



AMBER
ALERT

America's Missing:
Broadcast Emergency Response



Report to the White House On AMBER Alert

October 2004

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INTRODUCTION

“It is important to expand the AMBER Alert systems so police and sheriffs' departments gain thousands or even millions of allies in the search for missing children. Every person who would think of abducting a child can know that a wide net will be cast.”

- President George W. Bush

A tidal wave change took place on October 2, 2002, when President Bush hosted the first-ever White House Conference on Missing, Exploited, and Runaway Children. At that point in time, AMBER Alert became nationally focused. In conjunction with the conference, President Bush requested that Attorney General John Ashcroft appoint the first National AMBER Alert Coordinator.

Attorney General Ashcroft, that same day, appointed the Assistant Attorney General for Justice Programs, (OJP) Deborah J. Daniels, as the National AMBER Alert Coordinator.

“Few things grip law enforcement with more urgency than finding a missing child. Rapid response is vital in abduction cases, and taking the acclaimed AMBER Alert System nationwide will save lives and thwart would-be predators.”

-Attorney General John Ashcroft

The AMBER Alert System began in 1996 when Dallas-Fort Worth broadcasters teamed with local police to develop an early warning system to help find abducted children. AMBER stands for America's Missing: Broadcast Emergency Response. The name was created as a legacy to 9-year-old Amber Hagerman, who was kidnapped while riding her bicycle in Arlington, Texas, and then brutally murdered. Other states and communities began setting up their own AMBER plans as the idea was adopted across the nation.

From 1996 to 2001, the progress on developing and implementing AMBER plans throughout the country was not considered significant. At the end of 2001, only four states had statewide AMBER plans, now there are 49. To date, the successful recoveries of 127 children, or four-fifths of the total number of all successful recoveries, have occurred since October of 2002 (see chart on page 4).

As the first National Coordinator, Ms. Daniels acted immediately. She brought in experts from around the country, as well as OJP's partners at the National Center for Missing and Exploited Children, to assist her in developing a strategy to reach the goal of creating a seamless network for AMBER Alerts. The group included victims, law enforcement, broadcasters, and officials from the Departments of Justice and Transportation, and its advice has been invaluable.

On April 30, 2003, President Bush signed into law the PROTECT Act, which comprehensively strengthened law enforcement's ability to prevent, investigate, prosecute, and punish violent crimes committed against children. Building on the Bush administration's commitment to support AMBER Alert programs, the PROTECT Act codified the previously-established National AMBER Alert Coordinator role in the Department of Justice. The law tasked the Coordinator to:

- Facilitate AMBER network development.
- Support development of state AMBER plans and efforts.
- Help eliminate geographic gaps in AMBER networks.
- Provide regional AMBER network coordination.
- Establish guidance on criteria for issuing an AMBER Alert.

In this official capacity, Assistant Attorney General Daniels and OJP's partners devised a strategy based on three major areas:

- Assess Current AMBER Activity
- Create a Coordinated AMBER Network
- Communicate "Lessons Learned"

This Report highlights the progress made in these areas and outlines future plans for further development of the AMBER Alert.

The PROTECT Act also established a grant program for notification and communication systems along highways for the recovery of abducted children. The Secretary of Transportation was directed to carry out a program to provide grants to states for the development or enhancement of their highway alert efforts with regard to abducted children. Since late 2002, the Department of Justice has worked closely with the Department of Transportation (DOT) on its national efforts, and the agencies have been partners in the development and implementation of the national AMBER Alert strategy. (More information on the DOT program can be found in the Appendix of this Report.)

RECORDED PROGRESS ON RECOVERIES

The chart below depicts the substantial increase in the number of recovered children since the strategy has been in place. The numbers serve as evidence that the national coordination is working well. Over 160 children have been recovered since AMBER Alert began in 1996. As of October 1, 2004, the successful recoveries of 127 children, or four-fifths of the total number of all successful recoveries, have occurred since October of 2002, when the AMBER program became a coordinated national effort. This significant progress is attributable to better coordination and training at every level, increased public awareness, technological advances, and cooperation among law enforcement, transportation officials, and broadcasters. The collaboration of communities, states and territories, coming together to create and improve their AMBER plans, has also made a remarkable difference in the number of abducted children recovered. At the end of 2001, there were only four statewide plans, and as of October 1, 2004, 49 states have statewide plans in place. The 50th State, Hawaii, is making significant progress toward the establishment of a statewide plan.

AMBER Alert Progress 1999 to date		
Year	Number of Recovered Children	Number of Statewide AMBER Plans Implemented
1999	8	1
2000	8	1
2001	2	2
2002	26	28
2003	72	14
2004 (as of Oct. 1)	45	2
Total	161	49

updated 10/01/04

KEY AREAS OF NATIONAL IMPACT

AMBER Alert has made a significant difference in the lives of the over 160 children who have been successfully recovered, and their families. The safety of these children from all across the country was seriously threatened – and they are now alive and safe at home with their families because of an organized effort to search for children who have been abducted. Prior to the commitment from every level of government, the private sector, and ordinary citizens, abducted children were not recovered with the speed and success we are currently experiencing across the nation.

Following are the key aspects of the strategy which has created a national impact, and to which the significant recent success of AMBER Alert may clearly be attributed:

➤ *Guidance on Criteria for Issuing AMBER Alerts*

In April of 2004, guidance was provided to law enforcement, broadcasters, transportation officials, and the general public on AMBER Alert activation criteria. The Department of Justice does not mandate one set of criteria that would be assumed appropriate for every state. However, at the request of state coordinators, the Department has developed and shared its suggested criteria for the issuance of AMBER Alerts. The guidance is designed to work toward achieving a uniform, interoperable network of plans across the country, and minimizing potentially deadly delays due to confusion among varying jurisdictions. The elements in the Guidance on Criteria for Issuing AMBER Alerts are as follows:

❖ *Law enforcement confirmation of an abduction*

There is reasonable belief by law enforcement that an abduction has occurred.

❖ *Risk of serious bodily injury or death*

The law enforcement agency believes that the child is in imminent danger of serious bodily injury or death.

❖ *Sufficient descriptive information*

There is enough descriptive information about the victim and the abduction for law enforcement to issue an AMBER Alert to assist in the recovery of the child.

❖ *Age of child*

The abduction is of a child aged 17 years or younger.

❖ *NCIC data entry*

The child's name and other critical data elements, including the Child Abduction and AMBER Alert flags, have been entered into the National Crime Information Center (NCIC) system.

➤ *Training Programs*

Training has been the cornerstone of the national effort on AMBER Alert. Over 2,000 people in the areas of law enforcement, broadcasters, and transportation have been trained in the various aspects of AMBER Alert from 2002-2004. Existing curricula taught through a Justice Department grant to Fox Valley Technical College have been modified and enhanced to include pertinent AMBER training material. In addition, new training courses have been developed and presented to law enforcement throughout the country.

Several national training conferences have been held, and regional trainings have been ongoing.

- ❖ The first-ever National Training Conference on AMBER Alert was held in August, 2003. It brought together teams from every state to receive training, foster AMBER plan development, and share best practices.
- ❖ The first-ever AMBER Alert Technology Conference was held in December, 2003, which provided 65 AMBER coordinators access to new technology to enhance AMBER communications.
- ❖ The second National Training Conference on AMBER Alert was held in September, 2004 to train new team members from every state and to receive input on further strategy development.

➤ *Secondary Distribution of AMBER Alerts*

A mechanism has been created for the secondary distribution of AMBER Alerts through agreements between the National Center for Missing and Exploited Children (NCMEC) and nationally known communication companies, such as NEXTEL and AOL. When NCMEC receives AMBER Alerts from the DOJ-recognized AMBER coordinators, it will disseminate the Alerts to the secondary distributors who have entered into formal signed agreements with NCMEC. Having access to the communication capabilities of these large communication companies will greatly increase the chances for abducted children to be safely recovered. It is an unprecedented partnership between the public and private sectors which will help to save lives.

➤ *Entries into the National Crime Information Center (NCIC)*

Work with the FBI has resulted in determining proper usage of the existing Child Abduction flag and the creation of a new AMBER Alert flag within NCIC. When local law enforcement enters this information into NCIC, it will trigger immediate notification to the FBI and NCMEC. Having this new distinction between a child abduction and an abduction which has been classified as an AMBER Alert will greatly increase the chances for prompt apprehension of the abductor and safe recovery of the child.

➤ *Public Service Announcements*

Public Service Announcements (PSAs) featuring two fathers who have experienced the abduction of a child – John Walsh and Ed Smart – have been produced free of charge by *America's Most Wanted*. As a part of the AMBER Alert strategy, the PSAs serve as a prevention tool. They spread the word that citizens and authorities are on alert in defense of children, and that broadcasters are poised to act immediately when an Alert has been activated. They also send out a message to potential abductors that they should think twice before acting on their malicious intentions. The PSAs are being widely distributed, due to the cooperation and generosity of the National Association of Broadcasters.

STRATEGY DEVELOPMENT

To achieve the goal of creating a seamless network for AMBER Alerts, a three point strategy was developed:

- Assess Current AMBER Activity
- Create a Coordinated AMBER Network
- Communicate “Lessons Learned”

Working closely with a group composed of victims, law enforcement, broadcasters, and officials from the Departments of Justice and Transportation, it was determined that there were multiple issues involved with AMBER Alerts. AMBER Alert was not universally recognized or understood across the country. There was much confusion relating to “What, When, Where, How, and Why.”

It was deemed of critical importance that the Justice Department and the National Coordinator serve as a convener and facilitator of local and state efforts, rather than imposing an inflexible single system on the states and territories, each of which has unique concerns and relationships among local partners. Of equal importance, however, was the need to provide clear guidance, introduce the states to potentially helpful technology, ensure that each state dedicated an individual with sufficient authority to serve as the statewide AMBER coordinator, and help to remove barriers to the ability of states and communities to act promptly when a child’s life is endangered.

