

# CHAPTER THREE OVERVIEW



Figure 3-1  
Event Pedestrian Management

## PURPOSE

This chapter presents a high-level summary of managing travel for planned special events for all users of this technical reference. It aims to identify the key aspects of each step necessary to manage travel for a specific planned special event and all special events in a region.

This chapter provides a *background* on the purpose of managing travel for planned special events. It highlights all of the steps necessary to manage travel for a particular planned special event and all planned special events in a region. Recommended policies, guidelines, procedures, strategies, and resource applications that support and facili-

tate each step are indicated and organized through the following five phases: *program planning*, *event operations planning*, *implementation activities*, *day-of-event activities*, and *post-event activities*.

## INTRODUCTION

This chapter provides all users with a working knowledge of the techniques and strategies that practitioners may use to successfully: (1) plan for and operate a particular planned special event or (2) manage all planned special events in a region. In turn, individual stakeholders gain an understanding of the collective tasks facing multidisciplinary and inter-jurisdictional planned special event stakeholder groups charged with

developing and implementing solutions to acute and system-wide impacts on travel during a special event.

Subsequent chapters of this handbook provide expanded and in-depth coverage of all potential tasks and stakeholder activities conducted within individual planned special event management phases. Chapters 4 through 10, which represent the core chapters of this handbook, contain detailed information on advance planning, day-of-event operation, and post-event evaluation activities that stakeholders perform and/or consider in mitigating special event impacts on transportation system operations. Chapters 11 through 15 describe an advance planning and travel management process and considerations specific to a particular category of planned special event.

A background section describes how transportation operations vary during a planned special event and identifies advance planning activities employed to successfully manage travel for a special event. This section identifies specific stakeholders, coupled with their typical duties and responsibilities, that may actively participate under different phases of special event management. It also includes a discussion on the distinct, chronological phases of managing travel for planned special events, including the common products generated in each phase and associated benefits of carrying out each phase.

A section on categories of planned special events identifies special characteristics specific to each event category that impacts transportation system operations.

This chapter concludes by summarizing planning approaches, operational strategies, and technology applications for managing transportation system operations during

phases of managing travel for planned special events. These sections collectively present all the steps necessary to manage travel for a particular planned special event in addition to future events in a region.

## BACKGROUND

In the past, the media has reported horrendous traffic congestion that has occurred at several major planned special events. In one instance, golfers participating in a major professional golf tournament were caught in major traffic jams along with event patrons and other motorists. Facing a 2-stroke penalty or disqualification if they arrived at the first tee past their assigned tee time, several players pulled their cars to the side of the road, carried their golf bags, and walked to the course. These situations emphasize the need for this handbook, which presents policies, guidelines, procedures, strategies, and resource applications that assure the successful management of travel for planned special events.

### **What is Managing Travel for Planned Special Events?**

A planned special event creates an increase in travel demand and may require road closures to stage the event. Planned special events generate trips, thus impacting overall transportation system operations. This includes freeway operations, arterial and other street operations, transit operations, and pedestrian flow. Unlike roadway construction activities or traffic incidents that constrain travel within a single corridor, planned special events affect travel in all corridors serving the event venue.

Managing travel for planned special events involves developing a transportation management plan that contains operations and

service strategies specific to managing traffic, transit, and travel demand. As shown in Figure 3-2, a transportation management plan consists of three components:

- Traffic management plan
- Transit plan
- Travel demand management initiatives

Traffic operations agencies, transit agencies, law enforcement agencies, and event organizers represent key stakeholders in the transportation management plan development process because of the responsibility they bear in developing, approving, and implementing the plan. To ensure that the plan addresses the requirements of all those im-

pacted, the event planning team should be comprised of a wide range of stakeholders:

- Event operations stakeholders focus on mitigating the safety, mobility, and reliability impacts on transportation operations.
- Community interest stakeholders seek to minimize impacts on community quality of life and maximize potential social and economic benefits.
- Event support stakeholders serve to support and execute the transportation management plan by following proposed initiatives or providing necessary resources for plan deployment.

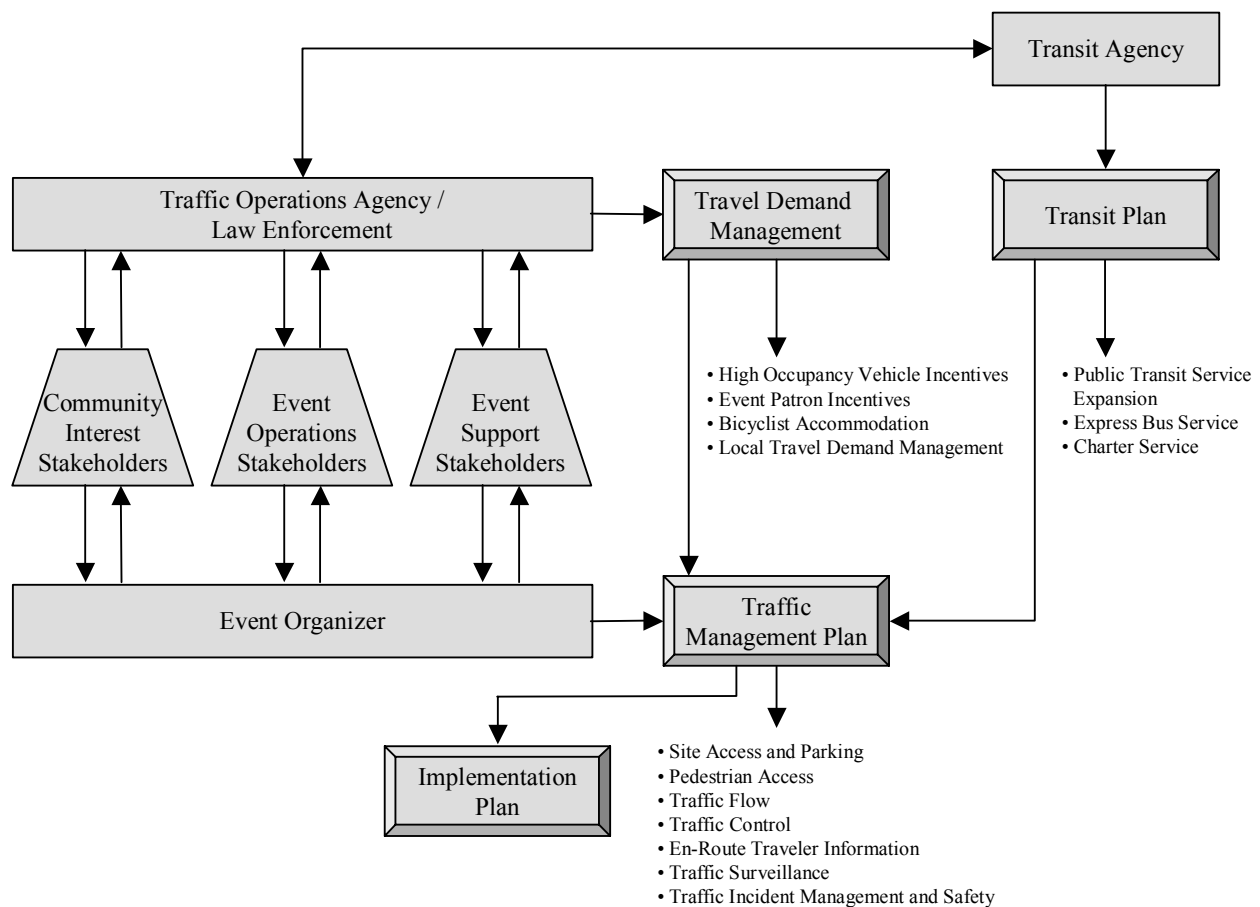


Figure 3-2  
Transportation Management Plan Components and Event Planning Team Involvement

## Stakeholder Roles and Coordination

The advance planning and management of travel for planned special events requires the consistent involvement and coordination of stakeholders throughout all phases of the event. Table 3-1 indicates the responsibilities of the three stakeholder groups.

- An oversight team involves mid-to-upper level representatives of transportation agencies and law enforcement. Additional stakeholders include elected officials, regional organizations, and other government agencies.
- The event planning team consists of mid-level representatives of transportation agencies and law enforcement as well as the event organizer, media, public safety agencies, private industry, and the public.
- A traffic management team includes operations managers and field personnel

representing transportation agencies, law enforcement, the event organizer, media, and private industry.

Major annual event or venue task forces exist in some jurisdictions that serve the role of both an oversight team and event planning team. The task force may meet year-round to mitigate lessons learned from past events, then expand to include additional event operations stakeholders as the next event nears.

Figure 3-3 presents common stakeholders, representing various disciplines and jurisdictions, that play an active role in managing travel for planned special events on a local and/or regional level.

The following subsections describe the potential roles and responsibilities of each identified stakeholder in addition to his or her coordination with other planned special events stakeholders.

Table 3-1  
Responsibilities of Stakeholder Groups

STAKEHOLDER GROUP	FUNCTION
Oversight Team	<ul style="list-style-type: none"> <li>• Manage all planned special events in a region.</li> <li>• Establish policies, regulations, procedures, and task forces for future application to a specific planned special event.</li> <li>• Identify infrastructure improvements and evaluate potential new technology applications.</li> <li>• Interact with an event planning team, consulting on feasibility study results and evaluating conceptual transportation management plan components.</li> </ul>
Event Planning Team	<ul style="list-style-type: none"> <li>• Conduct event operations planning activities for a specific planned special event.</li> <li>• Perform traffic management plan implementation tasks.</li> </ul>
Traffic Management Team	<ul style="list-style-type: none"> <li>• Manage travel on the day-of-event.</li> <li>• Interact with the event planning team during implementation activities.</li> <li>• Debrief the oversight team and event planning team during post-event evaluation activities.</li> </ul>

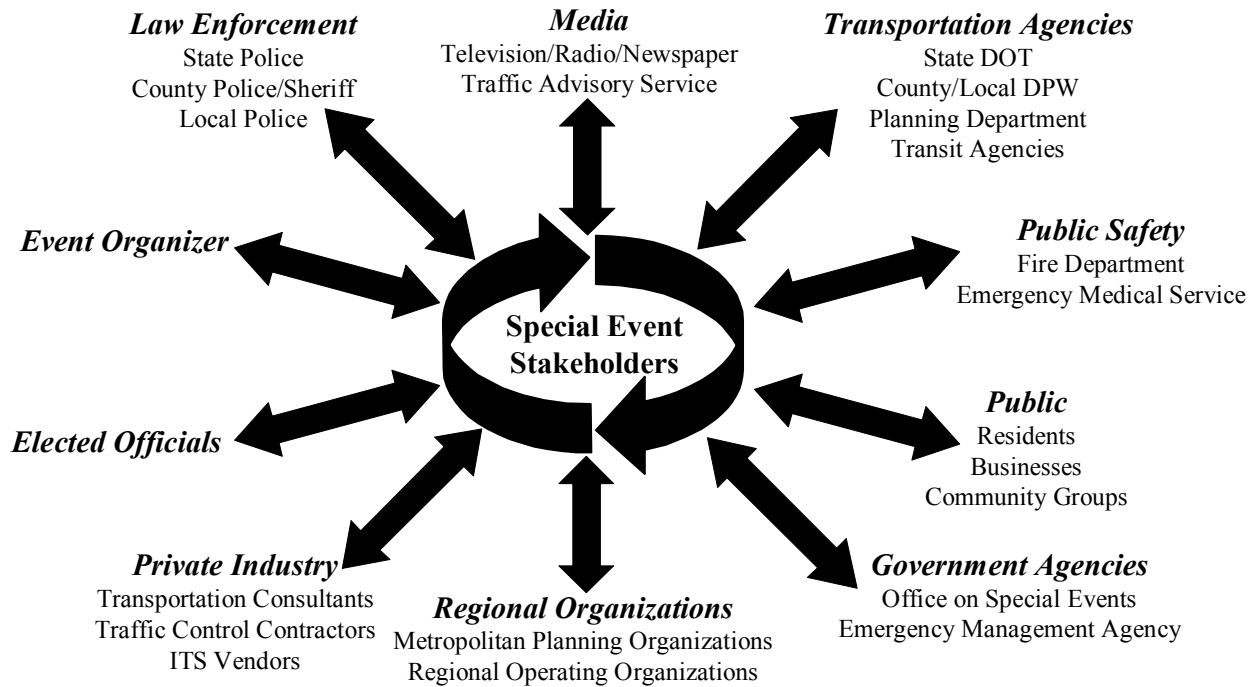


Figure 3-3  
Planned Special Event Stakeholders

Transportation Agencies

Transportation agencies own and operate the transportation system serving a planned special event. These agencies staff all three of the above mentioned stakeholder groups, although actual personnel may vary from group to group. Because of their involvement in every phase of managing travel for planned special events, transportation agencies have the unique opportunity to form partnerships with other stakeholders at different working levels. Such partnerships may lead to: (1) creation of interagency agreements at the program planning or oversight level, (2) agreement to share closed-circuit television (CCTV) video at the event

operations planning or mid-level, and (3) improvement of communications and coordination at the field level.

A state department of transportation (DOT) typically leads advance planning and day-of-event traffic management for freeway and/or arterial corridors serving an event venue. This includes operating a traffic management system to monitor, advise, and control traffic flow on these high-capacity routes. A state DOT may also facilitate the acquisition and deployment of portable, advanced technology equipment providing increased traffic management and monitoring capabilities.

A local or county department of public works (DPW) may include traffic engineers participating in program planning, event operations planning, and day-of-event traffic management. At the program planning level, the agency may initiate infrastructure improvement projects or establish traffic control guidelines for event permits. Event operations planning activities may include developing or reviewing proposed traffic management plans and developing traffic signal system timing plans to accommodate anticipated fluctuations in traffic demand. The agency has authority to enact temporary traffic and parking restrictions on streets adjacent to an event venue. Traffic engineers often serve a supervisory role on a traffic management team. In general, agency officials must monitor and maintain traffic flow traversing their jurisdiction. A local/county DPW assumes an expanded role in traffic operations planning and management for local level planned special events. The agency may also utilize roadway maintenance personnel to deploy required temporary traffic control devices, repair potholes along a parade route, and perform post-event street sweeping.

A planning department may administer a permit program for special events while a local jurisdiction planning commission may rule on the transportation component of an event permit application.

The previous section described the role of transit agencies in managing travel for planned special events, which may include service expansions and achieving cooperative agreements with private bus companies to obtain additional equipment and drivers.

### Law Enforcement

Law enforcement agencies facilitate the safe and efficient flow of traffic during a planned

special event through traffic control and enforcement. Agencies contribute to all phases of planned special events, particularly event-specific advance planning and traffic management. Local and county law enforcement having a traffic operations bureau may take responsibility for developing and executing a local street traffic management plan. Other potential duties of law enforcement include approving local street closures, approving an event traffic flow plan, approving temporary traffic control deployment, escorting dignitaries to/from the event venue, and enforcing the requirements of a traffic operations agency.

### Event Organizers

Event organizers initiate the event operations planning phase by notifying stakeholders, either through a written request to public agencies or the submission of an event permit application, and assembling an event planning team. The event organizer continually works to maintain interagency coordination in order to meet milestones in the advance planning process and ultimately gain stakeholder approval of the proposed transportation management plan. The event organizer may hire a private traffic engineering consultant to perform an event feasibility study and prepare a traffic management plan. The event organizer may also fund the deployment of equipment and personnel resources, including reimbursement of public agency personnel costs, required to mitigate traffic safety, mobility, and reliability impacts during the day-of-event. An event venue operator essentially represents an event organizer. These venue operators may work together with transportation agencies, law enforcement, and elected officials during the program planning phase to develop strategies, including permanent installation of equipment for improved traffic monitor-

ing and control, to better accommodate traffic and transit access to the venue.

### Elected Officials

Elected officials serve the overall community interest and often play a significant role on an oversight team. Local politicians can establish laws and regulations toward effecting improvements in planning and managing future planned special events. They may create a special task force to assist event organizers and local agencies to coordinate event planning activities. Local district politicians may advise an event planning team on alternatives to minimize quality of life impacts on represented residents and businesses.

### Public Safety

Public safety agencies, including a fire department and emergency medical service, represent event operations stakeholders that advise the event planning team on the provision of emergency access routes to and from the event venue. Public safety agencies, in addition to law enforcement and an emergency management agency, also work as part of the event planning team to ensure adequate pedestrian access routes and evacuation destination areas exist to meet emergency management plan requirements.

### Media

The media functions to disseminate event pre-trip travel information, in addition to real-time traffic and transit information during the day-of-event. A media representative may participate in a meeting of the event planning team to obtain advance information on proposed temporary traffic control, transit, and travel demand management initiatives. However, the media gener-

ally works independently of the traffic management team on the day-of-event.

### Private Industry

Private industry satisfies a wide range of public agency needs from the event operations planning phase through the day-of-event activities phase. Traffic engineering consultants may assume the role of a public agency traffic engineer and, in turn, develop a transportation management plan and manage either an event planning team, traffic management team, or both. Private traffic control contractors, such as barricade companies, fulfill the duties of a transportation agency maintenance department. Intelligent Transportation Systems equipment vendors contract with transportation agencies to:

- Supply and install on streets serving a fixed event venue, *permanent* equipment such as CCTV cameras, lane control signals, dynamic trailblazers, and parking management systems
- Deploy *portable* traffic management systems, including portable CCTV, portable changeable message signs (CMSs), portable highway advisory radio (HAR), portable vehicle detectors, and portable traffic signals.

In some instances, transportation agencies may arrange for an equipment demonstration, at no cost to the agency, to evaluate the performance of a particular technology application during a planned special event.

### Regional Organizations

Regional organizations interact with both the oversight team and an event planning team regarding major planned special events affecting a regional area. A Metropolitan Planning Organization (MPO) oversees the planning and programming of transportation

management strategies. For example, the agency may communicate and seek feedback on temporary travel demand management strategies with commuter groups and trucking companies. A MPO may loan staff to other public agencies in need of personnel to conduct planning and operations activities. The agency may also establish and/or coordinate temporary task forces charged with a particular function, such as event communications. A Regional Operating Organization (ROO) consists of traffic operations agencies, transit agencies, law enforcement, elected officials, and other operations agencies focused on the operation and performance of a regional transportation system. A ROO works to ensure inter-agency coordination of resources and information across jurisdictional boundaries. It builds partnerships and trust among agencies to improve their productivity and performance, thus creating a more responsive approach to mitigating temporary capacity deficiencies. ROO member agencies may, for example, share traffic signal timing plans, coordinate planned strategies and resources for managing travel, conduct public outreach, and participate in interagency training.

### Government Agencies

Government agencies, such as a government office on special events or emergency management agencies, are non-transportation agencies that generally serve in an oversight capacity. A government office on special events may work in tandem with the event organizer to initiate the event operations planning phase and coordinate event planning team stakeholders. Other emergency management and security agencies may meet with the event planning team to obtain an advance debrief on transportation management plan specifics.

### Public

The public represents individual residents, businesses, and associated community groups. Residents and businesses potentially impacted by intense traffic and parking demand generated by a planned special event may interact with event planning team stakeholders during a public meeting. This permits concerned citizens the opportunity to review and comment on proposed traffic and parking restrictions needed to accommodate event traffic.

## **Phases of Managing Travel for Planned Special Events**

The practice of managing travel for planned special events incorporates advance planning, management, and evaluation activities encompassing five distinct, chronological phases. Figure 3-4 summarizes the five phases and common products generated by coordinated stakeholder groups under each phase. Collectively, these phases facilitate the successful management of transportation system operations during a planned special event.

