

**Report on the State Barriers to Adopting and
Implementing Programs Using Roadside
Communications Systems for Alerts
Regarding Recovery of Abducted Children**

Prepared by:

**U.S. Department of Transportation
Federal Highway Administration
Operations Office of Transportation Management**

August 2004

Report on the State Barriers to Adopting & Implementing Programs Using Roadside Communications Systems for Alerts Regarding Recovery of Abducted Children

Executive Summary

This report is the result of a staff study in response to the requirement in section 303(i) of the *Prosecutorial Remedies and Other Tools to end the Exploitation of Children Today Act of 2003* or PROTECT Act (Public Law 108-21, 117 Stat. 650). The section requires the Secretary of the United States Department of Transportation (DOT) to conduct a study to examine State barriers to the adoption and implementation of State programs for the use of communications systems along highways for alerts and other information for the recovery of abducted children.

The America's Missing: Broadcast Emergency Response (AMBER) Plan Program is a voluntary program, created in 1996, through which emergency alerts are issued to notify the public about abductions of children. The broadcast media and law enforcement agencies have cooperated to provide AMBER Alerts, based on specific criteria when abducted children are at risk. Statewide AMBER Plans have been established in all 49 continental States, with 50 additional regional and local AMBER Plans. Since the inception of AMBER Plan Programs, more than 150 abducted children have been safely recovered.

In August 2002, the California Department of Transportation began using its changeable message signs (CMS) to provide AMBER Alert information. Since then, virtually every State and most local transportation agencies that own and operate CMS have become actively involved in responding when AMBER Alerts are issued. When owners of CMS and other motorist information services were approached to provide AMBER Alert information, there typically was some initial confusion regarding how to safely construct the messages. However, there has been virtually no resistance from the transportation agencies to the concept of participating in AMBER Programs.

There are relatively few State barriers to implementing programs using roadside communications systems for alerts regarding recovery of abducted children. The barriers or challenges that the transportation agencies face fall into three general categories: institutional, financial and technical. The institutional issues generally involve communications between agencies and establishing appropriate chains of communication. When there have been problems, they were often the result of confusion among the agencies related to responsibilities and authorities. The financial challenges are not unique to providing AMBER Alert information, but rather relate to lack of funding, or access to funding, to procure and operate roadside communication systems. The technical challenges are generally related to constructing effective messages for CMS that do not permit a great deal of information to be conveyed. There are other methods of roadside communication owned and operated by many transportation agencies that do allow more information to be provided to motorists, such as highway advisory radio and 511 travel information telephone services. While these technologies do not face the technical challenges of CMS related to constructing messages, they do have common technical issues related to sharing control of roadside communications systems to allow 24-hour operations by authorized agencies or personnel.

Post-alert reviews should be conducted with all agencies and parties to examine where processes can be improved, including providing information through roadside communication systems. State and local transportation agencies involved in providing AMBER Alert information should be encouraged to attend national conferences and training opportunities so that they may learn from the experiences of others. Federal-aid eligibility for procuring and operating roadside communication systems, including CMS, should be reinforced and reiterated so that State and local transportation agencies are fully aware of their funding opportunities. Good engineering practices must be applied when constructing messages for abducted children alerts, especially when using a medium that can only provide limited information, such as CMS. Guidance for constructing CMS messages that is based on human factors research related to motorists' capabilities should be used, based on the physical limitations of the sign's size and location.

Background

The AMBER Plan Program is a voluntary program through which emergency alerts are issued to notify the public about abductions of children. The AMBER Plan was created in 1996 as a powerful legacy to 9-year-old Amber Hagerman, a bright little girl who was kidnapped and brutally murdered while riding her bicycle in Arlington, Texas. The tragedy shocked and outraged the entire community. Residents contacted radio stations in the Dallas area and suggested they broadcast special "alerts" over the airwaves so that they could help prevent such incidents in the future. In response to the community's concern for the safety of local children, the Dallas/Fort Worth Association of Radio Managers teamed up with local law enforcement agencies in northern Texas and developed this innovative early warning system to help find abducted children. Statewide AMBER Plans are now established in all 49 continental States, with 50 regional and local AMBER Plans growing to meet the needs of local agencies. Since the inception of AMBER Plan Programs, more than 150 abducted children have been safely recovered.¹

