

# MDT SPECIAL EVENTS PLANNING SYNTHESIS

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*prepared for*  
THE STATE OF MONTANA  
DEPARTMENT OF TRANSPORTATION

*in cooperation with*  
THE U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

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*May 2016*

*prepared by*  
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# MDT Special Events Planning Synthesis Final Report

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**ACRONYM LIST**

|        |   |
|--------|---|
| CCTV   | Closed Circuit Television                   |
| CDOT   | Colorado Department of Transportation       |
| CMAQ   | Congestion Mitigation and Air Quality       |
| CSP    | Colorado State Patrol                       |
| DA     | District Administrators                     |
| DMS    | Dynamic Message Sign                        |
| DOT    | Department of Transportation                |
| FHWA   | Federal Highway Administration              |
| HAR    | Highway Advisory Radio                      |
| HOV    | High Occupancy Vehicle                      |
| LTAP   | Local Technical Assistance Program          |
| MACOP  | Montana Association of Chiefs of Police     |
| MDA    | Missoula Downtown Association               |
| MDT    | Montana Department of Transportation        |
| MOU    | Memorandum of Understanding                 |
| MUTCD  | Manual on Uniform Traffic Control Devices   |
| TMC    | Traffic Management Center                   |
| TOC    | Traffic Operation Center                    |
| TRIS   | Transportation Research Information Service |
| U of M | University of Montana                       |
| WSDOT  | Washington Department of Transportation     |
| WSP    | Washington State Patrol                     |
| WTI    | Western Transportation Institute            |
| WYDOT  | Wyoming Department of Transportation        |

## EXECUTIVE SUMMARY

Planned special events such as sporting events and festivals draw large crowds and limit the capacity of a transportation network built for daily traffic. To alleviate some of the transportation challenges, local and state governments generally adopt a broad range of special event traffic management strategies to improve transportation options, operations, and mobility. In Montana, traffic management practices have typically been done on a case-by-case basis and have not been documented for adaptation and use by other communities.

The Montana Department of Transportation (MDT) initiated this project to document existing special event management practices in Montana, to identify the best management practices used in other states, and to provide MDT and local governments with recommendations for improving traffic management strategies. The project consisted of three principal tasks: a literature review, an assessment of MDT's current practices (including meetings, surveys, and interviews with MDT personnel), and a survey of local stakeholders (city staff and event organizers) regarding their practices and experiences managing special events.

### Literature Review

The results of this literature review suggest that there is little documentation specific to transportation management strategies for events in rural and small urban environments. However, strategies suggested for larger events (i.e. from FHWA guidance) can be successfully implemented in a rural or small urban environment. In addition, researchers identified relevant special event processes from three neighboring states (Colorado, Wyoming, and Washington) that may be applicable in Montana.

Based on these sources, the literature review identified strategies organized around three stages of special events: pre-event, day-of-event, and post-event.

- **Pre-event.** Based on the literature, a recurring characteristic of successful event transportation management is encouraging communication among all stakeholders. Pre-event planning activities typically include stakeholder planning meetings, special permits or written agreements, transportation management plans, traffic control plans, and public information plans;
- **Day-of-event.** The development of detailed and specific transportation management plans can help to manage the unique challenges for each special event. This plan needs to consider activities for the day-of-event including: motorist information, traffic management strategies, and travel demand management strategies; and
- **Post-event.** Post-event reviews, meetings, and de-briefing reports are widely used to discuss the successes and failure with all event stakeholders, document best practices and lessons learned, and improve planning for future events.

### MDT Current Practice Assessment

To assess MDT's current special event practices, the research team reviewed prior MDT efforts to develop consistent special event guidance, conducted an in-person meeting with MDT officials, and conducted a survey of MDT personnel from various regions and divisions.

MDT's primary role in special event management is to approve events that will occur on or affect the state transportation system. Organizers must submit a permit application, which is available on the MDT website. The MDT special event permit application provides some consistency for how impacts to the transportation system (traffic flow, emergency vehicles) will be handled and includes a list of MDT expectations. The application requires a full description of the special event (type, location, size, timeline), a traffic control plan describing detour routes and signing to be utilized, encroachment permit (if applicable), and liability insurance documents (if applicable). In some cases, coordinating with construction activities is required.

However, the assessment revealed that MDT offices and personnel have different practices for processing the applications, and they provide different levels of assistance to event organizers. These differences have evolved based on experience, available resources, and number of events that occur in the jurisdiction. Variations exist in the following areas:

- Deadlines for submitting permit applications;
- Criteria for approving/denying applications;
- Level of assistance provided by MDT to help organizers complete applications;
- Provision of technical assistance on day-of-event; and
- Provision of traffic control devices (cones, signs, etc.) to organizers.

## Local Agency Survey

The research team conducted a survey of local stakeholders and event organizers to document their experiences and insights into the special event management process. The team also conducted case studies of three cities that manage large or numerous special events, and reviewed special event permit applications from across the state. These tasks revealed a number of common challenges for special event organizers:

- Securing resources to comply with traffic control requirements;
- Finding certified flaggers to conduct traffic control;
- Enforcing parking and traffic management for large events; and
- Many events require organizers to submit both a city and MDT permit application.

Local stakeholders also shared many common best practices, including:

- Joint, coordinated advance planning and traffic management involving organizers, local government, MDT, and law enforcement;
- Public notification in advance of event;
- Traveler information signage and services (day of event);
- Parking and transportation alternatives (park and ride lots, shuttles, etc.);
- Use of experienced traffic management firm for traffic control; and
- Post-event reviews and evaluations to improve event management.

## Conclusions and Recommendations

Several state and federal resources exist that may be available to assist with special event costs or equipment purchases. However, most are geared toward large events in urban areas, so must be

further investigated for applicability in Montana. In addition, a number of states and cities have developed grant programs that may serve as models for Montana.

There are a number of specific actions that MDT personnel can take to improve the portion of the special events process for which they are responsible. In general, these actions include:

- Creation or enhancement of guidance materials;
- Provision of training to staff and organizers to facilitate consistency;
- Creation of specific guidance for bicycle and running events;
- Make guidance available on the MDT website; and
- Coordination with city staff on procedures and sharing of outreach materials.

While the actual special event transportation planning and management is the responsibility of the event organizer, there are several actions that MDT may want to investigate and consider that could facilitate improved transportation management at special events, including working with cities and annual event organizers on:

- Creation of a public-private partnership that could fund the purchase of traffic control devices for a rental program;
- Creation of a grant program to fund special event transportation management;
- Development of alternative funding strategies that allow organizers to pay for transportation or law enforcement costs; and
- Coordination with Montana LTAP to schedule, offer, and market flagger training and certification prior to “event” season.

## INTRODUCTION

Planned special events include sporting events (including university game days), concerts, festivals, country fairs, and conventions occurring at mostly permanent venues such as arenas, stadiums, racetracks, fairgrounds, convention centers, and university campuses. They draw large crowds and have an impact (e.g., congestion and delay) on the limited capacity of a transportation network built for daily traffic.

The communities in Montana host a variety of special events throughout the year, all over the state. Although the communities in Montana are small urban and rural, they are no exception to the travel demand a special event places on the transportation network, such as those traveling to the event, those providing services for the event, and the day-to-day traffic using the adjoining roadways.

To alleviate some of the transportation challenges that a special event causes, local and state governments generally adopt special event traffic management strategies to improve transportation options, to manage transportation resources, and to communicate with the traveling public. These strategies can include:

- Special transit, shuttle and ridesharing services;
- Pedestrian and cycling improvements;
- Parking management and shared parking;
- Vehicle restrictions;
- Commute trip reduction programs;
- Marketing of alternative transportation options;
- Priority access for emergency, service, freight and high occupant vehicles in traffic and parking; and
- Transportation planning that provides appropriate redundancies and efficiencies to accommodate special and unexpected demands.

Montana has been successful in implementing special event travel demand management strategies for both small scale and large scale events (e.g., MetraPark in Billings, MSU Bozeman, and University of Montana, among others). However, the traffic management practices have typically been done on a case-by-case basis and have not been documented for adaptation and use by other communities around Montana.

The Montana Department of Transportation (MDT) initiated this synthesis project to develop and document best management practices for State maintained facilities, which will serve as a resource to local governments and communities for traffic management strategies for planned special events.

### Research Purpose and Objectives

The purpose of this project is to document existing special event management practices in Montana, to identify the best management practices used across the U.S. that are applicable to Montana, and to provide MDT and local governments with recommendations for implementing traffic management strategies for special events.

The objectives for this project are to:

- Assess and document existing special event management practices and procedures in Montana, including roles and responsibilities and current thresholds for actions;
- Identify best practice tools and strategies from within Montana and from other locations across the U.S. that could be applicable for Montana;
- Assess the willingness of local governments/communities to work with MDT on special event management strategies;
- Identify specific actions that MDT can take to improve special event traffic management;
- Improve coordination between MDT and local governments to reduce overlapping of traffic management activities to increase efficiencies of the system;
- Identify possible funding sources for developing special event traffic plans; and
- Develop a comprehensive synthesis document to serve as a resource for MDT and local governments/communities that will assist them with implementing traffic management strategies for planned special events.

## Report Scope

This report is the final synthesis report, which documents the findings from previous tasks of this project, as well as recommendations for future special event planning. This report will include:

- Existing special event management practices and procedures in Montana;
- Best practice tools and strategies from within Montana and from other locations across the U.S. that are applicable for Montana;
- Possible funding sources for developing special event traffic plans;
- Analysis of the MDT and local community/government surveys;
- Recommendations for specific action items that MDT can pursue to help with planned special events; and
- Recommendations of traffic management strategies for planned special events, as well as identification of the responsible parties (e.g., local police, local maintenance crews, MDT maintenance crews, Montana Highway Patrol, etc.).

## Report Overview

The remaining contents of the report are organized into the following chapters. The second chapter presents the results of a literature review, summarizing literature and other available information pertaining to special event management practices and management approaches that share Montana's small urban and rural considerations. The third chapter presents the results of an MDT survey, documenting the assessment of MDT's current special events practices. The fourth chapter summarizes the results of a survey of local agencies/organizations that organize special events. Finally, the last chapter provides conclusions and recommendations based on the overall research effort.

## LITERATURE REVIEW

The research team conducted an in-depth search and review of literature and other available information pertaining to special event management practices. The objective was to provide a complete picture of management approaches that share Montana's small urban and rural considerations. The research approach employed a comprehensive literature search through sources such as, but not limited to, the Transportation Research Information Service (TRIS), Google Scholar, the Montana State University Library, SCIFinder Scholar, state department of transportation (DOT) websites, and other databases.

The following sections summarize and discuss the literature identified by this effort that is most relevant to overall project objectives and the development of recommendations, including several special event case studies.

### Background

The Federal Highway Administration (FHWA) *Managing Travel for Planned Special Events Handbook* defines a planned special event as, "...an activity with a scheduled time and location that impacts the normal transportation system operations as a result of increased travel demand and/or reduced capacity attributed to event staging" (Dunn et al 2003). These events can include sporting events, concerts, festivals, racing (running, bicycle, etc.), fairs, and conventions, which draw large crowds and have an impact on the limited capacity of the transportation network built for daily traffic. To reduce and manage these impacts, planning for these special events is highly important.

### Special Event Categories

Planned special events can be categorized by a number of characteristics including: size, type of event (cultural, sporting, professional, etc.), time of day, duration, frequency, and impact to neighboring roadways. Frequent special events, such as sporting events and concerts, tend to have a specific venue. Infrequent events, such as parades or races, usually have higher attendance. The New South Wales Premier Department *Guide to Traffic and Transportation Management for Special Events* places events into four categories based on the disruption to the surrounding roadways (Lee et al 2006):

- **Class 1:** this event impacts major traffic and transportation systems and has a significant disruption to non-event traffic;
- **Class 2:** this event impacts local traffic and transportation systems and has a low-scale disruption to non-event traffic;
- **Class 3:** this event has minimum impact and negligible impact to non-event traffic; and
- **Class 4:** this event is conducted entirely under police control.

### Special Event Planning Phases

To further help alleviate the disruption to surrounding roadways, FHWA provides instructive guidance for transportation management during special events. The FHWA Special Events Handbook defines five phases of managing travel for planned special events (Dunn et al 2003):

- **Phase 1: program planning**, which includes long-term advance planning activities, often for a series of future events. These activities include stakeholder identification and coordination;
- **Phase 2: event operations planning**, which involves advance planning and coordination activities conducted for a specific special event;
- **Phase 3: implementation activities**, which generally comprise transitional activities that occur between planning and the day of the event. Examples include traffic management strategies, equipment testing and personnel training;
- **Phase 4: day-of-event activities**, which include implementation of the traffic management strategies, traffic monitoring, contingency plan activation (if needed) and communication activities; and
- **Phase 5: post-event activities**, which include evaluation activities such as event debriefings by stakeholder groups, the traffic management team, and the event planning team.

Figure 1 from the FHWA Handbook displays the phased planning process, including typical deliverables produced during each phase (and related topics discussed in the Handbook).

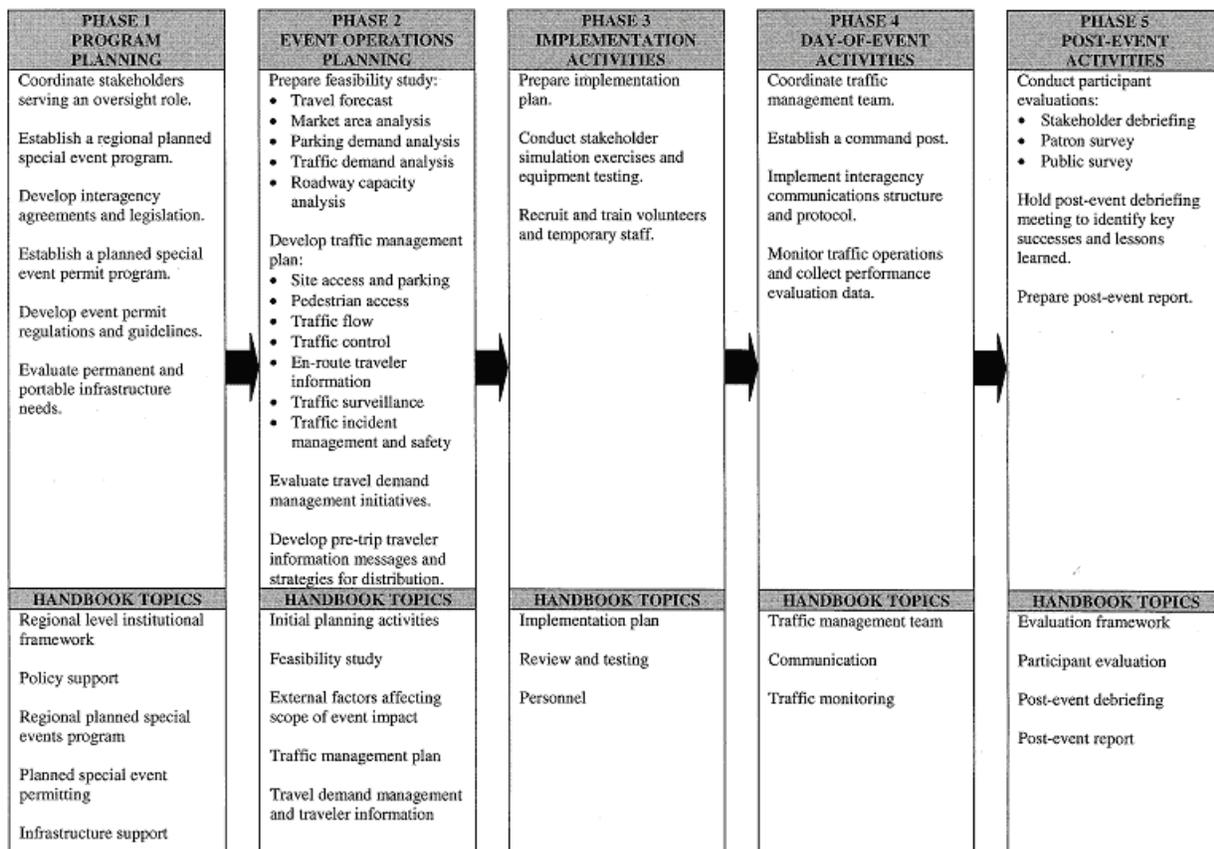


Figure 1: Planned Special Event Management Phases and Key Tasks Deliverables (Dunn et al 2003)

## Rural Special Events

While a variety of planned special events are hosted throughout rural and small urban communities, these events provide a multitude of challenges to an organizer due to high attendance from people all over the regional area, with limited transit options, alternate routes, and infrastructure for monitoring traffic (Dunn et al 2003).

The results of this literature review have shown that there is little documentation specific to transportation management strategies for events in rural and small urban environments. However, strategies suggested for larger events can be successfully implemented in a rural or small urban environment. For example, the FHWA Handbook proposes transportation planning based on event stages. While the planning process described in the Handbook is designed to accommodate large-scale, urban special events, (and may therefore be more complex than necessary for events in rural areas) it can be adapted for rural areas by combining Phases 1 through 3. Therefore, for this literature review (events in rural and small urban areas), the planning activities are organized around three stages: pre-event, day-of-event, and post-event.

The literature review also discusses specific examples from Colorado (Colorado State Patrol et al 2011), Wyoming (Wyoming Department of Transportation 2015), and Washington (Washington State Department of Transportation 2010 and 2015), neighboring states with rural and small urban transportation environments that are similar to Montana. Therefore, some of their special event planning requirements and policies may be applicable and useful to challenges in Montana.

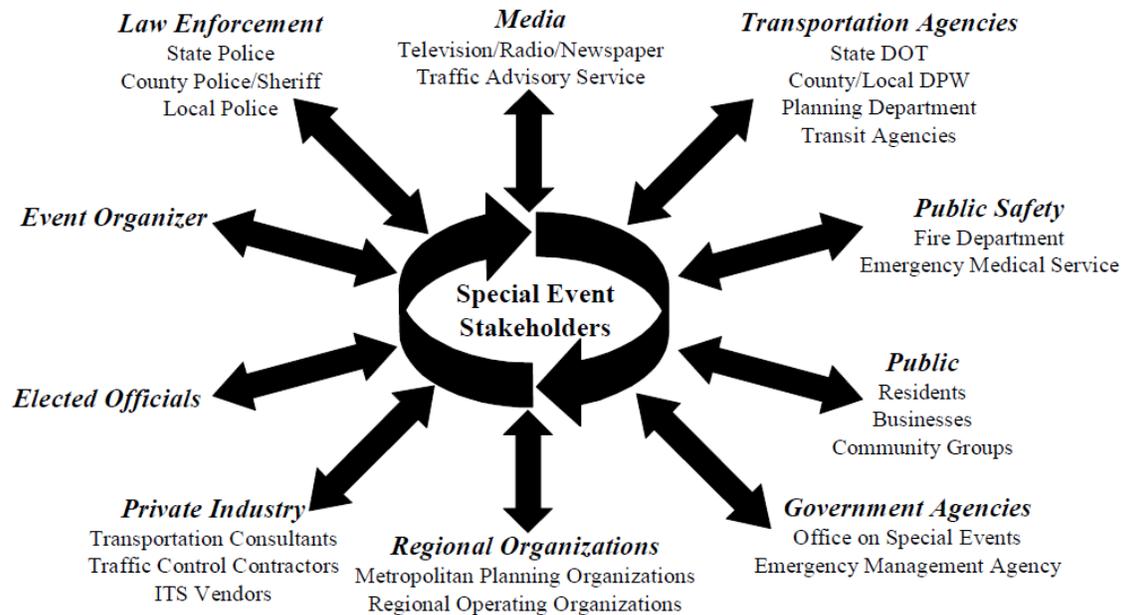
## **Pre-Event Activities**

Managing transportation for planned special events takes significant planning and cooperation from many stakeholders. The amount of pre-event planning necessary for an event depends on the size of the event and on the level of previous experience the agency and stakeholders have with an event. For example, an event that occurs every year needs less planning, because the stakeholders already understand their role from previous event experience (U.S. Department of Transportation 2008).

### Pre-event Planning Meetings

Pre-event planning meetings are an important part of the process because they allow for open communication among all stakeholders, which helps to build lasting relationships when moving forward with planning. Pre-event planning meetings are used to help stakeholders coordinate goals, answer questions about the permit process, create a flexible management plan, create a chain-of-command, and determine if there are any other projects or events, such as construction projects, that will exacerbate any transportation challenges (U.S. Department of Transportation 2008).

Key stakeholders should include the event organizer, transportation agencies, and law enforcement. Other stakeholders to consider include the media, community interest groups, private industry, and public safety agencies. Figure 2 displays examples of recommended



stakeholders for special event planning.

**Figure 2 Potential Stakeholders for Special Event Transportation Planning (Dunn et al 2003)**

During the pre-event stakeholder meetings, a management team should be established. This team will have the final say in the transportation plan and will implement the plan on the day of the event. The management team usually includes the key stakeholders (transportation agencies, law enforcement, and the event organizer). Team members will be involved in all planning, and one or more members will serve as the point of contact on the day of the event.

### Special Event Permit

Special events that will impact a state roadway generally require prior approval by either the state DOT or the state Highway Patrol. To gain approval, most states require a permit application or written agreement to be completed. The permit application is a proposal by the event organizer to host a planned special event. The application communicates important event information including: event date, time, location, and description, as well as a traffic control plan. Additional information may be required as part of the permit application (estimated number of participants, maps, estimated number of volunteers, etc.), but this differs by state.

The timeline for the application process also tends to differ by state. As an example, permit application information from Colorado, Washington and Wyoming is presented in Table 1.

**Table 1: Permit Application Information and Deadlines (Colorado State Patrol et al 2011, Washington State Department of Transportation 2015, and Wyoming Department of Transportation 2015)**

| Required Permit Application Information                                | State                           |                           |                        |
|--|---------------------------------|---------------------------|------------------------|
|  | CO                              | WA                        | WY                     |
| Application Deadline   | 60 business days prior to event | 60-90 days prior to event | 60 days prior to event |
| Contact Information  | X                               | X                         | X                      |
| Event Information (Name of Event, Date/Time, Location, Duration, etc.) | X                               | X                         | X                      |
| Type of Event  | X                               | X                         | X                      |
| Description of Event   | X                               | X                         | X                      |
| Estimated Number of Participants                                       | X                               | X                         | X                      |
| Estimated Number of Support Staff                                      | X                               |                           |                        |
| Estimated Number of Vehicles Associated with Event                     | X                               |                           |                        |
| Reoccurring Event?   |                                 | X                         |                        |
| Traffic Control Plan   | X                               | X                         | X                      |
| Maps   | X                               |                           |                        |
| Proof of Liability Insurance   | X                               | X                         | X                      |
| W-9 Forms  | X                               |                           |                        |

### Transportation Management Plan

A transportation management plan describes how traffic, parking, and pedestrians will be managed on the day of the event (Dunn et al 2003). A good transportation management plan describes management strategies, as well as, roles and responsibilities to help things run smoothly on the day of the event and enhance safety and efficiency. The plan should be flexible to deal with changing conditions and unexpected events as they arise, and special consideration should be made for emergency services access. Transportation management plans typically include a traffic control plan and a plan for public information.

#### *Traffic Control Plan*

As stated in Table 1, the event organizer is generally required to create a traffic control plan as part of a special event permit. The traffic control plan illustrates the temporary traffic control measures for facilitating road users through an event that “temporarily disrupts normal road user flow,” such as a full or partial road closure due to a special event (Federal Highway Administration 2004). Traffic control plans should be compliant with the Manual of Uniform Traffic Control Devices (MUTCD).

### *Public Information*

The last important step before an event is disseminating a notification to the public, emergency services and affected businesses. Pre-event media campaigns via news networks, radio, and internet can help release key information to the public about the event, such as detours and estimated traffic delays. This will help travelers to either become comfortable with any detours prior to the event or allow travelers to avoid the event area altogether, thus increasing the efficiency of the transportation network.

### Specific Rural State Examples of Pre-event Requirements

Specific examples for the pre-event activity guidelines and requirements for Wyoming, Colorado, and Washington are described below.

#### *Wyoming*

The Wyoming Department of Transportation (WYDOT) requires a traffic control plan to be submitted with a special event permit application. This control plan must include all traffic control measures to be used during the event. The control devices must comply with the MUTCD. The control plan must include “appropriate advance event notifications, warning signs, event marshals (flaggers), event field size, event escorts, traffic detours or delays, uniform peace officer requirements, etc.” (Wyoming Department of Transportation 2015). When selecting an event route, attention to shoulder widths, low truck traffic, and planned construction projects needs to be considered and can be discussed with the district coordinator. WYDOT provides a “Wyoming Bicycle Guidance Map,” which shows the routes bicyclists are encouraged to use for bicycle events.

#### *Colorado*

Colorado State Patrol (CSP) requires a traffic control plan that includes a detailed description of the event, including maps of existing traffic control at each intersection affected by the event, any detour routes to be used, and roads involved during the event. Maps must include information about the event course and direction, parking, rest areas, and any other pertinent information. For any bicycle or pedestrian race, a start/finish banner of 18’ must be used (Colorado State Patrol et al 2011). A CSP officer is required for all traffic control along state highways. The event organizer must pay CSP for all patrol officer hours, and a list of all associated fees is provided in Table 2. Event volunteers may be used to assist event participants only. Any rolling closures provided for bicycle races must be done by law enforcement. Vehicles in front and behind the closure must display “BICYCLE RACE IN PROGRESS” signs and use beacon lights (Colorado State Patrol et al 2011).

The state of Colorado requires that special event organizers distribute a news release at least two weeks before an event to local radio, television stations and newspapers. This news release must include event information, identify roads that will be affected, and warn travelers of any detours and potential delays. All local emergency services, transit, businesses, and post offices in the event area must also be notified once the event permit is approved by CSP. An example of the Colorado special event timeline is shown in Appendix A.

**Table 2: Colorado State Patrol Fees (Colorado State Patrol 2015)**

| Services             | Description                    | Cost                                  |
|----------------------|--------------------------------|---------------------------------------|
| Personal Services    | Troopers                       | \$64.30/hr*                           |
|                      | Civilian                       | \$43.60/hr*                           |
| Administrative Costs | Administrative Costs           | 3.5% of total personal services costs |
|                      | Application Fee                | \$25                                  |
| Mileage Fees         | Mileage for Patrol Cars        | \$0.74/mile/patrol vehicle            |
|                      | Mileage for Patrol Motorcycles | \$0.70/mile/patrol motorcycle         |

\* Minimum of four hours is required

### *Washington*

Washington Department of Transportation (WSDOT) requires that all traffic control plans be approved by a WSDOT regional traffic engineer if it is determined that the event will impact roadway operations or will require special traffic control. The traffic control plan must comply with the MUTCD. The plan must meet the following requirements: the event coordinator is responsible for acquiring all traffic control devices and installing them according to the approved plan prior to the event; any rolling traffic breaks must operate at a speed greater than 35 mph on a full access control highway; and the plan must include any proposals to close shoulders, lands, or roadways – including overall distance, lane/shoulder widths, date/time, and detour plans (closures on interstates and access controlled highways is prohibited) (Washington State Department of Transportation 2015). If a road closure is deemed necessary, the event coordinator must notify all emergency services 72 hours prior to the event. Notice of closure signs must be posted 7-10 days prior to the event and should read ‘SR\_TO BE CLOSED *day, date, time AT location*’ with 2 inch minimum sized capital black letters on a white background with a black border (Washington State Department of Transportation 2010).

Parades, bicycle, and pedestrian events are given special consideration in the state of Washington. “For cities with a population in excess of 22,500, only a traffic control plan is required prior to conducting a parade on a city street that is also a state highway” (Washington State Department of Transportation 2015). WSDOT and Washington State Patrol (WSP) will only have incidental involvement with parades. Bicycle and pedestrian events such as marathons, bicycle races, and triathlons must complete a special bicycle road race permit. These races may not be conducted on a state highway during peak traffic hours. A traffic control plan must include race details and maps that describe the race course in detail including: start/finish locations, parking, road closures, traffic controlled intersections, signs, traffic control equipment, and rest areas. There must also be plans on how businesses and residents will be notified of the event and what medical services will be available to participants. A 14’ 6” start and finish banner must be installed and removed upon completion of the event (Washington State

Department of Transportation 2010). Bicycle events usually take more planning than other events so a timely submittal of the application and traffic control plan is highly important.

For a fee, WSDOT and WSP will provide traffic control plan expertise for an event. An example of a WSP and WSDOT approved traffic control plan is provided in Appendix B.

## **Day-of-Event Activities**

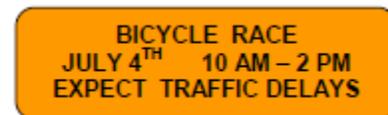
Prior to the day-of-event, organizers should have finalized a transportation management plan and all stakeholders should understand their role in helping the event run smoothly. The management team should work together to keep communication open and be available to modify the plans as needed. Typical day-of-event activities include the implementation of traffic management strategies, which should consider motorist information, travel demand management, and traffic management (Dunn et al 2003).

### Motorist Information

Communicating information will help travelers choose the best route to an event, and help non-event travelers avoid the event area if possible (U.S. Department of Transportation 2008). Motorist information can be provided both pre-trip (local media campaigns using local radio, television, and the internet) and en route (Highway Advisory Radio (HAR), Dynamic Message Signs (DMS), and static signs). En route techniques can also provide information prior to the event so travelers are unaware of potential congestion and delays in advance.

Typical motorist information includes the date and times of the event, any routes affected, possible delays, potential detours, route closures, and parking lot capacity. Tools such as DMS and HAR are useful for letting travelers know how roadway congestion changes throughout the day of the event.

Static signs cannot be changed as conditions change, but they help travelers become familiar with any detour routes and understand which routes to avoid during the event. Colorado requires static signs be placed every 15 miles along a bicycle race route at least one week prior to an event (Colorado State Patrol et al 2011). These signs must comply with the MUTCD and have an orange background with black lettering as shown in Figure 3.



**Figure 3 CDOT Example**

**Sign (Colorado State Patrol et al 2011)**

### Travel Demand Management

Travel demand management helps alleviate stress on the transportation network and can be accomplished in many ways using transit, park-and-rides, and parking incentives. These strategies will help reduce the number of event participants driving to an event, which will reduce strain on neighboring routes and reduce delays for all travelers.

Transit agencies should be involved in pre-event planning to create multi-modal travel choices for event participants. Modifications to transit service like changing schedules, creating more routes to an event, and adding more stops can help increase the number of transit riders to an event (Goodwill et al 2006). Event organizers should consider incentives (free transit or reduced event ticket costs for riders) for participants who use transit to increase the attractiveness of these

options (Bathurst Sustainable Development 2009, Goodwill et al 2006). Park-and-ride lots can also be used to reduce the number of participants who travel to a single location for an event. Parking incentives such as better parking or cheaper parking fees for High Occupancy Vehicles (HOV) can be used to increase the attractiveness of carpooling.

As mentioned above, DMS are an effective way to provide motorist information en route. Therefore, DMS can be utilized to promote mode shift (i.e., moving from a personal vehicle to transit) of event attendees by highlighting the availability of a park-and-ride. This promotion has seen positive response in Muir Woods National Monument, Grand Canyon National Park, and Rocky Mountain National Park (Strong et al 2007, Eidswick et al 2009, and Villwock-Witte et al 2012). Example messages include “BEAR LK PARKING LIMITED PARK AND RIDE IN ESTES,” “RMNP BEAR LK ROADWORK PARK AND RIDE AT FAIRGRND,” and “PARK AND RIDE IN TUSAYAN TUNE TO AM 1630.”

### Traffic Management

The goal of traffic management is to minimize the impact of increased traffic on the neighboring transportation network. Traffic management can be addressed through multiple strategies, including, but not limited to:

- Lane of roadway closures (therefore requiring a traffic control plan);
- Signal timings to allow for better flow to and from an event;
- Officer patrols and event volunteers who monitor and share traffic information on the ground to keep communications open, determine where there is a stress on the system, and help alleviate that stress where possible; and
- A traffic management team that monitors and manages traffic from a central command area using Closed-Circuit Television (CCTV).

Closures are necessary for many events including street fairs, parades, and bicycle races. Each event has different characteristics that will require a different type of closure. Closures include complete closures, moving or rolling closures, and partial closures. Any closure should have signs posted in advance of the event so that motorists are aware of upcoming detours and traffic delays.

For a complete closure, a roadway is closed to all vehicle traffic and detoured onto another route. A complete closure is necessary for events like a parade or a street fair; also some bicycle or running races will require a complete closure. For a rolling closure, well-marked escort vehicles (usually law enforcement) are at the front and rear of an enclosure or pack of participants. Participants who fall behind the rolling escort would need to follow the typical rules of the road. A partial closure is a closure of a lane on a multilane road. Examples of WSDOT bicycle race traffic control plans are provided in Appendix C.

For special events in Colorado, any closure must be approved by Colorado Department of Transportation (CDOT) and CSP and a special traffic control plan must be prepared and finalized before an event. Any local entities, businesses, and residents must be notified in advance, and law enforcement must direct vehicle traffic for a closure. Complete closures are not allowed on any roadway where bicycles are prohibited (Colorado State Patrol et al 2011). A complete closure is necessary for all road races that are national or world class events and closed-circuit

course bicycle races. A rolling closure must be conducted by a police escort. A partial closure requires signs and cones to warn motorists not to use the closed lane and motorcycle officers are required to enforce vehicle traffic.

Any closure in the state of Washington requires a Letter of Agreement with WSDOT and WSP. Road closures are only considered where absolutely necessary and are not allowed on interstates and other access controlled highways. Road closures will not be considered during peak traffic hours (Washington State Department of Transportation 2010). Any closure will require the event organizer to notify all emergency services and transit operators 72 hours in advance and will require signs to be posted along the affected route 7-10 days in advance. “WSDOT and the organizer shall consider total road closures for portions of a race course where average daily traffic volumes exceed 10,000 vehicles, or where difficult turns, high racing speeds, narrow roads, or other challenging conditions are present” (Washington State Department of Transportation 2010). Compete road closures are required for bicycle criteriums. Any road race located in a heavy traffic area or that has a field size larger than 100 must use a rolling closure with police escort. A rolling traffic break must operate at least 35 mph. Any intersections where the existing traffic control will be temporarily overridden must have a certified flagger or a law enforcement officer present to signal traffic. The intersections must have signs warning travelers of the event ahead. All traffic control signing must comply with MUTCD.

Law enforcement, event marshals, and certified flaggers should be used at intersections to help with any questions from event participants (marshals) and to direct traffic as needed (law enforcement, certified flaggers). Event marshals are responsible for answering participant questions, first aid, and for helping with any other issues with event participants. Marshals placed along a bicycle route can warn participants of upcoming hazards, route directions, and locations of rest areas. Marshals are the eyes and ears of the event and should keep in contact with law enforcement if any issues occur. Event marshals usually do not direct traffic but can assist with pedestrian crossings.

Both Colorado and Washington require event marshals to be present at special events. These marshals are not allowed to direct traffic in any way but should be available for participant assistance and to let law enforcement know when there are traffic issues.