Integration of the identified phases, from the post-event activities phase to the program planning phase, creates a seamless process allowing for continuous improvement of transportation system performance from one event to the next, especially in regard to recurring events or events occurring at permanent venues. This iterative process, where stakeholders apply successes and lessons learned from a particular special event to future events, supports activities pertaining to managing travel for all planned special events in a region. Recognition and integration of special event management phases achieves coordination across stakeholder groups, namely the oversight team, event



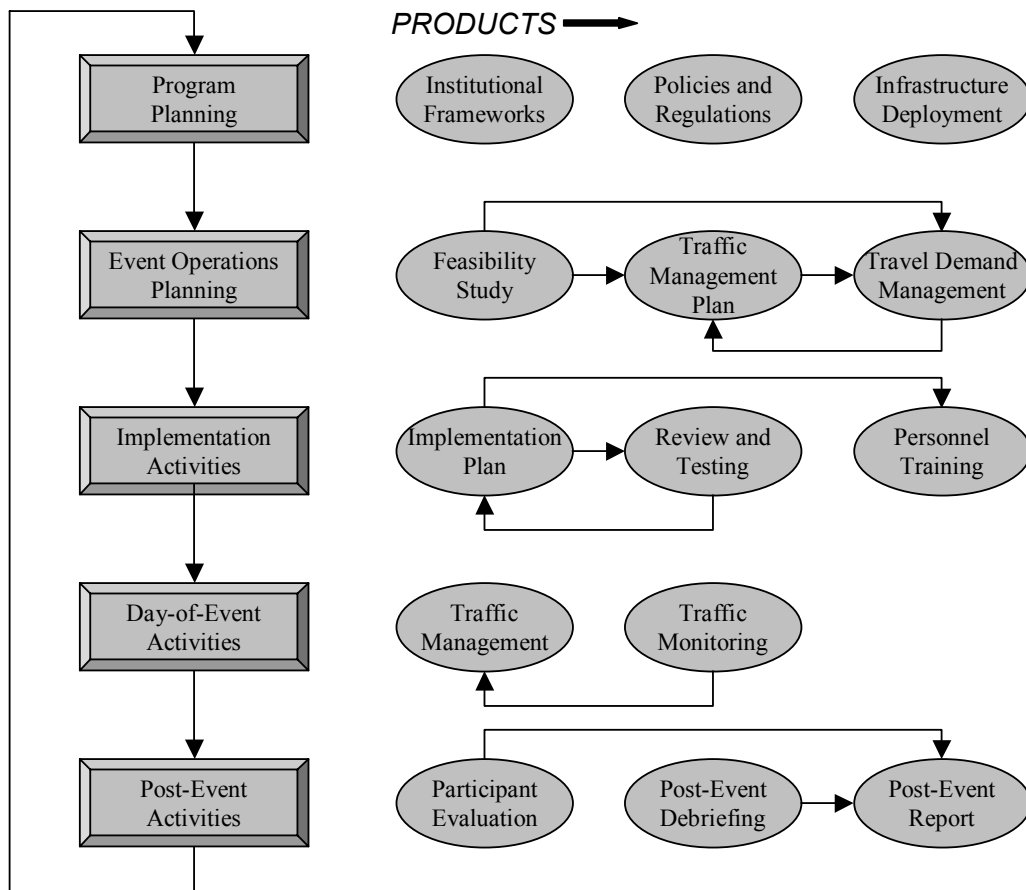


Figure 3-4  
Planned Special Event Management Phases and Associated Products

planning team, and traffic management team.

## PLANNED SPECIAL EVENT CATEGORIES



The first step toward achieving an accurate prediction of event-generated travel demand and potential transportation system capacity constraints involves gaining an understanding of the event characteristics and how these characteristics affect transportation operations. In turn, practitioners can classify the planned special event in order to draw comparisons between the subject event and similar historical events to shape travel forecasts and gauge transportation impacts.

Table 3-2 lists typical operational characteristics of a planned special event. Each characteristic represents a variable that greatly influences the scope of event operation and its potential impact on the transportation system.

These event operation characteristics create five categories of planned special events, indicated in Table 3-3.

### Discrete/Recurring Event at a Permanent Venue

A discrete/recurring event at a permanent venue occurs on a regular basis at a site zoned and designed specifically to accom-

moderate planned special events. This category includes sporting and concert events at stadiums, arenas, and amphitheaters in urban and metropolitan areas. Table 3-4 lists key characteristics of a discrete/recurring event at a permanent venue.

Table 3-2  
Event Operation Characteristics

CHARACTERISTIC
• Event time of occurrence
• Event time and duration
• Event location
• Area type
• Event market area
• Expected attendance
• Audience accommodation
• Event type

Table 3-3  
Categories of Planned Special Events

SPECIAL EVENT CATEGORIES
• Discrete/recurring event at a permanent venue
• Continuous event
• Street use event
• Regional/multi-venue event
• Rural event

Table 3-4  
Distinguishing Operating Characteristics of a Discrete/Recurring Event at a Permanent Venue

CHARACTERISTIC
• Specific starting and predictable ending times
• Known venue capacity
• Advance ticket sales
• Weekday event occurrences

## Continuous Event

A continuous event includes fairs, festivals, conventions, and air/automobile shows in urban and metropolitan areas. Aside from conventions and state/county fairs, many continuous events take place at a temporary venue, a park, or other large open space. These venues host planned special events on a less frequent basis than permanent multi-use venues, and planned special event per-

mitting typically governs whether a temporary venue can adequately handle the transportation impact of a particular continuous event. Table 3-5 lists key characteristics of a continuous event.

Table 3-5  
Distinguishing Operating Characteristics of a Continuous Event

CHARACTERISTIC
• Occurrence often over multiple days
• Arrival and departure of event patrons throughout the event day
• Typically little or no advance ticket sales
• Capacity of venue not always known
• Occurrence sometimes at temporary venues

## Street Use Event

A street use event occurs on a street requiring temporary closure. Events classified under this category include parades, street races, and motorcycle rallies occurring in rural, urban, and metropolitan areas. These events generally occur in a city or downtown central business district; however, race events or motorcycle rallies may necessitate temporary closure of arterial streets or limited-access highways. Planned special event permitting guidelines and restrictions typically (1) influence event operations characteristics (e.g., location, street use event route, time of occurrence, etc.) and (2) govern whether a traffic management plan can mitigate the transportation impact of a particular street use event. Table 3-6 lists key characteristics of a street use event.

Table 3-6  
Distinguishing Operating Characteristics of a Street Use Event

CHARACTERISTIC
• Occurrence on a roadway requiring temporary closure
• Specific starting and predictable ending times
• Capacity of spectator viewing area not known
• Spectators not charged or ticketed
• Dedicated parking facilities not available

## Regional/Multi-Venue Event

A regional/multi-venue event refers to multiple planned special events that occur within a region at or near the same time. Individual events may differ by classification category. Example regional/multi-venue events include: (1) occurrence of a single-theme event requiring multiple venues to stage the event, (2) occurrence of a downtown parade or festival in the vicinity of a downtown fixed venue also hosting a special event, or (3) occurrence of special events at two fixed venues in a region at or near the same time. Concurrent planned special events require consideration as a regional/multi-venue event if traffic generated by different, competing special events use the same traffic flow routes (e.g., freeway/arterial corridors, local streets) or parking areas over the same time frame. As a result, stakeholders involved in planning and managing individual special events must, as a group, forecast and mitigate the global impact of concurrent special events on transportation system operations. Table 3-7 lists key characteristics of a regional/multi-venue event.

Table 3-7  
Distinguishing Operating Characteristics  
of a Regional/Multi-Venue Event

CHARACTERISTIC
<ul style="list-style-type: none"> <li>• Occurrence of events at multiple venues and at or near the same time</li> <li>• Events having a time specific duration, a continuous duration, or both</li> <li>• Overall capacity generally not known if continuous events or street use events are involved</li> </ul>

## Rural Event

A rural event encompasses any discrete/recurring event or continuous event

that occurs in a rural area. Events classified under this category include fairs, festivals, and events at rural amphitheater and race-track venues. These events indicate that rural events collectively have the event operation characteristics of discrete/recurring events at a permanent venue and continuous events with one notable exception; rural events take place in rural areas. Table 3-8 lists key characteristics of a rural event.

Table 3-8  
Distinguishing Operating Characteristics  
of a Rural Event

CHARACTERISTIC
<ul style="list-style-type: none"> <li>• Rural or rural/tourist area</li> <li>• High attendance events attracting event patrons from a regional area</li> <li>• Limited roadway capacity serving an event venue</li> <li>• Area lacking regular transit service.</li> <li>• Events having either a time specific duration or continuous duration</li> </ul>

## PROGRAM PLANNING



Program planning for planned special events involves activities unrelated to a specific event. This level of advance planning involves the participation and coordination of stakeholders having an oversight role in addition to agencies directly responsible for event operations planning. Products of program planning include establishing new institutional frameworks, policies, and legislation to monitor, regulate, and evaluate future planned special events. Stakeholders utilize program planning initiatives to more efficiently and effectively complete event operations planning, implementation activities, day-of-event activities, and post-event activities for individual, future planned special

events. In turn, post-event activities (e.g., participant evaluation, stakeholder debriefing meeting, evaluation report) performed for specific special events provide valuable input for on-going program planning activities in a region or jurisdiction.

## **Regional Level**

Program planning for planned special events on a regional level concerns proactively improving travel management for all planned special events in a region. Program planning requires an institutional framework for generating and managing successful programs and initiatives. Some key considerations include:

- Role of oversight stakeholders
- Policy support
- Regional planned special events program

### Stakeholder Roles and Coordination

Program planning for regional planned special events necessitates the involvement and coordination of stakeholders representing multiple jurisdictions. At the program planning level, the stakeholders include:

- Those agencies directly involved in planning and day-of-event travel management for special events. These include law enforcement agencies, transportation departments, transit providers, and regional organizations.
- Others who typically are not involved in transportation management, such as the event organizers and elected officials serving an oversight role.
- Typically, mid-to-upper level agency administrators that collectively form the planned special events oversight team.

The following five-step process represents a way of doing business that facilitates re-

gional coordination when a planned special event occurs:

- Step One: Identify the Stakeholders.
- Step Two: Identify a Lead Agency.
- Step Three: Maintain Communication.
- Step Four: Form Subcommittees.
- Step Five: Continue Communication.

While planned special events may be temporary, and the planning for those events may bring together a group of stakeholders only for that event, ongoing programs and initiatives can be used to address general special event needs on a continual basis. An institutional framework can be created either before an event takes place or based on the planning for a specific special event. This framework can be used on a continuing basis to allow easier coordination among agencies for future events and eliminates the need to re-establish working relationships, which have already been created.

### Policy Support

In most instances, transportation and law enforcement agencies have no prohibitions from coordinating efforts with other agencies, especially for events expected to have an impact on that agency. However, there are instances where interagency agreements are helpful, or even necessary, for multi-agency cooperation.

While interagency agreements will vary based on state law and the culture of the agencies, there are some common issues they can address: (1) areas of responsibility and (2) funding issues.

Legislation provides the legal authority for a government agency to take certain actions. In many instances, activities involved in special events planning have already been addressed by legislation.

## Regional Planned Special Events Program

A regional planned special events program is an ongoing process designed to address a region’s needs for managing special events. It is not a program put in place to address a specific special event, although a specific event may trigger the formation of such a program. The scope of such a program should focus on planned special events of regional significance. If an event can be wholly managed within and by a single agency or jurisdiction (e.g., through a planned special event permit program), then there is no need for the regional plan to come into effect.

The program will put in place the framework for handling regional planned special events. This would include the template for groups created to deal with specific special events, identification of funding to support such planning, and the identification of infrastructure improvement needs in the region to better manage special events.

The stakeholders in a regional program such as this will vary from region to region. Table 3-9 lists organizations that should be considered part of the program. Leadership of the program will vary by region, but the agencies most likely to take the lead include state DOTs, state law enforcement agencies, and MPOs.

### **Local Level**

The development of a formal planned special event permit program marks a key program planning initiative to facilitate stakeholder coordination, compliance with community needs and requirements, and efficient event operations planning. Backed by guidelines and regulations specified in municipal ordinances, the program outlines a defined planning framework and schedule

for event organizers and participating review agencies to follow. It represents an *agreement* between participating public agencies (e.g., transportation, law enforcement, public safety, etc.) to ensure, through planning activities or review, that all planned special events meet a set of mutually agreed upon requirements for day-of-event travel management. A municipal permit represents approval, or agreement between a jurisdiction and event organizer, to operate a planned special event, and it includes provisions outside of travel management.

Table 3-9  
Regional Program Stakeholder  
Organizations

STAKEHOLDER ORGANIZATIONS
<ul style="list-style-type: none"> <li>• State Department of Transportation</li> <li>• Metropolitan Planning Organization</li> <li>• State police/patrol</li> <li>• Toll agencies</li> <li>• Mass transit agencies</li> <li>• Municipal governments and police departments</li> <li>• County governments and police departments</li> <li>• Owners of large venues (e.g., arenas, stadiums, universities)</li> </ul>

Some important considerations and applications of planned special event permitting include:

- Permitting proves particularly effective for less frequent continuous events, street use events, and rural events occurring at a temporary venue not having a known spectator capacity. These events place an emphasis on advance planning and public outreach to mitigate traffic operations deficiencies and community impacts.
- Jurisdictions may not require a permit for special events held at permanent venues, such as stadiums, arenas, and amphitheaters.
- Permitting allows jurisdictions the opportunity to engage the event organizer

at the beginning of the event operations planning phase.

- Public stakeholders can size-up the event operations characteristics of a proposed event in order to schedule adequate personnel and equipment resources to accommodate the event. Resources may include traffic control, security, and maintenance.
- From the event organizer's perspective, a special event permit application and associated regulations outlines a general approach toward successfully managing travel for the event, facilitates coordination with appropriate stakeholders, and gauges resource requirements on the day-of-event.

### Permit Process

Initiation of the permit process for a specific planned special event begins with the submission of a completed special event permit application by the event organizer. The permit application represents a formal proposal by the organizer to stage a planned special event. In some cases, particularly those where the event organizer requests assistance from the jurisdiction in locating a suitable venue location or street use event route, the event organizer and pertinent public stakeholders may interact prior to application submission to review the proposed event and permit process.

Figure 3-5 presents a flowchart summarizing key event organizer and public agency actions throughout the special event permit process, from submitting a permit application to conducting the proposed event.

The special event permit process serves to scope, schedule, and direct event operations planning activities for proposed events. This reduces unnecessary delay in facilitating stakeholder coordination, developing

planning deliverables (e.g., traffic management plan, etc.), reviewing mitigation strategies, and mobilizing personnel and equipment resources required to stage a particular planned special event. Practitioners may expand and contract the process in order to best fit: (1) the area type and involved stakeholders, (2) the special guidelines and regulations unique to a particular jurisdiction, (3) the operations characteristics of a particular event, and (4) the purpose of a particular event, such as community events versus commercial, for-profit events involving event organizers from the private sector.

### Application Components

The special event permit application serves to communicate event operations characteristics to a jurisdiction, thus permitting it to impose appropriate impact mitigation requirements and/or advise the event organizer to change event operation parameters. Key items include the event purpose that may signal the need to develop contingency plans in response to possible security threats or demonstrations. Information regarding event history and expected attendance assists in achieving a more predictable event travel forecast. The application should prompt the event organizer to indicate travel demand management initiatives, including use of carpools and other modes of travel.

Supplemental requirements to a special event permit application, required of the event organizer either at the time of initial application submission or after jurisdiction review of the application questionnaire, include:

- Event site plan
- Traffic flow plan
- Traffic control plan
- Parking plan
- Emergency evacuation plan

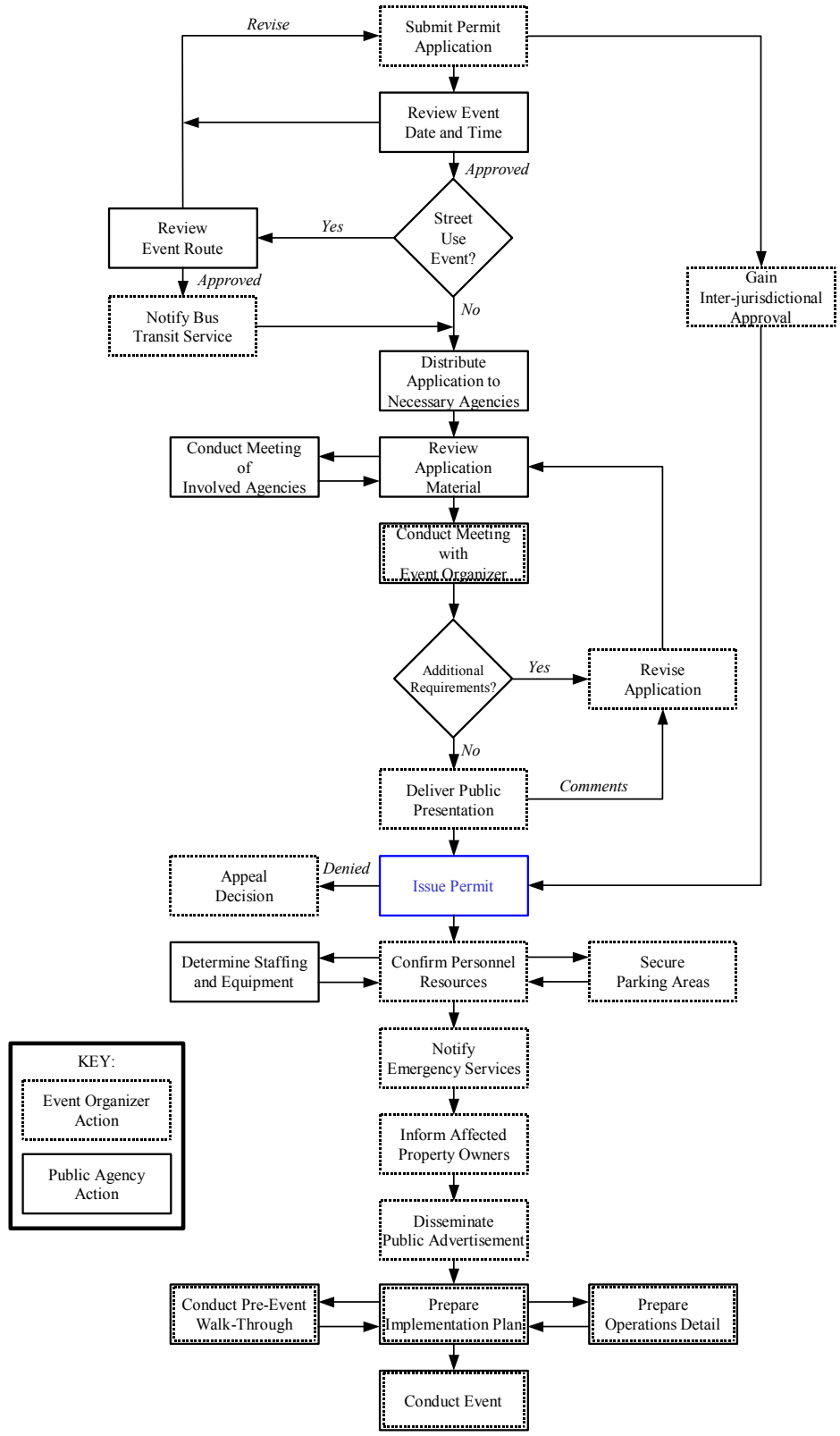


Figure 3-5  
Planned Special Event Permit Process

- Notice of event for affected property owners and residents
- Event advertising brochure
- Hold harmless agreement
- Certificate of insurance

### Permitting Requirements

Jurisdictions maintain the following general requirements for planned special events: (1) event restrictions, (2) impact mitigation and traffic control, (3) legal, and (4) funding. As indicated in Table 3-10, the municipal codes of jurisdictions across the Nation specify a wide range of requirements for managing travel for planned special events, all of which become incorporated in the special event permit process.

