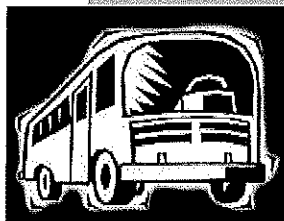


Appendix M:
Models and Guidelines Report
Maryland Department of Planning

Managing Maryland's Growth

Models and Guidelines #24

Adequate Public Facilities Ordinances (APFOs)



Maryland Department of Planning



TABLE OF CONTENTS

I.	INTRODUCTION	3
II.	IS AN APFO THE RIGHT TOOL FOR YOUR JURISDICTION?	5
III.	LEGAL FRAMEWORK AND BACKGROUND	6
IV.	INTERGRATING AN APFO WITH THE LOCAL GROWTH MANAGEMENT PROGRAM	7
V.	MUNICIPAL APPLICATION OF AN APFO	8
VI.	ADVANTAGES AND DISADVANTAGES	10
VII.	STEPS IN DESIGNING AN ADEQUATE PUBLIC FACILITIES PROGRAM	11
VIII.	MODELS	20

I. INTRODUCTION

The phrase “adequate public facilities” has an appealing ring to residents, public officials and developers in many fast growing suburban areas. Many such areas in Maryland have experienced the affects of burgeoning growth including either the reality of or a perception of overcrowded schools, traffic congestion, and water rationing during dry summer months.

Adequate Public Facilities Ordinances (APFOs) are an effort to phase the provision of public facilities consistent with a locally adopted comprehensive plan. An APFO ties development approvals under zoning and subdivision ordinances to specifically defined public facility standards. They are designed to slow the pace of development or in extreme cases to delay development approvals in an area until adequate service levels are in place or reasonably assured.

In plain English, an APFO says that if the roads are too congested, if the school classrooms are too crowded, if the water system cannot provide enough water, if the sewer pipes or treatment plant are full, or if there are not enough playing fields for recreational use, **then** development can not be approved until the problem is corrected. At the same time, however, an APFO is not the appropriate tool to stop growth that is otherwise consistent with local zoning. The application of an APFO **must be associated with** a funding source to remedy whatever the constraint on growth approval might be.

Almost any county or city will find that its citizens feel that more services and facilities are desirable, and public officials are always pressing against the affordability barrier to meet those needs. An Adequate Public Facility Ordinance is not the only tool available to local government to tie development approvals to infrastructure. In the context of various means of responding to the problem, APFOs are more structured than specifically enacted legislative **moratoriums**, which are generally last ditch efforts to control conditions when there are serious deficiencies. On the other hand, **impact fees**, which are often confused with APFOs, provide a means to raise additional funds for capital projects, but do not guarantee that sufficient funds will be available, but meanwhile have no effect on the pace of development.

Adequate Public Facility Ordinances can be important growth management tools for rapidly growing counties and municipalities. APFOs are also an important and valuable tool for implementing the Eight Visions that are included in every local comprehensive plan and are established in State law as Maryland’s development policy. In fact in 2000 the Maryland General Assembly incorporated the goal of adequate public facilities (though not a requirement that local governments adopt an APFO) into those Visions. APFOs are particularly relevant to the first Vision which calls for concentrating growth in suitable areas. The premise of an APFO is that growth should be *directed* to suitable areas where facilities are adequate. There is a particularly strong State interest in this issue, because considerable amounts of State funds are directed to constructing schools, sewer and water facilities, roads and parks. Since the passage of the Smart Growth initiatives in 1997 funding for growth related projects is prohibited outside of areas identified by local governments as their highest priority areas (Priority Funding Areas) for new growth.

In 1999 a subcommittee of the Economic Growth, Resource Protection, and Planning Commission issued a report on meeting public facility needs in growth areas. The introduction to that report stated:

"Costly demands and inefficient growth patterns, combined with public reluctance to increase taxes, severely hamper State and local government's ability to provide adequate facilities. Governments have responded with efforts to control or tax new growth, hoping both to reduce the growth in infrastructure need and to fund that which already exists. To do this, many communities have adopted adequate public facility ordinances. These require that sufficient schools, roads and other facilities be available before housing or other development can be built. Many times, however, the areas of a jurisdiction designated for growth are the very areas with existing overcrowding of public facilities, while excess capacity is located in more rural locales.

The overcrowding of public infrastructure acts as a flashpoint for citizen opposition to new and infill development in all areas. When schools, roads and other public facilities serving an area designated to receive new growth are already overcrowded and congested, public reaction to new residential and commercial developments, even those consistent with Smart Growth, is frequently negative. In the face of well founded public concerns about the ability of over-burdened local infrastructure to absorb additional users, government officials may either attach additional financial costs to a new development or discourage its construction altogether. If not permitted in a designated growth area, the demand which the new housing or commercial development is intended to meet will be met elsewhere, outside a designated growth area or even outside the State."

The following document draws heavily on two previous efforts by the Maryland Department of Planning to address the issues and opportunities associated with adequate public facility ordinances. It is primarily intended as an update to the Model and Guideline issued by the Department in the mid 1990's. Much of the format and some of the language from *Adequate Public Facilities: Managing Maryland's Growth*, Maryland Office of Planning, June 1996 is repeated here. It has been updated with recommendations and language from *Making Smart Growth Work: Meeting Public Facility Needs in Growth Areas, A Report to the Economic Growth, Resource Protection, and Planning Commission*, October 1999 and from information derived from a series of interviews with local governments with experience with implementing APFOs which was conducted in cooperation with the University of Maryland in 2005.

