the necessary adequate facilities. As the Development Impact Fee Ordinance requires steady investment of fee revenue in such facilities (the temporal 'rational nexus' between payments and benefits), government can demonstrate that adequate highways are on line and that the development delays due to staging requirements are not permanent.

The economic effect of impact fees will also support the objectives of the APFO. The increased cost to builders in Germantown and Eastern Montgomery County will place an added disadvantage to developing there. To the extent this competitive disadvantage will divert development away from these areas and towards other areas where threshold capacity is available, then a more favorable balance between growth and its supporting facilities will have been achieved.

An underlying assumption in the calculation of fees is that an area's master plan is balanced: that the mix of total development and transportation capacity at build-out will produce a level of traffic service equal to or better than the APFO standard level of service at that time. This will require planners to be explicit about the level of service objective in each master plan update, and to design the development/facility mix accordingly. This will strengthen the cogency of the master plan even more.

Conclusion. Properly constructed, an impact fee program can reinforce rather than supplant existing planning tools. The key is to integrate it with the pertinent elements of the master plan and staging plan: the planned facilities, the planned development mix and density, and the level of service requirements.

IMPACT FEES, A CLOSER LOOK

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It has been common practice as part of local subdivision approval to require that developers provide on-site improvements including water and sewer facilities, curbs and gutters, internal roads, and sidewalks. Providing internal road improvement has been viewed as a legitimate exercise of a locality's police power for over 30 years.(1) A more recent phenomenon has been for local officials to expect developers to pay for off-site road improvements serving traffic generated by a new development. The use of impact fees is one device communities have used to require developers to fund off-site improvements.

Impact fees are charges collected by a locality during its approval of land development to support public facilities needed to serve the newly proposed development. Impact fees are used to fund a variety of public facilities including roads, schools, water and sewer facilities, and parks. This paper focuses on the use of impact fees for road improvements. It highlights the use of impact fees by various localities in the United States and the types of highway improvements funded with the fees. It explores several important concerns and issues related to the use of impact fees:

- Are they a tax or a fee?
- How do they address developers' concerns regarding up-front payment of fees, paying a "fair share", and decisions about improvements?
- Who really pays the impact fee?
- How are traffic impacts determined?
- How do impact fees affect a locality's ability to attract development?
- How can the planning process address privately funded improvements in scattered locations?
- What is the future of impact fees?

There is a broad range in the level of impact fees and the type of fees used in various localities (see Table 1). Not surprisingly, the fees are higher in those localities using an impact fee to help support a mix of public facilities than it is in those areas which use them to support only road improvements. Localities have different processes for collecting impact fees. Generally they will use one of two approaches:

(1) calculate the fees based on information about the development, its potential traffic impacts, and, in some instances, a pre-determined program of improvements needed to serve a developing area, or

(2) negotiate fees and funding agreements with a developer for specific improvements to accommodate the traffic associated with new development, on a case-by-case basis.

Some localities use a combination of these two approaches, giving a developer the option of paying a calculated fee or negotiating for specific improvements. The impact fees are usually either imposed on all development or selected new development. Fees imposed only on selected new development are usually linked to a performance standard, wherein, a fee is triggered by the likelihood that traffic generated by a proposed development will cause a nearby facility (usually an intersection) to exceed a specific level of service.

