORNERS.

Design Elements:

- Sidewalks
- Pedestrian connections to the neighborhoods
- Pedestrian passageways through buildings
- Pedestrian crossings at intersections and within parking lots
- Curb cuts within sidewalks
- Bus stop locations
- Bikeways
- Public/private pedestrian circulation

2. **GOAL:** TO PROVIDE VEHICULAR CIRCULATION THAT IS SAFE, CONTINUOUS, AND PRODUCES A BALANCE BETWEEN VEHICULAR MOVEMENTS AND PEDESTRIAN MOVEMENTS.

Design Elements:

- Roads and the traffic patterns within Four Corners
- Bus stop locations
- Curb cuts
- Driveways: location, access, direction
- Parking lots
- Vehicular passageways as they relate to private lands and public rights-of-way

3. **GOAL:** TO IMPROVE THE VISUAL IMAGE OF FOUR CORNERS, TO CREATE AN IMAGE MORE COMPATIBLE WITH THE SURROUNDING NEIGHBORHOODS AND TO PRESENT A MORE SUITABLE "FRONT DOOR" FOR THE COMMUNITY.

Design Elements:

As listed above, generally, and in particular:

- Utility/light poles and overhead wires
- Landscaping or the development of green space within private lands or the public right-of-way
- Signage
- Lighting: public ways and private site lighting
- Existing structures: building location, building condition, special features or opportunities
- The edge between the commercial and residential areas

PROBLEM IDENTIFICATION/PROPOSED IMPROVEMENTS

The Four Corners commercial center serves the community as a convenience shopping center. The range of uses allows one to get a car fixed, pick up a quick dinner, or take dance lessons. The success of this role within the community depends on its abilities to attract customers and the ability of customers to get where they want to go easily and conveniently. The linkages to the neighborhoods are as important as the vehicular linkages to the commuters who pass by to shop and need to get in and out easily. The commercial center's appearance should communicate a positive image and become more of a magnet for shoppers. The following discussion will present the issues of circulation and image within Four Corners.

Circulation

Shoppers to the Four Corners commercial center face a variety of circulation conflicts. These conflicts are either vehicular or pedestrian conflicts, often one's opportunity becoming the other's obstacle. The high traffic levels for pedestrians and drivers, especially during rush hour, pose problems to both groups and their ability to safely and easily use the shops at Four Corners.

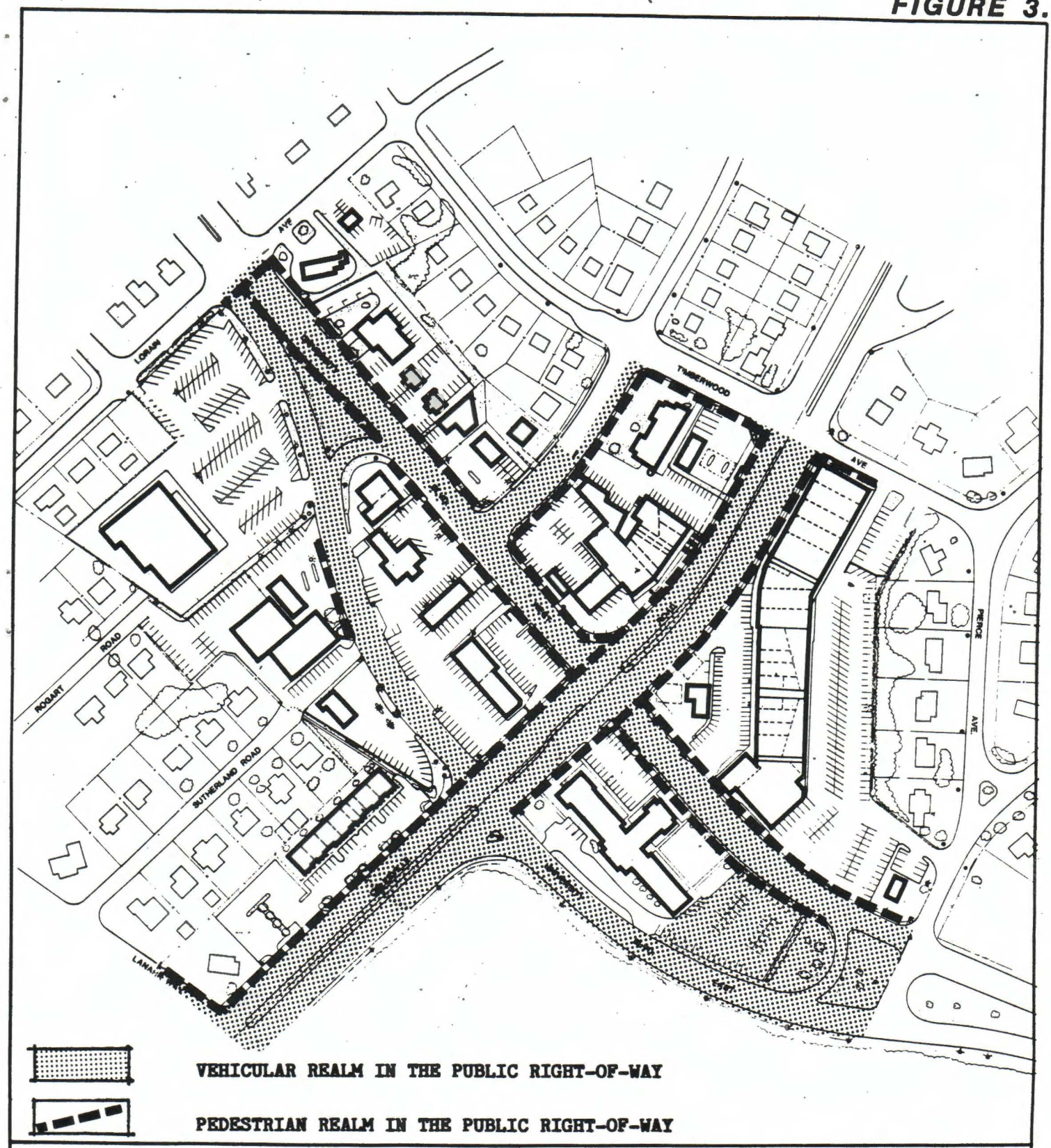
GOAL: TO PROVIDE PEDESTRIAN CIRCULATION THAT IS SAFE, CONTINUOUS, ATTRACTIVE, AND PRACTICAL FOR THE NEEDS OF FOUR CORNERS.

Despite the fact that the Four Corners commercial center was built to serve the suburban driving aesthetic, the pedestrian's demands in the area are great. After all, every driver or bus rider becomes a pedestrian once they step out of their vehicle. Lately, local residents find walking to or through Four Corners easier than dealing with the traffic congestion. Connections to the adjoining Kay Tract are a key element of the mixed-use development proposed there by this Sector Plan. Pedestrian linkages must provide clear orientation and safe passage across the highways to the Kay Tract.

Improvements to pedestrian circulation first require a study of the public right-of-way boundaries for Colesville Road and University Boulevard. See figure 3. The rights-of-way shown are taken from the best available information. More detailed surveys will be needed to accurately define the limits of the public right-of-way. Although some sidewalks are included within the right-of-way, others are not. Sidewalks, crosswalks, curb cuts, and bus stops are within the public domain, offering a feasible starting point for making improvements. Neighborhood connections and pedestrian passageways through buildings are elements of privately owned land. Improvements here may be feasible as well but will require participation and support from the private owners.

THE PUBLIC RIGHT-OF-WAY

FIGURE 3.



VEHICULAR REALM IN THE PUBLIC RIGHT-OF-WAY

PEDESTRIAN REALM IN THE PUBLIC RIGHT-OF-WAY

Four Corners Sector Plan

KEMP MILL-FOUR CORNERS PLANNING AREA URBAN DESIGN STUDY

Sidewalks

Problem Identification

- In all cases the sidewalks are located directly alongside the heavily traveled highways. This arrangement places the pedestrian close to traffic which is perceived as a vulnerable location, although this is a standard sidewalk location in commercial areas.

- Sidewalks run parallel to sidewalks in front of the block of stores along the western side of Colesville Road. This needlessly duplicates one line of travel and results in overpaving the commercial center.

- Most sidewalks are a standard of 4'6" wide, too narrow for their location next to highways in a commercial area.

- Sidewalks are non-existent in key locations (i.e. next to the bus stops along University Boulevard eastbound).

- Signs and utility/light poles have been located directly in sidewalks and traffic islands, blocking pedestrian passage.

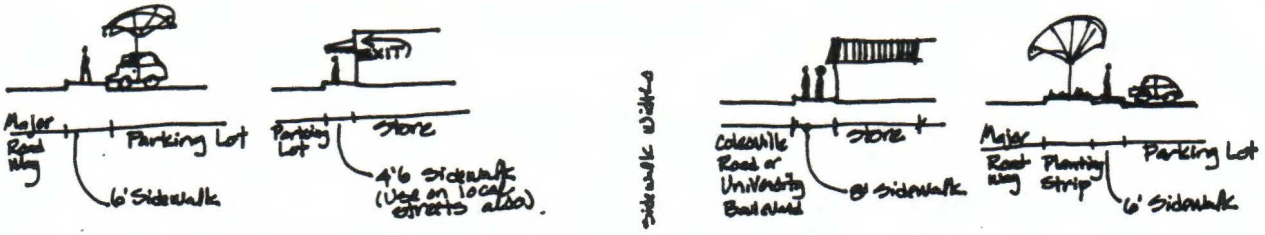
- Sidewalks have been paved over, losing their definition as part of the pedestrian realm.

- Multiple curb cuts create uneven grades, thus causing an additional disruption to the pedestrian's movements.

Proposed Improvements

The sidewalks in Four Corners should clearly define the pedestrian environment by providing continuous, safe, and adequately sized access. See figure 4. Proposed improvements are:

- All sidewalks shall be differentiated from other paved surfaces by a change in elevation, a change in texture or paving materials, or a raised curb. The pavement used should be continuous throughout, using one type of paving and with as few curb cuts as possible.



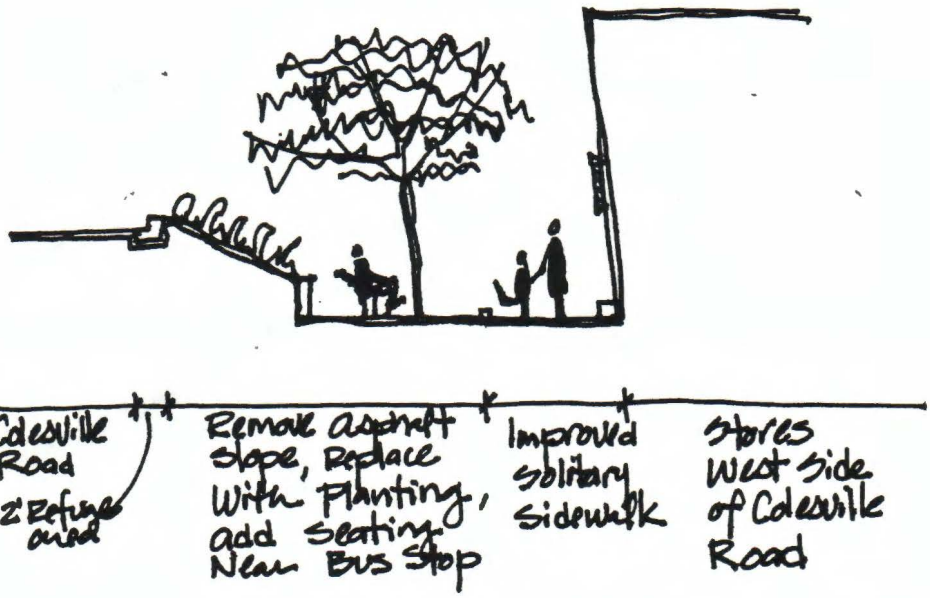
- Sidewalk widths need to be increased throughout Four Corners, particularly next to Colesville Road and University Boulevard. More preferable widths are:

- For sidewalks directly next to Colesville Road and University Boulevard	8 feet minimum width next to stores 6 feet minimum width next to parking areas
- For sidewalks separated by a planted strip or other barrier	6 feet minimum width
- For sidewalks along side streets and as a minimum width next to stores	4'6" minimum width (an existing condition)

- Sidewalks at intersections and within traffic islands shall be free of utility poles, signs, or other obstructions. These areas should be adequately sized to permit pedestrians to wait safely for walk signals. Implementation would require a Capital Improvement Program. See figure 5.

