

1. Report No. FHWA/TX-00/1834-2	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle ROLE OF PUBLIC TRANSPORTATION OPERATIONS IN EMERGENCY MANAGEMENT: RESEARCH REPORT		5. Report Date March 1999 Revised: June 1999; September 1999; December 1999	
		6. Performing Organization Code	
7. Author(s) Laura L. Higgins, Mark D. Hickman, and Cynthia A. Weatherby		8. Performing Organization Report No. Report 1834-2	
9. Performing Organization Name and Address Texas Transportation Institute The Texas A&M University System College Station, Texas 77843-3135		10. Work Unit No. (TRAIS)	
		11. Contract or Grant No Project No. 0-1834	
12. Sponsoring Agency Name and Address Texas Department of Transportation Research and Technology Transfer Office P. O. Box 5080 Austin, Texas 78763-5080		13. Type of Report and Period Covered Research: September 1998-February 1999	
		14. Sponsoring Agency Code	
15. Supplementary Notes Research performed in cooperation with the Texas Department of Transportation and the U.S. Department of Transportation, Federal Highway Administration. Research Project Title: Role of Public Transportation Operations in Emergency Management			
16. Abstract  This project examines the possible roles that public transit agencies can fulfill in the emergency management plans of their cities and/or counties. This report summarizes the first two phases of the project, which incorporate a review of available literature on emergency and disaster management planning, a review of the state of the practice among transit agencies in Texas, an examination of the legal and institutional issues that affect emergency planning and response, and a summary of possible transit roles with jurisdictional emergency management plans.			
17. Key Words Emergency, Disaster, Transit, Planning		18. Distribution Statement No restrictions. This document is available to the public through NTIS: National Technical Information Service 5285 Port Royal Road Springfield, Virginia 22161	
19. Security Classif.(of this report) Unclassified	20. Security Classif.(of this page) Unclassified	21. No. of Pages 45	22. Price



# **ROLE OF PUBLIC TRANSPORTATION OPERATIONS IN EMERGENCY MANAGEMENT: RESEARCH REPORT**

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Report 1834-2

Project Number 0-1834

Research Project Title: Role of Public Transportation Operations in Emergency Management

Sponsored by the  
Texas Department of Transportation  
In Cooperation with the  
U.S. Department of Transportation  
Federal Highway Administration

March 1999

Revised: June 1999; September 1999; December 1999

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## ACKNOWLEDGMENTS

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This research was performed for the Texas Department of Transportation, in cooperation with the U.S. Department of Transportation, Federal Highway Administration. Ms. Laura Higgins was TTI's Research Supervisor on the study. The report authors were Ms. Laura Higgins, Dr. Mark Hickman, and Ms. Cynthia Weatherby.

The authors would like to recognize and thank TxDOT's Project Director, Ms. Susan Hausmann from the Public Transportation Division, for her help and guidance in this study. Her assistance is greatly appreciated.

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## CHAPTER 1. TRANSIT IN EMERGENCY RESPONSE: INTRODUCTION

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Public transit agencies have a history of providing assistance during crisis situations, performing vital services such as evacuation of victims and transport of emergency personnel. In the aftermath of major disasters, public transit systems have often supplemented or replaced damaged or blocked roadways, maintaining mobility for residents and for repair and recovery workers. Some examples from recent years are summarized below:

- C As Washington's Columbia River and nearby waterways threatened to flood in February 1996, C-TRAN of Vancouver began monitoring water levels and planning with other local agencies for emergency services. When flood waters began to affect rural roads, C-TRAN detoured its routes to keep service running. As streets and bridges in Vancouver and Portland became hazardous, C-TRAN's urban routes began early and increased commuter service to get residents home; for several days, mass transit was the primary mode of travel in downtown Portland. In addition, buses performed emergency evacuations and transported emergency and recovery personnel throughout the crisis (1). During the following year, C-TRAN evacuated and sheltered Vancouver residents during two chemical spills and a downtown fire (2).
- C Harrisburg, Pennsylvania's Capitol Area Transit (CAT) responded to a variety of emergency conditions during the blizzard of 1996 and its aftermath. From a sudden increase in transportation demand when all government employees were sent home during the blizzard, to the evacuation of residents in flood zones, to the transport and shelter of firefighters during a four-alarm fire in late January, CAT vehicles and employees made significant contributions to Harrisburg's winter storm response and recovery (3).
- C After the bombing of the Alfred P. Murrah Federal Building in Oklahoma City, Metro Transit began running 24-hour service to accommodate transportation needs. In addition to maintaining all regular service, Metro Transit buses transported firefighters, rescue teams, and medical personnel, and evacuated residents from a nearby housing complex. Metro Transit personnel also manned the Multi-Agency Command Center, which coordinated communications during relief efforts (4).
- C The 1989 San Francisco earthquake destroyed some of the area's primary traffic arterials and damaged others to the point of impassability. The San Francisco-Oakland Bay Bridge and the I-880 freeway, which together comprised the main connection between the cities of San Francisco and Oakland, were closed after sections of these roadways collapsed. Several other freeways and on-ramps within San Francisco also closed, making travel in the city difficult. Within nine hours of the earthquake, the undamaged BART subway system was running, providing the only reliable transportation in the city. In the aftermath of the quake, other transit systems in the area joined in the effort to keep residents and repair crews mobile. Buses, subway, commuter rail, and ferries

maintained transportation in and around the cities until the roadways were rebuilt and kept a significant portion of the increased ridership even after automobiles were able to return to the freeways (5, 6).