Certified flaggers and law enforcement can be used at every intersection where the existing traffic control measures are being temporarily overridden. There should be signs placed before travelers reach the flagger, stating FLAGGER AHEAD. Colorado, Washington, and Wyoming require that any flaggers used for an event must be certified. Colorado and Washington require that any traffic control must be done by either a certified flagger or an off duty law enforcement officer. In Colorado a CSP officer is required to control traffic at any intersections along state highways outside of a municipality and where any traffic control devices have been overridden. In addition, CSP is required to be present at any closure.

## **Post-Event Activities**

Shortly after the event, organizers should conduct a post-event review to discuss the successes and failures with all event stakeholders. This meeting will allow stakeholders to give feedback and make recommendations. Creating a formal debriefing report will help all stakeholders

document best practices, lessons learned, and changes that need to be made for the success of future events (U.S. Department of Transportation 2008).

Colorado strongly suggests that a post-event debriefing meeting be scheduled with CDOT and CSP to discuss any event planning issues with the event planning. Organizers who fail to conduct or attend an after action review risk denial of future events.

## **Case Studies**

Four rural special event case studies were identified and reviewed. The information for these four case studies is shown below.

### NCHRP Synthesis 309: Transportation Planning and Management for Special Events

The Sweet Pea Festival in Bozeman, Montana is a three day art festival held every year at Lindley Park and includes a parade along Main Street. In 2001, approximately 19,800 people attended this festival (Transportation Research Board 2003). This event takes place with the help of many stakeholders and approximately 2000 volunteers. The City of Bozeman Sign Department provides and places all the signs and traffic control devices. A Physical Arrangements Committee is responsible for traffic planning, including pedestrian crossings at Lindley Park and shuttle buses to the event. The Montana Department of Transportation (MDT) has jurisdiction over Main Street where the parade takes place. The event organizer must notify MDT of the event, and MDT is responsible for detouring highway traffic away from Main Street during the parade. The Bozeman Police Department is not involved with traffic control with the event but is involved with public safety. The City of Bozeman requires the event organizers to obtain all equipment and personnel used for the event, and they are responsible for transportation services. Since most people in the Bozeman area know about the annual Sweet Pea Festival, getting information out to the public is not the top priority, but information about event parking and shuttles is provided in the event program.

During this event traffic is managed in many ways. During the parade a team of people uses signs to block any cross streets along the parade route. Volunteers stay at these barricades in case motorists do not obey the signs. Another team of volunteers helps with pedestrian crossings to Lindley with the use of signal paddles to temporarily stop traffic. Dynamic pedestrian signs near Lindley Park are also used to assist pedestrian traffic. Signs are used to warn travelers of any detours and to tell them to avoid parking on Main Street during the parade (Transportation Research Board 2003). During the festival special access is given to use a parking lot at Bozeman Deaconess Hospital as a park-and-ride lot. Signs and the event program will direct attendees to use this lot for a free park-and-ride shuttle to and from the festival or to use a walking trail from the park-and-ride to Lindley Park.

Stakeholders face many challenges with planning this event, but the largest challenge discussed is a general lack of expertise when it comes to event planning and management.

### Traffic Management of Special Events in Small Communities

This case study completed by the Western Transportation Institute (WTI) applied FHWA recommended strategies to address congestion during Montana State University football games in 2007. These strategies considered real-time travel information, road closures, traffic signal retiming, and real-time traffic monitoring. First this study reviewed game and non-game travel

times to see where congestion was an issue. Researchers found that post-game traffic had a significant effect on the neighboring transportation network, especially along 11<sup>th</sup> Avenue and 19<sup>th</sup> Avenue (Lassacher et al 2009). Overall, as the distance from MSU increased, the effect on the transportation network decreased.

A transportation management plan was established based on these results, which implemented the use of HAR and DMS to get information out to the public, road closures to detour traffic away from campus, retiming traffic signals post game to increase traffic flow away from campus, and CCTV to monitor intersections to allow police to direct traffic when there was increased stress on the system.

This management plan saw several positive results, demonstrating that FHWA strategies can be implemented in small urban communities (Lassacher et al 2009). Key to the success was the building of stakeholder partnerships. These partnerships helped facilitate an understanding of common goals and how each agency would help an event run smoothly; also it allowed agencies to share equipment and personnel. “Strategies such as signal retiming, manual traffic control, and road closures were straightforward to implement and made a significant difference compared with previous seasons” (Lassacher et al 2009).

### Traffic Effects on Fairs and Festivals on Low-Volume Roads

Fairs and festivals are growing in popularity in the United States. These festivals can attract large crowds to rural and small urban communities. These crowds usually travel on low-volume roads, causing congestion issues. Gathering traffic data for these fairs and festivals would be helpful to determine traffic volume estimates, which could be used to create traffic control plans, and understand how to deal with a disruption to a low-volume road (Eck et al 2003). Due to a lack of information on trip-generation data and characteristics of fairs and festivals, this study was undertaken to determine characteristics of fairs and festivals on low-volume roads in West Virginia.

This study conducted field data collection at four sites: The Stonewall Jackson Heritage Arts and Crafts Jubilee in Weston, WV; the West Virginia Honey Festival in Wells, WV; the Annual Fall Mountain Heritage Arts and Crafts Festival in Charles Town, WV; and the West Virginia Wine and Jazz Festival in Morgantown, WV (Eck et al 2003). Typically, 3,500 to 50,000 people attend these festivals. These sites are accessible by two-lane, low-volume roads. Researchers conducted traffic counts and collected vehicle occupancy data at each site, as well as attendance by day and for the entire event. The variation in attendance showed that half of event attendance occurs on a Saturday, and during 3-day events, attendance during Friday is lowest. Data for vehicle occupancy was collected for private passenger vehicles only. Vehicles containing two passengers ranged from 39-52 percent of total attendance. Trip-generation per booth was determined to have the highest rates on Saturdays for both two and three day events. Overall trip generation rates were higher for two days events than three day events (Eck et al 2003).

This study provided useful traffic data associated with fairs and festivals in West Virginia. This data provides a basic understanding of festival attendance. This information as well as an understanding of the neighboring road network can be used to develop transportation management plans for fairs and festivals.

### Corridor Traveler Information Coordination – Operational Test Event Summary: Sturgis Motorcycle Rally

The Sturgis Motorcycle Rally is an annual event that takes place in Sturgis, South Dakota. This is the largest motorcycle gathering in the world, with over 400,000 participants. This event presents numerous transportation management challenges for rural Sturgis, as well as, other areas in South Dakota, Montana, and Wyoming, especially along the I-90 corridor and other major routes heading to Sturgis. In 2012 these three states agreed to coordinate traveler information for the motorcycle rally that occurred August 6-12, 2012. The “Operational Guidelines for Coordinating Traveler Information with Other States along I-90/I-94” were used to facilitate Traffic Management Center (TMC)/Traffic Operation Center (TOC) operations staff coordination during the motorcycle rally. These guidelines help states develop methods for efficient coordination of traveler information and operational activities (North/West Passage 2012). Variations of this message, “I-90 STURGIS SD – TRAFFIC CONGESTION – WATCH FOR MOTORCYCLES”, were posted on both 511 and DMS along I-90 and other major routes heading into Sturgis (North/West Passage 2012). These messages were posted three days prior to the rally and removed immediately after the rally ended. Event contact information was also posted on the North/West Passage Map.

After the 2012 rally, an evaluation was conducted, which focused on coordination of staff from WYDOT, MDT, South Dakota DOT, and South Dakota Highway Patrol. Of the ten evaluations sent, five evaluations were completed; however, those five included representation from each of the three states. This evaluation focused on task analysis, tool analysis, and benefits to travelers. The task analysis showed that all key coordination tasks were completed during the rally. The South Dakota staff noted that creating an event in the 511 system every year would allow them to easily exchange messages for future rallies. The tool analysis showed that four of the five evaluators were aware of the North/West Passage Map, 511, and DMS prior to the rally. All staff understood how to use these tools and had everything that was necessary for coordination. Benefits of these coordination tools included: access to timely coordinated corridor information, facilitation of communication, establishment of contacts with others for future coordination, and speedy resolutions. It was noted that the state DOTs should consider modifying access to the North/West Passage Map for TMC/TOC operations so that the states can easily add or modify information in the map for future events. Currently the map can only be modified by contractors for the North/West Passage pooled fund. All staff evaluations believed that travelers benefited from the additional coordination among states, although travelers were not surveyed (North/West Passage 2012).

The tasks outlined in the “Operational Guidelines for Coordinating Traveler Information with Other States along I-90/I-94” were successful in facilitating coordination among Montana, South Dakota, and Wyoming (North/West Passage 2012). This coordination benefited both event and non-event travelers during the rally, and the information from this study will help with future coordination among the states for future events.

### **Key Literature Review Findings/Summary**

The key findings from the literature review are discussed below based on the three stages.

## Pre-event Activities

Managing transportation for planned special events takes significant planning. Based on the literature, a recurring characteristic of successful event transportation management is encouraging communication among all stakeholders. The amount of pre-event planning necessary for an event depends on the size of the event and on the level of previous experience the agency and stakeholders have with an event.

Pre-event planning activities typically include:

- **Pre-event planning meetings** with key stakeholders such as event organizer, transportation agencies, and law enforcement, media, community interest groups, private industry, and public safety agencies can help keep communication lines open, create strong relationships among stakeholders and develop a management plan that helps everyone understand how to work toward a common goal;
- **Special event permits** or a written agreement are typically required for a special event that will impact a roadway. The requirements of the special event permit application generally differ by state;
- **Transportation management plans** to describe how traffic, parking, and pedestrians will be managed the day of the event;
- **Traffic control plans** are generally required as part of the special event permit application process. This plan is used to describe temporary traffic control due to closures; and
- **Public information** and dissemination of information (general event information, road closures, detours, traffic delays, etc.) to the public, emergency services, and local businesses is important.

Based on a review of Wyoming, Colorado, and Washington special event processes, MDT may want to review and consider the following requirements/guidance from these three states:

- Establish pre-event planning meetings;
- Create a set permit application timeline;
- Provide guidance information, including example traffic control plans, to accompany the permit application template to assist event organizers in filling out the application;
- Document the requirement that the traffic control plan complies with the MUTCD;
- Create specific guidance and possibly even a separate permit application (like Washington) related to bicycle and running events. Some specific examples include:
  - For any bicycle or pedestrian race, a start/finish banner must be used;
  - “For cities with population over 22,500, only a traffic control plan is required for a parade on a city street that is also a state highway” (Washington State DOT 2015);
  - WA also provides example traffic control plans for bicycle races;
  - Races cannot be conducted on a state highway during peak traffic hours;
  - “Consider total road closures for portions of a race course where average daily traffic volumes exceed 10,000 vehicles, or where difficult turns, high racing speeds, narrow roads, or other challenging conditions are present” (Washington State DOT 2015);

- Require a rolling closure with a police escort for road races with in a heavy traffic area or that have a field size larger than 100;
- Any intersection where exiting traffic control will be temporarily overridden must have a certified flagger or law enforcement officer; and
- All rolling closures provided for bicycle races must be done by law enforcement and the vehicles in front and behind the closure must display “bicycle race in progress” signs and use beacon lights.
- Consider charging event organizers for assisting with traffic control along state highways such as CSP or for providing traffic control plan expertise such as WSDOT and WSP;
- Create guidance including timelines (e.g., two weeks in advance, 72 hours in advance, etc.) for new releases, notifying emergency services, transit, businesses, and post offices;
- Establish documented, consistent guidance specific to road closures. For example:
  - When selecting an event route consider and discuss with the district coordinator the shoulder widths, low truck traffic, and construction projects; and
  - Document that the event coordinator is responsible for acquiring and installing all traffic control devices.
- Create DMS and static sign message guidance; and
- Conduct post-event reviews with a formal debriefing report.

### Day-of Event Activities

Every event and location has unique challenges, which should be addressed through the development of a detailed and specific transportation management plan. This plan needs to consider activities for the day-of-event including: motorist information, traffic management strategies, and travel demand management strategies. The benefits of planning will provide a reduced demand on the transportation network, improved safety, and reduced delays for all travelers.

Providing motorists with information about the event will allow travelers to make an informed decision on how to get to an event or how to avoid the area. Strategies to get information out to the public can include:

- DMS;
- HAR; and
- Pre-event media campaigns.

Successful traffic management during a special event will increase traffic efficiency and safety for all drivers. Traffic management strategies include:

- Temporary lane/road closures;
- Portable signs;
- Traffic management teams;
- CCTV; and
- Law enforcement patrols.

Transportation demand management will reduce the stress on the road network and help reduce delays for both event and non-event traffic. Travel demand management strategies include:

- Park-and-ride;
- Incentives for HOV and transit riders;
- Increased transit options; and
- Parking management.

### Post-Event Activities

Conduct a post-event review to discuss the successes and failure with all event stakeholders. A formal debriefing report will help document best practices and lessons learned. Colorado strongly suggests post-event debriefings with the DOT and state patrol, and organizers who fail to conduct or attend the reviews risk denial of future events.

While every special event is unique with its own challenges, there are many strategies to manage transportation during a special event to minimize the disruption to the neighboring transportation network. The biggest challenge as noted in this literature review is that many of the techniques utilized in small urban and rural areas have not been widely documented.

## ASSESSMENT OF MDT CURRENT PRACTICES

The purpose of this task was to assess MDT's current practices and capabilities in regard to special event planning by:

- Gaining an understanding of current practices and procedures for special events at MDT including roles and responsibilities, coordination with local stakeholders, and current thresholds for the types of actions taken in order to identify where gaps exist;
- Identifying known examples of special event management planning/strategies in Montana;
- Identifying best practices and specific challenges from past events;
- Identifying known gaps in the practices and procedures, as well as changes they might recommend; and
- Identifying/assessing MDT's operational capabilities for special events (e.g., reversible lanes, signal operations, etc.).

To accomplish this, the research team employed three techniques. First, team members reviewed the previously created special event guidance document and templates. Second, the team led a discussion with the technical panel and MDT headquarters staff during the project kick-off meeting. Lastly, they surveyed MDT regional traffic and maintenance employees.

This chapter will provide a description of all three of these techniques, followed by an overview of MDT's current practices based on the findings from these activities.

### Previous WTI Special Events Permit Project (2005)

In 2005, WTI collaborated with MDT in order to develop a new or modified special events permitting process. MDT wished to create a consistent process across the state's 10 maintenance divisions. For this project, three technical memorandums were created including:

- Technical Memo #1: Analysis of MDT Current Process Administration (Taylor 2005a);
- Technical Memo #2: Analysis of Process Administration in Surrounding States (Taylor 2005b); and
- Technical Memo #3: Draft Forms and Process (McGowen 2006).

#### Technical Memo #1: Analysis of MDT Current Process Administration

In 2005, WTI collaborated with MDT in order to develop a new or modified special events permitting process. MDT wished to create a consistent process across the state's 10 maintenance divisions. Through personal interviews of nine of the ten maintenance chiefs, WTI looked at the MDT practices and consistency across divisions in effect at that time (Taylor 2005a).

First, the MDT draft Guidance for Special Events on State Highways was reviewed; under this guidance the following documents would be required for a special event permit:

- Traffic Control Plan including a site map of the event location, detour routes and signing in accordance with the MUTCD;

- Proof of Insurance including a Hold Harmless/Indemnification Agreement naming the State of Montana and the City in which the event is to be held as Additional Insured with a minimum amount of \$1,000,000; and
- Notification of police, fire department, emergency medical services, etc.

Other requirements included post event clean-up, providing for first aid services, arrangements for hiring off-duty police officers, and determining potential conflicts with public works projects. The following terms and conditions fall under the current MDT Special Event Street Closure Form; these include the grounds for revocation, necessary insurance including holding the City and State harmless from claims, protection of traffic and pedestrians, removal of trash, removal of installations and reimbursement to the City and State if infrastructure is damaged as a result of the event.

Then, nine of the ten division maintenance chiefs were interviewed to determine consistency with these requirements. Through these interviews it was found that each division varied in its permitting process. While most divisions used the Closure Form exclusively, a few divisions would use a less formal “letter exchange” with permit applicants. Findings showed that this form appeared to be inadequate for the purpose it was intended to serve. In many cases the requirements were not being met. It was recommended that the Closure Form be reevaluated and that its use be mandated by MDT. Even though previous “letter exchanges” were effective, these exchanges were too informal and did not provide assurance that all requirements would be covered. WTI recommended that the permit form should include a checklist of requirements that the permit applicant must meet in order to obtain a permit. It was also recommended that MDT develop a formal set of guidelines in order to clarify requirements for both the Division and the applicant.

Some divisions required no insurance because they were under the assumption that municipalities have sufficient coverage. Only one division required a proof of insurance policy to determine that all insurance requirements were met. It was recommended that MDT tighten up the type and extent of insurance requirements, and that verification of the insurance policy would be mandatory.

At that time, traffic control plans were submitted to each division, but some were contained as a promised stipulation in the letter exchanges. One of the divisions did not require a formal traffic control plan, but a route description and description of intended signage. Preliminary consultations between the permit applicant and the Maintenance Chief were held in some cases to determine if all of the plan requirements were met and understood. Only two divisions required that the traffic control plan be in conformance with the MUTCD. It was recommended that the submission of a traffic control plan be mandatory and that it complies with MUTCD, and meets flagger training requirements; beyond these requirements it was up to the maintenance chief to determine what was necessary.

Every division had established relationships with major municipalities in the region, as most municipalities took on the larger share of event related activities: they were responsible for making sure activities progressed according to plan, and they provided clean up/first aid/law enforcement, etc. Only one chief had a Memorandum of Understanding (MOU) with a municipality. In general these relationships were informal. Even though most of these

relationships have worked well, it was recommended that a formal MOU be considered to give the relationship validity and to describe the responsibilities of each party.

Unauthorized bicycle events were problematic in a few divisions. The Chiefs all shared the opinion that they did not have authority to stop these events even if they were a safety hazard, but in some cases Montana Highway Patrol might be called. It was recommended that MDT create a process with law enforcement agencies to address these unauthorized events.

### Technical Memo #2: Analysis of Process Administration in Surrounding States

The special events permitting process was examined in surrounding states: Idaho, Oregon, Washington, and Wyoming (Taylor 2005b). Each state's permit guidelines, policies, procedures, and forms were reviewed and compared to determine best practices that could be applied in Montana. Each state was found to have a more comprehensive process (formal guidelines, checklists, and requiring comprehensive insurance to protect the state from litigation) compared to Montana.

### Technical Memo #3: Draft Forms and Process

In Technical Memo #3, the information from the previous two memos was used to develop a set of forms, guidelines and process was developed for MDT consideration (McGowen 2006). These reports, found in Appendix D, were drafted and presented to Maintenance Chiefs in September 2005, and final copies were created based on feedback given.

Guidance documents were intended to clarify the process for both MDT and the permit applicant. A formal deadline of one month prior to the event was set for permit applications. A permit would be required for any event that required a land closure on any state maintained highway or street. This guidance document included a contacts list, application form, traffic control plan requirements, checklist of requirements, certificate of insurance, hold harmless agreement, and sample approval/denial letters.

The application form was expanded to include organization information, type of event, event date/time, setup and breakdown times, and any coordination or agreements with other agencies. The applicant was required to submit a traffic control plan that safely accommodates traffic for the event. MDT would review and modification would be made as necessary. If the traffic plan failed to meet approval five days prior to the event, then the permit could be revoked. The traffic plan must include the following: site map of event location and detour routes/signage, all traffic control devices must conform to MUTCD, applicant is responsible for acquiring and installing signage and traffic control devices, signs may be required to be placed at least one week prior to the event, and traffic control must be done by trained and certified individuals.

A checklist for event organizers was created, including requirements for notification of law enforcement, municipalities, local media, traffic control plan submission, insurance requirements, and signage.

The guidelines required a certificate of insurance coverage from the insurer or documentation from the local municipality stating that the city takes responsibility for the event. MDT and the City must be named as additional insured and a Hold Harmless Agreement must be signed.

Sample letters of approval or denial were also created. The approval letter states that the permit has been approved and provides information about the terms and conditions of the approval (such as requirements that must be met). The letter of denial states why the permit was denied and gives information about who to contact if there are any questions.

## **Kick-off Meeting**

The kick-off meeting for the MDT Special Events Planning Synthesis project was held in December of 2014. Along with discussing the roles and responsibilities of each party and reviewing the project scope, this meeting was used to document the knowledge of the technical panel and MDT headquarters' staff on MDT's current special event processes.

The purpose of the discussion was to: gain an understanding of current practices and procedures for special events at MDT including roles and responsibilities, coordination with local stakeholders, and current thresholds for the types of actions used to identify where gaps exist; identify known examples of special event management planning/strategies in Montana; identify best practices and specific challenges from past events; identify/assess MDT's operational capabilities for special events (e.g., reversible lanes, signal operations, etc.); identify additional MDT regional traffic employees and MDT maintenance site employees with whom to speak about special event management planning/strategies; and identify local community/government contacts, known by MDT, to include in the local agency survey.

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- Identify best practices and specific challenges from past events;
- Identify/assess MDT's operational capabilities for special events (e.g., reversible lanes, signal operations, etc.);
- Identify additional MDT regional traffic employees and MDT maintenance site employees with whom to speak about special event management planning/strategies; and
- Identify local community/government contacts, known by MDT, to include in the Task 4 survey.

### Current Practices and Procedures

Current special event practices and procedures in Montana start with MDT being notified of a special event that will affect traffic on a MDT roadway via a permit (the permit is available to event organizers on MDT's webpage at

<http://www.mdt.mt.gov/other/webdata/external/maint/forms/MDT-MAI-004->

[SPECIAL USE PERMIT.PDF](#)). It was noted that this is the only way MDT is notified; therefore, if a permit is not submitted, MDT will not have knowledge of the event.

The MDT special event permit provides some consistency for what is going to be done and includes a list of MDT requirements. It was noted that most communities know they need permits for anything that impacts the transportation system (parades, races, street dances, 3 on 3 basketball tournaments, etc.), but many permits are incomplete, therefore requiring a lot of work on MDT's part to gather the information necessary to issue the permit.

Technical panel staff indicated that there is currently no written standard practice for approving the permits, so staff rely on previous experience. When reviewing special event permits, MDT considers if a detour is needed, if the traffic control plan complies with the MUTCD, possible closures, impacts to traffic, and if law enforcement is needed. Some events (such as the bicycle race up Beartooth Highway) present safety issues and therefore require liability insurance, emergency medical services, DMS, and completion by a specific time. They also noted that the paper copies of the permits are kept on file for a designated amount of time.

Technical panel staff indicated that MDT has never conducted an after action review/evaluation based on the special event permit to assess how the traffic control for an event worked. However, they did note that they have completed some evaluations of signal timing effectiveness used in Billings at the MetraPark and in Missoula for University of Montana football games.

### Existing Gaps

The technical panel indicated that the greatest need to be filled by this project was to create consistency across the state with regard to special events guidelines and procedures (e.g., a special event in Bozeman would be handled the same as one in Missoula). A consistent process would include the following components:

- Explanation for small communities creating new events as to why traffic control is needed;
- A handout for event organizers (e.g., city) including a checklist of data needed and actions to take for the type of event (e.g., small, medium, large);
- Information for local agencies about the strategies they can implement (e.g., park and ride in Missoula for concerts);
- Consistent timeline for submitting permits;
- Consistent traffic control at events to reduce public frustration;
- Consistent guidelines on events that are not allowed so MDT special event permit reviewers can say no without causing political issues;
- Gap analysis of what is done now versus what can be done in the future; and
- A matrix describing the event type (e.g., x, y, z) and the actions (e.g., a, b, c).

### Examples of Special Event Management Strategies

Meeting participants discussed that MDT maintenance does not do a lot of special event management; generally the event coordinator is required to provide traffic control. However, there were two specific examples provided. First, MDT has provided special event coordinators with DMS in the past. However, this presents challenges because MDT staff needed to operate the DMS, who had to be paid overtime because events generally were not during business hours.

Second, MDT has provided special event signal timing in Billings for Metra Park night events. A review of this strategy was conducted, but the extra signal timing still did not have a positive impact due to the way Metra Park empties its parking lots.

### Best Practices

The technical panel identified several best practices. In the city of Billings, for example, MDT works with city traffic engineers and district staff/county staff on special events. Together they have created a designated parade route. Their current challenge is to decide whether or not to give permits to every event, because Billings has special events going on almost every weekend. Billings is currently studying special events very closely.

The panel also noted that Bozeman and Missoula have a good process for special event traffic control and coordination with local law enforcement.

An option that is not currently being done, but was suggested, included creating a pool of devices (e.g., DMS, cones, signs, etc.) that could be lent out to event coordinators. However, this could be a liability issue due to event coordinators not being certified. Additional challenges would include: funding the purchase of the devices, controlling who is borrowing them, making sure they are returned and not stolen, and securing sufficient staff time to manage this service. MDT Bozeman has provided signs in the past, but the traffic control responsibility really needs to fall on the event organizers and not on MDT.

### Specific Challenges

Specific challenges for MDT with special events include:

- Traffic challenges go beyond just MDT's roads; they impact local roads as well, and traffic management practices need to be reviewed upstream of the event, as well as at the scene;
- Sometimes events are so politically sensitive that there is tremendous political pressure to approve the special event;
- There are currently no repercussions for event organizers if they do not follow the requirements of the permit;
- Traffic control can cost \$1000-2000 to hire a traffic control company for an event;
- The biggest operational challenges are related to staffing. MDT does not have the resources to pay staff overtime to assist with traffic control for special events;
- Major issues also include the long term closures that occur without good detours. These detours then cause more issues with the public (e.g., the Ennis July 4th parade, which closes a bridge for two hours and severely affects traffic);
- It is hard to commit MDT resources, especially with the DMS because MDT cannot guarantee that the signs will be available if needed elsewhere for an emergency;
- Even with a rented DMS, MDT needs to approve the messages used; and
- Special events must have a traffic control plan that complies with MUTCD guidelines, but 80-90 percent of the time traffic control is done by law enforcement, and it does not comply with MUTCD (e.g., Darby without a detour route).

### Operational Capabilities for Special Events

The only operational capability discussed in depth at the kick-off meeting was traffic signal operations for special events. Headquarters staff indicated that they are in the process of looking for a grant to create a concept of operations for signals statewide. Along with the potential concept of operations, MDT is on the cusp of major signal changes including new controllers for all signals. The agency is also working towards the implementation of central system software with communications and remote access to seven major cities. Therefore, the signals should have more capabilities by 2018.

### MDT Staff Survey

The technical panel suggested that the following MDT staff should be surveyed for their opinions on special events in Montana:

- Maintenance chiefs;
- Section supervisors;
- Superintendents;
- District traffic engineers;
- District administrators;
- District construction engineers;
- Maintenance headquarters contacts;
- Communications team; and
- Construction district engineers.

The technical panel indicated that the maintenance staff are the key personnel on the ground, but the traffic group are important to survey as well, because they control the signals. The district administrators (DA) were also added because if something goes wrong with a special event and there are traffic impacts, the DA is the one to receive the complaints.

The panel also stated that it would be important to include a statement in the email saying that those receiving the survey should forward it to anyone else that should provide input.

### Local Community Contacts for Survey

The technical panel was asked about local community contacts who should be identified for special event planning and management activities. Panel members suggested that this question would be better answered by the MDT field staff. To gather this information, members recommended that this be added to the MDT special events survey. This would allow researchers to gather a statewide perspective and possibly gather the correct local contacts.

In addition to the list of major special events presented at the meeting, participants suggested adding the Folk Festival in Butte, because it closes down the town for three days.

Lastly, technical panel members indicated that local law enforcement and highway patrol should be included in the survey as they tend to manage most of the special event traffic and crowd control.

They also suggested that one to two events in each event type could be studied in more depth, for example the Missoula Marathon which has a huge impact on the city.

## MDT Survey

The research team designed a survey to obtain the experience and insight of MDT regional traffic employees and MDT maintenance site employees on MDT's special event management strategies.

### Survey Design

The intent of the survey was to document perspectives of field staff, in order to:

- Gain an understanding of current practices and procedures for special events at MDT including roles and responsibilities, coordination with local stakeholders, and current thresholds for the types of actions taken;
- Identify known examples of special event management planning/strategies in Montana;
- Identify best practices and specific challenges from past events;
- Identify known gaps in the practices and procedures, as well as changes they might recommend; and
- Identify/assess MDT's operational capabilities for special events (e.g., reversible lanes, signal operations, etc.).

The survey solicited the following types of information:

- Special event characteristics (Questions 1 through 3);
- MDT pre-event planning (Questions 4 through 12);
- MDT day-of-event activities (Questions 13 through 19); and
- Post-event activities (Questions 20).

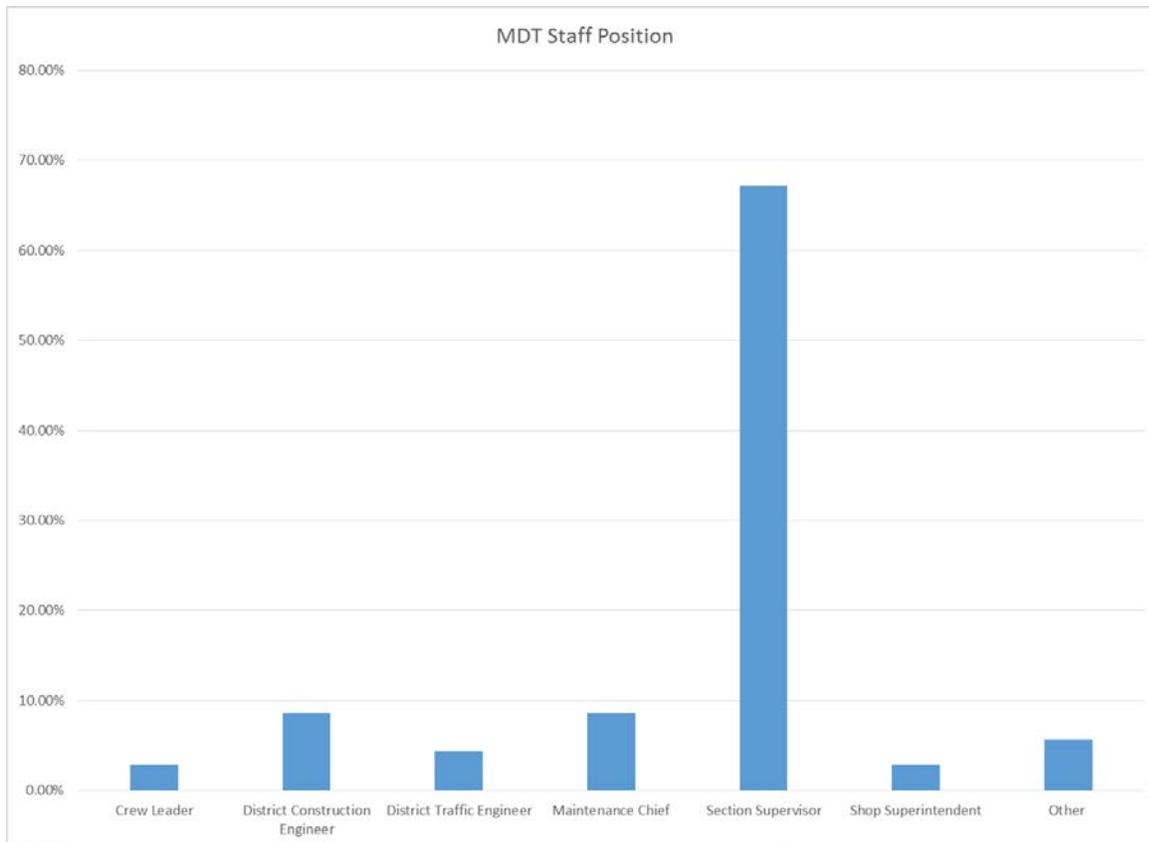
Throughout the survey, two types of responses were used: multiple-choice and open-ended questions. Multiple choice questions contained between two and nine response categories.

### Survey Distribution

This survey, shown in Appendix E, was emailed to maintenance chiefs, section supervisors, superintendents, district traffic engineers, district administrators, district construction engineers, maintenance headquarters contacts, the communications team, and construction engineers across the state of Montana by the MDT Traffic and Safety Bureau Chief.

There were 102 respondents; however, three did not accept the Montana State University consent form and therefore did not proceed any further. Sixty nine respondents provided their location. Of the 69 respondents, surveys were received from 48 distinct locations in Montana. The majority of locations provided only one response; however, nine locations provided multiple responses including: Anaconda, Bozeman, and Butte with two each; Kalispell, Miles City, and Missoula with three each; Great Falls with four, Wolf Point with five; and Billings with six.

The staff members were also asked to provide their position at MDT. Seventy respondents provided position titles including: crew leader, district construction engineer, district traffic engineer, maintenance chief, section supervisor, shop superintendent and other. As shown in Figure 4, the majority of respondents were section supervisors (67 percent).



**Figure 4: MDT Staff Position**

### Statistics

This survey was distributed to collect more qualitative than quantitative data; therefore, it was not distributed to collect a statistically significant sample. Due to this, means and standard deviations were not calculated. Rather the discussion focuses on summarizing the open ended responses and percentages. Percentages were based on total responses for each question and not on the survey total, because some respondents did not answer every question. Survey results are discussed in the following four categories:

- Special Event Characteristics;
- MDT Pre-Event Planning;
- MDT Day-of-Event; and
- MDT Post-Event Activities.

### Special Event Characteristics

To better understand the survey respondents' level of experience with special events and what special events occur in their area, questions 1 through 3 asked if respondents have had experience with special events, how often certain events occur in their area, and who they would suggest as an external contact for special events in their area.

### *Experience with Special Events*

The main objective of the survey was to document respondents' experience with special events, therefore, the first question was designed to ensure that the respondents had previous experience. Examples for experience included approving permits, traffic control, and fielding complaint phone calls.

