The pleasantness and convenience of everyday living in a modern urban society is largely dependent upon efficient systems of public service which form the basic framework for community well-being. These systems can be thought of in four groups: transportation, utilities, parks, and community facilities. All required public services should be provided in a logical sequence to facilitate development in accordance with orderly stages fulfilling the General Plan.

TRANSPORTATION

Workday commuting is the biggest problem to be overcome by the transportation system, because the volume of traffic is so much greater during rush-hour than at any other time. Forty per cent of all automobile trips and 50 per cent of all transit trips occur in just four hours of peak traffic.* Thus the transportation system which is more than adequate most of the time becomes badly overloaded at the rush-hour peaks.

The goal set by the 1959 Mass Transportation Survey was to design a transportation system which would “permit the large majority of the population to reach downtown Washington in 30 to 45 minutes during peak hours. It is also assumed that the transportation system will put each part of the region within a similarly reasonable travel time of most of the other focal points.”** Highway and rail rapid transit facilities represent the only two real possibilities for achieving the goal. The recommended system must allow this goal to be reached even with a greatly expanded population and a much larger urbanized area.

* NCPC and NCRPC, Mass Transportation Survey Report (p. 26).
** Ibid., (p. 20).
Highways. Four types of highways are shown on the General Plan, each having a special purpose: freeways, parkways, major urban highways, and major rural highways. The dual-lane freeways and parkways are all limited access, with no direct entrances from adjoining properties and having grade-separation interchanges that do away with grade crossings and traffic lights. Freeways and parkways together form a complete, high-speed, urban and interstate system of radial and circumferential routes. These two types of limited access roadways differ primarily in that freeways serve all traffic, whereas trucks are forbidden on scenic parkways. A further difference in some cases will be the use of freeway median strips for rapid transit.

The major urban highways are not designed for high-speed travel. Although these highways are divided by median strips and serve large amounts of through traffic, they have numerous cross-streets and traffic lights. Free access from adjoining properties is usually allowed. There are many more major urban highways than freeways and parkways, since they must serve all parts of the urban area rather than just the most heavily traveled routes.

The major rural highways go out into the open space wedges to connect with the small communities such as Upper Marlboro and Damascus, and to encourage the rural economy. Some of these highways also lead to recreational areas. In most cases they will not carry high volumes of traffic for many years to come. Therefore, present plans call for constructing only one side of an eventual dual roadway.

Many local streets must be provided in addition to freeways, parkways, and majors mentioned above, but they are beyond the scope of this plan.

Parking lots, bus loading areas, and facilities for transferring between highway and rapid transit are integral parts of highway planning. These two are beyond the scope of this report, and will appear in more detailed plans.
Rapid Transit. Express buses may serve the function of rapid transit on some freeways, especially for circumferential trips. But the emphasis in this plan is on radial routes for rail rapid transit directly to and from downtown Washington. Rail rapid transit requires separation from highway traffic. This can be accomplished by using median strips between freeway lanes and existing railroad rights-of-way, or by building monorails above ground and subway tunnels underground. Each of the four methods of separating rapid transit from highway traffic may be useful in the Regional District, depending on the particular situation. The choice between them depends upon 1) minimizing the total of right-of-way and construction costs, and 2) minimizing the social disruption to existing communities.

The Planning Commission's responsibility is in helping to find the most appropriate routes for rapid transit, reserving rights-of-way, reserving space for the necessary terminals, parking lots and other facilities along the routes, and in helping to avoid any adverse impact of these facilities on local communities. The National Capital Transportation Agency is responsible for the engineering, financing, construction, and operation of the rapid transit system. The Planning Commission and the State Roads Commission have been designated by the Governor of Maryland as his approving authority for NCTA plans.
Airports. Andrews Air Force Base, an important defense installation is the only large airport in the Regional District. It is not available to the general public, but it provides important military and diplomatic transportation services for the Federal government and is one of the largest employers in the Regional District. Highway transportation to the airport is well provided for by a parkway and two major highways. The big problem in keeping this airport serviceable is one of protecting the flight paths and noise areas against urban encroachment. Andrews is at the edge of the southeast urban corridor and will benefit greatly from the rural surroundings proposed in this General Plan. In addition, special airport zoning and the purchase of noise easements will be required both for the protection of the airport and the protection of the general public which might otherwise be induced to buy homesites too close to the inevitable noise in the flight paths. These flight paths are shown on the General Plan map as a warning.

