

IMPLEMENTATION

Implementation of the Comprehensive Plan is achieved through a variety of methods, the major ones being the Zoning and Subdivision Ordinances and the Capital Improvement Program. These basic methods are supplemented by numerous other elements that address critical areas such as fiscal policy, encouragement of economic development and the preservation of agricultural, historic and environmental assets.

SUBDIVISION ORDINANCE

The Subdivision Ordinance is the basic means for controlling the subdivision of land. It contains the regulations for dividing parcels of land into lots of any size less than five acres and for the provision of public facilities, if required, to serve the lots so formed. While this ordinance provides the means to subdivide land, the resulting lots and uses thereon must also conform to the zoning on the property.

ZONING ORDINANCE

The Zoning Ordinance prescribes both the size of lots into which land may be subdivided and the uses which may be pursued on the property. If an owner wishes to change either the lot size or uses permitted on his property, he must apply for rezoning to a district in which the desired lot size or uses are permitted. The Zoning Ordinance, therefore, is a primary means by which the land use recommendations of the Comprehensive Plan are implemented.

All property in Fairfax County falls into one or more of five general zoning district categories: residential, commercial, industrial, planned development, and overlay. Each category is broken down into a number of specific districts which are detailed in the County's Zoning Ordinance.

Residential zoning districts refer to land which may be developed with some type of housing. They are indicated by the code letter "R" followed by a number or letter which further describes density of residential use permitted, for example, the R-P (Residential Preservation) district designates that one dwelling unit is allowed on ten acres, the R-3 district allows three dwelling units per acre, and the R-30 district allows multiple family units such as apartment buildings, with 30 dwelling units per acre. There are 15 different residential districts.

Commercial zoning districts permit land uses such as offices, banks, stores, and shopping malls. There are eight commercial district designations. The C-1 through C-4 districts are primarily for offices, with the largest concentration of floor space allowed in a C-4 district. Retail uses, in addition to offices, are allowed in the C-5 through C-8 districts. For example, the C-7 district (Regional Retail) permits large shopping malls and offices.

Industrial zoning districts permit research and development establishments, offices and, in some cases, storage and manufacturing uses. The seven industrial districts range from I-1 (Industrial Institutional) to I-6 (Heavy Industrial).

Planned development zoning districts may be PDH (Planned Development Housing) for residential subdivision with secondary commercial uses such as neighborhood retail stores, PDC (Planned Development Commercial) for commercial centers, such as Skyline at Baileys Crossroads, which also may include housing as a secondary use; or PRC (Planned Residential Community) for complete communities, such as Reston and Burke Centre covering at least 750 acres and allowing all types of residential and commercial use.

Overlay zoning districts impose regulations for specific purposes in addition to those of underlying zoning districts. These overlay districts include:

- HD (Historic)—to protect certain areas through use and architectural controls within the district;
- AN (Airport Noise Impact)—to designate areas in which soundproofing of residential, commercial, and industrial structures may be required in order to minimize the impact of aircraft noise;
- SC (Sign Control)—to impose special controls on freestanding signs within intensely developed commercial and industrial areas;
- HC (Highway Corridor)—to control certain highway oriented uses along certain segments of major highways; and
- WL (Wetlands)—to place strict limitations on all uses within shoreline and marsh areas.

Another feature of the Zoning Ordinance which contributes toward implementation of the Comprehensive Plan is the regulation of land uses by special permit and special exception. The purpose of special permits and special exceptions is to control uses such as service stations, private schools, churches and public utility uses which have an impact upon or are incompatible with other uses of land. In addition, special exceptions provide for modifications of standards and regulations specified for certain uses within a given district; i.e., allowing greater height for structures than provided for by right within a district.

DEVELOPMENT CRITERIA FOR RESIDENTIAL DENSITY RANGES

Residential density ranges recommended in the plan and shown on the planning area maps are defined in terms of units per acre. Where the plan map and text differ, the text governs.

Only the lower end of the density range is planned as a presumptive appropriate density contingent upon satisfactory conformance with applicable ordinances, policies, regulations and standards and assurance of the protection of the health, safety, and general welfare of the public. Except where review of the development proposal and the comprehensive plan with regard to the preceding land use determinants clearly justifies approval above the low end of the planned density range, approval of such densities shall be based

on the satisfactory resolution of development issues identified through analysis of the development proposal.

The responsibility for demonstrating that a proposed development merits approval at a density above the low end of the comprehensive plan density range rests with the applicant. Justification can be demonstrated by proffer of: (1) a development plan which graphically portrays in sufficient detail a quality of development which exceeds minimum development standards through fulfillment of the development criteria below, of (2) finite development conditions which fulfill those criteria, or (3) a combination of (1) and (2).

In all cases, evaluation of the fulfillment of development criteria will weigh the number of criteria credited through proffered conditions against the number of criteria which are feasible for the specific rezoning application being considered. As a general guide, at least two-thirds of applicable criteria should be satisfied for approval of density at the high end of a one-unit density range. As a general guide for multi-unit density ranges, approximately one-half of the criteria should be satisfied for approval of mid-range densities and three-fourths satisfied for approval of high end of the density range.

Criteria need not be equally weighted. In exceptional instances, a single criterion may be overriding in evaluating the merits of a development proposal.

Use of Development Criteria

Evaluation of development proposals shall include a comparison of the proposed land use with the land use(s) recommended in the comprehensive plan. The comprehensive plan considered the following land use determinants when it was prepared.