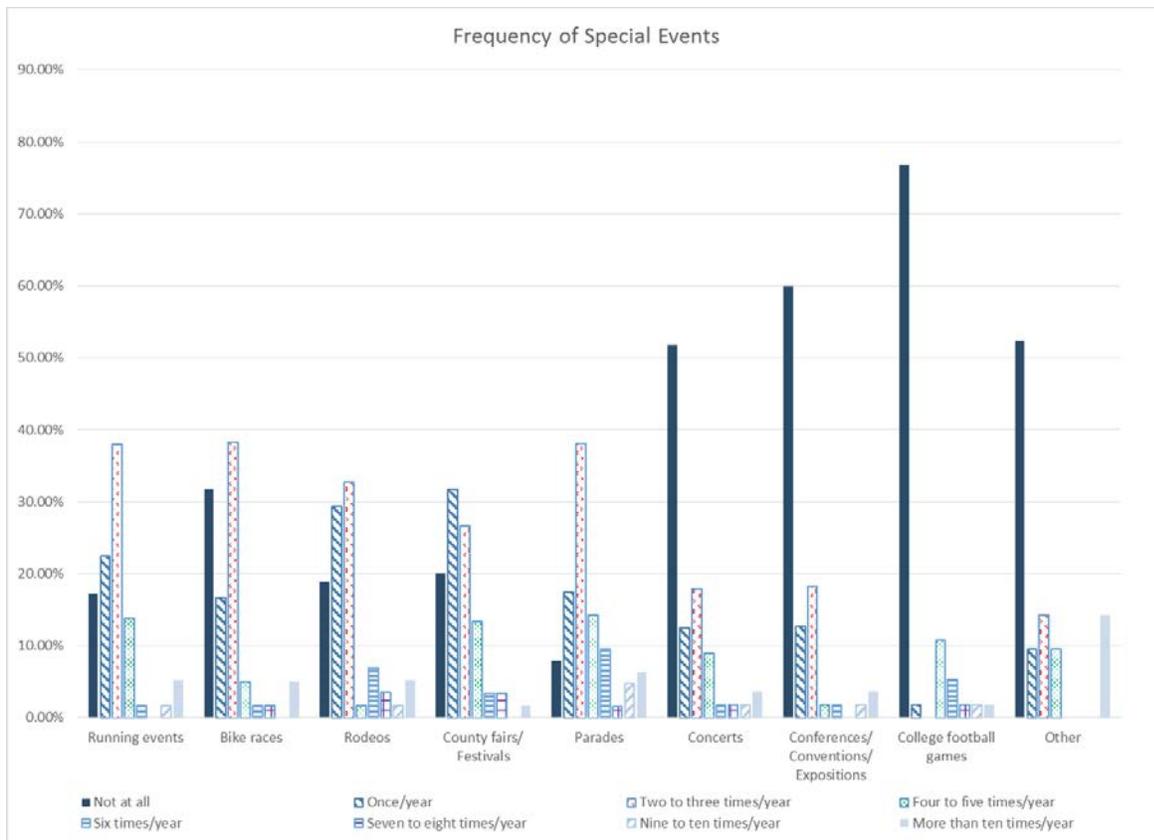
Of the 102 respondents who started the survey, 82 answered this question. Eighty-four percent said that they have experience with special events in their area. There were 13 people who said they had no experience with special events; they were advanced to the end of the survey and thanked for completing the survey.

### *Frequency of Events*

In question 2, respondents were asked how frequently certain events occur in their area. Respondents were provided a list including: running events (e.g., trail races, road races, marathons); bicycle races; rodeos; county fairs/festivals; parades; concerts; conferences/conventions/expositions; college football games; and other. They were also asked how frequently these events occur by choosing not at all, once per year, two to three times per year, four to five times per year, six times per year, seven to eight times per year, nine to ten times per year, and more than ten times per year.

As shown in Figure 5, the least frequent special events were college football games (77 percent said this event never occurs in their area), conferences (60 percent said this event never occurs in their area), and concerts (50 percent said this event never occurs in their area).

Of those events that had a greater frequency, the majority of events occurred between one and three times per year. Parades were the most frequent event with 92 percent of respondents saying they occur in their area. The majority of parades occurred between two to three times per year (38 percent). Eighty three percent of respondents said running events occurred in their area, with the majority occurring two to three times per year (38 percent). Other frequent events included rodeos (81 percent), county fairs (80 percent), and bicycle races (68 percent).



**Figure 5: Frequency of Special Events**

Other events included fishing tournaments, motorcycle rallies, street closures with detours, high volume motorcycle traffic related to Sturgis Rally in South Dakota, the many events in Downtown Bozeman on US 191 throughout the year, an annual western art exhibit in various locations in Great Falls, charity events, Montana Folk Festival, Evel Knievel Days, An-Ri-Ra Irish festival, Country Jam music festival, Rockin the Rivers music festival, soccer tournaments, fireworks and outdoor bands.

### *Special Event Organizers*

Respondents were then asked, in question 3, to provide contacts for special event organizers in their area who could provide information about best practices or lessons learned. These contacts will be sent a follow-up survey to gather their opinion on MDT's special events process.

Eighteen suggestions were provided, including contacts at:

- 12 cities/chambers of commerce;
- 2 schools;
- 2 area biking clubs; and
- 2 fairgrounds.

## MDT Pre-Event Planning

To better understand the current pre-event planning practices and procedures for special events at MDT, as well as best practices and specific challenges, questions 4 through 12 investigated the approval process, templates used, the timeline, standard practices, challenges with the process, best practices, recommended changes to the process, beneficial guidance for a document, and recommendations for consistent guidance.

### *Approval Process*

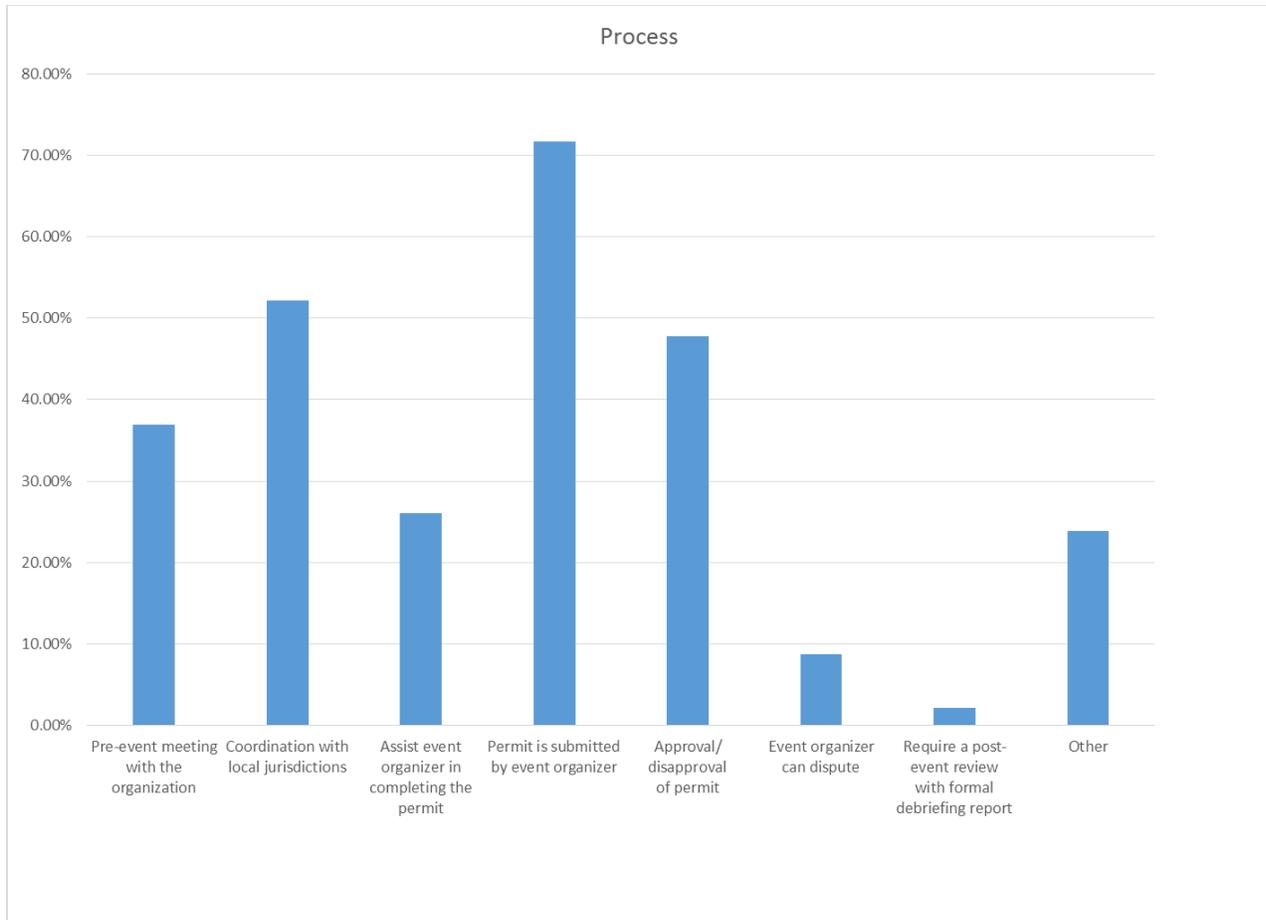
In question 4, respondents were asked what the current process in their area is for approving a special event. Respondents were asked to select all that apply and were provided eight options including: pre-event meeting with the organization, coordination with local jurisdictions, assist event organizer in completing the permit, permit is submitted by event organizer, approval/denial of permit, event organizer can dispute, require a post-event review with formal debriefing report, and other.

There were 46 responses to this question. As shown in Figure 6, the most common step in the process across all areas is a permit submitted by an event organizer (72 percent); however, only 26 percent of respondents assist the event organizers in completing this permit and only 37 percent hold a pre-event meeting with the organizers. Other frequent steps in the process include approving or disapproving permits (48 percent) and coordinating with local jurisdictions (52 percent).

Less frequent were event organizers disputing the permit denial (9 percent) and requiring a post-event review with a formal debriefing report (2 percent).

Responses for the other category (24 percent) included:

- Coordination with construction projects and their effects on the special event;
- Requiring a description of the event and liability insurance documentation (i.e., bicycle and running events), usually including maps and traffic control plans;
- Ensuring the events benefit the community and not personal businesses;
- Events (e.g., fishing) on tribal land (e.g., Crow Reservation), Bureau of Land Management lands, and National Wildlife Refuge lands do not require notification to MDT;
- Using special event signs to alert the traveling public of events occurring ahead of them;
- Others accept-deny permits. I deal with their decisions; and
- Sometimes a permit, sometimes not.



**Figure 6: MDT Approval Process**

### *MDT Special Event References/Templates*

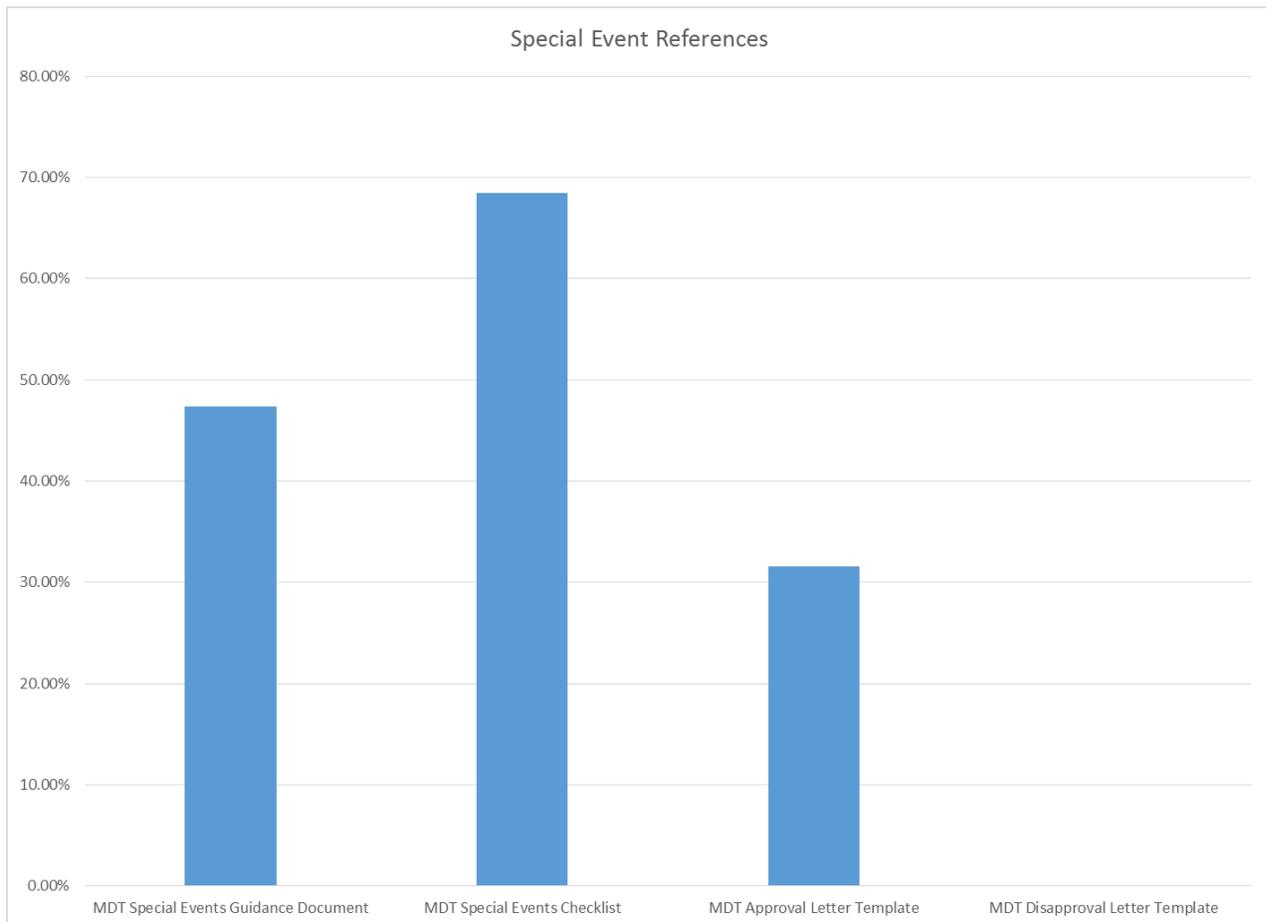
Question 5 asked respondents if they had ever used the MDT special events guidance document, MDT special events checklist, MDT approval letter template, and the MDT denial letter template.

Respondents were asked to check all that apply. As shown in Figure 7, of the 19 respondents (83 skipped the question), 68 percent have used the checklist, 47 percent the guidance document and 32 percent the approval letter. None had used the denial letter.

A follow-up question asked respondents who had not used the special event references, to explain why not. There were 24 responses including:

- 10 respondents indicated they do not need them because they do not have the authority to issue/approve special event permits, the permit goes through a different office (e.g., maintenance chief), or they mainly deal with the construction coordination;
- Three respondents were not aware of the existence of these documents;
- Three respondents only use the “Special Use Permit for State Maintained Highways,” but none of the other templates;
- One respondent indicated that his or her office has developed a map that identifies the detour route planned for repeated events;

- One respondent indicated that his or her office has its own procedures;
- One respondent indicated that the documents do not apply;
- One respondent indicated that he or she never needed them;
- One respondent indicated that he or she has not always had a contact person, not known details, and no one asked; and
- Three respondents had answers that were not relevant.



**Figure 7: Use of MDT Special Event Documents**

### *Timeline*

Respondents were then asked in question 6 if their area has a specific timeline set-up for special event approvals. There were 38 respondents (64 skipped the question). Only 16 percent said that there is a specific timeline.

A follow-up question asked for more detail on what the timeline is. Six respondents provided applicable information.

Responses ranged from same day to a few months in advance. They included:

- Case by case basis;

- I try to get the event out within the week. Sometimes the coordinator is late and asks for the same day. Usually they are yearly events and nothing really changes with the traffic control or location;
- At least two weeks prior to the event;
- As much advance notice as possible to the Maintenance Chief. I try to get 2 weeks' notice when possible;
- We ask for at least 1 month; and
- A few months in advance.

For those who replied they do not have a timeline, they were asked a follow-up question to determine if a timeline would be helpful and if so, how.

There were 13 applicable responses. Two respondents were unsure if a timeline would be helpful, four respondents said it would not be helpful, and seven respondents said it would be helpful.

For those that said it would be helpful, reasons included:

- It would help to know a week ahead because sometimes they do not know about an event until two days before;
- It would probably eliminate really late applications being turned in and would stop the last minute organizers;
- We might not get rushed so much;
- It would be helpful to give a deadline for when the permit needs to be submitted by and also lets the applicant know when they would have an answer; and
- It would only be helpful if all the organizations, in the various communities that want to sponsor an event that impacts an MDT route, know about the requirement to have MDT approval if impacting an MDT route and the related timelines.

### *Standard Practices*

Question 7 asked about standard practices used for special event permit approvals or denials.

There were 22 respondents. Responses included:

- Requiring general event information such as event type, location, size, and timeline;
- Talking/planning meeting with the organizers;
- Understanding how the event impacts traffic flow and emergency vehicles;
- Running special event by the superintendent or Maintenance Chief depending on who approves in that area;
- Reviewing the impact on traffic including detailed description of MDT routes impacted and detour routes to be used;
- Requiring documentation including a special event permit, traffic control plan, encroachment permit (if applicable), and liability insurance documents (if applicable);
- Coordinating with construction activities;
- Ensuring safety of participants;
- Requiring event organizers to utilize appropriate signing to warn motorists of the event;

- Ensuring organizers contacted and received approval from local government if local roads or city streets are being used for a detour;
- Ensuring access to and utilizing appropriate signing for a closure and adequately identifying the detour route. MDT routinely provides some event signing including variable message signing, signs, cones etc. for smaller local events when appropriate; and
- Understanding average traffic count, clean up, and time of delay.

### *Challenges with Process*

In question 8, respondents were asked, what, in their opinion, are the greatest challenges (for MDT staff and for special event organizers) with the current MDT special event process. Twenty-two respondents submitted applicable answers.

Only one respondent mentioned not having any challenges with the process. Among the rest, the most frequent challenges indicated were traffic control (7 respondents), safety (3 respondents), events occurring on weekends and holidays when staff are not at work (3 respondents) and getting the word out to communities and organizations that a permit is needed when an event impacts MDT roads (2 respondents). Other general challenges included making sure traffic keeps flowing and detours.

Specific challenges include:

- It is hard to determine when to approve or reject the permit applications based on duration, safety, and traffic impacts;
- People wanting to close roads for events that are specific to landowners;
- Lack of information from event organizers and not getting documents from MDT;
- Finding a consistent process that would be applicable for both rural and urban areas;
- Most people hand in hard copies, online would be great;
- Finding time to get together for a meeting;
- Getting the event organizers to understand what all we need to get the permit approved; and
- Making sure the event is signed properly, most of the events take place during off time hours of MDT employees. So who is making sure the organizers are doing what's in the permit. The event organizers know that MDT employees are off shift so anything goes. Basically they will put anything in the permit to get it approved but rarely follow through with what's in the permit.

### *Special Event Permit Best Practices*

Question 9 asked respondents if they would be able to share a special event permit application that they feel is a best practice.

Six respondents said yes (with one specifically mentioning traffic control for a parade), two respondents said no, one was unsure and another said it was not applicable. Two respondents pointed out that the MDT application template uses and contains basic information including name of event, time, traffic control, clean-up, and signature of the mayor of the city requesting it.

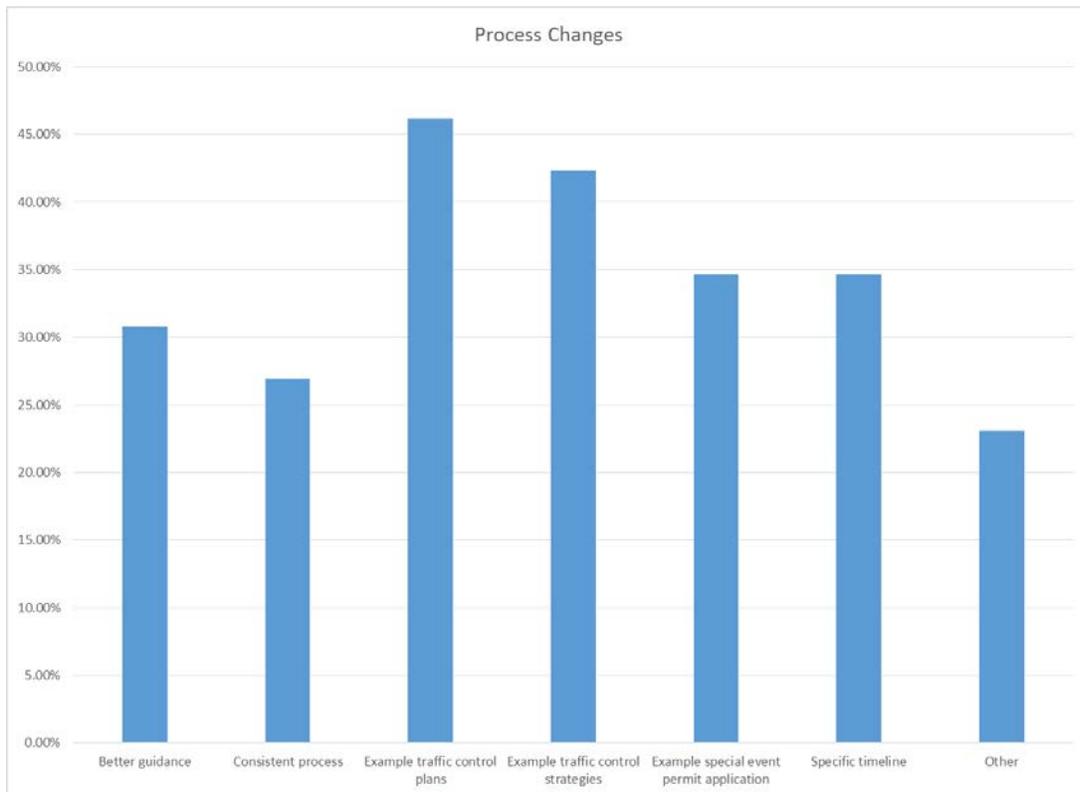
### Recommended Changes

In question 10, respondents were asked what they would change about the current MDT special event process. Respondents were provided options of better guidance, consistent process, sample traffic control plans, sample traffic control strategies, sample special event permit application, specific timeline, and other.

As shown in Figure 8, the top choices were sample traffic control plans (46 percent) and sample traffic control strategies (42 percent), but all of the provided options ranked between 27 and 35 percent.

One respondent noted that the Tribal programs on reservations do not fill out permits. Changes recommended under the other option included:

- To add phone numbers and email addresses on the form;
- To have examples for the public for traffic control would be helpful because they are working with small communities and they do not have the resources to get the information;
- Better information process to educate public about requirement to coordinate with MDT, that a permit process is required, and when and who to contact;
- Getting copies of the applications from the main office; and
- Asking staff if they would like to be a part of the event and not make it a must.



**Figure 8: Recommended Changes**

### *Guidance Document*

Question 11 asked if there were specific things that a special event guidance document should address, specifically topics that would be beneficial.

There were 8 applicable responses including:

- Develop special contract provisions to help with/accommodate the coordination of construction impacts on the events;
- A checklist of required documents and brochures to give to the organizers of the events so they know up front what is going to be expected to get the approval;
- Phone number and email address on the special event permit document;
- Advanced notice from the bicycle races that come through our areas and the route they are planning to take;
- Times, dates, impacts, locations, traffic control plans, and contingency plans;
- Early application;
- Traffic control;
- Consequences for not following the permit; and
- Liabilities

### *Consistent Guidance*

To make special event guidance consistent in Montana, question 12 asked respondents to identify consistency issues that need to be addressed.

There were 11 applicable responses. These included:

- A specific process should be developed and used statewide. This would include the required information from the organizers and the steps to determine whether or not to approve the permit;
- Make sure they are events that are community oriented;
- The event must be ok'd and signed by the local municipality where the event is being held before being approved by the Department;
- Training for MDT managers and education for potential event planners and organizers. Of equal importance, without both, no progress will be made;
- Meetings with event coordinators;
- Ensure compliance with an approved process;
- Maintenance at times does not get the permit. So we do not know if they have one or not. If I turn them in myself I know;
- Make process consistent across the state;
- Traffic control; and
- Whether a permit is needed and consequence if a permit is not received.

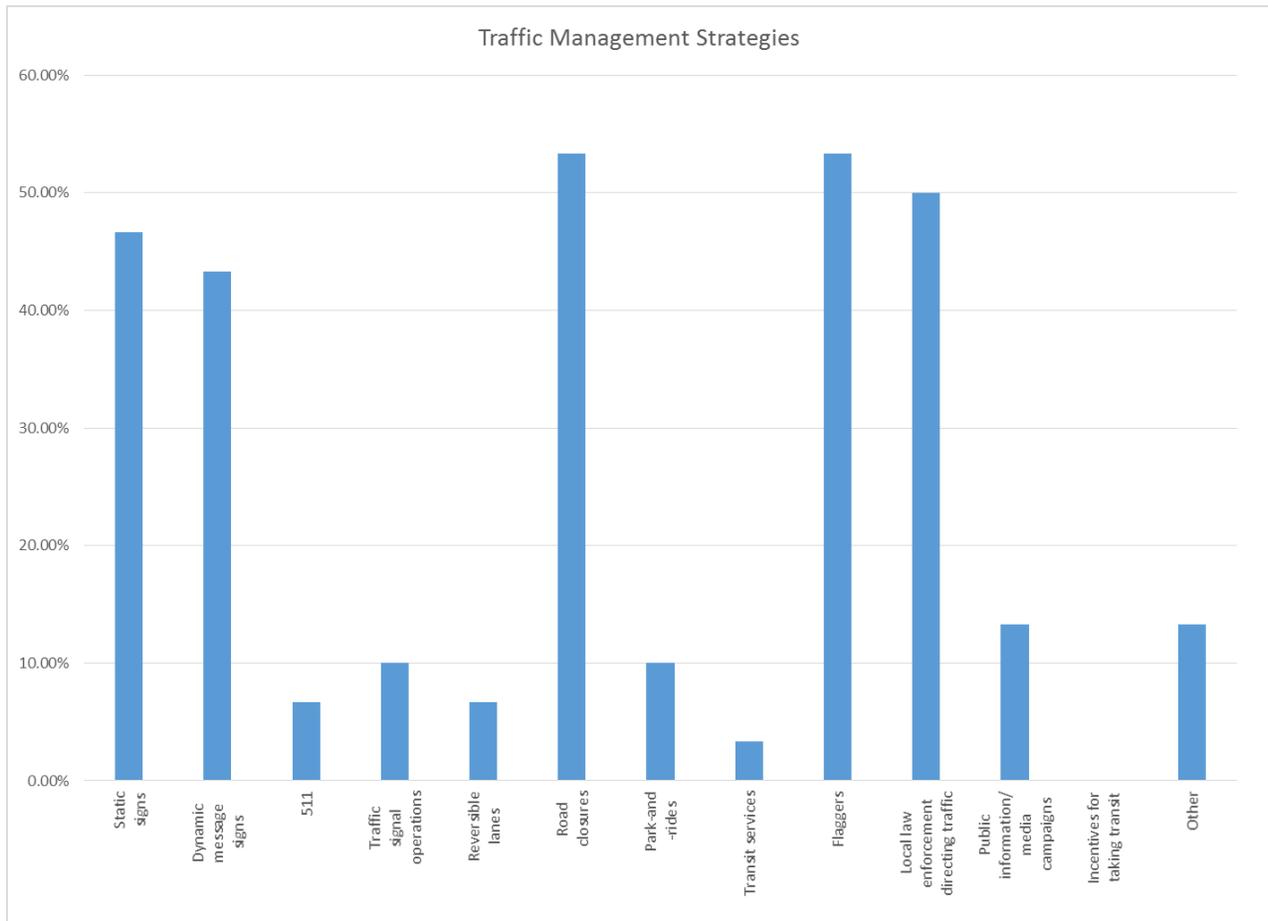
**MDT Day-of-Event**

To better understand the current day-of-event practices and procedures for special events at MDT including MDT’s operational capabilities, as well as best practices and specific challenges, questions 13 through 19 investigated traffic management strategies, challenges, best practices, providing devices, dynamic message sign use, and traffic monitoring data.

*Traffic Management Strategies*

Question 13 was asked to identify some of the common traffic management strategies that are approved for traffic control for events in the area. Respondents were provided with the following options: static signs, DMS, 511, traffic signal operations, reversible lanes, road closures, park-and-rides, transit services, flaggers, local law enforcement directing traffic, public information/media campaigns, incentives for taking transit, and other.

This question had 30 respondents. As shown in Figure 9, the most common strategies are flaggers (53 percent), local law enforcement directing traffic (50 percent), road closures (53 percent), static signs (47 percent), and DMS (43 percent).



**Figure 9: Traffic Management Strategies**

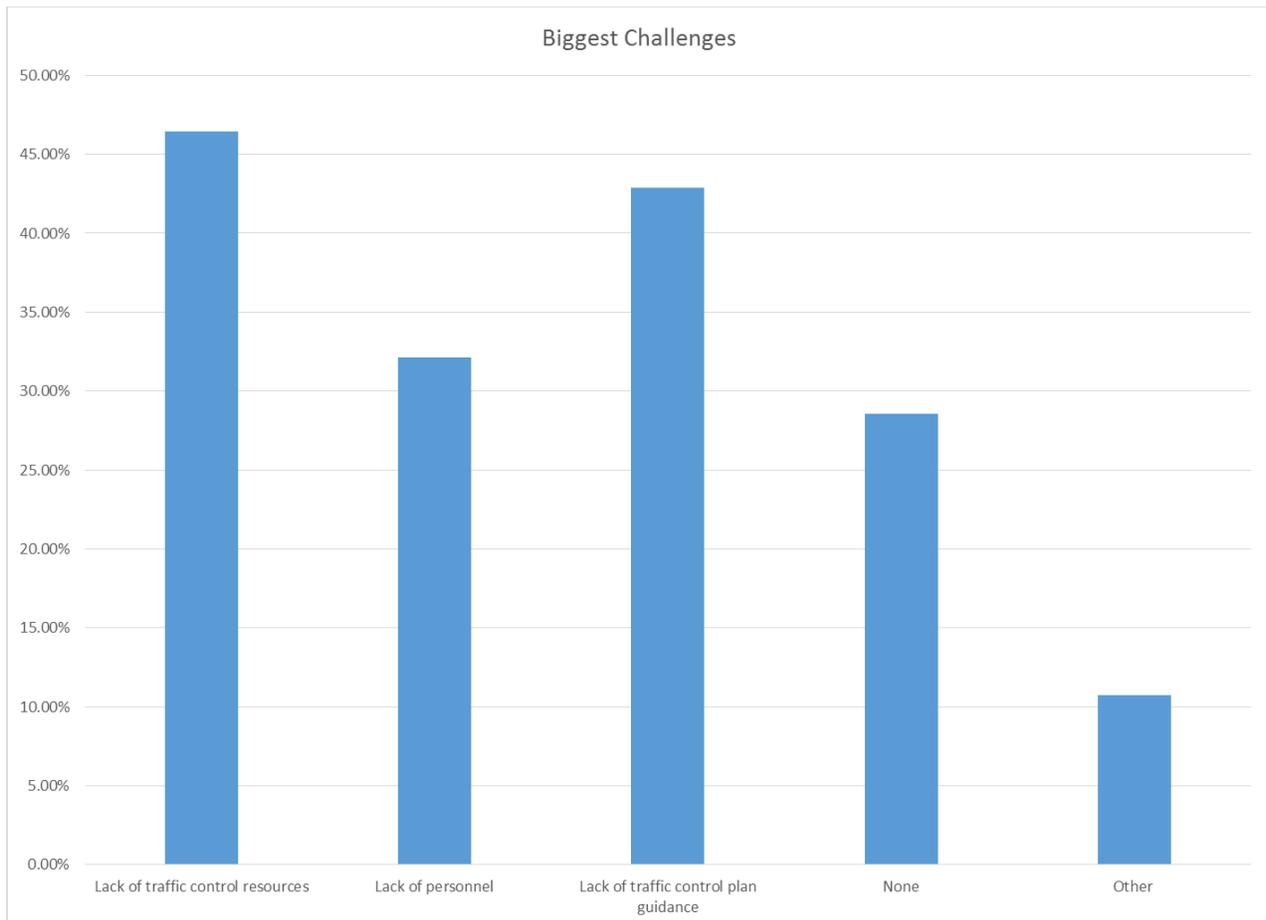
For those who chose other, responses included:

- In construction we approve a traffic control plan prior to implementation and we also discuss special events and traffic control at our preconstruction meetings;
- Coordination with City & County; and
- The chief sets the guidelines for this.

### *Biggest Challenges*

Question 13 asked respondents to identify the biggest challenges for special event traffic control. Options provided to respondents included: lack of traffic control resources, lack of personnel, lack of traffic control guidance, none, and other.

This question had 28 respondents. As shown in Figure 10, the most frequent challenges identified included lack of traffic control resources (46 percent), lack of traffic control plan guidance (43 percent), and lack of personnel (32 percent). However, 29 percent indicated there were no challenges.



**Figure 10: Challenges with Traffic Control**

Responses for other included:

- Placement of their out house and other support facility in the right of way; and
- Some organizers not having qualified people or thinking they have more power and authority than they have.

### *Best Practices*

Question 15 was an open-ended question asking what some of the special event traffic control best practices are in their area.

This question had 13 responses. The most frequent response was local law enforcement coordination and participation (4 respondents). Other responses included:

- Coordinated joint effort between event organizers, local government, MDT and law enforcement for traffic control;
- Having flaggers;
- Maintaining routes for truck traffic and clearly signed detour routes;
- Cones and DMS (light sign);
- When traffic control services are hired to do the traffic control on some of the events;
- Detailed plans;
- A group to establish and maintain devices;
- Sometimes meet and coordinate with the event sponsors to develop a traffic control plan and then have the event sponsors submit an encroachment permit application as needed; and
- Parking areas and using buses to move the people to the area where the special event is held.

### *MDT Traffic Control Device Use*

Question 16 asked if respondents have ever provided traffic control devices for a special event.

This question had 31 responses. More than half (55 percent) of respondents had provided traffic control devices for a special event and an additional 3 percent had provided traffic signal event timing.

A follow-up question was asked for those respondents who did provide traffic control devices, asking them to explain and state whether they would recommend this practice.

Thirteen respondents answered with only one respondent not recommending the practice and one saying only when absolutely necessary. One respondent provided a cautionary example of providing DMS that helps; however, the event was for a nighttime run which he or she considered unsafe.

For those who recommended the practice, they recommend it:

- To make sure the signs meet standards;
- Because organizers usually have a lack of resources;
- Because the more information on the road the better;

- Due to light boards and cones helping a ton with traffic control;
- Because signs are correct if MDT provides them; and
- Otherwise it may not get done and things become unsafe.

Traffic control devices that have been provided previously include:

- Traffic cones;
- (Detour) signs;
- DMS boards;
- Barricades; and
- Bikes on Road signs.

A specific example was provided by the Havre office, which has Bikes on Road signs available to loan to the race organizers. Another example was an MDT employee (certified flagging instructor) serving as a volunteer for the Color Run as a Flagger at one of the intersections during the race and Law Enforcement/Volunteer Fire Department flagging at the other intersection. The Color Run had approximately 300 participants and went very well with minimal impact on traffic and no incidents.

For the respondents who do not recommend providing devices to event organizers, a follow-up question asked why not.