Table 3-10  
Municipal Code Provisions on Planned  
Special Events

PROVISION
<ul style="list-style-type: none"> <li>• Special event definition</li> <li>• Conditions for permit requirement</li> <li>• Permit restrictions</li> <li>• Content of permit application</li> <li>• Permit application submission and review deadline</li> <li>• Notification of city/town officials</li> <li>• Notification of abutting property owners and residents</li> <li>• Permit approval criteria</li> <li>• Event organizer duties</li> <li>• City/town authority to restrict parking and close local roads</li> <li>• Hold harmless clause</li> <li>• Insurance requirements</li> <li>• Recovery of expenses</li> <li>• Procedure for appealing a denied permit</li> </ul>

## EVENT OPERATIONS PLANNING



Event operations planning concerns the advance planning and stakeholder coordination activities conducted for a specific planned

special event. The two main steps of the operations planning process involves: (1) completing a feasibility study to forecast event-generated traffic and parking demand and to determine the associated impact on transportation operations during the event and (2) developing a traffic management plan to service event-generated automobile, transit, and pedestrian traffic and to mitigate predicted impacts to the transportation system serving the event venue and surrounding area. Travel demand management represents a key component of the overall advance planning process when forecasted traffic demand levels approach or exceed available roadway capacity.

Figure 3-6 presents 31 steps in the event operations planning process for all planned special events. The flowchart covers development and integration of the phase's three primary products: feasibility study, traffic management plan, and travel demand management initiatives. It represents a suggested order of event operations planning activities. However, as noted below, the event planning team can modify activities to create a dynamic and more effective planning process tailored to the scope of a specific planned special event:

- Based on lessons learned from past special events at a particular permanent venue, stakeholders may program new infrastructure or adopt new policies (e.g., parking restrictions) early in the event operations planning process.
- A jurisdiction planned special event permit process and requirements will scope, schedule, and direct event operations planning activities for continuous events and street use events.
- The event planning team should repeat process steps for individual venue events comprising a regional/multi-venue event.



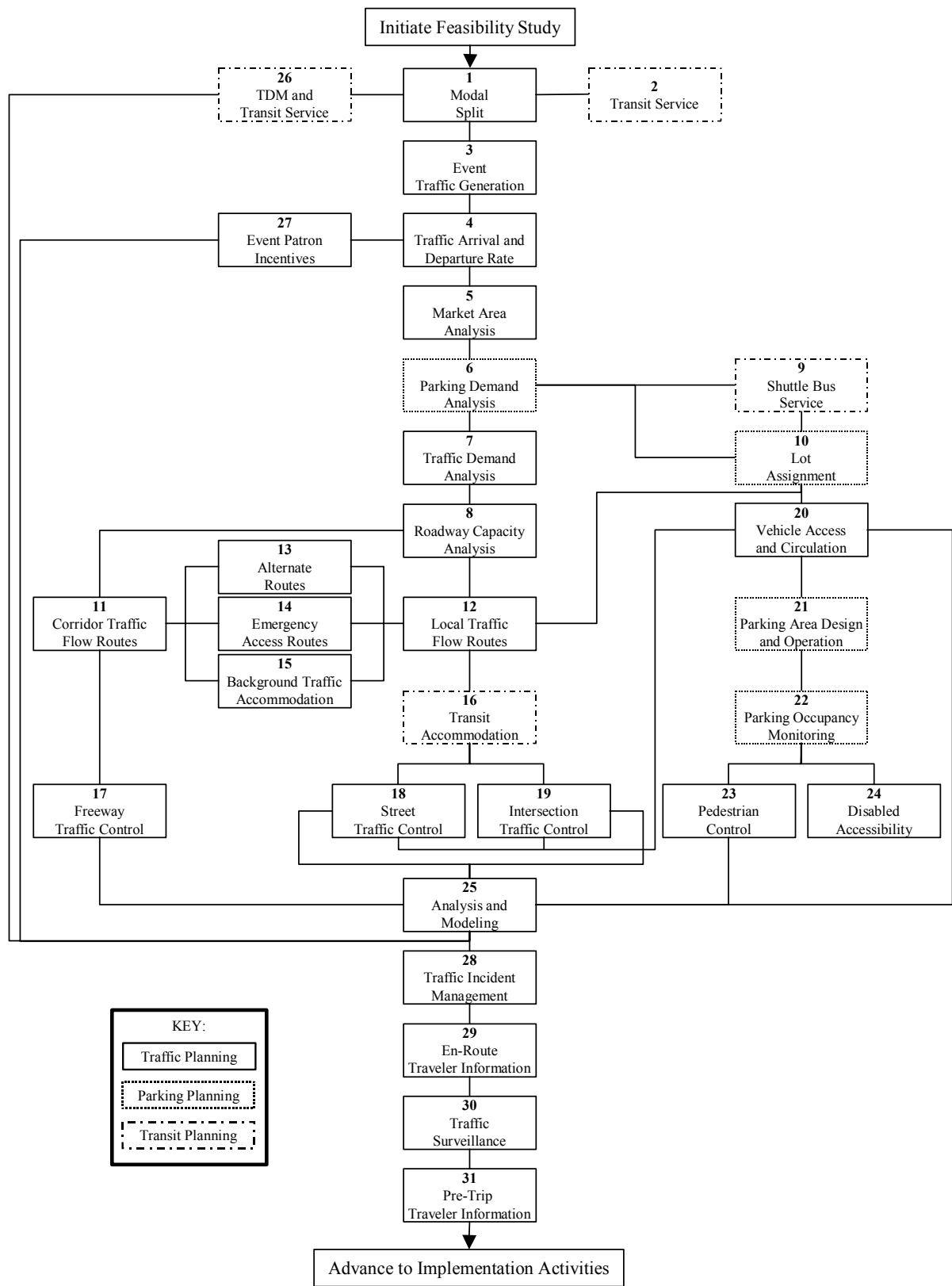


Figure 3-6  
Event Operations Planning Process Flowchart

- Links between process steps are two-way as stakeholders evaluate alternative strategies and/or integrate traffic management plan components.
- The event planning team can develop different traffic management plan components concurrently.

## Initial Planning Activities

This section examines key planning initiatives and special considerations in order to help guide the user through the first steps of the event operations planning phase. The event operations planning phase begins with stakeholders establishing a planning framework and schedule. The framework includes forming an event planning team, creating agreements, identifying performance goals and objectives, and deciding on mitigation assessment and approval protocol.

Special considerations evolve from reviewing the event operations characteristics of a particular special event (e.g., risk assessment) in addition to past successes and lessons learned. These considerations weigh heavy on traffic management plan requirements, and stakeholders must address issues affecting community residents and businesses through public outreach efforts early in the planning phase in order to ensure proper mitigation and non-conflict with traffic management plan specifications.

### Stakeholder Roles and Coordination

The event planning team handles tasks associated with *event-specific operations planning* and *traffic management plan implementation*. The event planning team consists of a diverse group of stakeholders with either event operations or community interest as their primary concern. An event planning team forms as a result of either: (1) co-

ordination among a traffic operations agency, law enforcement, and event organizer that represent the core event planning team stakeholders or (2) designation by a committee on special events within a regional transportation management organization, such as a traffic incident management program.

- The former typically describes event planning teams formed in response to local planned special events affecting few jurisdictions, such as events occurring in rural or urban areas.
- The latter may occur in metropolitan areas where planned special events happen frequently, thus warranting an *on-call* event planning team.

A *regional transportation committee on special events* features stakeholders that have achieved interagency coordination through past, cooperative travel management efforts.

- Stakeholder representatives have firsthand knowledge of the roles, resources, and capabilities of each committee participant.
- Stakeholders commonly include traffic operations agencies, law enforcement, transit agencies, event organizers or venue operators, and the media.
- Committees in metropolitan areas may create task forces for specific planned special event venues or recurring planned special events (e.g., annual fairs, fireworks displays, parades, etc.). The committee or task force generally meets and performs event operations planning tasks on an as-needed basis. The group may also convene regularly (e.g., weekly, monthly, or quarterly) to review program planning efforts for future planned special events.

## Risk Assessment

Based on the type and purpose of a planned special event, there exists potential scenarios where event patron or non-attendee behavior may cause overcrowded conditions in the vicinity of an event venue and/or create unplanned road closures. The event planning team must assess the nature of a proposed event and determine the need to incorporate special contingency plans in response to potentially dangerous situations that will interfere with the planned travel management on the day-of-event.

Table 3-11 lists four notable event-oriented

risk scenarios associated with some planned special events.

## Performance Goals and Objectives

The goals of managing travel for planned special events include *achieving predictability, ensuring safety, and maximizing efficiency*. Table 3-12 states performance objectives, for specific classes of transportation system users, applicable to satisfying the overall goal of operations efficiency and safety. In meeting these performance objectives, the event planning team must target the goal of achieving predictability during

Table 3-11  
Summary of Event-Oriented Risk Scenarios

EVENT-ORIENTED RISK	EXAMPLE SCENARIO
Demonstration or protest	<ul style="list-style-type: none"> <li>Any event that is political in nature or invokes social concern.</li> <li>Political conventions and parades</li> </ul>
Ticketless event patrons causing overcrowding	<ul style="list-style-type: none"> <li>Sold-out sports championship games</li> <li>Sold-out concerts involving select performers</li> </ul>
Fan celebration	<ul style="list-style-type: none"> <li>Response to city or school sports team winning a championship.</li> </ul>
Event patron violence	<ul style="list-style-type: none"> <li>Motorcycle rally violence between patrons and/or participants.</li> </ul>

Table 3-12  
Transportation System Operations Performance Objectives for Planned Special Events

USER CLASS	PERFORMANCE OBJECTIVE
Event patron	<ul style="list-style-type: none"> <li>Minimize travel delay to/from the event.</li> <li>Minimize conflicts between pedestrians and vehicles.</li> <li>Minimize travel safety hazards.</li> <li>Minimize impact of traffic incidents.</li> <li>Disseminate accurate, timely, and consistent traveler information.</li> <li>Increase automation of traffic control.</li> <li>Maximize site access service flow rates.</li> </ul>
Non-attendee road user	<ul style="list-style-type: none"> <li>Minimize travel delay on major thoroughfares, freeways and major arterials.</li> <li>Minimize impact on commuter and trucker travel time reliability.</li> <li>Maintain required parking and access for local residents and businesses.</li> <li>Maintain unimpeded access for emergency vehicles.</li> </ul>
Transit user	<ul style="list-style-type: none"> <li>Maintain scheduled travel times.</li> <li>Minimize transit bus dwell times.</li> <li>Maintain required transit station parking for non-attendee transit users.</li> </ul>

the event operations planning phase. Table 3-13 presents common, easy-to-measure measures of effectiveness (MOEs) for assessing the performance objectives that describe traffic operations. The identified MOEs represent day-of-event performance evaluation data, useful for: (1) making real-time adjustments to the traffic management plan on the day-of-event, (2) conducting a post-event evaluation of transportation system performance, and (3) referencing during advance planning for future event occurrences.

Table 3-13  
Measures of Effectiveness for Assessing  
Performance Objectives

LOCATION	MEASURE OF EFFECTIVENESS
Venue parking areas	<ul style="list-style-type: none"> <li>• Occupancy and turnover rate</li> <li>• Arrival and departure service rate</li> <li>• Time to clear parking lots</li> </ul>
Intersections	<ul style="list-style-type: none"> <li>• Vehicle delay</li> <li>• Queue length</li> </ul>
Freeways and streets	<ul style="list-style-type: none"> <li>• Travel time and delay</li> <li>• Traffic volume to capacity ratio</li> <li>• Traffic speed</li> <li>• Number and location of crashes and other incidents</li> <li>• Traffic incident clearance time</li> </ul>

### Planning Schedule and Deliverables

Figure 3-7 illustrates a high-level event operations planning schedule for an event planning stakeholder group. The figure lists advance planning activities and potential stakeholder meetings and public hearings in a timeline relative to the planning deliverables. The schedule indicates other stakeholder planning initiatives, such as the de-

velopment of a specialized transit plan to reduce event traffic demand.

The planning schedule provides a generic timeline, recognizing that actual event operations planning schedules vary considerably. For instance, some major, roving planned special events, such as the U.S. Golf Open, require an event operations planning phase spanning more than one year.

### Public Outreach

Planned special events that may impact adjacent neighborhoods and businesses usually require public involvement to address related concerns. The public represents individual residents, businesses, and associated community groups. Public outreach activities initiated early in the event operations planning phase can reveal important issues that local residents and businesses may have. Specific neighborhood impact issues include heavy traffic demand on local streets and event patron use of available local on-street parking. Soliciting these concerns through public involvement, and addressing the issues in the planning process, can improve relations and day-of-event operations.

The event planning team and public stakeholders should identify potential problems prior to the development of the traffic management plan. These problems can be identified by first understanding the event scope with consideration given to current neighborhood traffic and parking restrictions, traffic management plans deployed during past planned special events, and identified problems experienced during past events. With this information, the public stakeholders can make informed decisions and provide valuable input to the event planning team.

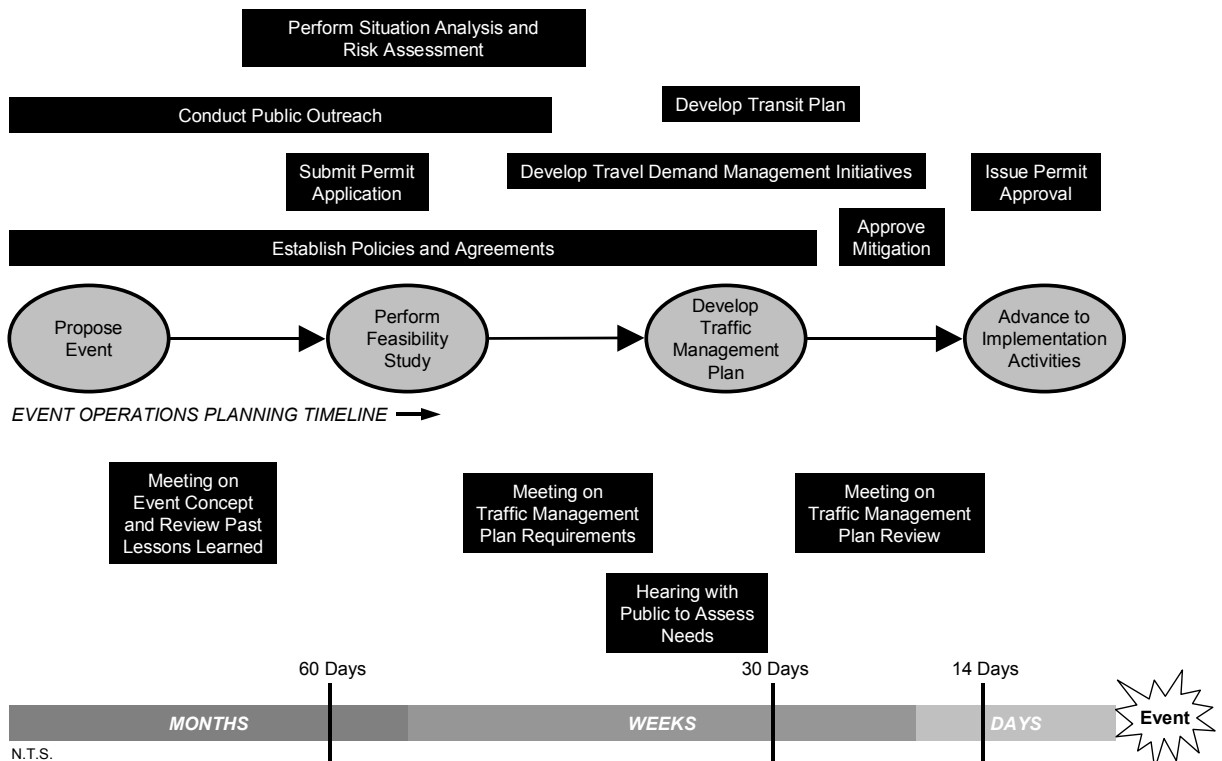


Figure 3-7  
Event Operations Planning Schedule

### Stakeholder Review of Planning Products

The event operations planning phase includes intermediate and final review periods for the event feasibility study and traffic management plan. Stakeholder review concentrates on the identification and proposed mitigation of event travel impacts. Effective and rapid stakeholder review of event operations planning products requires: (1) an annotated planning timeline, (2) a review process, and (3) performance standards. An annotated planning timeline proves effective for monitoring team progress. Adopting a formal review process reduces unnecessary delay in producing event operations planning deliverables required to stage a planned special event.

### Policies and Agreements

The establishment of special policies and agreements to support planning and day-of-event management of planned special events facilitates efficient stakeholder collaboration and defines important event support stakeholder services that may be incorporated into a traffic management plan for a particular planned special event. These initiatives improve interagency relationships, clarify decision-making responsibilities and expectations, and secure on-call services and agency actions. Stakeholders may develop policies and agreements specific to a particular planned special event or for all planned special events in a region. Because of the potential significant time to develop and approve a particular policy or agreement, stakeholders should establish these initiatives early in the event operations planning phase or during the program planning phase.

Table 3-14 summarizes four types of policies and agreements involving stakeholders responsible for event operations planning and/or day-of-event operations.

### Feasibility Study

The structure and approach of a planned special event feasibility study resembles a *Traffic Impact Study* required for planned developments, as illustrated in Figure 3-8. The figure shows the sequential steps in preparing a feasibility study for a planned special event.

Table 3-15 provides an overview of the first five feasibility study components. The accuracy of one analysis influences that of another. *Achieving predictability*, a goal of managing travel for planned special events, represents the focus of a feasibility study effort.

The feasibility study gauges the impact a proposed event has on traffic and parking operations in the vicinity of the venue. It determines if a particular planned special event will cause travel problems, where and when the problems will occur, and the magnitude of each identified problem using various MOEs. Initially, the study is con-

ducted *without* roadway capacity improvements or initiatives to reduce travel demand. Once the feasibility study identifies event travel problems, practitioners can take steps to mitigate transportation system deficiencies. These results define the scope of the traffic management plan required to successfully manage travel for a planned special event.

### Travel Forecast

Travel forecast analysis involves estimating: (1) modal split, (2) event traffic generation, and (3) traffic arrival rate. Event planning team stakeholders that typically collaborate on this analysis include a traffic operations agency, traffic engineering consultant, transit agency, and event organizer.

Under the scope of a feasibility study, modal split concerns identifying the existing modes of travel event patrons will use to access the event venue site. Common travel modes include personal automobile, public transit, and walking. Public transit refers to scheduled bus transit or commuter rail. Transit agencies may assist in determining a base transit split, without service incentives or promotion, for patrons traveling to/from the event.