1. Existing zoning patterns
 2. Existing and planned land use
 3. Trends of growth or change
 4. Density/intensity of development in the immediate vicinity
 5. Existing and proposed transportation facilities
 6. Encouragement of economic development activities
 7. Need to provide a variety of housing opportunities
 8. Impact on existing environmental features.
- When staff review and analysis confirm that the



Westgate Research Park at Tysons Corner

proposal is in accordance with the comprehensive plan and reveals no unfavorable development issues affecting the proposed development of adjacent properties, the above factors may serve as a basis for decision on the development proposal. When review confirms that the proposal is in accord with comprehensive plan, but staff analysis reveals development issues affecting the proposed development or adjacent properties, a more detailed evaluation using the development criteria described below should be used to determine an appropriate intensity of development

Development Criteria for Residential Evaluation

Development criteria include, but need not be limited to the following:

1. Proffer of a development plan incorporating design layout and features determined through staff analysis to merit recognition for good design and amenities for the property in the application.
2. Provision of supporting public facilities beyond minimal ordinance, regulations and standards to alleviate the impact of the proposed development on the community.
3. Accessibility to existing public facilities, and/or phasing of development completion to coincide with the programmed provision of public facilities shown in the current Capital Improvement Program (CIP) to reduce interim adverse impacts of the proposed development on the community.
4. Provision of public road improvements and/or commitment to a reduction in traffic volume in order to reduce development traffic impact.
5. Provision of developed recreational areas which meet adopted standards, other amenities, or common or publicly owned open space for passive recreation create a more attractive environment within the new residential area. At least ten percent of such recreation and/or open space area should be provided outside of any floodplain area as defined in the Zoning Ordinance.
6. Compatibility in architecture and site design with existing and other planned development within the community to reduce the impact of new development.
7. Design sensitivity and exceptional conservation measures to preserve and/or protect environmental resources associated with the application site.
8. Innovative design to incorporate energy-conserving features or design features of particular value to future residents of the development.
9. Incorporation of noise attenuation measures which will significantly reduce aircraft, railroad, or highway noise impact that otherwise would be determined an obtrusive nuisance to persons living or working on the application property.
10. Provision of moderately-priced housing to make housing available over a broad cost range in order to serve better the needs of the entire population. Guideline: all housing developments, except single-family detached, in excess of 150 units should be approved for the upper end of the density range only if a proportion of the units, usually 15 percent, is provided for low- and moderate-income families or the applicant proves to the satisfaction of the Board that provision of low- and moderate-income housing is technically or economically infeasible.
11. On tracts containing soils locally described as marine clay, approval above the low end of the density range should be con-

sidered only when: (1) proposed construction avoids the marine clay; (2) the development proposal requests apartment development on the marine clay and the Comprehensive Plan permits such development either explicitly or by recommending a density of at least 8-12 dwelling units per acre; or (3) a planned development district application, which is compatible with the comprehensive plan, proposes apartment development on marine clay portions of the site.

12. Where appropriate, land assembly and/or development plan integration which facilitates achievement of plan objectives.
13. Where appropriate, preservation and/or restoration of buildings, structures or other features of architectural, historic or environmental significance to preserve our heritage.

ZONING DISTRICTS GENERALLY ASSOCIATED WITH COMPREHENSIVE PLAN RESIDENTIAL DENSITIES

1-2	R-P	R-A or R-C
2-5	R-A or R-C	R-E
5-1	R-E	R-1
1-2	R-1	R-2
2-3	R-2	R-3
3-4	R-3	R-4
4-5	R-4	R-5
5-8	R-5	R-8
8-12	R-8	R-12
12-16	R-12	R-16
16-20	R-16	R-20

Development Criteria for Commercial and Industrial Evaluation

While the comprehensive plan has no equivalent to the residential density range in areas planned for commercial and industrial uses, each such rezoning application will be evaluated using pertinent development criteria as a basis for such evaluation. The pertinent development criteria will be those set forth in the list of residential development criteria numbered as 1, 2, 3, 4, 6, 7, 8, 9, 11, 12, and 13.

CAPITAL FACILITIES PROGRAMMING

Capital improvement programming is a guide toward the efficient and effective provision of public facilities. The result of this continuing programming process is the Capital Improvement Program (CIP), a document published annually that proposes the development, modernization or replacement of physical public projects over a multiyear period. The CIP shows the arrangement of projects in a sequential order based on a schedule of priorities and assigns an estimated cost and anticipated method of financing for each project.

Programming capital facilities over time can promote better use of the County's limited finan-

cial resources and assist in the coordination of public and private development. In addition, the programming process is valuable as a means of coordinating among County agencies to avoid duplication of efforts and to take advantage of joint planning and development of facilities where possible. By looking beyond year to year budgeting and projecting what, where, when and how capital investments should be made, capital programming enables public bodies to maintain an effective level of service to the present and future population.

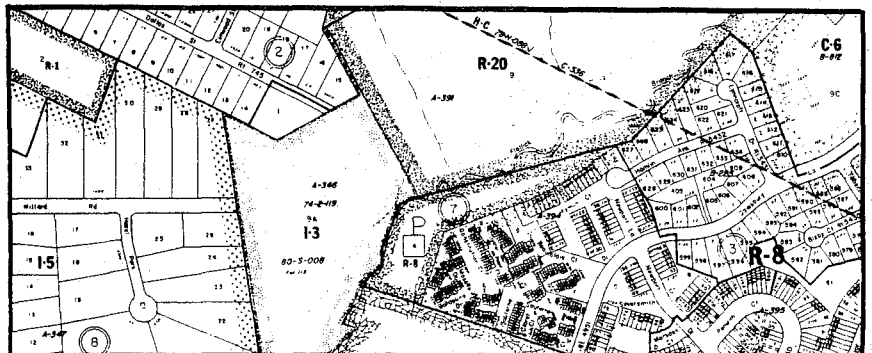
Benefits of Capital Programming

A long term capital improvement program has many obvious benefits that derive from its systematic approach to planning and financing public agency projects. These benefits will not occur, however, simply with the annual production of the document and its subsequent adoption by the local government. Its usefulness will depend on continuing legislative support of the program and firm executive commitment in carrying out program recommendations on a daily basis. Some of the more important benefits to be derived from a viable capital programming process include the following:

- **Assists in the implementation of the Comprehensive Plan.** The primary function of the CIP is to serve as a mechanism for implementation of the comprehensive plan. By outlining the facilities needed to serve the population and land uses called for in the plan and by scheduling them over time, the CIP guides the public construction program for the future.