- C A severe hailstorm in Fort Worth, Texas, rendered 28 out of 33 Mobility Impaired Transportation Service paratransit vans inoperable due to shattered windshields and lights. The storm also destroyed the roof of the Fort Worth Transportation Authority maintenance building, as well as causing extensive damage to other facilities. Despite a lack of electrical power in the maintenance facilities, personnel at the “T” worked through the weekend after the May 5, 1995, hailstorm and repaired the vans in time for Monday morning service (7).
- C Orlando’s LYNX transit service provided transportation for tornado victims in February 1998, sending LYNX-owned cars into areas that were inaccessible to LYNX buses. In April, a tornado in Nashville led to similar response activities by Nashville’s Metropolitan Transit Authority (8).

The Texas Disaster Act of 1975 and the Texas Emergency Management Plan require local jurisdictions to develop emergency management plans. These city and county plans organize personnel and resources from local public and private agencies to respond to emergency situations. Since public transit systems can and do play such an important role in many emergency situations, a written guideline for transit’s involvement in emergency planning is a useful and potentially crucial tool.

## **STUDY OBJECTIVES AND WORK TASKS**

This research study has two primary objectives:

- C to explore the possible roles of public transit systems in emergency planning, operations, and recovery; and
- C to present guidelines for developing, implementing, and evaluating a transit system’s emergency management plan.

Four work tasks were outlined to accomplish these objectives. This report documents the results of the first two tasks.

Task 1 included a review of the state-of-the-practice in emergency management in Texas and across the United States. This task included a literature review and a survey of Texas transit agencies and city/county emergency management personnel. Task 2 used this information, along with additional guidance on applicable legislation and institutional issues pertaining to emergency management, to develop a more detailed review of organizational roles that transit agencies might assume in an emergency, along with the preparation that is needed for emergency response activities.

In Task 3, a guidebook will be produced that will provide information and recommendations for developing an emergency plan for an urban or rural transit agency. Task 4 will pilot-test the guidebook in two case studies with selected transit agencies in Texas.

## **CHAPTER 2. TRANSIT AGENCIES AND EMERGENCY MANAGEMENT**

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Details and procedures for large-scale emergency management can vary greatly from location to location and there are few absolutes for the role of transit or other transportation services in emergency response. Federal and Texas legislation provides a basic framework for communities and government agencies to set up local emergency management plans.

### **COMMUNITY EMERGENCY RESPONSE—FEDERAL AND STATE REQUIREMENTS**

#### **Federal Legislation**

United States Code Title 42, The Public Health and Welfare, authorizes the President to commandeer public and private resources to respond to a large-scale disaster (Chapter 68— Disaster Relief, Subchapter IV—Major Disaster Assistance Programs). Among other powers, the President may call for temporary public transportation services to meet emergency transportation needs during a disaster. Executive Order 12656—Assignment of Emergency Preparedness Responsibilities (Part 14—Department of Transportation) gives the U.S. Department of Transportation responsibility for “emergency management and control” of transportation resources, including urban mass transit.

#### **State Legislation**

Texas State Government Code Chapter 418: Emergency Management (The Texas Disaster Act of 1975) similarly authorizes the governor of Texas to commandeer and reassign any people and resources necessary for emergency response. The Texas Disaster Act also led to the formation of the State Division of Emergency Management and the State Emergency Management Plan. The Division of Emergency Management is responsible for procurement and deployment of emergency supplies and support units, and is authorized to employ temporary personnel for emergency response activities. For local emergency response, the code recommends seeking advice and assistance for emergency management planning from local agencies, business and civic groups, and volunteer organizations, with state and federal assistance requested when local resources are inadequate for the necessary response.

*County Emergency Management Programs* are required by the Texas Disaster Act, with municipal programs also recommended. Declarations of local disasters may be made by the presiding officer of a county or municipal governing body (mayor of a city or county judge), and authorize the implementation of the county or municipal emergency plan, with needed aid and assistance rendered by local agencies and organizations as specified in the plan.

#### **The Role of Public Transportation in Emergency Response**

The challenge for transit systems is to determine how and when they can provide assistance to emergency response, while keeping their personnel, passengers, and resources safe. Requirements for transit agencies in emergency situations are not often well-defined and depend partly on the size and jurisdiction of the

agency. Large transit agencies with police/security divisions will tend to have more responsibility as a lead organization within a community's emergency response plan, while smaller agencies with few or no trained safety or security personnel may play a smaller supporting role (9). At a minimum, transit agencies should have an established communication network with the police, fire, and other emergency response personnel in the city and/or county.

