

# Traffic Operations and Planning

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## Issues

The scope and objectives of this workshop were defined by the participants as

1. Issues and problems related to traffic planning and operations in small and medium-sized communities and
2. Recommendations related to improving the practice of traffic planning and the management of traffic operations

Early in the workshop deliberations, the participants decided that the state of the art of traffic planning and operations techniques is adequate and that it would be more appropriate to focus their attention on the relationships of traffic managers to the community and to local policy-makers and on the remainder of the transportation planning process in small and medium-sized areas.

In choosing this focus, the workshop participants did not mean to imply that the field of traffic engineering techniques does not merit attention, research, or improvement. Rather, they were expressing their belief that the discussion of issues and the role of the traffic engineering professional is more in keeping with the conference keynote addresses.

The assumption that traffic engineering techniques are at an adequate level of sophistication is reflected in the preface of the workshops: The traffic planning system is working well in small and medium-sized areas. But from that positive statement, certain issues, or problem areas, were defined.

1. The traffic operations and planning process must be responsive to local needs.  
The workshop participants developed three responses to this issue:
  - (a) Traffic operational improvements should be recognized as major elements of the transportation system management (TSM) element and the transportation improvement program (TIP) of smaller urban areas.
  - (b) In cities having populations of fewer than 50 000, a listing of an annual program of traffic operations improvements in the same context as the formal TSM process, but without federal guidelines, is appropriate. A listing of all traffic engineering or operations improvements is an appropriate part of all the TIPs in small and medium-sized areas.

- (c) A variety of statewide approaches—financial support of in-house staff, circuit-riding traffic engineers, regional staff, state staff, consultants, university professionals, and automobile associations—have proved effective in providing traffic engineering assistance to small areas. Further institutional experimentation and dissemination of the results should be encouraged. A corollary to this is that no single approach works everywhere.

2. Traffic professionals have a credibility gap with local elected officials. Although communication problems and the transient nature of elected officials' tenure are major factors in this issue, the way to improvement lies in improved training of traffic professionals. Three specific recommendations were made:

- (a) Additional training, through workshops and seminars offered at geographically dispersed sites, is necessary to better understand the effects of traffic operations improvements.

- (b) The Institute of Traffic Engineers should institute a certification program linked to membership levels.

- (c) Because financial problems will magnify the communication issue in the near future, improved techniques should be developed for such areas as priority programming of improvements. The use of understandable visual and numerical techniques should be encouraged.

3. There is insufficient money available at the local level for traffic planning and for traffic operation improvements.

This problem is certainly not unique to the traffic engineering discipline, but when funding is not continuous, unique problems can arise. The workshop participants believe that a more stable source of funds is available.

Small urban areas do not seem to be making full use of available federal or state funds. The complexity and cost of obtaining federal funds should be reduced by the state, which generally has greater expertise in obtaining funding.

4. System performance measures are necessary. This issue is related to all other issues, and the workshop participants suggested a commensurate number of responses.

- (a) Performance measures should be easily understood by the professional and lay communities.

- (b) Performance measures should be easily deter-

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-