II. IS AN APFO THE RIGHT TOOL FOR YOUR JURISDICTION?

The premise that adequate public facilities should be available for new growth seems obvious. Superficially, an APFO should also be simple and obvious. But the experience in Maryland (as well as other States) has been that implementing an effective, consistent, and fair set of regulations is not as easy as it might seem. For instance:

- Can the standards you adopt for adequacy be justified? Would failure to meet those standards cause serious public harm or a threat to public health, safety and welfare? *Remember:* adoption of an APFO is an exercise of the police power and must be broadly based on protecting public welfare.
- Does your jurisdiction's growth management program provide a coherent context for an APFO program? Do you have a clear idea of what facilities are needed to accommodate planned growth? Is there a facilities plan or capital improvement program that indicates a commitment to investing in the needed facilities? *Remember:* the place to decide that your community should grow fast or slow is in the comprehensive plan. The APFO is a tool, along with zoning and subdivision regulations, to implement that plan and it must be accompanied by a mechanism to bring facilities up to an adequate level.
- Can agreement be reached in your community as to what is an adequate level of service for various public facilities? *Remember:* standards in an APFO must be applied fairly and be established through a public review process.
- Can your APFO be integrated into a growth management program to provide a consistent result? For instance, roads in rural areas tend to have more capacity for growth because the volume of traffic using them is so much less. An APFO based on road capacity could have the unintentional effect of pushing growth out of planned growth areas into rural / agricultural areas. *Remember:* The purpose of an APFO is to assure adequate capacity within growth areas consistent with a comprehensive plan. Standards and measures should be designed to accomplish that purpose.
- Can you provide sufficient staff resources and data to monitor growth trends and facility capacity? *Remember:* An APFO is just one of the tools available to local government to manage growth. Depending on the size of your community other tools may be more effective in accomplishing the same goals.

III. LEGAL FRAMEWORK AND BACKGROUND

In 1978, the Maryland General Assembly passed Article 66B, §10.01, specifically enabling municipalities and non-charter counties to adopt adequate public facilities ordinances. Even prior to that date, Maryland courts upheld the ability of local jurisdictions to adopt ordinances that condition development approval on a finding that infrastructure exists to sustain a project's anticipated impacts. In *Malmar Associates v. Prince George's County*, 272 A.2d 6 (1971), the Court of Appeals sustained an ordinance requiring an applicant to show that adequate educational facilities were in place. In the early cases, authority to enact an adequate facilities ordinance was usually implied, based upon the general authority to promote public health, safety and welfare that underlies zoning, planning, and subdivision regulations. In 1992, the scope of §10.01 was expanded to enable all local jurisdictions in Maryland, including charter counties, to enact a variety of growth management tools.

Adequate public facilities ordinances can be either a response to a crisis in existing capacity or the financial overburden on services required for new development, or part of a comprehensive review of the long - range demand for services and facilities. In either situation, the requirements must be reasonably and rationally related to a valid governmental interest. Approval can be made contingent on the local government's ability to provide services, or on a developer's agreement to furnish or finance the needed improvements. The standard in Maryland requires that adequate facilities be reasonably probable of fruition in the foreseeable future. (*Montgomery County v Greater Colesville Citizen's Association*, 70 Md. App. 374, 521 A.2d 770 (1987))

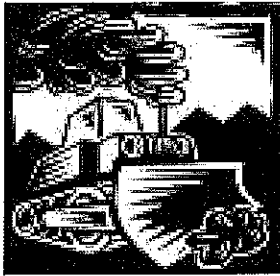
APFOs should set quantifiable levels of service for public facilities and services, since these standards provide a basis for the evaluation of the proposed projects in relation to existing or planned facilities. Lack of identifiable standards can lead to invalidation of the regulations or conditions as applied, as in the case of *Rosenberg v. Maryland-National Capital Park and Planning Commission*, 269 Md. 520, 307 A.2d 704 (1973). In that case approval of a subdivision had been denied based on inadequate educational facilities. The regulation in question required adequate schools "within a reasonable distance." However, the Court of Appeals found that this standard was so general that the Planning Commission was required to consider the school capacity within a mile and one-half of the proposed development, not just the capacity of the nearest elementary school.

One unresolved legal issue is the ability of a local jurisdiction to disapprove development based upon the inadequacy of facilities outside the control of the local government. One legal treatise suggests that agreements with facility providers may be necessary to ensure consistency with overall community growth objectives. (Rathkopf, *The Law of Planning and Zoning*, §13.06 (4th edition))

IV. INTERGRATING AN APFO WITH THE LOCAL GROWTH MANAGEMENT PROGRAM

A thorough and comprehensive growth management program should function so that land use planning and facility planning are linked and interdependent from beginning to end.

Long-range planning for growth should be conducted to ensure that a jurisdiction's financial ability to provide necessary facility improvements is not exceeded; and also that the capital facility plans are sufficient to accommodate the projected growth, and are consistent with the policies for locating future growth.



While an APFO can be an extremely valuable planning tool, it must be applied in combination with many other planning tools, and in the context of a broader, comprehensive growth management program. Integration of facility planning with land use planning can be viewed in an ideal sequence of four stages of the development planning process to understand the context of APF laws.

1. **Master Plan stage:** A long-range look at the location of anticipated growth and the public facility infrastructure necessary to support it. A land use plan that describes the location and intensity of growth must be followed by a community facilities plan which describes the existing facilities, and a list of new and upgraded / expanded facilities that will be required to provide the services which the community requires (or aspires to) over the subsequent 10 to 20 years. The list and price tag for the facilities that are generated by this process are usually staggering to local officials, but it is important not to ignore the reality of the fiscal demands that will be made by growth. Failure to confront this reality leads to the crisis situations that cause the demand for APF laws.
2. **Zoning and Capital Improvement Programming:** Zoning should be phased with existing capacity and with the short-term capital improvement program. A thorough and clear community facilities plan can provide a reasonable basis for making these zoning decisions. The community's zoning ordinance should address facility adequacy for both piecemeal and comprehensive rezoning, ensuring that adequacy standards are achievable within a reasonable time. The annual Capital Improvement Program (CIP) should be based on the community facilities plan, existing deficiencies, and synchronized with the zoning.
3. **Development approval stage:** APF laws are generally enacted at this stage to regulate approvals of subdivisions and site plans. They can be seen as a safety mechanism for unexpected growth spurts.
4. **Building permit stage:** Actions to halt building permits are usually in the form of a legislative moratorium that is based on evidence of serious deficiencies with no immediate solution. In the case of water and sewer facilities, administrative, rather than legislative action can halt the approval process.