Table 3-14  
Summary of Policies and Agreements Applicable to Managing Planned Special Events

ITEM	EXAMPLE APPLICATION
Interagency agreement	<ul style="list-style-type: none"> <li>Joint operations policy between stakeholders that establishes a shared role regarding event operations planning and day-of-event travel management.</li> <li>Memorandum of understanding defining stakeholder roles and responsibilities.</li> <li>Mutual-aid agreement facilitating resource sharing and/or reimbursement for services.</li> </ul>
Standard street use event routes	<ul style="list-style-type: none"> <li>Routes established under the program planning phase for recurring street use events such as parades and races.</li> </ul>
Toll facility congestion policy	<ul style="list-style-type: none"> <li>Suspension of tolls during periods of heavy congestion.</li> </ul>
Public-private towing agreement	<ul style="list-style-type: none"> <li>On-call towing and recovery services during a special event.</li> </ul>

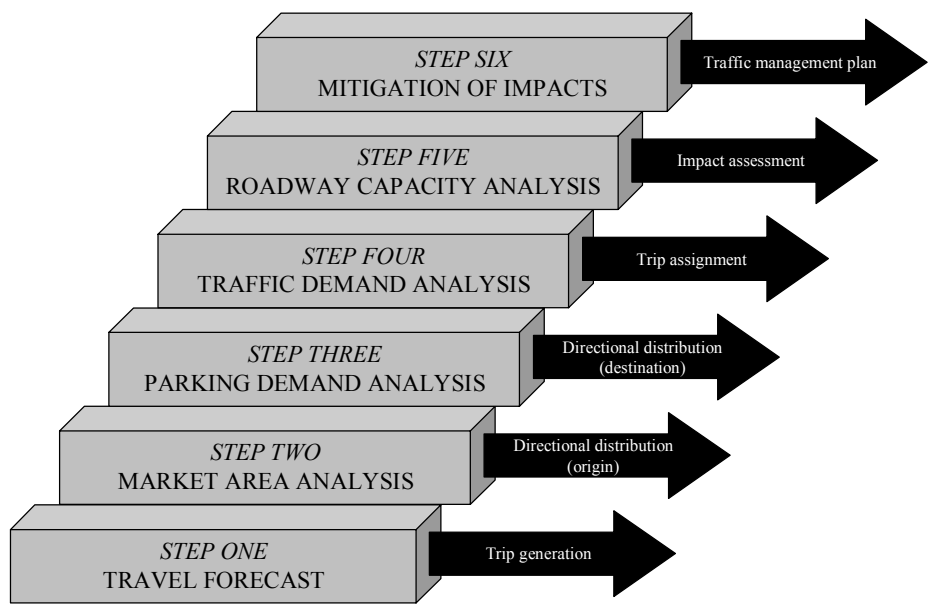


Figure 3-8  
Feasibility Study Analysis Steps

Table 3-15  
Feasibility Study Analysis Summary

COMPONENT	ANALYSIS	RESULT	APPLICATION
Travel forecast	• Modal split	• Number of trips by mode of travel	<ul style="list-style-type: none"> <li>• Input into parking demand analysis.</li> <li>• Input into traffic demand analysis.</li> </ul>
	• Event traffic generation	• Number of vehicle trips by personal automobile	
	• Traffic arrival rate	• Number of trips per unit of time	
Market area analysis	• Event trip origin	• Geographic location of event trip origins and percent split	• Input into traffic demand analysis.
Parking demand analysis	• Background parking occupancy	• Number of non-attendee vehicles per parking area and unit of time	• Input into event parking occupancy.
	• Event parking demand	• Number of event-generated vehicles per parking area and unit of time	• Input into traffic demand analysis.
Traffic demand analysis	• Background traffic flow	• Background traffic demand rate, adjusted for event-required road closures	• Input into roadway capacity analysis.
	• Event traffic assignment	• Event traffic demand rate per assigned route	
Roadway capacity analysis	• Section and point capacity	• Identification of capacity constraints and level of service	<ul style="list-style-type: none"> <li>• Input into traffic management plan.</li> <li>• Input into travel demand management assessment.</li> </ul>
	• Network operations	• Identification of bottleneck locations and saturation flow rates	

Unlike other traffic generators such as commercial developments, planned special event practitioners typically have advance knowledge of event attendance and, in turn, can develop traffic generation estimates via vehicle occupancy factors. Table 3-16 outlines a two-step process for forecasting event traffic generation. Input data includes a modal split estimate since the traffic generation forecast aims to estimate the number of event-generated trips by personal automobile. Vehicle occupancy factors can serve as the basis for estimating event-generated traffic.

In order to estimate peak traffic volumes generated by an event, practitioners must estimate the time and scope of peak traffic flow during event ingress and egress. Traffic arrival and departure rate indicates the peak period (e.g., hour or 15 minute) of event-generated traffic. The rate is used to determine the following key parameters for input into the traffic demand analysis: (1) peak period time and (2) percent of total event-generated traffic within the peak period. Event operation characteristics that influence traffic arrival and departure rates include:

- Event time and duration – e.g., specific start time, abrupt end time, continuous operation.
- Event time of occurrence – e.g., day/night, weekday/weekend.
- Audience accommodation – e.g., reserved seating, general admission.

- Event type – e.g., sports/concert, fair/festival, parade/race.

### Market Area Analysis

A market area analysis identifies the origin and destination of trips to and from a planned special event. The analysis focuses on developing a regional directional distribution of event patron trips to/from an event site via personal automobile. The site refers to the collective parking areas serving the venue. A regional directional distribution specifies: (1) the freeway and arterial corridors serving the venue site and (2) the percent split and volume of event-generated automobile trips traversing each corridor.

Table 3-17 summarizes three analysis methods used to define a planned special event market area.

### Parking Demand Analysis

A parking demand analysis functions to determine the amount of required parking for event patrons in the vicinity of the event venue. A parking occupancy study drives the overall analysis and determination of event parking areas. This study indicates the level of parking spaces occupied, relative to lot capacity, at intermittent time intervals. It also specifies an estimate of peak parking demand, a figure particularly useful for managing continuous events where parking space turnover occurs throughout the event day.

Table 3-16  
Traffic Generation Forecast Process

COMPONENT	DETAIL
Input data	<ul style="list-style-type: none"> <li>• Daily attendance</li> <li>• Percent automobile trips</li> <li>• Vehicle occupancy factor</li> </ul>
Method	<p><b>Step 1.</b> (Daily Attendance) x (Percent Automobile Trips) = Person Trips Via Automobile</p> <p><b>Step 2.</b> (Person Trips) / (Vehicle Occupancy Factor) = Vehicle Trips</p>
Result	<ul style="list-style-type: none"> <li>• Number of vehicle trips by personal automobile both to and from the event</li> </ul>



Table 3-17  
Market Area Analysis Methods

METHOD	DESCRIPTION
Travel time analysis	<ul style="list-style-type: none"> <li>Determine population distribution within travel time threshold of event venue.</li> </ul>
Distance analysis	<ul style="list-style-type: none"> <li>Determine population distribution within distance radius of event venue.</li> </ul>
Origin location analysis	<ul style="list-style-type: none"> <li>Determine weighted distribution of known origins by place or zip code.</li> </ul>

Figure 3-9 presents a parking demand analysis process used to determine the adequacy of event venue (on-site) parking and the identification of appropriate off-site parking areas. The flowchart denotes an analysis conducted for a one-time interval. Practitioners should perform an iterative parking demand analysis, over hourly time periods as necessary, if considering parking areas characterized by high background parking turnover.

### Traffic Demand Analysis

A traffic demand analysis determines: (1) a local area directional distribution and (2) the overall assignment of event-generated traffic. This analysis references results obtained through the travel forecast, market area analysis, and parking demand analysis.

The local area directional distribution indicates freeway ramps and intersections, including turning movements, traversed by event-generated traffic arriving to or departing from a planned special event. The regional directional distribution, as determined in the market area analysis, quantifies the percentage of event patron trips (e.g., origins) by regional freeway and arterial corridor, and the planned special event parking areas, as determined in the parking demand analysis, represent *sink nodes* or location of trip destination.

Traffic demand analysis includes developing composite background and event-generated traffic projections for all roadway system

facilities serving the event venue. Composite traffic volumes expressed as an hourly (or sub-hourly) rate meet roadway capacity analysis input requirements. These rates identify the peak hour capacity analysis periods during event patron arrival and/or departure. Practitioners must adjust background traffic volumes to account for displaced and diverted traffic due to road closures required to stage the planned special event.

As a preliminary step to assess the need to perform a detailed roadway capacity analysis, draw a circular screen line (e.g., 0.5 to 1 mile radius) around the event venue site. Note each roadway segment intercepted by the screen line, and estimate the segment's capacity in each direction of travel. Create a chart of hourly composite traffic volumes for each identified segment, and assess capacity deficiencies in both directions of travel.

### Roadway Capacity Analysis

A roadway capacity analysis uses traffic demand analysis results to measure the impact of a proposed planned special event on roadway system operations. At the feasibility study level, a roadway capacity analysis references existing roadway facility operations and capacity (e.g., no reverse flow operation or other capacity enhancements). The analysis assumes pedestrian access management strategies will minimize pedestrian/vehicular conflicts, and parking area

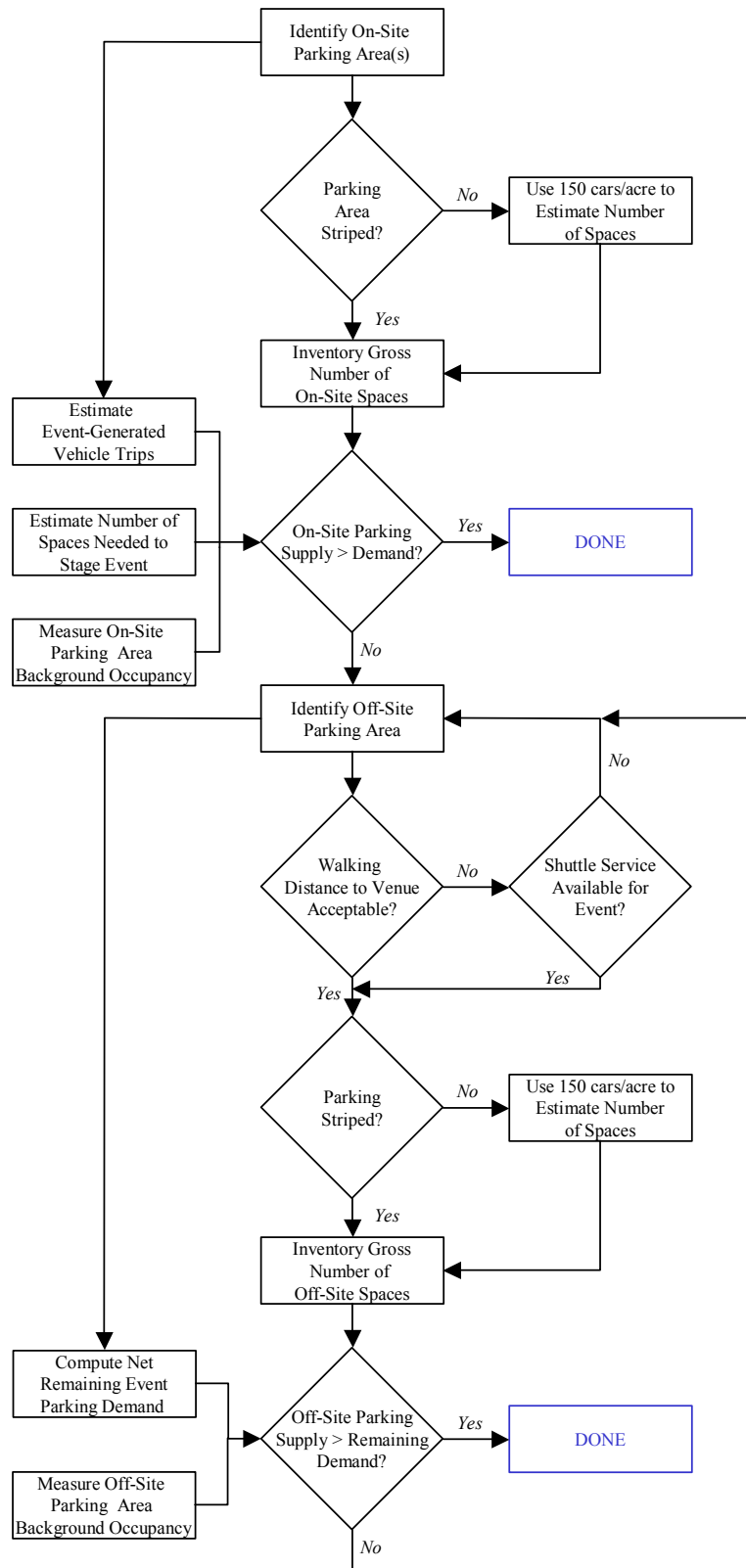


Figure 3-9  
Parking Demand Analysis Process

access points provide sufficient service flow rates through proper design. Regardless of capacity analysis outcome, pedestrian accommodation and parking management represent key considerations in a planned special event traffic management plan.

Roadway capacity analysis involves freeway segments, freeway junctions such as ramps and weaving areas, street segments, signalized intersections, and unsignalized intersections. To evaluate these facilities, practitioners can employ one of two approaches: (1) analyze section and point capacity using Highway Capacity Manual recommended methodologies or (2) analyze network operations using a computer traffic simulation model.

### Mitigation of Impacts

Mitigating anticipated planned special event impacts on travel represents the ultimate goal of conducting a feasibility study. The mitigation of congestion and potential safety impacts identified through a feasibility study requires development of a traffic management plan and complementing travel demand management strategies. In turn, practitioners can utilize the tools and techniques used to determine feasibility study results in order to evaluate various mitigation strategies and determine if the selected strategies adequately mitigate identified transportation system deficiencies.

Table 3-18 lists numerous tools for mitigating planned special event impacts on local roadway and regional transportation system operations. In meeting the overall travel management goal of *achieving efficiency*, these tools target utilizing the excess capacity of the roadway system, parking facilities, and transit.

## **Traffic Management Plan**

A traffic management plan indicates *how* traffic, parking, and pedestrian operations will be managed on the day-of-event. The plan contains strategies and tactics for mitigating travel impacts identified in a planned special event feasibility study analysis. It also accommodates planned travel demand management initiatives aimed at improving transportation system operations on the day-of-event.

The scope of a traffic management plan varies for each planned special event, even for events happening in the same jurisdiction or region. Different strategies and tactics are successful in handling different categories of planned special events occurring in metropolitan, urban, and rural areas. A successful traffic management plan satisfies both the: (1) customer requirements of all transportation system users and (2) allotted budget for personnel and equipment resources assigned to the day-of-event operation.

The key components of a traffic management plan for planned special events include:

- Site access and parking plan
- Pedestrian access plan
- Traffic flow plan
- Traffic control plan
- En-route traveler information plan
- Traffic surveillance plan
- Traffic incident management and safety plan

### Special Considerations

The event planning team must create a flexible traffic management plan that accommodates modifications on the day-of-the-event as well as special considerations

Table 3-18

Tools for Mitigating Planned Special Event Impacts on Transportation System Operations

CATEGORY	EXAMPLE TOOLS
<i>Traffic Control and Capacity Improvements</i>	
Freeway traffic control	<ul style="list-style-type: none"> <li>• Ramp closures or additional capacity</li> <li>• Alternate routes</li> <li>• Ramp metering</li> </ul>
Street traffic control	<ul style="list-style-type: none"> <li>• Lane control</li> <li>• Alternative lane operations</li> <li>• Road closures</li> <li>• On-street parking restrictions</li> <li>• Trailblazer signing</li> <li>• Parking management systems</li> </ul>
Intersection traffic control	<ul style="list-style-type: none"> <li>• Access and turn restrictions</li> <li>• Advance signing to improve traffic circulation</li> <li>• Traffic signal timing and coordination</li> </ul>
Traffic incident management	<ul style="list-style-type: none"> <li>• Service patrols</li> <li>• Tow truck staging</li> <li>• Advance congestion warning signs</li> <li>• Portable lighting</li> </ul>
<i>Traffic Management</i>	
Traffic surveillance	<ul style="list-style-type: none"> <li>• Closed circuit television systems</li> <li>• Field observation</li> <li>• Aerial observation</li> <li>• Media reports</li> <li>• Portable traffic management systems</li> </ul>
En-route traveler information	<ul style="list-style-type: none"> <li>• Changeable message signs</li> <li>• Highway advisory radio</li> <li>• Media</li> <li>• Static signing</li> <li>• Destination signing</li> </ul>
<i>Travel Demand Management</i>	
Transit incentives	<ul style="list-style-type: none"> <li>• Public transit service expansion</li> <li>• Express bus service from park and ride lots</li> <li>• Charter bus service</li> </ul>
High occupancy vehicle incentives	<ul style="list-style-type: none"> <li>• Preferred parking</li> <li>• Reduced parking cost</li> </ul>
Event patron incentives	<ul style="list-style-type: none"> <li>• Pre-event and post-event activities</li> </ul>
Bicyclist accommodation	<ul style="list-style-type: none"> <li>• Bicycle routes and available parking/lock-up</li> </ul>
Local travel demand management	<ul style="list-style-type: none"> <li>• Background traffic diversion</li> <li>• Truck diversion</li> </ul>
Pre-trip traveler information	<ul style="list-style-type: none"> <li>• Internet</li> <li>• Telephone information systems</li> <li>• Public information campaign</li> <li>• Event and venue transportation guide</li> <li>• Media</li> </ul>

that surface prior to the planned special event.

Table 3-19 lists the various groups that either attend or have a direct interest in a planned special event. Throughout the traffic management plan development process, the event planning team must regularly monitor and communicate any special considerations that arise in conjunction with the needs of the groups attending the event.

Table 3-19  
Groups Attending a Planned Special Event

GROUP
<ul style="list-style-type: none"> <li>• Participants</li> <li>• Spectators</li> <li>• Event sponsor</li> <li>• Dignitaries</li> <li>• Media</li> <li>• Non-ticketed visitors</li> <li>• Street vendors</li> </ul>

### Contingency Planning

Contingency planning represents *event insurance*. While stakeholders may consume additional time and resources during advance planning for a planned special event, the availability of contingency plans helps mitigate a potential systemic breakdown of the transportation system during an unexpected event occurring at or near the same time as the planned special event. Key steps in contingency planning include:

- Develop a traffic management plan that is *scenario-based*.
- Consider and plan for a range of possible unplanned scenarios. Table 3-20 provides a contingency plan checklist for planned special events.
- Determine changes in operation due to unplanned scenarios.

Table 3-20  
Contingency Plan Checklist

CONTINGENCY
<ul style="list-style-type: none"> <li>• Weather               <ul style="list-style-type: none"> <li>○ Severe weather outbreak</li> <li>○ Flooding on event site access routes</li> <li>○ Flooding in event parking areas</li> <li>○ Parking during wet weather</li> </ul> </li> <li>• Security threat</li> <li>• Major traffic incident</li> <li>• Delayed event</li> <li>• Event cancellation</li> <li>• Absence of trained personnel and volunteers on the day-of-event</li> <li>• Equipment breakdown</li> <li>• Demonstration or protest</li> <li>• Unruly spectator behavior</li> <li>• Overcrowding</li> <li>• Event patron violence</li> </ul>

### Site Access and Parking Plan

A site access and parking plan contains operations strategies for managing automobile, bus, taxi, and limousine traffic destined to and from the following areas in the vicinity of a planned special event venue: (1) public parking area, (2) reserved (permit) parking area, (3) overflow parking area, and (4) pick-up/drop-off area. The event planning team must create a flexible plan that contains proactive strategies for responding to real-time event patron travel patterns driven by their choice of public parking areas, especially if parking fees vary from lot to lot. Traffic destined to the three other site areas has a fixed ingress and egress pattern as specified in the plan through lot assignments and permitted movements.

Site access and parking plan development involves a three-step process: (1) access, (2) process, and (3) park:

- Access refers to getting event traffic from the adjacent street system to their destination, such as a parking area or

pick-up/drop-off area, during ingress and vice versa during egress. The traffic management team manages the access operations component.