There are also several small airfields in the Regional District to serve pleasure-craft and business planes. These small fields provide a great convenience because of their locations close to the urban area, and because of the scheduling difficulties brought about by heavy traffic at the crowded commercial airports. As in the case of Andrews, these small airports must be accessible by highways but protected from urban encroachment.

Small airports at the edge of urban corridor cities will play an important role in commuter transportation if helicopters or other vertical take-off vehicles come into wide use. All new airports must be very carefully located so as not to conflict with planned urban development. The Federal Government airfield on the Beltsville Agriculture Research Center is proposed for general aviation purposes, and a new airfield to replace Hyde Field near Clinton is proposed to complement the planned corridor city south of Clinton.
The presence or absence of utilities can determine where urban growth will occur and where it will not. This is particularly true of sewer systems.

Electricity and telephone service are seldom controlling factors, since they are the easiest and cheapest utilities to install and can be made available anywhere in the Regional District. Water and gas lines are somewhat more restrictive, but are available in most areas. Sewers, however, are another matter. They can not be made available anywhere a developer might wish.

Even a small, gravity-flow sewer system is relatively expensive. If the system must cross watershed divides, requiring pumps and force mains, the cost is greatly increased; it is increased still more if the area to be served is far distant from an existing trunk sewer. In many such cases the cost is prohibitive.

Whenever a trunk sewer is extended to serve a newly-developing subdivision beyond the previous limits of urbanization, an on-rush of construction is sure to follow. Frequently large amounts of surrounding land can be connected to the same sewer and a whole group of new subdivisions springs up.

Obviously, then, the decision as to where and when construction of sewer lines should take place can be as powerful a factor in shaping urban development as zoning and subdivision regulations.

All three of these controls must be coordinated for maximum effectiveness in creating the urban pattern contemplated in the General Plan.

The utilities needed to serve developments recommended in the General Plan should be constructed with the following considerations in mind:

Water. Water lines should be provided wherever necessary, but always in direct relation to the population distribution recommended by the General Plan.

Gas. New storage facilities, needed to reinforce supplies during months of peak demand and hold down costs to consumers, should be located at the edges of the urban pattern to aid the transition between urban and rural uses. Care in placing major new pipelines around rather than through new corridor cities will save costly relocations as intensive development takes place.
Electricity and Telephone. Major transmission lines should, so far as possible, seek rural locations or locations on the edge of the urban pattern. Where they must cross urban areas and branch out into local distribution lines, both they and the local lines should be built underground in order to contribute to a more pleasant urban environment. All major transmission lines should be carefully checked under mandatory referral laws to make sure they do not conflict with development features of the General Plan.
Sewers. Trunk sewers should be extended to areas ready for urbanization when needed, neither too early nor too late for the orderly sequence of growth. The map shows scheduling recommended by the Commission for the major trunk lines yet to be built. Wherever possible, the construction of sewer lines across rural zones should be avoided; where such crossing must be made, service connections which would encourage urban development should be prohibited by the use of limited access sewers. Storm sewers can be relatively short, emptying into natural drainage channels controlled by small dams and silt reservoirs at the edges of urban developments.

Note: 1. Sewage lagoon to be abandoned when downstream sewer is built.
   2. Pumping station to be abandoned when downstream sewer is built.
PARKS

The Park and Planning Commission has direct responsibility for the provision of parks and recreation centers. Stream valley parks acquired with the aid of Federal funds, granted under the Capper-Crantom Act to assure an appropriate system of metropolitan parks in the Nation's Capital, have been the mainstay of the park system in the Regional District until recently. Large regional parks are now becoming important supplements to the stream valley system. Youth centers are growing popular in bright-light locations, providing facilities for club meetings, dances, and other indoor activities on either an individual or group basis. Besides serving teen-agers, these centers are also proving attractive during the day for the activities of retired people.

Close cooperation with the Board of Education has resulted in the park-school concept. Under this concept park land is added to school sites to provide large playfields. This not only benefits the schools, but also provides local recreation facilities for the general public after school hours. Washrooms and even general purpose rooms in the school building sometimes can be made available to the public in connection with these park facilities.

Acquisition. Land for regional, local, and stream valley parks is reserved through the administration of subdivision regulations, and is acquired largely with funds raised by special park taxes. State parks along the Patuxent River and Seneca Creek and at Cedarville in lower Prince George's County are also part of the Regional District's public park system, as are Federal parks such as Greenbelt Regional and the George Washington Memorial Parkway. The acquisition program is being stepped-up; additional State and Federal funds are being sought.

