



## Infrastructure Planning and Growth Management:

# Learning from Experience

**F**or rapidly growing cities, this is the best of times and the worst of times.

Cities are benefiting from the arrival of new businesses and residents in many ways. Growth provides new economic opportunities for current businesses. The city benefits from an increasing diversity of ideas and cultures. Sheer numbers bring the city to the attention of new retailers and, perhaps, sports franchises. Civic and cultural institutions benefit from a growing business sector willing to support social causes and help underwrite museums and performing arts centers. And new development brings in new revenues.

We all know that such growth has not come without a cost, however. As the rate of growth exceeds government's ability to pay for infrastructure, roads become congested and schools become overcrowded. The quality of life that attracted so many residents is threatened. Wildlife habitat and other valued natural features are destroyed to accommodate new subdivisions. In many parts of the country, water supplies are inadequate or are being depleted at a fast rate. Lakes and rivers are harmed by construction and increased stormwater runoff. Air quality is affected by the increase in traffic congestion and vehicle miles traveled. And last but not least, the physical character of the city changes, becoming more homogenous, with the emergence of seemingly inevitable strip developments and the loss of local businesses.

"Infrastructure" is an awkward, technical word for something very fundamental to cities. Infrastructure is the skeleton that supports the muscles of the city. It is clean water to drink, parks to play in, streets to walk on and schools to learn in. Without adequate infrastructure, a city soon will become unlivable. By using the single term "infrastructure" for all these facilities, we recognize the interrelatedness of such facilities and the synergy they have with one another. Streets lead to neighborhoods and schools. Stormwater ponds can serve as recreational areas.

When we view each of these services or facilities as separate entities, we lose sight of the whole. Functional, cost-effective infrastructure is critical to your residents' quality of life, the image of your city, the cost of doing business both for government and the private sector, and the ability of your city to keep and attract business. And that is where planning comes in.

Here are some broader community objectives to keep in mind when evaluating infrastructure choices:

**Creating Community Character:** When the subject of community image or community design comes up, often it is in the context of development reviews of private-sector projects. However, the design of schools, libraries, roads, parks and stormwater facilities make a strong statement

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about a city and are critical to residents' quality of life. Durable, quality materials should be used and the project design should reflect the context of community. Locally appropriate materials should be used as well as native vegetation.

**Meeting Multiple Objectives:** The nature of the review process can lead to a piecemeal approach to infrastructure planning, which can have the effect of discouraging creative site design. Part of the problem is that different infrastructure components are designed by different entities. For example, cities have state, county and local roads.

However, even within cities, different agencies may take different approaches to infrastructure design. Traffic engineers design roads, stormwater engineers design holding ponds, and the parks department is in charge of recreational facilities. Within a city, each of these agencies should be looking at infrastructure facilities in a coordinated way. Each should understand the vision of the city and the role its department plays in building that city. Each major public-works project should involve the input of multiple agencies.

For example, when new roads are being designed, road engineers often lay out rectangular stormwater facilities that minimize the need for right of way. However, park designers may see opportunities for neighborhood parks. Environmental staff may see opportunities for creating small ecosystems, possibly connected by a trail system. Collaboration among departments can create projects that are greater than the sum of their parts. This process can be codified through the establishment of design standards for public facilities.

**Sustainability:** The term "sustainable design" has become widely used. The concept, however, is not new. Sustainable design is based on the premise that development should have a minimal negative impact on the environment. This is achieved through the use of environmentally sound materials and practices. One example is the trend in stormwater planning toward "low-impact design."

There is no silver bullet for meeting the infrastructure needs of a city. However, consistent and coherent decision making will result in progress. In closing, here are some strategies:

- ▶ Use planning to create the vision for your community. The vision will be the touchstone for the incremental everyday decisions that result in real change. Don't be afraid to think outside the box in creating your vision. After all, it was conventional thinking that created many of the problems facing your city today.

- ▶ Once the plan is in place, act consistently. Use the plan to justify the hard decisions.

- ▶ Bring your staff together. Planners, engineers, biologists and ecologists all need to be working on building the infrastructure of the city. Each of their disciplines offers something critical to the process.

- ▶ Bring partners into the visioning process. The county, school board, other cities and regional agencies are not always good at working together. However, the infrastructure demands are too great for any city to manage alone.

- ▶ Build support through communication, communication, communication. The message of where the city is going and why needs to be continually reinforced to a changing and growing population and to newly elected officials.

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