The investment of funds in public facilities clearly has an impact on the pattern of community development. This can be most clearly seen in the extension of water and sewer lines and transportation networks, but carries over in terms of schools, parks, fire and police facilities and the like. Planning for such public facilities and the public announcement of intentions to acquire property or schedule construction of new facilities can do much to influence private development decisions. Likewise private development plans can have an effect in the formulation and priority ranking of projects proposed in the CIP. Thus, the CIP is intended to provide an important element in the strategy to achieve the goals and policies established in the comprehensive plan. However, the CIP cannot function alone. Working in concert with the zoning ordinance, subdivision regulations and other regulating legislation as well as being cognizant of current economic conditions and private market decisions the CIP is one means of implementing certain aspects of the comprehensive plan.

- **Focuses attention on community goals and needs.** Capital projects can be brought into line with community objectives, anticipated growth and the government's ability to pay. By planning ahead for projects, those that are needed



Small section from Fairfax County Zoning Map

or desired the most can be constructed or acquired first. Maximum satisfaction can thereby be gained from the public money invested. The CIP, once adopted, keeps the public informed about future capital investment plans of the County, and public involvement in the CIP process can provide a mechanism through which a previously unidentified need can be surfaced and addressed, placing its priority within a framework of identified Countywide needs. In addition, knowledge of future capital projects and the financial ability of the County to fund these projects can be a valuable indicator to the private development sector.

- **Encourages more efficient government administration.** The CIP promotes coordination among government agencies and provides a check on potential overlapping or conflicting programs. Coordination of capital improvement programming by County agencies can reduce scheduling problems and overemphasis of any governmental function. Work can be more effectively scheduled and available personnel and equipment better utilized when it is known in advance what, where and when projects are to be undertaken. Furthermore, advance programming can assist in avoiding the possibility of costly mistakes due to improper project scheduling.

The program can guide local officials in making sound annual budget decisions. In addition, the CIP will indicate where sites for projects are needed and advance acquisition may be necessary to insure the availability of land in the areas of anticipated development.

- **Fosters a sound and stable financial program.** Through capital facilities planning, required bond issues or the need for other revenue production measures can be foreseen and action taken before the need becomes so critical as to require emergency financing measures. In addition, sharp changes in the tax structure and bonded indebtedness may be avoided when the projects to be constructed are staged over a number of years. Where there is sufficient time for planning, the most economical means for financing each project can be selected in advance. The CIP can facilitate reliable capital expenditure and revenue estimates and reasonable bond programs by looking ahead to minimize the impact of capital improvement projects. Keeping planned projects within the financial capacity of the County helps to preserve its credit rating and makes it more attractive to business and industry. Thus, the CIP becomes an integral element of the County's budgetary process.

Legal Basis for Capital Programming

The Fairfax County Capital Improvement Program (CIP) is prepared pursuant to Section 15.1-464 of the Code of Virginia, as amended, which states that:

Local commissions to prepare and submit annually capital improvement programs to governing body or official charged with preparation of budget.—A local commission may, and at the direction of the governing body shall, prepare and revise annually a capital improvement program based on the comprehensive plan of the county or municipality for a period not to exceed the ensuing five years. The commission shall submit the same annually to the governing body, or to the chief administrative officer or other official charged with preparation of the budget for the municipality or county, at such time as it or he shall direct. Such capital improvement program shall include the commission's recommendations and estimates of cost of such facilities and the means of financing them, to be undertaken in the ensuing fiscal year and in a period not to exceed the next four years, as the basis of the capital budget for the county or municipality. In the pre-



Curb and Gutter Construction

paration of its capital budget recommendations, the commission shall consult with the chief administrative officer or other executive head of the government of the county or municipality, the heads of departments, and interested citizens and organizations, and shall hold such public hearings as it deems necessary unless otherwise required.

Basis for Planning

The CIP and the Comprehensive Plan are mutually supportive; the Plan identifies those areas suitable for development and the public investment they will require. The CIP translates these requirements into capital projects designed to support the goals and policies of the Comprehensive Plan. In this way, necessary public facilities are available, or at least planned, in a concurrent time frame with private development. By providing a realistic timetable for the provision of facilities, orderly development, in the best interest of the citizens of Fairfax County, can be achieved.

Recommendations for public improvements made in the Comprehensive Plan have been reviewed for inclusion in the CIP. Since the Plan deals with a longer time frame than the CIP, many projects recommended for implementation in the Plan are not included in this five-year program. Many projects not included at this time will be incorporated into the CIP as existing needs are met and additional growth occurs. To the extent that growth does or does not occur in a given area will influence both the timing and scope of capital projects. While it is a desired goal to minimize public facility deficiencies, it is equally desired that only those projects with an identified need will be constructed.

Basis for Budgeting

The CIP and the Capital Budget are linked in two areas. The first year of the Advertised CIP is the Advertised Capital Budget. Action by the Board of Supervisors to adopt the Capital Budget alters the CIP as well. Additionally, the adopted CIP provides guidance for development of the Capital Budget for the following year.