V. MUNICIPAL APPLICATION OF AN APFO

While APFOs are most often applied in growing counties, municipalities should also consider whether some circumstances warrant their use.

For instance:

- Annexation petitions must be evaluated on the basis of the availability and extension of public services. This is most often accomplished through the application of a **Developer's Rights and Responsibilities Agreement**. However, an APFO could provide a set of specific, and consistently applied, standards and conditions for approval of an annexation petition.
- Municipalities that are located in counties with an APFO may consider similar standards in the interests of promoting interjurisdictional coordination particularly where facilities such as roads and schools are not constrained by jurisdictional boundaries. In 1997 such a concept was incorporated into Maryland's Smart Growth legislation.
- A municipality may have needs and infrastructure concerns not normally considered by a county. An APFO at the municipal level may focus more on the adequacy of urban parks, libraries and other services.

The Requirements of Maryland's Smart Growth Initiatives

In 1997 the Maryland General Assembly passed landmark legislation (Annotated Code of Maryland, Finance and Procurement Article, Section 5-7B) requiring the State to direct funding for 'growth related projects' to Priority Funding Areas. Growth related projects are defined in the Code and include most State programs that encourage and support growth and development such as highways, sewer and water construction, and economic development assistance. While public school construction does not have to be targeted to Priority Funding Areas, there are circumstances in which municipal governments may be required to adopt APFO standards for public schools in order to qualify for other State assistance that is targeted to Priority Funding Areas.

If a municipality is within a county that has established an APFO that includes school standards, the municipality must adopt an ordinance with standards substantially similar to State Rated Capacity standards adopted by the Interagency Committee for Public School Construction or to the standards established by the county APFO. This requirement does not apply to a municipality that collects a fee from residential development for the local cost of school construction if that fee is established and collected by the county or the municipality collects the fee for the county. There is also no requirement for a municipal APFO in a county that has not adopted an APFO standard for schools. After October 1, 1997 a county must consult with the municipalities before establishing an Adequate Public Facility Ordinance or changing the standards in an existing ordinance.

County has an APFO with no fees	Municipality must adopt a substantially similar ordinance or collect a fee from residential development
County has an APFO with a fee	Municipality may adopt a substantially similar ordinance or ,Municipality may allow the county to collect a fee from residential development, or Municipality may collect fee for the county
County has no APFO	No Municipal action required

VI. ADVANTAGES AND DISADVANTAGES

An APFO can be an important addition to a local government's regulatory tool box that will help to ensure a high quality of public facilities and services. An ordinance can help to maintain the fiscal integrity of a government by helping to reduce the demands of excessive borrowing to finance new facilities that are demanded by unexpected growth. Fiscal stability and high bond ratings are important factors to businesses considering new locations.

An APFO can be an extremely valuable planning tool when applied in combination with other planning tools, and in the context of a broader, comprehensive growth management program that includes:

- A policy for concentrating growth into designated growth areas;
- A policy for conserving rural areas for agricultural use and natural resource protection;
- A policy for directing resources to revitalize existing communities.

A properly designed program will facilitate economic growth and serve to streamline regulatory mechanisms.

- A coherent APFO in combination with a thorough growth management program will provide clear guidance to developers on when and where development will be allowed, avoiding unexpected delays.
- An APFO must be accompanied by a plan and a commitment to provide the facilities to support growth in a reasonable manner.

An APFO is not a substitute for a coherent growth management policy based upon an adopted comprehensive plan.

- The comprehensive planning process is the appropriate place for a community to regulate the amount of growth it will accommodate over the span of the planning period.

Facility adequacy can be affected by factors other than growth subjected to the APFO.

- Growth outside of the jurisdiction that adopted the APFO can affect the capacity of systems, particularly for roads and schools.
- In water and sewer systems, environmental standards can change and affect capacity. Nutrient caps and Total Maximum Daily Loads (TMDLs) can affect approvals even though these are not normally expressed as standards in an adopted APFO.

APFO standards can vary from jurisdiction to jurisdiction sometimes drawing growth away from areas in which it is otherwise planned.

- Standards must be written with an understanding of community goals and how they relate to standards in neighboring jurisdictions.
- An APFO should be written to provide local flexibility to deal with issues that arise that are not related to the projects subject to an APFO test.

VII. STEPS IN DESIGNING AN ADEQUATE PUBLIC FACILITIES PROGRAM

The Initial Assessment

1. Does the disease justify the cure?

Carefully examine the nature and severity of the problem before embarking on what will undoubtedly be an arduous and controversial effort. Determine whether there are other simpler means of accomplishing the same result. You might want to consider updating the facilities plan and inventory and possibly development regulations.

2. Is the overall growth management plan in order?

If you don't have a clear idea of the facility demands of the projected growth in your jurisdiction or you don't have a plan or policy to meet those demands, then an APFO is probably a premature response.

3. Do you have community support for this effort?

It is important that the effort involve citizens, developers, and other community business and civic leaders to maintain a balanced approach and a clear understanding of the objectives and probable outcomes of the effort. It will be particularly valuable to involve a variety of people with technical expertise like bankers, engineers and schoolteachers.