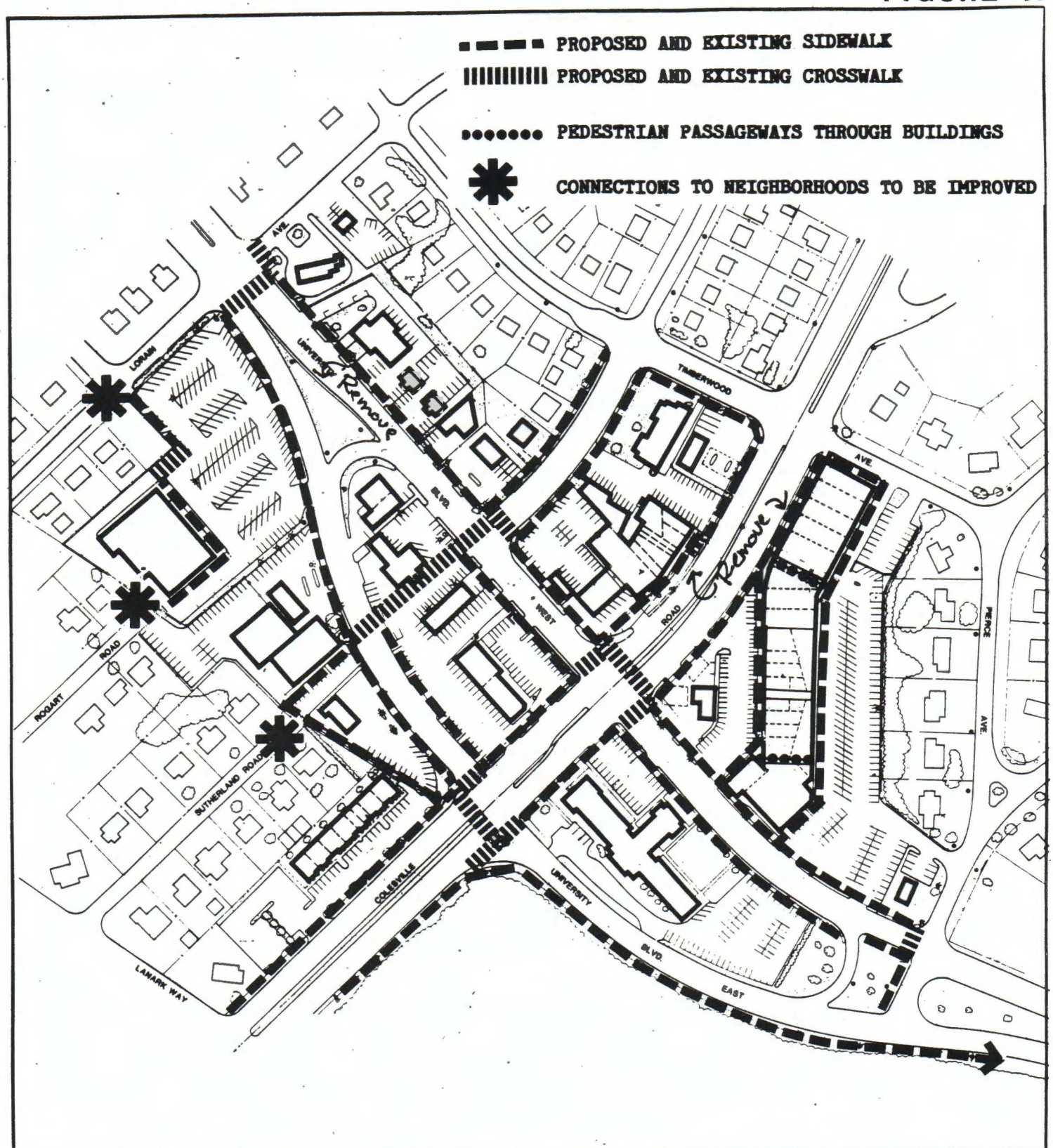
- Eliminate the duplication of sidewalks by removing street-side sidewalks where storefront sidewalks exist. Remove the existing unused sidewalk in the triangular island along the western end of University Boulevard.

- Add sidewalks as needed to create continuous pedestrian access throughout the Four Corners commercial area.



PROPOSED PEDESTRIAN CIRCULATION

FIGURE 4.

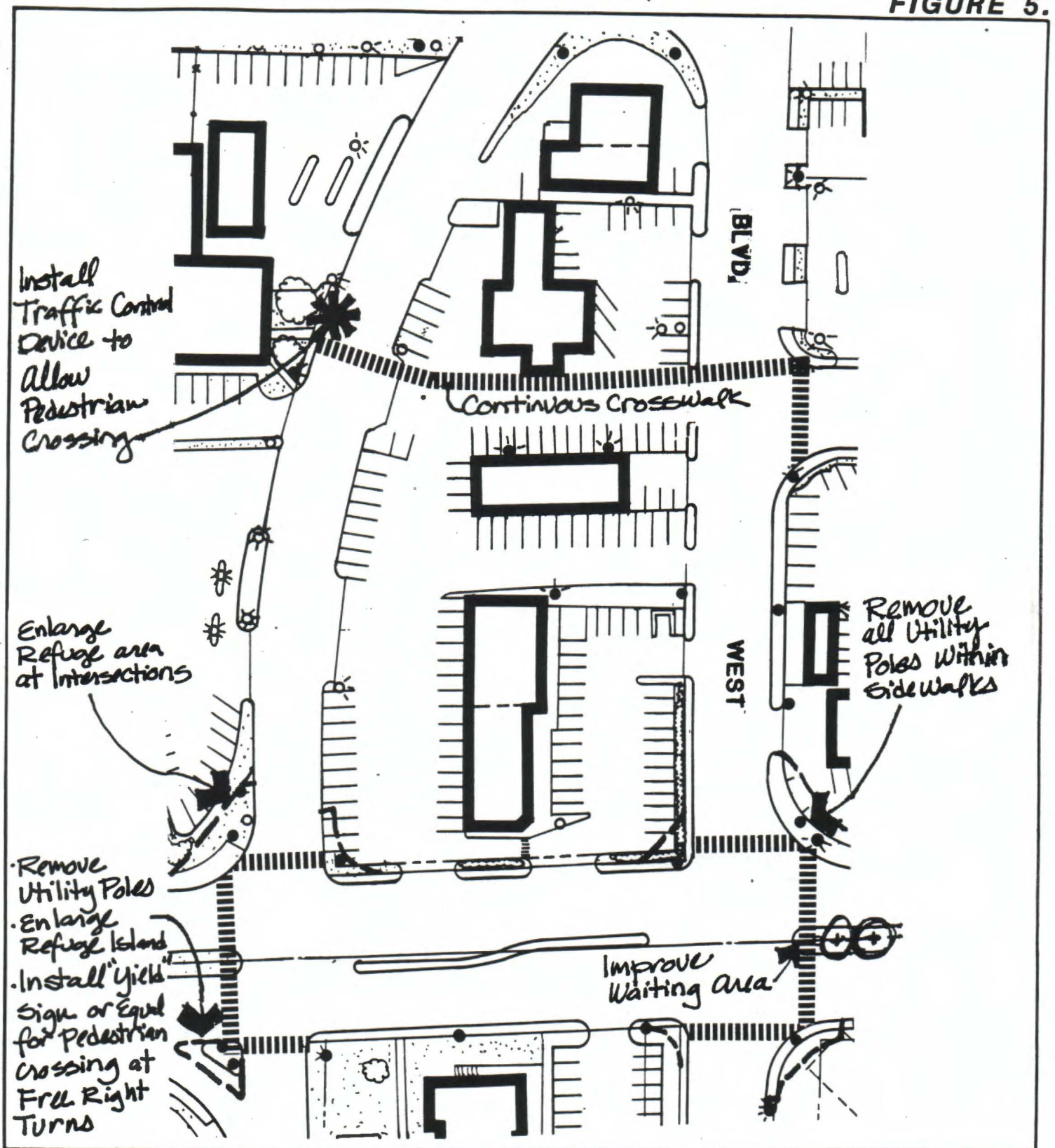


Four Corners Sector Plan

KEMP MILL - FOUR CORNERS PLANNING AREA URBAN DESIGN STUDY

CROSSWALKS AND INTERSECTION DETAILS

FIGURE 5.



Four Corners Sector Plan

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Pedestrian Connections to the Neighborhoods

Problem Identification

- The location of connections at Sutherland Road and Rogart Roads aren't marked or visible from the commercial center. Thus, there is poor orientation for their use. These connections are unsightly and run-down. The staircase cannot be used by all residents (i.e. baby carriages).

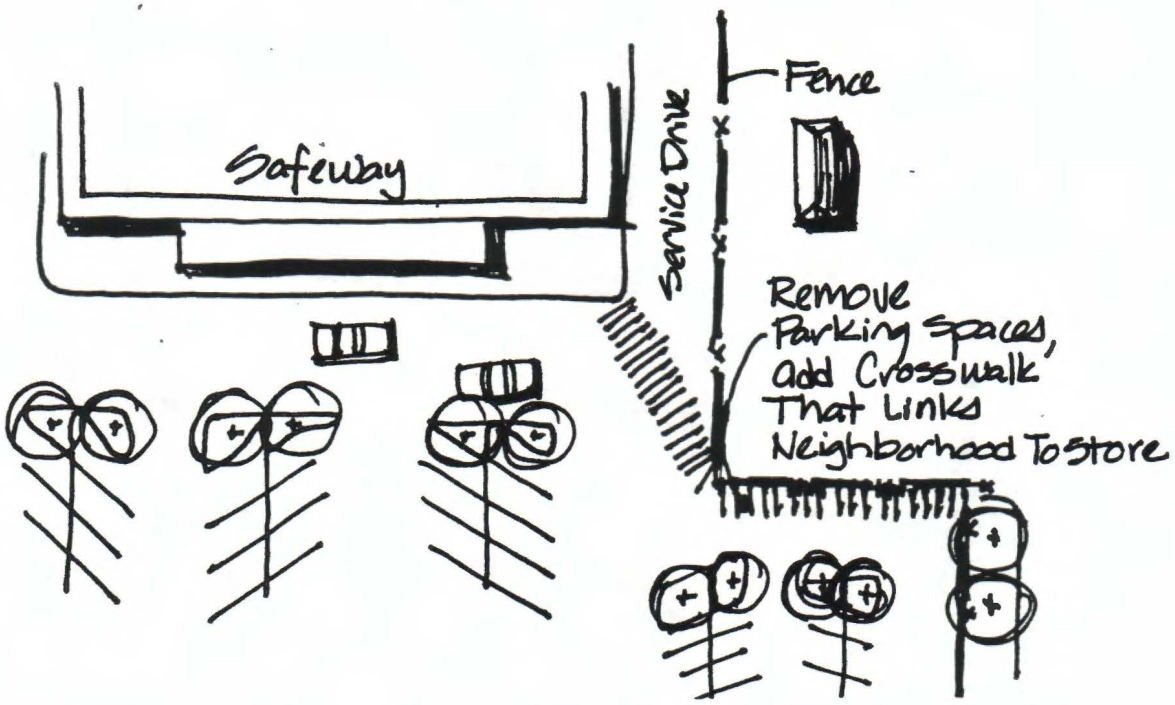
- The connection at Loraine Avenue into the Safeway parking lot is not permitted by provisions of the special exception for the parking lot. It is well-used by residents, however.