Thus, an orderly cycle of project identification, evaluation, financing and construction is achieved. The Capital Budget, however, is not merely the first year of the multi-year capital program. While the CIP is a proposed expenditure plan, the budget process, through the approval of fiscal resolutions by the Board of Supervisors, provides the mechanism for the legal authorization to appropriate and spend County funds.

ADEQUATE PUBLIC FACILITIES ORDINANCE

An implementation concept of great interest to many jurisdictions throughout the United States is a system of relating the adequacy of public facilities to new development. As an implementation concept, an adequate public facilities ordinance, in any form, would of necessity be tied to capital improvement programming and to criteria for adequacy of public facilities.

Capital improvement programming is the scheduling of public facility improvements over time, with consideration given to the priority of improvements and financial capability of the jurisdiction to provide those facilities. Such a system would tie new development to public facilities in a manner commensurate with sound fiscal and growth policies. An ordinance of this type would deny new development in those areas in which public facilities were lacking and not programmed.

Fairfax County is actively engaged in an investigation of this concept. The investigation thus far has turned up legal complexities which restrict implementation of such an ordinance in Virginia. In addition, it is logical that the first steps toward establishing an adequate public facilities ordinance are formulation of the Comprehensive Plan and development of the CIP. Once these are in place and part of an established planning process, implementation of an adequate public facilities process becomes a logical extension of the Plan. Therefore, the goal of an adequate public facilities ordinance can best be reached through systematic planning which establishes clear development objectives, capital improvements programs and evaluation methodologies.

AIR QUALITY LAND USE REVIEW

The federal Environmental Protection Agency (EPA) has promulgated regulations which will be significant for future nationwide implementation of land use plans. The two sets of regulations which result from the 1970 Clean Air Act are indirect source and parking management regulations. These regulations specify review powers of the EPA and can be delegated to state and local jurisdictions. Parking management regulations are significant for Fairfax County in that the implementation of the County's Comprehensive Plan for multifamily, commercial, and industrial land uses which generate 250 or more parking spaces will require EPA review and certification before construction can commence. The same is true under indirect source where the cutoff is 1,000 parking spaces. However, the scope of indirect source includes additional land uses such as highways and airports.

The state of Virginia has a set of regulations which are in the EPA approval stage. Fairfax County may eventually act as the review body for the EPA and state regulations. Pursuant to both the federal and state programs to review land uses which contribute significantly to air pollution, the staff is undertaking a study of the feasibility of doing a parking management plan for the County.

Federal Parking Management Program

The parking management program is defined as a part of the transportation control plans designed to provide the necessary control of photochemical oxidants (smog) and carbon monoxide as required under the Clean Air Act for attainment of national air quality standards. The management of parking supply regulation requires explicit consideration of air quality impact before construction of certain specified new parking facilities can proceed.

The specific purpose of parking management regulations is to reduce the area-wide growth in vehicle miles traveled (VMT) to achieve photochemical oxidant and carbon monoxide standards; and to assure that congestion associated with operation of a new parking facility does not cause or exacerbate a violation of carbon monoxide standards.

Federal Parking Management Plan

The parking management plan is a device whereby local jurisdictions can get away from the facility-by-facility review of projects which fall within the scope of regulations covered by parking management regulations. The August 22, 1974, issue of the *Federal Register* speaks to the question of parking management plan versus facility source review on an individual basis. The EPA Administrator discusses the issue of Parking Management Plans as follows:

The Federal Government can directly implement facility-by-facility review of applicable parking structures. Due to the nature of the planning process, however, only the State or local area can adequately develop a comprehensive parking management plan. Such a plan can interrelate future parking growth with the transit and land use plans and other unique needs of the community.

The Administrator believes that the ultimate result of these regulations should be the development by local areas of parking management plans to replace the Federal Regulations. It is, therefore, this Agency's policy that Federal Regulations on new parking facilities shall be applicable only until such time as approvable local parking management plans are developed and implemented. Accordingly, Appendix B sets forth a clear explanation of current requirements and alternative approaches for facility-by-facility review which can be used until such plans are developed as well as guidelines for formulation of these local Parking Management Plans. EPA Regional Offices will encourage and assist local area governments in development of these plans.

Perhaps the most valuable land use tool which the federal government can give to local jurisdictions is the ability to develop a parking management plan. This plan and process can give needed federal support to local jurisdictions in their comprehensive planning process. The parking management plan, by determining allocations of parking spaces by land use and by plan area through an allowable annual increase in vehicle miles traveled (VMT) can also add important federal legal support to the Comprehensive Plan. This plan, with the subsequent control of building permits through a certification process for all future development, could change the entire scope of planning and land use controls.

State Parking Management Program

The state of Virginia, pursuant to the federal effort, has promulgated legal requirements for air quality planning and control. These requirements are embodied in the air quality maintenance planning effort, a parking management planning program and an indirect source permit program.

The state indirect source program, effective January 1, 1975, follows the federal guidelines. The state's parking management planning program is distinct from the federal program in that the state program would be used where a major development management of parking supply. The federal program is directed toward much larger scale geographic areas such as metropolitan areas. However, the state plan, like the federal plan, may establish limits to development based on air quality criteria. This state planning program would be used where a major development center is proposed requiring a number of indirect source permits.

The air quality maintenance plan, presently under development by the state, is the format within which overall growth management parameters are set. Slated for completion in 1977, the maintenance plan will specify the permissible increase in pollutant emissions (a surrogate for growth and development), emission control programs, and land use planning and control strategies which are required for the maintenance of air quality through 1990.

In the aggregate, these regulations will be instrumental in enabling a community to plan its land use and direct growth and development pressures while assuring the maintenance of clean air. The air quality maintenance planning process with parking management and indirect source regulations will provide communities with area-wide growth controlling strategies and small-area and site-specific air quality management capability.