Responses included:

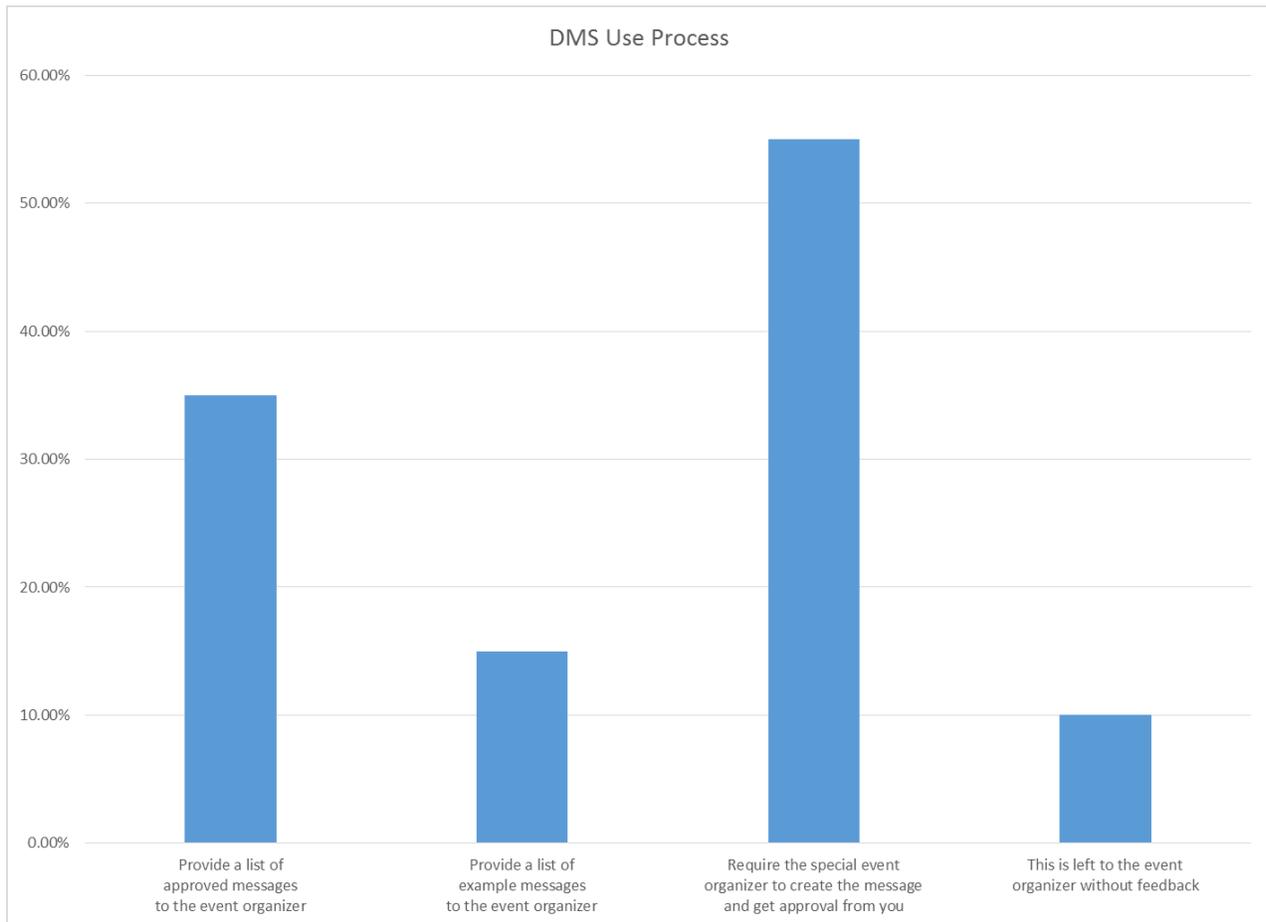
- No need;
- Do not have any;
- Plans come from bigger sections;
- Getting the signs and materials back and in good shape could be a problem;
- Do not like to use public funds to support private events;
- We do not do traffic control for the bicycle races;
- Events are generally required to use contractors to utilize our traffic control plan;
- There are multiple special events throughout the year by different sponsors and it becomes too difficult to decide which events MDT will provide traffic control for. MDT does not have the manpower and equipment to meet all of the special event's needs;
- Permittee usually does their own traffic control;
- Traffic control is not always used properly or are moved by unknowledgeable personnel; and
- We direct the organizers to get the traffic control devices from a contractor that specializes in the business of traffic control.

### *Process for Dynamic Message Signs*

Question 17 was used to identify the requirements for using a Dynamic Message Sign.

As shown in Figure 11, the most frequently used process was to require the special event organizer to create the message and get approval from MDT (55 percent), followed by providing a list of approved messages to the event organizer (35%). Less frequent are to provide a list of

sample messages to the event organizer (15 percent) and to allow the event organizer to create messages without input from MDT (10 percent).



**Figure 11: Process for Dynamic Message Signs**

### *Dynamic Message Sign Messages*

Question 18 asked if a list of previously approved or example DMS Messages would be useful.

This question had 26 respondents and 54 percent of respondents said that a list of approved or sample DMS messages would be useful.

As a follow-up question, respondents were asked for examples of DMS messages from their area that have been previously approved.

One respondent replied that they were told three years ago that DMS could not be used for special events. The other five respondents provided example messages including:

- “Watch for bicycles on road;”
- “Race in progress;”
- “Bikes on road;”
- Explaining why the road is closed; and

- Traffic stopped for next (time frame).

### *Traffic Monitoring Data*

Question 19 asked respondents if they have ever required an event to obtain traffic monitoring data.

This question had 37 responses and 100 percent of respondents said that they have never required traffic monitoring data for a special event.

### MDT Post-event Activities

The purpose of question 20 was to identify MDT's post-event activities, including if an after action review is held.

### *After Action Review*

The final question (question 20) asked if the respondents have ever held an after action review of a special event to determine what worked and what could be done better.

Of the 32 respondents, 28 percent said yes. Those respondents were then asked to describe this process.

Nine respondents described their after action review with the following information:

- We have canceled some events due to the outreach of the public (e.g., is the event community driven or business driven) and times of the events (e.g., we do not want to close roads at peak times);
- We had a meeting to decide what worked and what was not working and how we can improve the event for next year;
- Route cleanup after an event;
- This is only done the following year prior to the event happening again;
- At the end of a fair we would talk with all staff and get input on what works best to reach people at the event;
- With events that had traffic control we would talk about what we can do next time to make things run better;
- Talked about how it could be better;
- Attended the meetings after the event to discuss the things that worked and what needed to be changed;
- CM Russell Art Auction weekend. Quick draw event at the Great Falls Meadowlark Country Club; and
- We as MDT visited with business owners to see if we could have improved our signing due to both businesses being adjacent to HWY 2.

For respondents who had not previously held an after action review, they were asked if this would have been useful.

Of the 20 respondents, 12 respondents said yes, two said yes for large events and coordinating with City/County, two said maybe, one respondent said that he or she didn't know, and three said no with one indicating that his or her agency had done it long enough to know what works.

## Key Assessment of MDT Current Practices Findings/Summary

The key findings for this task have been summarized into five topic areas.

### Current Practices and Procedures for Special Events at MDT

Based on survey responses, the current special event practices and procedures for MDT include: submission of a permit (conducted by 72 percent of respondents), coordination with local jurisdictions (52 percent), and MDT approval or disapproval of a permit (48 percent). Assisting event organizers with the permit completion (26 percent), pre-event meetings with the event organizer (37 percent), and requiring after action reviews (2 percent) were less frequent occurrences.

### *Roles and Responsibilities*

The roles and responsibilities surrounding the special event process include:

- Special Event Organizer
  - Fill out MDT special event permit application with all relevant information for any event affecting a state roadway;
  - Secure approval from community to host the special event and for any effects on local roads; and
  - Provide or hire all necessary equipment and volunteers.
- Montana Department of Transportation
  - Ensure application is completely filled out;
  - Ensure signage and detours meet the MUTCD;
  - Approve or deny application; and
  - Retain a paper copy of the permit application.

### *Permit Application*

The process typically starts with MDT being notified, via a permit application (available on the MDT webpage at [http://www.mdt.mt.gov/other/webdata/external/maint/forms/MDT-MAI-004-SPECIAL\\_USE\\_PERMIT.PDF](http://www.mdt.mt.gov/other/webdata/external/maint/forms/MDT-MAI-004-SPECIAL_USE_PERMIT.PDF)), of a special event that will affect the state transportation system. This is the only way MDT is notified; therefore, if a permit is not submitted, MDT will not have knowledge of the event. The most frequent special events affecting state roadways in Montana include parades, running events, rodeos, county fairs, and bicycle races. Typically these occur 1 to 3 times per year in each given community.

The MDT special event permit application provides some consistency for how impacts to the transportation system (traffic flow and emergency vehicles) will be handled and includes a list of MDT expectations. The application requires a full description of the special event (type, location, size, timeline), a traffic control plan describing detour routes and signing to be utilized, encroachment permit (if applicable), and liability insurance documents (if applicable). In some cases, coordinating with construction activities is required. MDT keeps the permit application paper copies on file for a designated amount of time.

Most communities know they need permits for anything that impacts the transportation system (parades, races, street dances, 3 on 3 basketball tournaments, etc.), but many permits are incomplete, therefore requiring a lot of work on MDT's part to gather the information necessary

to approve the permit. The lack of a consistent deadline for event organizers to submit a permit application prior to an event can also be a challenge. While some survey respondents indicated that they used a specific timeline for the special event permit approval process, this timeline varied greatly among respondents, from requiring the permit application at least two days prior to an event to requiring the permit application months in advance. Respondents without a set timeline indicated that consistency would be helpful because it would help reduce the number of late permit applications and provide MDT with prior notice of an event (in some cases MDT was unaware of an event until the day of).

In 2005, a project was undertaken to develop a new or modified special events permitting process, including the creation of a consistent guidance document, checklist, and approval and denial letters for MDT. However, less than 70 percent of respondents had used these documents. Some respondents indicated that they did not know they existed or that their office had their own procedures.

### *MDT Approval/Denial*

Due to the lack of a written standard practice for approving the permits, staff utilize their previous experience for current thresholds. When reviewing special event permits, MDT considers possible closures, if a detour is needed, if the traffic control plan complies with the MUTCD, impacts to traffic, if the event benefits the community or a personal business, if the special event already has approval from the local community, and if law enforcement is needed. Some events (such as the bicycle race up Beartooth Highway) present safety issues and therefore require liability insurance, emergency medical services, DMS, and completion by a specific time. A consistent approval process would decrease public confusion over what is required and the repercussions of not meeting these standards, as well as allow MDT to deny permits despite potential political pressure.

### *Coordination with Local Stakeholders*

As mentioned previously, in some cases MDT has helped the event organizers to fill out their applications, conducted a pre-meeting with the stakeholders, or had an after action review. In general, however; MDT does not provide day-of-event assistance to the special event. There have been some cases though where MDT has provided traffic control devices for use by the special event. The main reasons for lack of assistance with the special event included budget constraints and overtime challenges, due to many special events occurring outside of typical working hours.

It was noted that the best practice for a special event is coordination between the special event organizer and local stakeholders, specifically local law enforcement, but also with local governments and MDT.

### *After Action Review/Evaluations*

Although only two percent of respondents require an after action review, several respondents indicated that they have completed an after action review in order to discuss what actions worked and what needs to be changed so the event runs better next time. For the participants who had not previously held an after action review, many indicated they would be beneficial in the future.

MDT has also completed some evaluations of signal timing effectiveness used in Billings at the MetraPark and in Missoula for University of Montana football games.

### Examples of Special Event Management Planning/Strategies in Montana

Both kick-off meeting participants and survey respondents stated that MDT maintenance does not do a lot of special event management; generally the event coordinator is required to provide traffic control. Therefore, more information for this question was obtained through the subsequent local agency survey.

However, the most common strategies identified in special event permit applications by event organizers were using flaggers (53 percent), local law enforcement directing traffic (50 percent), road closures (53 percent), static signs (47 percent), and DMS (43 percent).

In the few cases in which MDT has assisted special event coordinators, the agency provided DMS, special event timing, or traffic control devices. Providing DMS presented challenges because MDT staff needed to operate the DMS and had to be paid overtime, because events generally did not occur during business hours. Another challenge is that the signs cannot be guaranteed. If an emergency occurs, the signs would need to be utilized for the emergency instead. The special event signal timing was provided in Billings for Metra Park night events. A review of this strategy was conducted, but the extra signal timing still did not have a positive impact due to the way Metra Park empties its parking lots. Traffic control devices provided in the past include traffic cones, detour signs, DMS, barricades, and “Bikes on Road” signs. Specific examples of providing traffic control devices included the Havre office loaning “Bikes on Road” signs to race organizers and an MDT employee serving as a volunteer flagger for a Color Run, a race event that had approximately 300 participants.

### Best Practices and Specific Challenges from Past Events

Again, while MDT does not generally do the special event management themselves, they were able to identify some best practices and specific challenges from past events.

#### *Best Practices*

Some best practices identified in this task included:

- Ensuring a coordinated joint effort between event organizers, local government, MDT and law enforcement for traffic control;
- Providing parking areas and using buses to move the people to the area where the special event is held;
- Hiring traffic control services to do the traffic control for events;
- Use of DMS to provide traveler information and cones for traffic control;
- Having flaggers;
- Maintaining routes for truck traffic and clearly signed detour routes;
- Detailed plans;
- A group to establish and maintain devices; and
- Meeting and coordinating with the event sponsors to develop a traffic control plan and then having the event sponsors submit an encroachment permit application as needed.

A specific example was given for the city of Billings. There, MDT works with city traffic engineers and district staff/county staff on special events. Together they have created a designated parade route. Their current challenge is to decide whether or not to give permits to every event, because Billings has special events going on almost every weekend. Billings is currently studying special events very closely.

Survey respondents also identified 18 specific special events or special event organizers. The research team used the information and contacts in the local agency survey to identify their best practices and lessons learned.

### *Specific Challenges*

MDT faces many challenges when it comes to special events. These challenges were discussed during the kick-off meeting as well as in the survey responses. The most frequent challenges indicated by the survey relate to traffic control (7 respondents) including making sure that traffic keeps flowing normally and that appropriate detours are available, ensuring the safety of participants (3 respondents), and events that occur during weekends or holidays when MDT is not available for help (3 respondents). Looking further into challenges with traffic control, the most frequent challenges identified included lack of traffic control resources (46 percent), lack of traffic control plan guidance (43 percent), and lack of personnel (32 percent). However, 29 percent felt there were no challenges.

Other specific challenges include:

- Upstream impacts to local roads;
- Political pressure to approve the special event;
- No repercussions for not following permit requirements;
- Costs of traffic control;
- Staff overtime costs;
- Long term closures without adequate detours;
- Hard to commit MDT resources, due to potential for an emergency;
- MDT must approve DMS messages;
- Traffic control plan must comply with MUTCD guidelines;
- Hard to determine when to approve or reject the permit applications;
- Road closures for events that occur on or pass through private landowner property;
- Lack of information from event organizers and not getting documents from MDT;
- Consistent process applicable for both rural and urban areas;
- Most people hand in hard copies, which is less efficient than online;
- Finding time to get together for a meeting;
- Educating the event organizers about all the information and documents needed for permit approval;
- Making sure the event is signed properly and follows the approved traffic control plan;
- Lack of traffic control resources;
- Placement of support facilities (such as out houses) in the right of way; and
- Some organizers not using qualified people or thinking they have more power and authority than they have.

## Gaps in Practices and Procedures and Recommended Changes

### *Gaps*

Both the technical panel and the survey respondents indicated that the most critical need that can be filled by this project would be to create consistency across the state with regard to special events (e.g., a special event in Bozeman would be handled the same as one in Missoula), including both the required information from the organizers and the steps to determine whether or not to approve a permit. Another need is to create outreach materials to educate the public about the requirements for obtaining a special event permit application (including filling them out completely). Lastly, creating training for MDT managers and education materials for potential event planners and organizers is needed. This training and education for the two entities is of equal importance, without both, no progress will be made.

Specific items/gaps to address in the consistent process/guidance document include:

- Consistent timeline for submitting applications;
- Urban and Rural processes/strategies;
- Make sure that events are community oriented;
- The event must be approved and signed by the local municipality where the event is being held before being approved by the Department;
- Conduct meetings with event coordinators;
- Ensure compliance with an approved process;
- Create internal process to ensure all relevant MDT departments (i.e. maintenance) receive the applications and event information;
- Consistent traffic control at events to eliminate public frustrations;
- Consequence if a required permit is not received;
- Consistent guidelines on events that are not permitted;
- Liability risks and requirements;
- Need for contingency plans;
- Special contract provisions to help with/accommodate the coordination of construction impacts on the events; and
- Require advanced notice from bicycle races, including route information.

### *Recommended Changes*

The technical panel and survey respondents recommended numerous changes, including:

- Create a consistent process and guidance document as described above. This consistent process will also give MDT the control to deny permits that do not meet these standards without causing political issues;
- Develop handouts for event organizers that include:
  - A checklist of required documents and data needed so they know up front what is going to be expected of them to get the approval;
  - An explanation for organizers creating new events as to why traffic control is needed (e.g., impact to emergency vehicles; conflicts with construction projects; safety of participants; maintaining routes for truck traffic; long-term closure impacts without good detours; impacts upstream, as well as, at event scene; etc.);

- Actions to take based on the type of event (e.g., small, medium, large);
- Information about the strategies they can implement (e.g., park and ride in Missoula for concerts); and
- Examples for traffic control because they are working with small communities and they do not have the resources to get the information.
- Conduct a gap analysis of what is done now versus what can be done in the future;
- Develop a matrix describing the event type (e.g., x, y, z) and the actions (e.g., a, b, c);
- Improve the information process to educate public about requirement to coordinate with MDT, that a permit process is required, and when and who to contact;
- Ask staff if they would like to be a part of the event and not make it a requirement; and
- Consider the implications of providing traffic control devices (traffic cones, DMS, barricades, detour signs) to event organizers for events. Currently this practice is not widely used because it is considered a liability issue due to event coordinators not being certified.

The pros of this include:

- MDT can ensure that the signs meet standards;
- organizers usually have a lack of resources;
- the more information on the road the better; and
- DMS and cones are very helpful with traffic control.

The cons to this include that:

- MDT does not have the manpower or staff time to handle all event needs, to manage this service, and to control who is borrowing them;
- MDT does not have the funds to purchase extra devices for use by event organizers, and some survey respondents indicated they do not like to use public funds to support private events;
- Getting the signs and materials back (not stolen) and in good shape could be a problem;
- There are multiple special events throughout the year by different sponsors and it becomes too difficult to decide which events MDT will provide traffic control for;
- Traffic control is not always used properly or devices are moved by unknowledgeable personnel; and
- MDT staff can direct the organizers to get the traffic control devices from a contractor that specializes in the business of traffic control.
- Consider a pre-approved list of DMS messages. Examples of messages used in the past include:
  - “Watch for bicycles on road;”
  - “Race in progress;”
  - “Bikes on road;”
  - Short explanation of why the road is closed; and
  - “Traffic stopped for next (time frame).”

### MDT's Operational Capabilities for Special Events

In this task it was determined that while there were some examples of particular MDT sections providing devices (e.g., DMS, static signs, traffic cones, barricades, traffic signal timing) for use at special events, MDT does not, in general, provide operational support for special events. This is due to lack of resources and budget; therefore, MDT instead requires event organizers to provide and or contract out all traffic management needs.

However, if MDT were to change this in the future, the table below provides a list of useful devices for special event management and indicates if MDT owns these devices for other purposes. Note that permanent installations of any of these devices could only be used for special events in the area of those devices.

**Table 3: Potential MDT Special Event Management Resources**

| <b>Special Event Management Resources</b>  | <b>MDT Ownership</b>   |
|--|--|
| Closed circuit television systems for traffic surveillance (permanent or portable)   | Permanent only, mainly collocated with RWIS and used mainly for winter weather |
| Parking management/information systems (detection and surveillance technology to determine available number of spaces)   | NA   |
| Traffic management center (permanent, portable, virtual)   | NA   |
| Aerial observation for traffic surveillance (e.g., helicopters)  | NA   |
| Unmanned aerial observations (e.g., drones)  | NA   |
| Detectors for measuring real-time traffic conditions (permanent or portable)   | Automatic counts stations but not real-time                                    |
| Weather sensors (permanent or portable)  | Permanent and used mainly for winter weather                                   |
| Dynamic message signs (permanent or portable)  | Both permanent and portable  |
| Highway advisory radio (permanent or portable)   | Permanent  |
| Traffic signal system (permanent closed loop signal system, permanent centrally controlled traffic signal systems, permanent centrally controlled adaptive signal systems) | MDT is currently documenting the long term signal system needs for the state.  |
| Traffic devices (e.g., cones, drums, barricades, etc.)   | Yes  |
| Telephone information systems (511)  | Yes  |
| Traveler information website/app   | Yes  |
| Advance signing to improve traffic circulation and warn of congestion  | Yes  |
| Service patrols  | NA   |
| Flaggers   | Yes  |

As indicated by survey respondents, typical traffic control strategies utilized by event organizers and approved by MDT include: flaggers (53 percent), local law enforcement directing traffic (50 percent), road closures (53 percent), static signs (47 percent), and DMS (43 percent). Less frequent, but strategies also used included 511, traffic signal operations, reversible lanes, park-and-rides, transit services, and public information/media campaigns. Respondents were unaware of the use of incentives for taking transit.

## **SURVEY OF LOCAL AGENCIES**

The purpose of this task was to identify current practices and examples of special event management in Montana (outside of MDT), how the stakeholders feel these practices are working, and what changes the stakeholders might recommend. It was also used to assess the willingness of local communities/governments to work with MDT on special event management practices.

To accomplish this, the research team surveyed local entities with known special events, followed up with phone calls to several organizations in Montana with known special events to gather additional information, and reviewed Montana special event permit applications and webpages.

### **Local Agency Survey**

The research team designed a survey to obtain the experience and insight of special event organizers across Montana. The survey solicited the following types of information: special event characteristics; pre-event planning; day-of-event activities; and post-event activities.

This survey was emailed to the 18 contacts identified in the survey of MDT personnel. This included 12 cities/chambers of commerce (that were called to identify a specific contact and to ask them personally to participate in the survey), two bicycle clubs, two schools (St. Labre Indian School and Whitehall High School), and two fairgrounds (Fallon County Fairgrounds and Montana State Fair). The survey was also sent to the 24 bicycle clubs identified by Bike Walk Montana, to 66 additional chambers of commerce as identified through an internet search, to the Montana Association of Chiefs of Police (MACOP), and to the main email contact for Montana Highway Patrol Headquarters.

There were 19 respondents; however, only 16 respondents proceeded beyond the Montana State University consent form. Respondents represented 14 different communities and were from Chambers of Commerce, City Public Works Departments, Parks and Recreation Departments, and bicycle clubs.

### **Survey Design**

The research team designed a survey to obtain the experience and insight of special event organizers across Montana.

The intent of the survey was to document perspectives of special event managers, in order to:

- Identify current practices and examples of special event management in Montana (outside of MDT);
- Document how the stakeholders perceive these practices are working;
- Identify changes the stakeholders might recommend; and
- Assess the willingness of local communities/governments to work with MDT on special event management practices.

The survey solicited the following types of information:

- Special event characteristics (Question 1);
- Pre-event planning (Questions 2 through 7);
- Day-of-event activities (Questions 8 through 16); and
- Post-event activities (Questions 17 and 18).

Throughout the survey, two types of responses were used: multiple-choice and open-ended questions. Multiple choice questions contained between two and nine response categories.

### Survey Distribution

This survey, shown in Appendix F, was emailed to the 18 contacts identified by MDT. This included 12 cities/chambers of commerce (that were called to identify a specific contact and to ask them personally to participate in the survey), two bicycle clubs, two schools (St. Labre Indian School and Whitehall High School), and two fairgrounds (Fallon County Fairgrounds and Montana State Fair). The survey was also sent to the 24 bicycle clubs identified by Bike Walk Montana, to 66 additional chambers of commerce as identified through an internet search, to the Montana Association of Chiefs of Police (MACOP), and to the main email contact for Montana Highway Patrol Headquarters.

There were 19 respondents; however, only 16 respondents proceeded beyond the Montana State University consent form. Respondents represented 14 different communities within Montana that host special events. These locations included: Bozeman, Butte, Cascade, Cooke City, Great Falls, Kalispell, Lakeside, Lewistown, Libby, Miles City, Missoula, Philipsburg, Whitehall, and Wolf Creek.

Respondents represented Chambers of Commerce, City Public Works Departments, Parks and Recreation Departments, and bicycle clubs. Specific events that were represented included: Cow Country, USAC Races, Race Montana Triathlon, Senior Olympics, Montana Dragon Boat Festival, One Helena Hundred Bicycle Century Ride, Flint Creek Valley Days Classic Car Show, Nordicfest Heritage Festival, Mountain Madness Air Show, Montana Hell Ride, Chokecherry Festival, St Patrick's Day Parade, July 4<sup>th</sup> Parade, Blarney Stone Fun Run, Frontier Days, and multiple events in Bozeman and Butte.

### Statistics

This survey was distributed to collect more qualitative than quantitative data; therefore, it was not distributed to collect a statistically significant sample. Due to this, means and standard deviations were not calculated. Rather the discussion focuses on summarizing the open ended responses and percentages. Percentages were based on total responses for each question and not on the survey total, because some respondents did not answer every question. Survey results are discussed by category in the following four chapters:

- Special Event Characteristics;
- Pre-Event Planning;
- Day-of-Event; and
- Post-Event Activities.

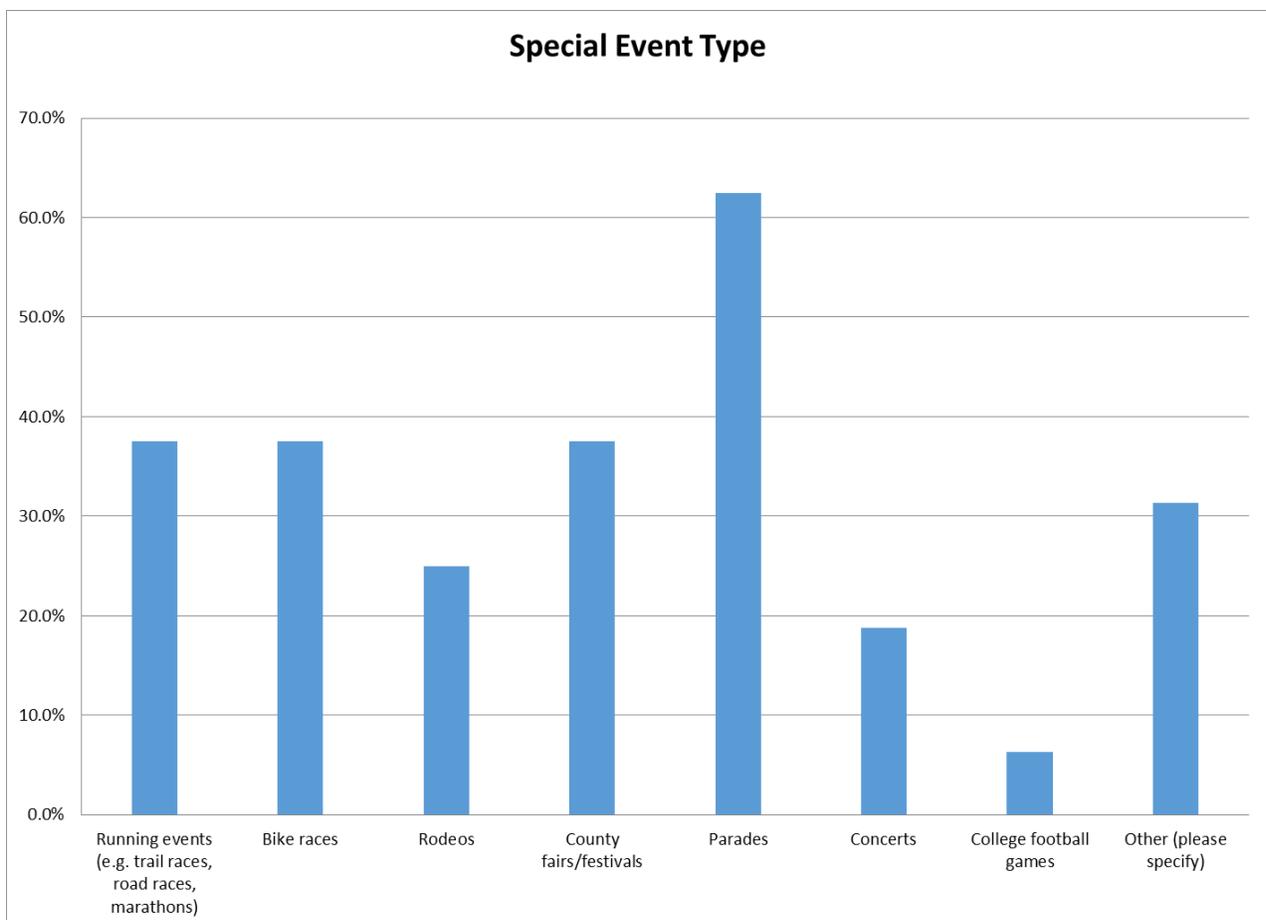
## Special Event Characteristics

To better understand the survey respondents' level of experience with special events and what special events occur in their area, question 1 asked about the type of events with which they have been involved.

### *Experience with Special Events*

The main objective of the survey was to document respondents' experience with special events; therefore, the first question was designed to ensure that the respondents had previous or current experience. The question asked what types of special events they had previously (or currently) organized.

Of the 19 respondents who started the survey, 16 answered this question. As shown in Figure 12, the majority of respondents, 63 percent, had organized parades. Other popular events were running events (38 percent), bicycle races (38 percent), and county fairs/festivals (38 percent). Fewer respondents had experience with rodeos (25 percent), concerts (19 percent), and college football games (6 percent). Other special events that respondents had organized, but were not on the list included: boat races, fundraisers, recreational bicycle rides (noncompetitive), car shows, Brewfest, BBQ challenges, pond hockey classics, and Spartan races.



**Figure 12: Special Event Types**

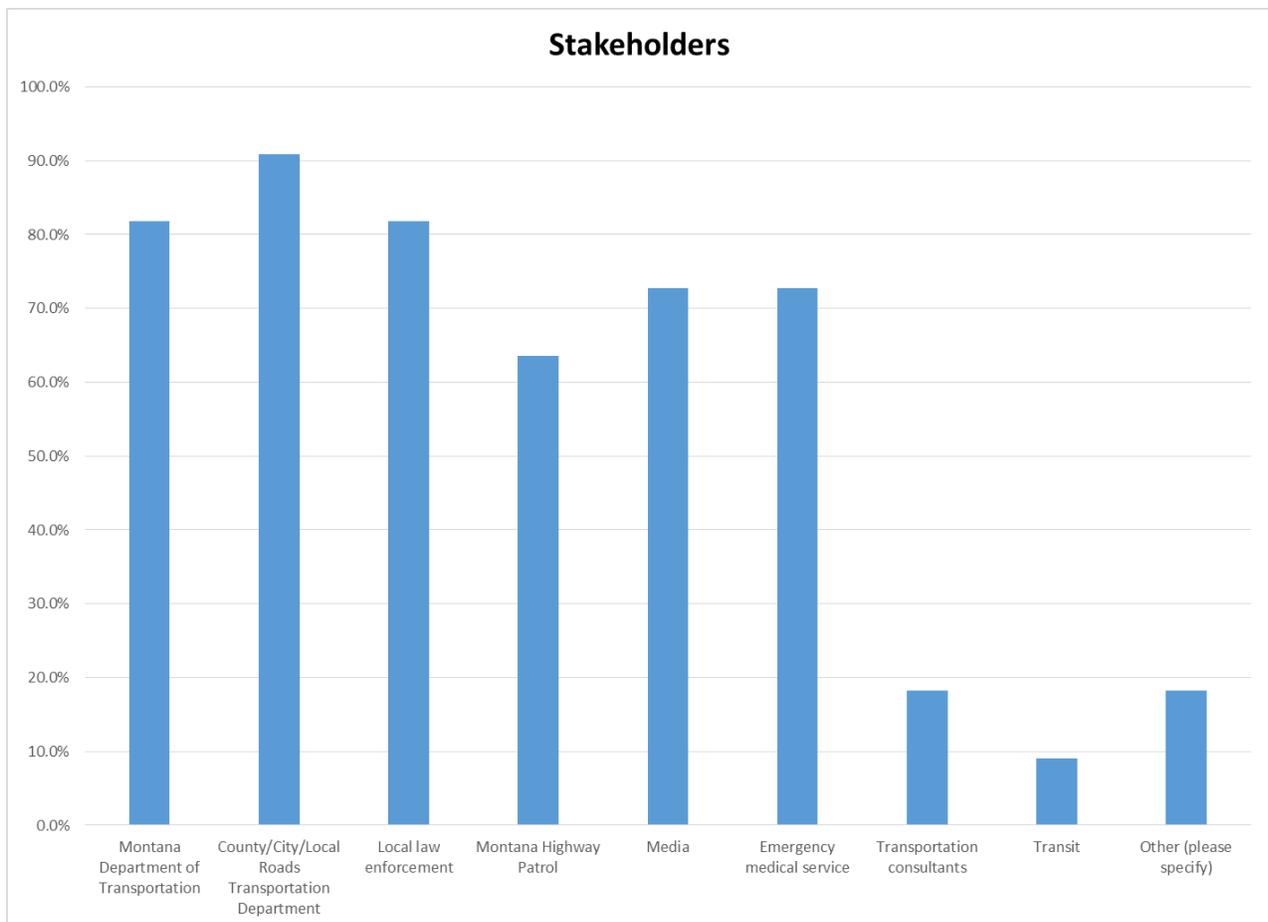
**Pre-Event Planning**

To better understand the current pre-event planning practices and procedures for special events in Montana, as well as best practices and specific challenges, questions 2 through 7 investigated stakeholder involvement, MDT guidance, challenges with the process, recommended changes to the process, suggestions for a guidance document, and the possibility of sharing a sample application.

**Stakeholders**

Question 2 asked the respondents (event organizers) to identify stakeholders that they include in the planning process. Respondents were asked to choose all that apply. Options included: Montana Department of Transportation; county/city/local roads transportation department; local law enforcement; Montana Highway Patrol; media; emergency medical services; transportation consultants; transit; and other.

As shown in Figure 13, the most frequent responses included county/city/local roads transportation department (91 percent), Montana Department of Transportation (82 percent), local law enforcement (82 percent), media (73 percent), emergency medical services (73 percent), and Montana Highway Patrol (64 percent).



**Figure 13: Stakeholders Involved in Pre-event Planning**

Other responses included the city government and search and rescue agencies.

### *Guidance*

In question 3, respondents were asked if MDT provides them with any guidance for filling out the special event permit and if so, what they provide and is it helpful.

There were ten responses to this question. Five respondents indicated that MDT did not help them; of these one respondent said that the event did not use Montana State Highways and another stated that they use copies of old applications for guidance. A third stated that MDT is included in the review of all permits taking place on state roads in their city (street closures), but MDT is not involved in filling out permits. All permits come through the City initially. When the City submits the permit materials for MDT approval, the respondent lets MDT know how the City intends to handle the closure, and approval is typically granted without any conditions.

The other five respondents indicated that MDT does help them, with one specifically stating that the “local MDT is very helpful”. Specific examples included: MDT personnel initially explained the process and what was to be included in the application, assistance through the website, assistance from staff, and meeting with MDT and the City to map out a special event when needed.

### *Challenges with Process*

Question 4 asked special event organizers to identify the greatest challenge with the current MDT special event process. There were ten responses to this question.

One respondent had never filled out the permit and three respondents indicated that there were no challenges. In fact, one of them stated that “MDT and local coordination work hand in hand” and the entity is “happy with the current way of doing it.”

Responses included:

- Knowing who/when to contact MDT;
- Just knowing who to contact, once I figured that out I passed it on to everyone in my community;
- Getting confirmation that the form has been received and processed;
- Filling out two applications for any event, one for MDT and one for town approval;
- Requirements for certified flaggers. Flaggers are difficult to find and difficult to get to commit to an event but all street crossings where vehicles will be stopped require 2 flaggers; and
- The greatest highway related challenge with the Mountain Madness Air Show is the volume of traffic generated by this event: nearly 30,000 people attended our 2014 show over a 2-day weekend.