- No connections link up to a sidewalk.

Proposed Improvements

- Attractive, safe, well-defined pedestrian connections between Four Corners and their neighborhoods will promote and allow better pedestrian use of the commercial area. These connections should be designed to be accessible for all residents and shall connect to sidewalks or crosswalks. Ramps are preferable to staircases where needed. Low-level lighting should be installed for safe evening use. See figure 3.

- The pedestrian connection at Lorrain Avenue and the Safeway parking lot should be established. A review of the requirements of this special exception should be undertaken to make the connection possible.



Pedestrian Passageways Through Buildings

Problem Identification

- Although these passageways are vital to two-sided shopping centers, they are unmarked from rear parking lots or from storefronts.

- Most of the passageways are poorly maintained, poorly lit, and present a threat to the pedestrian.

Proposed Improvements

These passageways need to be improved to encourage their use and to promote better circulation between the stores, the parking lots, and the sidewalks. Recommended improvements include:

- Create an attractive space within the passageways to encourage their use. Use proper lighting, use railings on steps, keep the area well-maintained, and utilize the display cases where available.

- Clearly mark the location of the passageways from the outside, listing the uses available on the other side.

Pedestrian Crosswalks

Problem Identification

- Crosswalks are representative of competing demands on an intersection. Better traffic flows need free right turns, and these conflict directly with safe pedestrian crossings. Most pedestrians can cross Colesville Road within one walk cycle, but slower walkers need two walk cycles to cross. They must wait in the refuge area in the center median.

- No mid-block crosswalks are present, thus jaywalking across Colesville Road (by Woodmoor Shopping Center) and University Boulevard (from Sutherland Road) is common.

- No parking lots have pedestrian walkways marked within. This conflicts with traffic flow and impedes safe pedestrian movement.

Proposed Improvements

Pedestrian crosswalks are the crux of pedestrian safety in areas of high traffic volume like Four Corners. Recommendations are to make all crosswalks highly visible and to allow for safe pedestrian access. See figure 5.

- Use brightly painted lines or create a change in texture or color by using contrasting paving materials. Periodic maintenance should be scheduled to ensure highly visible crosswalks.

- Put up signs at every crosswalk that doesn't have a traffic light to warn drivers to yield to pedestrians.

- Use brightly colored bollards to prevent vehicles from using handicapped ramps as parking lot entries (a problem next to High's). The bollards can also be used to make the crosswalks more visible.

- Modify free right turns at intersections by signage or signal to allow safe pedestrian crossings. This will become important for connections to the Kay Tract.

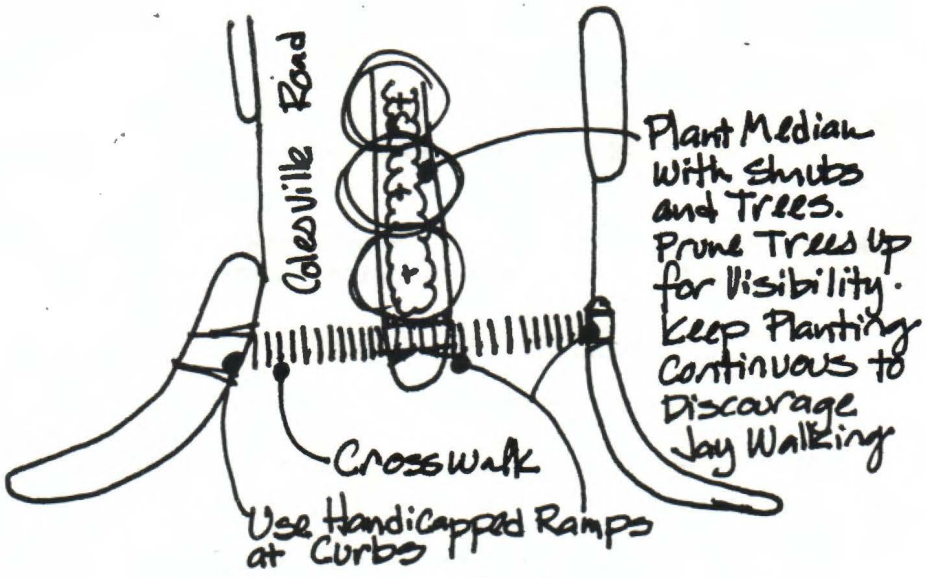
- Restripe parking lots to allow for internal pedestrian crosswalks and to include sidewalks next to stores.

- Improve refuge characteristics of pedestrian islands or in center medians by providing adequately sized standing areas and some sense of protection or separation from vehicles.

- Provide a mid-block crosswalk at University Boulevard at the intersection of Sutherland Road. Consideration should be made for a traffic control device for the eastbound lane of University Boulevard near the Post Office to allow for pedestrian crossing This could be timed with the stop light at Colesville Road and University Boulevard east.

- A crosswalk should be included within the parking lots in between University Boulevard east and westbound lanes.

- To provide an alternative to jaywalking across Colesville Road, improve the crosswalk at University Boulevard. The median strip within Colesville Road should be planted with a continuous strip of shrubbing and trees to become an attractive obstacle to crossing mid-block.



Bus Stops

Four Corners is served by Washington Metropolitan Area Transit Authority and Ride-On bus service. The intersection serves as a transfer point between the north-south and east-west routes.

Problem Identification

- Part of the pedestrian realm, the bus stops, aren't located in areas where the pedestrians can get to them easily and safely. In one case, no sidewalk exists at the bus stop. The bus stops are located in some areas of excessive traffic turbulence, i.e. at Colesville Road at Woodmoor Shopping Center and across the street.

- Only one bus stop has seating available. Unfortunately, it is too close to the street to provide an adequate buffer between traffic and the waiting rider.

Proposed Improvements

Bus stops need to be located where pedestrians can get to them easily, where transfers are easily made, where pedestrians can wait in safety with some protection and comfort, and where impact on traffic operations is minimized. Suggested location adjustments are shown on figure 6. Future bus stops should be integrated with future pedestrian and vehicular connections to the Kay Tract. Existing bus stops should also be re-evaluated and designed to provide maximum waiting areas that are safe and easy to get to.

Bikeways

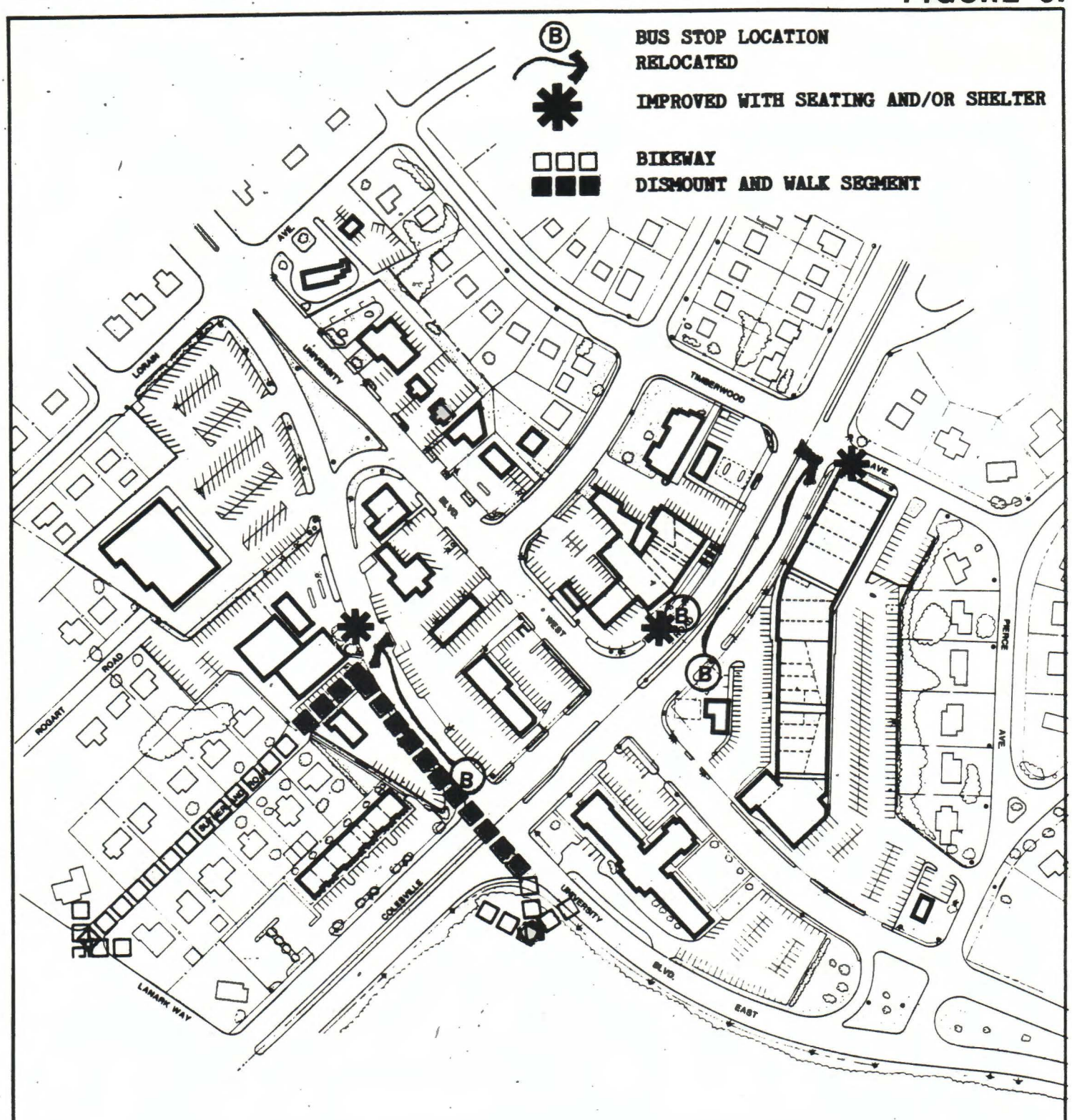
The existing and proposed bikeway network has been shown as part of the transportation plan. The bikeway enters the commercial district from Sutherland Road south and then skirts University Boulevard eastbound toward the Kay Tract. The difficulties in providing pedestrian circulation here translate into difficulties in providing adequate room for a bikeway. The segment along University Boulevard should be designated for "dismount", where bicyclists walk their bikes. See figure 6. Development of the Kay Tract should include a bike path on University Boulevard within its interior.

Public/Private Pedestrian Circulation

The sidewalks and pathways that traverse from public property to private property, and vice-versa, need to be continuous and coordinated. The goal of continuous pedestrian circulation requires that linkages be established wherever the ownership pattern shifts. The diagram of "Proposed Pedestrian Circulation" found in figure 4, highlights where the paths and sidewalks throughout Four Corners are to be located and how they link up. Where sidewalks are duplicated in private and public lands, accommodations need to be made to only use one and turn the remainder over to green space.

BUS STOPS AND BIKEWAYS

FIGURE 6.



Four Corners Sector Plan

KEMP MILL-FOUR CORNERS PLANNING AREA URBAN DESIGN STUDY

GOAL: TO PROVIDE VEHICULAR CIRCULATION THAT IS SAFE, CONTINUOUS, AND PRODUCES A BALANCE BETWEEN VEHICULAR MOVEMENTS AND PEDESTRIAN MOVEMENTS.