Table 1: Use and Impact Fees in Selected Localities

Locality	Approach	Amount of Calculated Fees	Basis	Types of Highway Improvement
Newport Beach, CA	Negotiated	NA	Performance Standard: based on percentage of traffic generated by a development which will use a nearby intersection.	widenings intersection improvement
San Diego, CA 1/	Calculated Fee	SF unit: $1,900-3,800 MF unit: $1,300-2,700 Commercial Acre: $4,000-56,000 Industrial Acre: $3,000-22,000	Estimated cost of expanded public facilities associated with undeveloped lots. Varies by area within city.	arterials collectors local streets
Palm Beach, FL 2/	Combined Approach	SF unit: 2,000 sq. ft. - $804 2,000 sq. ft. - $1,045 Commercial/Industrial Acre: $28,500	Highway construction costs and number of trips generated by development.	widenings intersection improvements
Corvallis, OR 3/	Calculated Fee	SF unit: $1,500-2,000 Commercial Acre: $17,000	Value of development, lot area, structure area, cost of expanded capital facilities. Varies by area within city.	widenings intersection improvements bridge replacements
Snohomish County, WA 4/	Combined Approach	$150 per daily trip generated	Performance Standard: developer's proportionate share of cost to improve roads that will operate at LOS D due to traffic generated by development.	widenings intersection improvements
Waitsfield, VT 5/	Negotiated Fee	NA	Cost of improvements in developing area, size of development, and its traffic impacts.	planning study to identify areawide improvements serving new development intersection improvements widenings

KEY:
SF = Single Family
MF = Multi Family

1/ San Diego's fees or facility benefit assessments, are for three subareas within the city which have adopted financial plans. The fees are used for roads, parks, libraries, schools, fire stations, and other public facilities. Development fees are also collected in other areas of the city and tend toward the lower range of the fees shown in the table.

2/ The $28,500 represents a typical commercial development with a 85,000 sq. ft. building that covers 25 percent of the site. In practice, fees for commercial and industrial uses are calculated on the basis of a $26.79 rate per ADT, which Palm Beach officials convert to a fee of $2,679 per 1,000 sq. ft. (up to 80,000 sq. ft.) and a declining rate for larger developments.

3/ Corvallis uses the fees to fund water, sewer, and transportation facilities. The fees are divided equally among these three categories. Square footage of structure is used to calculate fee for commercial activities; the $17,000 per acre shown in this table is estimated.

4/ Although Snohomish County uses a combined approach, (i.e., allowing developers to either pay a calculated fee or negotiate for the fees due), in most instances, the developers have opted to negotiate the fee.

5/ Waitsfield is unique among these localities, in that, local officials are negotiating development fees solely on the authority of State statute. Vermont Act 250, a land use control law, requires a State land use permit for major development. Agreements are negotiated to correct "unreasonable congestions and unsafe conditions" on highways, as part of the permitting process. Fayston and Warren are other Vermont localities using the State statute to negotiate development fees.

TAX OR FEE

A locality may legitimately require off-site road improvements, but a developer can only be required to pay the portion of the costs which reflect the needs created by the development and its increased accessibility provided by the improvement.(2) If a locality imposes an impact fee higher than the developer's share of the costs for improvements reasonably needed to serve the new development, then the courts view the fee as a tax and overrule the impact fee.(3)

DEVELOPERS' CONCERNS

Cost and certainty are a developer's overriding concerns. Quite simply, early in the development review, a developer wants to know what fees or improvements local officials expect him to provide. He does not want any surprises later. Based on a recent FHWA study on developer funded improvements (4), the following observations can also be made about the developer's viewpoint:

- A developer wants to minimize up-front capital costs, so he prefers to phase improvements (or fees) to coincide with each phase of a development's completion or build-out.

- A developer wants other developers and the locality to share in the expense of off-site improvements which benefit more than the new development alone.

- A developer wants to have control over improvements constructed with his money, particularly when he funds the entire costs. Thus, a developer often prefers to assume responsibility for constructing the off-site improvements so he has more control over the cost, the timing, and the assurance that the improvements will be constructed.

- A developer does not want long-term responsibility for road maintenance, so he prefers to turn over responsibility for the roads to the locality once they are constructed. A locality will usually wait a year to accept the improvements, allowing sufficient time for any construction deficiencies to show up.

Unfortunately, it is difficult to structure an impact fee that is fully responsive to all the concerns raised by developers (see Table 2). By nature, a negotiated impact fee provides greater flexibility to a locality and a developer. Some localities use a combination of calculated and negotiated impact fees. This approach works well in that small developers may pay the fees and proceed with their project. Larger developers, on the other hand, may find it worthwhile to negotiate for specific improvements that suit the needs of their development and its proposed build-out. A developer sometimes may be able to negotiate for improvements which he believes cost less than the sum of flat fees he would have otherwise paid.