- Process involves activities necessary to “approve” vehicles for entry into a parking area. A fee transaction between a parking area operator and motorist represents a common process activity.
- Park involves handling vehicles from a process point to a parking space. A parking team and associated volunteers operate the process and park components. A breakdown in any one of the three components can result in congestion extending to the adjacent street system and possibly to freeway and arterial corridors serving the planned special event.

In order to facilitate safe and quick spectator and participant travel to/from the event site, the site access and parking plan should specify tactics that prevent potential congestion on parking area access roads and allow for good circulation on roadways surrounding the event site. Table 3-21 indicates site access and circulation considerations applicable to the development of a site access and parking plan.

The objective of designing and operating parking areas involves providing an access point capacity in excess of the peak rate of traffic flow that traverses the driveway. Any planned special event parking area that requires a fee or permit for access has a service facility in-place to process vehicles entering the lot. Therefore, a first-in-first-out queuing system exists.

Queuing happens when the arrival rate exceeds the service rate. The arrival rate denotes the number of vehicles traversing a single parking area access point over some period of time. The service rate is the number of vehicles the service facility can process over some period of time. The magnitude of this rate depends on the number of servers (e.g., staff or automated gates) that comprise the service facility and server efficiency. A parking area queuing system operates stochastically. Traffic arrival rates will vary, and individual transaction times that collectively determine the service rate will also vary. In designing a service facility for a planned special event parking area, select a conservative server service time (e.g., the time to serve one vehicle) and determine the required number of servers that can process the maximum anticipated arrival rate with one server on break.

Table 3-21  
Site Access and Circulation Considerations

CONSIDERATION	TACTIC
Parking area ingress	<ul style="list-style-type: none"> <li>• Right turn circulation pattern</li> <li>• Contraflow operation</li> <li>• Shoulder utilization</li> <li>• Lane channelization</li> <li>• Parking area overflow access points</li> </ul>
Pick-ups and drop-offs	<ul style="list-style-type: none"> <li>• Use of off-street areas</li> <li>• Designation of pick-up/drop-off areas to avoid conflict with primary traffic ingress/egress routes</li> <li>• Storage area</li> </ul>
Parking area egress	<ul style="list-style-type: none"> <li>• Right turn circulation pattern</li> <li>• Preservation of adjacent street flow</li> <li>• Provision of rapid parking area unloading</li> </ul>

Parking operators and volunteers must meet the following two requirements for parking vehicles:

- Park vehicles at the same rate as those being processed.
- Minimize pedestrian/vehicular conflicts inside parking areas.

The event planning team should design a site and parking plan to service both the traffic management team and event patrons. Pre-trip traveler information dissemination (via media, websites, mailings, brochures) should include elements of the site and parking plan. Table 3-22 contains a site and parking plan development checklist.

### Pedestrian Access Plan

A pedestrian access plan provides for the safe and efficient movement of pedestrians within the immediate area of the venue. This includes accommodating pedestrian trips to/from several mode transfer points in a planned special event activity network. These points include site parking areas, transit stations, express/charter bus stations, shuttle bus stations, and pick-up/drop-off areas. Moreover, some event patrons may make their entire trip, originating from home or work, on foot. In meeting the managing travel for planned special events goal of *ensuring safety*, the event planning team must develop a plan that: (1) accommodates pedestrians accessing an event via a network of safe walking routes and (2) minimizes pedestrian/vehicular conflicts.

A successfully implemented pedestrian access plan for planned special events permits *rapid dispersion* of pedestrian flow. Although high pedestrian volumes encompass the immediate venue area during ingress and egress, the plan effects efficient access through a radial network of pedestrian

routes. It also includes time-sensitive strategies to minimize overcrowding conditions at venue gates and mode transfer points. The plan also considers a continuous shuttle bus service operations detail to handle event patrons destined to/from satellite parking areas and transit stations not easily accessible by foot.

Pedestrian access routes are comprised of two components:

- A *routing* component, consisting of sidewalks or paths between street intersections.
- A *crossing* component, consisting of infrastructure or other vehicle control measure that allows pedestrians to cross a street safely.

Planned special event pedestrian management involves the implementation of integrated control tactics to facilitate pedestrian routing and crossing between a mode transfer point and the event venue.

Two strategies for managing pedestrian flow on walkways during planned special events include:

- Locating access route termini.
- Providing additional, temporary pedestrian walkway capacity.

Table 3-23 describes tactics for improving the safety and capacity of pedestrian street crossings. Use of a temporary pedestrian bridge represents an effective tactic for crossing wide streets or roadways where traffic throughput is emphasized. Temporary street closures during event egress allow the venue to empty faster and permits pedestrians to disperse to a number of adjacent mode transfer points and pedestrian access routes. Mid-block crossings not only

Table 3-22  
Site and Parking Plan Checklist

ELEMENT	PROVISION
Event patron parking areas	<ul style="list-style-type: none"> <li>• Highlight free, pay (state rates), and reserved (permit) parking areas.</li> <li>• Indicate lots where tailgating is permitted.</li> <li>• Show specific parking area access points and state restrictions.</li> <li>• Indicate number of entrance/exit lanes (or servers) at each access point.</li> <li>• Designate lots by a number or letter and provide lot-specific directions.</li> <li>• State time parking areas open, particularly if time varies by parking area.</li> <li>• Discuss features of each parking area (e.g., paved, staffed, lighting, security).</li> <li>• State estimated walking time from each parking area.</li> <li>• Indicate connecting pedestrian access routes.</li> <li>• Show overflow parking areas, state distance from venue, and indicate criteria for operation (e.g., sell-out).</li> <li>• Indicate parking areas for motorcycles.</li> <li>• Indicate parking areas for recreational vehicles (e.g., overnight parking).</li> <li>• Furnish map of available off-site parking areas.               <ul style="list-style-type: none"> <li>○ Include information on street regulations (e.g., one- or two-way) and connections to freeways and major arterials.</li> <li>○ State on-street parking restrictions.</li> <li>○ Specify private parking area regulations (e.g., egress control).</li> <li>○ Indicate location of entrance/exit points to off-street parking areas.</li> <li>○ Include rates if available.</li> <li>○ Show restricted off-site parking areas (e.g., residential neighborhoods, etc.)</li> </ul> </li> </ul>
Gate access information	<ul style="list-style-type: none"> <li>• Indicate gate names as shown on event patron tickets.</li> </ul>
VIP information	<ul style="list-style-type: none"> <li>• Show VIP (e.g., official guest / sponsor) parking areas.</li> <li>• Show credential pick-up location.</li> <li>• Show hospitality areas.</li> </ul>
Shuttle bus route and stations	<ul style="list-style-type: none"> <li>• Display shuttle route and all stations.</li> <li>• State cost, and emphasize free services.</li> </ul>
Drop-off / pick-up sites	<ul style="list-style-type: none"> <li>• Show access points and circulation lanes for transit/taxi/limo/shuttle service.</li> <li>• Show exclusive bus lanes.</li> <li>• Show transit / express bus stations.</li> <li>• Indicate general drop-off / pick-up sites where turnaround is permitted.</li> <li>• Indicate valet parking drop-off.</li> <li>• Show disabled drop-off / pick-up site.</li> </ul>
Other parking areas	<ul style="list-style-type: none"> <li>• Show express/charter bus parking area.</li> <li>• Show limousine parking area.</li> <li>• Show media parking area.</li> <li>• Show venue employee parking area.</li> </ul>
Disabled parking areas	<ul style="list-style-type: none"> <li>• State specific location (e.g., first row) of disabled-only spaces in general parking areas.</li> <li>• Indicate number of spaces available.</li> </ul>
Other considerations	<ul style="list-style-type: none"> <li>• Show aerial map.</li> <li>• Promote advance purchase (permit) options.</li> <li>• Indicate towed vehicle (e.g., illegally parked) pick-up area.</li> <li>• Emphasize new provisions (e.g., new parking areas, etc.).</li> <li>• Present map in grid format for easy reference.</li> <li>• Prepare maps for different venue events if parking plan varies.</li> <li>• Draw map to scale.</li> <li>• Show private property.</li> <li>• Display landmarks.</li> <li>• Indicate municipal fireworks viewing areas.</li> </ul>



Table 3-23  
Pedestrian Crossing Tactics

TACTIC	APPLICATION
Temporary pedestrian bridge	<ul style="list-style-type: none"> <li>• Provides uninterrupted flow.</li> <li>• Achieves total separation of pedestrians and vehicles.</li> <li>• Enhances pedestrian safety.</li> </ul>
Street closure	<ul style="list-style-type: none"> <li>• Provides uninterrupted flow.</li> <li>• Accommodates very heavy pedestrian volume.</li> <li>• Allows pedestrian dispersion.</li> <li>• Requires officer control.</li> </ul>
Mid-block street crossing	<ul style="list-style-type: none"> <li>• Provides interrupted flow.</li> <li>• Avoids pedestrian conflict with turning vehicles.</li> <li>• Requires officer control.</li> </ul>
Staffed crossings	<ul style="list-style-type: none"> <li>• Provides interrupted flow.</li> <li>• Accommodates light pedestrian volume.</li> </ul>

reduce the likelihood of vehicle-pedestrian collisions, but accident severity as well.

The pedestrian access plan must accommodate disabled event patrons arriving via all travel modes serving a planned special event. This involves examining all routes that a disabled event patron may traverse and, in turn, ensuring the patron has an unimpeded path from mode transfer point to venue seat. Accessible pedestrian routes must: (1) maintain a minimum path width, (2) include curb cuts and temporary ramps for negotiating grade separations, and (3) conform to local Americans with Disabilities Act (ADA) regulations. If a particular route (e.g., from express/charter bus station or transit station) does not meet accessibility requirements, then accessible shuttles must operate between affected mode transfer points and accessible pick-up/drop-off areas.

A shuttle bus service should be operated continuously within the venue site area during event ingress and egress, with the service schedule revolving around event patron arrivals and departures. Common shuttle service to/from a planned special event venue include: (1) satellite parking area service, (2) transit station service, and (3) em-

ployee parking area service. A particular planned special event may involve multiple private and public (e.g., transit agency) shuttle service operators, all of whom must coordinate with the event planning team on service details and station locations. Successful shuttle bus services positively influence the travel mode or destination (e.g., off-site) choice made by persons traveling to and from a planned special event.

The end result in shuttle bus service design involves determining the required number of buses to meet expected ridership levels. Based on event category and associated operations characteristics, the number of shuttle buses needed during event ingress and egress may vary.

A temporary shuttle bus station will exist at both a mode transfer point and at the event venue. Station design and operations should facilitate the rapid loading and unloading of shuttle passengers without impacting adjacent traffic operations and pedestrian movement. Because of the high concentration of pedestrian traffic at the event venue during ingress and egress, venue station design is critical. On-site shuttle bus stations should: (1) facilitate easy shuttle bus access,

(2) provide a defined passenger waiting area, (3) promote an orderly queue formation, and (4) shield waiting passengers from adjacent vehicular and pedestrian traffic.

Table 3-24 lists pertinent pedestrian access plan informational elements of interest to event patrons and participants. A traffic flow map or traffic control plan, prepared as a traveler information tool, may contain callouts to pedestrian facilities and day-of-event control tactics.

Table 3-24  
Pedestrian Access Plan Checklist

ELEMENT
<ul style="list-style-type: none"> <li>• Show recommended pedestrian access routes.</li> <li>• Show pedestrian bridges and tunnels.</li> <li>• Indicate special pedestrian crossing tactics (e.g., street closure or mid-block crossings)</li> <li>• Show shuttle bus route, direction of travel, stop locations, and loading and unloading areas.</li> <li>• Show vertical connections between infrastructure levels (e.g., stairs, escalator, elevator, ramps).</li> <li>• Show designated pedestrian crossings at street use event venues.</li> <li>• Indicate special regulations.</li> <li>• Highlight pedestrian access routes and crossings suitable for disabled event patrons.</li> </ul>

### Traffic Flow Plan

The preparation of a traffic flow plan represents a required preliminary step to the design of a traffic control plan. The traffic demand analysis component of a feasibility study indicates the freeway/arterial corridors and local streets that event patrons will utilize to access the venue site area. In developing a traffic flow plan, the event planning team modifies predicted flow routes to maximize transportation system operating efficiency on the day-of-event while meeting public safety agency needs. In turn, a traffic control plan facilitates traffic flow on recommended flow routes through service-

enhancing strategies and tactics that handle forecasted event traffic demand on these routes.

The advantage of developing a traffic flow plan is two-fold:

- Allows the event planning team to influence and control event patron patterns of ingress and egress.
- Provides important advance information for event patrons and participants regarding *best access* routes to the event.

The traffic flow plan must account for two types of traffic flow routes: *corridor* and *local*:

- Corridor flow routes include the freeways and major arterial roadways serving the planned special event venue.
- Local flow routes traverse the street system adjacent to the event venue and service a particular parking area or pick-up/drop-off point.
- A *target point* represents the point of connection between corridor and local flow routes, characterized by a freeway interchange or major arterial intersection.
- On the day-of-event, the management of corridor flow routes typically involves surveillance and dissemination of traveler information regarding target point and local flow route operations. The traffic management team implements traffic control initiatives beginning at the target point and continuing along the local flow route.

Figure 3-10 describes a process for assessing corridor and/or local traffic flow routes. Traffic control strategies for increasing corridor route capacity include eliminating weaving areas or other ramp control tactics. Strategies for local routes include striping

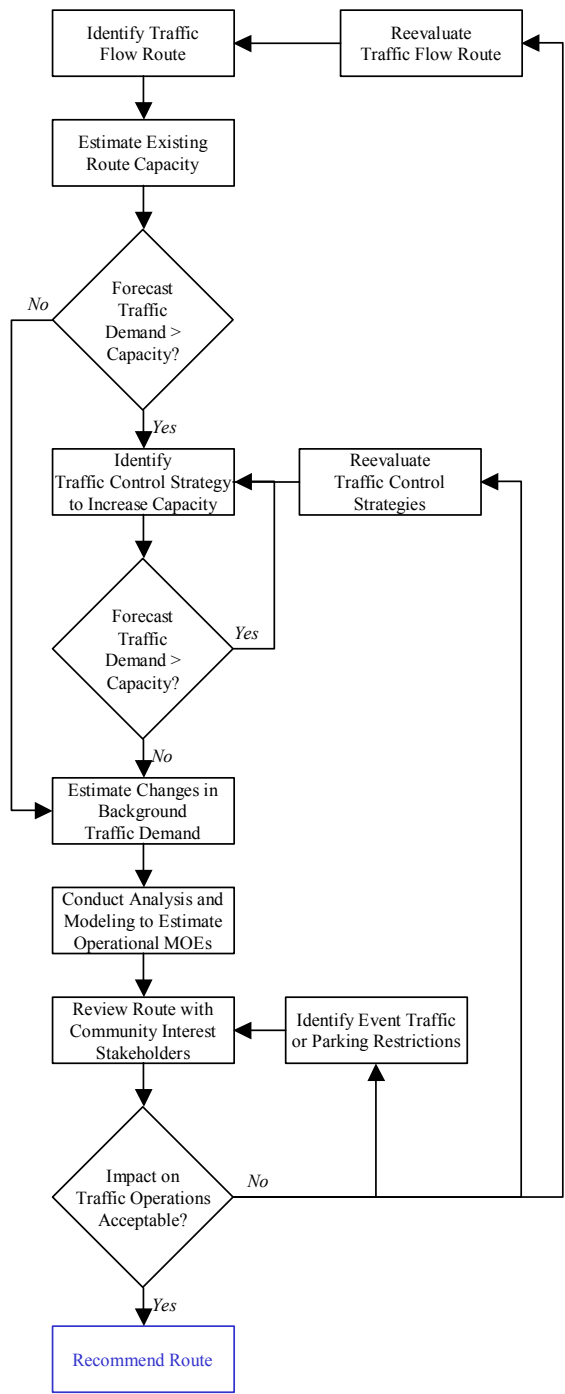


Figure 3-10  
Traffic Flow Route Assessment Process

additional travel lanes to handle flow in the predominant direction, restricting turning movements, and revising traffic signal timing plans. The “Traffic Control Plan” sec-

tion describes these strategies and other mitigation alternatives in greater detail.

Other considerations involved in the development of traffic flow plans include:

- Emergency access routes
- Background traffic accommodation
- Transit accommodation

Emergency access route planning involves designating street closures or emergency access lanes within the venue site area to connect to some or all of the following termini: (1) public safety (e.g., fire and emergency medical service) headquarters, (2) local hospital, (3) freeway or major arterial serving a regional hospital, and (4) location of staged ambulances and first-aid stations for on-site medical treatment.

Table 3-25 presents a range of passive (e.g., traveler information dissemination only) and aggressive (e.g., physical traffic control) tactics for accommodating background traffic during a planned special event.

A traffic management plan that prioritizes bus flow to and from the venue site area positively influences the utility associated with transit and other travel choices involving express bus, charter bus, or shuttle bus transport. Transit agencies should operate on scheduled bus transit routes up until the last possible point to divert around a road closure required to stage a planned special event. This avoids user confusion and minimizes inconvenience to non-event attendees.

Table 3-26 lists tactics for accommodating scheduled and event-generated bus service.

The traffic flow plan serves stakeholders managing the planned special event in addition to event patrons and participants. The

Table 3-25  
Tactics for Accommodating Background Traffic during Planned Special Events

USER GROUP	TACTIC	BENEFIT
Regional through traffic	<ul style="list-style-type: none"> <li>• Freeway-to-freeway diversion beginning a significant distance upstream of an event venue.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintains mobility.</li> <li>• Reduces the level of background traffic on corridor flow routes serving the venue.</li> </ul>
Local through traffic	<ul style="list-style-type: none"> <li>• Arterial-to-arterial diversion</li> </ul>	<ul style="list-style-type: none"> <li>• Eliminates non-attendee exposure to venue site area.</li> <li>• Discourages cruising around site area.</li> <li>• Allows public to become familiar with route after repeated implementation.</li> </ul>
Neighborhood residents and businesses	<ul style="list-style-type: none"> <li>• Parking restrictions</li> </ul>	<ul style="list-style-type: none"> <li>• Permits resident access to on-street parking spaces.</li> <li>• Permits employee and customer access to public parking areas.</li> </ul>
	<ul style="list-style-type: none"> <li>• Traffic control points</li> </ul>	<ul style="list-style-type: none"> <li>• Restricts neighborhood area access to residents and business employees.</li> </ul>
	<ul style="list-style-type: none"> <li>• Signing and alternate routes</li> </ul>	<ul style="list-style-type: none"> <li>• Directs customers to businesses and other traffic generators.</li> </ul>

Table 3-26  
Bus Accommodation Tactics

TACTIC
<ul style="list-style-type: none"> <li>• Exclusive bus route</li> <li>• Exclusive/priority bus lane</li> <li>• On-demand communication with TMC or command post</li> </ul>

product of strategic route planning involves informing event patrons of best access routes to and from the planned special event. Stakeholders can communicate preferred route directions via: (1) event patron ticket mailings, (2) media public information campaigns, and (3) event, venue, or traffic information websites.

Table 3-27 contains a traffic flow plan development checklist.

### Traffic Control Plan

Freeways represent corridor flow routes serving event patrons and participants destined to/from a planned special event from various parts of a region and beyond. These corridor flow routes connect to local, street-level flow routes that, in turn, serve event venue parking areas. A freeway interchange

marks the point of connection, or target point, between corridor flow routes and local flow routes. Together, the three entities comprise the roadway system servicing a planned special event. The scope of traffic control expands and contracts, proportionally to system performance, during event ingress and egress.