The relationship of vehicular access to the businesses of Four Corners must remain unquestionably strong. The rising traffic volumes and consequent congestion, however, are beginning to nullify that relationship. The Transportation Plan has discussed a variety of improvements to meet vehicular circulation goals. The Urban Design Study will address the details of vehicular circulation problems within the public rights-of-way as well as within privately owned parcels (parking lots).

Problems in the privately held properties are more difficult to work with. The use-by-right commercial zones in Four Corners allow development without additional review, so internal circulation patterns and parking lots are developed in an incremental, per parcel basis. Even where circulation is coordinated between parcels, the results remain undesirable. Implementation of this study's recommendations for privately held properties ultimately rests in the will of the owner.

Traffic Patterns Within Four Corners

Problem Identification

- Traffic patterns and increasing levels of traffic that cause congestion at the Four Corners intersection and neighborhood have already been cited in the Transportation Plan. Other traffic problems in the public right-of-way is turbulence in the traffic flow due to cars entering or exiting driveways or weaving through traffic lanes to make the existing and proposed jug-handle turns. Also, high speed traffic on eastbound University Boulevard doesn't allow traffic to blend in easily or allow pedestrians to cross safely. These problems are discussed as curb cuts and bus stop locations and crosswalks. (See Pedestrian Circulation.)

Proposed Improvements

Improvements to the existing traffic problems in Four Corners have been proposed in the Transportation Plan. These short-term improvements include elimination of cut-through traffic, consolidating access points, reducing left-turn lanes and improving driveway designs, and intersection improvements designed to help traffic flow. Other improvement proposals suggest grade separation alternatives for solving long-range traffic needs. The Urban Design Study will respond to the short-term improvements and consider them as the most likely alternatives to be accepted and utilized.

Bus Stop Locations

Problem Identification

- Previously noted as having poor pedestrian connections, bus stop locations can also exacerbate congestion. One example is the bus stop in front of Woodmoor Shopping Center.

Proposed Improvements

Bus stops should be located where there is a minimum of traffic congestion. Bus stops shouldn't overlap curb cuts or block views at busy intersections. New bus stop locations were proposed in relation to pedestrian connections. See figure 5. These new locations also move bus stops away from congested areas at intersections and parking lot entrances.

Curb Cuts and Driveways

Problem Identification

- The excessive number of curb cuts is disruptive to smooth traffic flow and conflicts with weaving traffic patterns needed to make turns from west to east on University Boulevard. See figure 7. The resultant number of driveways utilizes excessively paved surfaces and duplicates the same movement needlessly. Often, curb cuts are located too close to each other and to the intersections. The curb cuts on the western edge of Colesville Road between University Boulevard eastbound and westbound are particularly problematic. Inappropriate radii and width of entry also contribute to difficult traffic movements around driveways.

Proposed Improvements

The consolidation and elimination of some curb cuts in Four Corners will help traffic flow and will increase opportunities for providing green space, all without sacrificing easy access to businesses. In some cases the elimination of one curb cut can be achieved by the widening of another. For most cases one-way traffic flows are preferable. Criteria for curb cuts are difficult to establish in Four Corners. Each curb cut location has to be evaluated on a case-by-case basis and tied into traffic flow patterns and site use requirements.

EXISTING CURB CUT LOCATIONS

FIGURE 7.

Four Corners Sector Plan

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Parking Lots

Problem Identification

- The parking lots of Four Corners were designed in accordance with the older parking regulations and most did not undergo any site plan review. Some parking areas have emerged from their site's use in an ad-hoc fashion.

- Whether parking lots are developed for a single property or are consolidated for several properties, internal circulation is not uniformly continuous and smooth. In either case, no provisions for landscaping to screen or shade cars have been addressed.

- Where they exist, parking lot traffic diverters (islands) are painted and are not raised surfaces; therefore, they're not as noticeable or effective.

- Parking spaces are located directly at entry points to parking lots, often with conflicting back-up zones.

- Access to the Woodmoor Shopping Center's front parking lot is unsafe. It is caused by multiple and confusing access points. Access must be modified for a minimum of traffic disruption to Colesville Road and to maximize internal circulation.

- Access to Woodmoor Shopping Center rear parking lot is unknown to the general public because of inadequate signage. Interior pedestrian passage is very poor.

- Parking lots in the western University Boulevard island are used to cut through and avoid the turn-around at the westernmost end of the island. This conflicts with internal traffic movements and adds additional traffic congestion mid-block.

Proposed Improvements

Modifications to existing parking lots can achieve: better circulation, more efficient land use (i.e., more parking using less land), and can open up more opportunities for green space. When properties renovate or redevelop their parking lots they should use the space-saving aspects of the recently approved off-street parking guidelines, i.e. smaller parking spaces. See figures 8 and 9. A review of the special exceptions for the commercial properties could reveal where the existing parking has expanded beyond the original approvals. Going back to the original parking lot limits could provide more green space as needed. Guidelines to be followed in re-evaluating parking lots are:

Parking Lots (cont'd.)

- Provision of 5 percent green space is mandatory.

- Use raised islands for more effective traffic diverters.

- Pedestrian walkways must be included in all parking lots.

- Parking lots should be screened with evergreen hedges and shade trees planted internally.

- Entry to parking lots from University Boulevard or Colesville Road must have a 20 foot minimum stacking lane before parking spaces begin.

- All parking lot entrances and locations shall be clearly marked, and the signs posted shall be visible to drivers.

- One-way traffic flows at entrances and within parking lots are recommended wherever possible.

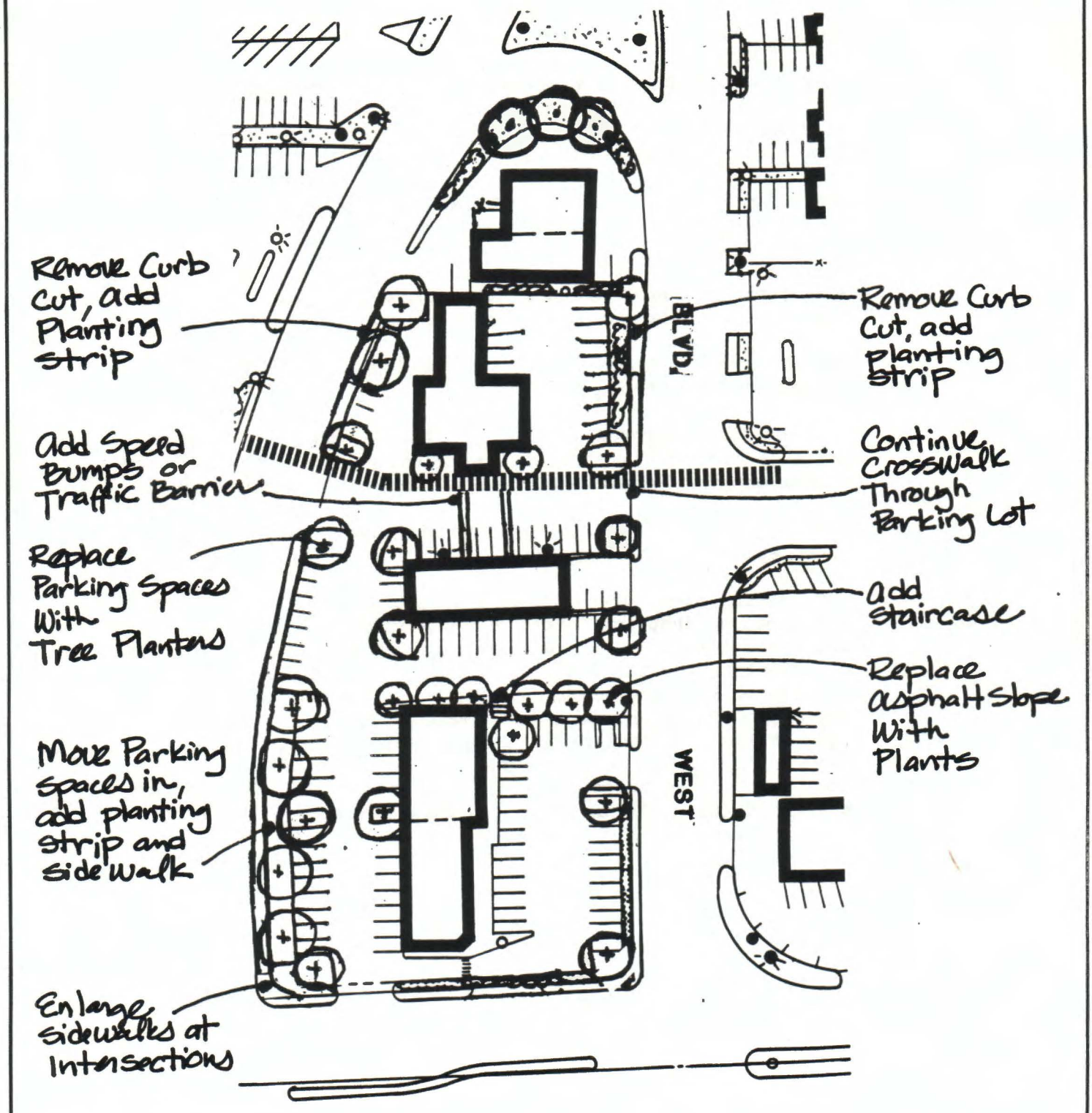
- The recently approved Parking Regulations shall be used as a guideline; where appropriate, waivers shall be granted where dimensions vary or there are other extenuating circumstances.

- Parking lots shall be consolidated wherever possible to reserve green space elsewhere on-site.

Two parking areas are particularly problematic - the front of the Woodmoor Shopping Center and the island between University Boulevard west. The Woodmoor's front parking lot has chronically bad circulation and unsafe stacking extending into Colesville Road and the gas station. The island parking lot in University Boulevard west has engulfed every available square foot of land needlessly and has too many curb cuts. The island is also used for cut-throughs to the post office from the neighborhood, an unstabilizing force to the already formidable traffic flows. The accompanying sketches show details of the proposed improvements.

PROPOSED CONCEPT FOR CENTER ISLAND UNIVERSITY BOULEVARD PARKING LOT

FIGURE 8.