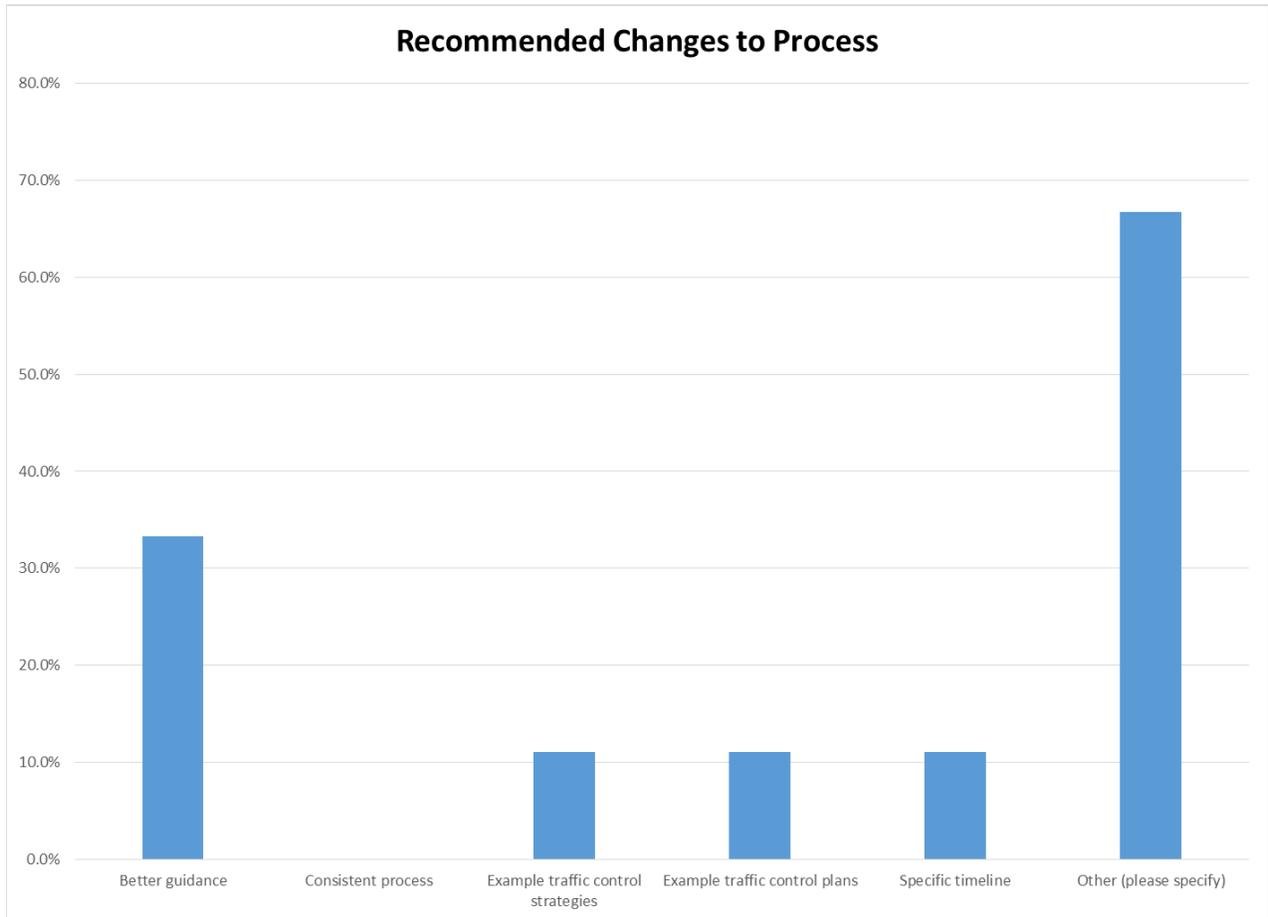
### *Recommended Changes*

In question 5, respondents were asked what (if anything) they would change about the current MDT special event process. Respondents were provided options of better guidance, consistent process, examples of traffic control plans, examples of traffic control strategies, specific timeline, and other. There were 9 responses to this question.

As shown in Figure 14, the top choices were other (67 percent) and better guidance (33 percent). Examples of traffic control plans, examples of traffic control strategies, and specific timelines only had one positive response each. Under “other,” the responses included one not applicable and two would not change anything.

Changes recommended under the other option included:

- A web-application process that saves data from year to year. We basically do the same event every year, and only the date needs to change on our application;
- Seems like just approval and sign check out right now, which works for us, but if the expectation is different, then it should be communicated; and
- In Bozeman, MDT does not have their own special event process (that I'm aware of). These are all handled by the City. Bozeman's biggest issue, in my opinion, is that there are too many events closing Main Street because of its impact on drivers and the amount of work it causes for City departments (closures). We have however limited Main Street closures to established events only. Organizers must prove that there is interest in the event at another location.



**Figure 14: Recommended Changes**

### *Guidance Document*

Question 6 asked if there were specific things that a special event guidance document should address, specifically topics that would be beneficial.

There were four applicable responses including:

- Please don't make it too elaborate or strict;
- The ability to close a state highway in a commercial district for a car show;
- Single file riding vs double file riding vs group riding (for bicycles); and
- Information on insurance and certified flagger requirements including information on how to get certified as a flagger.

### *Copy of Special Event Application*

In question 7, respondents were asked if they would be willing to share a copy of their special event application. Of 10 respondents, nine said yes. However, upon following up, only one was provided.

### Day-of-Event

To better understand the current day-of-event practices and procedures for special events in Montana, as well as best practices and specific challenges, questions 8 through 16 investigated traffic management strategies, challenges, public information, volunteer resources, equipment testing, communications, traffic operations, media, and traffic monitoring.

### *Traffic Management Strategies*

Question 8 was asked to identify some of the common traffic management strategies that are used for traffic control for events in the area. Respondents were provided with the following options: static signs, DMS, 511, traffic signal operations, reversible lanes, road closures, park-and-rides, transit services, flaggers, local law enforcement directing traffic, public information/media campaigns, incentives for taking transit, and other.

This question had 11 responses. As shown in Figure 15, the most common strategies are road closures (73 percent), local law enforcement directing traffic (64 percent), static signs (55 percent), public information/media campaigns (55 percent), traffic signal operations (27 percent), and flaggers (27 percent).

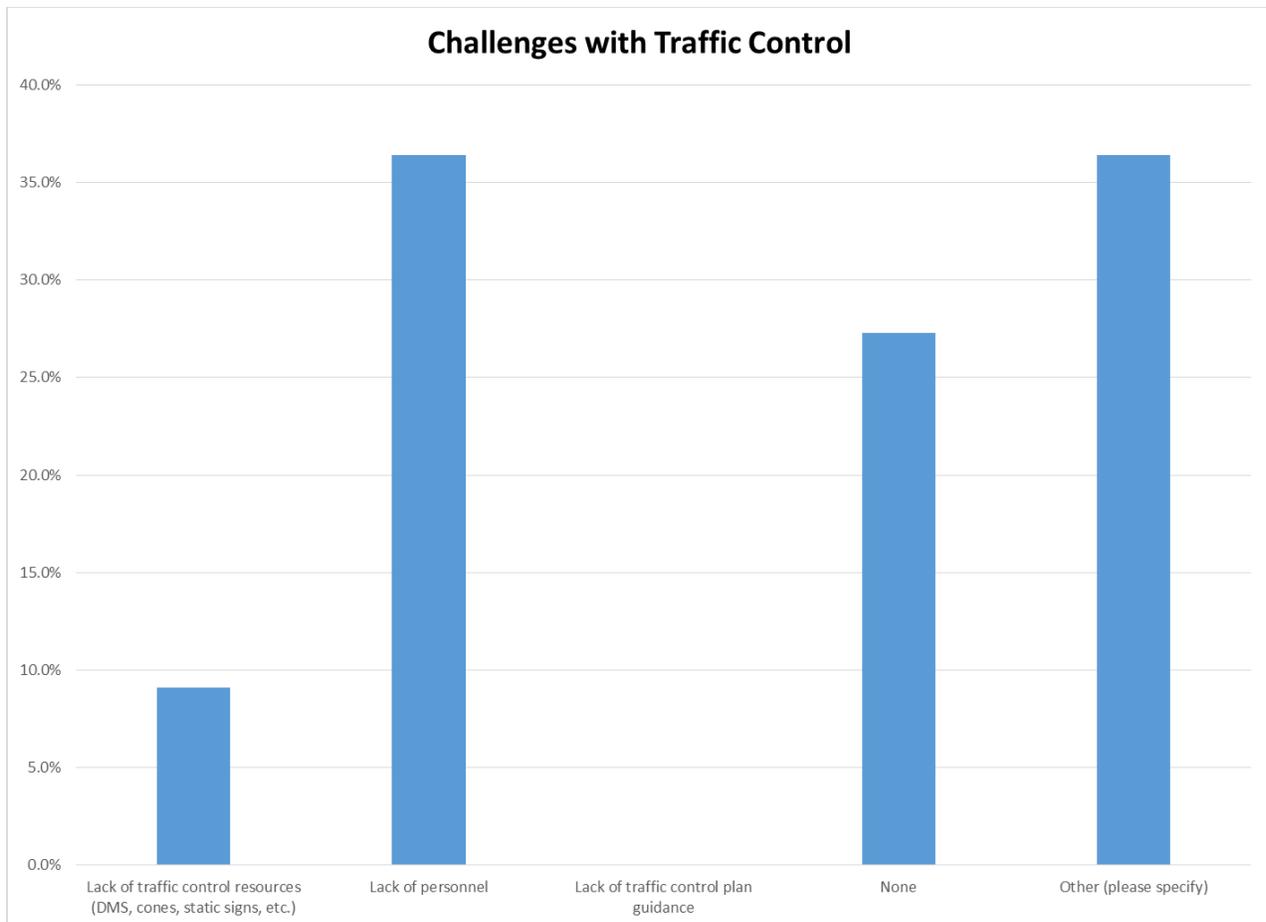


**Figure 15: Traffic Management Strategies**

*Biggest Challenges*

Question 9 asked respondents to identify the biggest challenges for special event traffic control. Options provided to respondents included: lack of traffic control resources, lack of personnel, lack of traffic control plan guidance, none, and other.

As shown in Figure 16, this question had 11 responses. The most frequent challenges identified included lack of personnel (36 percent) and other (36 percent). However, 27 percent stated there were no challenges.



**Figure 16: Challenges with Traffic Control**

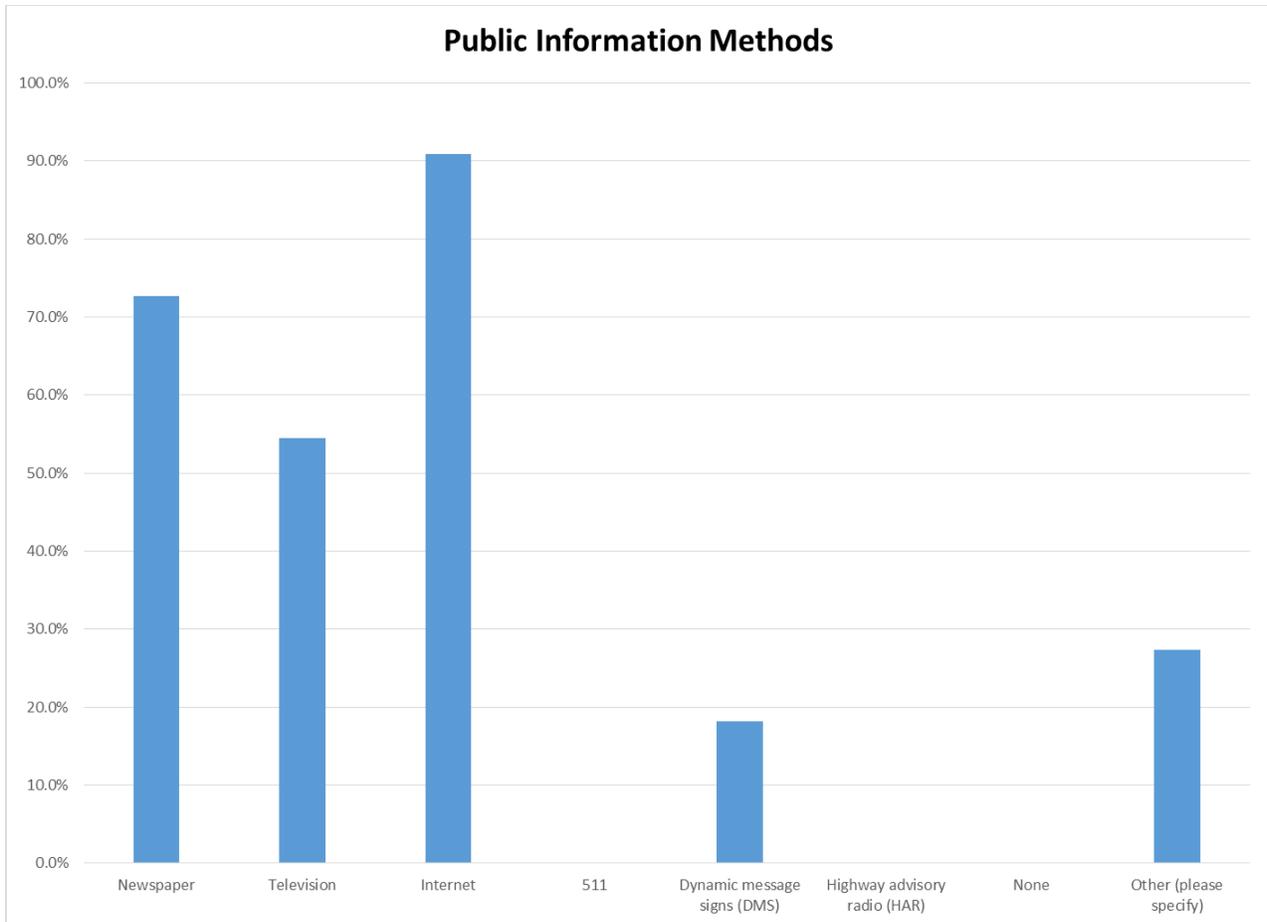
Responses for other included:

- Parking space at our event, and also getting motorists to observe the signs and slow down;
- Would like to grow the show and use the state highway block as part of the show;
- The challenge was to raise the funds to pay for the items listed above; and
- City not getting signs out early enough.

### *Public Information*

In question 10, respondents were asked how they get the pertinent information out to the public about a special event. Respondents were asked to check all that apply and were provided with the following response options: newspaper, television, internet, 511, DMS, HAR, none, and other.

There were 11 responses to this question. As can be seen in Figure 17, the majority of respondents use traditional methods of public information including the internet (91 percent), newspapers (73 percent), and television (55 percent).



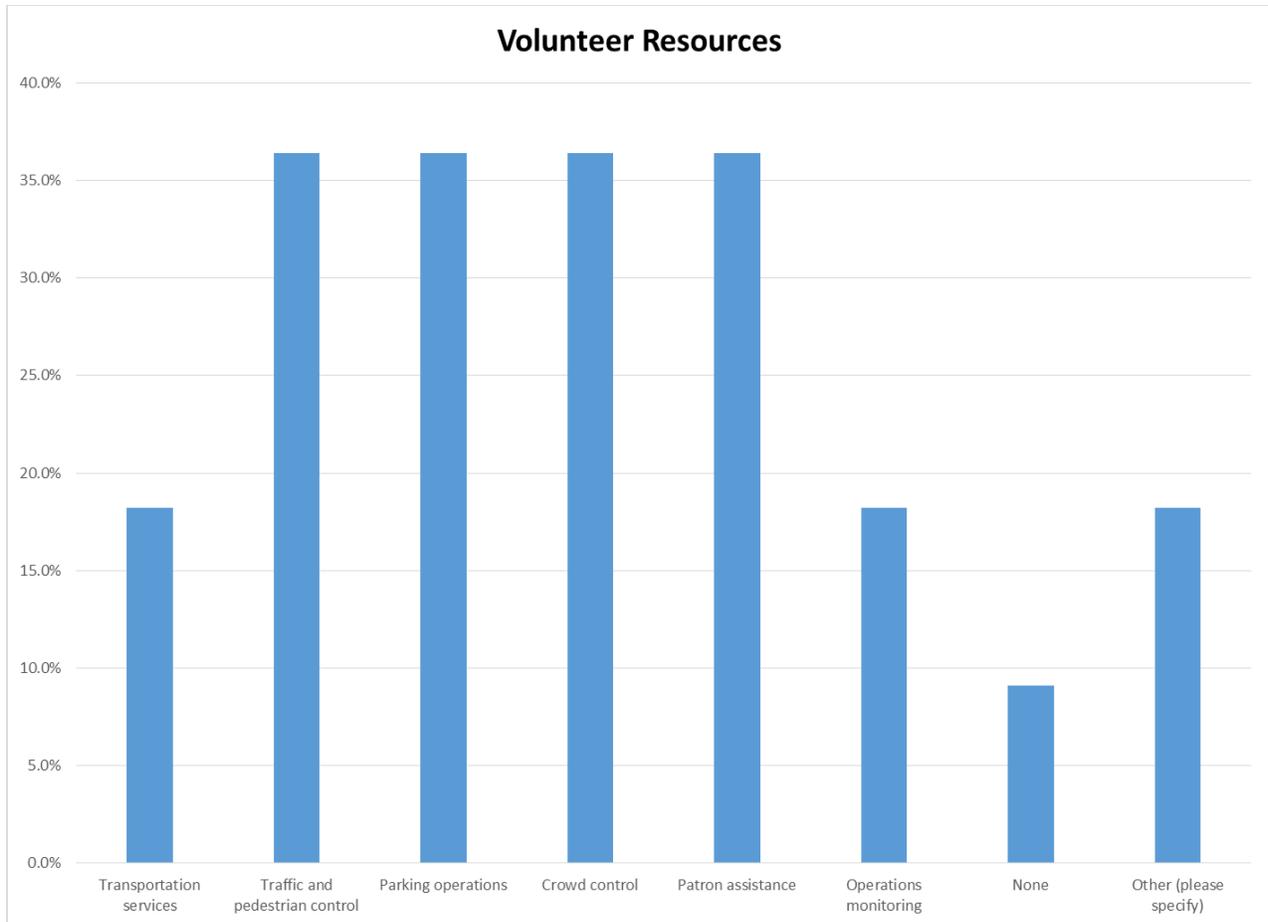
**Figure 17: Public Information Methods**

Other responses included radio, door to door, signage, and newsletters.

*Volunteer Resources*

Question 11 asked respondents how they use volunteer resources. Respondents were asked to check all that apply and options provided included: transportation services, traffic and pedestrian control, parking operations, crowd control, patron assistance, operations monitoring, none, and other.

As shown in Figure 18, the most frequent responses were traffic and pedestrian control (36 percent), parking operations (36 percent), crowd control (36 percent), and patron assistance (36 percent).



**Figure 18: Use of Volunteer Resources**

Other responses included: set-up and directional guidance during a fun run.

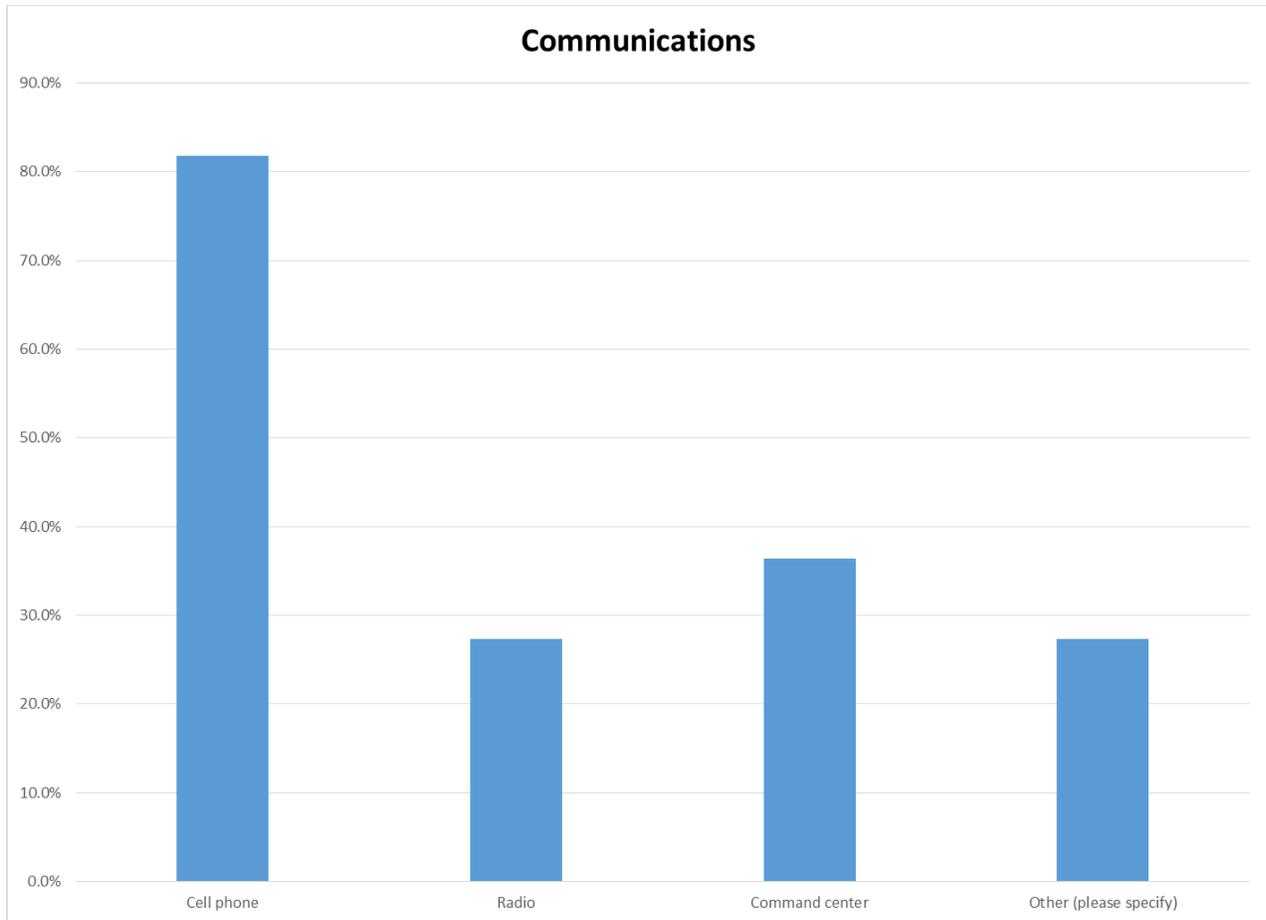
*Testing Equipment*

Question 12 asked if respondents tested all traffic control equipment before the event. Ten respondents answered this yes or no question. Twenty percent said yes and 80 percent said no.

*Communications*

Question 13 asked how the lines of communication are kept open among all stakeholders during the event. Respondents could check all that applied and were provided the options of cell phone, radio, command center, and other.

As shown in Figure 19, the majority of respondents indicated cell phone (82 percent). Thirty-six percent used a command center and 27 percent used radio.



**Figure 19: Communications on Day-of-event**

Other responses included satellite phone, email, and [stakeholders are] close enough when setting up to communicate easily.

### *Traffic Operations*

Question 14 was an open-ended question asking who has the final say on all traffic operations during an event.

This question had 11 responses.

- Four stated the special event director, with one who coordinates with MDT and local law enforcement for any potential conflicts and another who coordinates with airport management and emergency services;
- Three stated the city with one specified as the public works department;
- Two stated the chamber of commerce with one noting that the chamber communicates what it wants/needs and the city places the signs;
- Another stated local law enforcement and MDT; and
- The last stated volunteers, search & rescue, veteran groups.

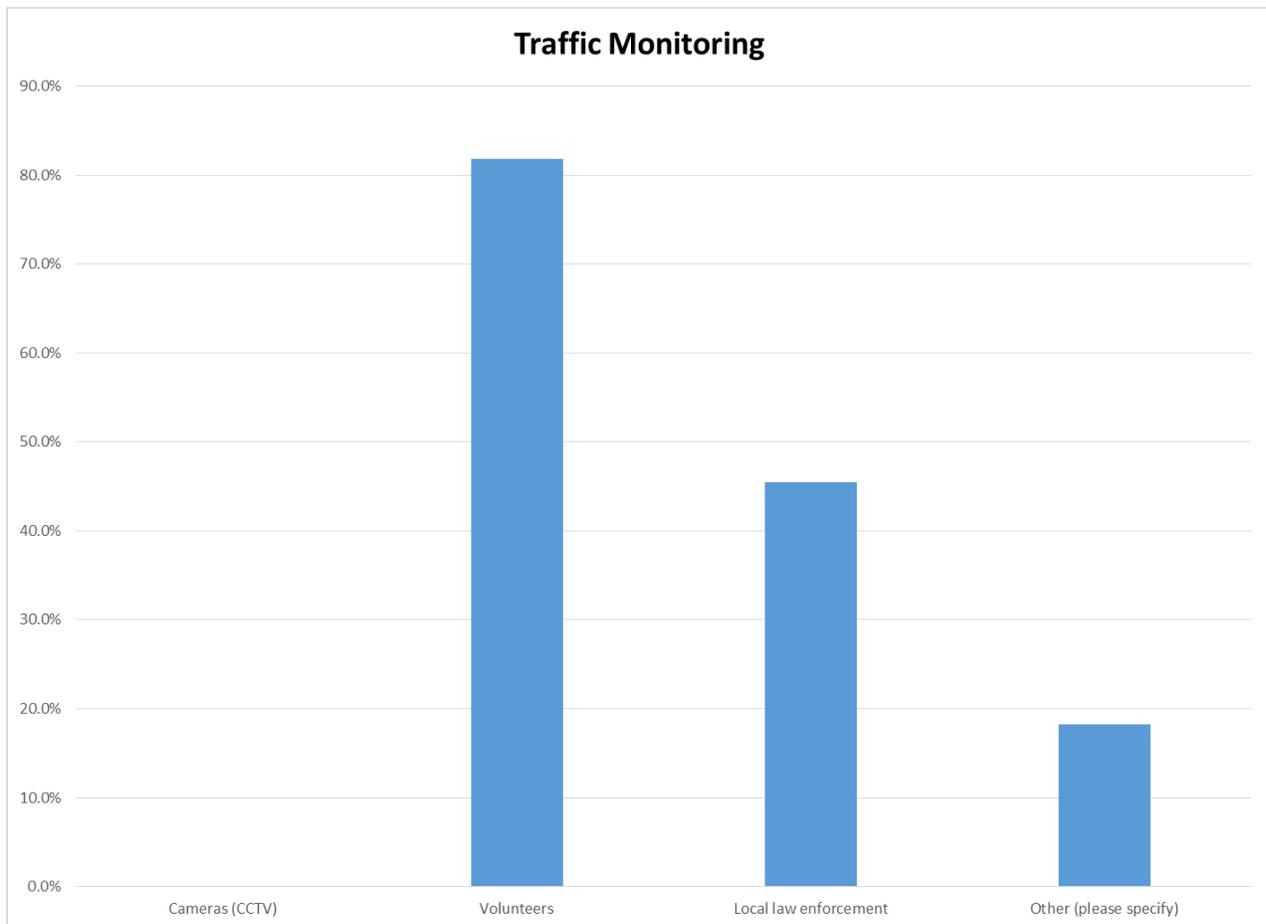
### Media

Question 15 asked respondents if they keep in contact with the media to update the public on traffic around a special event. This yes or no question received 11 responses with 73 percent saying that they do keep in touch with the media.

### Traffic Monitoring

In question 16, respondents were asked how they monitor traffic during a special event. Respondents were asked to check all that apply and the options provided included: Cameras (CCTV), volunteers, local law enforcement, and other. There were 11 responses to this question.

As shown in Figure 20, the most frequent response was volunteers (82 percent) followed by local law enforcement (46 percent). Another monitoring techniques included using a traffic and parking management contractor. Note that none had used cameras (CCTV).



**Figure 20: Traffic Monitoring Methods**

### Post-event Activities

The purpose of questions 17 and 18 was to identify post-event activities in Montana, including if an after action review is held.

### *Survey of Public Opinion*

Question 17 asked if respondents had ever conducted a survey to gain insight on the public opinion of transportation management during a special event. This yes or no question received 11 responses with only one respondent (9 percent) indicating he or she had conducted a survey.

### *After Action Review*

The final question (question 18) asked if the respondents had ever held an after action review of a special event to determine what worked and what could be done better.

Of the 11 respondents, 91 percent said yes. Those respondents were then asked to describe this process.

Responses included that after action reviews were conducted with volunteers, the 5-10 key people of the event, the event board, a forum with the public, and/or the event organizer with the city/chamber.

In some cases, these meetings are used to create an after action report, but more importantly they gather information to be used in the future about event details and potential refinements such as placement of volunteers, specific routes improvements, and signage or traffic cone placement improvements.

For respondents who had not previously held an after action review, they were asked if this would have been useful. Only one person responded to this question and said absolutely.

## **Case Studies**

To collect additional information, event organizers and local agencies were contacted in three communities (Whitehall, Billings, and Missoula) to document rural case studies.

Whitehall was chosen as a rural location and to document the Frontier Days Celebration; whereas, Billings and Missoula were chosen to represent the more urban areas. Billings was chosen due to the recent formation of a special event committee, and Missoula was chosen due to the large number of events and organizations that work together to manage them.

### Frontier Days

For the past 30 years, the Whitehall Chamber of Commerce has organized Frontier Days, which includes a rodeo, street dances, kids' activities, a parade, and vendor exhibits. The annual community event draws around 2000 people throughout the weekend. The Chamber manages Frontier Days with the assistance of approximately 20 volunteers.

This event requires the closure of Main Street for the parade and a closure (shorter in length than the parade) for the vendor exhibit. In order to get permission for these closures, the Whitehall Chamber of Commerce must fill out both the town special event permit application (available in print copy only at the town hall) and the MDT special event permit application. To get city approval, there must be a route map, search and rescue plan, and MDT approval.

The traffic control (static signs and cones) used for this event are borrowed from the town and a Dynamic Message Sign is borrowed from a private entity in Cardwell, MT. The traffic control and detours are set-up by search and rescue with help from Chamber of Commerce volunteers.

The traffic management in the past few years has been a huge improvement over the past. This is due in part to volunteers handing out maps of the closure and potential detours to drivers in stopped traffic, so they have options for where to go (as a courtesy, the volunteers also distribute bottled water). Another strategy that has worked well for parking shortages is offering parking at the local school and using transit between the school parking and event. The Chamber would like to be able to request traffic control (cones, barricades, etc.) from MDT as the smaller towns do not have enough of their own.

When asked about best practices/lessons learned to share with someone preparing for a special event for the first time, the representative of Whitehall Chamber of Commerce mentioned the following:

- When creating a detour route, ensure you consider the turning movements for commercial vehicles as some streets are too narrow to accommodate them and should not be used in the detour;
- Hand out detour maps to all stopped vehicular traffic;
- After action meetings are crucial for getting feedback, issues, lessons learned, and ideas for improvement from all volunteers;
- Examples of previously completed, approved applications are very useful; and
- Definitely overstaff everything (e.g., if you think you need 2 volunteers at a street corner, schedule 4-6).

### Billings

The City of Billings was contacted in light of their recent review of their special events process. The review was completed by a committee, which was created because of the growing number of events. In recent years, there have been more than 100 events per year with most of them in downtown Billings. Many challenges (multiple events on same day, one group had every Saturday, how many events per organization per year should be allowed, etc.) were identified by the committee charged with the review, and the members brought them to the council for decisions. The outcome from this review process was a new special event permit application requesting additional information from event organizers.

According to its website, the City of Billings provides both a “Special Event & Right-of Way Permit Application Checklist” (City of Billings Date Unknown) and a “Special Event & Right-of-Way Permit Application” (City of Billings 2015). The application is formatted as a packet that contains information for an event organizer (defining an event, describing the permitting process, discussing considerations that will be taken during review of the application, event priority, and annual and park event information), as well as the permit application.

The traffic plan/traffic control portion of the permit application is very detailed (two pages long) and includes a checklist of required information when submitting the application. It requires applicants to choose a type of event (road race, parade, bicycle race/walk, procession, other) and

submit a route and traffic control plan. If the event is a parade, Billings has three designated parade routes, so one of those must be selected.

The checklist assists event planners in considering potential challenges such as:

- People trying to reach hotels, residences, businesses, places of worship, and public facilities including public transportation;
- How many flaggers and ensuring flaggers are certified;
- Provision of a 12 foot wide unobstructed emergency access lane on closed streets for the fire department;
- Pedestrian access on public sidewalks must be maintained unless alternative options are provided;
- Paint used for the event must be temporary water based paint and there will be a charge if it is not gone in a month;
- Event organizers are responsible for placing and removing parking meter tags; and
- Notification of businesses and residences requires proof of notice delivery via a sign-off form.

When asked about the traffic management in Billings for special events, the respondent indicated that the City does a great job for stationary events; all event organizers have to hire a private contractor and if flaggers are needed they must be trained and certified. The events that they struggle with are the short running races that are done as fundraisers. In these cases, the organizers do not have a lot of money for traffic control, so it is challenging to establish requirements that balance the appropriate level of traffic control with the budget for a fundraiser.

### Missoula

Missoula hosts many special events a year (around 18-20 closures of Main Street per year) with many different organizers. These include, but are not limited to: the University of Montana (football games, rodeos, concerts), Run Wild Missoula (Missoula Marathon and other races), and Missoula Downtown Association. To find out more about the effects the special events have on traffic in Missoula, the research team spoke to representatives from each of the above mentioned organizations, as well as the Missoula City Police.

#### *Events at University of Montana (U of M)*

Many of the events that are hosted by the University of Montana have a big impact on traffic (e.g., football games average 25,000 people mostly from outside Missoula) due to limited river crossings providing lack of access to the University, but in general, do not include road closures (on campus or in the city). U of M provides traffic management on campus only, through static signage and patron notifications (e.g., where to park), and the University tends to schedule these events at night when there are generally fewer people on the campus. In the case of a really big event (e.g., Paul McCartney concert) that would affect traffic in the city of Missoula as well, U of M coordinates with the City of Missoula police.

One challenge noted was that the local bars around town hire a bus for some events at U of M stadium. This is done to accommodate the parking; however, sometimes this means a car is parked in front of a downtown establishment for 6-8 hours and there is no parking enforcement.

The City of Missoula police were able to share some lessons learned from U of M events, specifically the Paul McCartney concert:

- DMS on the Interstate were useful to warn motorists of the traffic and the backups at the two Missoula exits;
- Police from the traffic unit were stationed at the bottom of the Interstate exit ramps to help control turning traffic to help alleviate some of the backups on the Interstate;
- At the Van Buren and Broadway intersection, pedestrians were not obeying the walk signals; they would continue crossing until the traffic pattern changed which caused challenges for turning vehicular traffic. This was alleviated as soon as a police officer was stationed at this intersection; and
- Remember to consider that commuter traffic will be exiting the city as event traffic is entering; this may also cause congestion.