The main objective of freeway management during planned special events involves minimizing freeway mainline congestion. Freeway traffic control tactics implemented in response to local traffic flow or ramp operation degradation preserve freeway mainline operations. Freeway traffic control and management strategies for planned special events include traveler information dissemination and interchange operations.

Traveler information disseminated upstream of freeway interchanges serving an event venue effectively: (1) introduces all freeway users to critical traffic management plan components affecting traffic flow in the vicinity of the event venue and (2) facilitates freeway lane management as motorists learn of temporary freeway ramp control tactics

Table 3-27  
Traffic Flow Plan Checklist

ELEMENT	PROVISION
Event patron corridor flow route	<ul style="list-style-type: none"> <li>• Indicate recommended freeway ramps, by route direction, to/from event venue or specific parking area.</li> <li>• Indicate corridor target points representing a connection to local flow routes.</li> <li>• State freeway or arterial lane assignments for event traffic (e.g., event traffic two right-lanes).</li> <li>• Furnish information on roadway construction projects, as applicable, and indicate alternate routes.</li> <li>• Indicate modified ramp control tactics (e.g., closures/additional lanes).</li> <li>• Show freeway interchange configurations (and direction of travel) and exit numbers.</li> <li>• State tolls, if applicable.</li> </ul>
Event patron local flow route	<ul style="list-style-type: none"> <li>• Show connection to corridor flow route.</li> <li>• Indicate local streets that connect to freeway entrance/exit ramps.</li> <li>• Indicate recommended flow route to/from general and reserved parking areas (minimum) or individual parking areas (recommended).</li> <li>• Indicate one-way streets.</li> <li>• Show all road segment closures.</li> <li>• Specify permitted turning movements.</li> <li>• Emphasize controlled turn areas (turns prohibited or only one turn allowed).</li> <li>• List modified roadway striping (e.g., reversible lanes or contra-flow).</li> <li>• Indicate event participant/VIP access routes.</li> </ul>
Traveler information	<ul style="list-style-type: none"> <li>• Promote use of regional park &amp; ride locations and event satellite parking areas.</li> <li>• Indicate commercial radio and highway advisory radio frequencies with event travel information.</li> <li>• Alert motorists of static and changeable message sign guidance along route.</li> <li>• Stress importance of following route and adhering to traffic control officer instructions.</li> </ul>
Traffic management team information	<ul style="list-style-type: none"> <li>• Include contingency maps detailing routes to overflow parking areas.</li> <li>• Provide written directions for diverting corridor flow routes via local street system.</li> <li>• Indicate alternate routes for ingress and egress to same target point.</li> </ul>
Other travel modes / user groups	<ul style="list-style-type: none"> <li>• Show transit routes and state corresponding route number(s).</li> <li>• Show preferred taxi routes.</li> <li>• Indicate bicycle routes.</li> <li>• Indicate pedestrian routes.</li> </ul>
Other considerations	<ul style="list-style-type: none"> <li>• Provide information on both ingress and egress flow routes.</li> <li>• Emphasize law enforcement endorsement of recommended routes and directions.</li> <li>• State travel times (by mode of travel) and distances (e.g., from select origins)</li> <li>• State when special traffic flow routes go into effect and terminate.</li> <li>• Disseminate written ingress/egress driving directions.</li> <li>• Indicate potential points of confusion (“do not take”) along recommended route (e.g., freeway exits, turning movements).</li> <li>• Indicate heavy vehicle restrictions.</li> <li>• Indicate expected congested/non-congested areas.</li> <li>• Use callouts to highlight critical movements.</li> <li>• Label all streets and freeways.</li> <li>• Color-code recommended routes to specific parking areas.</li> <li>• Emphasize new provisions (e.g., new road closures or route).</li> <li>• Prepare maps for different venue events if parking plan varies.</li> <li>• Show parking areas.</li> <li>• Show venue gates.</li> <li>• Draw map to scale.</li> <li>• Show private property.</li> <li>• Display landmarks.</li> </ul>

and/or downstream lane closures that warrant a lane-change.

Management of freeway interchange operations for planned special events involves maximizing ramp capacity and preventing freeway mainline congestion. Table 3-28 presents interchange operations tactics for planned special events.

The central traffic control strategy for local flow routes serving a planned special event involves *emphasizing throughput*. Tactics that increase street capacity include a combination of: (1) on-street parking restrictions, (2) vehicle travel on road shoulders, and (3) alternative lane operations. Streets connecting freeway/arterial corridor routes and venue parking areas characteristically serve a predominant directional traffic flow during ingress and the reverse flow during egress.

Alternative lane operations comprise two categories:

- Reversible lane operation
- Contraflow operation

The application of alternative lane operations to streets during a planned special event creates an express route between an event venue and high-capacity freeway/arterial corridors. Three key elements in developing an alternative lane operations plan include lane balance, markings, and enforcement.

The management of traffic traversing a local flow route on the day-of-event involves route guidance and monitoring of traffic control initiatives.

The event planning team should design special route marker signs for guiding motorists

to venue parking areas and pick-up/drop-off locations. Each route marker may consist of a color-coded letter or symbol. When erected along a local flow route, the route marker assemblies collectively trailblaze a route to the drivers' destination of choice. Signs that introduce each route marker should be placed on all freeway and arterial corridors serving the event venue.

The deployment of a portable traffic management system(s) (PTMS) provides a traffic management team with the capability of monitoring traffic operations at critical roadway system locations in addition to disseminating updated traveler information at that location. Critical locations include target points connecting a corridor flow route and a local flow route or key driver decision points on the street network surrounding an event venue. Typical PTMS components include:

- Surveillance camera
- Changeable message sign
- Highway advisory radio
- Detection devices
- Weather sensor
- Flood lights
- Power source (e.g., solar)

Wireless communication via spread spectrum radio enables the traffic management team to view full-motion video from PTMS surveillance cameras.

A proactive approach toward developing strategies for controlling intersection traffic during a planned special event aims to:

- Increase intersection traffic handling capacity.
- Improve the orderly movement of traffic.
- Prevent crash occurrences.

Table 3-28  
Interchange Operations Tactics for Planned Special Events

TACTIC	EVENT TIME	APPLICATION	BENEFIT
Rolling road block	Ingress	<ul style="list-style-type: none"> <li>Initiate tactic on freeway mainline upstream of congested interchange ramp(s).</li> </ul>	<ul style="list-style-type: none"> <li>Alleviates traffic demand at interchange, thus permitting street or ramp bottleneck to dissipate.</li> </ul>
	Egress	<ul style="list-style-type: none"> <li>Initiate tactic on freeway mainline upstream of a congested ramp junction or weaving area.</li> <li>Use tactic to meter freeway mainline traffic demand without creating a secondary bottleneck upstream of the congested area.</li> </ul>	<ul style="list-style-type: none"> <li>Reduces level of congestion at the primary bottleneck location.</li> </ul>
Entrance ramp closure	Ingress	<ul style="list-style-type: none"> <li>Initiate tactic on ramps in close proximity to and upstream of interchange target point for event traffic.</li> <li>Divert affected traffic to another downstream access point.</li> </ul>	<ul style="list-style-type: none"> <li>Eliminates congestion caused by traffic merging with heavy freeway mainline traffic.</li> </ul>
	Egress	<ul style="list-style-type: none"> <li>Initiate tactic as necessary to reduce freeway mainline congestion in the vicinity of closely spaced entrance ramps.</li> </ul>	<ul style="list-style-type: none"> <li>Reduces freeway mainline congestion or prevents congestion from occurring.</li> </ul>
Exit ramp closure	Ingress	<ul style="list-style-type: none"> <li>Close ramp, as needed, to alleviate congestion on a downstream local flow route.</li> <li>Initiate only if a downstream exit ramp and local street system can handle diverted traffic.</li> </ul>	<ul style="list-style-type: none"> <li>Reduces congestion on local flow route.</li> </ul>
	Egress	<ul style="list-style-type: none"> <li>Initiate tactic at freeway interchanges connecting local traffic flow routes that have special egress traffic control measures in effect.</li> </ul>	<ul style="list-style-type: none"> <li>Prevents traffic from accessing local flow routes in the direction of the event venue that operate in favor of egress traffic flow.</li> </ul>
Elimination of weaving area	Ingress	<ul style="list-style-type: none"> <li>Close cloverleaf interchange entrance ramp to facilitate unimpeded diverge to access adjacent exit ramp.</li> </ul>	<ul style="list-style-type: none"> <li>Eliminates weaving area congestion.</li> <li>Extends deceleration lane for traffic using exit ramp.</li> </ul>
	Egress	<ul style="list-style-type: none"> <li>Close cloverleaf interchange exit ramp and mainline right-lane to facilitate unimpeded merge with mainline.</li> </ul>	<ul style="list-style-type: none"> <li>Eliminates weaving area congestion.</li> <li>Extends acceleration lane for traffic using entrance ramp.</li> </ul>
Ramp metering	Ingress	<ul style="list-style-type: none"> <li>Meter freeway entrance ramps upstream of interchange target point for event traffic.</li> </ul>	<ul style="list-style-type: none"> <li>Reduces congestion caused by traffic merging with heavy freeway mainline traffic.</li> </ul>
	Egress	<ul style="list-style-type: none"> <li>Meter freeway entrance ramps downstream of interchange target point for event traffic</li> </ul>	<ul style="list-style-type: none"> <li>Reduces congestion caused by traffic merging with heavy freeway mainline traffic.</li> </ul>
Late diverge prohibition	Ingress	<ul style="list-style-type: none"> <li>Deploy traffic cones along barrier line extending upstream of exit ramp gore area.</li> </ul>	<ul style="list-style-type: none"> <li>Reduces congestion at diverge ramp junction caused by motorists attempting to make a sudden lane-change to access an exit ramp.</li> <li>Improves safety.</li> </ul>
Additional exit ramp lane	Ingress	<ul style="list-style-type: none"> <li>Cone an additional lane on exit ramps serving traffic destined to an event venue.</li> </ul>	<ul style="list-style-type: none"> <li>Provides additional ramp storage capacity.</li> <li>Proves particularly effective if two-lane ramp traffic does not have to merge at downstream end of ramp.</li> </ul>

The key to maximizing capacity involves simplifying traffic movements and minimizing the number of traffic signal phases. Stakeholders can also reduce the number of competing intersection traffic flow movements by initiating a planned road closure. Advance signing of permitted intersection movements improves the orderly movement of traffic.

The significant change in traffic volume and flow patterns at street intersections in the vicinity of a planned special event venue during event ingress and egress mandates a review of traffic signal timing plans during the event operations planning phase. Advance traffic signal operations planning involve developing event traffic signal timing plans. Traffic signal timing plans should exist for a range of contingency scenarios that prioritize either major street or minor street traffic movements. Methods to increase time for a specific movement include: (1) selecting an existing plan with a longer cycle length to increase the normal favored phase, (2) implementing a custom plan favoring a minor street phase (3) deploying a contingency “flush” plan, consisting of an extra long phase or cycle, to facilitate movement through a corridor, and (4) increasing time for a movement through manual traffic signal system operator control. In traffic signal system-controlled corridors carrying high traffic volumes on the day-of-event, system operators may enact simultaneous coordination, where all signals within a single corridor turn green at the same time.

The event planning team designs traffic control plans for use by the traffic management team and traffic control vendors. Table 3-29 contains a traffic control plan development checklist for freeway, street, and intersection management.

### En-Route Traveler Information Plan

En-route traveler information can provide event patrons and other transportation system users with current roadway and transit information while traveling en-route. Information is typically provided via devices deployed along the side of the roadway, or from devices mounted on the dashboard of the vehicle. Along the roadway, CMS and HAR messages typically provide information regarding an upcoming planned special event, including current conditions related to the special event such as traffic congestion, incident and construction locations, weather advisories, parking availability, and alternate routes. In-vehicle and personal mobile devices can provide a variety of en-route traveler information to both the traveler as well as transportation providers.

Static signs can be used for event management to inform travelers of an upcoming planned special event, to identify park & ride lots, and to guide motorists to particular locations. It is not uncommon for agencies to use static signing in special event management for the following purposes:

- Notify travelers of a future special event.
- Notify travelers of future facility changes for the event such as lane closures or occupancy restrictions.
- Identify special alternate routes for the event.
- Guide travelers to parking or park & ride lots.

One of the most fundamental technologies available for disseminating traffic-related information from the roadside is that of changeable message signs. CMSs are sometimes referred to as dynamic message signs



Table 3-29  
Traffic Control Plan Checklist

ELEMENT	PROVISION
Freeway control plan	<ul style="list-style-type: none"> <li>• Specify maintenance and protection of traffic per MUTCD guidelines (e.g., location of traffic control equipment, equipment quantities, and safety signs).</li> <li>• Indicate ramp control and capacity modifications.</li> <li>• Highlight exclusive traffic flows (e.g., unimpeded merge, etc.).</li> <li>• Dimension weaving area, acceleration/deceleration lane lengths, ramp length.</li> <li>• Indicate potential bottleneck locations for surveillance monitoring.</li> </ul>
Street control plan	<ul style="list-style-type: none"> <li>• Show closed road segments.</li> <li>• Indicate directional lane control (e.g., alternative lane operations).</li> <li>• Show one-way streets.</li> <li>• Indicate number of ingress and egress lanes at each venue access point (e.g., parking areas, pick-up/drop-off points).</li> <li>• Show street use event route.</li> <li>• Indicate parking restrictions.</li> <li>• Indicate location of command post(s).</li> <li>• Integrate with signing plan (e.g., show route trailblazer signs).</li> </ul>
Intersection control plan	<ul style="list-style-type: none"> <li>• Specify maintenance and protection of traffic per MUTCD guidelines (e.g., location of traffic control equipment, equipment quantities, and safety signs).</li> <li>• Show permitted pedestrian movements and crosswalk locations.</li> <li>• Indicate approach lane designations and pavement markings.</li> <li>• Indicate traffic control.</li> <li>• Highlight exclusive/permitted traffic flows (indicate approach lane and corresponding receiving lane).</li> <li>• State special regulations (e.g., turn prohibition, exclusive bus lane, resident/permit only movement).</li> <li>• Show approach closures.</li> <li>• Indicate parking restrictions.</li> <li>• Indicate location of traffic control officers.</li> <li>• Indicate location of equipment storage area at intersection.</li> </ul>
Signing plan	<ul style="list-style-type: none"> <li>• Show location of permanent/portable changeable message signs.</li> <li>• Show location of permanent/portable highway advisory radio stations.</li> <li>• Indicate CMS/HAR message sets. <ul style="list-style-type: none"> <li>○ Default ingress and egress</li> <li>○ Contingency scenarios</li> </ul> </li> <li>• Show location of temporary static signs and message.</li> <li>• Indicate location of dynamic blank-out signs.</li> </ul>
Equipment location plan	<ul style="list-style-type: none"> <li>• State number of traffic cones, drums, and barricades required at designated locations. <ul style="list-style-type: none"> <li>○ Indicate equipment staging areas (e.g., shoulder, median, intersection corner)</li> </ul> </li> <li>• Indicate location of equipment storage areas.</li> </ul>
Other considerations	<ul style="list-style-type: none"> <li>• Provide plans for both ingress and egress operation.</li> <li>• Indicate roadway construction zones.</li> <li>• Include table of quantities.</li> <li>• Show aerial map.</li> <li>• Draw map to scale.</li> <li>• Display landmarks.</li> </ul>

or variable message signs. CMSs are programmable traffic control devices that can usually display any combination of characters to present messages to motorists. These signs are either: (1) permanently installed above or on the side of the roadway, (2) portable devices attached to a trailer, or (3) portable devices mounted directly on a truck and driven to a desired location.

Highway advisory radio is an effective tool for providing timely traffic and travel condition information to the public. It has various advantages and disadvantages. Its most important advantage is that it can reach more travelers, or potential travelers, than the other roadside technology, changeable message signs. While CMSs reach only those motorists at a particular point, and can only convey a short message, HAR has the advantage of being able to communicate with any person in the HAR broadcast range. Furthermore, the amount of information that can be conveyed to the user is much greater. Its primary disadvantage is that it is restricted to low power, and this can lead to poor signal quality (since many outside forces affect the signal, such as weather) and, therefore, poor listener levels.

The public has learned to depend upon the media to provide them with “almost” real-time traffic information. Commercial radio has proven to be a good means of providing travelers with traffic information both in and out of their vehicles. It is not uncommon for planned special event stakeholders, including public agencies, to partner with a commercial radio station (or for a commercial radio station to sponsor a special event) to enhance the information dissemination related to the event and its transportation conditions. Care should be taken to ensure that the information disseminated reflects current traffic conditions and is credible.

Other technology applications include:

- Cellular telephone-based systems
- 511
- In-vehicle displays
- Subscription services
- Personal data assistants

An en-route traveler information plan must be developed in concert with the traffic flow plan and traffic control plan. The success of any traffic management plan depends on disseminating correct information to motorists at the right time and location.

Detailed plans are necessary that identify the facilities and resources to be used. For instance, what permanent CMS or HAR are to be used and what holes exist in the information dissemination strategy? Where will portable devices be required? Traveler information plans must include planned message sets for equipment and technology used to disseminate en-route traveler information, including static signs, changeable message signs, highway advisory radio, and telephone information systems.

#### Traffic Surveillance Plan

A traffic surveillance plan can include:

- Closed-circuit television systems
- Field observation
- Aerial observation
- Media reports

Closed-circuit television surveillance is a very valuable planned special event management tool for observing real-time conditions related to special event corridors, alternate routes, parking and pedestrian conditions, as well as for a verification tool for messages placed on changeable message signs.

A common and efficient technique to observe the traffic conditions during a planned special event is to place human observers, or detectors, in the field, usually at critical locations. Normally, these observers have the role of monitoring conditions and reporting back to a central location for strategic assessment. These human detectors are gathering relevant information related to the event and using established protocol to communicate the information back to the central processing and coordination facility.

It is common to deploy these observers where technology is lacking and where they may perform an additional role in traffic management or traffic incident management (e.g., freeway service patrol operators).

Aerial surveillance has long been used to monitor the operation of the surface transportation network. “Observers” in aircraft (fixed wing or helicopters) fly over freeways and streets and monitor conditions in real-time, using two-way radios to communicate with the TMC or with service patrols on the freeway. This approach can be relatively expensive when one considers the expense of leasing or operating an aircraft, although it does have the benefit of being able to cover a large area.

The media needs to be a partner in the planned special event management and operations effort. Agreements must be in place that define their role within the plan, as well as what information needs to be communicated, both prior to and during the event.

Traffic Incident Management and Safety Plan

The occurrence of a planned special event that increases or disrupts the normal flow of traffic places a premium on the optimal use of existing facilities. A traffic incident and

safety plan specifies crash prevention tactics and traffic incident quick clearance initiatives, some of which denote special provisions enacted just for the day-of-event. These traffic incident management techniques preserve two goals of managing travel for planned special events: (1) ensuring safety and (2) maximizing efficiency.

Crash prevention tactics focus on improving driver awareness of surroundings and driver behavior. Table 3-30 lists crash prevention tactics applicable to planned special events.

Table 3-30  
Crash Prevention Tactics

TACTIC
<ul style="list-style-type: none"> <li>• Portable lighting</li> <li>• Congestion warning sign</li> <li>• Public information safety campaign</li> <li>• Enforcement</li> </ul>

Portable lighting devices enhance driver understanding of traffic control and traffic flow patterns at night. Congestion warning signs, placed upstream of known roadway bottleneck locations, alert drivers of demand-induced congestion on the day-of-event. A public information safety campaign strives to change motorists’ behavior when traveling to and from a planned special event by emphasizing event traffic control and regulations, pedestrian safety, and vehicle operation. Enforcement aims at preventing drivers from executing illegal and dangerous movements in an effort to bypass congestion and/or day-of-event traffic control.