4. Can you afford the staff effort?

Develop a clear work program and schedule, and determine the staff resources available for preparing, enacting, and implementing the ordinance. It may be appropriate to develop the ordinance incrementally, i.e. one facility type at a time. Additional staff may be necessary. There may also be necessary improvements in the collection and analysis of data on existing and projected facility capacity.

5. Can you afford the results?

Take the time to test the outcomes of proposed regulations on different types of development (e.g. residential, commercial, institutional development) in a variety of specific areas around your jurisdiction. Make sure the ordinance will achieve your objectives and make sure you can afford the results. As previously mentioned an APFO can have the inadvertent effect of making it relatively easier to develop in rural areas. Also it may very likely have the effect of stalling or preventing an economic development project that is otherwise attractive and desirable. These possible effects should be understood in advance of adopting an ordinance.

Setting Up an Adequate Public Facility Ordinance

1. What facilities should be included?

Most jurisdictions in Maryland with an APFO will have some standards for road capacity, for schools, for water supply, and for sewer service. Other public services or facilities that are at times tested in an APFO are parks and recreation facilities, emergency services and police. The facilities included in a local APFO should reflect community needs and should focus on facilities over which the jurisdiction setting the standards has some control.

2. Setting Standards

This is one of the most important steps in establishing an ordinance. Decisions regarding the standards applied to a facility type will determine how restrictive the ordinance will be. The decisions will be based on expectations within the community regarding standards and quality of life goals.

There are two steps involved in determining an APFO standard. The first is to determine what technical standard is to be used as a measure of capacity within a facility. The second is to determine how the performance of local infrastructure is to be measured against that standard. These two steps vary by infrastructure type.

Roads

The commonly used measures of road capacity are Level of Service (LOS) standards established by Transportation Research Board of the National Academies in Washington DC. These are typically measures of automobile traffic flow through selected road segments or intersections and are expressed as grades from A (essentially a free flow condition) to F. Definitions are given below.



There are no hard and fast rules that provide various policy makers with guidance on what measure of performance should be applied at any one point. For example a LOS of E is often acceptable in a heavily urban setting, and yet would be considered akin to gridlock in a more rural environment. The LOS performance measure used in the APFO will, therefore, depend heavily upon local expectations.

It is important to note that traditionally these standards make no allowances for pedestrian movement or any other mode other than the number of automobiles and vehicle movements. The existence of substantial transit service, for example, could be used to justify additional development that might otherwise run afoul of standard Level of Service measures. Neither is there any measure of more efficient use of the automobile and the road, that is, typically, the LOS measures make no distinction between a vehicle with six occupants and a vehicle with one occupant.

LEVEL OF SERVICES DEFINITIONS

LOS A defines free flow operations. Free flow speeds prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream. The effects of incidents or point breakdowns are easily absorbed at this level.

LOS B represents reasonably free flow, and free flow speeds are maintained. The ability to maneuver within traffic stream is only slightly restricted and the general level of physical and psychological comfort provided to drivers is still high. The effects of minor incidents and point breakdowns are still easily absorbed.

LOS C provides for free flow with speeds at or near the free flow speed of the freeway. Freedom to maneuver within traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver. Minor incidents may still be absorbed, but the local deterioration in service will be substantial. Queues may be expected to form behind any significant blockage.

LOS D is the level at which speeds begin to decline slightly with increasing flows and density begins to increase somewhat more quickly. Freedom to maneuver within the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort levels. Even minor incidents can be expected to create queuing, because the traffic stream has little space to absorb disruptions.

LOS E describes operation at capacity, which is at its highest density value. Operations at this level are volatile, because there are virtually no usable gaps in the traffic stream. Vehicles are closely spaced, leaving little room to maneuver within the traffic stream at speeds that still exceed 49 mi/h. Any disruption of the traffic stream such as vehicles entering from a ramp or a vehicle changing lanes, can establish a disruption wave that propagates throughout the upstream traffic flow. At capacity, the traffic stream has no ability to dissipate even the most minor disruption, and any incident can be expected to produce a serious breakdown with extensive queuing. Maneuverability within the traffic stream is extremely limited, and the level of physical and psychological comfort afforded the driver is poor.

LOS F describes breakdowns in vehicular flow. Such conditions generally exist within queues forming behind breakdown points. Breakdowns occur for a number of reasons: traffic incidents, points of recurring congestion, and forecasting volumes greater than capacity. Breakdown occurs when the ratio of demand to capacity exceeds 1.00. Operations immediately downstream of such a point, however, are generally at or near capacity, and downstream operations improve as discharging vehicles move away from the bottleneck. Whenever LOS F conditions exist, they have the potential to extend upstream for significant distances.

Given these constraints, the LOS measure itself is often inadequate. It underestimates the capacity to move people in the total transportation infrastructure, including alternative transportation modes. It does not, by itself, take into account the nature of the built environment in which it is applied (a highly urban environment may desire to impede the free flow of automobile traffic), and it often results in automobile oriented expenditures at the expense of other modes and the urban fabric of an area.

Sewer Service

Adequacy standards are usually based on very clear engineering standards and physical limitations. Current Maryland law requires that a master plan for water and sewer be in place in each county. The plan delineates where service exists or is planned within a ten-year period. If an area is not within a planned service area, densities consistent with Smart Growth will not be possible. Paradoxically, development at very low densities is often easier outside of planned service areas because the other questions of treatment capacity and standards discussed below do not have to be asked.

As for the availability of capacity in areas where services are planned, capacity is usually expressed in terms of hydraulic capacity (millions of gallons per day) at the endpoint of the system, the wastewater treatment plant (WWTP). However, this may not provide a full description of the availability of capacity, which may be further constrained by regulation if the WWTP is not treating wastewater to the standards required by permit.