The AMBER Plan Program encourages use of the most effective methods to communicate with the public on behalf of abducted children. In August 2002, the California Department of Transportation began using the changeable message signs (CMS) on its freeways to provide information about child abductions. Over time, these child abduction alerts have been communicated through various means including radio and television stations, highway advisory radio, CMS and other media. Seventy-four percent of children who are kidnapped and later found murdered are killed within the first three hours after being taken, and 99 percent are killed within the first 24 hours.²

President Bush hosted the "White House Conference on Missing, Exploited, and Runaway Children" on October 2, 2002. Subsequently, the U.S. Department of Transportation, through its Intelligent Transportation Systems Joint Program Office (ITS JPO) established a program to provide grants of up to \$125,000 to State departments of transportation for planning, coordinating and designing systems, protocols, and message sets that support the coordination

¹ National Center for Missing and Exploited Children website, <http://www.missingkids.org>, August 19, 2004.

² Assistant U.S. Attorney General Deborah J. Daniels, Chicago Sun-Times, November 5, 2003.

and communication necessary to issue an AMBER Alert and to provide the means to communicate an AMBER Alert to motorists.³

Title III, subtitle A of the PROTECT Act deals with AMBER Alerts. The subtitle establishes the position of National AMBER Alert Coordinator in the Department of Justice (DOJ), requires the establishment of minimum standards for issuing an AMBER Alert, authorizes \$20 million to DOT to provide to States for AMBER Alert activities, authorizes \$10 million to DOJ to provide to States for support of AMBER Alert communications plans, and limits the liability of the National Center for Missing and Exploited Children in communicating information related to child abduction alerts. Section 303(i) of the PROTECT Act requires the Secretary of Transportation to conduct a study to examine State barriers to the adoption and implementation of State programs for the use of communications systems along highways for alerts and other information for the recovery of abducted children. On June 15, 2004, the Federal Highway Administration (FHWA) announced the AMBER Plan Implementation Assistance Program, offering grants of up to \$400,000 to each State, up to a total of \$20 million, to install or enhance motorist information services to notify motorists of child abduction alerts.⁴

FHWA recognizes the value of the AMBER Plan Program and fully supports State and local governments' choice to implement this program. However, in an August 2002 memorandum, FHWA noted that CMS are not always the most effective or safest method to disseminate information related to child abductions and clarified its policy on the use of CMS for displaying AMBER Alert messages. Since the CMS can convey only a limited amount of information to motorists, when there is a need to provide more extensive information to motorists, it is critical that other types of traveler information services (e.g., 511 travel information telephone services, highway advisory radio, web sites, commercial radio) be used, or that the messages displayed on a CMS supplement these other services.⁵

DOJ conducted the first national AMBER Alert conference in Dallas in August 2003. Locations with active AMBER Plans sent teams of four, including the designated AMBER Plan Coordinator and a transportation representative. All States participated, and of the nearly 300 participants, 23% were from departments of transportation. DOT and the FHWA assisted in planning for and participated in the national conference. In addition, FHWA is a member of the National AMBER Alert Advisory Group, which is chaired by the National AMBER Alert Coordinator, and provides advice related to training, outreach and standards. Since the first national AMBER Alert conference, DOJ is conducting regional training conferences in the spring and summer of 2004, again bringing together State and regional AMBER Plan teams to discuss experiences and lessons learned. Information from these conferences and from a survey of FHWA field offices and the States has been used in producing this report.

Findings / Barriers

When owners of changeable message signs and other motorist information services were approached to provide AMBER Alert information, there typically was some initial confusion

³ February 12, 2003, Notice in the *Federal Register* at 68 FR 7164.

⁴ June 15, 2004, Notice in the *Federal Register* at 69 FR 33456.

⁵ FHWA Policy Memorandum, <http://www.fhwa.dot.gov/legregs/directives/policy/AMBERmemo.htm>.

regarding how to safely construct the messages. However, there has been virtually no resistance from the transportation agencies to the concept of participating in AMBER Programs. No one can argue against using any means available to attempt the timely and safe return of abducted children. The barriers or challenges that the transportation agencies face related to using roadside communication for providing information about child abductions fall into three general categories: institutional, financial and technical. These challenges are outlined below.