Service patrols can play a key role in traffic incident management for planned special events. The service has great versatility, and patrol operators can satisfy a wide range of traffic management team needs. For example, operators can assist in establishing day-of-event traffic control, performing traffic surveillance, providing timely traffic condi-

tion reports from various remote locations, and rapidly clearing traffic incidents.

A quick clearance practice consists of laws, policies, procedures, and infrastructure aimed at effecting the safe and timely removal of a traffic incident. Service patrols, as previously described, represent a quick clearance infrastructure component. Rapid clearance of traffic incidents during planned special event ingress and egress avoids significant impact to corridor and local traffic flow routes in addition to routes used by participants and VIPs.

The following quick clearance initiatives benefit traffic incident management in high-volume corridors, characteristic of planned special events: (1) vehicle/cargo removal laws and policies, (2) stakeholder open roads policy, and (3) public-private towing contracts.

## **Travel Demand Management and Traveler Information**

Travel demand management represents a key component of the overall advance planning process when forecasted traffic demand levels approach or exceed available road capacity. TDM strategies may be warranted for planned special events occurring during peak travel times, continuous events located in downtown areas, street use events of long duration, regional/multi-venue events, and special events in rural areas having limited transportation system capacity. The goal is to optimize event patron and non-attendee travel through incentives aimed at consolidating person trips and altering user travel patterns and habits, while minimizing any penalties to the user.

The goal of transit operators involve designing a special event service and related incentives to not only improve the travel choice

utility associated with using transit, but also to exceed the utility (e.g., travel time, parking fees, comfort, etc.) associated with traveling via personal automobile. Successful transit services collectively may result in a significant change in event patron modal split without impacting service to non-attendee users.

The availability of pre-trip travel information, consisting of essential event operations and real-time traffic information, proves effective in assisting event patron evaluation of potential travel options, trip departure times, and travel routes to the event venue. Similarly, other road users, seeking to minimize event-related impacts to their trip, value this information.

TDM, transit, and pre-trip traveler information initiatives complement one another and work to reduce traffic on the roadway network in the vicinity of the event. These initiatives are not infrastructure improvements to increase capacity, but rather are methods that decrease vehicular traffic by providing event patrons with various travel choices as well as providing information that may lead to a reduction in traffic volumes.

### Demand Management Strategies

Successful TDM strategies, developed to reduce the amount of event patron traffic, encourage carpooling and the use of alternate travel modes. TDM strategies may also influence the travel patterns of non-attendee road users by encouraging a trip time shift or a change in travel mode. The resulting reduction in traffic demand reduces travel times for both event patrons and non-attendee road users.

Table 3-31 contains a summary of travel demand management strategies.

Table 3-31  
Travel Demand Management Strategies

STRATEGY	DESCRIPTION	TECHNIQUES	USER GROUP
High occupancy vehicle (HOV) incentives	<ul style="list-style-type: none"> <li>Increase the number of persons traveling in each vehicle.</li> </ul>	<ul style="list-style-type: none"> <li>Consider continuing HOV restrictions on HOV lanes to later weekday hours, or even into weekend hours, in order to encourage event patrons to carpool.</li> <li>Reduce parking fees for vehicles with more than two people.</li> <li>Provide free advertising for private lots to balance discounts given for HOV parking.</li> </ul>	<ul style="list-style-type: none"> <li>Event patrons</li> <li>Non-attendee road users</li> </ul>
Event patron incentives	<ul style="list-style-type: none"> <li>Encourage event patrons to arrive early or leave late in order to reduce peak traffic demand.</li> </ul>	<ul style="list-style-type: none"> <li>Consider departure strategies that encourage spectators to stay late after an event:                             <ul style="list-style-type: none"> <li>Post-event fireworks or concert</li> <li>Special programming on stadium video screens</li> <li>"Meet the mascot" promotion for children</li> <li>Special discount with a ticket stub at nearby restaurants and pubs</li> <li>Extended parking, at no additional cost, for event goers to encourage their patronage of downtown restaurants and shops after an event.</li> </ul> </li> <li>Consider arrival strategies that encourage spectators to arrive early before an event:                             <ul style="list-style-type: none"> <li>Registration in free drawings and contests that occur before the event</li> <li>Early opening of venue restaurants and/or offering of special discounts</li> <li>Tailgating encouraged in venue parking areas</li> <li>Encouraging spectators to watch teams warm-up before the game</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Event patrons</li> </ul>
Bicyclist accommodation	<ul style="list-style-type: none"> <li>Encourage the use of bicycles in traveling to/from the event.</li> </ul>	<ul style="list-style-type: none"> <li>Provide proper bicycle paths (existing and temporary).                             <ul style="list-style-type: none"> <li>Maximization of safety for bicyclists</li> <li>Avoidance of roadways with higher traffic volumes due to the event</li> </ul> </li> <li>Provide security in bicycle parking areas.                             <ul style="list-style-type: none"> <li>Staffing to prevent bicycle theft</li> </ul> </li> <li>Locate bicycle parking close to venue entrance.</li> <li>Provide bicycle racks on transit buses to allow spectators to access mass transit while carrying a bicycle.</li> </ul>	<ul style="list-style-type: none"> <li>Event patrons</li> </ul>
Local travel demand management	<ul style="list-style-type: none"> <li>Increase the use of public transit.</li> <li>Encourage car pools.</li> <li>Shift work hours.</li> <li>Shift commercial truck travel routes and delivery schedules.</li> </ul>	<ul style="list-style-type: none"> <li>Encourage alternate travel choices.                             <ul style="list-style-type: none"> <li>Avoidance of travel during times of event ingress and egress</li> <li>Avoidance of travel near event venue</li> </ul> </li> <li>Encourage businesses to implement TDM strategies.                             <ul style="list-style-type: none"> <li>Telecommuting</li> <li>Carpooling</li> <li>Flexible hours</li> <li>Modified delivery schedules</li> </ul> </li> <li>Early release from work on event dates for infrequent night events</li> <li>Use media to announce alternate routes to and around the event.</li> <li>Contact commercial trucking companies.                             <ul style="list-style-type: none"> <li>Times to avoid routes serving the event venue</li> <li>Reduction of number of truck trips</li> <li>Shifting of some truck trips to nighttime (non-event) hours.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Non-attendee road users</li> </ul>

## Transit Service

Modifications to existing transit service for a special event represent TDM strategies. The focus of the public transit agency is to increase ridership during the event by increasing the attractiveness of the service that it provides. In many locations and for many types of special events, additional ridership to and from special event sites can provide substantial additional revenue for the transit system at little additional cost. Also, transit system use may relieve traffic congestion around the venue.

Table 3-32 contains a summary of transit service strategies.

## Pre-Trip Traveler Information

Various traveler information techniques are used to disseminate information to the public, including both event patrons and non-attendee road users, so they can be better informed when planning their trip to a planned special event, or around an event.

Table 3-33 lists techniques used to provide pre-trip information to the traveling public.

The primary function of pre-trip information involves assisting drivers with decisions regarding route planning, travel mode, and the time of day to travel. Accurate pre-trip travel information will provide benefits to all transportation system users in the form of time and cost savings.

Pertinent information that event patrons may want before beginning their trip include:

- Best driving route to the venue from specific origins (e.g., cities or freeways)
- Best public transit route
- Parking area locations and parking fees, access to disabled parking spaces, and times that the parking areas open before the event
- Recommended event ingress and egress routes, particularly if different for arrivals and departures

Table 3-32  
Transit Service Strategies

STRATEGY	TECHNIQUES
Public transit service expansion	<ul style="list-style-type: none"> <li>• Maximize use of public transit.               <ul style="list-style-type: none"> <li>○ Existing service with additional vehicle hours</li> <li>○ Modifying existing service by creating a route deviation with a stop near the event venue</li> <li>○ Implementation of an express service to establish a special purpose route to and from the event site</li> </ul> </li> </ul>
Express bus service	<ul style="list-style-type: none"> <li>• Discourage event patrons from driving their vehicles to the event site due to expected site parking deficiencies and anticipated roadway congestion.               <ul style="list-style-type: none"> <li>○ Using express bus service between a park and ride facility or remote parking lot and event venue</li> <li>○ Using park and ride lots that best intercept spectator traffic as it approaches the event site.</li> </ul> </li> </ul>
Charter service	<ul style="list-style-type: none"> <li>• Use a contract service to provide transportation directly to the event site from outlying areas (e.g., other neighborhoods and cities).</li> <li>• Consider both charter bus operations as well as charter rail service.</li> </ul>
Transit service marketing	<ul style="list-style-type: none"> <li>• Establish a comprehensive transit marketing program.               <ul style="list-style-type: none"> <li>○ Informing the public of the availability of public transit service to/from the event venue</li> <li>○ Convincing the public to use the service</li> </ul> </li> </ul>

Table 3-33  
Pre-Trip Traveler Information  
Dissemination Techniques

TECHNIQUE
<ul style="list-style-type: none"> <li>• Internet</li> <li>• Telephone information systems</li> <li>• Public information campaign</li> <li>• Event and venue transportation guide</li> <li>• Kiosks</li> <li>• Television</li> <li>• Newspapers</li> <li>• Changeable message signs</li> <li>• Highway advisory radio</li> </ul>

- Up-to-the-minute roadway information (e.g., current traffic conditions and weather conditions)
- Estimated travel time by different travel modes
- Event information such as times and schedules
- Recommended speed/safety advisories
- Scheduled roadway construction and maintenance lane closures
- On-street parking restrictions during the event
- Heavy vehicle restrictions
- Expected delays leaving the event

## IMPLEMENTATION ACTIVITIES

Implementation activities mark a transition phase between event operations planning and day-of-event activities. Therefore, the phase involves both the event planning team and traffic management team. This phase includes activities key to the success of any planned special event, including implementation plan development, stakeholder review and testing exercises, and personnel resource management and training. The underlying objectives of these activities are to: (1) improve the efficiency of traffic management plan deployment and (2) increase traffic management team preparedness. In turn,

this creates a more responsive traffic management team and fluid team operation, thus translating to better transportation system performance on the day-of-event.

## Implementation Plan

An implementation plan details the actions required to put a traffic management plan into effect on the day-of-event. Its purpose is to: (1) define personnel assignments that indicate the roles and responsibilities of individual traffic management team personnel on the day-of-event, (2) describe a scenario-based, operations *game plan* at the management-level, and (3) communicate instructions and organize personnel at the field-level. It is intended for use by individual traffic management team personnel at the command post and in the field. While the traffic management plan indicates *how* traffic, parking, and pedestrian operations will be managed, the implementation plan describes the *what*, *when*, and *where* in terms of personnel and equipment resource deployment needed to execute traffic management plan provisions.

Table 3-34 presents an implementation plan checklist. All planned actions, even if not explicitly noted in the table, must include what, when, and where instructions. For multi-day or multi-venue events, traffic control strategies and resource deployment can be organized through matrices for easy reference.

## Review and Testing

Review and testing allows the traffic management team to identify potential limitations of the traffic management plan *prior to* the day-of-event. With stakeholder agencies representing various jurisdictions and disciplines, review and testing promotes traffic management team coordination and in-

Table 3-34  
Implementation Plan Checklist

ELEMENT	ACTION
Command post operation	<ul style="list-style-type: none"> <li>• Indicate agencies staffing the command post in addition to the name and schedule of agency representatives.</li> <li>• Specify equipment needs and times of delivery and set-up.               <ul style="list-style-type: none"> <li>○ Computers, networking, temporary phone and modem lines, televisions and radios, dry erase board or flipchart(s), message board, office supplies, furniture.</li> </ul> </li> <li>• Indicate procedures for accessing the command post (e.g., clearing security)</li> <li>• Specify vehicle parking area and helicopter landing area.</li> </ul>
Operations timeline	<ul style="list-style-type: none"> <li>• Indicate command post location and hours of operation.</li> <li>• State parking, traffic control, and service patrol shifts.</li> <li>• State when egress plan goes into effect.</li> <li>• Specify parking area and venue gate open/close times.</li> <li>• Summarize the location and time (close/reopen) of planned full/partial road closures.</li> <li>• Include event schedule, such as event start time, event end time, and significant activities during the event (e.g., parade detail and headline entertainment schedule).</li> <li>• State times of sunrise and sunset, if applicable to traffic control measures (e.g., use of portable lighting).</li> </ul>
Operations management	<ul style="list-style-type: none"> <li>• Indicate scenario-based criteria for implementing traffic management plan components (e.g., traveler information message sets, traffic flow routing, reversible lane operations, etc.)</li> <li>• Include a series of operations details for sequential time segments on the day-of-event.</li> <li>• Specify contingency plans – indicate available plans and associated equipment/personnel resource deployments and changes in traffic management team command.</li> <li>• Indicate procedure for revising the traffic management plan on the day-of-event.</li> <li>• State protocol for terminating traffic and parking management detail.</li> <li>• Summarize traffic management plan changes since previous event.</li> </ul>
Contact information	<ul style="list-style-type: none"> <li>• State contact information for individual traffic management team members.               <ul style="list-style-type: none"> <li>○ Home phone, work phone, cell phone, pager number, fax number, e-mail address, unit/radio assignment, rank, detail assignment, vehicle assignment.</li> </ul> </li> <li>• Include contact information for agencies involved in contingency plan deployment.</li> </ul>
Communications	<ul style="list-style-type: none"> <li>• List radio call-sign of traffic management team members.</li> <li>• Indicate guidelines and restrictions regarding use of various radio channels or talkgroups (e.g., field-to-field communications, field-to-command post communications, non-event communications).</li> </ul>
Traffic management team organization	<ul style="list-style-type: none"> <li>• State agency duties, responsibilities (e.g., traffic control, traffic signal operation, traveler information device operation, etc.), and jurisdiction.</li> <li>• Specify highest-ranking agency representative on the day-of-event in addition to mid-level (e.g., zone) managers.</li> <li>• Summarize chain of command.</li> </ul>
Equipment and infrastructure management	<ul style="list-style-type: none"> <li>• Mandate pre-event equipment check (e.g., CMS operation).</li> <li>• Specify locations and quantities of traffic control and other support (e.g., portable lighting) equipment. Indicate equipment owner and, if applicable, power source.</li> <li>• Indicate equipment delivery, installation, and removal schedule in addition to personnel assignments.</li> <li>• Indicate schedule and location (zone) assignment of available equipment maintenance crews on the day-of-event.</li> <li>• Include equipment operating instructions (e.g., remote HAR programming).</li> <li>• Indicate temporary static sign locations and descriptions.</li> <li>• Specify planned traveler information message sets (e.g., CMS and HAR).</li> <li>• Specify personnel responsible for monitoring and programming traveler information devices on the day-of-event.</li> </ul>



Table 3-34 (cont'd)  
Implementation Plan Checklist

ELEMENT	ACTION
Equipment and infrastructure management (cont'd)	<ul style="list-style-type: none"> <li>• Indicate protocol and personnel charged with implementing different traffic signal timing plans as needed on the day-of-event.</li> <li>• Indicate protocol and personnel charged with monitoring traffic surveillance equipment (e.g., CCTV).</li> <li>• List available maintenance personnel and equipment resources.</li> </ul>
Location-specific traffic and pedestrian control	<ul style="list-style-type: none"> <li>• Indicate agency personnel (e.g., number of staff or individual name, rank, and unit/radio assignment), report date and time.</li> <li>• Specify schedule and route of roving service patrols.</li> <li>• State protocol and personnel assignments for maintaining unobstructed emergency access routes.</li> <li>• Specify task instructions, including traffic and pedestrian flow restrictions and permitted movements (e.g., special allowances for local traffic, buses, etc.).</li> <li>• Summarize the location and time (close/reopen) of planned full/partial road closures encompassing a particular location.</li> <li>• Provide step-by-step directions in order for substitute personnel to quickly learn protocol.</li> <li>• Include explanation, supplemented with graphics, of special event parking area permits and event passes.</li> </ul>
Post-event evaluation	<ul style="list-style-type: none"> <li>• Describe components of post-event field personnel debriefing. <ul style="list-style-type: none"> <li>○ Time of heavy traffic and pedestrian flow</li> <li>○ Qualitative assessment of traffic and pedestrian operations at location.</li> <li>○ Recommendations to improve traffic and/or pedestrian flow at location</li> </ul> </li> </ul>

creases stakeholder familiarity of the duties, responsibilities, and capabilities of other stakeholders.

While a traffic management plan can cover many contingencies, it cannot cover all possibilities. Review and testing can allow participants to see how they handle various scenarios and how varying elements can affect the plan. The testing of the plan should be considered part of the overall training that is needed for traffic management team personnel to become familiar with the plan and their role in it.

### Stakeholder Simulation Exercises

The simulation exercise can test important elements such as: (1) interagency communications, (2) deployment of personnel and equipment, and (3) information gathering and dissemination. While stakeholders may conduct the exercise at the venue where the

planned special event will occur, much of the plan will involve permanent TMCs or temporary command posts which are in operation before, during, and after the event. Therefore it is important that all of the responsible agencies and TMCs, which may have a role to play during the actual event, be involved with the simulation exercise.

Exercises can take on two different forms:

- A tabletop exercise
- A full-scale simulation

The purpose of both types of exercises is to: (1) test the written assumptions in the traffic management plan and (2) see what must be changed and how the plan can be improved. No matter how thorough a traffic management plan may be, it can not account for all contingencies. The plan assumes participants will follow the steps laid-out, but individuals make mistakes and equipment may

fail. Both the tabletop and full-scale simulation allow the participants to see how they react to those unexpected events.

In both a tabletop exercise and a full-scale simulation, participants receive and use the written traffic management plan and implementation plan as the basis for their actions. Table 3-35 lists elements of a typical exercise.

Table 3-35  
Elements of a Stakeholder Simulation  
Exercise

ELEMENT
<ul style="list-style-type: none"> <li>• Identify the stakeholders who will participate in the exercise.</li> <li>• Distribute copies of the traffic management plan and implementation plan to participants.</li> <li>• Develop a script for the exercise, including surprise elements, which may not be addressed in the traffic management plan.</li> <li>• Provide a timeline for the exercise to play-out (the exercise will probably take place in an accelerated timeframe compared to a real-life event).</li> <li>• Identify reviewers who will watch the exercise and take notes.</li> <li>• Provide time to review the exercise.</li> <li>• Modify the plan based on what was learned during the exercise.</li> </ul>

### Equipment Testing

A wide variety of equipment may be used to manage travel during a planned special event. This includes communications equipment and equipment in the field, which supports the traffic management plan and helps the traffic management team manage the event. Equipment that may need to be tested includes:

- Center to center communications
- Center to field communications
- Changeable message signs, both fixed and portable
- Highway advisory radio
- CCTV

While testing is no guarantee that equipment will work as expected, it is useful in identifying unknown problems and potential problems before the event.

### **Personnel**

Traffic management plan implementation on the day-of-event involves personnel duties ranging from trivial tasks to responsibilities critical to the safety and mobility of transportation system users. A traffic management team comprised of supervisors and field staff having experience in assigned duties and responsibilities represents a key to successfully managing travel for planned special events. Experienced personnel should exist at all levels in the traffic management team hierarchy: interagency command, agency command, and field operations. However, supplementing experienced personnel with temporary staff and volunteers on the day-of-event also provides advantages that (1) reduce personnel cost as public agency personnel likely require overtime wages on the day-of-event, (2) permit public agencies to adequately meet other daily staffing requirements, and (3) provide expanded control over transportation operations and greater convenience to event patrons.