In summary, air quality standards and planning systems will probably become one of the essential land use planning tools of the coming decade. Fairfax County, through significant investments in monitoring equipment, air quality modeling, and technical staff, is establishing the basis for air quality planning procedures which may have significant land use implications in the coming months.

LAND BANKING

A land banking program could achieve a number of objectives such as current acquisition of land at current market rates before zoning. The program can be used to acquire land for such future uses as housing sites, parks and open space land, and sites for schools, police and fire stations. Such acquisition would avoid additional expenditures in the future from inflated property values and would also insure land uses compatible with the plan.

In an expanded form, a program such as this could also help direct future growth patterns by using programmed capital facility sites acquired through a land banking system as an element in an adequate public facilities ordinance. Benefits would be maximized if such an ordinance could preclude development in areas where existing public facilities were not adequate or programmed or where advance acquisition of sites for public facilities had not taken place. Fairfax County has formulated and implemented a land banking program which should be expanded to achieve the full objectives outlined for this tool.

TAXES AS A DEVELOPMENT GUIDE

Land use value assessment is a useful public policy implementation tool which the state of Virginia has recently written into law. The law allows local jurisdictions which adopt it as part of their code to provide tax incentives for real estate devoted to agricultural, horticultural, forest and open space uses. The declaration of policy for Special Assessments for Agricultural, Horticultural Forest, or Open Space Real Estate is as follows:

58-769.4. Declaration of Policy.—An expanding population and reduction in the quantity and quality of real estate devoted to agricultural, horticultural, forest and open space uses made the preservation of such real estate a matter vital to the public interest. It is, therefore, in the public interest (a) to encourage the preservation and proper use of such real estate in order to assure a readily available source of agricultural, horticultural and forest products and of open spaces within reach of concentrations of population, to conserve natural resources in forms which will prevent erosion, to protect adequate and safe water supplies, to preserve scenic natural beauty and open spaces and to promote proper land use planning and the orderly development of real estate for the accommodation of an expanding population, and (b) to promote a balanced economy and ameliorate pressures which force the conversion of such real estate to more intensive uses and which are attributable in part to the assessment of such real estate at values incompatible with its use and preservation for agricultural, horticultural, forest or open space purposes. It is the intent of this article to provide for the classification, and permit the assessment and taxation, of such real estate in a manner that will promote the preservation of it ultimately for the public benefit.

Before any such special real estate tax assessment may be given to a landowner, the state law establishes criteria which must be met by the landowners. The law states that local officials must determine, among other things, that real estate devoted to (1) agricultural or horticultural uses consists of a minimum of five acres and has produced gross sales of agricultural or horticultural products thereon together with any payments received under a soil conservation program averaging at least five hundred dollars per year for each of three years in a five-year period immediately preceding the tax year in issue, (2) forest use consists of a minimum of twenty acres and, (3) open space use consists of a minimum of five acres (1971, Ex. Sess., c. 172).

A system which would permit the special real estate tax assessment needs much further study as it has important implications. These include revenue loss and a necessary, proper and complete staff and structure to administer such a program.

CONCLUSION

Implementation issues are critical today if the Plan is to be successfully implemented. Fairfax County has a broad-scale effort to strengthen traditional implementation tools and is actively seeking to establish new devices to ensure the goals set forth in the Plan are fully realized.

AREA PLAN IMPLEMENTATION MECHANISMS

Special Improvements Districts

Public investments mainly provide the basic facilities or infrastructure for development. Where development of land or buildings is desired for particular uses or the provision of certain services not clearly in the public domain, quasipublic or private-public mechanisms must be used.

These mechanisms have only modest precedents for use in Fairfax County. They have been called upon for very limited purposes, chiefly for projects unrelated to planning goals.

One problem that is common to many older urban areas is that it is not profitable for one owner to renovate and improve his own property unless neighboring owners also are willing to improve their properties, thereby upgrading the entire neighborhood. This seems to be true particularly for commercial properties or for property in changing neighborhoods. In newer and partially developed areas, or areas in which a convenient range of services is not available in a community, a similar problem arises. No one property owner can sustain the investment requirements for new service or facilities such as completion of service roads, addition of parking spaces, reorientation of existing buildings and the like.

In many circumstances, the possibility is suggested of establishing improvement associations or districts to provide for the improvements. These would design and accomplish redevelopment or substantial renovations. The result would be to make such areas more attractive and functional, and accordingly, more profitable. An entity is needed which can effectively assign costs to beneficiaries and exercise sufficient authority to require that all the beneficiaries participate in such projects.

Special districts or other entities such as special corporations are authorized in Virginia for a number of purposes. Most are financially and legally responsible for their own actions. Charges and taxes levied by some special districts are distinct from those of cities and counties. They are particularly attractive for some purposes in that they enable a community to assess the beneficiaries of a new public improvement for its cost. Included among the powers of a special district may be the bonding capacity. The interest on such bonds is tax free, but they are not necessarily guaranteed by the Commonwealth or the local government. They could not be expected to sell as cheaply as County bonds.

A variety of special districts and corporate entities have been established in Virginia, including the following: airport authorities, bridge and beach authorities, education assistance authorities, industrial development authorities, industrial development corporations, hospital and health center commissions, mosquito control districts, park authorities, parking authorities, port authorities, public service corporations (utilities), redevelopment and housing authorities, sanitary districts, sanitation districts, soil conservation districts, transportation authorities, and turnpike authorities.

Industrial Development Authority

Industrial development authorities (IDA) may be created by local governments. They have powers to own land and buildings and provide landscaping, utilities, roadways and other facilities necessary or desirable in connection with development by the authority.