“Seventy-four percent of children who are kidnapped and later found murdered are killed within the first 3 hours after being taken. As AMBER Alert Coordinator, I am working closely with law enforcement and broadcasters to speed the safe recovery of every abducted child.”

-Deborah J. Daniels
Assistant Attorney General and
National AMBER Alert Coordinator

In order to create a coordinated network and communicate “lessons learned,” it was necessary to conduct a thorough assessment of then-current AMBER activity. With resources appropriated in Fiscal Years 2003 and 2004 (\$2.5m and \$4m, respectively), the Child Protection Division of the Office of Juvenile Justice and Delinquency Prevention (OJJDP) was given responsibility for structuring projects in line with the formulated strategy. While conducting the assessment, work also began on creating a coordinated network and communication efforts.

The successful 20-year partnership between the Justice Department and the National Center for Missing and Exploited Children (NCMEC) was a tremendous asset in moving forward with numerous components of the AMBER Alert program. In particular, an agreement was reached with NCMEC to rely on its expertise in tracking and verifying the number of children recovered as a result of an AMBER Alert. More recently, a secondary AMBER Alert distribution mechanism has been developed, with NCMEC as the focal point. Currently, further efforts are underway to employ the Regional Information Sharing Systems' (RISS) secure internet capability, as well as the communications capability of the National Law Enforcement Telecommunications System (NLETS), to facilitate urgent AMBER-related communication among states, and between individual states and NCMEC.

STRATEGY IMPLEMENTATION

To date, the strategy has been implemented as follows:

- **Assess current AMBER activity**
 - ▶ Determined status of local, statewide, and regional AMBER plans to identify national trends, characteristics, and current procedures.
 - ▶ Evaluated available technology and developed AMBER Alert draft technology standards to promote cooperation between state communications systems.
 - ▶ Developed an implementation plan to monitor, report, and track national AMBER Alert progress and changes.

- **Create a coordinated AMBER network**
 - ▶ Provided training and guidance on plan development and enhancement for law enforcement, broadcasters, and transportation representatives through regional summits and missing children training courses.
 - ▶ Established federal, state, and local partnerships and promoted agreements among states and communities to develop a seamless communication network.
 - ▶ Partnered with the National Center for Missing and Exploited Children to convene the first Southeast Conference on Missing and Exploited Children, held in June 2004, (AMBER Alert component included in the training).
 - ▶ Provided **criteria guidance** on issuance of AMBER Alerts, available on the AMBER Alert web site: amberalert.gov.
 - ▶ Created a mechanism for secondary distribution of AMBER Alerts through agreements between the National Center for Missing and Exploited Children and nationally known communication companies.
 - ▶ Established operational AMBER Alert statewide plans in 49 states.
 - ▶ Worked with the FBI in developing proper usage of the existing Child Abduction flag and the creation of a new AMBER Alert flag within the National Crime Information Center.

- **Communicate “lessons learned”**
 - ▶ Held the first-ever National Training Conference on AMBER Alert in August 2003, which brought together teams from every state to receive training, develop AMBER plans, and share best practices.
 - ▶ Presented the national strategy at over 37 conferences held by broadcasters, law enforcement, and juvenile justice organizations.

- ▶ Held the first-ever AMBER Alert Technology Conference in December, 2003 which provided 65 AMBER coordinators access to new technology to enhance AMBER communications. A conference report is posted on the Department of Justice AMBER Alert web site: amberalert.gov .
- ▶ Held a meeting in February, 2004 with national and state broadcasters and media representatives, obtaining input into a process for expanding and enhancing the AMBER Alert system from a broadcaster/media perspective.
- ▶ Raised public awareness through the creation of a national AMBER Alert web site and made it more accessible by assigning a new URL: amberalert.gov .
- ▶ Made media appearances; created training videos for both law enforcement and broadcasters; and produced and distributed an AMBER Alert strategy brochure.
- ▶ Expanded the AMBER Alert web site to include a “Toolkit” of resource material for use in commemorating National Missing Children’s Day.
- ▶ Worked with *America’s Most Wanted* on finalizing public service announcements on missing and abducted children for wide distribution in television, radio, print, and Internet media.
- ▶ Integrated AMBER Alert information into existing training programs and publications.
- ▶ Made available on the AMBER Alert web site a Department of Transportation “best practices” report on Dynamic Message Signs.
- ▶ Convened the second National Training Conference on AMBER Alert in September, 2004, to share best practices and receive strategy input from every state, Puerto Rico, and the Virgin Islands.

FUTURE PLANS

AMBER Alert has gained momentum throughout the country that has, in fact, institutionalized its operation. The term has become a household word, and each year, more children are being recovered. The national training conference in September, 2004 provided necessary input for future planning. Following are items currently underway:

- Increase the number of regional summits and localized training specific to the needs of a community.
- Help to improve communications among plan coordinators through creative use of the Internet, and develop an electronic newsletter to include information about technologies and success stories.
- Finalize guides on AMBER Alert practices and procedures designed for a variety of audiences.
- Develop a report to the Congress on the implementation of the AMBER Alert legislation, the activities of the National Coordinator, and the effectiveness and status of the AMBER plans of each state, as required by the PROTECT Act.
- Create an AMBER Alert Fact Sheet brochure for use at public events.
- Train law enforcement officers on the proper usage of the Child Abduction and AMBER Alert flags in entering information into the National Crime Information Center, develop an instructional fact sheet and card as reference resources for officers, and work with the FBI to develop a “query” system which leads the data entry officer through the process to ensure the flags are employed when necessary.

The Justice Department has proudly served in advancing the AMBER Alert system nationwide. As National AMBER Alert Coordinator, Assistant Attorney General Deborah Daniels has taken on the role with a “hands-on” management style. The enthusiastic substantive leadership provided to the states and localities has resulted in a comprehensive AMBER program with remarkable results. The growth of AMBER Alert since October of 2002 has created a stable infrastructure for the recovery of abducted children that should continue as standard practice for law enforcement, broadcasters, transportation, and the American public into the future.

APPENDIX

- **Guidance on Criteria for Issuing AMBER Alerts**
- **Successful AMBER Alert Recovery Stories**
- **Home Page for AMBER Web Site: www.amberalert.gov**
- **AMBER Alert Public Service Announcements (CD-Rom)**
- **Department of Transportation AMBER Plan Implementation Assistance Program RFA**
- **Department of Transportation Report on Messaging Practices for Dynamic Message Signs**



April 2004

Guidance on Criteria for Issuing AMBER Alerts *from the National AMBER Alert Coordinator*

The centerpiece of every successful AMBER plan lies in the development of clearly defined activation criteria. In response to requests from law enforcement and broadcasters handling alerts at the state, regional, and local levels, the U.S. Department of Justice is offering guidance on a set of criteria. It is designed to work towards achieving a uniform, interoperable network of plans across the country and to minimize potentially deadly delays due to confusion among varying jurisdictions. The following are criteria recommendations:

★ Law enforcement confirmation of an abduction

It is recommended that AMBER plans require confirmation by law enforcement of an abduction prior to issuing an alert.

This component is essential when determining the level of risk to the child. Clearly, stranger abductions are the most dangerous for children and thus are primary to the mission of an AMBER Alert. To allow activations in the absence of significant information that an abduction has occurred could lead to abuse of the system and ultimately weaken its effectiveness. At the same time, each case must be appraised on its own merits and a judgment call made quickly. Law enforcement must understand that a “best judgment” approach, based on the evidence, is appropriate and necessary.

★ Risk of serious bodily injury or death

It is recommended that plans require a child be at risk for serious bodily harm or death before an alert can be issued.

This element is clearly related to law enforcement’s recognition that stranger abductions represent the greatest danger to children. The need for timely, accurate information based on strict and clearly understood criteria is critical, again keeping in mind the “best judgment” approach.

★ **Sufficient descriptive information**

It is recommended that in order for an AMBER Alert to be effective in recovering a missing child, the law enforcement agency have enough information to believe that an immediate broadcast to the public will enhance the efforts of law enforcement to locate the child and apprehend the suspect.

This element requires as much descriptive information as possible about the abducted child and the abduction, as well as descriptive information about the suspect and the suspect's vehicle. Issuing alerts in the absence of significant information that an abduction has occurred could lead to abuse of the system and ultimately weaken its effectiveness.

★ **Age of child**

It is recommended that every state adopt the "17 years of age or younger" standard; or, at a minimum, agree to honor the request of any other state to issue an AMBER Alert, even if the case does not meet the responding state's age criterion, as long as it meets the age criterion of the requesting state.

Most AMBER plans call for activation of the alert for children under a certain age. The problem is that age can vary---some plans specify 10, some 12, some 14, 15, and 16. Differences in age requirements create confusion when an activation requires multiple alerts across states and jurisdictions. Overuse of the AMBER Alert system will undermine its effectiveness as a tool for recovering abducted children.

★ **NCIC data entry**

It is recommended that immediate entry of AMBER Alert data into the National Crime Information Center (NCIC) system be a plan requirement.

Text information describing the circumstances surrounding the abduction of the child should be entered, and the case flagged as a Child Abduction. Many plans do not mandate entry of the data into NCIC, but this omission undermines the entire mission of the AMBER Alert initiative. The notation on the entry should be sufficient to explain the circumstances of the disappearance of the child. Entry of the alert data into NCIC expands the search for an abducted child from the local, state, or regional level to the national. This is a critical element of any effective AMBER Alert plan.

Summary of Department of Justice Recommended Criteria:

- ! **There is reasonable belief by law enforcement that an abduction has occurred.**
- ! **The law enforcement agency believes that the child is in imminent danger of serious bodily injury or death.**
- ! **There is enough descriptive information about the victim and the abduction for law enforcement to issue an AMBER Alert to assist in the recovery of the child.**
- ! **The abduction is of a child aged 17 years or younger.**
- ! **The Child's name and other critical data elements, including the Child Abduction flag, have been entered into the National Crime Information Center (NCIC) system.**



Successful AMBER Alert Recovery Stories

AMBER Alert Saves Lives

AMBER Alerts can prevent further tragedy from occurring when children are abducted by violent perpetrators.