Institutional

In many locations, the communication and interaction between law enforcement and transportation agencies has been only during times of emergencies and has been somewhat ad hoc. In order to be able to provide timely AMBER Alert messages, the interactions needed between law enforcement and transportation agencies must be formalized. All parties involved with issuing and responding to child abduction alerts need to know their responsibilities and authorities, and the appropriate chains of communications to avoid improper or mistimed alerts.

Standard operating procedures help to ensure timely and secure interagency communications throughout the duration of the AMBER Alert. There have been instances where AMBER Alert messages continued to be provided through motorist information services after the alert had been cancelled because of failure of timely notification to the transportation agency. Similarly, there have been a few instances where transportation agencies did not provide abduction alert information as quickly as they might have if there had been established protocols and procedures for roadside communication system operators to follow.

Some CMS and motorist information systems are not in operation 24 hours a day because the agencies that own the systems only staff their operations centers during business hours or peak travel periods. These types of operations present challenges to displaying AMBER Alert information when the CMS operations centers are not staffed. Formal agreements and joint operating procedures must be put in place before agencies can permit others to operate their CMS systems. The arrangements must be formalized in order to ensure that only authorized agencies or personnel have access to roadside communication systems. Adequate training is needed to ensure that proper procedures are followed and to allow messages to be displayed in a timely fashion, especially if operation of the CMS will be from remote locations using public telecommunications services.

Financial

Many locations lack the infrastructure – signs, communications, power – needed to convey AMBER Alert information to motorists on a regional basis. Because of competing needs for the public funding that is available, State and local transportation agencies may have been unsuccessful in gaining access to funding for acquiring the CMS or other roadside communications systems. In addition to the funding for procuring hardware and communications, there have been challenges related to financing the operations of the motorist information systems and of the communication systems between law enforcement, as the issuers of AMBER Alerts, and transportation agencies as the owners of the roadside systems.

All of these activities are eligible for reimbursement under the major Federal highway funding programs. However, roadside communication systems are part of the growing list of competing

needs that are resolved through the collaborative planning processes used to decide the allotment of federal funding in States and metropolitan areas.

Technical

In general, there are relatively few technical challenges to providing AMBER Alert information through roadside communication systems. Transportation agencies faced with providing alert information have been initially challenged in constructing appropriate messages for CMS that are presented in a safe manner for motorists traveling along highways. Often the information provided from law enforcement or the media would be too much to be able to safely present to motorists using roadside communication systems that have limited capability, such as CMS. Some of the initial locations provided lengthy, complex AMBER Alert messages that caused motorists to either slow down to read the message or ignore the message altogether. In a number of locations, including Los Angeles, AMBER Alert messages slowed the flow of traffic and the AMBER Alert messages had to be removed from CMS during peak rush hours.

Therefore, it is important that the information provided by CMS is coordinated with other means whereby people can obtain more detailed information about the abducted child, the suspect, or the suspected vehicle. Besides broadcast media, which are the primary means of disseminating this detailed information, many transportation agencies own and operate highway advisory radio systems or 511 travel information telephone information services that are capable of providing more detailed messages related to abducted children. Related to CMS, a number of transportation agencies have indicated a desire for standardized messages or standard methods of constructing messages.

Generally, communication between law enforcement and transportation agencies during AMBER Alerts is basic and fundamental, such as telephone or facsimile transmission. These systems rely upon human intervention to function and as such, are subject to unintentional lapses resulting in lack of timely notifications. Automating the communications between law enforcement and transportation would help to ensure more timely and accurate notifications when alerts are issued as well as when alerts are cancelled. These measures help to assure that the public continues to notice the alerts messages and that the messages retain their creditability.

As noted above, some CMS and motorist information systems are not in operation 24 hours a day and as such, present challenges to displaying AMBER Alert information when the CMS operations centers are not staffed. While the barriers to joint or shared operation of CMS systems are institutional, there are technical design and communication issues that must be resolved in order to securely allow agencies other the owner of the CMS to display messages.