The State of Texas Emergency Management Plan (10) designates the Texas Department of Transportation (TxDOT) as a support agency for the functions (annexes) of Communications, Evacuation, Public Information, Recovery, Resource Support, Direction and Control, Hazard Mitigation, Hazardous Materials and Oil Spill Response, Search and Rescue, and Transportation. Transportation (Annex S) (11) and Evacuation (Annex E) (12) are two functions in which public transit services are likely to play a significant role.

Annex S (Transportation) of the State Emergency Plan includes among its list of TxDOT functions the coordination of transit resources to support emergency transportation needs. Annex E (Evacuation) lists a number of functions that transit agencies may be qualified to fulfill, including traffic analysis, monitoring of road conditions and evacuation progress, traffic barriers and controls, and transport for people who are without other safe means of transportation.

## **STATE-OF-THE-PRACTICE: TEXAS TRANSIT AGENCIES AND EMERGENCY RESPONSE**

A telephone survey was conducted of transit agencies, cities, and councils of government throughout the state. Transit and local government personnel were asked what, if any, role the transit systems were assigned in the local emergency management plans and whether the transit agency had recently been involved in emergency response or in planning and training exercises.

Forty-eight Texas transit agencies and associated county/city emergency-planning agencies were successfully contacted; of the transit systems contacted, 33 are participants in local emergency plans. Involvement varies from informal agreements between transit systems and local governments for emergency use of transit vehicles to comprehensive plans for transit's role in evacuations, communications, and other emergency response scenarios. Appendices A, B, and C at the end of this report list the transit systems contacted that are involved in their city and/or county emergency plans, or that have provided assistance to their communities during emergency situations. A complete list of survey participants is provided in [Appendix D](#).

### **Highlights of Transit System Emergency Planning and Activities**

*Sun Metro, El Paso:* The transit system stands ready to provide evacuations, transport, and shelter for emergency personnel and volunteers, and road blocks as directed by police. Sun Metro monitors road and weather conditions to determine safe routes in inclement weather or other adverse conditions. In addition, transit sedans are available to police if a larger police fleet is needed, and Metro vehicles are equipped with multi-channel two-way radios that can provide communications support to emergency efforts.

***City of Lewisville:*** The transit system parks one “backup” bus at the city’s fire station on a regular basis, available to the transit system when needed but at the fire department’s disposal for evacuations, personnel and resource transport, or other emergency functions.

***Panhandle Community Services:*** All Panhandle Transit vehicles that are county- or state-funded are available for use by the fire and sheriffs’ departments in the counties served. Several years ago, Panhandle Transit provided training to sheriffs’ departments on the operation of these transit vehicles.

***City of Tyler:*** All Tyler Transit vehicles, as well as Tyler school buses and church buses, are on the city’s call list for emergency use. A mock-disaster test of Tyler’s emergency plan procedures is planned for October 1999.

***City of Galveston:*** The city’s STEP program provides evacuation for senior citizens and people with disabilities in the event of an emergency. The service is prearranged, by registration with the city, and encompasses both transit and EMS functions.

A number of transit agencies have participated in ***area-wide emergency-response drills***, including The T, RTA (Corpus Christi), Bee County, SPAN, Galveston Island Transit, and Waco Transit. Tyler Transit and Parker County Transportation Services plan to participate in upcoming drills in 1999.

## **Emergency Response Experiences of Texas Transit Agencies**

***Storm and fire evacuations:*** VIA of San Antonio, The T, Colorado Valley Transit, Del Rio Transit, and Laredo Municipal Transit are among the Texas transit systems that provided evacuations during 1998’s string of storms and flooding. Connect Transit (Gulf Coast Center COG), Kleburg County transit, and the Corpus Christi RTA also have a history of providing evacuation and other emergency transportation services during severe storms. SPAN has provided evacuations for floods and for a hotel fire.