Four Corners Sector Plan

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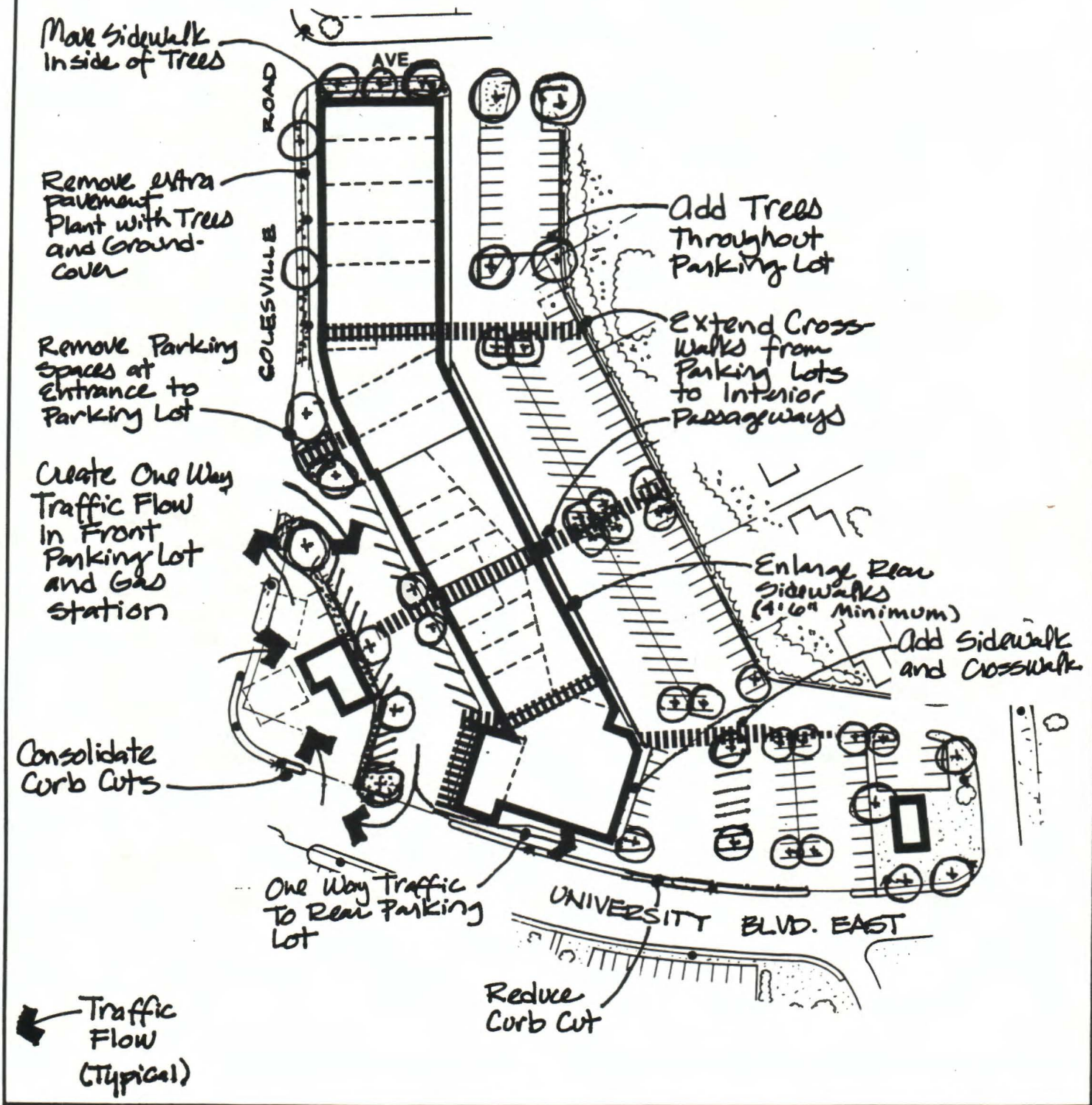
PROPOSED CONCEPT FOR WOODMOOR SHOPPING CENTER PARKING LOT

FIGURE 9.



Four Corners Sector Plan

KEMP MILL-FOUR CORNERS PLANNING AREA URBAN DESIGN STUDY

Image

GOAL: TO IMPROVE THE VISUAL IMAGE OF FOUR CORNERS, TO CREATE AN IMAGE MORE COMPATIBLE WITH THE SURROUNDING NEIGHBORHOODS AND TO PRESENT A MORE SUITABLE "FRONT DOOR" FOR THE COMMUNITY.

The image of Four Corners is one that is focused on the commercial center. The commercial center is the basis for the area's namesake: Four Corners, the intersection of Colesville Road and University Boulevard. It is also more visually prominent than the neighborhoods. While the commercial center is visually dominated by pavement, parking, lighting, and overhead wires, the neighborhoods are characterized by dense, green plantings and street trees.

But the image of a place is also formed from less tangible elements. The visual experiences combine with the perception of how the place functions to create an image. A positive image is formed from an attractive, intriguing appearance. Just as importantly, the ease of use, the perceived safety of use, and the ability to get what you need while there create a positive image of a place. A negative image is formed by an unsightly or shabby appearance and frustrated attempts to use a place conveniently or safely. This frustration could stem from waiting in traffic, not finding a parking space, or having to walk around a sign post next to 50 m.p.h. traffic to get to a bus stop.

The visual image of Four Corners operates on two scales. One scale is the image obtained by the driver passing through or stopping at the Four Corners' shops. The driver's image is a broad one comprising a road lined with utility poles and overhead wiring, confused orientation to shop locations, traffic, a proliferation of curb cuts, pedestrians randomly crossing streets, and a sense of past vitality for the older shops. The other, smaller scale image is the pedestrian's. The pedestrian's image is one that senses the overwhelming traffic levels while crossing the street or trying to walk from store to store. The lack of maintenance is more obvious, as are the steep staircases and poor lighting. The pedestrian also senses the lack of any established pedestrian realm in Four Corners. There are no shade or street trees and there is no strong separation between the pedestrian's and the automobile's realm offering the pedestrian protection.

One goal of this study is to establish the pedestrian realm within Four Corners. This necessarily includes integration with the vehicular realm, but not a dominance of one over the other. Just as importantly, these two issues must combine with other improvements to improve the visual image of Four Corners.

The Design Elements of Pedestrian and Vehicular Circulation

Problem Identification/Proposed Improvements

More than the proper functioning of the pedestrian and vehicular realm, these design elements have a visual quality that must be addressed as well. The sidewalks, pavement, crosswalks, etc., are individual elements that should blend into the overall image. When these building blocks are properly maintained or are attractive in themselves, they add to the subtle visual quality of an area. When these building blocks are run-down, non-continuous, or non-existent, the subtle effect is that the whole area is shabby, difficult to use, or unappealing.

Landscaping or the Development of Green Space Within Private Lands or the Public Right-of-Way

Problem Identification

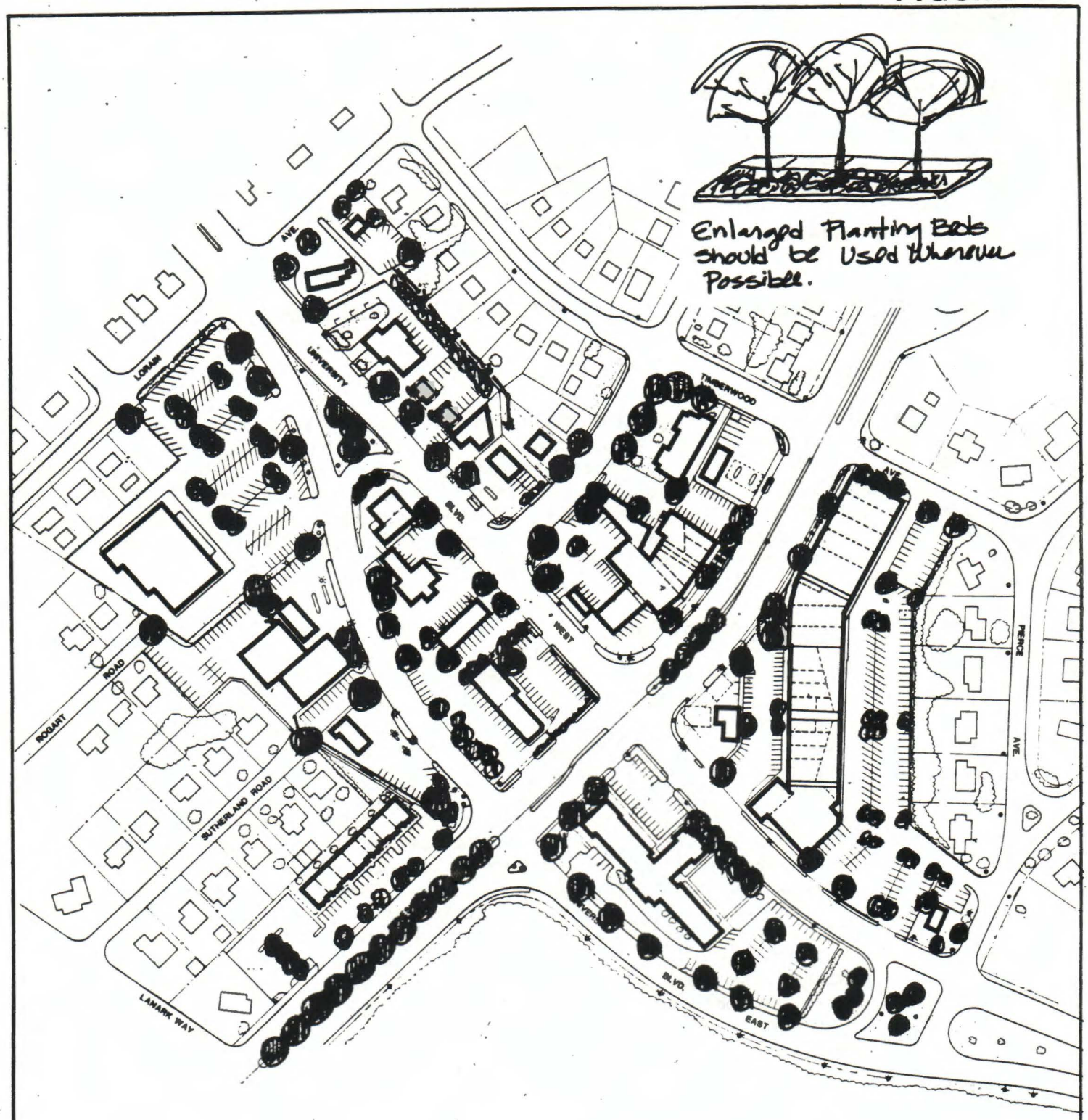
To the architectural and paved surrounds of Four Corners, the lack of green space (trees, shrubbery, ground cover, or lawn) is noticeably lacking. The lack of any effective green space provides no visual relief of the hard line, man-made surfaces, no sensual relief from the sun or other elements, and provides no pedestrian-scaled elements to more clearly define the pedestrian realm. The driver's view is one that just sees undifferentiated development and cars. Trees and other plants provide the definition and screening between different uses.

Proposed Improvments

The solution to reclaiming green space in Four Corners is based on an incremental approach, giving injections of green space wherever feasible. The location of plantings ultimately depends on the implementation of other suggestions. Reducing paved surfaces by redesigning parking lots for smaller parking spaces, removing duplicated sidewalks, or removing extra driveways are all ways to provide room for landscape plantings. See figure 10. As with the other aspects of adding improvements in Four Corners, locations for improvements overlap publicly and privately owned lands. Implementation techniques will have to address the two sectors. The right-of-way sketch for pedestrian circulation shown in figure 2, also shows areas where landscape improvements could be made within the public right-of-way. Other improvements to areas such as parking lots and driveways all show areas where opportunities for landscaping exist. An important aspect of the landscaping plan is that it is one whose design recognizes that it is to be implemented in a built environment. Planting in an existing environment accepts an incremental, irregular design concept. Planting in areas that were previously paved requires planting details that provide for plant survival and adequate development, despite the surrounding compacted soils. Larger tree pits and tree protection devices will need to be considered. Wherever possible enlarged planters should be

LANDSCAPING OPPORTUNITIES

FIGURE 10.