January 8, 2004

Calhoun, GA

A man allegedly murdered his three former in-laws and his own 10-month-old daughter before abducting his two daughters, ages 3 and 4, and his stepdaughter, aged 10. He contacted his ex-wife, told her about the killings, and threatened the lives of the girls. An AMBER Alert was issued. A motorist heard the Alert on the radio, recognized the vehicle from the Alert and contacted police. Authorities were quickly at the scene, apprehended the suspect, and safely recovered the three children.

August 1, 2002

Lancaster, CA

Sixteen-year-old Tamara Brooks and Jacqueline Marris, 17, were parked in a quiet area frequented by local teens with their male friends late at night in two separate cars. A man came out of the bushes and held all four teens at gunpoint. He tied up both boys and put the two girls into a car and sped off into the night. As soon as authorities were alerted and confirmed that the girls were in danger, an AMBER Alert was issued across the region. A description of the girls, suspect, vehicle and license plate number were broadcast over local airwaves and displayed on electronic highway signs. Soon after, an animal control agent called in identifying the car in which the girls were abducted. She had matched up the vehicle's license plate number with the information provided on the highway signs. Police were soon at the scene and the girls were safely recovered.

The Power of the Microphone

Some perpetrators release the abducted child after hearing the AMBER Alert on the radio or seeing it on television.

September 28, 2003

Lafayette, CO

After authorities learned that a man had *allegedly* beaten his former girlfriend and abducted their 14-month-old son, an AMBER Alert was issued. Lafayette police reported that when the man heard the AMBER Alert on his radio, he dropped off the child at a family member's house the next day. The family member immediately contacted the child's mother. The child was safely returned to his mother.

States Working Together to Recover Abducted Children

49 states have statewide AMBER Alert plans, and are working together to develop interstate agreements. This means that if one state issues an AMBER Alert but the child is abducted across state lines, other states will agree to issue an AMBER Alert.

*May 7, 2003
St. Cloud, MN*

An 11-year-old girl was reported missing by her mother when she awoke to find her gone, along with a 21-year-old man who had been staying with the family in search of work. Because of her age and the time and nature of her disappearance, the girl was believed to be in danger, and an AMBER Alert was issued. When authorities learned that the suspect had ties in Utah, an AMBER Alert was activated in Utah as well. A Utah Highway Patrol trooper heard the alert and began using his laptop to calculate the drive time from St. Cloud, Minnesota, to Utah when he saw a car matching the description in the AMBER Alert drive by. The trooper pulled the car over, arrested the suspect, and the girl was safely returned to her family.

*November 24, 2004
Los Angeles, CA*

A 4-year-old Hoffman Estates, Illinois, boy was abducted by his biological parents from his custodial grandmother. Because the parents had a history of child abuse, an AMBER Alert was issued. Sightings of the couple and child were reported over the next few days. A week after the abduction, authorities had reason to believe the suspects and child were in California. The California Highway Patrol issued a statewide AMBER Alert. The mother heard the Alert in California and turned herself in. The child was safely recovered.

AMBER Alerts on Highway Signs Help Recover Children

Astute motorists have helped law enforcement recover children when they have read AMBER Alerts posted on highway signs.

*July 26, 2004
Columbus, Ohio*

Four children, ages 10, 6, 4, and 2, were taken from Miamisburg, Ohio, by their step-grandfather, a convicted child molester who had served 9 ½ years for this crime in a Arizona prison. He had told the children's parents they were going to the local park. When they did not return at the prearranged time, authorities were notified. An AMBER Alert was issued because of his past history. A motorist saw a highway sign posting the AMBER Alert information and noticed that the vehicle in front of him was the car sought by police. The driver alerted law enforcement and the police stopped the vehicle. The suspect was apprehended and the children were safely recovered.



- Messages from AMBER Alert Coordinator
- September 2004
- May 2004
- April 2004
- February 2004
- November 2003
- August 2003
- January 2003
- August 2002

[History of AMBER Alert](#)

[AMBER Alert Strategy](#)

[Guidance on Criteria for Issuing AMBER Alerts](#)

[From Attorney General John Ashcroft](#)

[PROTECT Act](#)

[Guide to Child Safety](#)

[AMBER Alert Contacts](#)

[Toolkit for Raising Awareness about Missing Children](#)

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"Seventy-four percent of children who are kidnapped and later found murdered are killed within the first 3 hours after being taken. As AMBER Alert Coordinator, I am working closely with local law enforcement and broadcasters to speed the safe recovery of every abducted child."

--Deborah J. Daniels,
Assistant Attorney General and
National AMBER Alert Coordinator



Public Service Announcements

Broadcasters who wish to air the PSAs, Pls. visit the National Association of Broadcasters' web site at www.nab.org.

- PSA 1 - Running Time: 00:13 sec ([QTime](#), [WinMedia](#))
- PSA 2 - Running Time: 00:19 sec ([QTime](#), [WinMedia](#))
- PSA 3 - Running Time: 00:30 sec ([QTime](#), [WinMedia](#))



[AMBER Alert Nat'l Strategy](#)

- ASSESS Current AMBER activity
- CREATE a coordinated AMBER network
- COMMUNICATE "lessons learned"

The information and statements contained on this official Department of Justice AMBER website shall not be used for the purposes of advertising, nor to imply the endorsement or recommendation of the United States Government.

Reference herein (including any document posted hereon or linked hereto) to any specific AMBER or AMBER-related commercial products, processes, or services by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government.

Highlights

[Remarks of Assistant Attorney General Deborah J. Daniels, Office of Justice Programs, at the Second National AMBER Alert Conference "Bringing Our Children Home"](#) (Dated: September 8, 2004)

[Press Release: Justice Department Announces New AMBER Alert Public Service Announcements and Website](#)

[Progress Report on the National AMBER Alert Strategy](#)

News from the Department of Transportation:

- [AMBER Plan Implementation Assistance Program RFA](#)
- [Report on Messaging Practices for Dynamic Message Signs](#) ([Memo to the field offices](#))

[Successful AMBER Alert Recovery Stories](#)

[Guidance on Criteria for Issuing AMBER Alerts - From the National AMBER Alert Coordinator](#)

[Presidential Message for National Missing Children's Day 2004](#) (Dated: May 17, 2004)

[Publications Advisory](#) (Dated: May 19, 2004)

DEPARTMENT OF STATE**[Public Notice 4708]****Notice of Receipt of Cultural Property Request From the Government of the Republic of Colombia**

The Government of the Republic of Colombia, concerned that its cultural heritage is in jeopardy from pillage, made a request to the Government of the United States under Article 9 of the 1970 UNESCO Convention. The request was received on April 21, 2004, by the United States Department of State. It seeks U.S. import restrictions on pre-Columbian archaeological material including, but not limited to, certain categories of stone sculpture, including rock art; pottery, including figurines and containers; gold; and certain categories of objects of perishable materials, including wood, bone, and textile. The request also seeks similar import restrictions on Colonial period artifacts, including, but not limited to, oil paintings, polychrome sculpture, and silver objects of decorative and liturgical purposes.

Information about the Act and U.S. implementation of the 1970 UNESCO Convention, as well as a public summary of the Colombia Request can be found at <http://exchanges.state.gov/education/culprop>.

Dated: June 3, 2004.

Patricia S. Harrison,*Assistant Secretary for Educational and Cultural Affairs, Department of State.*

[FR Doc. 04-13467 Filed 6-14-04; 8:45 am]

BILLING CODE 4710-11-P**DEPARTMENT OF STATE****[Public Notice 4707]****Advisory Committee on Historical Diplomatic Documentation Notice of Meeting**

Summary: The Advisory Committee on Historical Diplomatic Documentation will meet in the Department of State, 2201 "C" Street NW., Washington, DC, July 12-13, 2004, in Conference Room 1105. Prior notification and a valid government-issued photo ID (such as driver's license, passport, U. S. government or military ID) are required for entrance into the building. Members of the public planning to attend must notify Gloria Walker, Office of the Historian (202-663-1124) no later than June 28, 2004 to provide date of birth, valid government-issued photo identification number and type (such as driver's license number/state, passport number/country, or U.S. government ID

number/agency or military ID number/branch), and relevant telephone numbers. If you cannot provide one of the enumerated forms of ID, please consult with Gloria Walker for acceptable alternative forms of picture identification.

The Committee will meet in open session from 1:30 p.m. through 3 p.m. on Monday, July 12, 2004, in Room 1105 to discuss declassification and transfer of Department of State records to the National Archives and Records Administration and the status of the Foreign Relations series. The remainder of the Committee's sessions from 3:15 p.m. until 4:30 p.m. on Monday, July 12, 2004, and 9 a.m. until 1 p.m. on Tuesday, July 13, 2004, will be closed in accordance with section 10(d) of the Federal Advisory Committee Act (Pub. L. 92-463). The agenda calls for discussions of agency declassification decisions concerning the Foreign Relations series and other declassification issues. These are matters not subject to public disclosure under 5 U.S.C. 552b(c)(1) and the public interest requires that such activities be withheld from disclosure.

Questions concerning the meeting should be directed to Marc J. Susser, Executive Secretary, Advisory Committee on Historical Diplomatic Documentation, Department of State, Office of the Historian, Washington, DC, 20520, telephone (202) 663-1123, (e-mail history@state.gov).

Dated: May 28, 2004.

Marc J. Susser,*Executive Secretary, Department of State.*

[FR Doc. 04-13466 Filed 6-14-04; 8:45 am]

BILLING CODE 4710-11-P**DEPARTMENT OF TRANSPORTATION****Federal Highway Administration****AMBER Plan Implementation Assistance Program; Request for Applications****AGENCY:** Federal Highway Administration (FHWA), DOT.**ACTION:** Notice; request for applications.

SUMMARY: This document requests applications for assistance from public agencies to implement State and local departments of transportation aspects of AMBER Plan Programs in each State. The FHWA AMBER Plan Implementation Assistance Program will provide grants to States (including Puerto Rico and the District of Columbia) to implement plans and programs that have been developed to include State and local transportation

agencies and their resources into AMBER Plan Programs. The intent is to provide funds to States for the purpose of implementing systems and procedures that have been identified as necessary to incorporate various traveler information systems such as changeable message signs (CMS) in the issuance of child abduction or AMBER Alerts.