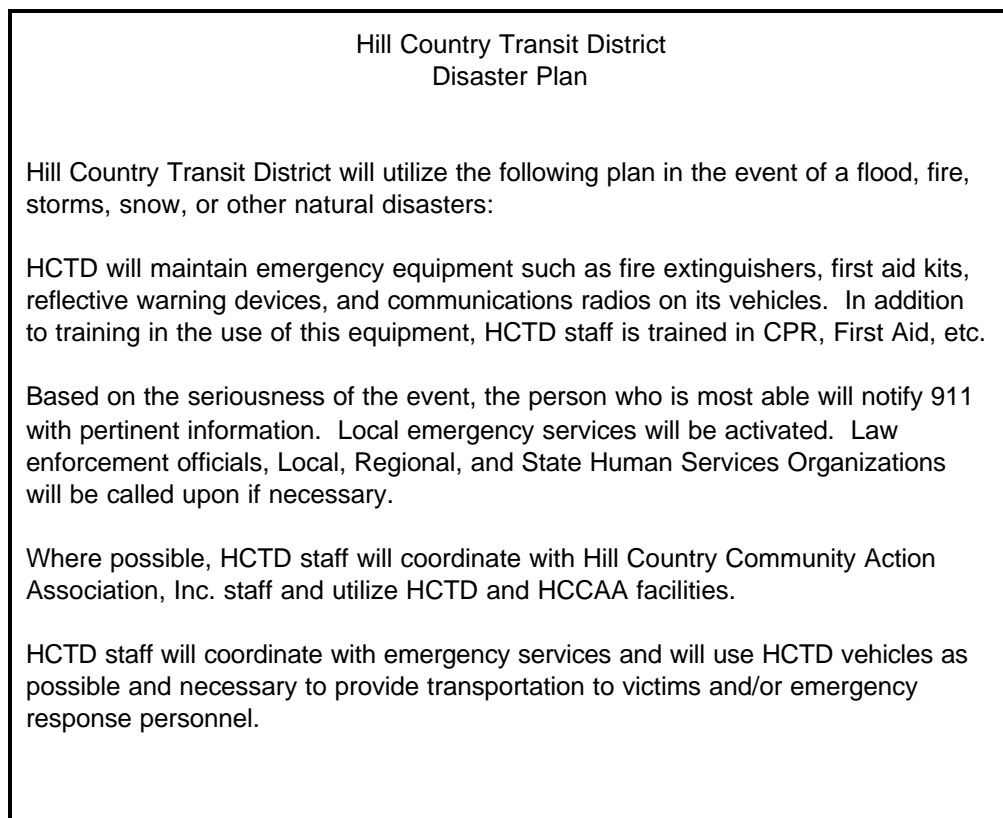
***Hazardous material and technological emergencies:*** The City of Mesquite, Abilene Transit, and Connect Transit have provided evacuation and personnel transport in response to hazardous material spills. Emergency evacuation was also provided recently for students in response to a hazardous-material release at a public school. Waco Transit helped to evacuate a neighborhood during a recent bomb threat.

***Shelter/respice assistance:*** Houston METRO and Capitol Metro of Austin use buses as heated or air-conditioned shelters and treatment centers for emergency workers at the site of a fire or hazardous-material incident. Sun Metro in El Paso has responded to several small incidents requiring transportation assistance, and has participated in firefighter training scenarios.

## Emergency Management Plans

Emergency management plans maintained by Texas Transit Agencies vary from single-page summaries of responsibilities to multi-chapter manuals. [Figure 1](#) shows the Hill Country Transit District Disaster Plan, while the more extensive plan for Houston METRO is outlined in [Figure 2](#).

Emergency plans and agreements with county and municipal agencies are future goals for several Texas transit systems. Thunderbird Transit received calls from other agencies within the Concho Valley Council of Governments during recent storms requesting advice and information on emergency procedures. Golden Crescent's R Transit, following guidelines provided by the Administration on Aging, attempted to participate in the area-wide response to last year's floods in Victoria, but a lack of communication between R Transit and other county agencies prevented transit vehicles from accessing certain areas to perform evacuations and other services.



**Figure 1. Hill Country Transit District Disaster Plan.**

**Houston METRO  
EMERGENCY MANAGEMENT PLAN**

**OVERVIEW**

- I. Authority
- II. Purpose
- III. Procedure
- IV. Situation and Assumptions

**SECTION ONE—METRO EMERGENCY OPERATIONS PLAN**

- I. Purpose
- II. Concept of Operations
- III. Direction and Control
- IV. Organization/Assignment of Responsibilities
- V. Increased Readiness Conditions

**SECTION TWO—LOCAL ASSISTANCE PLANNING**

- I. Role
- II. Scope
- III. Notification—Request for Assistance
- IV. Levels of Assistance (Minor Occurrences, Major Events)

**SECTION THREE—PLAN DEVELOPMENT, MAINTENANCE, AND IMPLEMENTATION**

- I. Development and Review
- II. Training/Implementation

**APPENDICES**

- I. Hurricane Preparedness
- II. Hazardous Materials Incidents
- III. Winter Storms
- IV. Floods
- V. Facility Fire
- VI. Public Demonstrations
- VII. Terrorism/Facility Security Procedures
- VIII. Bomb Threat Procedures
- IX. Transportation Accident
- X. Emergency Notification List

**Figure 2. Houston METRO Emergency Plan Outline. Source: Emergency Management Plan, Metropolitan Transit Authority of Harris County.**

## Transit and Emergency Management in Other States

Additional ideas for transit roles in emergency management, or for approaches to transit functions and preparations, are found in transit and government agencies of other states. A sampling of these is summarized below, with other examples given in [Chapter 1](#).

***Jefferson Parish Transit System, Louisiana:*** The Jefferson Parish emergency management plan includes the parish transit system in “Group 1” of essential emergency personnel. The transit system provides evacuation to shelters, uses buses to shelter emergency workers onsite, and mans radio stations on a 24-hour basis during crisis scenarios to coordinate response needs and to monitor route changes and closures. The emergency plan is regularly reviewed and updated, drawing on lessons learned from each new emergency response experience [\(13\)](#).