Four Corners Sector Plan

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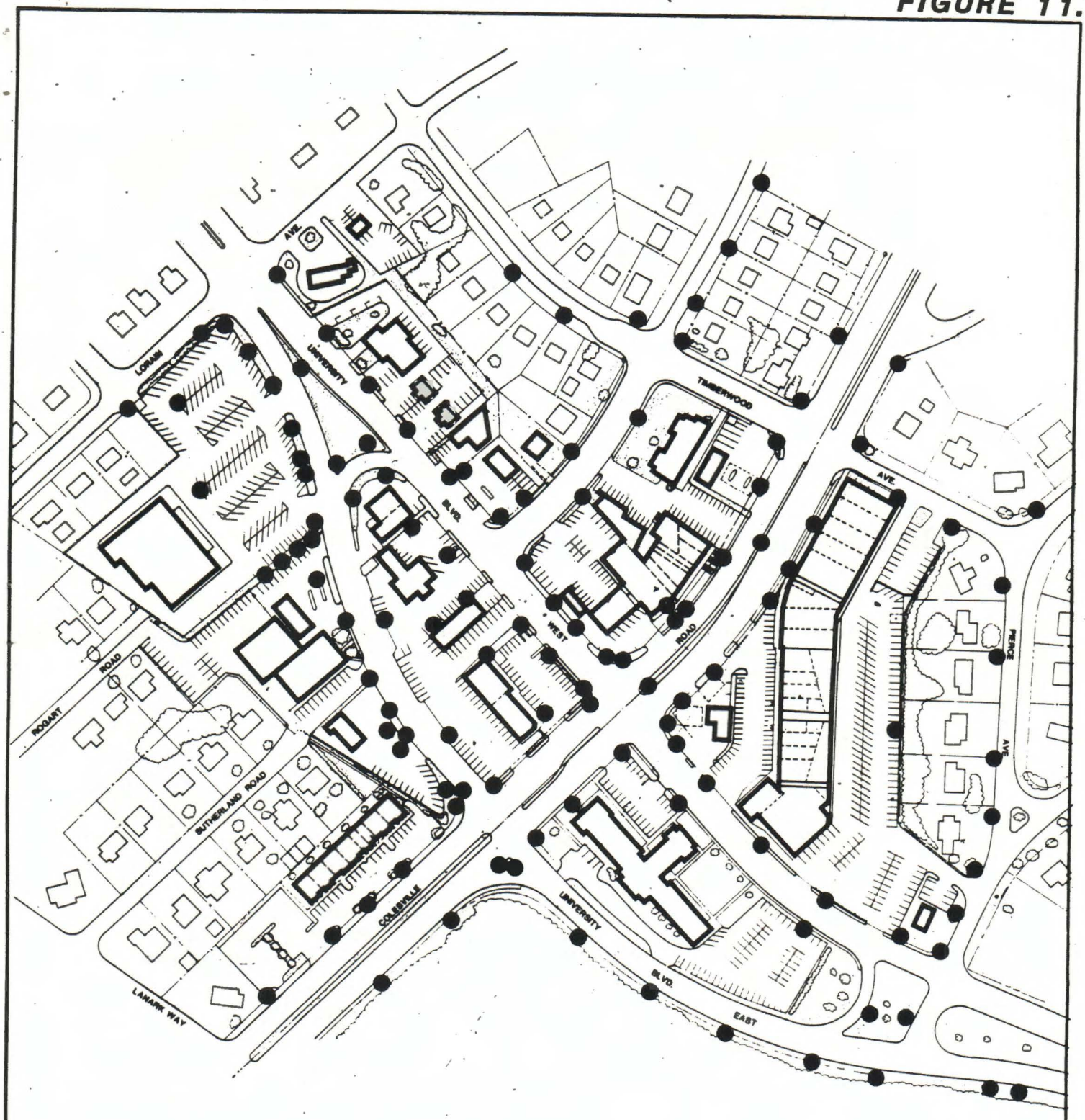
UTILITY AND LIGHT POLE LOCATION

FIGURE 11.



● UTILITY OR LIGHT POLE, TYPICAL

Four Corners Sector Plan

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used. This requires planters the size of one or more parking spaces or the use of a continuous green strip for several trees.

Locations identified for landscaping opportunities in Four Corners are:

- Traffic islands in the public right-of-way, both within Colesville Road and University Boulevard. Plants should be located without impeding the driver's sight distance. Shrubs should be located to keep views open and trees pruned high enough to allow views underneath.

- Along sidewalks, either through parking lot redesign, the elimination of parking spaces, or the removal of duplicating sidewalks.

- Within parking lots, in areas where excess paving was removed.

- Building foundation plantings, especally in front of the single-family detached homes now converted to offices.

- In any locaton that has paving beyond what is required.

Utility/Light Poles and Overhead Wires

Problem Identification

Both the driver's and pedestrian's image of Four Corners encompasses the utility poles and overhead wires. To the driver they represent visual clutter, and to the pedestrian they are barriers to unobstructed passage. See figure 11.

Proposed Improvements

An obvious recommendation is to bury the utilities around the Four Corners intersection. This would free up the pedestrian's realm, remove a major source of visual unattractiveness, and provide opportunities for more desirable at-grade modifications (i.e., relocate all sidewalks away from streets). The implementation of this recommendation needs to be viewed in context of the costs of undergrounding utilties. A determination of this need has to be ranked with other projects to determine its feasibility.

Short of undergrounding utilities, the following recommendations are made:

- Where utility or light poles obstruct pedestrian circulation, the poles should be relocated out of the sidewalk. If this is impossible, sidewalks should bend to provide adequate room to walk by.

Utility/Light Poles (cont'd.)

- Should roadway improvements that require extensive roadwork at this intersection be approved in the future, all utilities should be placed underground at that time.

Existing Structures

Problem Identification

The structures within Four Corners' commercial area are a varied group. The incremental development of Four Corners is best exemplified by the scattered arrangement, the diverse types of buildings, and the variety of styles. Stores and townhouses have been clustered in groups along Colesville Road, but elsewhere businesses are located on a per-parcel basis, spreading out along University Boulevard.

A listing of the buildings within Four Corners are:

5 gas stations
2 auto repair shops
3 fast food/convenience retail
1 free-standing supermarket
1 row of office townhouses
1 animal hospital
6 free-standing offices/businesses
1 church
1 shopping center, the Woodmoor Shopping Center
1 block of connected businesses

The styles of the buildings relate to each divergent use and when they were built. Some of the buildings accurately indicate their use: gas station, grocery store, or fast food stores. Others are either too non-descript to tell, or are at cross purposes to the buildings they occupy, i.e. stores or offices within single-family detached houses. In this last case, when the houses are used as offices and the lawns and foundation plants are replaced by parking lots, the end result is an unattractive looking house that doesn't quite look like a house or an office. The key to successful conversions on strips like this is that, until new development occurs, some semblance of the original settings should be kept. In this instance, a reduction of front yard paving and parking and maintaining the front yard plantings are needed.

Most of the buildings appear to be in good repair, particularly the newer businesses. When the older buildings are undermaintained it becomes obvious very quickly. A building is upgraded very easily with new painting, new signage, or new plantings. The basic maintenance of keeping public areas clean, hiding trash and dumpsters, and keeping lights and doors working may go unnoticed when they're done, but become signs of decay and blight when not done. To create and preserve a positive image for the buildings of Four Corners, the following is recommended:

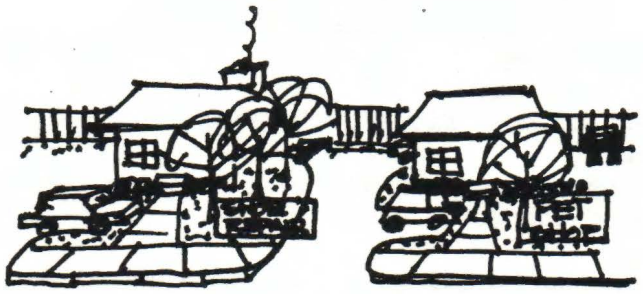
Proposed Improvements

- Houses used as businesses near the residential edges should maintain a residential character from the streetside view.

- All dumpsters and junk piles should be screened from public view by wooden fences or other permanent devices.

- An incentive for maintenance should be developed to encourage upkeep of all structures in Four Corners.

- Unnecessary vehicle storage in parking lots should be discouraged. Where possible parking areas not requiring front access should be screened from curbside view, i.e. the post office parking lot.



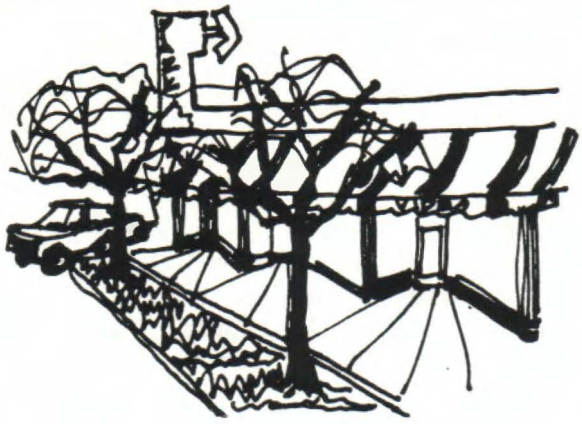
WOODMOOR SHOPPING CENTER

Comment should be made on the Woodmoor Shopping Center. Although the strip shopping centers of the 1950's have yet to reach historic preservation status, Woodmoor does exhibit several unique design features that make it an interesting and attractive asset to the neighborhood. The Park Historian for M-NCPPC has described the highlights of the Woodmoor Shopping Center as being...

> "...related to the 'moderne' styling of the Silver Spring shops, incorporating 'streamlined' facades of limestone or light brick accentuated by black marble and aluminum trim."

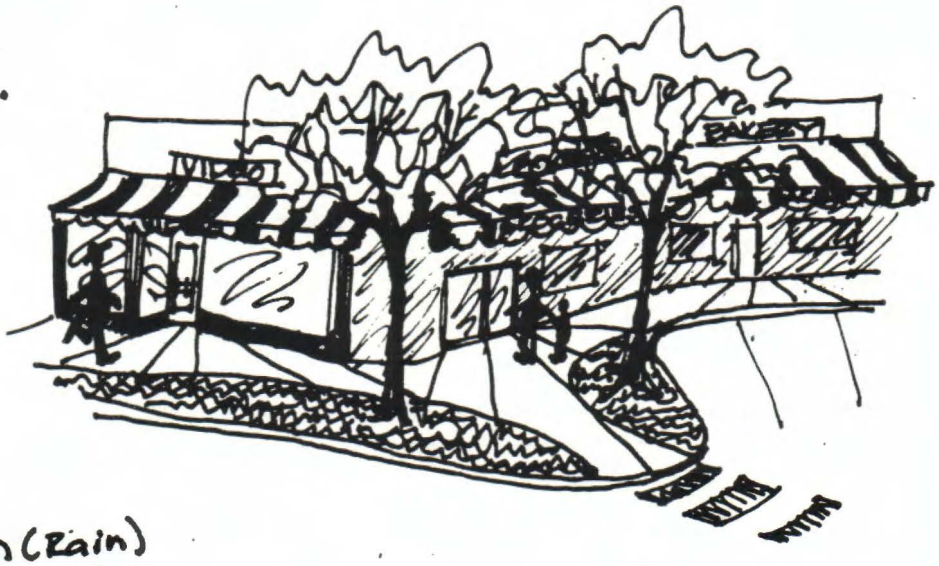
The Woodmoor Shopping Center is a design feature within the Four Corners community. Because of its prominent location traversing one entire quadrant of the intersection and its orientation to the intersection, the shopping center should be preserved and enhanced. However, appreciation of the Woodmoor Shopping Center is greatly inhibited by the corner gas station located in front of it. Also, poor maintenance has dulled many of its intriguing details. A sketch study (not included here) will show what improvements could highlight the Woodmoor Shopping Center and return some character to the Four Corners' "front door".

WOODMOOR SHOPPING CENTER SKETCH STUDY- FRONT



- Plant Front Strip
- Indicate Rear Parking lot
- Restripe Sidewalk to emphasize Architectural Detail.

- Use night-lighting to Emphasize Architectural Detail.