Table 2: Responsiveness of Impact Fees to Developers' Concerns

Developers' Concern	Type of Impact Fee	
	Calculated Fee	Negotiated Fee
1. **Minimize upfront capital costs**	**Unresponsive:** Calculated Fees are usually collected early in the development process.	**Varies:** Sometimes improvements are required before building permit is issued. However, depending on scale of development and nature of improvements, they may be phased with development.
2. **Pay "fair share"**	**Responsive:** Calculated fees are commonly levied on all new developments.	**Varies:** Negotiation provides opportunity for cost-sharing agreements among multiple developers and the locality. However, when the need for improvements is triggered by performance standard, subsequent developers often get "free ride" due to excess capacity provided an improvement funded by an earlier developer.
3. **Control over improvements**	**Unresponsive:** Calculated fees are often collected, then earmarked by the locality for improvements in developing areas within the jurisdiction.	**Responsive:** Developer and local officials negotiate for specific improvements. Developer usually has option to contract for the improvements directly or fund the improvement through a State or local contract.
4. **Maintain roads**	**Responsive:** The locality has full control for road construction and maintenance. Impact fees usually support new facilities or major upgrade of existing facilities (beyond routine maintenance).	**Responsive:** Developer and local officials usually negotiate that the locality assumes full maintenance responsibility 1 year after construction is completed.

WHO PAYS

Although a developer pays impact fees to a locality, an important issue is who really bears this cost. Does the developer pass the cost onto the consumer, i.e. the "newcomer" who occupies or shops at the development? Does the developer lower his offer for vacant land in anticipation of the additional development costs associated with impact fees, in which case the seller of the property actually bears the fee. Or, does the developer pay the impact fee in full from his own profits?

Some developers refer to impact fees as legal extortion. The courts believe a developer pays an impact fee voluntarily:

> The dedication of land or the payment of fees as a condition precedent to development is voluntary in nature. Even though the developer cannot legally develop without satisfying the condition precedent, he voluntarily decides whether to develop or not develop. Development is a privilege not a right.(5)

The courts are also wary about "newcomers" paying the entire cost of expanding public facilities in developing areas. Some judges have specified rigorous criteria that should be considered in determining the allocation of the cost of facilities funded through impact fees (6). These include:

(1) the cost of existing facilities;

(2) the manner of financing the existing capital facilities such as user charges, special assessments, bonded indebtedness, general taxes, or federal grants;

(3) the relative extent to which the newly developed properties in the municipality have already contributed to the cost of existing capital facilities by such means as user charges, special assessments, or payment from the proceeds of general taxes;

(4) the relative extent to which the newly developed properties and other properties in the municipality will contribute to the cost of existing capital facilities in the future;

(5) the extent to which the newly developed properties are entitled to a credit because the municipality is requiring their developers and owners (by contractual agreement or otherwise) to provide common facilities (inside or outside the proposed development) that have been provided by the municipality and financed through general taxation or other means (apart from user charges) in other parts of the municipality;

(6) extraordinary costs, if any, in servicing the newly developed properties; and

(7) the time-price differential inherent in fair comparisons of amounts of costs paid at different times.

Although the fee does not necessarily have to achieve a precise mathematical equity, the courts note that the locality must disclose the basis for calculating an impact fee to anyone who challenges its reasonableness.

The preferred approach is for the impact fee to be absorbed in the cost of land. To achieve this objective, Wietz (7) has suggested several guidelines for a locality planning to adopt impact fees including:

1. Give Adequate Notice

   Provide 4 or 5 years notice that impact fees are on the horizon. This is more fair for citizens, land investors, and developers. It will avoid a situation where a developer buys land without expecting to pay for off-site improvements, then is hit with an impact fee imposed after the purchase.