***Florida:*** The Florida Department of Transportation is designated as the lead agency in Emergency Support Function (ESF) 1 (Transportation) of the state and county emergency plans. This is a different command structure than in the State of Texas Emergency Management Plan, in which the lead agencies for transportation and evacuation functions are the Division of Emergency Management and the Department of Public Safety [\(14\)](#).

***WMATA, Washington, D.C.:*** All transit operators are trained in emergency procedures, including evacuation, location and use of on-board emergency equipment, and coordination with other rescue and emergency personnel. Beginning in January 1999, non-operating employees of WMATA have also begun to receive emergency response training [\(15\)](#).



## **SUMMARY: TRANSIT SYSTEM ROLES IN EMERGENCY RESPONSE**

The functions a transit system will be able to perform in an emergency response scenario will vary depending on the resources of the transit system and the needs and resources of the city or county in which it operates. Possibilities for transit agency involvement in Texas include the following:

- C evacuation of local residents during flooding, fires, hazardous-material spills, bomb threats, or other emergency conditions;
- C transport of emergency workers and volunteers to and from an emergency staging site;
- C supplemental transportation for people and supplies within a city or county during recovery from flooding or other area-wide disasters;
- C use of air-conditioned/heated buses as shelter/respice facilities for emergency workers and victims; especially valuable during a fire or hazardous-material response effort;
- C communications support, if buses are radio-equipped;
- C monitoring of road and weather conditions; determining safe travel routes; and
- C supplemental vehicles for police or other local agency.

This is not an all-inclusive list, nor will all transit agencies be equipped to perform every task on this list. Each transit agency must assess its own resources, capabilities, and the potential needs and hazards that are likely to be faced within its city or county. Working with local governments and emergency response personnel, transit agencies can then determine the functions that they are best able to fulfill within the jurisdiction's Emergency Management Plan. The [following chapter](#) reviews the issues and process that are involved in developing an emergency plan.



## CHAPTER 3. DEVELOPMENT OF AN EMERGENCY PLAN

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Many resources are available on the subject of emergency management planning and procedures, some of which are listed in the references for this report. While the details of each vary depending on the intended audience and environment (e.g., handbooks for general industry versus directives for government agencies), most agree on the general approach that should be taken in developing an emergency management program.

### THE FEDERAL EMERGENCY MANAGEMENT AGENCY AND COMPREHENSIVE EMERGENCY MANAGEMENT

The Federal Emergency Management Agency (FEMA) was formed in 1979, meshing five separate federal agencies that had dealt with various aspects of disaster and emergency response. The formation of FEMA also consolidated the concept of *Comprehensive Emergency Management* (CEM), which takes into account not only the response to a specific emergency but also the conditions and activities prior to and following the crisis. CEM emphasizes the importance of *mitigation, preparedness, response, and recovery* in managing and containing the effects of an emergency situation.

*Mitigation* refers to actions taken to minimize potential risks and hazards. Mitigation for transit systems may include vehicle and facility design considerations, training in safety procedures and standards, and other activities that promote safe operating conditions on a day-to-day basis.

*Preparedness* refers to the groundwork that should be laid for crisis intervention. Risk assessment, responsibilities and communications within and between organizations, emergency procedures, and training are all issues that need to be addressed in advance of an emergency situation in order for a response effort to be effective.

*Response* begins when the emergency situation has occurred; or, in some cases, when warning signs indicate that an emergency is imminent. Continued communications and coordination of response activities is a vital factor in reducing the severity of the emergency.

*Recovery* takes place after the crisis has passed and involves repairing damage and restoring normal operations. Debriefing and assessment of the response and its success are also part of the recovery phase; experiences from one response effort will be useful in refining preparations for the next.

An emergency management plan should, ideally, describe procedures and documentation for each of these four phases.

## MITIGATION

Vehicle design standards, accessibility for riders with disabilities, equipment maintenance, and safe operating procedures—all of these are associated with normal transit operations and are not obvious components of emergency planning. However, these elements of day-to-day operation are a vital part of the Crisis Mitigation phase of emergency management. Similar to the minimum number of required fire exits in a public building, or the design requirements for hazardous material containers (9), standards in design, maintenance, safety, and security will help prevent some emergencies and will help lessen the effects of the ones that occur. Following is a partial list of considerations that contribute to crisis mitigation in public transportation:

- C Design Criteria for facilities, vehicles, communications, and power. All transit agencies must comply with federal, state, and local regulations and codes when purchasing or renovating vehicles and facilities. Additional guidelines are available from the American National Standards Institute (ANSI), the American Society for Testing and Materials (ASTM), and other national organizations. *Recommended Emergency Preparedness Guidelines for Urban, Rural, and Specialized Transit Systems (16)* lists federal regulations that pertain to transit vehicles used in emergency response scenarios. The regulations include guidelines for accessibility by elderly and disabled passengers, bus testing, fire safety design, warning devices, and driver and occupant protective devices.
- C Operating Practices for vehicle operators, including speed limits, passenger loading and unloading, and security measures.
- C Passenger Education on safe riding practices and personal security.

