Planimetric data for outdoor event planning

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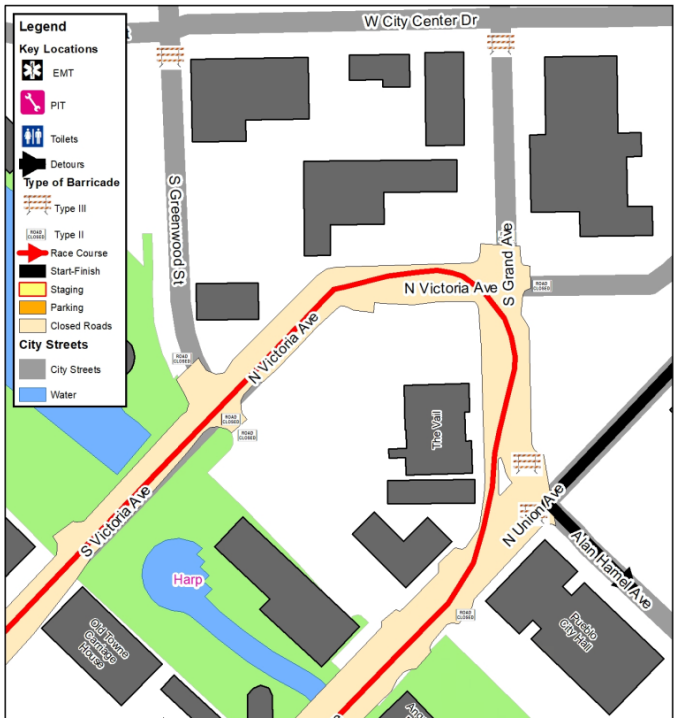
Outdoor sporting and entertainment events are a staple of summertime at county fairs, farmers markets and urban festivals. Foot races, bike races, parades and music festivals all make use of public space to bring people together for social events. Public outdoor events are part of our culture. But what makes an outdoor event successful? They certainly have their roots of success tied to the culture and history of an area. But another key element plays an important role in the safe and successful execution of public events: site planning.

Challenges to hosting regular outdoor events can be addressed in the physical environment by building permanent facilities such as parks, fairgrounds, stadiums and band shells. When outdoor events are planned in areas not normally designed for them, many complex problems must be addressed. In today's geospatial-enabled world, planimetric data can provide part of the solution.

When city and regional planners think about planimetric data, they imagine mapping things like utility corridors, roadways, curb lines or sidewalk locations. They might also map the locations of parks, open space or storm sewer covers. Local governments use this information for a variety of purposes from urban planning to utility work planning. So how can this fundamental type of geographic information systems data be useful for outdoor event planning? What are the needs and benefits of planimetric data for event planning?

To answer the questions, let's explore the needs of event planners once local permits and schedules are set. Event



planners generally have three areas of concern when executing large outdoor events;

1. event infrastructure placement (temporary stages, toilets, first aid, etc.)
2. crowd and resource management
3. emergency management

All three concerns must come into play in the three-dimensional space in which the event will take place. For example, how much equipment and staging space is available for the event? What is the best placement for food vendors? Are there areas that are off-limits to the public? What are the major pedestrian thoroughfares? What roads must be blocked off? Where is the nearest parking?

Not unlike larger-scale mapping applications, outdoor event planners must consider a variety of information to make relevant site layout decisions. Placement of special-event barricades, tents, emergency equipment, sound stages and other temporary structures requires planning for ease of access, emergency evacuations and crowd control, and other considerations. In the past, a paper plan might have been created using an outline of the event area. The layout of tents and other structures would be approximated with symbols or hand-drawn objects. That site plan would then be copied to share with others.

Public domain planimetric data such as that maintained by the Denver Regional Council of Governments has facilitated event planning in the GIS realm. The data can help answer a variety of questions like: How wide is a street at a major intersection? How many hectares is a grassy area identified for a concert? How far must concertgoers walk from the nearest parking lot? For crowd control and safety concerns, planimetric data can help planners identify key locations for police presence and medical personnel. Locations for portable toilets, food tents, beer garden permits, racecourse barricades, soundstages, supply trucks, utility and power line routing can all be planned more efficiently in a GIS environment. Elements can be arranged in digital space to allow for a review of equipment spacing, support access and crowd movement.

Additionally, the ability to publish the map data online allows multiple parties to review plans for adherence to local codes and resource allocation. For example, a local police department can review barricade, spectator and festival locations to determine resource and officer placement on the ground. Audio-visual equipment can be located and cabling distances measured, while mixing boards, generators and other equipment are located away from crowds in a semi-secure environment.

First responders can plan for temporary first-aid service locations and ambulance and firetruck ingress and egress routes. Police and public security personnel can plan for security checkpoints, pedestrian flow and egress.

In my own experience it is clear: Planimetric data provides an invaluable resource for efficient site planning of public outdoor events.

Planimetric data for downtown Pueblo, Colorado. Source: Microsoft, Jim Castagneri

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