2. Tailor Developer Contributions to Specific Sites

   Fees should be based on the expected impact of developments on surronding facilities. The end result should be that land near facilities with excess capacity should cost more than land near facilities over capacity. Other things being equal, the difference in the land price would be equivalent to the impact fees.

3. Do Not Constrict the Supply of Land

   A sufficient supply of land is needed in order for the impact fees to be absorbed in the cost of land. The supply of land should not be constricted artificially through restrictive land use requirements. Preferably, land should be assessed at its full value so (1) vacant land will fully reflect the effects of impact fees, and (2) a decision to sell is made on the basis of whether the anticipated appreciation will offset the carrying costs.

4. Design Consistent Land-use Requirements

   Land-use requirements should be predictable and pragmatic. There should be flexibility to trade-off higher density for more developer contributions, but local officials should manage this option cautiously. If the developers believe approval of such a trade-off is automatic, they will bid-up land in anticipation of building at a higher density. Local officials should also be wary that the increase in a developer's contribution approximates the increase in value associated with approval of a higher density.

5. Set Realistic Fees

The fees should reflect the proportionate cost of improvements associated with a development and the value of the increased accessibility. If the fees are too low, the developer will receive some windfall. If they are too high, the costs will be passed-on to the consumer. If they are not substantiated, the courts will overturn the impact fee.

Who pays? The answer depends on the timing of instituting the impact fees, the structure of the fees, and the supply of land. Theoretically, impact fees can be capitalized in the value of land. In practice, the cost is more likely borne by the consumer. A developer may haggle with a land investor about the price of land, perhaps discussing the financial implications of impact fees on its development. The price of land and development expenses (including impact fees) are separate line items in a developer's mind, especially once an option or offer is accepted for the land. The final development program--the type, scale, and/or mix of development--is decided later during review and approval by local officials. The development program is the key factor in determining the amount of impact fees whether the fee is calculated or negotiated (for specific improvements). The impact fees associated with the development program become a fixed cost in the developer's base expenses for estimating his return. In turn, it is passed-through to the "newcomer" who occupies or shops at the development.

DETERMINING TRAFFIC IMPACTS

Determining the traffic impacts of proposed development is an important issue for several reasons. It allows local officials to identify potential deficiencies on the highway network which could occur from traffic generated by a proposed development. In turn, this povides the basis for devising improvements and negotiating a funding agreement with the prospective developer. This process can constitute a systematic process for calculating an impact fee which is essential for an impact fee to withstand legal challenges. Broward County, Florida developed one of the more widely recognized processes for determining the traffic impacts of proposed development.(8) Its computerized model, Traffic Review and Impact Planning System (TRIPS) is used to estimate the traffic impacts of proposed development and determines the development's "fair share" of the cost of planned improvements.

The traffic impacts associated with new development can be determined using available transportation planning and engineering procedures. In simple terms, it is a matter of comparing future traffic with and without the proposed development. In reality, it involves a considerable degree of judgment and a good technical understanding of the subtle effects of different assumptions when applying the methodology. Below is a step-by-step description of a suggested process for determining the traffic impacts of new development and some of the critical issues in applying the methodology:

Step 1: Forecasting Background Traffic

Background traffic is a combination of existing traffic and traffic that will be generated by other development already approved within the general vicinity of a proposed development.

The key issue is whether the background traffic includes any traffic that would be generated by the proposed development.

Step 2: Identify Planned Highway Improvements and Potential Deficiencies.

The background traffic is assigned to the highway network. The network should include proposed highway improvements which are expected to be constructed whether or nor the particular development under review is built. Highway deficiencies are identified with the background traffic. Ideally, no deficiencies occur.

The key issue is making a realistic determination about the proposed highway improvements.

Step 3: Estimate the Traffic Generated by the Proposed Development

Trip generation rates and information on the size of the proposed development are used to estimate the amount of traffic associated with the development. There are several important issues:

What trip generation rates are used? Often a locality will use rates compiled by the Institute of Transportation Engineers (9), or agree with the developer on rates that more accurately reflect local conditions.