Figures 3 and 4 show examples from the Operator Safety Manual of Connect Transportation (Gulf Coast Center).

<b>Connect Transportation, Gulf Coast Center MAINTENANCE INTERVALS SCHEDULE</b>	
<b>(3,000) MILES</b>	
*	Change engine oil and replace oil filter
<b>(6,000) MILES</b>	
*	Change engine oil and replace oil filter
*	Rotate tires and adjust air pressure
*	Lubricate steering linkage suspension, driveshaft U-joint. Grease fittings.
<b>(9,000) MILES</b>	
*	Change engine oil and replace oil filter
*	Inspect exhaust system for leaks, damage, or loose parts. Remove any foreign material trapped by exhaust systems shielding.
NOTE: It is normal for a certain amount of moisture and staining to be present around muffler seams. The presence of soot, light surface rust, or moisture does not indicate a faulty muffler.	
*	Lubricate steering linkage suspension, driveshaft U-joint. Grease fittings.
<i>(Continued)</i>	

**Figure 3. Transit Vehicle Maintenance Schedule,  
Connect Transportation, Gulf Coast Center.**

## Connect Transportation, Gulf Coast Center

SUBJECT:  
RADIO PROCEDURES

Review date: 6/05/98  
Revision date: 6/15/98

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### POLICY

To insure the safety of our drivers and passengers and to enhance the performance of our operations, all Connect Transit personnel will be familiar with two-way radio operations.

### PROCEDURE

8. Staff utilizing the two-way radio shall follow the standard use practices of the FCC. Use of profanity, abusive language, or other inappropriate broadcast is not allowed and could result in disciplinary action.
9. All base stations and vehicle units shall be tuned to appropriate assigned frequency at all times.
10. Staff should initiate communications by stating who they are calling "Base (101, etc.) this is 102 (base, etc.)." At the completion of the transmission both parties will indicate that the transmission is completed by saying their call sign and "clear."
11. Except in the event of an emergency, all staff should listen five (05) seconds before transmitting to ensure there are no transmissions in progress. Transmissions should not be interrupted unless it is an emergency.... (*Continued*)

**Figure 4. Radio Procedures,  
Connect Transportation, Gulf Coast Center.**

## PREPAREDNESS

### Risk Assessment

Preparedness for emergency management begins with an assessment of types of emergencies that may be encountered within the community and within the transit system. Each of these possible emergency scenarios should then be examined to determine how much of a risk it would pose to the transit system.

The Federal Transit Administration's (FTA's) *Critical Incident Management Guidelines* (CIMG) (9) prescribe risk assessment procedures as a fundamental part of both the mitigation and preparedness phases of emergency management. Detailed risk assessments are crucial to decisions that will be made as vehicles and personnel are deployed for emergency response. CIMG demonstrates a risk assessment matrix that defines levels of risk as they affect agency operations. The transit system must then estimate the vulnerability of transit system elements to different identified safety and security risks, and determine ways to mitigate those risks. Data sources for the analysis are also provided by CIMG.

The Transit Cooperative Research Program has published a report on risk management for transit systems, entitled *Tools for Transit Risk-Exposure Identification and Treatment for Bus Systems*. The accompanying Windows®<sup>1</sup>-based software, *Transit Risk Manager*, provides instruction and examples for issues such as insurance coverage, safety policies, and state legislation and regulations, and helps a transit agency perform a comprehensive risk-management assessment (17).

### Assessment of Emergency Response Capabilities

In preparation for joining a community-wide emergency plan, transit systems should determine the resources and activities they are capable of providing to an emergency response effort. Figure 5 is an example of a vehicle resource list that is part of the Brazos County Interjurisdictional Emergency Management Plan.

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<sup>1</sup>Windows® is a registered trademark of the Microsoft Corporation.

<b>Brazos County Interjurisdictional Emergency Management Plan</b>				
<b>APPENDIX 1 to ANNEX S</b>				
<b>Passenger Transportation Assets</b>				
<u>Owner</u>	<u>Type</u>	<u>Quantity</u>	<u>Capacity</u>	<u>Special Equip</u>
Brazos County Sheriff	Vans	3	15	
	Vans	1	9	
City of Bryan: 361-3600	Mini Vans	3	8	---
City of College Station 764-3773	Van	2	15	---
	Van	8	8	---
	Minivan	7	6	---
Texas A&M 845-1971	Bus	35	46	---
	Bus	9	50	---
	Bus	12	40	W/lifts
	Bus	2	35	---
	Bus	1	45	---
	Van	3	5	W/lifts
	Van	1	15	---
College Station ISD 764-5440	Bus	36	72	---
	Bus	4	15	W/lifts
	Bus	1	10	W/lifts
	Bus	1	35	---
	Bus	1	47	---
Bryan ISD 361-5260	Bus	100	72	---
	Bus	12	12	W/lifts
	Vans	3	8	---
Brazos Transit System 778-4495	Trolleys	8	21	W/lifts & Radio
	Cutaways	4	21	W/lifts & Radio

**Figure 5. Passenger Transportation Assets, Brazos County Interjurisdictional Emergency Management Plan.**

### **Interorganizational Agreements**

Within the transit agency, a “command” and communication structure should be determined and documented so that each employee knows whom to contact for instructions and to report incidents or conditions. A similar structure will govern coordinated efforts between transit agencies and other emergency response personnel. This structure should designate the lead and support agencies for types and levels of emergency response, as well as the lead and support personnel within each agency. Overall objectives and strategies for emergency response should be consistent throughout the hierarchy, down to terminology and job titles (9, 18, 19).