DATES: Applications for AMBER Plan Implementation Assistance must be received prior to July 16, 2004, to receive funding in fiscal year 2004. Applications for AMBER Plan Implementation Assistance must be received prior to July 15, 2005, to receive funding in fiscal year 2005. Decisions regarding the acceptance of specific applications for funding will be made within 30 business days of receipt.

ADDRESSES: Applications for AMBER Plan Implementation Assistance should be submitted electronically via e-mail to Amberplan@fhwa.dot.gov, or mailed directly to the Federal Highway Administration, Office of Transportation Management—AMBER Plan Implementation (HOTM-1), 400 Seventh St., SW., Room 3401, Washington, DC 20590-0001.

FOR FURTHER INFORMATION CONTACT: Mr. Robert Rupert, Office of Transportation Management (HOTM-1), (202) 366-2194; or Ms. Gloria Hardiman-Tobin, Office of Chief Counsel (HCC-40), (202) 366-0780; Department of Transportation, Federal Highway Administration, 400 Seventh Street, SW., Washington, DC 20590-0001. Office hours are from 8 a.m. to 4:30 p.m., e.t., Monday through Friday, except Federal holidays.

SUPPLEMENTARY INFORMATION:**Electronic Access**

An electronic copy of this document may be downloaded using a modem and suitable communications software from the Government Printing Office's Electronic Bulletin Board Service at (202) 512-1661. Internet users may reach the Office of the Federal Register's home page at http://www.archives.gov/federal_register and the Government Printing Office's Web page at <http://www.gpoaccess.gov/nara>.

The document may also be viewed at the FHWA's Operations home page at <http://www.ops.fhwa.dot.gov>.

Background

The AMBER Plan Program is a voluntary program where law enforcement agencies partner with broadcasters to issue an urgent bulletin in the most serious child abduction cases. These bulletins notify the public

about abductions of children. The FHWA recognizes the value of the AMBER Plan Program and fully supports the State and local governments' choice to implement this program.

Alerts of serious child abductions may be communicated through various means including radio and television stations, highway advisory radio, changeable message signs (CMS), and other media. Under certain circumstances, using CMS to display child abduction messages as part of an AMBER Plan Program has been determined to be consistent with FHWA policy governing the use of CMS and the type of messages that are displayed. The FHWA issued a policy memorandum in August 2002 that supports the use of CMS for AMBER Alerts. This memorandum may be viewed at the following url: <http://www.fhwa.dot.gov/legregs/directives/policy/AMBERmemo.htm>.

On February 12, 2003, the FHWA published a notice in the **Federal Register** at 68 FR 7164, requesting applications from States for AMBER Plan Program Assistance. These grants of up to \$125,000 were to facilitate the inclusion of State and local transportation agencies into existing or proposed AMBER Plan Programs. Of specific interest to the FHWA were the development of policies and procedures to provide specific guidance on displaying AMBER Alert or child abduction messages on CMS and the improvement of communication systems and protocols between public safety and transportation agencies. The notice expressly prohibited the procurement of roadside or in-vehicle devices with AMBER Plan Program Assistance funding. As of June 1, 2004, 37 States and the District of Columbia have received funding for AMBER Plan Program Assistance. The remaining 13 States and Puerto Rico have until July 16, 2004 to apply for AMBER Plan Program Assistance grants.

The Prosecutorial Remedies and Other Tools to End the Exploitation of Children Today (PROTECT) Act of 2003 (Pub. L. 108-21, 117 Stat. 650) incorporated the AMBER Plan Program Assistance into section 303(b). Section 303(c) of the PROTECT Act of 2003 provides for implementation grants and is the basis for this AMBER Plan Implementation Assistance Program.

Objectives of the AMBER Plan Implementation Assistance Program

The FHWA AMBER Plan Implementation Assistance Program will provide up to \$20 million in total grants to States (including Puerto Rico

and the District of Columbia) to implement enhancements of notification or communications systems along highways for alerts and other information for the recovery of abducted children. The intent is to improve the overall capability of communicating child abduction, AMBER Alerts and other important information to motorists using CMS or other traveler information systems.

Each State (including Puerto Rico and the District of Columbia) may apply for a grant of up to \$400,000 to be used in implementing its plan or program developed for the use of CMS or other motorist information systems to notify motorists about abductions of children. A State shall be eligible for an AMBER Plan Implementation Assistance Program grant if the Secretary of Transportation, or his delegated official, determines that the State has developed a State program in accordance with section 303(b) of the PROTECT Act of 2003.

Funding

The instrument to provide funding, on a cost reimbursable basis, will be a Federal-aid project agreement. Federal funding authority is derived from section 303(h) of the PROTECT Act of 2003. Actual award of funds will be subject to funding availability.

Federal funding for AMBER Plan Implementation Assistance may be used as necessary to implement local plans and programs developed in accordance with section 303(b) of the PROTECT Act of 2003. Eligible activities may include, but are not limited to: acquisition and installation of CMS and other roadside motorist information equipment; communications and power for roadside devices; systems necessary to provide for wide area alerts to motorists; enhanced communications between public safety, law enforcement and transportation agencies to improve notifications of child abductions or provide for 24-hour operation of motorist alert systems; and other services or systems to support the timely notification to motorists about abductions of children.

Matching Share/Cost Sharing

Section 303(d) of the PROTECT Act of 2003 mandates that the Federal share of the cost of activities supported by an AMBER Plan Assistance Program grant may not exceed 80 percent. The remaining minimum twenty percent matching share must be from non-federally derived funding sources, and must consist of either cash, substantial equipment contributions that are wholly utilized as an integral part of the project,

or personnel services dedicated full-time to the project for a substantial period, as long as such personnel are not otherwise supported with Federal funds.¹ The non-federally derived funding may come from State, local government, or private sector partners. However, funding identified to support continued operations, maintenance, and management of the system will not be considered as part of the partnership's cost-share contribution.

Grantees shall maintain financial records that detail the activities provided by Federal funding, indicating appropriate total matching requirements, as described under the heading, Matching Share/Cost Sharing. The FHWA and the Comptroller General of the United States have the right to access all documents pertaining to the use of Federal funds and non-Federal contributions. Grantees and sub-grantees are responsible for obtaining audits in accordance with the Single Audit Act Amendments of 1996 (31 U.S.C. 7501-7507) and revised Office of Management and Budget (OMB) Circular A-133, Audits of States, Local Governments, and Non-Profit Organizations, dated June 30, 1997, as revised, that is available at the following url: <http://www.whitehouse.gov/omb/circulars/a133/a133.html>. The audits shall be conducted by an independent auditor in accordance with generally accepted government auditing standards covering financial audits found at 49 CFR 18.26.

Instructions to Applicants

An application for AMBER Plan Implementation Assistance Program shall consist of two parts: (1) a proposed technical approach; and (2) a financial plan. Together these two elements must describe the proposed activities to be conducted with this funding. The complete application, excluding appendices, shall not exceed 15 pages in length, including the Technical Approach, the Financial Plan, the title page, index, tables and any appendices. A page is defined as one side of an 8½ by 11-inch paper, with a type font no smaller than 12 point.

Applications shall be submitted in an electronic format compatible with Microsoft Office 2000. The cover sheet or title page of the application shall include the name, address, phone number, and e-mail address of an individual to whom correspondence and questions about the application may be directed. Any portion of the application or its contents that may

¹ See Consolidated Appropriations Act, 2004, Pub. L. 108-99, 118 Stat. 3, 289.

contain proprietary information shall be clearly indicated; otherwise, the application and its contents shall be non-proprietary.

Application Content

Applicants must submit an acceptable Technical Approach and Financial Plan that together provide sound evidence that the objectives of this program can successfully be completed in a timely fashion.

Applications should be organized into the following two sections:

1. Technical Approach

The application should briefly summarize the plan that was developed for the use of CMS or other motorist information systems to notify motorists about abductions of children, and identify the activities that are to be funded with this grant. The plan should be included as an appendix to the application. The following paragraphs illustrate the general information that applicants should include in this section of the application.

(A) The application should identify the specific activities to be funded by the grant and their relation to the plan that was developed for the use of CMS or other motorist information systems to notify motorists about abductions of children, in accordance with section 303(b) of the PROTECT Act of 2003.

(B) The application should include a schedule or timeline for completion of the proposed activities for which the grant will be used. The schedule should include milestone events or targeted activities, especially indicating any activities that require FHWA actions or actions by organizations typically not influenced by the applying agency.

2. Financial Plan

The Financial Plan should demonstrate that sufficient funding is available to successfully complete all aspects of the proposed implementation as identified in the plan described in section 1. Additionally, the Financial Plan shall provide the financial information described under the heading, Matching Share/Cost Sharing.

An acceptable Financial Plan should:

(A) Provide a clear identification of the proposed funding to implement the plan that was developed for the use of changeable message signs or other motorist information systems to notify motorists about abductions of children. The Financial Plan shall include a commitment that no more than 80 percent of the total cost will be supported by Federal funds. Financial commitments from other public agencies and from private firms should

be documented appropriately, for example, through memorandums of understanding.

(B) Describe how the proposed activities to be funded will be conducted to ensure their timely implementation and the continued long-term operation.

(C) As appropriate, include corresponding public and/or private investments that minimize the relative percentage and amount of Federal funds. Also include evidence of continuing fiscal capacity and commitment from anticipated public and private sources.

Authority: Sec. 303, Pub. L. 108-21, 117 Stat. 650, 662-663, 42 U.S.C. 5791b; 23 U.S.C. 315.

Issued on: June 7, 2004.

J. Richard Capka,

Deputy Administrator, Federal Highway Administration.

