

mined from rapidly available data.

(c) Manuals should be developed and circulated that clearly document the measurement process in order to ensure consistency in application.

(d) Performance measurements should reflect changes in travel conditions, especially worsening conditions, and indicate the source of the problem.

(e) Easily understood performance measures should be used, e.g., average operating speed, volume, delay, or number of accidents.

(f) Service criteria should be stratified by city size.

5. There are defects in the traffic planning process.

(a) The level of effort is not linked to the rate of growth.

(b) Project priorities are not related to energy concerns.

(c) Transportation professionals have not acted as advocates.

(d) The effects of traffic improvements on land use are relatively greater in small urban areas than in large areas, and this is not generally recognized.

Although the specificity of the recommendations dealing with issue 5 was relatively low, the workshop participants were very concerned about this area. They noted

that several improvements should be made: The awareness of local elected officials must be increased with respect to land-use versus transportation decisions, the roles of officials, and decision resources; educational programs should be developed to inform decision makers of the transportation planning process; and traffic engineering staffs must closely link traffic operations and land-use planning.

The workshop was structured by the resource papers. The main response to the plenary session papers was a consensus that credibility (issue 2) is the most urgent concern of local traffic engineers. Second, the workshop participants expressed concern over the ability, or inability, of local traffic engineers to assimilate and filter the multitude of federal regulations that affect the practice of traffic planning and operations engineering. Such problems as misinterpretation of regulations promote an operating philosophy whereby local-level professionals will err on the side of redundancy, overdesign, and an excessive number of public hearings. This has a negative effect on the cost of traffic planning and operations, the practitioner's credibility with local officials and the public, and the effectiveness of the planning and operating processes.

A Traffic Engineer's Perspective on Federal Transportation Funding Programs for Urban Areas

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The perspective of the local traffic engineer is presented in terms of an assessment of federal urban transportation funding programs. This provides a viewpoint on how some cities have responded or are reacting to federal programs. Programs in Gainesville, Florida, are used as illustrations.

TRANSPORTATION PLANNING

What do these acronyms mean?

Acronym	Definition
RPC	Regional Planning Council
UATS	Urban Area Transportation Study
MPO	Metropolitan Planning Organization
TIP	Transportation Improvement Plan
TSM	Transportation System Management
TOPICS	Traffic Operations to Increase Capacity and Safety

These are very important acronyms; in reality, the programs they represent are the essence of the transportation planning process.

The regional planning council (RPC) is responsible for coordinating the total transportation planning effort in local communities. These agencies are most important. However, most medium-sized and small cities have discontinued or phased out their local transportation responsibilities and transferred them to the regional planners, and strong local input no longer exists.

An urban area transportation study (UATS) is required for a city to qualify for federal transportation funding; without such a study, the other terms have very little meaning.

The metropolitan planning organization (MPO) enables local officials to become more responsive and involved. In reality, local officials are often not knowledgeable of the transportation planning process and do not have time to devote to technical matters. Rather, they are interested in their constituents, and the transportation planning process is not responsive to this need.

The transportation improvement plan (TIP) is a short-range plan that lists almost all of the funds available for road needs in the local community. However, in most states (e.g., Florida), TIP funding and priorities are controlled entirely by the state department of transportation. It is often impossible for local officials to affect the priority order; the local priority is not necessarily important to the state highway network.

In a recent news report on a meeting between state and Federal Highway Administration (FHWA) officials, Secretary of Transportation Brock Adams is quoted as stating "changes are being made to cut the red tape for State-Federal Urban Transportation programs." But regrettably, just cutting the red tape between state and federal transportation programs will not significantly help the cities and local governments to cope with their transportation problems. From the viewpoint of local government, the various FHWA funding programs address themselves to the majority of current urban trans-

portation problems. However, it is very difficult or impossible to obtain these funds or to ensure that they are utilized to their greatest potential. This unfortunate situation has occurred because

1. Federal acts mandate that all FHWA programs be administrated through state highway agencies or departments of transportation (DOTs).
2. FHWA state representatives are not involved in local programs and do not assist local officials in obtaining federal funds.
3. Federal funds are not categorized for specific programs.