An authority is authorized to encourage industry and develop trade by inducing manufacturing, industrial, governmental and commercial enterprises to locate in the state. It may also exercise its powers with respect to pollution control facilities.

It is not intended that any such authority shall itself be authorized to operate any manufacturing,

industrial, or commercial enterprise. However, this would seem to establish further that industrial development authorities may become involved with commercial activities. In addition, if declining business areas can be determined to be detrimental to citizens, it also seems that the involvement of the authority is justified.

An authority does not have the power to operate any facility except as lessor. All bonds issued by an authority must be payable solely from the revenues and receipts derived from the leasing or sale of facilities by the authority. Bonds are not deemed to constitute a debt or pledge of faith and credit of the Commonwealth or any political subdivision thereof, including the municipality which created the authority issuing such bonds.

Economic Development Authority

Special legislation in 1964 enabled a Fairfax County Industrial Development Authority. Subsequent legislation has provided for all local governments in Virginia to establish industrial development authorities. Fairfax County retained its industrial authority as enabled under the earlier legislation but the name was changed and the entity is now known as the Fairfax County Economic Development Authority (EDA). It operates under essentially the same powers provided in the original legislation and is somewhat more responsive to control by the local government than would be an industrial development authority. The EDA may stimulate the development of industry in the County; it may receive, operate and maintain County facilities and receive funds from the County for operation; and it may issue bonds which may be secured by pledge of any political subdivision.

It appears that the EDA may be more adaptable to accomplishing the general purposes of fostering and developing industry than an IDA. The industrial development authority is more specifically authorized to promote industry and foster commerce as well as operate pollution control facilities. Therefore, the economic development authority may be more beneficially used to provide the basic studies, researches, and planning prior to spin-off of projects to specific industrial development authorities, industrial development corporations, or other entities such as sanitary districts.

Industrial Development Corporation

The purpose of such a corporation is to stimulate and promote business prosperity and economic welfare. It is provided with special powers and limitations by law to allow it to act as a promoter to provide loans to businesses which are unable to obtain private financing.

The corporation is composed of members, which must be financial institution, who are willing to lend funds to develop new businesses or improve or expand existing ones. It provides for pooling of investments by financial institutions in order that risks may be spread proportionately among them. In addition, stock may be issued. Stockholders elect one-third of the directors and members elect the remainder.

Loans may be obtained from any other financial agencies, persons, or agencies of the state or federal government. It appears such a corporation is particularly useful for private investors to participate with local governments and entities associated with them such as industrial development authorities and economic development authorities in packaging both sites and facilities for both new and existing industries and commercial businesses.

Thus, it would appear that there is legal justification for the involvement of an industrial development authority in the renewal of commercial areas.

Sanitation Districts

Subject to referendum approval, local governments may establish sanitation districts for the purpose of abating pollution. This authorization is used primarily to provide an agency for operation of a sewerage system.

Such a district, however, can be used to provide systems for disposal of all wastes. It is particularly useful for a combination of local governments to solve their disposal problems, especially when competition for sites as well as water has become uneconomical, inefficient and subverted by dominating parochial interests. When regional planning is required by the State Water Control Board as well as federal agencies with legal authority, the sanitation district can be extremely useful not only for planning but also for implementation of the plan and operation of the system after it is built.

Small Sanitary Districts

The problems found in the use of small sanitary districts are indicated by some of the conditions imposed for their use. The Board of Supervisors may issue bonds for a sanitary district in an amount not to exceed 18 percent of the assessed value of all real estate therein which is subject to taxation, in order to carry out the purposes of the district. This percentage ceiling may be increased in some instances, but it would be necessary to determine the effects on the bond rating and other constraints of the County, an revenues of any overlapping districts. Sanitary districts may be initiated by petition of 50 qualified voters, or 50 percent of the voters in a district of fewer than 100 persons. If a majority of the voters in a district favor the issuance of bonds, then it may be done. It will be necessary to research the legal implications for (1) business districts which have no resident voters (assumedly, property owners are equivalent) and (2) the legal basis for including in a district property belonging to persons who do not wish to participate in its establishment. As part of the requirements for establishing a district, it is necessary to prove that all property owners will benefit either directly or indirectly.

Many of the special districts, such as sanitary districts, are used to provide a specific service to an area, such as sanitation control, fire protection or leaf and refuse collection. Under such districts a specific service is provided to specific and identifiable users and can be supported by user charges.

In other types of districts, particularly those involving establishment of public authorities such as industrial and housing, it is much more difficult to assign costs to exclusive users. The benefits spill over large areas. For the redevelopment of a commercial area, it would be necessary to determine who actually benefits and to what extent. Before supporting the renewal, owners would need to be convinced that the benefits to them would exceed the costs to them.

Another problem is coordination. It is necessary to have effective cooperation among the County government, property owners in the planning district, businessmen who lease the space, and residents who live nearby. Absentee landlords may be less interested in local problems than others, and may prefer a posture of minimum financial exposure.

Although the activities of special districts are normally financed by a property surtax, other states allow alternative financing. In California, special improvements areas in business districts may place a tax on retail sales. Also, in cases where a pedestrian mall is constructed, businesses are charged by the front foot. In Kentucky, the occupational license fees derived from business in a renewal area may be applied directly to the project. It would be necessary to research the possibility of doing this for Fairfax.

It is feasible for the County to attack many problems by using existing mechanisms and authorities. For instance, the Economic Development Authority and the Housing and Redevelopment Authority are provided with broad powers which could be applied to problems of blight and declining businesses. It may be possible to undertake joint-venture projects between one or both authorities and private businessmen. A number of entities authorized by state law may be used. Some of them are discussed here.

Transferable Development Rights

The concept of transferable development rights (TDR) is currently under study in various areas of the United States. A development rights system is a possible long-term future option in land use control. Fairfax County is investigating the possibilities of this concept, but much further investigation and monitoring is needed.