What mix of vehicles, vehicle occupancy rates, and peak hour factors are used? Assumptions about these factors drive the all-important number of vehicles trips generated by the proposed development. These assumptions are especially important when deciding the effectiveness of special transit services or employer sponsored ridesharing programs associated with the proposed development.

Step 4: Estimate the Amount of Pass-by Traffic that will be Attracted to the Development

Pass-by traffic is background traffic that will be attracted to the development. Assumptions about pass-by traffic are important when estimating the traffic impacts of retail development. An estimate is needed for the number of drivers who will stop and shop as part of their normal trip by the site. For a mixed-used development, it is also important to separate the number of trips that will be generated onsite between activities--such as the number of employees making mid-day shopping or lunch trips on-site.

Although pass-by traffic may be separated out as part of Step 1, it is important to recognize the distinctions and assumptions about these trips when determining the overall traffic impacts of a proposed development.

Step 5: Assign Traffic from the Development to the Highway Network and Identify Deficiencies

The traffic from the development is assigned to the network with the background traffic. Traffic volumes are examined and potential operating deficiencies are identified.

Determining the traffic impacts associated with a proposed development is rather straightforward, but it can be a tedious, complicated exercise. Availability of data is a problem, especially getting reliable data on the results of transportation management programs (Step 3) and pass-by traffic (Step 4). Local planners and the developer's representatives should agree upon the critical assumptions for the analysis so the results will provide a constructive basis for determining the impact fees, especially when they plan to negotiate improvements to serve the traffic associated with a development.

ATTRACTING DEVELOPMENT

A key factor affecting the feasibility of impact fees is the presence of a strong local economy. The supply and demand for developable land must be sufficient to absorb the added expense of impact fees. An area with a soft local economy trying to attract development is an entirely different situation. Publicly funded improvements are often necessary to attract development to the area.

Impact fees evolved as an element of a broader growth management strategy for localities experiencing strong development pressure, e.g. places in such states as California, Florida, and Washington. The objective was to encourage development to occur in areas within a locality where the public facilities have adequate capacity to serve the development. Impact fees are used as a charge for development in areas where there is insufficient capacity.

A complicating factor is the border effects between localities. The traffic impacts of development sometimes occur in an adjacent jurisdiction. There is no formal mechanism for imposing impact fees across jurisdictions. Ideally neighboring localities need to coordinate development approvals near their boundaries and negotiate joint funding agreements with developers to share in the cost of improvements in the area. A more unfortunate situation is the case of two jurisdictions with and without impact fees. The jurisdictions without the fees will have an advantage in attracting development, while the other jurisdiction experiences the traffic impacts with little prospect for negotiating a joint agreement.

PLANNING CONSIDERATIONS

The planning process can identify improvements that will be needed in developing areas, and impact fees can be used to fund the improvements as development occurs. Broward and Palm Beach Counties, Florida use this approach. Each county is divided into districts and officials identify road improvements needed to serve new development within each district. Impact fees are credited to separate accounts for each district. If the county does not use the fees to construct the improvements within several years, it must refund the money to the property owner.

San Diego, California uses a similar approach to fund a broad array of public facilities. The developing portion of San Diego is divided into fourteen communities. A comprehensive plan is prepared for each community and identifies the public facilities that will be needed as the area develops--including roads, parks, libraries, schools, fire stations, and other capital facilities. The cost of these facilities is estimated, and a fee is computed for the costs associated with each undeveloped parcel. In most areas, an agreement is negotiated with each developer based on the calculated development impact fee. Financing plans have been adopted for 3 communities (and another is pending), which reflect the capital improvements identified in each community's comprehensive plan. Each financing plan also includes rates for calculating a facilities benefit assessment for the development of each lot. Once a financing plan is adopted, the fee is calculated during development approval, and individual developer agreements are no longer necessary.