In general, local parks, park schools, and youth centers will be in the urban communities where the people are; stream valley parks will be (as the name implies) where the major streams are; and regional parks will be where they can form a boundary between urban and rural environments.

Development. The development of recreational facilities on park lands is as important as acquisition and is therefore being stepped up to keep pace with population growth.

Park Standards. Six types of park areas will be acquired and developed as recommended by the Outdoor Recreation Resources Review Commission and defined as follows:*

Class I. High Density Recreation Areas
Areas intensively developed and managed for mass use, including playgrounds, playfields, swimming beaches, and any other facilities designed for intensive recreation.

Class II. General Outdoor Recreation Areas
Areas subject to substantial development for a wide variety of specific recreation uses, and as camping, picnicking, fishing, water sports and nature walks.

Class III. Natural Environment Areas
Various types of areas that are suitable for recreation in a natural environment and usually in combination with non-residential uses such as forestry.

Class IV. Unique Natural Areas
Areas of outstanding scenic splendor, natural wonder, or scientific importance.

Class V. Primitive Areas
Undisturbed roadless areas, characterized by natural wild conditions, including "wilderness areas."

Class VI. Historic and Cultural Sites
Sites of major historic or cultural significance.

* For a fuller explanation, see "Chap. 6 Guidelines for Management," Outdoor Recreation for America, pp. 55-120.
Outright public ownership and development will be emphasized for Class I and Class II (Recreation) areas. Standards of one acre of Class I parks for each 600 persons in the Regional District and a ratio of one acre of Class II parks for each 100 people will be maintained or bettered. Class IV, V and VI (Unique, Primitive and Historic) areas will be acquired where appropriate. Class III (Natural Environment) areas will primarily remain in private ownership with the public acquiring only scenic or recreation easements.
Community facilities fall into three categories: cultural, protective, and administrative. The cultural facilities consist of schools and libraries, plus art centers with auditoriums, exhibition rooms, and small meeting rooms. Protective facilities include the police and fire departments, hospitals, and health centers. Administrative facilities include courts and the various governmental offices.

Space for all of these facilities must be found within the urban pattern, near the people they are to serve. Their sizes, locations, and functions need to be in direct proportion to the size of the community and the type of residents.
public school system

Directing new urban growth into preplanned and logical patterns, as this General Plan recommends, will make it possible to select and acquire in advance of development the best sites for community facilities as well as parks. This procedure should result in substantial savings for the taxpayer.

The distributions of schools, libraries, fire stations, and health centers in the Regional District are indicated in the General Plan. They represent previous studies, including the master plans of schools and libraries, which have been adapted to this plan.

Individual sites for community facilities are reviewed by the Commission under mandatory referral legislation for coordination with adopted plans. A permanent site selection committee made up of staff members from the Commission and various other public agencies meets regularly to help assure the best choices for public building sites.
Better public services in accordance with the General Plan can be achieved by using the procedures listed below and explained in Part II, Carrying Out the Plan.

Transportation

- Coordinate the Master Plan of Highways with the corridor pattern of development.
- Cooperate with the National Capital Transportation Agency in establishing an efficient rapid transit system.
- Incorporate the General Plan transportation recommendations into detailed master plans, including provision for automobile parking, bus loading, and highway-to-transit transfer facilities.
- Protect airports with rural and airport zoning, and encourage noise studies to define areas unsuitable for residential subdivision.

Utilities

- Use the General Plan as a major criterion in County reviews of programs for the extension of water and sewer lines.
- Limit access to sewers where rural areas must be crossed.
- Strengthen mandatory referral authority over gas and electric utilities to avoid conflicts.
- Encourage the use of underground electrical and telephone wires.

Parks

- Coordinate the park acquisition program with the corridor-wedge form of development.
- Seek additional State and Federal matching funds for park acquisition.
- Use subdivision powers to better advantage for reserving and acquiring park land.
- Keep park development in step with growing population.

Community Facilities

- Continue the preparation of plans for community facilities in the Regional District, based upon the corridor-wedge distribution of population.

- Improve capital budgeting for community facilities by
  - automatic data processing for land use and population figures.
  - more thorough review by the Commission of individual capital budgets
  - a yearly capital improvements report combining all capital budgets in each county.

- Continue and strengthen individual referrals of mandatory referrals.