[FR Doc. 04-13391 Filed 6-14-04; 8:45 am]

BILLING CODE 4910-22-P

DEPARTMENT OF TRANSPORTATION

Federal Transit Administration

Preparation of an Environmental Impact Statement for a Proposed Transit Improvement Project in Branson, Missouri

AGENCY: Federal Transit Administration (FTA), DOT.

ACTION: Notice of Intent to prepare an Environmental Impact Statement.

SUMMARY: FTA is issuing this notice to advise agencies and the public that an Environmental Impact Statement (EIS) will be prepared for a proposed transit improvement project in Branson, MO.

DATES: *Scoping Meeting:* A scoping meeting is scheduled for resource agencies at 2 p.m. on Tuesday, June 29, 2004 at the Branson City Hall Municipal Courtroom (110 West Maddux Street; Branson, MO) and will be followed by a public open house at the same location and date from 4 to 7 p.m. (to be advertised locally). Oral and written comments may be made at these sessions. Project staff will be available at the sessions for informational discussion and to answer questions. These sessions will identify the core study-area boundary; the study schedule; the public involvement plan; the problem statement; the project purpose and need; the study goals and objectives; effectiveness measures, as well as identify the range of alternatives to be considered in the study. Input will be solicited at both sessions to focus the environmental investigations. The

meeting location is accessible to individuals with disabilities.

Individuals with special needs contact Cheryl Ford, Engineering Department; City of Branson, MO at (417) 337-8559. Comment Due Date: Written comments on the scope of the EIS should be sent to the Branson City Engineer at **ADDRESSES** given below by July 30, 2004.

ADDRESSES: Written comments on the project scope should be forwarded to: Joni Roeseler, Project Manager; Federal Transit Administration, Region VII; 901 Locust Street, Room 404; Kansas City, Missouri 64106; Telephone: (816) 329-3936; Email: joan.roeseler@fta.dot.gov; or: David Miller, City Engineer; City of Branson; 110 West Maddux Street, Suite 310; Branson, Missouri 65616; Telephone: (417) 337-8559; Email: dmiller@cityofbranson.org.

FOR FURTHER INFORMATION CONTACT: the FTA or the city of Branson personnel identified at the **ADDRESSES** given above. You can also visit the City of Branson website, identified as www.branson.com where a project page is expected to be established at the time of the scoping meeting. Scoping Package: An information packet, referred to as the Scoping Booklet, will be distributed to all public agencies and interested individuals and will be available at the meetings. Others may request the Scoping Booklet by contacting the Branson City Engineer at **ADDRESSES** given below. If you wish to be placed on the mailing list to receive additional information as the project develops, contact the Branson City Engineer at **ADDRESSES** given below.

SUPPLEMENTARY INFORMATION: FTA, in cooperation with the city of Branson and the Missouri Department of Transportation (MoDOT), will prepare an EIS on a proposal to address transit improvements in the city of Branson, MO. The EIS will include identification and evaluation of all reasonable multi-modal alternatives as defined under the National Environmental Policy Act (NEPA) scoping process. This alternatives analysis and NEPA evaluation process is expected to result in the selection of a locally preferred transit alternative, which may include a fixed guideway alternative.

Branson, Missouri, with a population of about 6,000, accommodates over seven million visitors a year. These visitors make trips to multiple venues (theaters, lodging, restaurants, etc.), which are concentrated along State Route 76. This roadway, referred to as "The Strip", offers a single lane of vehicular flow in each direction divided by a two-way left-turn lane. The



Final Report

***AMBER, EMERGENCY, AND TRAVEL TIME
MESSAGING GUIDANCE FOR
TRANSPORTATION AGENCIES***

Prepared for
**U.S. Department of Transportation
Federal Highway Administration
Office of Operations
Washington, DC**

Prepared by



Under contract to
**Battelle
505 King Avenue
Columbus, Ohio 43201**



May 27, 2004



Quality Assurance Statement

The Federal Highway Administration provides high-quality information to serve Government, industry, and the public in a manner that promotes public understanding. Standards and policies are used to ensure and maximize the quality, objectivity, utility, and integrity of its information. F H W A periodically reviews quality issues and adjusts its programs and processes to ensure continuous quality improvement.

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List of Acronyms

AMBER	America's Missing: Broadcast Emergency Response
AVI	Automatic Vehicle Identification
CMS	Changeable Message Signs
DMS	Dynamic Message Signs
DOT's	Departments of Transportation
EAS	Emergency Alert System
FHWA	Federal Highway Administration
ITS	Intelligent Transportation Systems
TMC	Transportation Management Center
VMS	Variable Message Signs
VSL	Variable Speed Limit

1 Introduction

1.1 Purpose of Study and Guidelines

Transportation officials constantly strive to achieve safe and efficient movement of people and goods. Many agencies across the nation are pooling their resources and collaborating to achieve these goals not just at the jurisdictional level, but also for entire regions. Best management practices in operations rely on this spirit of cooperation to proactively balance demand and capacity, while recognizing the dynamic and somewhat unpredictable nature of both.

Clearly, intelligent transportation systems (ITS) that harness computing and communications technologies to monitor transportation systems, support traffic management, and provide travel information services all in near real-time are key to successful operations. For example, changeable message signs (CMS) have become an established part of transportation agencies' traffic control "toolkit." While specific capabilities have been upgraded over the years to improve conspicuity, operational control, and cost effectiveness, the essential functionality of CMS has been, and continues to be, to convey timely and important en-route and roadside information to motorists and travelers.

For nearly forty years, transportation agencies have developed various policies regarding the use of the CMS. The Federal Highway Administration (FHWA) has provided policy guidance on several occasions in recent years regarding appropriate uses of CMS.¹ However, this previous guidance has been more focused on acceptable uses, rather than operational guidance. Consequently, operational practices across the nation vary, based on locally identified needs and procedures.

FHWA has undertaken the current study to develop guidance to provide assistance and direction to transportation officials in planning, designing, and providing various types of traveler information messages using CMS. Specifically, these guidelines address messaging for travel time information, emergency or security warnings, and child abduction (AMBER) alerts.

This document reports on the findings of interviews with a number of representatives from State Departments of Transportation (DOT's) and FHWA Division Offices across the country.

1.2 Definitions

For the purposes of these guidelines, a CMS is defined as a sign capable of displaying an electronic message, using multiple lines (and often multiple pages) of messaging. Such messaging can be varied using a pre-set library of messages, tailored to suit particular conditions, or left blank. Typically a CMS is capable of displaying real time information, and is fully controllable by an operator in a transportation management center (TMC).

The term CMS is often used interchangeably with variable message signs (VMS) and dynamic message signs (DMS). VMS and DMS may include other types of signs capable of displaying set messages that are effectively a part of the sign, e.g. a rotating 'drum' type

¹This subject is discussed in detail in section 2.1.

sign, or signs that can vary between a set message (or instruction) and a blank message, e.g. a time-based traffic restriction. A specific variation of VMS/DMS is a variable speed limit (VSL) sign, which displays varying locally defined speed limit information that reflects prevailing traffic conditions.

In this report, “travel time information” refers to a broad range of messaging that may include actual, estimated or predicted travel times and delays. The term “page” is used to refer to the number of screens used to relay one message. This term is interchangeable with “panel,” “phase,” and “scroll.”

These guidelines apply only to the use of CMS, as defined above, and not to VMS, DMS, or VSL.

1.3 Extent of Use of CMS

According to the ITS Deployment Tracking database (2002 Survey Results), accessible on the internet at <http://itsdeployment2.ed.ornl.gov/its2002/default.asp>, the current deployment of CMS is as follows:

- 2744 permanent freeway CMS deployed by 86 agencies in 71 metropolitan areas
- 694 portable freeway CMS deployed by 68 agencies in 60 metropolitan areas

Among the 86 agencies that have permanent and 68 agencies that have portable freeway CMS deployed in metropolitan areas, there is a considerable difference in the scale of CMS deployments. The largest are Virginia DOT with 200 permanent CMS in the Washington D.C. metropolitan area and New Jersey DOT with 50 portable freeway CMS in the New York, NY/Northern New Jersey/Southwestern Connecticut region. The smallest are Ohio DOT, District 12 with 1 permanent CMS in the Cleveland/Akron/Lorain metropolitan area and North Carolina DOT with 1 portable freeway CMS in the Greensboro/Winston-Salem/High Point, NC metro area.

2 Problem Statement

While the absolute number of signs is important from a traffic management standpoint, what is of greater importance for these guidelines is the number of agencies with such deployments in place, or in planning. This is because of the potential for widely varying operational policies and practices to develop, leading to inconsistent approaches to messaging by adjacent agencies when addressing similar (or even the same) situations.

This potential problem of inconsistency is exacerbated by a number of relatively new applications for messaging, e.g. travel time information, emergency or security warnings, and AMBER alerts, for which a new pool of operational experience and best practice is slowly developing in a relatively small number of agencies and locations. FHWA recognizes there is value in capturing lessons learned from around the country to obtain a better understanding of successful and unsuccessful experiences. During the process of interviewing representatives from DOT's, more than one interviewee identified the need and desire for guidelines in these areas. These experiences are the basis for the guidance contained in this document.

2.1 Previous Guidelines

The FHWA has provided policy guidance on the use of CMS as follows:

- January 2001, by sharing a memorandum in response to a question from Pennsylvania (www.fhwa.dot.gov/legregs/directives/policy/pame.htm),
- August 2002, regarding child abduction (AMBER) alert messages displayed on CMS (www.fhwa.dot.gov/legregs/directives/policy/ambermemo.htm),
- March 2003, regarding the posting of security-related messages on CMS (www.fhwa.dot.gov/legregs/directives/policy/securmemo.htm).

These guidance memoranda were intended to assist states in determining what was and what was not appropriate to display on their roadside CMS. Additionally, the TMC Pooled Fund Study (<http://tmcdfs.ops.fhwa.dot.gov>) has conducted a number of projects related to TMC operations; including “Changeable Message Sign Operation & Messaging” that directly relates to the creation of CMS messages.

In the context of AMBER alert messages, it is noted that State DOT’s use the officially established procedures within the State to receive child abduction notices, whether this be through the Emergency Alert System (EAS) or through official law enforcement channels. The development of such procedures is specific to circumstances pertaining to each state, and consequently is not addressed by this document.