Interorganizational agreements should specify the types and level of services that the transit agency will be able to perform for various emergency response efforts, primary contact personnel, funding for emergency activities, and the responsibilities and authority of each agency during an emergency (9, 16).

### **Emergency Procedures**

Written procedures should be developed for each of the potential hazards and corresponding services identified in the emergency plan. Evacuations, road and traffic monitoring, communications, and other emergency activities need to support each other and to operate as efficiently and safely as possible. Standardized emergency procedures for each of these functions will help to maximize the effectiveness of emergency response while minimizing the risks to personnel and vehicles. Figure 6 outlines the emergency-response duties of Houston METRO personnel. More detailed instructions would be provided within for personnel within each department on their specific activities. Procedures should also be established in the emergency plan for communicating with the public during emergencies.

### **Education, Training, and Evaluation**

Training and test scenarios are essential to evaluating the effectiveness of any emergency plan. Weaknesses in communications and procedures can be detected and corrected or mitigated before they damage an actual response effort; personnel become familiar with “standard” procedures and decision making, reducing the “guesswork” for carrying out similar decisions and procedures during an actual crisis situation. The first step of effective education is the dissemination of the emergency plan and procedures to all employees who will have a role in carrying out the plan (9, 19). Specific guidelines and examples of training exercises are detailed in the FTA’s *Recommended Emergency Preparedness Guidelines for Urban, Rural, and Specialized Transit Systems* (16) and in the *Emergency Exercise Handbook* (20). (See Figure 7.)

<b>Emergency Management Plan of Metropolitan Transit Authority of Harris County</b>								
	General Manager	Media/Public Info	Emerg. Mgmt. Coordinator	METRO Police	Operations	Maintenance	EC & RE	Human Resources
<b>CONDITION 4</b> Beginning of disaster vulnerability season.	1. Brief Board Members and Senior Staff on overall emergency operations.	1. Review emergency news releases and appropriate contact numbers. 2. Brief Senior Staff on emergency information programs and news releases. 3. Instruct all personnel in emergency responsibilities.	1. Review and update Emergency Mgmt. Plan and SOPs for EOC operation. 2. Brief Senior Staff on EOC operation and procedures. 3. Review and update warning and communication process for employees.	1. Review and update law enforcement provisions in Emergency Mgmt. Plan. 2. Review assignment of all personnel. 3. Conduct test and training.	1. Review and update transportation provisions in Emergency Mgmt. Plan. 2. Review assignment of all personnel. 3. Conduct test and training. 4. Instruct all personnel in emergency procedures.	1. Review and update maintenance provisions in Emergency Mgmt. Plan. 2. Review assignment of all personnel. 3. Conduct test and training. 4. Conduct test and check readiness of all emergency equipment. 5. Check readiness at all facilities.	1. Review assignments of all personnel. 2. Instruct key personnel in emergency procedures. 3. Review with contractors the emergency procedures.	1. Review assignments of key personnel. 2. Instruct key personnel in emergency procedures.
<b>CONDITION 3</b> Situations exist that could develop into a hazardous condition.	1. Review and update procedure for support of area government agencies.	1. Commence increased readiness information to public and Ride Sponsors. 2. Meet with local news media to review METRO's emergency preparedness plans and activity.	1. Review and finalize alert list with department heads. 2. Check readiness of all facilities and departments. 3. Alert key EOC staff members. 4. Begin watch of possible emergency, log activities, and monitor developments. 5. Correct any deficiencies.	1. Check readiness of law enforcement equipment, supplies, and facilities. 2. Correct deficiencies in equipment or facilities. 3. Alert Superintendents and other key personnel. 4. Maintain close contact with Transtar.	1. Designate location and type of equipment in case of immediate request for transportation. 2. Alert Superintendents and other key personnel. 3. Review alert list with all personnel.	1. Correct all deficiencies in equipment and facilities. 2. Review alert list with all personnel. 3. Alert Superintendents and other key personnel.	1. Alert key personnel. 2. Review readiness plans with active contractors. 3. Review alert list with all personnel. 4. Coordinate with contractors for potential use of services and equipment for METRO emergencies.	1. Alert key personnel. 2. Review alert list with all personnel. 3. Review readiness plans.
<b>CONDITION 2</b> Situations exist that have definite characteristics of developing into a hazardous condition.	1. Brief Board Members and Senior Staff of possible emergency. 2. Review assignments of all employees.	1. Maintain contact with local media on activities being performed by METRO to prepare for emergency. 2. Provide readiness info and status of METRO operations to Ride Sponsors and METRO patrons. 3. Provide information as requested on info numbers.	1. Alert EOC Staff. 2. Staff EOC at standby level. 3. Establish contact with Transtar. 4. Prepare to send METRO representative to man Transtar. 5. Alert key METRO personnel of possible emergency duty.	1. Alert personnel of possible emergency duty. 2. Place off-duty personnel on standby. 3. Closely coordinate with Transtar for any requests for assistance (transportation of evacuation). 4. Establish liaison with local police, fire, and EMS organizations.	1. Alert personnel of possible emergency duty. 2. Instruct off-duty personnel to standby. 3. Be prepared to respond to requests and to assist in evacuations.	1. Alert key personnel of possible emergency duty. 2. Place off-duty personnel on standby as required.	1. Alert key personnel of possible emergency duty. 2. Alert contractors of possible emergency situation.	1. Alert key personnel of possible emergency duty. 2. Be prepared to respond to requests from the EOC.