### *Missoula Marathon*

Run Wild Missoula has over 1600 members and organizes approximately 15 events each year totaling more than 11,000 participants. Their largest event is the Missoula Marathon with two days of events totaling approximately 6500-7000 people. The attendees are approximately 50 percent from outside of Missoula, with 30 percent of those from out of state.

The marathon is on a Sunday morning starting at 6 AM in the most rural part of Missoula and ends in the city center. Due to limited parking at the start location(s), a local school bus company is hired to provide around 40 buses for a park and ride. Approximately 80 percent of attendees utilize the buses. Due to permitting requirements, a complete road closure is not a possibility as it is for larger urban marathons (e.g., New York, Boston). Therefore, in general one travel lane (one direction) is closed to vehicular traffic using traffic cones and static signage, and organizers attempt to set the route using residential streets with less traffic volume, where possible. The traffic management is done by a private company. Law enforcement officers (around 15) are utilized at all critical intersections (signalized or high volume), whereas, volunteers are used at the remaining intersections.

When asked about best practices/lessons learned to share with someone preparing for a special event for the first time, the representative of Run Wild Montana mentioned the following:

- First and foremost is engagement with traffic engineer/public works and law enforcement governing agencies (city, county, and state) who will be involved with the special event either by approving the permit or helping to manage traffic. Try to touch base with all of the agencies several times a year for coordination. For Run Wild Missoula this includes Missoula County, City of Missoula, MDT, city police, county sheriff, and Montana Highway Patrol.
- Hire a third party contractor to set-up and manage traffic control. It is a significant effort to do this for a marathon (26.2 miles) and requires experience to do it safely.
- Ensure the yearly budget includes funding to hire a local traffic management firm for their races;
- Utilize barricades, cones, and signage consistent with the MUTCD as it is a consistent format known to the public and minimizes their confusion during a street closure;
- Use as many physical bodies, in safety vests, as possible for traffic control;

- Public notification is important and typically the smaller the community, the bigger a challenge this is. Use traditional media and social media to get the word out about what/when the event is happening and the expected travel impact (expected delays, how long they will last, alternate routes) so people can preplan their travel; and
- When creating a race route:
  - Use the trail network (off road) to the greatest extent possible or the residential streets (lower volume and fewer potential conflicts than an arterial);
  - Talk to stakeholders about the potential course to identify possible challenges/conflicts as local agencies know the street network the best; and
  - If the event coordinator is not from the community, connect with someone in the local running community as they will know the best routes and the challenges for runners in the area.

### *Missoula Downtown Association Events*

The Missoula Downtown Association (MDA) is a non-profit, private organization that promotes businesses and events in downtown Missoula. It organizes approximately 75 events in Missoula each year of which around 35 are public events, drawing in approximately a quarter million people per year to downtown Missoula. Most of these events occur at Caras Park (not on a public street); however, three of these events occur on Main Street in Missoula requiring street closures (River City Roots Festival with a two tier closures, the Parade of Lights, and the Car Show).

Similar to Run Wild Missoula, MDA hires a private construction firm to do traffic control. The closure plan created by the private firm is submitted to the city along with the permit application and liability insurance. To obtain approval six departments must sign off on the permit application. The typical traffic control for an MDA event on Main Street includes static signage and type 2 and 3 barricades. As there are 18 intersections on Main Street, it is hard to hire enough uniformed officers; therefore, officers are supplemented with volunteers.

A strategy used for special events is public notification through local media, press releases, ads, maps, public service announcements, and door to door notifications. Another is to work with the local transit agency. Transit in Missoula is offered free of charge and while MDA has not needed to set-up a specific park and ride for most events, many attendees do park along the transit route and ride in to the event. One event that does utilize a park and ride is the Color Me Rad Race at the U of M stadium. For this event, parking in downtown parking garages (3 of them) is promoted and buses are hired to transport registrants to the stadium. This strategy helps with parking but also ensures the attendees are spending more time in downtown and possibly generating more revenue.

Due to an unforeseen change, Missoula recently had two large events in one day (River Roots Festival and U of M football game) due to a request by ESPN to move the date of the football game. Knowing this would cause extra traffic, a strategy used was for MDA to hire a contractor to place DMS on the Interstate to provide traveler information to motorists about the special events.

MDA respondents suggested that traffic signal operations for special events may be helpful, especially if possible with the upgraded signals that Missoula is supposed to get in a few years.

They are excited to have a left turn signal added at one intersection in Missoula as this will be helpful for general traffic. They also suggested that the city consider providing the traffic control service for a reasonable fee rather than recommending a contractor. This would ensure that all protocols the city wants are done accurately.

When asked about best practices/lessons learned to share with someone preparing for a special event for the first time, the MDA representative mentioned the following:

- Stakeholder communication is key including business owners on the route to be closed (communicating changes about where their customers and employees should park and alternative routing), alternative modes of transportation (bus routes, sidewalks, bicycle lanes may all also be affected by closures), and the public. The representative provided an example of an event this past year that did not notify stakeholders and caused chaos;
- Contract a third party for traffic control. It is important that someone qualified does this;
- During parades you need to consider the traffic signals. In Missoula they generally change them to flashing;
- During races there is sometimes a gap in runners that would allow traffic to move; at intersections where this is a potential, a police officer or county sheriff should be stationed there for traffic control;
- Safety vests are valuable especially for events with a lot of traffic;
- Missoula has two, one-way streets so if Main Street will be closed, they need to consider how this will affect the one-way streets. An example provided was for two events on the same day (run and Mother's Day brunch at local hotel). Due to the road closure for the run and the hotel being located on a one-way street, the hotel was inaccessible. This required working quickly to convert part of the one-way street to accommodate entrance to the hotel. For future years, the run will no longer be held on Mother's Day and a feasibility study was completed last year recommending converting the one-way streets;
- When closing a Main Street, also consider the needs of the local businesses. For example, there is a drive thru at the bank in downtown that is affected by the closure and therefore the drive thru needs to be rerouted. There is also a business with a garage that fronts to Main Street and no access via an alley. The employees can get called out on a service call at any time and therefore they need access to the vehicles;
- Some events require redirecting traffic flow for parking garages that reside on a one-way street;
- It is important to build a timeline and protocol for setting up and taking down static signs and barricades so all stakeholders work from the same information. It is also important to have someone clean up the debris and trash before the road is reopened; and
- Conduct a wrap-up meeting after every event with the planners and volunteers to gather notes/lessons learned. When you begin planning for the next year, start with a review of the previous year's notes.

## Special Event Permit Applications

The research team conducted an internet search for special event permit applications in Montana to identify best practices in regard to providing information and assistance to special event organizers who are filling out the permit. Special event permits for nine communities in Montana were reviewed including:

- Billings (City of Billings date unknown) and (City of Billings 2015);
- Bozeman (City of Bozeman date unknown);
- Butte (City of Butte-Silver Bow 2014);
- Glendive (City of Glendive date unknown);
- Great Falls (City of Great Falls 2016);
- Hamilton (City of Hamilton 2014);
- Livingston (City of Livingston date unknown);
- Missoula (City of Missoula 2013); and
- Whitefish (City of Whitefish 2005).

There were a lot of similarities in the special event permits, including:

- All of the special event permits viewed were available online; however, only one (Bozeman) was a fillable form that could be saved;
- About half of the permits were available on a webpage specifically dedicated to special events (Great Falls, Livingston, Missoula, and Whitefish) and contained additional information or examples. The other half were available as downloads from a webpage with multiple types of forms (similar to MDT);
- The majority had the policy (including section/code/ordinance numbers) identified on the permit and/or the website;
- All applications required proof of liability insurance;
- All but one application had a specific due date for special event permit applications; however, the timelines varied from 7 days to 14-15 days (3), 30 days (2), 45 days, and 60 days; and
- The majority of the special event permit applications contained supplemental information to assist event organizers in filling out the permit (checklists, fee lists, notices, guidelines, responsibilities of event organizer, etc.).

Some of the notable differences included:

- All cities (except Missoula) call road closure applications a “special event permit application.” In Missoula, that name is used for parks and recreation department permits to rent areas for weddings or to reserve sports facilities. The permit for road closures was called a “street use permit;”
- All applications require a traffic control plan for street closures; however, in Great Falls, the public works traffic division creates the traffic control plan and provides the traffic control equipment to special event organizers, Butte requires the submitted traffic control plan to be from a licensed traffic control company, and Missoula requires the traffic control plan to be reviewed prior to submission of the street use permit;
- Billings and Missoula require copies of flagger certifications if using flaggers. Bozeman specifically states on their checklist that “flaggers are required for stopping traffic and volunteers are required for stopping runners/walkers” (City of Bozeman date unknown);
- Billings and Glendive both have set parade routes for use;
- Public notification is required in some of the permits. Whitefish requires a letter from property owners/businesses that will be affected by the closure and Billings requires proof of notice delivery via a sign-off form;

- Hamilton directly addresses in a letter attached to the permit application that it has distinct criteria/guidelines/restrictions for 5k races, fun runs, and fundraising walks/marches separate from those for complete street closures and escorted parades. This includes restrictions for streets unable to be closed for these events, stating that they are able to deny a special event permit in accordance with the code, and requiring fun runs to occur on sidewalks except for the start of the race;
- Bozeman directly addresses run and bicycle events in a supplement including how intersections should be controlled for these events;
- Hamilton provides consequences for not following through with the approved traffic control: “any lane or street closure not in conformance with the approved traffic control plan and applicable laws may result in receiving a citation for violation of the municipal code or other applicable state laws” (City of Hamilton 2014);
- Several of the community guidelines provide useful contact information; for example Hamilton provides contact information for a store to purchase vests for flaggers and contact for the Public Works Department where traffic control equipment can be borrowed; Missoula provides contacts for private vendors available to do traffic control; and Bozeman provides contact information for the Montana Local Technical Assistance Program (LTAP) for obtaining flagger training;
- Billings requires emergency access lanes and placement/removal of parking meter tags by event organizers;
- Bozeman specifically states that “automobiles, trucks, or other large, heavy equipment are not acceptable barricades” and that “barricades at night must have lights;” (City of Bozeman date unknown)
- Whitefish includes a letter that explains that while it supports “various special events with appropriate donations of City resources” there may be “unforeseen emergencies or necessities that exert a primary claim on any and all City resources at any time”(City of Whitefish 2005); and
- Several communities have specific requirements regarding paint to be used for marking on streets, trails or concrete. In Glendive, marking is required to be done using chalk or soluble, washable paint that will disappear with rain. Billings requires paint to be temporary water-based paint and states that there will be a charge if it is not gone in a month.

## **Key Survey of Local Agency Findings/Summary**

The key findings for this task have been summarized into four topic areas.

### Current Practices and Procedures for Special Events in Montana

In Montana, a special event with a road closure requires a permit based on both state and city codes. For a state road, this requires a permit through MDT and for a local road requires a city permit. In some cases, it will require both (e.g., downtown Bozeman).

#### *City Permit*

In general, a city special event permit requires the organizer to provide a special event permit application, a traffic control plan, and proof of liability insurance. Sometimes the special event permit application forms are available online, with one city (Bozeman) having a fillable form

and some even having a webpage specifically dedicated to special events (Great Falls, Livingston, Missoula, and Whitefish) containing additional information or examples. There are some cities, however, that only provide hard copies of the form (Whitehall). Application due dates ranged from 7 to 60 days before the event.

The majority of the special event permit applications reviewed for this project contained supplemental information to assist event organizers in filling out the permit (checklists, fee lists, notices, guidelines, responsibilities of event organizer, etc.).

Examples of specific or unique application requirements include:

- There are some differences in the application name: most cities call it a “special event permit,” but one city calls it a “street use permit;”
- All applications require a traffic control plan for street closures; however, in Great Falls, the public works traffic division creates the traffic control plan and provides the traffic control equipment to special event organizers, Butte requires the submitted traffic control plan to be from a licensed traffic control company, and Missoula requires the traffic control plan to be reviewed prior to submission of the street use permit;
- Bozeman requires the use of flaggers and Billings and Missoula require copies of flagger certifications if using flaggers;
- Billings and Glendive both have set parade routes for use;
- Public notification is required in some of the permits, with two cities requiring specific documentation that notification has occurred;
- Hamilton has established distinct criteria/guidelines/restrictions for 5k races, fun runs, and fundraising walks/marches, which are different than the requirements for complete street closures and escorted parades;
- Bozeman directly addresses run and bicycle events in a supplement including how intersections should be controlled for these events;
- Hamilton provides consequences (i.e. citations) for not following through with the approved traffic control;
- Several of the community guidelines provide event organizers with useful contact information for obtaining equipment, private traffic control services, and flagger training;
- Billings requires emergency access lanes and placement/removal of parking meter tags by event organizers;
- Bozeman outlines specific requirements for the use of barricades;
- Whitefish specifically notifies organizers that in the event of an emergency, critical city services will have primary claim on resources and equipment; and
- Several communities have specific requirements regarding materials to be used for marking on streets, trails or concrete, in general requiring temporary materials such as chalk or washable paint.

### *MDT Permit*

To obtain an MDT special event permit, organizers can find the application on the MDT website under forms ([http://www.mdt.mt.gov/other/webdata/external/maint/forms/MDT-MAI-004-SPECIAL\\_USE\\_PERMIT.PDF](http://www.mdt.mt.gov/other/webdata/external/maint/forms/MDT-MAI-004-SPECIAL_USE_PERMIT.PDF)). Like the cities, MDT requires a special event permit application, a traffic control plan, and proof of liability insurance.

Event organizers were asked via survey if MDT provides assistance with their applications. Half of the respondents said no with one providing examples from previous applications; however, the other half had received help from MDT with specific examples including: MDT personnel initially explained the process and what was to be included in the application, assistance through the website, assistance from staff, and meeting with MDT and the City to map out a special event when needed.

### *Special Event Management and Planning*

All sources for this report (from both surveys and case studies) stated that the key to special event management and planning is coordination with stakeholders. Survey respondents indicated that the most frequent stakeholders included county/city/local roads transportation departments (91 percent), Montana Department of Transportation (82 percent), local law enforcement (82 percent), media (73 percent), emergency medical services (73 percent), and Montana Highway Patrol (64 percent). In addition to those, case study respondents indicated that city government, search and rescue agencies, transit companies, and business owners were very important as well.

Communication with these stakeholders was key both before and during the event. Communications during the event were most frequently conducted using cell phone (82 percent), command center (36 percent) and radio (27 percent) with other responses including satellite phone, email, and in person communications.

Prior to the event, the majority of respondents use traditional methods of public information including the internet (91 percent), newspapers (73 percent), and television (55 percent) with other responses including radio, door to door, signage, and newsletters.

Communication with the public was also essential during the event. Approximately 73 percent of respondents stay in contact with the media throughout the event to update the public on traffic. Another example of communication with the public during the event was handing out maps to those stopped at a closure.

### *Traffic Control*

When asked who has the final say on all traffic operations during an event, respondents gave a wide range of examples, including the special event director, the city, the chamber of commerce, local law enforcement, MDT, volunteers, and search and rescue.

Responsibility for the traffic control plan was handled differently in the cities with some requiring the city to create the traffic control plan, some requiring this of a certified traffic control company, and some leaving this to the event organizer. The equipment requirements also vary; in some cases it was provided by the city, sometimes by MDT, and sometimes contracted out.

The most common traffic control strategies used by survey respondents included road closures (73 percent), local law enforcement directing traffic (64 percent), static signs (55 percent), public information/media campaigns (55 percent), traffic signal operations (27 percent), and flaggers (27 percent).

Traffic during the event was usually monitored by volunteers (82 percent), local law enforcement (46 percent), or a traffic and parking management contractor. Note that none had used cameras

(CCTV). Volunteer resources were typically used for traffic and pedestrian control (36 percent), parking operations (36 percent), crowd control (36 percent), and patron assistance (36 percent) with other responses including set-up and directional guidance during a fun run.

### Stakeholders Perceptions on Current Practices and Procedures

Stakeholders were asked for their views on the effectiveness of the current special event planning process. Through this process, researchers were able to document information about current challenges, lessons learned, and recommended changes.

The most frequent challenge identified with the current practices and procedures was lack of personnel (36 percent); however, 27 percent stated there were no challenges. Some specific challenges identified included:

- Parking space at event;
- Enforcement: Getting motorists to observe the signs and slow down;
- Authorization to close a state highway for a show;
- Raising funds to pay for traffic control;
- Working with the City to get the signs out early enough;
- Establishing traffic control requirements for short running races that are done as fundraisers (Organizers generally lack money for traffic control); and
- Enforcing parking for park-and-ride users who leave cars for 6-8 hours in spots intended for store patrons.

Although only one survey respondent had ever conducted a survey to gain stakeholder insight on the public opinion of transportation management, 91 percent had held after action reviews. These reviews were generally conducted with volunteers, the 5-10 key people of the event, the event board, a forum with the public, and/or the event organizer with the city/chamber.

In some cases, these meetings are used to create an after action report, but more importantly they gather information to be used in the future about event details and potential refinements, such as placement of volunteers, specific route improvements, and signage or traffic cone placement improvements.

### *MDT Permit/Process*

Several respondents indicated that the current process worked well, with one of them stating that “MDT and local coordination work hand in hand” and another stating they are “happy with the current way of doing it.”

Survey respondents who indicated having challenges described them as:

- Knowing who to contact at MDT and when;
- Getting confirmation that the form has been received and processed;
- Filling out two applications for any event, one for MDT and one for town approval;
- Requirements for certified flaggers. Flaggers are difficult to find and difficult to get to commit to an event; and
- Managing the high volume of traffic generated by Mountain Madness Air Show: nearly 30,000 people attended the 2014 show over a 2-day weekend.

## *Lessons Learned*

Best practices and lessons learned identified in this task that could help others include:

- When planning for closures and detours, ensure you consider:
  - Turning movements for commercial vehicles as some streets are too narrow to accommodate them and should not be used in the detour;
  - Potential congestion that will occur if commuter traffic will be exiting the city as event traffic is entering;
  - Impact to one-way streets (will people be able to access the businesses and residences necessary on the one way streets when closure is in place?)
  - Needs of the local businesses, residences, and places of worship (where employees and customers should park, drive-thrus at banks, garages for on call businesses, entrance to parking garages, etc.)
  - Emergency service access; and
  - Needs of alternative modes (public transportation stops and routes, pedestrian access on public sidewalks must be maintained unless alternative options are provided, bicycle lanes, etc.)
- When creating a race route:
  - Use the trail network (off road) to the greatest extent possible or the residential streets (lower volume and fewer potential conflicts than an arterial);
  - Talk to stakeholders about the potential course to identify possible challenges/conflicts as local agencies know the street network the best; and
  - If the event coordinator is not from the community, connect with someone in the local running community who knows the best routes and the challenges for runners in the area.
- Traffic control strategies to consider include:
  - Park-and-ride lots can be beneficial by alleviating parking shortages and also to increase revenue generation in the downtown area;
  - DMS on the Interstate are useful to warn motorists of the traffic and the backups;
  - Stationing law enforcement at Interstate exit ramps to help control turning traffic can alleviate backups on the Interstate;
  - Presence of law enforcement can be sufficient to alleviate some challenges (e.g., pedestrians who do not obey the walk signals);
  - Utilize barricades, cones, signage, and safety vests consistent with the MUTCD as it is a consistent format known to the public and minimizes their confusion during a street closure;
  - During parades, consider the traffic signals and their timing (generally change them to flashing);
  - Hand out detour maps to all stopped vehicular traffic; and
  - During races, station a police officer or county sheriff to conduct traffic control at intersections where traffic may be able to move when there are large gaps between groups of runners.

General lessons learned include:

- Stakeholder engagement is key (city/county traffic engineer/public works, MDT, city police, county sheriff, Montana Highway Patrol, public transportation, and business owners);
- Public notification through both traditional and social media is crucial and typically the smaller the community, the bigger a challenge this is;
- Utilize previously completed, approved applications as an example;
- Ensure the yearly budget includes funding to hire a local traffic management firm for races;
- Contract a third party contractor to set-up and manage traffic control. It is a significant effort that requires a qualified, experience entity;
- Overstaff (use as many bodies as possible) for traffic control (e.g., if you think you need 2 volunteers at a street corner, schedule 4-6);
- Build a timeline and protocol for setting up and taking down static signs and barricades so all stakeholders follow the same steps. It is also important to have someone clean up the debris and trash before the road is reopened; and
- After action meetings are crucial for documenting feedback, issues, lessons learned, and ideas for improvement from all volunteers. When planning for the next year, start with a review of the previous year's notes.

## Recommended Changes

### *MDT Process*

Survey respondents were asked what changes they recommend for the current MDT process. The top choice was better guidance (33 percent). Examples of traffic control plans, examples of traffic control strategies, and specific timelines only had one positive response each. One specific recommendation was for a web application that saves data from year to year.

One respondent indicated that the current process is just “approval and sign check out right now, which works for us, but if the expectation is different, then it should be communicated” and another indicated that [in their city], “MDT does not have their own special event process (that I'm aware of).”

### Willingness to Work with MDT

Survey and case study respondents stated that they would be open to working with MDT, including 9 of 10 being willing to share their previously completed applications with the research team if needed.

Respondents who had received help from MDT in the past were grateful, and some respondents were interested in additional guidance specifically including: the ability to close a state highway in a commercial district for a car show; information on single file riding vs double file riding vs group riding (for bicycles); and information on insurance and certified flagger requirements including how to get certified as a flagger.

Respondents did indicate that when they fill out the MDT application, they also have to fill out a city application; therefore, they would appreciate it if MDT requirements were not too elaborate or strict.

Other suggestions, from local agencies, for working with MDT included:

- Allowing event organizers to request traffic control equipment (cones, barricades, etc.) from MDT, as smaller towns do not have enough of their own; and
- Allowing event organizers to request signal timing changes for traffic operations during a special event.

## CONCLUSIONS AND RECOMMENDATIONS

This chapter focuses on possible funding sources for developing special event traffic plans; recommendations for specific action items that MDT can pursue to help with planned special events; and recommendations for traffic management strategies for planned special events, as well as identification of the responsible parties (e.g., local police, local maintenance crews, MDT maintenance crews, Montana Highway Patrol, etc.).

### Funding Sources

This section discusses three categories of funding sources: Montana sources, national sources, and grants.

#### Montana

In Montana, the special event organizer is responsible for funding special event transportation planning and management. Transportation costs for a special event may include, but are not limited to, fees for:

- Obtaining the special event permit;
- Creation of a transportation management plan;
- Creation of a traffic control plan especially if there is a requirement to use a licensed professional such as in Butte;
- Liability insurance;
- Renting traffic control devices (cones, barricades, stop paddles, DMS, static signage, etc.);
- Hiring a traffic control company for the event;
- Law enforcement participation to provide temporary traffic control;
- Motorist information; and
- Certification for volunteers/staff as flaggers.

Event organizers typically build these costs into their special event budgets or yearly budgets, such as the Missoula running club that builds the cost of traffic control for events directly into their yearly budget to ensure they have enough funding to cover these costs. First time special event organizers face the most challenges, because they are frequently unaware that a special event permit and traffic control plan are necessary, and of their planning and budget responsibilities. Another challenge is when the special event is a fun run intended as a fundraiser and the amount needed for traffic control (hiring a traffic control company typically runs \$2000-3000) by far exceeds the amount of money that would be raised for charity during the fundraiser.

In some cases costs are kept down when private entities donate the use of the dynamic message sign, the town lends the traffic control devices to the special event organizer, the town requires the use of its existing traffic control plan (Great Falls), or annual special events work from or adapt the previous year's traffic control plan.

#### National

The NCHRP 309 study (Transportation Research Board 2003) referenced Federal, State, and local funding sources that are available for special event traffic management, which will be

summarized here. However, it should be noted that similar to how the special event process was developed with urban areas in mind, these funding sources are also geared for large, urban special events and therefore before applying for these, organizers should investigate whether the funding source is applicable to the specific rural need.

Federal sources include:

- Congestion Mitigation and Air Quality Improvement Program (CMAQ) for traffic control devices such as traffic management centers, DMS, cameras, HAR, traffic signal control systems, and patrol vehicles, as well as, public transportation, bicycle, and pedestrian projects;
- Federal Transit Administration Section 5307 for urbanized areas, 5309 for bus and bus facilities, and 5311 for rural and small urban areas have been previously used for capital improvements and transit system planning; and
- Federal Highway Administration has a variety of grant programs that can be used; however, the only example provided was for a major event (2002 Winter Olympics).

State and local funding sources have been used by transportation departments to fund personnel costs and traffic control devices.

Similar to Montana, many states require the event organizers to provide some, if not all, funding for the special event transportation planning and management. Two innovative funding sources described included developer or impact fees that are assessed for frequent special events at a static special event venue (used to improve the transportation infrastructure to accommodate the special events) and public-private partnerships where the partners work together to deploy an Intelligent Transportation System technology (HAR, DMS, traffic signal control system, etc.) for special event management.

### Grants

Several examples of special event grants were found. While none of these were specifically geared towards transportation planning or management for special events, Montana could establish a similar program that encompasses transportation if funding were available. These examples include Montana, Salt Lake City, City of Ft Myers, and City of Elk Grove. They are all described in more detail below.

While Montana does not have a grant specific to transportation management for special events, the Montana Office of Tourism has a Special Events Grant Program (SEGP) that allows funds to be utilized for event marketing and promotion out of state. This program was developed in 2002 and has provided over \$1 million to “assist with economic development through the creation and/or enhancement of annual, on-going events (Office of Governor State of Montana 2014).”

Salt Lake City has created a special fund called the Salt Lake City Signature Event Fund, which was started by the Mayor and the City Council to assist in funding “larger events that provide significant economic and/or cultural contributions to the community and smaller community events that, due to their nature and scope, are unable to generate the needed revenue to cover presentation costs (Salt Lake City 2016).” This fund has been available for four years and provides approximately \$170,000 per fiscal year to applicants. Events are awarded amounts

between \$100 and \$15,000 and are not available to fundraisers or private events that are not open to the public.

City of Fort Myers in Florida has a grant program that provides “limited funds for City services. The grant can only be used for events held on or in City owned or operated facilities, parks, or streets (City of Ft Myers 2016).” When funding is granted to the requestor, it is “transferred directly to the appropriate facility and/or park department.” Examples of use include trash pickup, police services, permits, and facility rental.

The City of Elk Grove, CA has an event sponsorship grant program available to non-profit organizations with the intent to host special events in the community. The funding can be used for city facility use, in-kind service, or direct funding (City of Elk Grove 2016).

## **Recommendations for MDT’s Special Event Permitting**

As was discussed previously, an event organizer is primarily responsible for special event transportation planning and management in Montana. MDT’s responsibilities for state roadways include: ensuring the application is completely filled out, approving/denying application; ensuring signage and detours meet the MUTCD, and retaining a paper copy of the permit application. It should also be noted that in general when a state roadway is used, along with filling out the MDT permit application, the event organizer must also fill out the special event permit for the local community in which the special event will take place.

The main challenges faced by MDT include consistency and education about the process. This training and education for both MDT and event organizers are of equal importance, without both, no progress will be made.

There are a number of specific actions that MDT personnel can take to improve the portion of the special events process for which they are responsible. These recommendations have been categorized into actions that assist MDT staff, event organizers, and city staff.

Actions to assist MDT staff:

- Update the MDT special event permit application to include event organizers’ email addresses and phone numbers. This could include creating a fillable permit that could be auto-filled with information from the previous years;
- Create a guidance document for MDT staff to assist with guidelines for approving or denying a special event to create consistency statewide (e.g., a special event in Bozeman would be handled the same as one in Missoula).

A draft of items to consider when accepting or denying applications can be found in Appendix G. The document should also include guidance for a consistent process for both rural and urban areas. Guidance should include suggesting pre-event and post-event meetings, creating a set application timeframe (currently this varies from 2 weeks to a few months for MDT and 7 days to 30 days for Montana cities), clear guidelines for when to approve or deny a permit application, repercussions for organizers who do not file a permit (Hamilton provides citations), a process for ensuring compliance with permit requirements and consequences for those who do not (possible permit denial in subsequent years), a process for notifying all relevant MDT departments about a special

event (e.g., traffic, maintenance, construction, etc.), providing a traffic control plan template for MDT staff to guide the approval process, providing guidance and examples of dynamic message sign messages previously approved, and providing a process for communicating with event organizers that a permit was received and is being processed;

- Create training for MDT staff on the new guidance and invite a few of the divisions with best practices to share their experience (e.g., Billings, Missoula, Bozeman, etc.). This training could be provided via a webinar and recorded for use by future staff as well; and
- Coordinate with the cities on their special event needs; this could also allow for a partnership to be created (possibly through a formal MOU) through which cities could notify MDT of all special events in the area. In this way, MDT would know about all potential events that would affect their operations and construction projects, regardless of whether or not the event organizer submitted an MDT permit application.

Actions to assist event organizers:

- Create better guidance for event organizers on what is required for a special event permit application. This could include either (1) adding additional information to the special event permit application to create a “packet” and/or (2) creating a webpage on MDT’s website specific to special events. Both of these recommendations have been carried out in cities in Montana.

Specific guidance to create/update would include, but not be limited to:

- A documented process for permit applications including a checklist of required documents and data elements needed for approval, and general guidance. A draft was created in 2005 as shown in Appendix D. Recommended updates to this document are shown in Appendix H;
- A document explaining why traffic control is needed, potential strategies to consider implementing, draft DMS messages, and lessons learned from previous event organizers as shown in Appendix I; and
- Examples of traffic control plans.
- Create outreach materials to educate the public about the requirements for obtaining a special event permit application (including filling them out completely). Outreach materials could include creating a handout that could be passed out to bicycle and running clubs in Montana, as well as, providing them to the cities for distribution when event organizers come to them for special event applications or questions. Another option would be to work with the cities to get the word out, because many times the event organizers are also filling out city applications. Therefore, MDT should work with the cities to provide information about whether an event organizer is also required to fill out MDT’s special event permit application. This information could be inserted into the city’s special event permit application and/or packet, as well as, added to their special event websites. A draft is shown in Appendix J;
- Create a training for potential event organizers that discusses each piece of the new guidance described above for example:
  - Section 1: Overview of Transportation Management for Special Events
    - Why is it important?
    - What does it entail?
  - Section 2: Transportation Management Strategies

- What to consider when closing a road;
- Differences by event type (fair, parade, bicycle/running race, etc.);
- Strategies to use for transportation management;
- Resources;
  - Example traffic control plans;
  - Example DMS messages;
  - Contact information for local device stores and traffic control companies; and
  - Contact information for flagger certification.
- Case studies from past events; and
- Lessons learned from previous events.
- Section 3: Overview of MDT Special Event Process and Guidelines
  - Process;
  - Checklist of needed items; and
  - Guidance/requirements.

This training could be provided as a webinar so organizers from across the state could attend and it could also be recorded and posted on MDT's webpage for future event organizers.

Actions to assist city staff:

- Coordinate with the cities to ensure that any new MDT requirements would not conflict with city requirements; and
- Provide the outreach materials, training, and guidance for event organizers to all cities in Montana. They could refer special event organizers to this information even if they do not need to fill out MDT permit applications and only need to fill out city applications.

## Recommendations for Traffic Management Strategies

While the actual special event transportation management is the responsibility of the event organizer, there are several actions that MDT could take that would assist event organizers with making events safer and less disruptive for the traveling public.

- One of the greatest concerns for special event organizers was the cost of traffic control device rental, the cost to hire a traffic control company, or the lack of local devices to borrow. While MDT does have some of these devices, there was concern that they do not have the manpower or staff time to handle all event needs, to manage/control who is borrowing equipment, funds to purchase extra devices, and dealing with unreturned/damaged equipment. Therefore, several options are suggested to potentially assist with this challenge:
  - MDT could work with cities and annual event organizers to investigate the creation of a public-private partnership that could fund the purchase of traffic control devices for a rental program. The first step in this process would be to look into for any potential legal ramifications to MDT. When considering this type of program, the group would need to consider not only how to purchase the equipment, but who would be eligible to borrow it, how the equipment rental would be managed, where it would be stored, the need to have equipment in multiple locations in Montana, how to prioritize who can borrow it if there are

- multiple events on a given day/weekend, if there would be a fee to borrow equipment, whether there is a need for a deposit/reimbursement for rentals; and ramifications for damages/lost/unreturned items;
- A separate idea for funding traffic control would be to work with the cities and other state departments to consider starting a grant program (similar to the Montana Office of Tourism grant), but specifically for special event transportation management that event organizers could apply for yearly. This fund could be set up similar to the one in the City of Ft Myers, through which the funding is directed to city or state staff for assistance with the traffic control plan and device rental/set-up or to law enforcement. Or, the fund could be set up to provide funding directly to event organizers to assist with the cost of creating a traffic control plan, hiring law enforcement, renting traffic control devices, getting certified as a flagger, or hiring a traffic control company; and
  - A third option would be for MDT to create a funding structure similar to law enforcement, through which event organizers could pay MDT for assistance with traffic control plans, renting traffic control devices, and assistance with setting up closures. This could potentially be more cost-effective than hiring a private company and all parties (MDT, city, and event organizer) would know it was done correctly. This could potentially provide MDT the opportunity to pay staff overtime (similar to law enforcement) or allow flex time use to assist with these events, which are typically done after hours. Again, the first step in looking into this option would be speaking with legal staff.
- Another concern was related to traffic control and closures for bicycle and running races, as many times these are rolling closures and not full closures, especially for fundraisers. MDT could serve as the champion to coordinate the cities, DOT, and running clubs/bicycle groups across Montana to discuss and potentially create example guidance about special event safety for bicycle/running races (note that specific guidance may vary by event and location). Discussions may include examples of routes for each city that could be recommended for 5ks that do not affect streets and improve safety, examples of permit applications for bicycle/running races, and examples of traffic control plans used when rolling closures or full closures are necessary. Details of bicycle/running events that were collected in this report and could be used at a discussion meeting can be found in Appendix K;
  - Coordinate with Montana LTAP, cities, and local event organizers to schedule, offer, and market flagger certification training to special event organizers in the spring before “special event season;” and
  - Consider how MDT’s transportation tools could potentially be utilized to assist special event organizers. This would include putting road closures and detours into the MDT traveler information website and mobile app, using MDT’s permanent DMS for special events in those areas, and coordinating with the cities on traffic signal operations for special events. *(If this action is pursued, consider adding a statement about emergency need for devices such as the one Whitefish uses “All parties are likewise informed that although the City agrees in good faith to provide timely services in support of certain special events, unforeseen emergencies or necessities may exert a primary claim on any and all City resources at any time. In the event of an emergency or mission critical*

*demand, City staff, equipment, or other resources may be withdrawn immediately and dispatched to other locations for an indefinite period of time (City of Whitefish 2005)."*

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## APPENDIX A: COLORADO SPECIAL EVENT TIMELINE

Special Events on Colorado Roadways  
Page 14

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### TIMELINE

#### **120 Days Prior to Publically Announcing the Event:**

Most large events are planned and organized months, if not years, ahead of the actual event. Event organizers are encouraged to hold a planning meeting with the CSP, CDOT and local municipalities to discuss the proposed course and initiate the permit process. Conflicts with other activities may be avoided with advance planning. At the planning meeting, any known highway construction, maintenance activities or other scheduled events that are planned for the proposed routes will be discussed. An attempt will be made by CDOT to not schedule any construction or maintenance activities, which will interfere with the event once the permit has been issued. Reviewers may wish to distribute plans to others for comment

#### **90 Days Prior to Public Announcement**

Comments and concerns from CSP, CDOT and other jurisdictions are due to the Event Organizer.