2.2 Issues Related to Messaging

There are three primary issues related to messaging that will be addressed by these guidelines:

- The basis for the message, i.e. what condition is occurring? What segment or region is impacted? What outcome or driver response is desired?
- How the content was determined, i.e. how is the message structured to maximize driver comprehension? Is the message aimed at commuters, unfamiliar drivers, or other groups? Is the content automated or put together by a TMC operator? How is the message coordinated with other information dissemination techniques, e.g. 511?
- What policies govern the display of messages, i.e. whose authority is needed to initiate a message? What are the arrangements for posting, updating, and terminating a message? What is the process for inter-agency coordination (especially with non-transportation agencies)? How are messages prioritized during periods when multiple messages are desired? How are 24/7 operations ensured?

3 Context for the Guidelines

3.1 Trends Influencing Use

In the past few years, ITS technologies and their role in operations have matured to such an extent that their value for transportation and non-transportation needs now extends beyond that originally envisioned:

- In cities such as Atlanta, CMS are routinely used to provide travel time information on an upcoming section of freeway and alternative freeway sections. Similarly in Orlando, the iFlorida model deployment will provide motorists with travel time

information between points A and B on alternative routes, thereby presenting motorists with objective information on which to base a decision about which route to choose.

- Immediately following the 9/11 terror attacks, CMS were used to provide travel information related to the emergency in an attempt to steer travelers away from the most affected areas and to provide related news, e.g. airport closures. With the continued (and fluctuating) awareness of homeland security, particularly at the High (orange) threat advisory level, states such as Virginia and Maryland use CMS to provide tip-line contact information.
- Perhaps the single application that has most captured the public attention, however, is the use of CMS to provide information related to stranger-child abductions, otherwise referred to as AMBER Alerts². Given statistics that indicate that 91 percent of stranger abducted children are murdered in the first 24 hours after their abduction (44 percent in the first hour), time is not just of the essence but a matter of life or death. The use of CMS in this way has been credited with the capture of the abductor and successful recovery of the abducted child(ren.)

It is recognized that there are several other applications for CMS messaging such as intermodal/multimodal messages in support of transit, incidents, special events, and work zone closures. However, the purpose of this report is to focus solely on best practices and guidance associated with the three applications listed above.

3.2 Parallel Activities

Apart from the guidelines that are being documented in this report, there are other related activities that are underway in parallel, most notably by the Texas Transportation Institute (TTI) on behalf of FHWA. The TTI work is investigating human factors issues related to the construction of messages for display on CMS, in the same general context as for these guidelines, i.e. travel times, homeland security/emergencies, and AMBER Alerts. Neither of the two efforts is duplicative, as each is investigating different aspects of the subject. To the extent that this study is scanning the state of practice across the nation, and subject to deliverable deadlines, these guidelines are supportive of the TTI effort.

4 Technical Approach

The study is divided into three tasks:

- 1) Literature/Background Review
- 2) “Scan” of the Practice
- 3) Best Practices / Lessons Learned

² AMBER is an acronym for America’s Missing: Broadcast Emergency Response. However, it is named after Amber Hagerman, a nine-year-old from Arlington, Texas, who was abducted and murdered in 1996. In response to community concern following this tragedy, the Association of Radio Managers with the assistance of area law enforcement in Arlington, Texas, created the “Amber Plan.” The Plan uses the Emergency Alert System (EAS), formerly the Emergency Broadcast System, to report serious child abduction cases.

The overall approach is research-based, using published sources and direct interviews. In addition, there is a degree of interaction with the TTI study referenced above.

This report provides a summary of findings from individual states, based on information provided by FHWA Division Office staff, interviews with state DOT representatives with direct operational experiences associated with CMS messaging, and other incidental information derived since the commencement of the study, including:

- National Training Conference on AMBER Alert
- Travel Time Workshop held at the 2003 ITS America Conference

Appendix A summarizes information provided by FHWA Division Office staff and state DOT representatives. In many of the selected states, multiple individuals were selected for interview to ensure that a broad range of application- or location-specific experiences were captured. Typically, the survey instrument was provided to the interviewees ahead of time, and interviews were conducted by telephone. The survey instrument is provided in Appendix B. Interview responses are provided in Appendix C. Appendix D contains a database that lists detail information on the literature sources including the type of document, the title of the document, web site link where its available, source of the document, date published, author, and a brief summary (if available).

5 Scan of the Practice

A scan of the practice was conducted via a series of interviews with representatives from DOT's and Division offices of the FHWA. This section summarizes the results of the interviews. The discussion covers the three focus topics - travel times, homeland security and AMBER Alerts - as well as a section covering general practical concerns. Each topic includes a discussion of sign and message readability; message construction; the differences between messages posted to portable vs. permanent CMS; and any costs and benefits reported from states using CMS.

It should be noted that the sections of this report that deal with homeland security are much more brief than are other sections. In the course of interviews for this research, very few states or jurisdictions reported using CMS for any activity related to homeland security or emergencies of that nature, and those that did use CMS for this purpose used them rarely.

5.1 Travel Times

5.1.1 Process and Operations

Traveler information systems that incorporate as much automation as possible can help agencies optimize the use of valuable resources. The use of CMS for travel times is no exception. The calculation and presentation of travel times is generally automated. In all jurisdictions reporting the use of CMS for travel times, the information is posted during morning and evening peak travel times. The system is generally timed to begin and end at a certain time of day, but some states require a TMC operator to "turn on" and "turn off" the system manually.

CMS display information gathered from a variety of means including loop detectors, video detection systems, automatic vehicle identification (AVI) transponders, and toll tags. An algorithm applied to field devices calculates the distance covered to determine the

estimated travel times from a CMS to specific destination, usually a major intersection and/or interchange, or in the case of toll tags, from one toll plaza to the next downstream toll plaza. While most travel times are calculated automatically, one district reported a program where a pilot car drove the length of a segment, and physically called the travel time into the TMC. This method of gathering travel times was deemed cost prohibitive and too time-intensive. Jurisdictions that have gone from manual calculation to automated report positive feedback.

There are regions that are planning to implement static signs with a CMS insert panel, providing the motorist a static line of text referring to an upcoming intersection, with a live CMS panel that changes according to the automated data being fed to the sign, as illustrated in Figure 1 below.



Figure 1. Static Travel Time Sign

Some states that do not post travel times do provide to the motorist an estimated delay in minutes from one point or origin to destination. This feature tends to be available at the entrance to tunnels. In one jurisdiction, an estimated delay time over 30 minutes will prompt operators at the TMC to enter information regarding alternate routes.

5.1.2 Messaging

Messages are constructed to be as short as possible while still conveying information pertinent to the motorist. To this end, many state DOT's have developed abbreviated message sets using standard wording and letters.

Most interviewees indicated that travel time messages should be kept to one panel, and that accuracy was perhaps the most important element of the message. Several respondents noted that if travel times do not change as per conditions, motorists will fail to trust the information and will ignore the signs.

The elements of travel time messages tend to be consistent from day to day, so the traveler can come to expect to see information on a given segment. A traveler that can anticipate some elements of the message can essentially skip over those elements, taking less time to read the information that changes.

Most interviewees considered it a forgone conclusion that travel time information must be geared toward the local daily commuter. Illinois DOT, for example, has been providing travel times to the public for over 40 years via local media, however the posting of travel times on CMS is relatively new. IDOT's CMS display provides the following information:

estimated travel time on the first line and destination on the second line, as illustrated below:

8 – 10 MINS
TO DOWNTOWN

IDOT is preparing to upgrade the display of travel times on CMS by adding a second destination to the message, allowing for motorists to get information on two destination points.

Georgia has dealt with the perceived restriction of providing travel times by simply adding a mileage indicator along with travel times to a downstream destination. A travel time message into Atlanta may read:

TRAVEL TIME
TO DOWNTOWN / 7 MILES
8 – 10 MINS

The difference to a motorist unfamiliar with the region is significant. With this additional information, even an unfamiliar motorist can derive value from a travel time message by estimating the average speed based on the travel time to a point a certain mileage ahead.

5.1.3 Policies and Practices

Policies and practices refer to the rules applied regarding when to post, update and remove travel time messages.

The policies governing the posting and removal of travel time messages rely mostly on automation. Jurisdictions that post travel times do so at a given time every morning and afternoon. The update of messages is handled automatically via the algorithm that calculates the travel time from data coming in from field devices.

Travel time and delay messages are considered to be valuable information and an efficient use of CMS *in the absence of adverse traffic incidents or events*. In this manner, travel times (or delays) not only give the estimated time between a CMS and a point downstream; the presence of the travel time information gives the implicit message that there are no adverse conditions affecting traffic.

5.2 Homeland Security and Related Emergencies

5.2.1 Process and Operations

The use of CMS for homeland security or other emergencies of this nature is limited. There is a general consensus that CMS have been deployed to provide information regarding traffic conditions to the public, and messages related to homeland security that do not refer to anything traffic-related don't fit this mold. AMBER Alerts are widely recognized as the acceptable exception to this rule; homeland security messages are not generally considered a viable exception.

When CMS are used for homeland security, the number of signs deployed is generally fewer than it is for other purposes. Maryland State Highway Authority, for example,

reports that during the two times CMS were used for this purpose, the Authority tried to use CMS that were at least 5 miles apart.

The paucity of information contained in this report regarding the use of CMS for homeland security and related emergencies can be summed up by the perspective expressed in Washington State. DOT professionals in that state stated that the Washington DOT policy is to use CMS for events on the roadway. Only if an event regarding homeland security had an effect on the roadway; i.e. closed a road or a lane, would that information be appropriate to post on CMS.

5.2.2 Messaging

In Maryland, Virginia and New York, CMS have been used to post a terrorist information tip-line, along with the homeland security threat level color, and motorists asked to call with any terrorist-related information. Virginia has reported using CMS for homeland security twice in the past twelve months, when the national threat level has been raised to orange. Respondents from New York's State DOT report being ordered to post a terrorist information tip-line on their CMS.