Activities

Under the leadership of DOJ's National AMBER Alert Coordinator and through the efforts of the State AMBER coordinators, transportation agencies have become integral players in AMBER Plans across the country. Transportation agency representatives have been included as members of State and regional AMBER Alert teams that have attended the national and regional AMBER Alert conferences. DOT is represented on the AMBER Alert National Advisory

Group, and has provided input and direction related to transportation agencies' needs and concerns in the development of guidance, training materials and AMBER Alert conferences.

The FHWA issued guidance related to the appropriateness of providing AMBER Alert information using CMS in August 2002. In the winter of 2003, the FHWA developed general guidance related to operating CMS, including guidelines for developing messages that can be read safely by motorists. In addition, FHWA incorporated specific information drawn from the successful practices of transportation agencies in displaying AMBER Alert messages into a 2004 guidance report that deals with three specific types of messages on CMS: security-related messages, travel time messages, and AMBER Alert messages.

The AMBER Program Planning Assistance effort by the Department, announced in February 2003, provided States (including the District of Columbia and Puerto Rico) up to \$125,000 each to help determine how transportation agency resources can best be used when AMBER Alerts are issued, including investigating ways to improve interagency communications, including automating the communications between law enforcement and transportation agencies. As of August 2004, forty States and the District of Columbia had received assistance grants, and were planning how to incorporate AMBER Alert information into the various traveler information systems. These funds have helped convene stakeholders of regional and State AMBER Plans and establish basic communications between the major players.

FHWA announced the AMBER Plan Implementation Assistance Program, authorized by the PROTECT Act, on June 15, 2004. This assistance program offers States (including the District of Columbia and Puerto Rico) up to \$400,000 each to implement or enhance motorist information systems, such as CMS, to allow motorists to be informed when AMBER Alerts are issued. In addition, the design, installation and operation of CMS are eligible activities for reimbursement under the major Federal-aid funding programs since these activities are considered part of traveler information systems.

Conclusions / Recommendations

There are relatively few State barriers to implementing programs using roadside communications systems for alerts regarding recovery of abducted children. When requested, virtually every State and local transportation agency that owns and operates roadside systems, such as CMS, has attempted to comply. Initially, the messages are sometimes confusing to motorists. But more experiences and process improvement analyses conducted among all involved parties after the issuance of the alerts result in better messages and improved communications with motorists. Post-alert reviews among all agencies involved in issuing and providing the AMBER Alerts should be encouraged as process improvement techniques.

Effective communications and relationships among law enforcement, media and transportation agencies are the greatest contributors to overcoming the barriers and challenges to States in providing child abduction information using roadside communications systems. Agencies can exchange potential remedies for issues such as timely notifications among agencies and shared operations of roadside systems. Since networking and exchanging information with peers related to shared experiences provide invaluable opportunities for enhancing interagency

communications, State and local transportation agencies should be encouraged to take advantage of travel opportunities afforded by AMBER Alert conferences and training sessions.

To help alleviate concerns regarding funding to acquire and operate roadside communication systems and hardware, maximum flexibility should be afforded to States and local governments related to eligibility of such activities under Federal-aid highway programs. The flexibility of current eligibility rules should be retained and reiterated.

Due to the variety of sizes and locations of CMS, establishing discrete, standardized messages for AMBER Alerts is not practical. However, State and local agencies that operate CMS should use guidance that has been developed with human factors considerations to ensure that effective messages are provided that do not overburden motorists. Distracted motorists present hazardous situations, and transportation agencies must be cautious in providing messages that may overload motorists already taxed by the driving tasks. In addition, transportation and public safety agencies must examine using all available roadside communications systems to provide the highest quality information. This requires using CMS – capable of only conveying relatively small amounts of information regarding the child abduction – in coordination with other communications systems such as broadcast media, highway advisory radio and 511 travel information telephone services to provide detailed information to motorists.

The FHWA continues work on expanding and improving the use of roadside communication systems to provide better information to motorists. All of these traveler information efforts have fully incorporated AMBER Alert and other safety-related messages into their various programs. Guidance materials developed for these programs will include appropriate references and recommendations for alerts regarding recovery of abducted children.