In some cases, the amount of personnel required to implement traffic management plan strategies (e.g., traffic/pedestrian control, parking, surveillance) on the day-of-event, coupled with implementation plan assignments such as equipment delivery and installation, may exceed the staffing capabilities of agencies and contractors involved in managing travel for a planned special event. As a result, the recruitment and training of temporary staff and volunteers becomes paramount to the success of day-of-event operations.

## Volunteer Recruitment

Prior to initiating volunteer recruiting efforts, event planning team and/or traffic management team stakeholders must determine the number of volunteers needed. This represents a function of the number of potential volunteer work assignments and number of available volunteer supervisors. An alternative approach to recruiting after traffic management plan development involves: (1) soliciting the public, through event advertisements, for volunteers early in the event operations planning phase and (2) developing a volunteer contact list for later reference as conditions warrant.

Because different special event work assignments peak varying levels of interest among volunteers, stakeholders should recruit additional volunteers for certain low-interest assignments. This avoids a potential shortfall relative to volunteers not showing up for work on the day-of-event.

## Training Activities

Training for volunteers and temporary staff ensure these personnel: (1) understand the traffic management plan component governing their assignment, (2) disseminate accurate information to event patrons and supervisors, and (3) understand traffic management team operations protocol. Training involves the distribution of reference material, pre-event seminars, or both.

Table 3-36 lists general volunteer training activities. Since most volunteers do not possess relevant experience in managing transportation and parking operations, training activities should address all of the potential decision-making scenarios that volunteers may encounter in addition to day-of-event communications.

Table 3-36  
General Volunteer Training Activities

ACTION
<ul style="list-style-type: none"> <li>• Discuss traffic management team chain of command.</li> <li>• Summarize job training and required duties.</li> <li>• Schedule review.</li> <li>• Present examples of typical and contingency scenarios and how volunteers should react.</li> <li>• Provide background in customer service.</li> <li>• Describe field communications infrastructure.</li> <li>• Discuss proper radio communications protocol.</li> <li>• Explain types of parking area permits and event passes.</li> <li>• Discuss strategies for accommodating persons with disabilities (e.g., review disabled accessible routes and site facilities).</li> <li>• Review security guidelines.</li> <li>• Review guidelines for interacting with the media.</li> <li>• Indicate transportation information and alternatives for volunteer access to event venue site.</li> </ul>

## DAY-OF-EVENT ACTIVITIES

Day-of-event activities focus on the daily implementation of the traffic management plan in addition to traffic monitoring. The traffic management team represents a distinct stakeholder group charged with executing the traffic management plan and modifying the plan as warranted by real-time conditions on the day-of-event. Team organization includes agency representatives stationed at a central command post, at secondary command posts, at a permanent TMC, and at strategic locations in the field for traffic control and observation. The traffic management team generally functions under a formal management process, namely the Incident Command System, to ensure successful traffic management plan deployment and minimal impact to transportation system users. Traffic monitoring provides traffic and incident management support in addi-

tion to performance evaluation data. Timely deployment of contingency plans developed during the event operations planning phase depends on the accurate collection and communication of real-time traffic data between traffic management team members.

### Traffic Management Team

The traffic management team includes not only many of those stakeholders that have been involved during the event operations planning phase, but all those who may be involved for the first time on the day of the event. Table 3-37 lists typical stakeholders involved in day-of-event activities.

Table 3-37

Traffic Management Team Stakeholders

<b>STAKEHOLDER</b>
<ul style="list-style-type: none"> <li>• Traffic operations agency</li> <li>• Transit agency</li> <li>• Law enforcement</li> <li>• Public safety</li> <li>• Event organizer</li> <li>• Transportation consultants</li> <li>• Traffic control contractors</li> <li>• Emergency management agency</li> </ul>

### Stakeholder Roles and Coordination

A planned special event represents a source of non-recurring congestion where, similar to a traffic incident, stakeholders must adopt a formal management process to ensure successful traffic management plan deployment and minimal impact to transportation system users. The Incident Command System can be used to handle traffic management during planned special events. The ICS organizes and coordinates multi-agency response to an incident by establishing responsibilities and lines of authority. An Incident Commander has overall responsibility for managing the planned special event.

### Command Post

The ICS will most likely be used in a multi-agency command post. The command post will probably be at or near the venue where the planned special event takes place. Depending upon the size of the event, secondary command posts may exist. These secondary command posts may take on specific areas of responsibility, such as law enforcement or traffic control.

In some instances, a permanent TMC may serve as the primary command post. The advantage of using the TMC is that many of the communications resources and other needed tools are already in place.

Advantages of a single command post include: (1) key agencies are represented in a single location and (2) communications among agencies are simplified.

An advantage of secondary command posts is that event management can be more easily switched if a problem develops at the primary command post.

### Resource Planning

The plan developed for the resources needed for the event represent the collected best opinion on what is needed. Resource planning involves the following two parts: (1) determining the scope and amount of resources that will be used on the day-of-event and (2) identifying resources in advance in case the traffic management team needs more resources than planned to implement the traffic management plan.

The most important resource that stakeholders must plan for involve personnel resources. Planning considerations include:

- What type and quantity of skilled personnel are needed?
- Where should personnel be deployed?
- What responsibilities will individual personnel have?

### Managing Traffic

While the traffic management plan and supporting implementation plan notes how stakeholders expect to manage traffic, the actual management of traffic on the day-of-event may differ from what the plan calls for. Traffic incidents, changing weather conditions, and other unexpected events can all cause the traffic management plan to be modestly modified or completely changed. After safety, successfully managing traffic represents the reason why stakeholders developed the traffic management plan in the first place and that goal must remain paramount.

As part of the traffic management plan, various scenarios can be addressed from best case to worst case, together with likely variations. Having different scenarios and response plans specified in the traffic management plan will help managers more quickly respond to changes. Again, not every variation can be noted, but experienced staff can modify what the traffic management plan calls for.

### Evaluation Activities

Although many hours have been spent creating the traffic management plan, the plan should remain flexible with the ability to modify and enhance it with necessary changes based on real-time traffic conditions. Updates can continue through the course of the planned special event, accounting for new situations and unexpected events. Evaluation of the plan is an ongoing

activity during the event, and participants should contribute their insights as they witness the event unfolding. The traffic management team must be open to modifications of what had been agreed to during the event operations planning and implementation activities phases.

Table 3-38 indicates key traffic management plan evaluation activities on the day-of-event.

Table 3-38  
Traffic Management Plan Evaluation Activities

ACTION
<ul style="list-style-type: none"> <li>• Establish briefing schedule and location (e.g., command post).</li> <li>• Identify ranking representative of each stakeholder agency participating in briefings.</li> <li>• Conduct day-of-event briefing.               <ul style="list-style-type: none"> <li>○ Situation status</li> <li>○ Objectives and priorities</li> <li>○ Current organization</li> <li>○ Personnel and equipment resource assignments</li> <li>○ Communications</li> <li>○ Concerns and related issues</li> <li>○ Recommended changes</li> </ul> </li> <li>• Achieve consensus on recommended changes.</li> </ul>

### **Communication**

In most areas of the country, interoperable communications, in which all agencies are able to communicate on a common radio frequency, is not yet a reality. That being the case, it is necessary for a communication structure and protocol to be established. As shown in Table 3-39, the structure should include the noted primary considerations.

Whatever frequency is used, it is important that all those who must use it be able to access the channel and that coverage include all areas where operations will take place.

Table 3-39  
 Communications Structure Primary  
 Considerations

CONSIDERATION
<ul style="list-style-type: none"> <li>• What radio channels or frequencies will be used.</li> <li>• Who will use these channels.</li> <li>• Will a common lexicon be used for communications.</li> </ul>

Another important part of the protocol involves using *common language* on a multi-agency frequency. An increasing number of agencies are now using clear language protocols on their radio frequencies, and these standards should be followed if multiple agencies have to communicate with one another. Clear language simply says that commonly understood words and phrases are used instead of codes.

#### Interagency Communication

To minimize confusion and extraneous information being shared among agencies, the question of who will use which frequencies should be decided during the planning process. Stakeholders should understand: (1) how they can reach other traffic management team members during the event, (2) which channels they will be found on, and (3) what information should be shared.

Since many of the stakeholders comprising the traffic management team may not be accustomed to interagency coordination, they should understand the importance of sharing information with their interagency partners. Information not shared with others who are affected could lead to difficulties managing traffic and cause mistrust among participating stakeholders.

#### Equipment

The participating agencies may normally operate on a wide variety of systems. VHF, UHF, and 800 MHz trunked systems are among those in common use, and agencies cannot normally communicate from one system to another. Before the right equipment can be identified, it is important for the stakeholders to understand what they want the communications system to do. Is it simply a means to share information, or does real-time coordination have to take place? Who has to operate on the channel? Where will they be located? Once these questions are answered, it becomes possible to identify the appropriate equipment to use for the event.

#### Interacting with the Media

The media may find that the usual means they use to get traffic information are unavailable during the planned special event. Due to security concerns, airspace near the site may be off limits. This makes the media more dependent upon the agencies to provide them with updates.

Unless a proactive decision is made otherwise, most agencies would not want the media to call the command post for updates. Calls to and from the TMC may be the best way to get information to the media. Wherever the media are directed to call, it is important that the person handling those calls has the most up-to-date, accurate information available. For the media to trust this source, they must believe that this is the best place to get information. Since most media want to verify information on their own, agencies should be prepared for the media to seek out other sources. The media may also acquire information via cell phones from event patrons driving to the planned special event, and the media will want to verify the information the public provides with the transportation agencies. If trust is lost be-

tween the media and the agencies, the agencies may lose control of the flow of information.

### Traveler Information Dissemination

Traveler information will have two important audiences during the event: (1) those who plan to attend and (2) those who want to avoid the delays the event may cause. In both cases, traveler information tools can be used to effectively disseminate information.

On the day-of-event, it must be clear who will update traveler information devices and how timely and accurate information will get to the officials responsible for providing the updates. These individuals must be part of the communication chain. Assigning a dedicated person to handle the updates would be ideal. Conflicting priorities could result in out-of-date information being disseminated if one person is asked to handle too many tasks.

## **Traffic Monitoring**

Agencies responsible for managing planned special events require numerous types of information on the current conditions of the system to support delivery of effective service for the planned special event. This required information varies widely depending on: (1) the service being provided, (2) how often it needs to be collected, and (3) how accurate it needs to be.

In a traffic management system, the traffic monitoring component, or surveillance component, is the process in which data is collected in the field. This data is used to supply information about conditions in the field to other system components including personnel located in the field on the day-of-event.

The information collected through the monitoring effort is valuable for post-event activities. After the event, the information gathered and/or observed can be used as part of the program or event evaluation. The data collected provides: (1) input into estimating the benefits of the traffic management plan and operation and (2) input into planning for future planned special events.

### Performance Evaluation Data

Performance measures provide the basis for identifying the location and severity of problems (such as congestion and delay), and for evaluating the effectiveness of the implemented planned special event management strategies. In essence, performance measures are used to measure how the transportation system, and therefore the traffic management plan, performs with respect to the adopted goals and objectives, both for ongoing management and operations of the special event and the evaluation of future options.

In managing travel for planned special events, a direct relationship exists between the performance measures selected and the data needed in the performance measurement process. The data and information used in decision-making must be of high quality because the remedies have to be performed immediately. They must originate from reliable, consistent sources and meet the needs of the decision makers. Moreover, the decision makers must have confidence in the information, or it will not be used.

## **POST-EVENT ACTIVITIES**



Post-event activities range from informal debriefings between agencies comprising the traffic management team to the development

of a detailed evaluation report. Qualitative evaluation techniques include individual debriefings of traffic management team members, patron surveys, and public surveys. Quantitative evaluation techniques include performing an operational cost analysis and analyzing performance evaluation data collected during the traffic monitoring process. Evaluation results, identifying needs and successes, represent valuable input toward planning for future planned special events and creates an iterative process.

### Evaluation Framework

The first steps in the evaluation of the traffic management plan implemented for the planned special event take place during the event operations planning phase. Knowing ahead of time that a post-event evaluation will occur allows participants to make provisions for the review. In particular, this means collecting data during the event, which can be used as part of the review process. At a minimum, this would include data indicating how the system performed and a log of what took place during the event.

#### Measures of Effectiveness

Measures of effectiveness represent quantitative measures that give some insight into how effectively a unit is performing. MOEs are measures of activity that, while not reflecting performance directly, show workload and trends. To evaluate how well the traffic management plan worked, some form of measurement is necessary. In addition to telling stakeholders how effective their plan was, the measurements provide transportation professionals the means to demonstrate to others, including the media and elected officials, how well the plan may have worked.

There are two areas of effectiveness that should be measured, *internal* and *external*. Table 3-40 indicates examples of internal measures. Table 3-41 presents a list of external measures.

Table 3-40  
Internal Measures of Effectiveness

MEASURE
• Number of messages displayed on changeable message signs
• Number of messages broadcast on highway advisory radio
• Number of traffic incidents handled
• Number of messages transmitted between stakeholders
• Number of traffic signal timing changes
• Number of times a ramp(s) was closed and time/duration of closure(s)

Table 3-41  
External Measures of Effectiveness

MEASURE
• Volume of traffic on major routes
• Volume of traffic on alternate routes
• Volume of traffic entering and exiting the site and parking areas
• Hours of delay
• Number of event patrons and participants utilizing transit to and from the event
• Travel times
• Modal split
• Average vehicle occupancy

#### Application to Future Events

Whether the event is a one-time only happening or an annual occurrence, what has been learned through the evaluation can contribute toward proactively improving travel management for all planned special events occurring in a region.

To be beneficial for future planned special events, the results of the evaluation should be documented and made accessible. In the case of a one-time only event, the evaluation may show both general and specific insights, which can be used for other future planned



special events. These could include areas such as traveler information, interagency communications, and the planning process itself.

For recurring events, a file providing the cumulative benefit of lessons learned will help sharpen the traffic management plan developed for each new occurrence. It is also important to remember that with recurring events, slight changes in circumstances will require modifications to the plan.

### Participant Evaluation

Participant evaluation includes: (1) stakeholder debriefing, (2) patron survey, and (3) public survey.

#### Stakeholder Debriefing

At the conclusion of the planned special event, a debriefing session should be held. The stakeholder debriefing is an opportunity to bring together those involved and impacted by the planned special event. In it, these individuals, and the groups they represent, can compare what the plan called for and what actually took place. They can also examine areas the plan may not have addressed but turned out to be issues in hindsight. All of those who were involved in creating the traffic management plan, as well as key people who played a role during the event itself, should be present for this session. This includes stakeholders forming the event planning team and traffic management team. Table 3-42 lists elements of a stakeholder debriefing.

#### Patron Survey

Although the goal is to keep traffic moving on all of the transportation facilities, the patrons are the ultimate customers of everyone involved in the traffic management of the

planned special event. It is largely for their benefit the traffic management plan was created in the first place, and they are the ones likely to suffer the greatest consequences if the plan does not work. Therefore, the viewpoint of event patrons is needed if a credible evaluation of the plan is to be done.

Table 3-42  
Elements of a Stakeholder Debriefing

ELEMENT
<ul style="list-style-type: none"> <li>• Introductions of individuals and the roles they played (if not obvious)</li> <li>• Explanation that the debriefing is not designed to find blame for anything which may have gone wrong, but to identify areas of improvement for future planned special events</li> <li>• Distribution of a chronology of the special event, preferably one which melds individual agencies' own chronologies</li> <li>• Review of the timeline of events</li> <li>• Discussion of other areas of concern</li> <li>• Next steps to incorporate lessons learned</li> </ul>

Sample questions for possible inclusion in a patron survey include:

- Were you aware of any special travel information before the event?
- Did you find information provided en-route to the event (e.g., via signs, radio) helpful?
- Did you experience any unexpected problems approaching the venue?
- Do you have any suggestions or other comments you wish to offer?

#### Public Survey

The public survey takes in a wider audience than the patrons. This includes those who may have been impacted by the planned special event even though they did not attend the event. Since this is a larger and more diverse group of stakeholders, it may be more difficult to identify and survey them.

Sample questions for possible inclusion in public survey include:

- Were you aware of the event before it took place?
- If you were aware of the event beforehand, would you have altered your plans based on that information?
- Did you change your plans or schedule as a result of the event?
- How would you evaluate the effectiveness of traffic management efforts for this event (poor, good, excellent)?
- Do you have any additional comments or suggestions based on your experience?

### Post-Event Debriefing

A post-event debriefing should be held to review what took place. The purpose of the debriefing is to: (1) examine what took place, (2) compare it to what was expected to happen, (3) identify what worked well, and (4) determine areas of improvement for future planned special events.

It is important to remember that the post-event debriefing is not designed to be a time to blame individuals or agencies for what took place during the event.

Table 3-43 lists the broad topic areas that should be covered in the post-event debriefing.

Table 3-43  
Post-Event Debriefing Meeting  
Agenda Topics

TOPIC AREA
<ul style="list-style-type: none"> <li>• Purpose of meeting</li> <li>• The planning process</li> <li>• Interagency communications</li> <li>• Traffic management in and around the venue</li> <li>• Traffic management outside of the event site</li> <li>• Traveler information, including media</li> <li>• Lessons learned</li> </ul>

The purpose of the post-event debriefing is not to just identify what could have been done better but to note what was successful. The successes and lessons learned must be chronicled so that those stakeholders who are responsible for planning the next planned special event will be able to tap the wisdom of those who have done this before.

### Post-Event Report

Table 3-44 presents an outline of a typical post-event report.

Table 3-44  
Outline of Post-Event Report

<b>REPORT ORGANIZATION</b>
<ul style="list-style-type: none"> <li>• Outline report topics.</li> <li>• Document products of the event operations planning phase.</li> <li>• Identify key successes.</li> <li>• Present lessons learned.</li> <li>• Identify improvements for future events.</li> <li>• Configure to serve as a working document for future special event planning.</li> <li>• Review chronologically what took place.</li> <li>• Summarize both positive and negative aspects.</li> <li>• Include all stakeholder viewpoints.</li> </ul>
<b>OPERATIONAL COST ANALYSIS</b>
<ul style="list-style-type: none"> <li>• Examine operational costs.</li> <li>• Include staffing, overtime, and equipment for each involved agency.</li> <li>• Identify potential cost savings.               <ul style="list-style-type: none"> <li>○ Reallocation of personnel</li> <li>○ Division of responsibilities</li> <li>○ Use of technology</li> </ul> </li> <li>• Include total staffing, overtime, and equipment for all agencies.</li> </ul>
<b>QUALITATIVE EVALUATION</b>
<ul style="list-style-type: none"> <li>• Include survey of stakeholders.</li> <li>• Include survey of event patrons.</li> <li>• Include survey of public.</li> </ul>
<b>QUANTITATIVE EVALUATION</b>
<ul style="list-style-type: none"> <li>• Provide numerical picture of the event.               <ul style="list-style-type: none"> <li>○ Costs</li> <li>○ Hours saved</li> <li>○ Traffic incidents handled</li> <li>○ Passengers carried on various modes.</li> </ul> </li> <li>• Present cost/benefit analysis.</li> </ul>

Since the process of handling the planned special event follows a timeline, the easiest way to organize the report may involve reviewing what took place chronologically. An alternative method of organizing the report concerns dividing it by subject areas such as traffic management, traveler information, command center operation, and communications.

The report should summarize both positive and negative aspects. Remember, this is not designed to be a public relations piece to promote the handling of the planned special event but a working document to assist future special event planning.

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