#### **30 Days Prior to Public Announcement:**

Deadline to submit completed special event permit application and application fee to CSP.

#### **60 Days Prior to Event:**

Response deadline from CSP and CDOT on approval or denial of the permit application--response will include estimated costs if permit is approved. Traffic Control Plan, permits from local jurisdictions, and confirmation of notifications (see Notifications section below) due to CSP

#### **30 Days Prior to Event:**

Payment equal to CSP staffing estimate and Certificate of Insurance due to CSP.

#### **Day of Event:**

Event Organizer and CSP Ride Supervisor meet to discuss any questions  
Have a safe and fun event!

#### **30 Days After Event:**

Debrief meeting with CSP to review event success, safety issues, and permit requirements

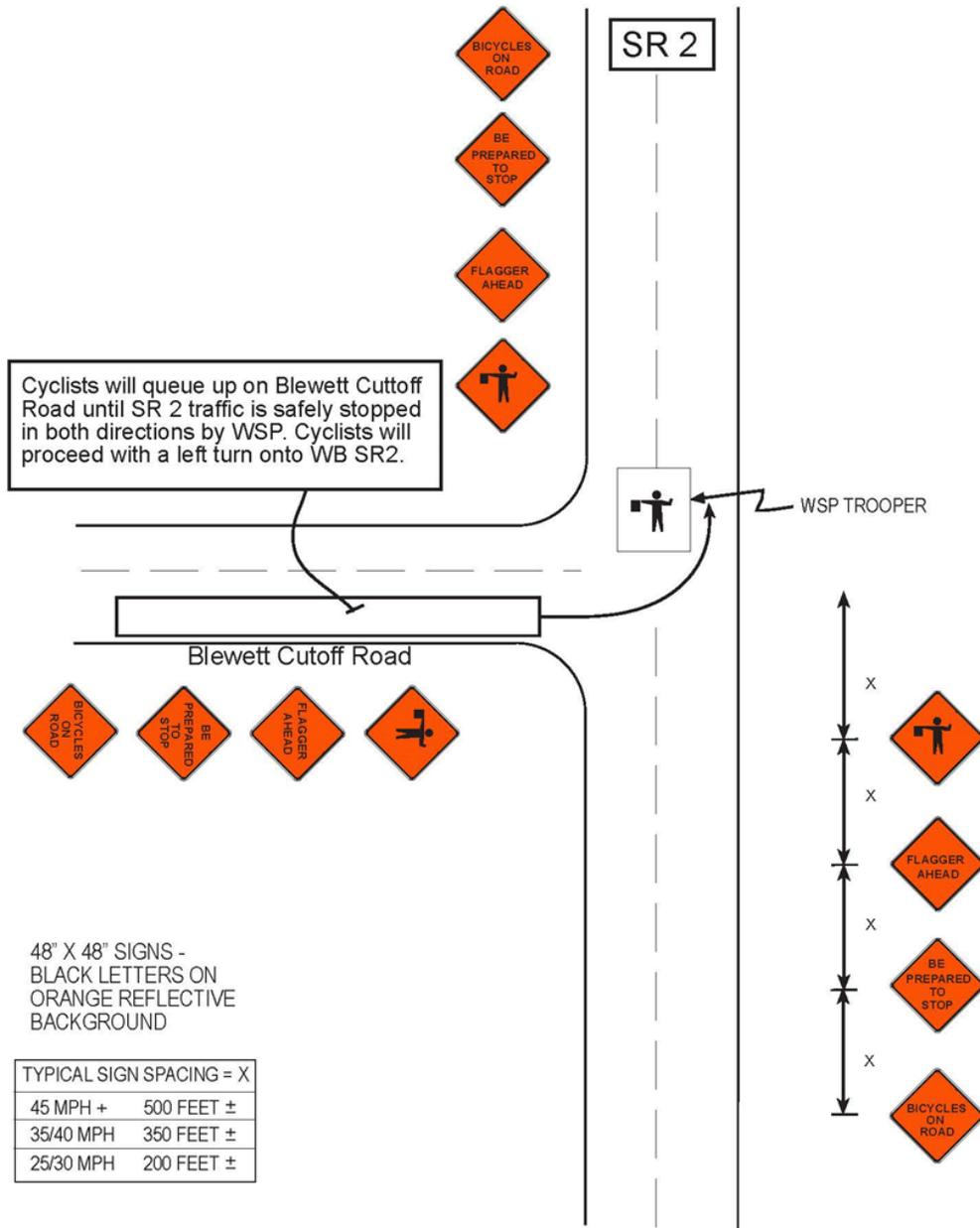
#### **60 Days After Event:**

Approximate date for refund from CSP for overpayment of CSP costs (see Permit Application for details).

## APPENDIX B: WSP AND WSDOT APPROVED TRAFFIC CONTROL PLAN

### Agreement 06-02 Exhibit B

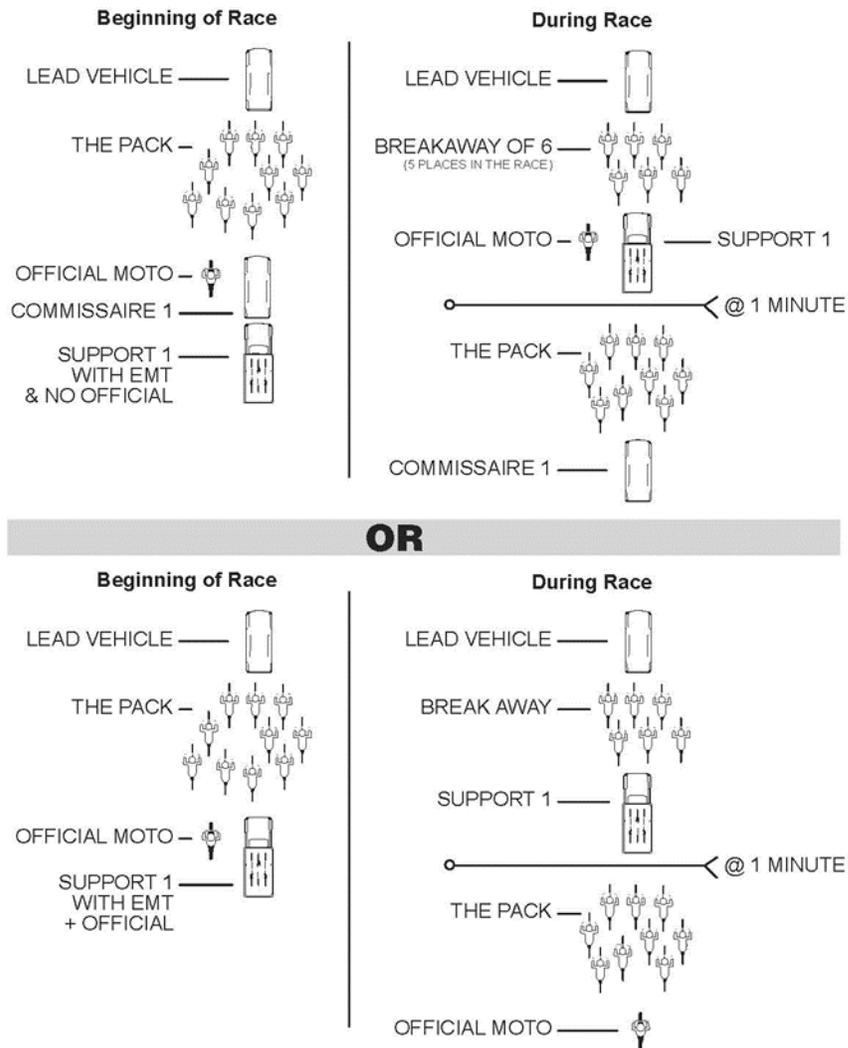
#### Courage Classic 2006 Traffic Control - Plan SR 2 @ Blewett Cutoff Road



# APPENDIX C: WSDOT BICYCLE RACE TRAFFIC CONTROL PLAN

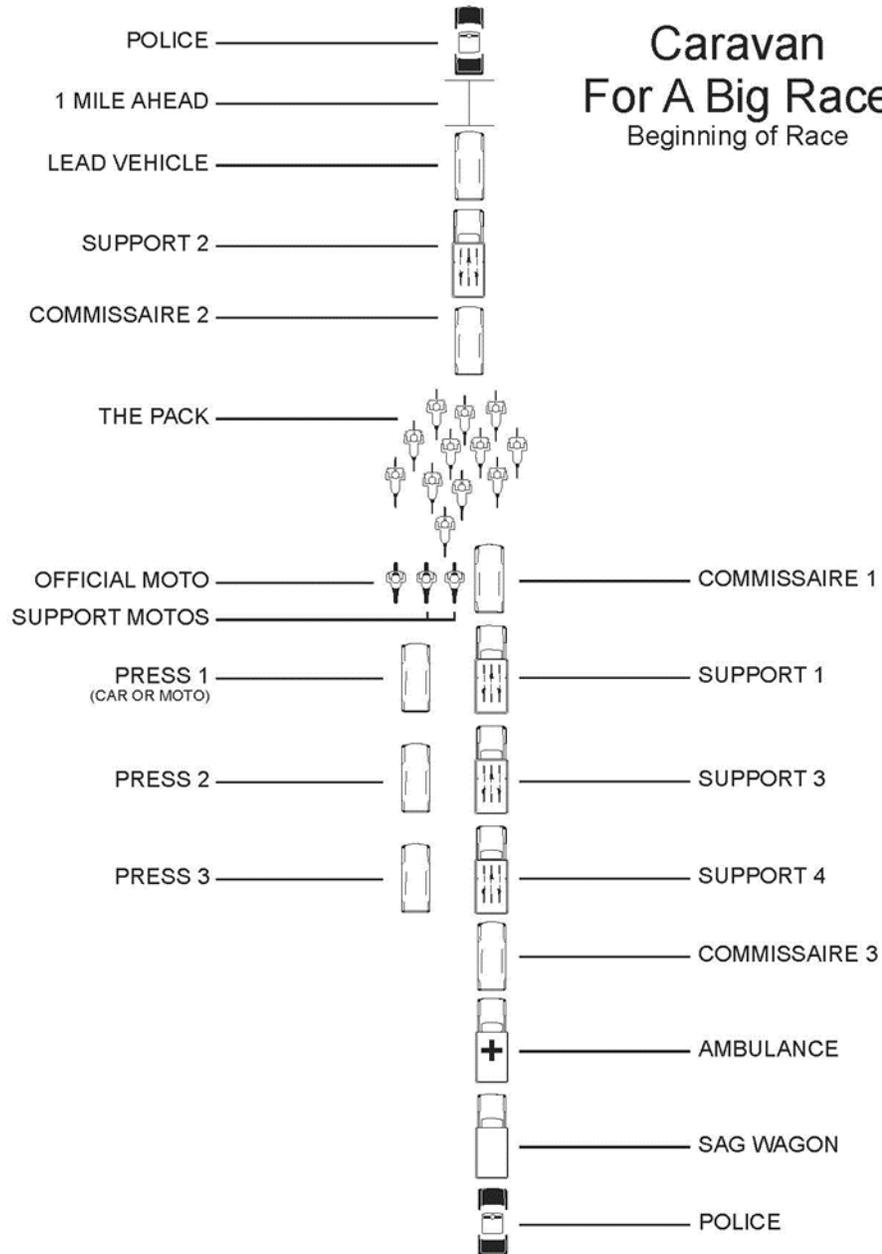
## Appendix D *Typical Road Race Rolling Enclosure Diagram*

### Caravan For A Small Race



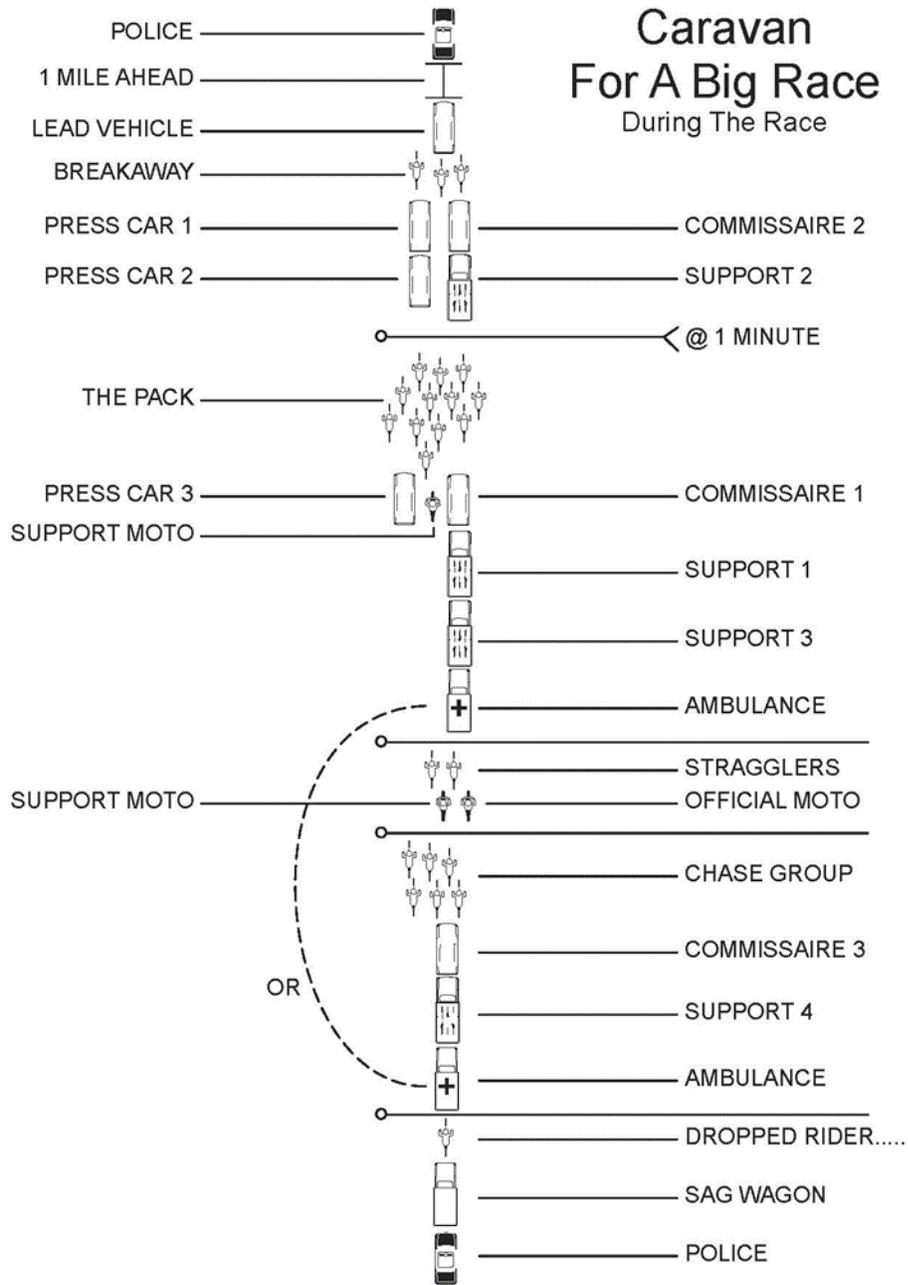
Typical Road Race Rolling Enclosure Diagram

Appendix D

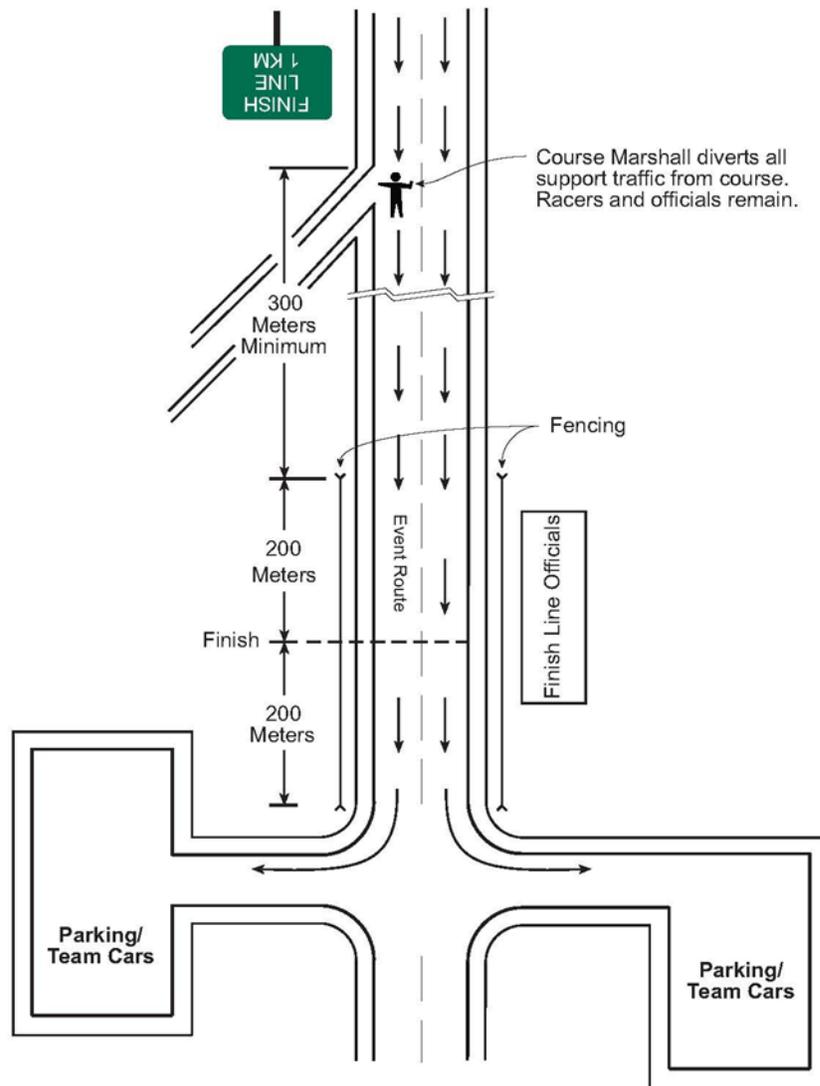


Appendix D

Typical Road Race Rolling Enclosure Diagram

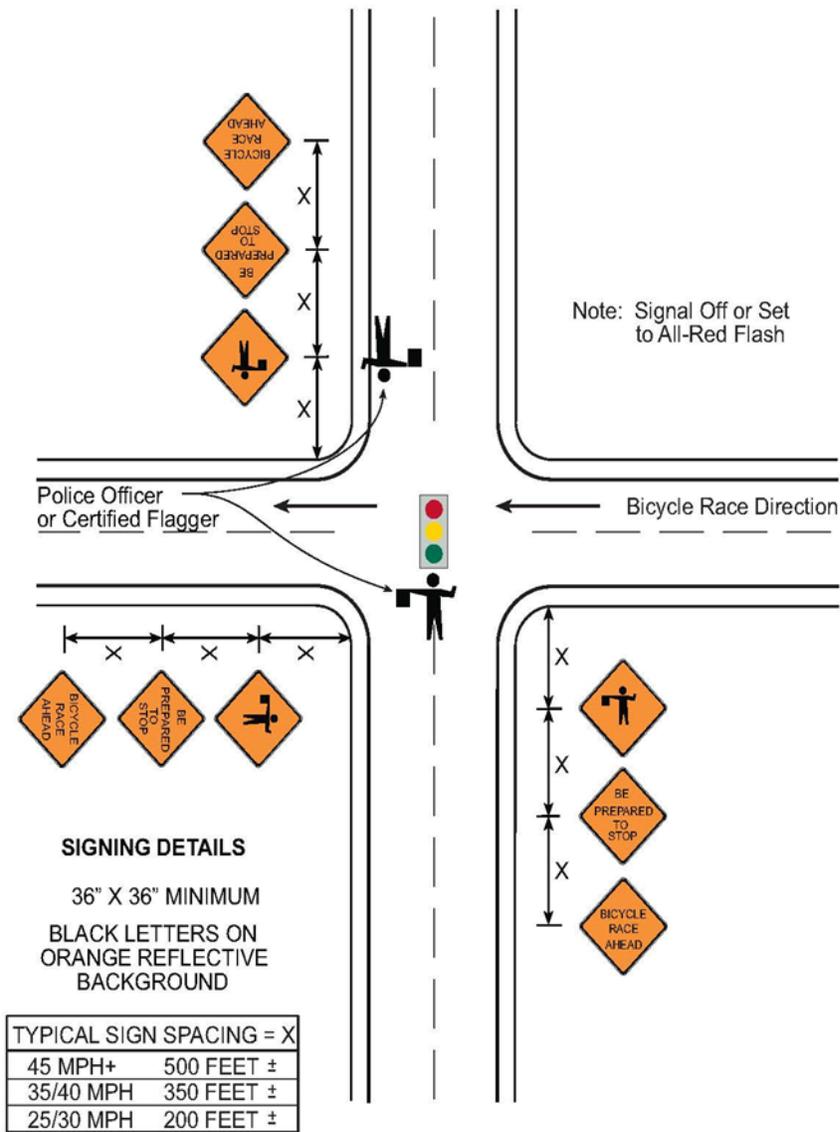


**Appendix E** **Major Event  
Finish Line Setup**

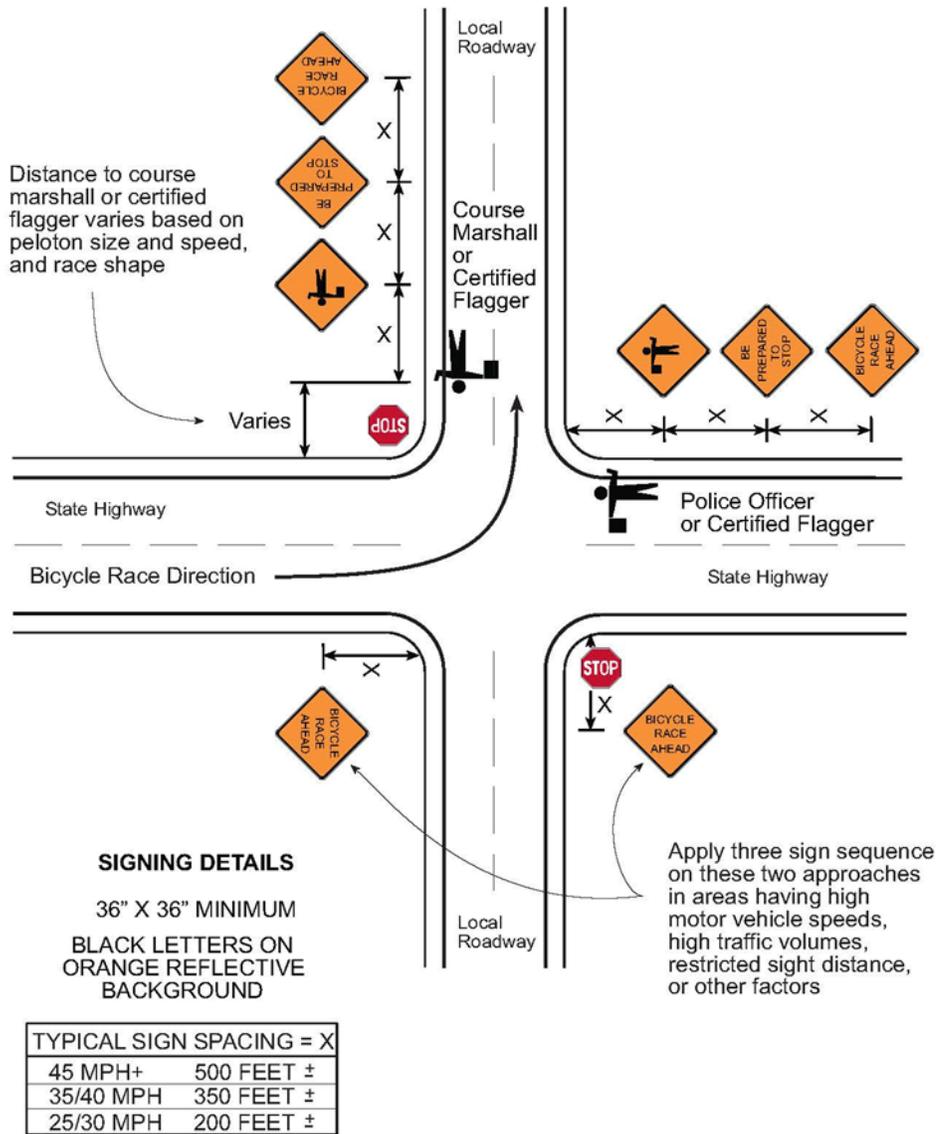


The race course is closed to public travel. Non-race traffic is detoured around the closed highway section using standard detour signing per the MUTCD.

**Appendix F** **Typical Intersection Traffic Control**



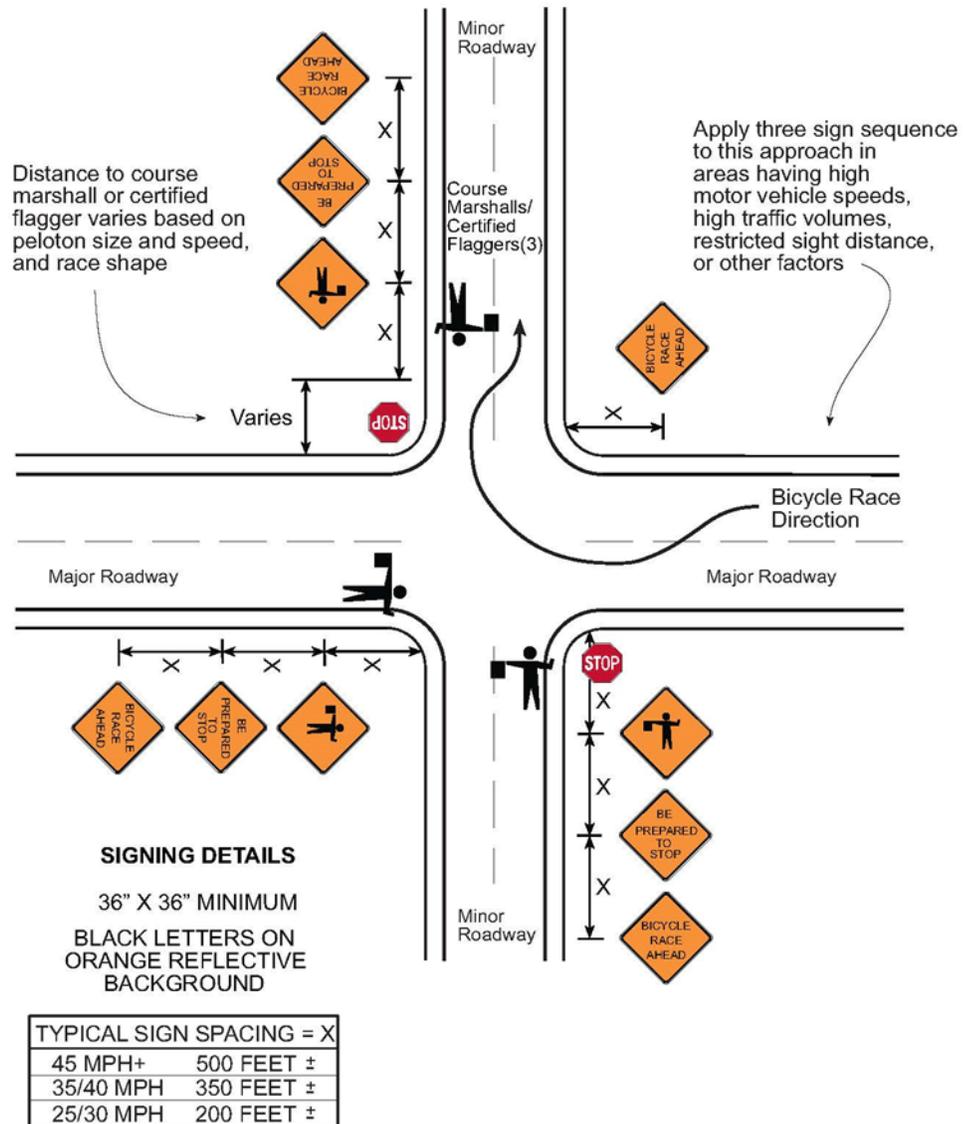
Race Passing Through Major Signalized Intersection



Race Turns Left Off State Highway and Onto Local Roadway With Stop-Controlled Approaches

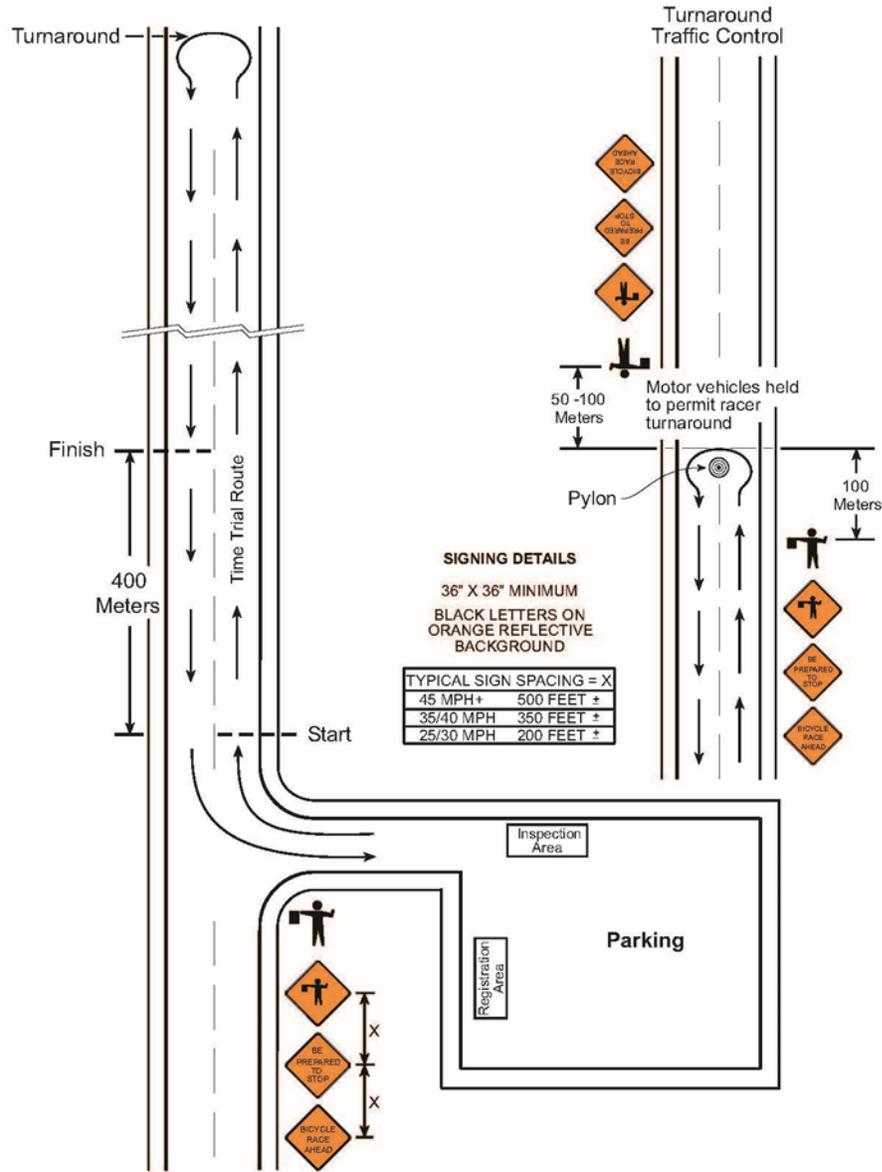
Appendix F

Typical Intersection Traffic Control



Race Turns Right From Major Roadway and Onto Minor Roadway  
 With Stop-Controlled Intersection Approaches

**Appendix G Traffic Control for Time Trials**



## APPENDIX D: DRAFT MDT SPECIAL EVENT GUIDANCE FOR EVENT ORGANIZERS

Montana Department of Transportation Special Event Application and Guidelines

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### Guidance for Special Events on State Maintained Highway and Streets

These Guidelines are intended for use by permit applicants and by the Montana Department of Transportation (MDT) Maintenance Chiefs to facilitate comprehensive and consistent preparation of applications and their implementation, to assure that all requirements of the permit are met.

MDT recognizes the need of many special interest groups across the State to hold Special Events on State-maintained highways and streets. To assure the safety of the public and event participants, event organizers must apply for and receive approval of a Special Event permit which sets forth specific requirements that must be met. Permit applications may be obtained from, and returned to, the MDT Maintenance Chief within whose Division the event is to take place. Applications for special event permits must be received by MDT no later than **one month** prior to the event date, unless other arrangements are made.

A permit is required for any event that requires a lane closure (full or partial) on any State-maintained highway or street. This includes any activity in the shoulder or adjacent to the roadway that may impede safe and efficient travel. Activities that do not require a lane closure, but occur within the highway right-of-way may not require a special event permit, but do require an encroachment permit.

Note that a bicyclist does not need a permit to operate a bicycle on a state roadway so long as they are able to comply with Montana State Law. Bicycle races require approval as well as bicycle touring events that do not comply with State Law (for example, state law requires bicycles to ride single file on the right of the roadway except as specified). Temporary signs needed for traffic control during a bicycle race may be available. Contact the Bicycle and Pedestrian Coordinator for availability.

This application is a request for use of a highway or street facility only. The Applicant should check to ensure permits and approval are not required by other jurisdictions and organizations such as cities, counties, and private landowners.

In administering the permit process, Maintenance Chiefs will exercise their best judgment regarding when, and to what extent, the permit conditions have been met by the Applicant. In some cases, MDT may have an agreement in place such that a municipality may handle most of the permitting process for MDT owned roads within the city limits. However, do not assume that approval by the city guarantees MDT approval. The Applicant must check with the Maintenance Chief if they are not sure.

In order to receive the approval permit to hold an event the Applicant must complete all portions of the application. A complete application will include the completed application form, the checklist, a certificate of insurance, a hold harmless agreement and a Traffic Control Plan. The following sections of this document describe the pieces of an application that must be completed along with some additional information needed by the Applicant. The sections include:

- **Contact List:** This list provides addresses and phone numbers for people to contact and submit applications to.
- **Application Form:** This is the primary application with the main information regarding the event.

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Montana Department of Transportation Special Event Application and Guidelines

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- **Traffic Control Plan:** The Applicant must prepare and submit a Traffic Control Plan. This section provides guidance on the Traffic Control Plan development.
- **Checklist:** At the time of application some items may not have yet been completed. However, all items must have a responsible person listed with a planned date for completion, or an explanation of why a requirement is not applicable to your event. All items on this list must be completed unless special approval is given in writing by the Maintenance Chief.
- **Certificate of Insurance:** The Applicant must submit either a certificate of insurance that meets the requirements described in this section or a letter from the City stating that the City takes responsibility for the event and does not require proof of insurance.
- **Hold Harmless Agreement:** This is an agreement that must be completed in order to protect MDT from any litigation that results directly from this event.
- **Sample Approval/Denial Letter:** This does not need to be filled out by the Applicant, but is provided as an example of the letter they will receive if they are approved to have the event. If the Applicant will be unable to comply with the standard terms and conditions in this letter, it should be addressed in the application.