Generally state highway agencies or DOTs

1. Are road builders (excellent ones),
2. Are rurally oriented and do not really understand local problems or how to solve them,
3. View local officials as interfering with their programs and their charged objective of building new roads,
4. Do not inform local officials of programs available to their areas,
5. Do not fully abide with federal guidelines on local participation, and
6. Do not adjust state programs to new federal programs to take advantage of the available funds.

As a result, badly needed, high-benefit, relatively low-cost transportation projects in local communities go unfunded. Consider, for example, the traffic operations to increase capacity and safety (TOPICS) program that FHWA at one time listed as a first priority under the urban system program. At its height in 1973/74, approximately \$1 000 000 was spent on TOPICS type projects in the Gainesville, Florida, local area. In 1975 and 1976, the expenditures for TOPICS improvements were approximately \$100 000. Why?

TOPICS funding changed from specific categorized funding to a program that must compete for funding with all other urban system programs (again, to be administered by the state DOTs). The results speak for themselves—new highways are built and high-benefit, low-cost TOPICS projects go unfunded.

The safer off-road systems program is another example. There have been no projects in Gainesville under this program and very few in other cities in Florida. Why?

There are two reasons: First, the state DOT was not really interested in the program and was late in informing local governments of the program. Second, most of the local streets in Gainesville are on the federal-aid urban system, under the assumption that they will receive federal monies from the urban system funds, and thus do not qualify for the safety funds.

The same situation holds true for the pavement markings demonstration program.

Consider, now, another approach. The bikeways demonstration project is an FHWA program. When local officials in Gainesville found information about it in an FHWA newsletter, they applied for a grant and were awarded \$115 000. But the DOT local office was not even aware of this program until the local officials made contact in accordance with the federal mandate to "contact your local highway officials."

Economic Development Administration programs are another example where Gainesville applied for funding through its own initiative. As a result, most of the off-system-roads type projects and several major TOPICS

projects are now under construction. This was done without red tape or any strings attached. Why can't the federal urban transportation program use similar procedures? Federal officials should involve local governments in the transportation planning process to a greater extent—these people have the expertise and get the job done. But the following quotations from responses to a questionnaire sent to members of the Urban Traffic Engineers Council in Florida illustrate their general view of problems with federal urban transportation programs:

Everything goes through state DOT. They add requirements and delays which discourage the cities from getting involved in some programs.

Information is disseminated through the DOT. If they do not like a program they merely do not pass the information along.

There is no uniformity in application of programs. Things which 'can't be done' in one district are done in another district.

The city people rarely get to meet with FHWA people to get first hand clarification of procedures. We are subject to the interpretation made by the state DOT.

TRAFFIC OPERATIONS

Traffic operations are the working part of the results of the transportation planning process.

In 1970, Gainesville, which has a population of 68 000 and an urban-area population of 100 000, employed its first traffic engineer. At the time, traffic engineering was a division of the Public Works Department and had three employees, a sign painter and two laborers, and an annual operating budget of \$47 000. The directive to the new traffic engineer was "correct our existing and growing traffic problems!"

By 1977, the population of Gainesville had grown to 72 000 and that of the urban area to approximately 150 000. The Traffic Engineering Department had grown to 20 employees and had five divisions (administration, planning and design, traffic signals, traffic signs, and parking meters) and an operating budget of more than \$300 000. In addition, during this seven-year period, the Traffic Engineering Department had been directly responsible for obtaining more than \$5 000 000 for traffic operating improvements from state and federal programs. The funds for these capital improvements have exceeded the total cost to the city for funding the Traffic Engineering Department since its formation in 1970.

In 1978, the Public Works and the Traffic Engineering Departments were combined into a Department of Transportation that is responsible for all transportation engineering activities for the city. The new department has 123 employees and a 1978/79 operating budget of approximately \$1 700 000.

The discussion of Burns' paper focused on the complexity of regulations and the number of state and federal categorical programs that must be considered in the budget and priority programming processes. It was noted that documentation and justification of projects must always be aimed at two, and sometimes three, audiences:

1. State and federal agency staffs,
2. Local elected officials, and
3. The community.

The resulting problem is that a traffic engineer does not always know who the client is—is it the funding and regulating authorities or is it the local community and system users? The planning process does not always mesh well with the funding process. For example, it was observed that absolutely no federal-aid urban funds have ever been spent on a non-state road in the urban areas of that state.