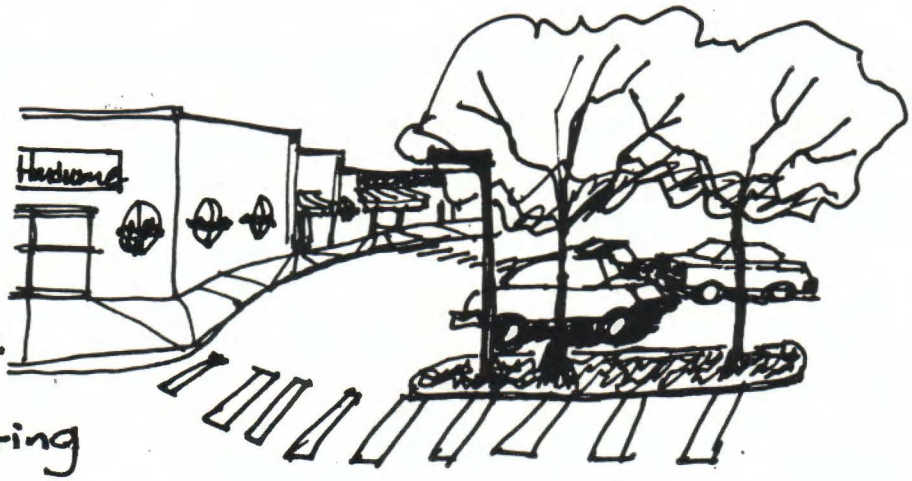
- Remove Parking Spaces Next to Street and Create Planted Entry (and stacking lane).
- Add awnings for Pedestrian Protection (Rain) and to highlight businesses.

- Reduce Gas Station's Canopies and Building Size to Increase Visibility to Store Fronts and Signage

FIGURE 12.

WOODMOOR SHOPPING CENTER SKETCH STUDY- BACK

- Add Street Trees to former Parking spaces
- Add flower pots for Color and Interest
- Add crosswalks
- Widen Rear Sidewalk
- Use Pedestrian and Driver Scaled Lighting



- Indicate Entry to Pedestrian Passageway with awnings or equivalent
- Put Signage next to Passage way that indicates Stores with Front entries
- Light Passageways and Utilize Display Cases

- Add Flower Boxes to Windows above for color and to give relief to now flat wall
- Add lighting at Pedestrian Level

FIGURE 13.

Signage

Problem Identification

As varied as the architecture is in Four Corners, so is the signage. The different functions of the signs are for advertising, highway identificaton, and direction. In Four Corners, the incremental parts, the location and design of the signs, add up to a confusing total. In addition, poor maintenance of the signs adds to the visual blight of the area.

Several significant problems arise in Four Corners. The individual shops of the Woodmoor Shopping Center go unnoticed because of the location of the canopies of the corner gas station. There are no obvious signs next to the road indicating the presence of the Woodmoor's rear parking lot. Many would-be patrons will drive by if the front parking lot is full. A billboard is placed at the edge of Four Corners, creating an incompatible relationship to the residential area beyond. Also, signage in Four Corners is undermaintained and outdated, thus graphic quality and appeal is low. Highway signs are placed within pedestrian walkways, forcing the pedestrian close to traffic, thus negating the utility of the sidewalks.

Proposed Improvements

Staff recommends a review of signs in Four Corners to remedy these situations:

- Signs should be located so as not to obstruct views of other signs or buildings. Where possible, signs should be clustered or placed close to the ground.

- Signs should be well-designed, using bold simple graphics or words to signal the driver's attention quickly and not create excessive clutter.

- Billboards should not be located near residental edges or be visible from the residential areas.

- All signs should be well-maintained and properly lit.

- One consideration for reviewing signs in Four Corners is to decide upon a graphic theme or signage design for all or part of the commercial area. This would serve as an identifiable characteristic for the commercial area, allowing Four Corners merchants to advertise jointly and promote the area as a whole. One idea is to utilize the blank facades along Colesville Road to be used for wall graphics, also reinforcing the Four Corners theme.

Lighting

Four Corners at night shows its true commercial character when the signs and streets are brightly lit. The area is still active at night with several stores open until nine o'clock, and bars, restaurants and convenience stores open even later. Thus, lighting at night becomes an image-maker in two ways. It creates a sense of safety for the pedestrian and adds a touch of drama and excitement for passersby.

Problem Identification

- The parking lots behind Woodmoor Shopping Center are lit by flood lights mounted high on the building itself. This doesn't provide adequate lighting for parking, particularly in the far back corners. Only two of these lights were operating during a recent field inspection. The front of Woodmoor Shopping Center does not include area lighting, creating a dark parking lot (from same field visit).

- The pedestrian passageways through the buildings are either unlit or dimly lit.

- The colorful and interesting neon lights of Woodmoor Shopping Center are hidden beyond the gas station's canopy and brighter lighting.

- Fred and Harry's parking lot has building-mounted flood lights, as does Woodmoor Shopping Center. Although lighting levels seem adequate for the area, it appears utilitarian and lacks attractiveness.

Proposed Improvements

- Lighting for parking lots should be in operation during evening hours when any business is in operation. This also includes pedestrian passageway lighting to allow safe entry to storefronts from the rear parking lots. Lighting in the parking lots should be on poles within the parking spaces for optimum lighting coverage.

- All lighting next to the adjoining residential properties should be designed so no excessive light shines in their direction. Low level lighting or lighting with cut-off features should be used.

The Edge Between the Commercial Area and Residential Areas

Problem Identification

The treatment of the edge between the commercial center and the neighborhoods can make or break a compatible relationship for both parties' benefit. The outline on figure 1 shows the edge of the commercial area as reinforced by zoning and various special exceptions. In many cases the edge is reinforced physically by retaining walls, other changes in grade, fences, and heavy plantings. The northern edge of the commercial center is not visually defined behind the offices facing University Boulevard.

Proposed Improvements

Recommendations to improving and maintaining the boundary are:

- Because of the close proximity of residences to the commercial center, visual screening is required where commercial uses adjoin residential uses directly. The screen shall consist of fences and plantings to soften the views for the residents. No lighting or other dominant intrusions shall be located, so there is no obvious impact to the residential areas.

- Allow no further encroachment into the neighborhood by commercial uses or by special exceptions, except as noted in the land-use plan. Where expansion occurs proper screening should be installed.

IMPLEMENTATION

The recommendations of this Urban Design Study are both incremental and broad, and are also located within the public properties and private properties. Often improvements straddle both public and private properties at the same time. Having identified the problems, what remains is how to achieve the recommended improvements of the study. The list of scenarios that follows suggests paths to follow to achieve the goals of this study. They are starting points for discussion that will ideally evolve into future policy.

- The State Highway Administration agrees to improve sidewalks or plantings within state rights-of-way in accordance with this Urban Design Study. This could be initiated by Planning Board or other. Future proposals for improvements should incorporate the highest design sensitivity and standards to be consistent with this Plan's recommendations.

- Montgomery County's Department of Housing and Community Development (DHCD) could designate this area as a commercial revitalization project and provide funds for capital improvement projects, building and site improvements or other renovations, and business improvement loans.

- New development of any one of the Four Corners' quadrants would, in itself, improve this area. New development has already added some landscaping and has upgraded some businesses. This private sector implementation would be incremental at best, but should be encouraged to achieve the goals of this study.

- The Four Corners Business (Men's) Association could be resurrected to consolidate improvement efforts within the privately owned lands. The citizens' influence could be used here as well to prioritize projects and lend support to participating businesses. Connections to school groups or garden clubs or other organizations can be established through this group to consolidate efforts and funds. Additionally, this group is essential to obtaining DHCD funds.

- A citizens' action committee should be formed in any case to initiate and promote efforts to forward the goals of this study. This committee could work with planning staff, other public agencies, and other interested groups to lend support to other efforts to gain support for their own efforts.

Resolution No.: 10-2066
Introduced: July 7, 1986
Adopted: July 7, 1986

COUNTY COUNCIL FOR MONTGOMERY COUNTY, MARYLAND
SITTING AS THE DISTRICT COUNCIL FOR THAT PORTION
OF THE MARYLAND-WASHINGTON REGIONAL DISTRICT
WITHIN MONTGOMERY COUNTY, MARYLAND

By: District Council

Subject: Final Draft Four Corners Sector Plan

Background

1. On January 13, 1986, the Montgomery County Planning Board transmitted to the District Council the Final Draft Four Corners Sector Plan.

2. The Final Draft Four Corners Sector Plan analyzes the area population, housing, and environmental characteristics; and makes recommendations for future land use, transportation, public facilities, and zoning.

3. The Final Draft Four Corners Sector Plan is an amendment to the Master Plan for Kemp Mill-Four Corners and Vicinity, 1967, as amended; to the General Plan for the Physical Development of the Maryland-Washington Regional District; and to the Master Plan of Highways within Montgomery County, Maryland.

4. On April 3, 1986, the District Council held a public hearing wherein oral and written testimony was received concerning the Final Draft Four Corners Sector Plan.

5. On May 27, 1986, and June 3, 1986, worksessions were held by the Council's Planning, Housing and Economic Development Committee regarding the Final Draft Four Corners Sector Plan amendment and the issues raised at the public hearing.

6. On June 17, and July 7, 1986, the District Council met to review the Final Draft Four Corners Sector Plan and the recommendation of the Planning, Housing and Economic Development Committee.

Action

The County Council for Montgomery County, Maryland, sitting as the District Council for that portion of the Maryland-Washington Regional District in Montgomery County, Maryland approves the following resolution:

The January 1986 Four Corners Sector Plan is approved with the following amendments:

1. On page 38, delete language pertaining to first bullet and substitute the following:

[• "Any application for the MXPD Zone on the "Kay Tract" must address the traffic capacity of the Colesville Road/University Boulevard intersection. No zoning application should be approved unless it is demonstrated that the proposed development will not degrade this intersection any further than the current level of service and will not generate additional peak-hour traffic in the critical lanes. This may be accomplished by:

- selecting and balancing a mixture of land uses according to their respective trip generation and distribution characteristics, thereby creating an opportunity to spread the timing and distribution of site generated traffic;

- on-site and off-site roadway improvement;

- Transportation Systems Management projects; and

- public and private improvements that will generate additional capacity at the intersection.

The zoning application should establish a linkage between transportation improvements and site buildout. Site development should be staged, with each stage tied to a corresponding set of transportation improvements. This will permit site development to occur at a rate and intensity commensurate with the provision of supporting transportation improvements. These improvements should include construction of additional pavement to increase intersection capacity and a set of programs and initiatives that will encourage trips to and from the site by ridesharing and public transportation."]

• Traffic standards for MXPD zone application will be provided by future amendment to Four Corners Master Plan.

2. The Human Services Chapter is revised in accordance with the attachment to this Resolution titled "Human Services and Land Use Issues in the Four Corners Community," dated June 7, 1986.

This is a correct copy of Council action.

Kathleen A. Freedman, Secretary
County Council

HUMAN SERVICES AND LAND USE ISSUES IN THE FOUR CORNERS COMMUNITY

The Four Corners Community is a diverse one in a geographic area which has experienced the growth and changes characteristic of the older parts of Montgomery County. The housing stock, consisting primarily of single family detached homes, was built after the Second World War during a period of rapid growth. This development met the market requirements of the time and the common needs of a relatively homogenous population seeking suburban homes. Since the fifties, the Four Corners Community has experienced significant demographic and social changes. The average age of the population has increased due to increase in longevity, retention of homes after the children are gone, and fewer and later children of new, younger families. Household size has decreased due to divorce and smaller family sizes. The racial and ethnic composition of the population had broadened to include a larger percentage of both American-born and foreign-born minority groups. More women are working in the paid labor force outside the home.

Meeting the new needs generated by these demographic and social changes is crucial to the future stability and attractiveness of older communities in Montgomery County. This chapter examines the change in needs of the Four Corners Community in terms of the traditional sector plan elements, housing, transportation and community facilities. Special emphasis is given to the facility and service needs of the very young and the very old. While they do not represent the full spectrum of human service needs in the area, they are emphasized in this plan because it is possible to identify significant shifts in these demographic groups and because there are specific land use and structural changes that can be made in response to their needs.