Essentially sewer service capacity can be viewed as a 'weak link' process. That is the treatment plant may have capacity, but if any of the components, such as pumping stations or sewer lines, that deliver the waste to the plant are undersized, development will be constrained until the component is brought up to size. Generally the costs of correcting capacity constraints everywhere except the WWTP is made the responsibility of the developer and usually is not a long term constraint on development. Providing adequate capacity at the endpoint of the system, the WWTP, involves expensive improvements the costs of which are borne by local and State government.

A local jurisdiction providing sewerage service may use its APFO as a mechanism to control development so as not to violate its permit for operating a WWTP and its associated collection system. The bottom line, however, is that all governments operating a WWTP system are regulated through federal permits administered by the Maryland Department of the Environment. They must therefore have a mechanism to monitor flows and assure that treatment levels are maintained. Overflows into surface waters or a failure to maintain levels of treated discharge, result in fines and sometimes a moratorium mandated by the State.

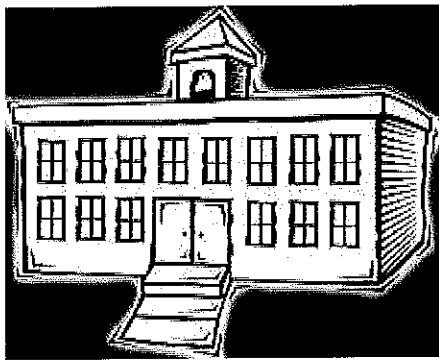
Water Supply

Much like sewerage infrastructure, a water supply APFO must consider the location of existing and future service, the quality and quantity of available supplies and distribution system questions. The location of existing or planned service is regulated by the comprehensive water and sewerage plans required by State law. Again, if an area is not within a planned service area, densities consistent with Smart Growth will not be possible. Once again, development at very low densities is often easier outside of planned service areas because the other questions of treatment capacity and standards discussed below do not have to be asked.

The most understood measure of adequacy for public water supply is measured at the beginning point of the distribution system. Two questions are asked. Is there sufficient supply available at the source of water, as expressed in a State issued appropriations permit to accommodate a new development? Second, is the water treatment system that processes raw water to make it suitable for domestic use of adequate size? In both cases availability will be expressed as a volume measure (millions of gallons per day) and compared to some estimate of demands generated per new household. Historically, these have not been difficult issues for local government to address in Maryland, where fee structures were designed to encourage increased water use as local government viewed water as a revenue generator. That is no longer the case. In many areas the adequacy of water supply sources are now in question given rates of growth and new standards for recharge of both ground and surface water supplies. In addition fairly recent federal treatment standards have drastically increased the cost to local service providers.

Schools

In Maryland the commonly used standard for school capacity is "State Rated Capacity" (SRC). The Administrative Procedures Guide for Maryland's Public School Construction Program defines SRC as "the maximum number of students that reasonably can be accommodated in a facility without significantly hampering delivery of the educational program." The Guide goes on further to state that "It (SRC) is not intended to be a standard of what class sizes should be. School system staffing varies widely depending on a number of factors. It is, however, a criteria used in evaluating whether a particular school is overcrowded such that relief is needed and provision of additional space may be warranted."



While State Rated Capacity may not be intended as a standard for classroom sizes, in actual practice the SRC number for any school is established by a formula derived by multiplying the number of classrooms in each grade by a State approved capacity for each classroom. In 2004 the Maryland General Assembly passed legislation that established the following classroom standards:

Prekindergarten classrooms	x 20 students
Kindergarten classrooms	x 22 students
Grades 1 – 5	x 23 students
Grade 6	x 25 students
Special Education (self contained)	x 10 students

Secondary School (middle, junior, and senior high grades 6 – 12 inclusive) capacities are derived by taking 85 percent of the product of the number of teaching stations and 25 and then adding the product of the number teaching stations for special education and 10. Put another way the formula is:

Secondary classrooms	x 25 students x 0.85
Special education	x 10 students.

The application of these formulas results in a State Rated Capacity for each public school that is established by the local school board and approved by the Maryland Department of Planning.

School enrollments are measured annually at the beginning of the school year, each September. The typical APFO measure is then expressed as a utilization rate, and varies in range from 85 percent of State Rated Capacity to 120 percent of SRC. How the measure is applied also varies across the State. Some counties measure the utilization rate at every school serving a proposed development. Others measure it across a number of schools in a locally defined district. Still others measure utilization rates solely in elementary schools rather than at all schools in a system. Finally, some school systems will use a locally defined capacity number rather than SRC. These locally defined numbers use the same measuring technique, but may have slightly lower numbers for classroom sizes.

3. Establish a thorough public review process

With the exception of requirements for water and sewer treatment and capacity, many of the standards discussed above depend upon the expectations within the communities in which they are imposed. It is important that the process for developing APFO standards include a broad representation from the community. It is important to have a process in place to reach out to community leaders during this effort. It is also important to have involvement from lawyers, bankers, engineers, and land planners who are familiar with the intricacies of the development process, and the unique characteristics of the development regulations in your jurisdiction.

4. Some components of an APFO

- Establish a process for collecting the information on facility use, capacity standards and projected growth.

Counties and municipalities normally adopt an APFO when they begin to face serious pressures from new development. The ability to respond to those

pressures requires the establishment of a certain level of administrative capacity to manage the process. It also requires that a process be established to monitor the utilization rates in the infrastructure facilities being tested. There are two aspects to this. First, how is 'available capacity' defined and how often is it monitored or tested? Second, what assumptions are made regarding the amount of that capacity that would be 'consumed' by any proposed development?

Available capacity for water and sewer systems will largely be defined by permitted flows and treatment standards. The closer a water or sewer system gets to 'capacity' the more closely regulatory authorities will insist on monitoring and regulating new connections. There are widely accepted standards for new household demands on water or contributions to wastewater flows. These are usually expressed in gallons per capita per day, multiplied by local assumptions concerning numbers of new residents in a household. These parameters may differ based upon the type of residential development being proposed. As just one example, a single family detached home on a fairly large lot will have higher water consumption rates per household unit than will a townhouse. It is appropriate for an APFO to consider these differences.