Failure of the Applicant to adhere to the mandatory requirements, as judged by the Maintenance Chief, may result in rejection of the permit application by MDT. All costs incurred by the Applicant in preparing the application and Traffic Control Plan are the responsibility of the Applicant.

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 Montana Department of Transportation Special Event Application and Guidelines
 

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### Contact List

There are ten (10) MDT Maintenance Divisions located throughout the state, each within one of the five (5) MDT Districts. Contact numbers for each division are listed below.

|  |   |
|--|---|
| <u>Missoula District</u><br>2100 W Broadway<br>PO Box 7039<br>Missoula, MT 59807-7039<br>(406) 523-5800<br><br>Kalispell Area Office<br>85 5 <sup>th</sup> Avenue East North<br>PO Box 7308<br>Kalispell, MT 59903-0308<br>(406) 751-2000<br><br><u>Butte District</u><br>3751 Wynne<br>PO Box 3068<br>Butte, MT 59702-3068<br>(406) 494-9600<br><br>Bozeman Area Office<br>907 North Rouse Avenue<br>PO Box 1110<br>Bozeman, MT 59771-1110<br>(406) 556-4700<br><br><u>Great Falls District</u><br>200 Smelter Avenue NE<br>PO Box 1359<br>Great Falls, MT 59403-1359<br>(406) 454-5880<br><br>Havre Area Office<br>1671 Highway 2 West<br>PO Box 580<br>Havre, MT 59501-0580<br>(406) 262-5500 | <u>Glendive District</u><br>503 N River Avenue<br>PO Box 890<br>Glendive, MT 59330-0890<br>(406) 345-8200<br><br>Miles City Area Office<br>217 North 4th Street<br>PO Box 460<br>Miles City, MT 59301-0460<br>(406) 233-3600<br><br>Wolf Point Area Office<br>Highway 25 East<br>HC 31, Box 3000<br>Wolf Point, MT 59201-9802<br>(406) 653-6700<br><br><u>Billings District</u><br>424 Morey St.<br>PO Box 20437<br>Billings, MT 59104-0437<br>(406) 252-4138<br><br>Lewistown Area Office<br>1620 Airport Road<br>PO Box 491<br>Lewistown, MT 59457-0491<br>(406) 538-1300<br><br>Bicycle/Pedestrian Office<br>2701 Prospect Avenue<br>PO Box 201001<br>Helena MT 59620-1001<br>(406) 444-9273 |
|--|---|

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Montana Department of Transportation Special Event Application and Guidelines

**Application Form**

|   |             |  |              |                 |
|---|-------------|--|--------------|-----------------|
| Application Number (issued after submittal):  |             | Date of Application:                         |              |                 |
| Organization's Legal Name:  |             | Event Name:                                  |              |                 |
| Organization's Official Mailing Address:  |             | Organization's City:                         | Zip:         |                 |
| Organization's Telephone Number:  | Fax Number: | Office Hours:                                | County Name: | State:          |
| Are you an authorized official of the organization?<br><input type="checkbox"/> Yes <input type="checkbox"/> No |             | Organization's Website (URL), if applicable: |              |                 |
| Describe type of event (Parade, concert, etc.):   |             | Organization's email address, if applicable: |              |                 |
| Event time and location: Please attach additional sheets of a site map if you need more room:                   |             |  |              |                 |
| Event date:   | Setup time: | Start time:                                  | End time:    | Breakdown time: |
|   |             |  |              |                 |
|   |             |  |              |                 |
|   |             |  |              |                 |
| The event is:<br><input type="checkbox"/> Private <input type="checkbox"/> Open to the public                   |             |  |              |                 |
| List any coordination or agreements with other agencies:  |             |  |              |                 |
|   |             |  |              |                 |
|   |             |  |              |                 |
|   |             |  |              |                 |
|   |             |  |              |                 |

By signing this application you affirm that the information provided is correct and accurate, and if approved, you agree to complete the items in the checklist and you agree to the terms and conditions that will appear in the approval letter (for typical conditions see the Sample Approval Letter).

\_\_\_\_\_  
Name of Applicant

\_\_\_\_\_  
Title

\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Date

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Montana Department of Transportation Special Event Application and Guidelines

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### **Traffic Control Plan**

The Applicant shall submit a Traffic Control Plan for the event. Sponsor or contractor developed Traffic Control Plans must adequately and safely accommodate anticipated traffic conditions. Costs for developing the Traffic Control Plan is the responsibility of the organization sponsoring the event. The Applicant should allow for MDT review and revisions, and be prepared to make modifications to the Traffic Control Plan if needed. If the Traffic Control Plan does not receive final approval before five days prior to the event, the permit may be revoked. The Traffic Control Plan should have the following elements:

- Include a site map or sketch of the event location and adjacent public roads, as well as necessary detour routes, advance signing and/or en route signing.
- Applicable detours and signing for pedestrians should also be shown.
- All traffic control devices shall conform to the Manual on Uniform Traffic Control Devices (MUTCD), specifically the section titled "Temporary Traffic Control". You may find more information on the Federal Highway Administrations website <http://mutcd.fhwa.dot.gov/index.htm>.
- The Applicant is responsible for acquiring and installing signs and other traffic control devices specified in the Traffic Control Plan. At the discretion of MDT, signs may be loaned to the event organizers from certain maintenance offices or the Bicycle/Pedestrian Office at MDT Headquarters.
- You may also be required to provide advisory signs placed a minimum of at least one week prior to your event if the event impacts a major use roadway. Advisory signs are intended to provide advanced notice to the regular users of a roadway for the scheduled closure.
- Individuals assisting with controlling traffic should be trained and Certified by an MDT recognized organization or individual.
- Ensure adequate event parking.

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Montana Department of Transportation Special Event Application and Guidelines

**Checklist for Special Event Organizers**

|  | Yes | N/A | Contact Name: | Date |
|--|-----|-----|---------------|------|
|  |     |     | Phone Number: |      |
| 1. Have you arranged for street cleaning after the event to clean debris and remove any signs?   |     |     |               |      |
| 2. Have you arranged for necessary amenities such as stand-by first aid services and public toilets?                                   |     |     |               |      |
| 3. Have you notified city and county municipalities? <sup>1</sup>  |     |     |               |      |
| 3a. Are there any public works projects planned that would create conflicts?   |     |     |               |      |
| 4. Is crowd control needed? Have you contracted with off duty police officers for crowd/traffic control?                               |     |     |               |      |
| 5. Have you notified police department, sheriff's office, highway patrol, fire department and emergency medical services? <sup>1</sup> |     |     |               |      |
| 6. Have you notified school bus service (if event takes place on a school day) and local transit? <sup>1</sup>                         |     |     |               |      |
| 7. Have you notified the local news media (newspaper, radio, television)? <sup>1</sup>   |     |     |               |      |
| 8. Have you notified large traffic generators such as churches, universities and shopping centers? <sup>1</sup>                        |     |     |               |      |
| 9. Do you have a Traffic Control Plan? Has it been approved by Maintenance Chief?  |     |     |               |      |
| 10. Have you submitted a certificate of insurance to MDT as specified in the application document?                                     |     |     |               |      |
| 11. Have you completed the "hold harmless" form?   |     |     |               |      |
| 12. Have you obtained appropriate signing for traffic control that is consistent with the Manual on Uniform Traffic Control Devices.   |     |     |               |      |

<sup>1</sup> Notices may need to be mailed or hand delivered 20 days in advance to all entities impacted by event activities (3 days for local media, 2 days for emergency services). Information in this notice should include, but not be limited to, the date(s), time(s), location(s), types of activities, detour and alternative routes, and a telephone contact number for your organization.

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Montana Department of Transportation Special Event Application and Guidelines

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### **Certificate of Insurance**

The Applicant must provide either a certificate of insurance executed by a duly authorized representative of each insurer to MDT with the application in order to allow MDT to ensure it meets all MDT requirements or documentation (e.g. a letter) from the local municipality stating that the City takes responsibility for the event and does not require proof of insurance. The following items must be on the certificate of insurance.

- MDT and the city where the event is held must be named as an additional insured. The preferred wording would be: “coverage under this policy provides for the additional insured for all causes for action arising out of the event scheduled for \_\_\_(Insert Date)\_\_\_.”
- A Severability of Interest Clause needs to be included. The preferred wording is “The insurance afforded applies separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the company’s liability.”
- The insurance must state that it is primary and covers all event activities. Suggested wording would be: “This policy is intended to be primary to, and not contributory with, any other insurance maintained by, or on behalf of, the State of Montana or the Montana Department of Transportation, unless the claim or loss arises out of the sole negligence of the State of Montana or the Montana Department of Transportation.”
- A 30 day written cancellation notification is required. Preferred wording would be: “the issuing company shall give written notice by mail 30 days prior to cancellation.”
- Minimum coverage of \$1,000,000 unless a greater amount is warranted by the scope of the event as determined by MDT.
- All insurers shall have a Best’s rating of AV or better and be licensed in the State of Montana.

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Montana Department of Transportation Special Event Application and Guidelines

Hold Harmless Agreement

Name of Person or Applicant has requested a Special Events Permit from the Montana Department of Transportation to conduct a Type of Event on, or in the vicinity of State Highway Highway Route Number in the County of Enter Name of County on the Date day of Month, Year. For consideration of such permission, Name of Organization or Authorized Representative hereby fully releases and discharges the State of Montana and the Montana Department of Transportation, its officers, agents and employees from any and all claims from injuries, including death, damages or losses which arise, or which may be alleged to have arisen out of, or in connection with, the event. Name of Organization or Authorized Representative further agrees to indemnify and hold harmless and defend the State of Montana, its officers, agents and employees from any and all claims resulting from injuries, including death, damages or losses, including, but not limited to, the general public, which may arise or which may be alleged to have arisen out of or in connection with this event.

Name of Organization or Authorized Representative

Name of Preparer

Title

Authorized Signature Date

Applicant's statement of Agreement: I hereby affirm that the above information is true and correct in describing the intent of this Special Event application. I Authorized Signature and Title the undersigned, agree to abide by the provisions of this Special Event application, if approved, and any instructions that may be attached (or accompany) hereto.

Signature of Applicant Print Name Date Contact Phone No.

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Montana Department of Transportation Special Event Application and Guidelines

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### Sample Approval Letter

(Date)

(Applicant Name and Address)

Dear Applicant,

With regard to your application for a permit to conduct (Event Name) on the portion of (highway route number) on (date) beginning at (time) and ending at (time), we have reviewed your application and approve the application subject to the following terms and conditions:

- **Revocation:** This permit may be revoked by the City/State upon giving seven (7) days advanced written notice. However the City/State may revoke this permit without notice if Permittee violates any of its terms or conditions.
- **Protection of Traffic and Pedestrians:** The Permittee shall protect the event area with traffic control devices that comply with the Manual on Uniform Traffic Control Devices as outlined in the applicant's Traffic Control Plan. The Permittee further agrees to insure and provide for the safe passage of pedestrians within the event area. Unless approved by the City, the Permittee will not allow any obstruction within any sidewalk or designated pedestrian walkway. The Permittee also agrees to assure a minimum of twelve (12) foot continuous traffic lane for emergency vehicle access within the event area. Further, the Permittee will notify all area emergency services at least forty-eight (48) hours prior to the closure and will, at that time, provide said agencies with a sketch of the event layout.
- **Rubbish and Debris:** Immediately upon completion of the event, all rubbish and debris shall be removed and the roadway and roadside left in a safe, neat and presentable condition satisfactory to the City/State.
- **Inspection:** The installation(s) or activities authorized by this permit shall comply with the approved Traffic Control Plan and the conditions of this permit. The Permittee may be required to remove or revise the installation(s) or activities at the sole expense of the Permittee, if the installation(s) or activities do not conform to the requirements of this permit or the approved Traffic Control Plan as determined by MDT.
- **Removal of Installations:** Upon termination of the event and/or permit, the Permittee will remove the installations installed under this permit at no cost to the City/State and restore the premises to the prior existing condition. Exceptions will include reasonable and ordinary wear and tear and damage by the elements, or by circumstances over which the Permittee has no control.
- **City/State to be Reimbursed for Repairing Roadway:** Upon being billed, the Permittee agrees to promptly reimburse the City/State for any expense incurred in repairing damage

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## APPENDIX E: MDT SURVEY

### Montana Department of Transportation Task 2 Survey

#### Subject Consent for Participant in Human Research at Montana State University

MDT is sponsoring a project to enhance special event transportation planning across the state. You have been identified as an internal MDT special event contact, and we would like to ask you a few questions to learn more about your experiences, expertise, and insights regarding the special event planning process.

The Western Transportation Institute (WTI) at Montana State University is conducting this survey for MDT's research program. The goal of the survey is to:

- Document current special event practices related to the permitting process and traffic control
- Identify best practices in use throughout the state
- Identify current and emerging challenges

WTI will create a synthesis for MDT from the survey results.

Participation is voluntary and you can choose to not answer and/or you can stop at any time.

If you have any questions about the research, you can contact Jaime Eidswick at [jaime.eidswick@coe.montana.edu](mailto:jaime.eidswick@coe.montana.edu) or (774) 571-3503. If you have any additional questions about the rights of human subjects you can contact the Chair of the Institutional Review Board, Mark Quinn, (406) 994-4707 ([mquinn@montana.edu](mailto:mquinn@montana.edu)).

**AUTHORIZATION:** I have read and understand the discomforts, inconvenience and risk of this study. I, (name of subject), agree to participate in this research. I understand that I may later refuse to participate, and that I may withdraw from the study at any time. I have received a copy of this consent form for my own records.

\* Do you agree to the above terms? By clicking yes, you consent that you are willing to answer the questions in this survey.

Yes

No

Montana Department of Transportation Task 2 Survey

Please provide the following contact information.

Name

Title

Location

1. Do you have any experience with special events run in your area (e.g. approving permits, traffic control, fielding complaint phone calls, traveler information, etc.)?

- Yes
- No

**Montana Department of Transportation Task 2 Survey**

2. How frequently do the following special events occur in your area?

|   | Frequency            |
|---|----------------------|
| Running events (e.g., trail races, road races, marathons) | <input type="text"/> |
| Bike races  | <input type="text"/> |
| Rodeos  | <input type="text"/> |
| County fairs/festivals                                    | <input type="text"/> |
| Parades   | <input type="text"/> |
| Concerts  | <input type="text"/> |
| Conferences/Conventions/Expositions                       | <input type="text"/> |
| College football games                                    | <input type="text"/> |
| Other (please specify below)                              | <input type="text"/> |

Other

3. As the next step in this process, we plan to survey a representative group of special event organizers. Are there any special event organizers in your area that you feel we should contact because the event represents complexity, best practices or lessons learned? If so, which event did they organize? If you have the organizer's contact information, please provide that as well.

Montana Department of Transportation Task 2 Survey

Pre-Event Planning

4. What is the current process in your area for providing approval for a special event? (check all that apply)

- Pre-event meeting with the organization
- Coordination with local jurisdictions
- Assist event organizer in completing the permit
- Permit is submitted by event organizer
- Approval/disapproval of permit
- Event organizer can dispute
- Require a post-event review with formal debriefing report
- Other (please specify)

5. Have you ever used any of the following MDT special event references/templates (check all that apply)

- MDT Special Events Guidance Document
- MDT Special Events Checklist
- MDT Approval Letter Template
- MDT Disapproval Letter Template

5a. If you have not used the above special event references, please explain why not.

6. Does your area have a specific timeline set-up for special event permit approvals?

- Yes
- No

6a. If yes, what is it?

6b. If no, would this be helpful and how?

7. What are some standard practices that you use in your area when it comes to special event permit approvals or disapprovals?

8. In your opinion, what are the greatest challenges (for MDT staff and for special event organizers) with the current MDT special event permit and process?

9. Would you be able to share a special event permit application that you feel is a best practice?

10. If you could change anything about the current MDT special event process, what would you change? (check all that apply)

- Better guidance
- Consistent process
- Example traffic control plans
- Example traffic control strategies
- Example special event permit application
- Specific timeline
- Other (please specify)

11. Are there specific things you would like addressed in a special event guidance document? Topics that would be beneficial to you?

12. To make special event guidance consistent in Montana, what do you think needs to be addressed?

Montana Department of Transportation Task 2 Survey

Day-of-Event

13. What are some of the common traffic management strategies that you approve when it comes to traffic control for events in your area?

- Static signs
- Dynamic message signs (DMS)
- 511
- Traffic signal operations
- Reversible lanes
- Road closures
- Park-and-rides
- Transit services
- Flaggers
- Local law enforcement directing traffic
- Public information/media campaigns
- Incentives for taking transit
- Other (please specify)

14. What are some of the biggest challenges for special event traffic control in your area?

- Lack of traffic control resources (DMS, cones, static signs, etc.)
- Lack of personnel
- Lack of traffic control plan guidance
- None
- Other (please specify)

15. What are some best practices for special event traffic control in your area?

16. Have you ever provided traffic control devices for a special event?

- Yes
- We have provided traffic signal event timing
- No

16a. If yes, please explain and state whether you would recommend this.

16b. If no, why not?

17. If a dynamic message sign is used for a special event, do you (check all that apply)

- Provide a list of approved messages to the event organizer
- Provide a list of example messages to the event organizer
- Require the special event organizer to create the message and get approval from you
- This is left to the event organizer without feedback

18. Would a list of previously approved or example DMS messages be useful?

- Yes
- No

18a. If yes, what are some examples from your area that you have previously approved?

19. Have you ever required an event to obtain traffic monitoring data?

Yes

No

Montana Department of Transportation Task 2 Survey

Post-Event Activities

20. Have you ever held an after action review of a special event to determine what worked and what could be done better?

Yes

No

20a. If yes, please describe.

20b. If no, do you think this would be useful?

## APPENDIX F: LOCAL AGENCY SURVEY

### Subject Consent for Participant in Human Research at Montana State University

MDT is sponsoring a project to enhance special event planning across the state. You have been identified as a special event organizer in Montana, and we would like to ask you a few questions to learn more about your experiences, expertise, and insights regarding the special event planning process.

The Western Transportation Institute (WTI) at Montana State University is conducting this survey for MDT's research program. The goal of the survey is to:

- Document current special event practices related to the permitting process and traffic control
- Identify best practices in use throughout the state
- Identify current and emerging challenges

Participation is voluntary and you can choose to not answer and/or you can stop at any time.

If you have any questions about the research, you can contact Jaime Eidswick at [jaime.eidswick@coe.montana.edu](mailto:jaime.eidswick@coe.montana.edu) or (774) 571-3503. If you have any additional questions about the rights of human subjects you can contact the Chair of the Institutional Review Board, Mark Quinn, (406) 994-4707 ([mquinn@montana.edu](mailto:mquinn@montana.edu)).

**AUTHORIZATION:** I have read and understand the discomforts, inconvenience and risk of this study. I, (name of subject), agree to participate in this research. I understand that I may later refuse to participate, and that I may withdraw from the study at any time. I have received a copy of this consent form for my own records.

\* Do you agree to the above terms? By clicking yes, you consent that you are willing to answer the questions in this survey.

- Yes
- No

Please provide the following contact information.

Name

Special Event Name

Location

1. What types of special event have you previously (or currently) organized (check all that apply)?

- Running events (e.g. trail races, road races, marathons)
- Bike races
- Rodeos
- County fairs/festivals
- Parades
- Concerts
- College football games
- Other (please specify)

Pre-Event Planning

2. As an event organizer, what stakeholders do you include in the planning process? (check all that apply)

- Montana Department of Transportation
- County/City/Local Roads Transportation Department
- Local law enforcement
- Montana Highway Patrol
- Media
- Emergency medical service
- Transportation consultants
- Transit
- Other (please specify)

3. Does MDT provide you with any guidance for filling out the special event permit? If so, what do they provide and is it helpful (if applicable)?

4. In your opinion, what is the greatest challenge for special event organizers with the current MDT special event permit, the special event process, and local coordination (if applicable)?

5. If you could change anything about the current MDT special event process, what would you change?  
(check all that apply)

- Better guidance
- Consistent process
- Example traffic control strategies
- Example traffic control plans
- Specific timeline
- Other (please specify)

6. If a special event guidance document was created for event organizers, are there specific things you would like to see addressed/topics that would be beneficial to you?

7. Would you be willing to share a copy of the special event permit application you submitted?

**Day-of-Event**

8. What are the traffic management strategies that you used for your event?(check all that apply)

- Static signs
- Dynamic message signs (DMS)
- 511
- Traffic signal operations
- Reversible lanes
- Road closures
- Park-and-rides
- Transit services
- Flaggers
- Local law enforcement directing traffic
- Public information/media campaigns
- Incentives for taking transit
- Other (please specify)

9. What was your biggest special event traffic control challenge for your event?

- Lack of traffic control resources (DMS, cones, static signs, etc.)
- Lack of personnel
- Lack of traffic control plan guidance
- None
- Other (please specify)

10. How do you get pertinent information out to the public about a special event? (check all that apply)

- Newspaper
- Television
- Internet
- 511
- Dynamic message signs (DMS)
- Highway advisory radio (HAR)
- None
- Other (please specify)

11. What do you use volunteer resources for? (check all that apply)

- Transportation services
- Traffic and pedestrian control
- Parking operations
- Crowd control
- Patron assistance
- Operations monitoring
- None
- Other (please specify)

12. Do you test all traffic control equipment before the event?

- Yes
- No

13. How do you keep communications open among all stakeholders during the event?

- Cell phone
- Radio
- Command center
- Other (please specify)

14. Who has the final say on all traffic operations during an event?

15. Do you keep in contact with the media to update the public on traffic around a special event?

- Yes
- No

16. How do you monitor traffic during a special event? (check all that apply)

- Cameras (CCTV)
- Volunteers
- Local law enforcement
- Other (please specify)

Post-Event Activities

17. Have you ever conducted a survey to gain insight on the public opinion of transportation management during a special event?

Yes

No

18. Have you ever held an after action review of a special event to determine what worked and what could be done better?

Yes

No

18a. If yes, please describe.

18b. If no, do you think this would be useful?

## APPENDIX G: DRAFT MDT SPECIAL EVENT GUIDANCE FOR PERMIT APPROVAL/DENIAL

*This draft guidance can be used to assist MDT staff in their responsibilities surrounding special event permit approval/denial. Prior to its use, this guidance should be reviewed by the MDT staff to ensure that it is complete and up-to-date and text highlighted in yellow should be filled in by MDT staff.*

### Roles and Responsibilities

The roles and responsibilities surrounding the special event process for state maintained/owned roads include:

- Special Event Organizer
  - Fill out MDT special event permit application with all relevant information for any event affecting a state roadway;
  - Secure approval from community to host the special event and for any effects on local roads; and
  - Provide or hire all necessary equipment and volunteers.
- Montana Department of Transportation
  - Ensure application is completely filled out;
  - Ensure signage and detours meet the MUTCD;
  - Approve or deny application; and
  - Retain a paper copy of the permit application.

### Application Process

**STEP 1:** Event organizer finds the application on the MDT webpage [http://www.mdt.mt.gov/other/webdata/external/maint/forms/MDT-MAI-004-SPECIAL\\_USE\\_PERMIT.PDF](http://www.mdt.mt.gov/other/webdata/external/maint/forms/MDT-MAI-004-SPECIAL_USE_PERMIT.PDF) and fills it out completely. Organizer returns it to the Area Maintenance Chief (see Table 4) xx days prior to the event.

**Table 4: Area Maintenance Chief Contact Information**

| Area        | Contact | Phone | Email |
|-------------|---------|-------|-------|
| Missoula    |         |       |       |
| Kalispell   |         |       |       |
| Butte       |         |       |       |
| Bozeman     |         |       |       |
| Great Falls |         |       |       |
| Havre       |         |       |       |
| Billings    |         |       |       |
| Lewistown   |         |       |       |
| Miles City  |         |       |       |
| Wolf Point  |         |       |       |

*Insert a map of the maintenance areas to document with locations are within an area*

### **Figure 21: Map of Maintenance Areas**

**STEP 2:** MDT sends email to event organizer and copies to local city contact to acknowledge receipt of application and to indicate when organizer can expect to hear back.

**STEP 3:** MDT should review the information and accept/deny the permit. A sample approval and denial letter can be found in Appendix D and should be inserted into the MDT guidance document if/when it becomes adopted as a standalone document.

Items for MDT staff to consider when denying/approving an application:

- Are all application pieces complete (traffic control plan, liability insurance, map, encroachment permit, etc.)?
- If there is a closure, is there a reasonable detour suggested? (*A decision should be made and documented as to if events can be denied if there are no detour routes, for example the Ennis July 4<sup>th</sup> parade which closes a bridge for 2 hours*)
- Are the effects to traffic unreasonable? (*A decision should be made and documented about what the reasonable thresholds are and when a permit should be denied*)
- Will the special event affect a scheduled construction project? (*A decision should be made and documented as to what interference with a construction project would require permit denial*)
- Does traffic control plan comply with MUTCD?

- Is the event community-oriented or does it benefit a private business? *(A decision should be made and documented as to whether or not MDT can/should deny events oriented for a private business)*
- Do the events occur on or pass through private landowner property? *(A decision should be made and documented about the approval/denial of these events)*
- Is law enforcement needed and has it been contracted?
- Are certified flaggers needed and has certification been obtained?
- What are the thresholds for an event requiring emergency medical services, DMS, and completion by a specific time? *(Document these thresholds both for MDT and event organizers)*
- One stakeholder suggested the event be approved by local municipality first before MDT approves; however, most of the cities require MDT approval before they will approve it.
- Document that Tribal lands, Bureau of Land Management, and US Fish & Wildlife Service do not need to submit permits for events on their lands.
- Develop guidance for bicycle and running races *(see suggestion in the recommendations section to work with event organizers, local clubs, and cities to determine and document guidance)*

**STEP 4:** MDT notifies MDT departments of special event approval (maintenance, traffic, construction, etc.), as well as city contact.

**STEP 5:** Consider holding/attending a pre-event meeting with event organizers.

**STEP 6:** Ensure that organizers comply with the permit requirements. Repercussion would be documentation to deny future special event permits. If MDT becomes aware of an event that did not file a permit but should have, there should be repercussions for this as well, such as citations.

**STEP 7:** Consider holding/attending an after-action review meeting to discuss and document lessons learned for future events. This should be used when approving future applications and should be added to guidance for future event organizers.

## APPENDIX H: RECOMMENDED UPDATES TO DRAFT MDT SPECIAL EVENT GUIDANCE FOR EVENT ORGANIZERS

Most of the information necessary for this document was created in the previous special events project and can be found in Appendix D and should be adopted as a standalone document.

That document includes:

- General guidance;
- Contact list (*a map should be added so that locations outside of the 10 listed will know to which area they fit in*);
- Application form (*although the current one can be replaced in this document if MDT prefers to continue using it*);
- Traffic control plan considerations;
- Checklist;
- Certificate of Insurance;
- Hold Harmless Agreement; and
- Sample Approval/Denial Letter (this can be copied from the event organizer guidance and inserted into the MDT guidance).

Additional information that could be added to this document includes:

- A map/list of state owned highways (especially those running through cities) so event organizers can determine if they need to submit an MDT permit application;
- A request for a copy of the certification showing who will be controlling traffic (e.g., notification it will be law enforcement, flagger certifications, name of traffic control company, etc.);
- Example of letter for notifying the media, emergency services, transit, business owners, and post offices of the special event and the traffic control plan;
- Contact information for where to purchase/borrow traffic control devices and/or contractors to hire for traffic control plans and day of event transportation management (*before this is added, check to make sure there is no liability for MDT providing this information and that it is an exhaustive list so it does not look like you are recommending certain companies over others*);
- Contact information for hiring law enforcement;
- Contact information for Montana LTAP for flagger certification training; and
- Add guidance for the use of dynamic message sign messages, especially the requirement that messages need to be approved by maintenance staff.

## **APPENDIX I: DRAFT UNDERSTANDING TRAFFIC CONTROL – RATIONALE AND RECOMMENDATIONS**

While transportation management of a special event may not seem to be the top priority when planning and organizing an event, it is a very important piece for the safety of participants. It also ensures that the impacts of the event do not have detrimental effects on the local community, which will help retain public support for your event in the future.

### **So Why is Traffic Control Necessary?**

When planning your event, you must consider and accommodate the safety of all participants, whether they are driving or walking to your event. Many times this includes closing the road to traffic to ensure their safety. But in closing a road, you must also plan for the many consequences. These include how the closure will impact:

- Emergency vehicles;
- Construction projects;
- Commercial vehicle traffic;
- Delays to the community for long-term closures without good detour;
- Businesses on the closed road (both their business that day and where their employees should park);
- Transit vehicles and routes; and
- Postal trucks and routes.

### **Road Closure Considerations**

Therefore when closing a road and selecting detour routes, you should consider:

- Turning movements for commercial vehicles, as some streets are too narrow to accommodate them and should not be used in the detour;
- Commercial vehicle restrictions;
- Construction projects;
- Potential congestion that will occur if commuter traffic will be exiting the city as event traffic is entering;
- Impact to one-way streets (will people be able to access the businesses and residences necessary on the one way streets when closure is in place?);
- Needs of the local businesses, residences, and places of worship (where employees and customers should park, drive-thrus at banks, garages for on call businesses, entrances to parking garages, etc.);
- Shoulder widths;
- Emergency service access; and
- Needs of alternative modes (public transportation stops and routes, pedestrian access on public sidewalks must be maintained unless alternative options are provided, bicycle lanes, etc.)

## Traffic Management Strategies

To assist with transportation management, potential strategies to employ, may include, but are not limited to:

- Park-and-ride lots can be beneficial by alleviating parking shortages and also to increase revenue generation in the downtown area;
- DMS on the Interstate are useful to warn motorists of the traffic, detours, and the potential backups;
- Stationing law enforcement at Interstate exit ramps to help control turning traffic can alleviate backups on the Interstate;
- Presence of law enforcement can be sufficient to alleviate some challenges (e.g., pedestrians who do not obey the walk signals);
- Utilize barricades, cones, signage, and safety vests consistent with the MUTCD, as it is a consistent format known to the public and minimizes their confusion during a street closure;
- During parades, consider the traffic signals and their timing (generally change them to flashing);
- Utilize flaggers to help with traffic control;
- Hand out detour maps to all stopped vehicular traffic; and
- During races, station a police officer or county sheriff to conduct traffic control at intersections where traffic may be able to move when there are large gaps between groups of runners.

## Dynamic Message Signs (DMS)

As mentioned above, DMS (both portable and permanent) can be an effective way to provide en route information to both event attendees and locals about the traffic effects of an event.

DMS messages must follow set guidelines to be readable at certain speeds, and there are certain abbreviations that can/cannot be used. MDT guidelines for creating DMS messages can be found xxx. Some key information includes:

- MDT permanent DMS can only accommodate 18 characters per line and 3 lines per display. 2 displays can be used for a message with a maximum of 7 total words (excluding preposition) for 65mph; and
- MDT portable DMS can only accommodate 8 characters per line and 3 lines per display. 2 displays can be used for a message with a maximum of 7 total words (excluding preposition) for 65mph

Listed below are some sample messages that can be used on permanent DMS:

BIKE RACE

NEXT \_ MILES

BE ALERT

**BICYCLES ON ROAD****\_ MILES AHEAD****BE ALERT**

Listed below are some example messages that can be used on permanent or portable DMS:

**RACE****IN****PROGRESS****BIKES****NEXT****ON****\_ MILES****ROAD****TRAFFIC****NEXT****STOPPED****\_ MILES****TRAFFIC****NEXT****STOPPED****\_ MIN**

Prior to their use, all DMS messages **MUST** be approved by MDT Maintenance staff.

**Lessons Learned**

MDT has compiled a list of lessons learned from previous event organizers that may be useful as you consider your transportation management. If you know of additional lessons learned that should be added to this list, please contact xxx at xxx to have them added to this document for future event organizers.

- Ensure a coordinated effort between event organizers, local government, MDT, and law enforcement;
- Consider providing parking area and using buses to move people to the special event area (park-and-ride);
- Maintain routes for truck traffic;
- Consider upstream impacts to local roads;
- Stakeholder engagement is key (city/county traffic engineer/public works, MDT, city police, county sheriff, Montana Highway Patrol, public transportation, and business owners);

- Public notification through both traditional and social media is crucial and typically the smaller the community, the bigger a challenge this is;
- Utilize previously completed, approved applications as an example;
- Ensure the yearly budget includes funding to hire a local traffic management firm for races;
- Contract a third party contractor to set-up and manage traffic control. It is a significant effort that requires a qualified, experience entity;
- Overstaff (use as many bodies as possible) for traffic control (e.g., if you think you need 2 volunteers at a street corner, schedule 4-6);
- Build a timeline and protocol for setting up and taking down static signs and barricades so all stakeholders follow the same steps. It is also important to have someone clean up the debris and trash before the road is reopened; and
- After action meetings are crucial for documenting feedback, issues, lessons learned, and ideas for improvement from all volunteers. When planning for the next year, start with a review of the previous year's notes.

## **APPENDIX J: DRAFT LANGUAGE FOR CITIES TO ADD TO THEIR SPECIAL EVENT APPLICATIONS AND/OR WEBSITES**

Special events that occur on state maintained/owned highways require an MDT special event permit, **in addition to** any city permits that may be required. To determine if you also need an MDT permit, please visit the MDT website here: xxx.

## APPENDIX K: BICYCLE/RUNNING RACE DISCUSSION POINTS

Bicycle and running races present unique traffic control challenges. MDT may want to consider the development of supplemental and/or specific guidance for these events. Below are some examples and discussion points.

- Create specific guidance and possibly even a separate permit application (see example from Washington State DOT) related to bicycle and running events. Some specific examples include:
  - For any bicycle or pedestrian race, a start/finish banner must be used;
  - “For cities with population over 22,500, only a traffic control plan is required for a parade on a city street that is also a state highway” (Washington State DOT 2015);
  - WA also provides example traffic control plans for bicycle races;
  - Races cannot be conducted on a state highway during peak traffic hours;
  - “Consider total road closures for portions of a race course where average daily traffic volumes exceed 10,000 vehicles, or where difficult turns, high racing speeds, narrow roads, or other challenging conditions are present” (Washington State DOT 2015);
  - Require a rolling closure with a police escort for road races within a heavy traffic area or that have a field size larger than 100;
  - Any intersection where exiting traffic control will be temporarily overridden must have a certified flagger or law enforcement officer;
  - All rolling closures provided for bicycle races must be done by law enforcement and the vehicles in front and behind the closure must display “bicycle race in progress” signs and use beacon lights.
- When creating a race route:
  - Use the trail network (off road) to the greatest extent possible or residential streets (lower volume and fewer potential conflicts than an arterial);
  - Talk to stakeholders about the potential course to identify possible challenges/conflicts as local agencies know the street network the best; and
  - If the event coordinator is not from the community, connect with someone in the local running community who knows the best routes and the challenges for runners in the area.
- Hamilton has established distinct criteria/guidelines/restrictions for 5k races, fun runs, and fundraising walks/marches, which are different than the requirements for complete street closures and escorted parades;
- Bozeman directly addresses run and bicycle events in a supplement including how intersections should be controlled for these events.

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