When funding agreements for the improvements are negotiated in a piecemeal manner, planning serves an important role in providing data for traffic impact studies and examining the broader effects of privately funded improvements in scattered locations. A regional planning agency and the localities within a metropolitan area can work together in sharing information under this approach. A locality is provided on-line access to regional traffic forecasts for use in estimating background traffic near a proposed development as part of a traffic impact analysis for the development. Information on privately funded improvements is funneled into the planning process. As part of subsequent plan updates, the improvements will be reflected in the performance of the highway system when determining the need for areawide improvements.

CONCLUSION: FUTURE CONSIDERATIONS

California, Colorado, Florida, Oregon, Texas, and Washington use impact fees. More states are considering their use each day--e.g. Maine, Maryland, New Hampshire, New Jersey, New Mexico, and North Carolina. They are accepted by the courts and are viewed by some developers as a normal part of business. They are in vogue with the current emphasis on user fees and increased private-public cooperation for funding capital facilities. They are a useful means of funding improvements in suburban and fringe areas where development pressures are particularly strong and land is readily available. In such localities, they can represent a significant portion of the local revenue used for highway improvements.

As localities continue to grapple with the problems of traffic congestion and limited public resources, local officials will view impact fees as another source of funds for needed improvements. Once viewed as an element of a more comprehensive growth management strategy, impact fees are now more commonly viewed for their revenue potential.

Impact fees are not a panacea. The application of impact fees requires deliberate thought by local officials about local factors affecting their feasibility, their administrative complexity, and their equity.

A strong local real estate market is crucial for impact fees to be feasible. A concerted effort is needed to implement them. State and/or local enabling legislation is usually required. Once adopted, impact fees are time consuming to administer--it is especially time consuming for the local planning staff, local officials, and developers to negotiate and approve funding agreements on a case-by-case basis. If a calculated fee is used, local staff must identify improvements that will serve a developing area, estimate their cost, derive a formula for distributing the costs among prospective development, collect the fees as development occurs, and account for the fees used to fund improvements in specific areas. Finally, serious equity issues are raised by placing a hidden fee on newcomers for public facilities.

Local officials should address all these issues when considering whether to institute impact fees. Planners have a responsibility to raise these issues in the decision-making process. Impact fees are appropriate and desirable as part of a broader growth management strategy for a community. They are less appropriate and desirable when viewed strictly as an alternative source of revenue. A dedicated local add-on fuel tax, for instance, is administratively simpler, more flexible, and more equitable in distributing the cost of highway improvements among the general local population who use all public roads. It is neither feasible nor appropriate from a public policy viewpoint to expect impact fees to provide the primary source of funds for highway improvements. State and local governments should rely on a mix of revenue sources--both traditional user fees and more contemporary sources--to support future transportation improvements.

REFERENCES

1. Brous v. Smith, 106 NE2d 503 (1952).

2. Land/Vest Properties, Inc. v. Town of Plainfield, 379 A2d 200 (1977).

3. Home Builders and Contractors Association of Palm Beach County, Inc. v. The Board of County Commissioners of Palm Beach County, 446 So2d 140 (1983); Timothy Ross Lafferty v. Payson City, 642 P2d 376 (1982); and Trent Meredith, Inc. v. City of Oxnard, 170 CalRptr 685 (1981).

4. Laurence J. Meisner, Kimley-Horn Associates, Inc. Financing Urban Transportaiton Improvements, "Report 2: Use of Private Funds for Highway Improvements." Federal Highway Administration, January 1984.

5. Trent Meredith, Inc. v. City of Oxnard, 170 CalRptr 685 (1981)k.

6. Branberry Development Corp. v. South Jordan City, 631 P2d 899 (1981).

7. Stevenson Weitz. "Impact Fees: There Is No Free Lunch," Planning, Vol. 50, No. 7 pp. 12 - 14. American Planning Association, July 1984.

8. Institute of Transportation Engineers. Trip Generation - An Informational Report, Third Edition, 1982.

9. Ruth Knack, James Frank, and Harry Stewart. "How Road Impact Fees are Working in Broward County," Planning, Vol. 50, No. 6, pp. 24 - 27. American Planning Association, June 1984.