Level of Service standards for roads was discussed above. There are accepted standards for automobile trip generation for just about every variety of urban and suburban development. These assumptions are common elements of traffic analysis studies often required of new developments. However, since level of service on a particular road segment may be affected by traffic generated by development beyond the jurisdiction it may be impossible for any local jurisdiction to prevent a deterioration in level of service. Local highway or public works departments should institute a program to periodically measure level of service on key road sections and intersections.

Public school enrollments are reported on an annual basis every September. Most APFOs will use the utilization rates (enrollment / State Rated Capacity) to determine available capacity for a full year following that date. Enrollments in a system, as well as enrollments in any particular grade, will rise and fall based upon changes in development, changes in the character of existing neighborhoods, and natural changes in population (birth rates). An APFO is designed to measure only the contribution of new residential development to school enrollments. Assumptions are commonly made, based on past history, regarding the contributions of different housing types to school populations. These per - unit contributions would then be multiplied by the number of units in a proposed development to determine whether capacity in the system is available.

- Determine the stage of development approval where this will apply

At what point in the development approval process is the APFO test conducted? The test may be applied at one of several points in the process.

The earliest test would be applied at the concept plan stage. The developer will provide an estimate of the total number and types of residential units and would be told in turn whether capacity is available to permit those units. A very early approval process is usually to the developer's advantage. The risk to a local government in such an early approval is that it ties up capacity well in advance of actual construction. If development is delayed or the size of development is reduced in another stage of the process an even greater element of uncertainty and inefficiency would be built into the process. The ordinance would need to have a clause requiring development to proceed through the remaining approval processes in a timely fashion to deal with this issue.

It is much more common for the APFO test to be applied at the plat approval stage. At this point in the process, both the developer and the local government will have a much better understanding of other (non-APFO) issues and a better understanding of what the developer desires, and what might ultimately be approvable. This is still early enough for a developer to stage actual construction if that becomes necessary because of some infrastructure or resource constraint. The risk to local government is lessened, though a clause requiring development to proceed in a timely fashion is still a good idea.

Some jurisdictions apply the APFO test at the building permit stage. The risk here falls mainly upon the development community. By this point most site approval issues have been resolved and a substantial investment has been made. Local government will have a much better idea of actual available capacity in their infrastructure systems at this point in the process. However, if adequate capital planning has not been done, there is much less time available to fix any capacity problems. Failure of a test at this stage, when a local government has been well aware of the size and nature of the proposed development for some time, can bring into question the equity of the procedures established in the ordinance. A mechanism in the ordinance that requires local government to inform a developer of capacity issues earlier in the process, even if the actual test is not applied, should be incorporated.

- Determine applicability (residential / non-residential) and exemptions.

Applicability of the APFO tests can be a fairly easy determination. Though their contributions may differ all development can be tested for impacts on roads, water, and sewer. Most commercial or industrial development is not required to meet a school APFO test, though it may be argued that an industrial development, for example, may bring with it further demands for housing, and therefore school capacity.

Exemptions are a less easy matter. A typical exemption for school tests in Maryland is for age - restricted housing. Given an aging population and the demand for housing catering to that population, such exemptions may make sense. Concern has been expressed that such developments actually be restricted to older age groups, rather than a mechanism to avoid APFO tests.

Some exemptions exist to encourage certain types of development or development in specific locations. Exemptions to many APFO requirements can be given in order to encourage transit oriented development. Exemptions could also be given to development in 'Town Centers' in order to encourage concentrated growth.

- Determine an appeals process if not already covered by zoning or subdivision provisions.
- Establish a queing process, or a 'waiting list' for developments that could be approved if the APFO standards were met.

VIII. MODELS

The following models are intended to provide the reader with examples of practice that may be applied or amended for application to local purposes. Citations are supplied for the readers use. The examples are not intended to substitute for the official language in the ordinance cited as such language is subject to revision at the discretion of the local governing body.

1. Determination of Capacity for Roads; Variable Standards in and out of growth areas.

The following model contains suggested language for allowing a different standard for road capacity for developments proposed inside a growth area than would be permitted in a rural area. It should be noted that the ordinance permits a developer to make appropriate improvements as determined by agreement with the County in both instances.

Model: Frederick County Adequate Public Facilities Ordinance (*Chapter 1-20: Adequate Public Facilities*)

§1-20-31(A) For all development applications meeting the threshold criteria outlined in § 1-20-30, a traffic impact study (TIS) shall be prepared by the developer and submitted to the Department of Planning and Zoning which will review it along with the Department of Public Works. The portion of existing road(s) required to be adequate shall be determined by the Department of Planning and Zoning in consultation with the Department of Public Works based on a pre-study conference or documented correspondence between the county and the developer. The Department of Public Works shall use as its guidelines the following 2 paragraphs, but may, in consultation with the developer, adopt a reasonable study area based on sound traffic engineering knowledge of the site and the situation. Any disputes regarding study area or scope shall be resolved by the Planning Commission.

(1) The portion of the existing road(s) required to be adequate for a proposed development located in an area designated as agricultural/rural or conservation in the County Comprehensive Plan shall be from the site's planned entrance(s) to the nearest intersection of an arterial road or freeway/expressway with a collector road, in the direction(s) of traffic flow anticipated by the Department of Public Works unless the pre-study conference determines otherwise.

(2) The portion of the existing road(s) required to be adequate for a proposed development located in an area having a designation other than agricultural/rural or conservation on the County Comprehensive Plan shall be from the site's planned entrance(s) to the nearest intersection of an arterial road or freeway/expressway with an arterial road, in the direction(s) of traffic flow anticipated by the Department of Public Works unless the pre-study conference determines otherwise.