Outside of these east coast states, CMS is documented to have been used in only a few instances, such as near urban airports, where CMS were used to advise travelers that there would be vehicle inspections during times of elevated terrorist alerts.

As with the use of CMS for other purposes, there is emphasis on keeping the message as short as possible. Maryland State Highway Authority reports trying to use only one panel for any message relating to homeland security. Mandated by the Governor to post a tip-line after the September 11th attacks, CMS during this time provided motorists a 1-800 number to contact.

5.2.3 Policies and Practices

Policies and practices regarding the use of CMS for homeland security and related emergencies is still new, and information regarding policies and practices is still emerging.

The decision to post a message is in many cases handled by one agency, usually the state police or similar law enforcement agency. Departments of transportation are only the conduit through which homeland security messages are given. Messages are received from state offices of homeland security.

5.3 AMBER Alerts

5.3.1 Process and Operations

Initiation of AMBER Alerts always rest with an emergency management or law enforcement agency such as State Police, or Office of Emergency Management (OEM). Information to post, update and remove alerts often comes via fax to the DOT, or via local methods of using the EAS. Discretion on the part of TMC staff is not a relevant issue; the only free text in an AMBER Alert is the details; e.g. make and model of car, and tag number. Some jurisdictions have a programmed list of preplanned scenarios; templates into which an operator has only to insert the details relevant to the particular situation. Other DOT's receive instruction on how exactly to structure the entire message.

5.3.2 Messaging

There is significant variety in the actual text displayed on CMS during an AMBER Alert. Not only are the variations apparent from state to state, but many states are refining their own policies and display messages differently from one Alert to the next.

The amount of information available to law enforcement, and by extension the DOT, can vary, and therefore make standardization a challenge. The TMC operators at Washington State Department of Transportation, moving ahead on only the information they had, posted the following message:

AMBER ALERT
CALL 911

This was widely seen as a failure, as there was no specific information such as vehicle description or tag number to help locate the vehicle involved, and many motorists were not yet familiar with AMBER Alerts. The jurisdiction's 911 dispatch center was inundated with calls from confused motorists.

While a vehicle description is generally part of the text displayed during an AMBER Alert, there is disagreement regarding the posting of entire vehicle license plate numbers. Some jurisdictions consider that a license plate number is too much information for a motorist to absorb while driving at freeway speeds, and instead prefer to advise motorists to tune to local news radio to obtain more information. Others consider that to post a vehicle description without license plate number may contribute to vigilante behavior on the part of a motorist who sees a vehicle matching the description. (This is a supposition that is not supported by any evidence of actual vigilante behavior.) One respondent at Texas Department of Transportation noted that if a vehicle description is posted without an identifying tag number, it's possible a motorist may report seeing a child who is upset, but not in any danger, inside a vehicle matching the description. In Southern California, emphasis is placed on displaying the *state* of the license plate of a vehicle involved in an AMBER Alert rather than a long string of digits, which Caltrans District 12 considers motorists cannot remember.

The order of information given in different jurisdictions is more similar than dissimilar. Most respondents indicated that three lines are generally used to convey an AMBER Alert, and the order tends to be: general category of information on the top line, vehicle information on the second line, and desired motorist response on the third line. Two pages are most often used to convey all information pertinent to the alert. Examples of wording include:

(Page I)
CHILD ABDUCTION
RED FORD
CALL 911

(Page II)
CHILD ABDUCTION
LIC # ABC 123
CALL 911

One state indicated that they do not use the term “AMBER Alert” on their CMS, for fear that motorists will confuse the text with a change in the national security threat level. This state instead posts “CHILD ABDUCTION” on the first line of CMS during an AMBER Alert.

5.3.3 Policies and Practices

Policies regarding the posting, updating and removal of AMBER Alerts are generally not the domain of DOT's. The role of the DOT in providing AMBER Alerts is widely accepted as supplementary; they take the information, put it out to the public via CMS and instruct motorists to respond accordingly, e.g. call 911 or another abbreviated phone number, or tune to local media for detailed information.

The amount of time an AMBER Alert remains active differs greatly. Some DOT's keep an AMBER Alert on CMS for a set amount of time, usually between 3 and 8 hours. NYSDOT specifies in their policy that alerts be kept on CMS for 8 hours from the time of initiation, and that time be extended whenever an update to the alert is provided. One Caltrans district has a policy providing for the removal of an Alert within one hour if it occurs during rush hour, 4 hours during non-peak. This policy is in direct contrast to the practice of some DOT's of waiting for the managing law enforcement agency to advise the DOT to remove the information.

Caltrans District 7 in Los Angeles adjusted their policy regarding the posting of AMBER Alerts after it was shown that Alerts posted during peak travel hours caused unnecessary congestion. Therefore, the district currently has a policy of not displaying AMBER Alerts during peak hours. After the peak hours are over, any active AMBER Alerts are then posted to CMS.

5.4 General

5.4.1 Sign and Message Readability

Although not the focus of this report, for the purposes of completeness, some attention was given to issues of general readability, including horizontal and vertical locations, design speed, and traffic speed, as well as size and number of characters, and number of pages.

Guidelines regarding sign readability in some states call for a minimum of 900 feet of visibility, which translates to 8.8 seconds of viewing time at 70 mph or 11 seconds at 55 mph. One rule of thumb in practice when using CMS: there should be a minimum exposure time of at least two seconds per line. Arizona State University studied the legibility of various CMS in the Phoenix area and concluded that fiber optic CMS have an average legibility of approximately 835 feet. Subtracting 150 feet due to vehicle cut-off, where the sign is hidden to the driver due to the roof of the vehicle as the vehicle approaches the CMS, this leaves an average reading distance of 685 feet. Thus, motorists have approximately six seconds to comprehend a CMS message at 75 mph, or seven seconds at 65 mph.³

³ Coylar, James and Tim Wolfe, “Displaying Travel Time Messages on Freeway Variable Message Signs in the Phoenix Metropolitan Area.” Paper presented at the 2004 ITS America Annual Meeting.

In the states studied the lines per page range from 2 - 3 lines; characters per line from 16 – 28; and from 10 to 18 inches per character. Most signs are capable of using two pages; some signs can display even four consecutive pages; but many states insist that more than one page is not safe to display to drivers traveling at freeway speeds. Some signs are capable of providing more elaborate presentations: different fonts, flashing, centering, or justifying text right or left.

5.4.2 Message Construction

Message construction refers to standard words and phrases and abbreviations.

There is little variability in the area of message construction. Word and phrase libraries tend to be relatively similar; the notable differences occur in the formality of the message structure. Message construction in some DOT's follows a specific outlined convention, for example:

1. State the problem being addressed
2. Describe the location
3. Define the recommended motorist action or effect

A balance is sought between the impact of these three elements. If one of these elements is overemphasized, the end result is that others may be neglected, or messages become too long or complex. Additionally, consistency in style and order allows the motorist to anticipate the message and allows them to focus on the element line that is of most importance to them. When more than one page is available, messages are still often constructed to fit within one page to maximize readability.

5.4.3 Permanent vs. Portable CMS

Message construction is generally different between permanent and portable CMS. Portable signs are generally smaller and able to handle fewer characters per line. Portable signs tend to accommodate 2 lines of text while freeway signs tend to accommodate 3 lines. At Arizona Department of Transportation (ADOT), for example, freeway CMS are 3-line, 18 characters per line. Portable CMS are 3-line, 10 characters per line. Messages are tailored to be displayed in two pages whenever possible.

The type of information displayed is another difference between the two types of signs. In general, only permanent CMS provide travel times, because portable message signs don't have the capability to handle full travel time messages. Guidelines in many states stress the point that portable CMS are not to be used in place of conventional signs and pavement markings. Portable CMS should be used only when some response or decision by the driver is desired. While AMBER Alert messages are generally posted either on all permanent CMS or within a specified radius, posting of AMBER Alerts on portable CMS tends to be at the discretion of the TMC supervisor on duty.

5.5 Uses and Benefits

5.5.1 Frequency of Use

The frequency of use of CMS is a significant and widely discussed issue. Contradictory attitudes exist regarding CMS frequency of use. On one hand, transportation officials consider that the use of CMS should be rare and retain the ability to get a driver's attention; if there is text on the CMS, there are unusual conditions occurring. On the other hand,

feedback to many DOT's suggests that the traveling public doesn't like to see the signs remain blank, as it gives the impression that the signs are nothing more than a rarely-used expensive toy. Section 6.5.3 elaborates on this point.

5.5.2 Outcomes

Travel time information, when it is accurate and dynamically updated, is well received by the driving public. The posting of this information provides local travelers with the information necessary to choose an alternate route when appropriate, thereby contributing to the effective management of urban congestion.

The overall response to AMBER Alerts is consistently positive nationwide. The public sees the use of CMS for AMBER Alerts as a very valuable use of the equipment. Texas, Georgia and California have all experienced positive outcomes to AMBER Alerts, with California experiencing a high visibility success with the safe return of two female teenagers who had been abducted by a stranger. Many states claim that as of the implementation of an AMBER Alert plan, every alert has resulted in the safe return of the abducted child.

Regarding the use of CMS to alert airport-bound drivers to an increase in security, the general opinions of respondents indicates that the information serves to calm motorists who might otherwise be surprised and angry at the increased wait time getting to the airport.

5.5.3 Feedback on Driver Response and Perceptions

Feedback on the use of CMS for travel times and AMBER Alerts is consistent. The majority of DOT and FHWA respondents report positive feedback on the display of travel times on CMS. Specifically, displaying travel times on CMS has alleviated public concerns that the message signs are never used.

New York representatives indicate that feedback is positive on the issue of the signs always having some message and never staying blank.

Negative feedback reported in the interviews includes public dissatisfaction with blank signs. The motoring public tends to be suspicious of CMS that are rarely, or according to some perception, never used. On the other hand, negative feedback has also been reported when CMS are used for generic messages such as "Drive Safely".