Briefly, the use of development rights requires that a jurisdiction assign to an area of land a new set of property interests called development rights. The rights would be marketable and would be assigned pursuant to a master plan which would designate the percentage of developable land in each district. The assigned development rights would be severable from the land but could be used only within the boundaries of the TDR district. A developer who desires to develop a site at higher than basic planned intensity or density would be required to buy the development rights attached to land in the district which was physically or economically unsuitable for development. When the development rights are sold, the original land, to which they were assigned, loses the rights and becomes permanent open space. (Such land may still be in private ownership, however.)

Mandatory Dedication

Mandatory dedication is an implementation tool not widely used in the past. However, it is one of the elements in the County's *Zoning Ordinance*.

There are two bases for requiring dedication. The first basis is the requirement for assignment of land for public services which must be supported by the development, such as internal roads and easements. The second basis for dedication is the need for large land areas for other uses such as public open space, major rights of way for expressway or transit lanes, future public school sites, police stations, and fire stations.

The *Zoning Ordinance* provides for mandatory dedication in two areas. The first is within the area of condominium development. The ordinance states in Paragraph 5 of Sect. 2-409 that, in condominium developments, the reservation and/or dedication of land for schools, parks and streets in accordance with adopted comprehensive plans shall be made.

The second area is in the site plan section which is Article 17, Part 2, Required Improvements. The site plan section of the ordinance requires a construction of pedestrian walkways—both within a project and as connectors to adjacent areas—and construction of trails or walkways in accordance with the general location shown on adopted Comprehensive Plan. The land upon which the walkways or trails are constructed is required to be dedicated to either the County, an appropriate homeowners association, or the Northern Virginia Regional Park Authority. Service drives are required where appropriate, and they are to be dedicated to the Virginia Department of Highways and Transportation. The dedication and construction of proposed new roads and the widening or other improvement of existing roads on existing alignments, as indicated on an adopted comprehensive plan, shall be done by the developer. Expressways and freeways need not be constructed by the developer.

Buffering

Buffering between incompatible activities such as transportation/residential and commercial/residential is another means of influencing land use. It is used to increase stability and to mitigate negative effects of new development on an established neighborhood.

As an example, garden apartments and/or townhouses have historically served as transition use in separating commercial activities from single-family residential dwelling units in Fairfax County. This is a satisfactory procedure because it is accepted by people who choose to live around an established core or center of commercial activity (regional center, community shopping center, employment center or major business district).

Another example of buffering is the provision of open space, in most instances occupied by trees or other elements of the landscape. The width of such a transition or buffer zone, based on the intensity of use being screening, could vary from 20 to several hundred feet. This type of transition might be used around neighborhood shopping and convenience centers, community centers, employment centers and industrial activity of all types.

The present minimum standards for screening under the County's regulations leave much to be desired. It appears that greater emphasis should be placed on specific detailed transitional treatment, where appropriate, in the submission of project plans. As an example, a neighborhood commercial center is proposed. It is determined that a spatial transition is the desired approach to buffering the commercial center from surrounding noncommercial uses. The applicant would then be requested to show within the development plan a specific spatial treatment between the structures, parking areas and adjacent residential areas. The nature and type of land use transition results from a process of negotiation if a tract of land is zoned for planned unit development. In such cases each project submitted to the County is treated uniquely, as contrasted to the typical situation in which there is a single standard applied, regardless of the nature of the project.

Signs

The *Zoning Ordinance*, Chapter 30 of the County Code, provides regulations for the display of signs. The regulations control all signs which are installed after adoption of the Code provisions. Special permits, special exceptions, and the basic use limitations are tailored to the zoning districts. Sign control overlay districts are helpful in establishing uniformity and reducing visual competition.

Signs which were erected in accordance with previous regulations may continue in use so long as the existing use which they advertise or identify remains. Such signs can neither be altered nor moved. If a nonconforming use is discontinued for more than two years or if use of a sign becomes an unlawful nonconforming use, then the sign itself becomes unlawful and may be removed.

Problems concerned with signs are usually those which develop from lawful nonconforming uses. There is no easy solution. Change of use, or change of zoning which authorizes a change of use, is normally the only way to obtain relief from unsightly, ineffective, and distracting displays of signs.

There would appear to be two suitable ways to provide for change or removal of existing but lawfully nonconforming signs. One is unacceptable currently because it requires state legislation to authorize it. This would establish reasonable periods for sign owners to recoup their capital investment by establishing an amortization period for the life of the sign. Another is infeasible because it depends entirely on voluntary participation by sign or property owners and the local

government in a program which would provide for the removal of nonconforming signs, with expenses and benefits balanced between public and private interests.

It may be feasible for land owners and businessmen to use a special entity for the removal and replacement of signs. The entity could be a nonprofit corporation or, conceivably, a small sanitary district. It would require participation by all the sign user/owners in a particular area. A commercial strip is a most likely candidate for the use of such a mechanism.

Tidal Wetlands

Fairfax County is designated by law as part of Tidewater Virginia. Wetlands are a portion of the Tidewater area. By definition, wetlands are defined as both vegetated and nonvegetated. Vegetated wetlands means all that land lying between and contiguous to mean low water and an elevation above mean low water equal to the factor 1.5 times the mean tide range and upon which is growing certain types of marsh vegetation. Non-vegetated wetlands means all that land lying contiguous to mean low water and which land is between mean low water and mean high water, not otherwise included as vegetated wetlands.

Tidal wetlands have long been recognized as highly productive ecosystems. The export of the products of primary production (detritus) from a wetland to the adjacent aquatic system is a function of ecological importance. This conveyance of nutrients is the critical link between wetlands and the commercial fish and shellfish industry.