(D) The following level of service criteria shall be met to determine road adequacy.

(1) Roads and intersections located in areas designated agricultural/rural or conservation in the County Comprehensive Plan shall be considered adequate if a LOS "C" or better is maintained using the critical lane method (CLM). Roads and intersections located in areas having designations other than agricultural/rural or conservation on the County Comprehensive Plan shall be considered adequate if a LOS "D" or better is maintained using the CLM. Further, for signalized intersections only, which are also required to be analyzed using the highway capacity manual method (HCM), the overall intersection LOS must be "D" or better to be considered adequate. Required mitigations, if any, will be reviewed on a case-by-case basis.

2. Determination of Capacity for Roads; Variable Standards near transit services.

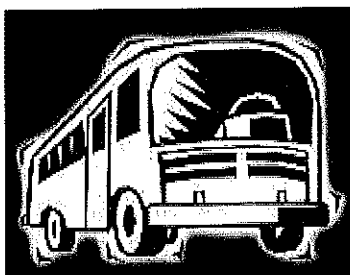
Model: City of Rockville Adequate Public Facilities Standards (Ordinance Number 24-05)

The following model provides an example of differential standards for roads justified by the availability of transit services in a particular geographic area. The language quoted contains a planning / public policy justification for the differential standard. Note in particular the recognition of the urban nature of the community and stated goals for bicycle and pedestrian access. The second part of the model contains specific elements regarding site access and circulation that is to be part of the transportation report required of the developer.

III. Levels of Service

III.A. Transportation

Currently, mobility throughout the City of Rockville is limited due to traffic congestion generated by local and regional trips. Regional growth, combined with anticipated development activity within the City will stress the existing and proposed infrastructure. In addition, Rockville's roadway system is essentially built out. Locations that currently contain the worst congestion levels generally require multi-million dollar improvements to solve the problem. Alternatively, these areas will require an increased reliance on non-vehicular improvements to increase the capacity of a multi-modal transportation system. However, in less densely developed areas of the City where traffic operates at acceptable LOS, many small-scale intersection improvements can still occur.



The City's Master Plan provides a vision for a shift from an auto-centric transportation system to a multi-modal system that serves motorists, bicyclists and pedestrians. Through stated goals and objectives, it aims to create a transportation system that is safe and accessible, provides mobility for all users, and accommodates anticipated local and regional demands. To address all modes of transportation, the City has implemented a Comprehensive Transportation Review (CTR) for new development projects. The CTR focuses on auto, transit, pedestrian, and bicycle levels of service, as well as Transportation Demand Management (TDM) programs. The

CTR requires a Transportation Report (TR) be submitted with all development applications. The TR consists of five components: an examination of existing conditions, a site access and circulation analysis, an automobile traffic analysis a non-auto off-site analysis, and proposed mitigation and credits. The analysis included in the TR is based on the type of development project and projected site trip generation(s). Development projects in the City that generate more than 30 peak hour auto trips, as defined in the CTR, must submit all five (5) components of the TR. Development projects that generate less than 30 peak hour auto trips do not need to provide the automobile traffic analysis and the non-auto off-site analysis. The TR report is used to test if the development project meets APF standards. The following are principles used by the City to ensure that adequate transportation facilities exist during and after a development project:

- In order to address increased congestion and to encourage development activity where viable transportation options exist, the City has established Transit-Oriented Areas (TOA's) and non Transit-Oriented Areas (non-TOA's), as approved by the Mayor and Council. Areas defined as TOA's must include existing or programmed facilities that provide multi-modal access. TOA's include areas 7/10ths of a mile accessible walking distance from existing and programmed Metro and MARC stations and programmed fixed-guideway transit stations on dedicated transit rights-of-way. A map of the TOA's is attached in Appendix B and shows walking distances of 7/10ths of a mile from fixed-guideway transit stations.
- Transit-Oriented Areas (TOA's) and non-Transit-Oriented Areas (non-TOA's) have different thresholds. More congestion is allowed in TOA's, where viable multi-modal options exist. Stricter congestion standards are applied in non-TOA's where less congestion is mandated.
- Development projects in TOA's can claim larger amounts of credit for multi-modal transportation improvements and TDM programs and/or contributions than development projects in non-TOA's.

Appendix A: Definitions

Transportation Report, required by the CTR, is one report that consists of five components:

- **Component A: Introduction and Existing Conditions:** Project description.
- **Component B: Site Access & Circulation:** Analysis of internal circulation, entrance configurations, truck access and other relevant access and on-site features.
- **Component C: Automobile Traffic Analysis:** Analysis of auto traffic using the technical guidelines for traffic analysis in the auto study area.
- **Component D: Non-Auto Off-Site Analysis:** Analysis of access to alternative modes of transportation available in the respective study area for pedestrian, bicycle, and transit facilities in the multi-modal study area.
- **Component E: Summary and Mitigation:** Summary of the report findings and recommendations.

3. Determination of Capacity for Water and Wastewater Systems

Model: Queen Anne's County Interim Adequate Public Facilities Ordinance (Title 28)

The following model contains typical language for definitions of adequacy for water and wastewater systems. It is comprehensive in that it defines the kinds of facilities to be tested (treatment plants, pumping stations, etc.) but is notable in that it defers the actual definition of adequacy to a determination to be made by professional staff managing the systems.

(C) Wastewater systems. The proposed development shall be served by an adequate community sewage system, multi-use system, or individual sewage disposal system.