6 Best Practices and Lessons Learned

Drawing on the results of the interviews and literature review, several lessons learned from CMS operations practitioners emerge along with the best practices identified by the study team. These findings, described below, can serve as the basis for guidelines on CMS operations.

6.1 General

- ***Create a sense of urgency in order to convince drivers to comply*** – Experience of DOT's has shown that motorists don't respond as well to information given without a reason, e.g. "right lane closed." Giving the cause of the closure creates a greater sense of urgency and makes the motorist more likely to comply.

- ***Improve interstate coordination*** - Interstate coordination is typically an informal, un-standardized process. Some agencies utilize email to coordinate interstate CMS usage; some have contact numbers and make calls when the need arises. The process by which the controlling agencies communicate with each other should be standardized.
- ***Use paging conservatively*** – If a message requires more than one page, it is an important consideration that there be enough time for the traveler to read it.
- ***Aggressively maintain CMS*** – A CMS that doesn't benefit from regular maintenance, has non-operational bulbs, or a transformer that doesn't work consistently, appears to the public as an expensive toy.
- ***Coordinate the placement and use of CMS along a corridor*** – If more than one CMS is available upstream from an incident, the sign farthest from the incident should be used to provide advance warning, thereby allowing drivers sufficient time to divert from the route. The sign closer to the incident should be used to control traffic flow nearer the incident.
- ***Always work to build credible and useful information*** – The value of CMS's and the messages they display significantly influences their credibility.

6.2 Travel Times

- ***In new deployments, seek feedback from, and educate, the public before travel time messages are instituted*** – The experience of more than one DOT surveyed showed that a campaign of public awareness is critical in order for travel time messages to have an initial positive effect. In regions where the information is new, DOT's should expect that motorists would slow down to read the signs, since they are unfamiliar with the abbreviations used. An effort should be made to expose motorists to travel time messages, including background on how origin/destination pairs are chosen, before the messages are deployed on CMS. Seeking motorists' input on message forms and destinations will improve the ultimate quality of the service, enhancing the likelihood of a positive response when the service is deployed.
- ***Travel times must be dynamic*** – Travel times must reflect reality, or err on the conservative side. Stale travel times, or the same travel time during non-congestion periods could lead to credibility problems.
- ***Travel time messages can be structured to benefit more than the local traveler***- It is widely thought that travel time information is the distinct domain of the local commuter. Best practices in Atlanta illustrate how a simple upgrade to the information given will benefit the unfamiliar traveler without taking anything away from local motorists already used to the system. Simply, CMS signs should give information regarding how many miles ahead the destination is. Distance between sign and destination will allow for unfamiliar motorists to be able to calculate the approximate congestion delay ahead.
- ***Messages for travel time should be considered differently from emergency messages*** – It is important to consider the difference between travel time messages and those that announce an AMBER Alert or major event impacting travel. A well-designed message should be useful, easily understood, concise, and distinguishable from other message types. Also, rules of thumb used in calculating the time necessary for a motorist to read a CMS (approximately 1 second per word, excluding prepositions) can be extended somewhat when it is assumed that

motorists will quickly grow accustomed to reading daily (during weekdays) travel time messages.

- ***Travel times should not be simultaneously provided for both high occupancy vehicle (HOV) and general-purpose lanes on the same sign.*** – Providing a set of travel times for general-purpose lanes and HOV lanes is too much information for the motorist to absorb at once. Where signs have been dedicated for HOV facilities, the potential to provide HOV lane specific information should be explored. Where dedicated HOV lane CMS are not available, it may be possible to give the difference in travel times between the HOV and general-purpose lanes on the CMS over the general-purpose lanes.

6.3 Homeland Security and Related Emergencies

- ***Communicate clearly to the motorist the purpose of posting a message*** – Interviewees at New York State DOT report being asked by the State Office of Security to post a terrorism Tip-line along with the national threat level color. Motorists were confused as to the purpose and meaning of this message, and flooded the tip-line with calls. The message was removed the following day.
- ***Limit CMS use for homeland security to those situations that affect the motorist*** – The posting of an information hotline falls under the category of general information, and is not an appropriate use for CMS.

6.4 AMBER Alerts

- ***Standardize AMBER Alert messages*** – The actual wording of an AMBER Alert varies from state to state. While Texas CMS display “Kidnapped Child” on the first line during an AMBER Alert, others provide the first line “Child Abduction” and still other states write “AMBER Alert”. The recommendation is being made that the term “AMBER Alert” not be used on CMS, as there is no evidence to suggest that the term is widely recognized. In addition, there is a chance that motorists might confuse an AMBER Alert with something related to the color-coded homeland security alert system. Instead, the introductory line on CMS should give specific information, such as “Child Abduction.” The issue of the desired motorist response, e.g. to call 911, to call another abbreviated phone number, or to listen to local media, should be left up to the state agency issuing the alert, as the process differs from state to state and within states. Note: under circumstances where the size of CMS permits, wording such as “AMBER Child Abduction” or “AMBER Abduction” may be an acceptable alternative if the word “AMBER” is desired in the introductory line.
- ***Display license plate numbers*** – There is debate among transportation officials as to whether the posting of license plate numbers is necessary. There is a case to be made that a license plate number is too long for a motorist to absorb; even to read during the short time he or she has to take in the information. However, the arguments for displaying the number are stronger. AMBER Alerts will presumably always result in an increase in call volume to local 911 or police. Providing a description of a vehicle without an accompanying license plate number can be expected to result in a glut of useless calls reporting vehicles that fit the description. In addition, there is the possibility of vigilante behavior should a particularly well meaning but aggressive motorist spot a vehicle that fits the description and is transporting a child.

- ***Know and utilize accurately the purpose of CMS's role in an AMBER Alert*** – Is the purpose to give all pertinent information, or to alert the driver to tune to local radio, a 511 telephone service, etc.? If radio stations are partnered and get information, should that be the primary way to get information about the AMBER emergency?
- ***Where TMC operations are not 24/7, create standard agreements with a local emergency management agency that is 24/7 regarding who can have access to sign operations after hours***– For instance in rural locations, more than one agency should share control of sign operations, so that when a TMC shuts down, a responsible agency can post and remove messages. It is noted that technology exists for broadcasters to activate EAS alerts. For example, every sizeable city must designate two local broadcast stations with the sole responsibility for disseminating a national emergency message from the President. Consequently, there may be opportunities for broadcasters to post and update messages in situations where TMC operations are not 24/7. As with any cooperative efforts of this nature, it is very important to develop policies and procedures that govern the circumstances under which such arrangements would be implemented, and to provide all necessary safeguards.
- ***Messages must be created with time constraints in mind***– CMS on interstates should use one page only; information more than one page in length exceeds the driver's capacity to absorb the information and drive safely.
- ***AMBER Alerts work best at the local level***– Broadcasting alerts within 200 miles of an abduction within the first 3 hours of a kidnapping is considered a helpful guideline for state DOT's. This reflects how far an abductor could travel in the first three hours and keeps alerts local, reducing the likelihood of too many alerts leading to a possible lack of public attention.
- ***Standardize the communication between states***– As the issues related to AMBER Alerts are time critical, some standardization needs to take place in the interstate sharing of data. Agreements are currently relatively informal; and there is no way to chart the effectiveness. It is difficult to ascertain exactly how quickly an AMBER Alert generated in one state is posted to the CMS of an adjoining state.
- ***Explore the role of CMS messaging as part of a comprehensive package of travel information dissemination methods***– Methods such as CMS, Highway Advisory Radio, 511, internet-based systems, etc. are frequently used for disseminating travel information. In this report mention has been made of CMS and 511 that may provide options for greater geographic coverage and alternative means to provide time-critical information.
- ***Convene a meeting or workshop to maintain best practices and consistent policies***– As accumulated knowledge and experience of AMBER Alerts (and potentially other forms of messaging) develop, capturing best practices and maintaining consistent policies will be beneficial. One potential way to facilitate this is to convene a meeting comprising highway officials and local AMBER Alert representatives (including broadcasters.) Such a meeting would share standard operating procedures, and review operating characteristics such as coverage and duration for each alert.

7 Conclusion and Next Steps

CMS is clearly an important device in aiding in the safe and efficient movement of people and goods through the transportation network. CMS is an outstanding example of ITS using computing and communications technologies to support traffic management and provide travel information directly to the audience that needs it most. While CMS have been in use for years, improving technology and a changing climate has necessitated, or provided the opportunity for, greater and more diverse use of CMS. However, there is a balance to be struck between the variety of new uses possible for CMS with practices that are best suited to the use of these devices.

CMS for the use of travel times, homeland security and AMBER Alerts are still, to varying extents, new applications for these devices. The extent of deployment of these applications varies greatly across the nation. More time and more research is needed in order to properly study the effects that these messages have on the traveling public.

Stakeholders in traffic management and traveler information such as ITS America, AASHTO and ITE should be convened to further investigate the feasibility of the suggested guidelines documented in this report. Moreover, the consensus of a group of transportation officials alone cannot be considered the last word on the issues brought forth in this report. More study needs to be undertaken at the level of the average motorist. Transportation officials can only give their own opinions, or at best anecdotal evidence of the elements that work in the display of messages. Research directly with drivers and other members of the traveling public is needed.

As part of ongoing research, FHWA should commission a series of White Papers on issues related to performance monitoring. The transportation industry needs to further study and quantify the performance of CMS messages. A brief list of research questions includes, but is not limited to, the following issues:

- How many AMBER Alerts with successful outcomes are directly attributable to CMS?
- How long can an AMBER Alert be displayed before motorists grow accustomed to the message?
- How useful is travel time information to out-of-town motorists?
- When do motorists consider it is appropriate to use CMS for homeland security?
- How can DOT's convey the sense that CMS signs are operational even when they remain blank for long periods of time?

The value of ITS deployment in Europe should be carefully considered in regards to further research. A scanning tour of Europe in 2001 provided valuable information regarding the use of CMS for travel times in Barcelona and Madrid, Munich, and Berlin. Information from reports such as these should be incorporated into further discussion on the topics.

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