Scientific research has examined the contributions of tidal wetlands to estuarine food chains in the Chesapeake Bay. This analysis has determined that where tidal exchange is high, marshes export important amounts of dissolved nitrogen and significant amounts of carbon in particulate and dissolved forms (the necessary building-blocks for a viable aquatic environment) to the estuary.

Through the Virginia Institute of Marine Sciences' research, wetlands in the Commonwealth have been quantitatively evaluated and ranked according to their total ecological importance. The criteria utilized for this evaluation were the wetlands detritus production, waterfowl and wildlife utilization, erosion and flood buffers, and water quality control.

Based on total environmental value, two of the four types of wetlands contiguous to the County's coastal shoreline, arrow arum-pickerel weed and freshwater mixed, have the highest ecological ranking in the Chesapeake Bay region. These two ecosystems encompass approximately 75 percent of the County's 920 total vegetated wetland acres. The other two types, cattail and yellow pond lily, are ranked only slightly lower in total value and are important systems for water quality control, flooding buffers, and wildlife and waterfowl utilization.

In 1972, the General Assembly took a positive step to protect and enhance the marine environment of the Commonwealth by passing the Wetlands Act. The wetlands zoning ordinance as enabled in the Act (Section 62.1-13.5) is specifically designed to promote compatible uses (e.g., cultivation and harvesting of shellfish, noncommercial outdoor recreational activities, cultivation and harvesting of agricultural or horticultural products, the construction or maintenance of aids to navigation, etc.) and to control noncompatible uses (e.g., extensive filling and/or excavation proposals) from causing irreversible deterioration to these valuable natural resources.

In addition, all federal agencies are mandated to consider wetland alteration as a last resort when carrying out programs affecting land use. This policy was established in order to avoid, to the extent possible, the long and short term

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adverse impacts associated with the destruction or modification of wetlands.

Using the State's authorization (Section 62.1-13.5 of the Code of Virginia) the County adopted an amendment to Chapter 112 (Zoning), of the Code of the County of Fairfax, Virginia. This amendment adopted the Fairfax County Wetlands Zoning Ordinance which now places the responsibility of management and control of the County's wetland resources with the County itself. The purpose and intent of the Wetlands Zoning Ordinance is as follows:

The County of Fairfax recognizes the unique character of the wetlands, an irreplaceable natural resource which, in its natural state, is essential to the ecological systems of the tidal rivers, bays and estuaries of the Commonwealth. This resource is essential for the production of marine and inland wildlife, waterfowl, finfish, shellfish and flora; is valuable as a protective barrier against floods, tidal storms and erosion of the shores and soil within the Commonwealth; is important for the absorption of silt and of pollutants; and is important for recreational and aesthetic enjoyment of the people for the promotion of tourism, navigation and commerce.

In order to protect the public interest, promote the public health, safety and the economic and general welfare of Fairfax County, and to protect public and private property, wildlife, marine fisheries and the natural environment, it is declared to be the public policy of Fairfax County to preserve the wetlands and to prevent their despoliation and destruction and to accommodate necessary economic development in a manner consistent with wetlands preservation.

To implement this policy, the County established the Wetlands Overlay District and the Fairfax County Wetlands Board. The Wetlands Overlay District sets forth the regulations for the use and development of the County's wetlands. District boundaries have been drawn on the Official Zoning Map and include all that land defined as vegetated and nonvegetated wetlands. If a proposed activity falls within the Wetlands Overlay District, a Wetlands Permit may be necessary. The Wetlands Board has the responsibility to hold public hearings and to issue or deny permits based upon the amount of impact a project may have on a tidal wetland.

With the Wetlands Zoning Ordinance, Fairfax County can now effectively implement and ensure that its planning policies along its coastal environment are not circumvented by State or Federal policies. Additionally, the ordinance reduces further development in or contiguous to wetlands thereby protecting their important ecological functions and their recreational/economic value to the County's citizens.

On October 22, 1975, the Board of Supervisors endorsed a set of policies designed to maintain the "AAA" bond rating awarded to the County on that date by Moody's Investor Service, Inc. The policies were reinforced in October of 1978 when the County was awarded an "AAA" bond rating by Standard and Poor, Inc. The policies stress the close relationship between the planning and budgetary process. Based on a commitment to reexamine the policies every five years in light of changing financial conditions, the Board, on May 5, 1980, revised certain portions of the policies. As such, these policies are used as a framework in formulating the Capital Improvement Program (CIP). Key among the current policies applicable to Fiscal planning are the following:

1. The comprehensive land use planning system must continue as a dynamic annual process which is synchronized with the capital improvement program, capital budget, and operating budget.
2. The County's ratio of net debt as a percentage of estimated market value of taxable property must remain less than three percent.
3. The ratio of debt service expenditures (payments of both principal and interest) as a percentage of General Fund expenditures must be reduced to ten percent as soon as possible, with a long-range goal of remaining under a ten percent ceiling.

4. Bond sales must be limited to an average of \$60 million a year or \$300 million for the next five years to meet policies #2 and #3 above.
5. The County should continue the emphasis on pay-as-you-go financing of capital facilities. Maintaining a high level of General Fund support of capital expenditures will reduce debt service obligations.
6. Efforts must continue to eliminate duplication of functions within the County government and the autonomous and semiautonomous agencies.
7. "Underlying" debt (contracted by towns within the County and by sanitary districts) must not expand beyond what is now contemplated, and new sanitary districts for the purpose of incurring bonded indebtedness should not be created. Any new bonds carrying the name of the County must be secured by extremely tight covenants.
8. The County must continue to diversify its economic base so as to increase employment in the private sector, particularly industrial employment.