(1) The community sewage system shall be considered adequate if the lateral systems interceptors, pumping stations, force mains and treatment plant have sufficient unreserved or uncommitted available capacity to accommodate expected and ultimate peak flows from the proposed development; or

(2) The community sewage system shall also be considered adequate if improvements, expansion or construction of facilities necessary to comply with standards in Subsection C(1) above are scheduled to be constructed and on-line within the first two years of the six-year CIP; or

(3) The community sewage system may be considered adequate if improvements, expansion or construction of facilities necessary to comply with standards in Subsection C(1) are scheduled to be constructed and on-line within the first four years of the six-year CIP and the applicant agrees to contribute to financing of specific improvements in accordance with the six-year CIP which will comply with Subsection C(1) or (2) above.

(4) Multi-use systems and on-site sewage disposal systems shall be considered adequate if the design is approved by appropriate state and County authorities.

(D) Water systems. The proposed development shall be served by an adequate community water system, multi-use water system or individual water supply system.

(1) The community water system shall be considered adequate if the source facilities, storage tanks, pumping stations and distribution systems have sufficient unreserved or uncommitted capacity available to provide the average flow required in addition to minimum fire flow for the proposed project; or

(2) The community water system shall be considered adequate if improvements, expansion or construction of facilities necessary to comply with standards in Subsection D(1) above are scheduled to be constructed and on-line within the first two years of the six-year CIP; or

(3) The community water system may be considered adequate if improvements, expansion or construction of facilities necessary to comply with standards in Subsection D(1) above are scheduled to be constructed and on-line within the first four years of the six-year CIP and the applicant agrees to contribute to the financing of specific

improvements in accordance with the six-year CIP which will comply with Subsection D(1) or (2) above.

(4) Multi-use systems and individual water supply systems shall be considered adequate if the design is approved by appropriate state and County authorities

4. Determination of Public School Capacity

Model: Queen Anne's County Interim Adequate Public Facilities Ordinance (Title 28)

The following is a typical example of how a school ordinance may be written. It has several salient features. It includes a set percentage of State Rated Capacity. It includes a direct reference to the Capital Improvement Program. Finally it includes a provision that permits developer financing of public school construction or improvements.

§ 28-12. Threshold requirements.

A. Public schools. Public schools in the service area of the proposed development shall be considered adequate if:

- (1) The existing and projected school population, together with the school population projected to be generated from the proposed development, is 120% or less of the state-rated capacity per school affected or the Board of Education determines that exceeding capacity will not be detrimental to the curriculum or quality of education; or
- (2) The County is scheduled to initiate construction within the first two years of the adopted six-year CIP such additional schools or school improvements as are necessary in combination with existing schools to comply with Subsection A(1) above; or
- (3) The applicant agrees to undertake school construction or improvements necessary to meet Subsection A(1) above; or
- (4) The applicant agrees to contribute to the financing of specific improvements in accordance with the CIP that will comply with Subsection A(1) above.

Model: Charles County Adequate Public Facilities Requirements (Section 297-258 of the Charles County Code)

This model has a number of features that might be considered in drafting an ordinance relating to public schools. First, there is not a hard numerical standard here. The test is not expressed as a percentage of capacity. Instead, a school capacity allocation committee is established with authority to consider a number of factors. Those factors include existing and projected enrollments compared to rated capacity, improvements programmed within a Capital Improvements Program, the potential for redistricting to take advantage of available capacity in the entire system, growth in incorporated towns, and core capacity (the size of cafeterias and other non-classroom spaces) in each school.

B. No final plat for a residential subdivision or development services permit for a residential site plan shall be approved until school capacity allocation has been granted by the Director of Planning and Growth Management. School capacity will be deemed adequate upon the granting of a school capacity allocation. It is the intent of this chapter that the capacity of public schools shall not be adversely affected by residential development.

C.____The annual School Capacity Allocation Committee, composed of the Charles County Commissioners and the Charles County Board of Education, and/or their designated representatives, will meet to decide on the appropriate allocations for the upcoming year. This Committee will consider the following factors, as well as any other information deemed pertinent, in establishing the allocatable school capacity for the upcoming year:

- (1) Current enrollments
- (2) Projected enrollments
- (3) Current capacities of individual schools
- (4) County-wide capacity at each level of school
- (5) Capacity to be provided within the next five years by any current CIP projects
- (6) Additional capacity provided by the use of relocatable classrooms within the Board of Education's relocatable classroom guidelines
- (7) Current district boundaries for school attendance and redistricting opportunities within the Board of Education's policy guidelines
- (8) Residential development and growth within the incorporated towns which will impact the enrollments at county schools
- (9) Number of lots from minor subdivisions recorded in previous year
- (10) Core capacities of each school facility.

D. When determining the amount of allocatable school capacity, allocation may be made only if school capacity currently exists or is programmed to exist under the then applicable capital improvement projects program within the next five years.

E. Allocation amounts may not exceed the amount of capacity available in the allocatable school capacity currently in effect. These allocation amounts shall be based on the factors listed in Subsection C above.

F. The granting of school capacity allocations shall be in accordance with the policies and procedures established in the adequate public facilities manual.

5. *Determination of Contribution of new students per unit*

Model: Washington County Adequate Public Facilities Ordinance (*Article 5.3 Measuring for Available Capacity*)

A basic model based upon an expected number of students per dwelling unit for Elementary, Middle, and High School levels.

5.3.2 The projected enrollment (PE) or the number of students expected from each development under review shall be based on the following yield factors:

- (a) Elementary School = 0.2 students per dwelling unit.
- (b) Middle School = 0.1 students per dwelling unit.
- (c) High School = 0.11 students per dwelling unit.

Model: Charles County Adequate Public Facilities Manual

A slightly more complex model demonstrating a different contribution by housing type as well as by grade level.

Process: To derive the student yield for each type of dwelling structure, the totals for each of the three school levels are added together. For example, the yield of .55 for single family structures is derived by adding the elementary yield of 0.23 to the middle school yield of 0.13 and the high school yield of 0.19.