Demand for services for the elderly can be expected to grow among homeowners who are becoming the "frail" elderly [1] in post-war suburbs such as Four Corners. Demand can also be expected to grow among young parents who are recycling into post-war suburbs; increasing numbers are two-career households

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[1] The term frail elderly refers to people who are still in good health but at an age where they are susceptible to rapid changes in their health, and are less physically able. The number of people aged 75 and over is generally taken as an index of the number of frail elderly. All people over 75 are not frail.

or single parents -- both groups needing day care for their children. The degree to which the Four Corners area and other similar areas face this dual demand for new services is indicated by some statistics from Holy Cross Hospital, which is immediately adjacent to the planning area. In 1983, Holy Cross had the second highest number of admissions of elderly in the state, and also the second highest number of live births.

HOUSING

The housing stock in the Four Corners area was designed primarily to meet the privacy needs of a nuclear family. The elderly were not a major component in the suburban population when this housing stock was built. They now represent one of the major groups needing to be accommodated as the average age in the community continues to increase.

There will be growth in frail elderly homeowners in the Four Corners area as the area's initial postwar occupants of about forty years ago reach their seventies and eighties. During the decade 1970 to 1980, there was a rapid growth in the elderly in the 65-74 age group, and somewhat lower rates of growth in the 55-64 age group. That wave of people will continue to age, and the decade from 1980 to 1990 will see a large growth in people over age 75. The increase of the 65-74 age group in the Four Corners area between 1970 and 1980 was 96 percent. That rate of increase suggests that the 75 and over population may double during the current decade. In 1980, 382 people, or 3 percent of the population of the Census tracts wholly or partially included in the Four Corners area, were 75 and over.

The housing choices of the elderly are influenced by affordability, a loss of physical stamina which may affect the ability to maintain a single family home, and a desire to maintain their social and community support system in the face of ongoing losses in their circle of friends due to death. For many elderly homeowners, even if they are willing to sever neighborhood ties, the cost of alternative housing arrangements is or appears to be overwhelming in proportion to increased services. The data and the experience of the Department of Family Resources suggests that the number of frail elderly living in single-family homes will continue to increase, and many of these will be living alone.

Other factors influencing changes in the use of the housing stock in the Four Corners area are the entry of women into the paid labor force and the increasing number of single parent families. The proximity of the area to job markets and the existence of stable communities encourages the entry of

younger families as the housing recycles. These new families will affect the demand on public schools and will increase the need for child day care facilities. The availability of public school capacity and of child care facilities will have a distinct effect on the continued viability and stability of the single-family housing communities.

Finally, the original development of housing in the Four Corners area did not address the shelter needs of groups with special requirements including the chronically mentally ill and the handicapped. Whereas these needs were frequently accommodated in an institutionalized setting in the fifties, recent state and federal legislation and Court rulings have required that these individuals be cared for in the least restrictive environment, ideally home communities.

The primary land use need of disabled people is for housing. Group homes and apartments are effective and efficient means for meeting housing needs. As described in the Department of Family Resource's 1985 Update of Group Home Needs and Resources, group homes serve anyone who, "... because of emotional, mental, familial, or social differences, has a need for supervision or assisted community living ..."

The "Update" on group homes goes on to define four categories of group homes which are in greatest need. The categories are homes for the mentally retarded/developmentally disabled, the mentally ill, the multiple handicapped, and the elderly.

There are currently within the Four Corners area homes for the mentally ill and the mentally retarded/developmentally disabled.

While the occasional controversy over these homes makes it inadvisable to detail locations or numbers, it is significant that as with the other 88 homes in the County in 1985, the ones in the Four Corners area apparently go essentially unnoticed. It is sufficient to state that the number of homes in the Four Corners area does not indicate an over concentration in the area. It should also be noted that the Four Corners area has relatively good public transportation, particularly to Silver Spring where there are job opportunities appropriate for the developmentally disabled.

One further point should be made. In 1986, there were not any group homes for the elderly in the Four Corners area. Given the statistics given earlier, it would seem to be an appropriate area for such homes. Group homes for the elderly will offer at least some elderly an alternative, especially in their own neighborhoods.

Given the increasing variety of housing needs of residents in Four Corners, tools must be found to allow for more flexible uses of the single-family home without threatening the stability of single-family neighborhoods. The greatest resource in Four Corners is the existing single-family housing stock. In the short term, tools which allow for modifications and alterations to the single-family home will have the most immediate use. In the long term, tools to encourage development of housing that may have multiple uses over its lifetime and to address eventual redevelopment of the single-family housing stock also need to be developed.

Shared housing and accessory apartments can provide income, services, and human contact for older persons and also provide needed housing opportunities for young families, especially single parent families. In the Four Corners neighborhood, however, use of the accessory apartment ordinance is limited since a minimum lot size of 7500 square feet is required to apply for an accessory apartment use. Further experience with accessory apartments may indicate the possibility of modifying it to accommodate accessory apartment uses in Four Corners while still maintaining the stability of the neighborhood.

Another use of the existing housing stock to meet these human needs may be the adaptation of single-family houses for day care services for the elderly as well as for children. Much of the County's present child day care service is now being provided in single-family homes, and this appears to be a distinct possibility to provide services for the frail elderly while enabling them to stay in their homes and communities.

TRANSPORTATION

An increase in transportation needs has paralleled the differentiation of shelter needs. A neighborhood designed on the assumptions of easy access to either an automobile or to a driver limits the mobility of the elderly, children, the handicapped, those who cannot afford cars and others. Transportation systems keyed to a home-to-work trip for a head of household fail to provide for trips by other family members for other equally valid purposes such as day care, food shopping, volunteer work, social meetings and others.

The continued livability of communities such as Four Corners depends in part on the County's ability to plan for and meet a range of transportation needs. In the case of the existing housing stock in the Four Corners community, the mobility problems created by the dependence on the automobile may only be solved by increasing the amount and type of transportation

services available. The initiation of the Ride-On bus program was an early recognition that transit service must extend into the neighborhoods. Paratransit solutions being developed in response to road congestion problems experienced by the commuter must also be evaluated in terms of applicability to neighborhood service.

Beyond additional transportation services, zoning must be evaluated in terms of an adequate land use mix that provides needed neighborhood services easily accessible by a range of transportation modes and not just the automobile. The finding required for a special exception for elderly housing that the housing be located so as to be accessible to transit needs to be broadened for other special exceptions that serve populations with special transportation requirements.

COMMUNITY FACILITIES

Community facilities offer another opportunity to respond to the changing service needs of the Four Corners community. As noted in the Community Facilities Plan "as households age and composition changes, so will the types of facilities and services demanded. Schools and playgrounds may become less important to a major segment of the population. Changes in household composition may require the adaptation of public structures for new uses such as conversion of school buildings to facilities for the elderly."

Community facilities provide a flexible, responsive tool which can be used in the short term to accommodate new human service needs. The development or redevelopment of community facilities, which is generally under the control of the government more than the private redevelopment of the housing stock, also offers the County the opportunity to lead by example. In the overall process of shaping the evolution of the Four Corners community to better reflect and accommodate its residents, public facilities will continue to be the County's front line response because they enable the County to provide services to special groups in a responsive fashion and also allow the County to develop examples of structures reflecting concepts which may eventually be used to regulate private development.

In particular, additional facilities are needed to provide housing for the elderly. The Kay Tract offers an opportunity for such a facility, possibly in combination with a child day care facility. The former Four Corners Elementary School site is being developed for housing for the elderly. Other proposals for such facilities must be carefully reviewed to avoid adverse impact on existing neighborhoods.

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION
8787 Georgia Avenue • Silver Spring, Maryland 20910-3760

MCPB NO. 86-34
MNCPPC NO. 86-22

RESOLUTION

WHEREAS, The Maryland-National Capital Park and Planning Commission, by virtue of Article 28 of the Annotated Code of Maryland, is authorized and empowered, from time to time, to make and adopt, amend, extend, and add to a General Plan for the Physical Development of the Maryland-Washington Regional District; and

WHEREAS, The Montgomery County Planning Board of the Maryland-National Capital Park and Planning Commission, pursuant to said law, held a duly advertised public hearing on July 15, 1985, on the Preliminary Draft Sector Plan for Four Corners and Vicinity; being an amendment to the Master Plan, Kemp Mill-Four Corners and Vicinity, 1967, as amended; the Master Plan of Bikeways, 1978, as amended; the Master Plan for Historic Preservation, 1979, as amended; being also an amendment to the General Plan for the Physical Development of the Maryland-Washington and the Master Plan of Highways within Montgomery County, Maryland; and

WHEREAS, the Montgomery County Planning Board, after said public hearing and due deliberation and consideration, on January 9, 1986, approved the Final Draft Sector Plan, and recommended that it be approved by the Montgomery County Council; and

WHEREAS, the Montgomery County Council, sitting as the District Council for that portion of the Maryland-Washington Regional District lying within Montgomery County, held a public hearing on April 3, 1986, which testimony was received concerning the Final Draft Sector Plan; and

WHEREAS, the Council Planning, Housing and Economic Development Committee, at worksessions held on May 27, 1986 and June 3, 1986, reviewed the Final Draft Sector Plan and the issues raised at the April 3, 1986 public hearing with the Montgomery County Planning Board and interested parties; and

WHEREAS, the Montgomery County Council, sitting as the District Council for that portion of the Maryland-Washington

Regional District lying within Montgomery County on July 7, 1986, approved the Final Draft Sector Plan, subject to modifications and revisions, by Resolution 10-2066; and

NOW, THEREFORE, BE IT RESOLVED, that the Montgomery County Planning Board and the Maryland-National Capital Park and Planning Commission do hereby adopt said Sector Plan for Four Corners and Vicinity, together with the General Plan for the Physical Development of the Maryland-Washington Regional District and the Master Plan of Highways as approved by the Montgomery County Council in the attached Resolution 10-2066; and

BE IT FURTHER RESOLVED, that copies of said Sector Plan shall be certified by the Maryland-National Capital Park and Planning Commission and filed with the Clerk of the Circuit Court of each of Montgomery and Prince George's Counties, as required by law.

* * * * * *

This is to certify that the foregoing is a true and correct copy of a resolution adopted by the Montgomery County Planning Board of The Maryland-National Capital Park and Planning Commission, following Montgomery County Council approval of the Four Corners Sector Plan, on motion of Commissioner Heimann, seconded by Commissioner Granke, with Commissioners Christeller, Granke, Heimann, and Krahnke voting in favor of the motion, and with Commissioner Keeney being absent, at its regular meeting held on Thursday, July 10, 1986, in Silver Spring, Maryland.

Thomas H. Countee, Jr.
Executive Director

* * * * * *

This is to certify that the foregoing is a true and corrected copy of a resolution adopted by The Maryland-National Capital Park and Planning Commission, following Montgomery County Council approval of the Four Corners Sector Plan, on motion of Commissioner Krahnke, seconded by Commissioner Yewell, with Commissioners Christeller, Rhodes, Granke, Heimann, Krahnke, Keller, and Yewell voting in favor of the motion, and with Commissioners Keeney, Dabney and Botts being absent, at its regular meeting held on Wednesday, July 9, 1986, at the "White Mansion" in Mitchellville, Maryland.

Thomas H. Countee, Jr.
Executive Director

PLANNING STAFF ACKNOWLEDGEMENTS

Project Staff

William R. Barron
Stephen Federline
Wynn Witthans

Acknowledgements

Perry Berman
James Crawford
Mary Goodman
Patrick Hare
Bernard Horn
Lawrence Lewis
Babatunde Owolabi
Fred Peacock
Gail Price
Marty Reinhart
Tanya Schmieler
Pat Willard

Report Production

E. Faye Smith
Marie Steingrebe
Florence Taylor
Brandt Hare and Staff