**Figure 6. Organization for Emergencies — “Increased Readiness Conditions” Table from Emergency Management Plan of Metropolitan Transit Authority of Harris County.**

## **PLAYER EVALUATION FORM**

*Please take a few minutes to complete this form. Please use additional sheets of paper for more room and return it to a controller/evaluator during the debriefing session after the exercise or as soon as possible.*

What changes or additions to the current plans and procedures should be made based on your participation in the drill?

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What additional job aids, checklists, etc., would you like to have made available?

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**SAMPLE**

Based on the drill, what additional capabilities/equipment/resources are needed?

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What recommendation do you have to improve future drills and how should lessons learned be shared throughout the organization?

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NAME AND ADDRESS: \_\_\_\_\_

**NOTE:** *This information will be kept confidential, but we may need to contact you for further information.*

**Figure 7. Sample Training Exercise Evaluation Form.**  
Source: *Emergency Exercise Handbook (20)*.

## RESPONSE

The occurrence of an emergency situation, be it a storm, fire, flood, or other threat, triggers the Response phase of emergency management. In the case of rainstorms, floods, and other weather-related emergencies, emergency response teams may have prior warning and therefore the opportunity to begin emergency procedures in advance of the crisis. In other cases, there will be little or no warning. In all emergency situations, constant monitoring and frequent communication will be a necessity, and guidelines established in the Preparedness phase should govern decisions and activities.

The first responder to the scene of an emergency will be responsible for assessing the situation and notifying the appropriate agencies and/or personnel. Pertinent information will include the nature and severity of the emergency, the number of people involved, and the type of emergency services that will be needed. ***Quick reference information*** should be available to all emergency response personnel concerning the contact people within each organization, staging sites, emergency phone and fax numbers, and radio frequencies. Other quick reference information may include notification and other first-responder procedures, evacuation maps and guidelines, and summary information on special procedures for specific hazards (9, 18, 19).

Although the transit agency is not likely to be the primary source for ***public information*** during an area-wide disaster or emergency, transit personnel should be aware of some general guidelines for communicating with the public and the media. Establishment of a transit public relations officer and of basic policies for handling media questions and press releases will help to maximize effective communication with the public (9).

## RECOVERY

After the crisis has passed, the primary objective of the transit agency will be to restore normal transit service. In addition, it may be called upon to assist with cleanup efforts, return of evacuees, and other recovery activities within the community. The emergency management plan should outline and describe the procedures for recovery activities, as well as the steps and criteria for restoring normal transit service. *Critical Incident Management Guidelines (9)* outlines these steps, shown in [Figure 8](#).

- |     |   |
|-----|---|
| 8.  | Determine critical services and prioritize needs  |
| 9.  | Assess damage and determine required resources    |
| 10. | Communicate to appropriate authorities            |
| 11. | Implement critical services                       |
| 12. | Assess feasibility of restoring normal operations |
| 13. | Perform trial runs of normal operations           |
| 14. | Communicate with employees                        |
| 15. | Resume all scheduled service on all routes        |

**Figure 8. Restoring Transit Service (9, pp. 75-76).**

Debriefing, after-action reports, and evaluations of response activities are vital to the continued development and maintenance of the emergency management plan. Lessons learned from each response effort will help to refine the emergency management plan for future situations. After-action reports also include records of equipment, resources, and personnel involved in emergency response activities. These reports will be necessary to determine funding needs, to request state or federal assistance if necessary, and to address replenishment of supplies ([9](#), [16](#), [18](#)).

## DEVELOPING EMERGENCY RESPONSE CAPABILITY

The Integrated Emergency Management System (IEMS) implementation process was developed by FEMA as a framework for building emergency response capability within an agency or a jurisdiction. IEMS is based on the concept of “all-hazards” response: regardless of the specific types of hazards that may be encountered in a particular area, the resulting emergency needs—transportation, evacuation, shelter, and supplies of resources—will be similar. IEMS focuses on these common elements of emergency response, and on the constant assessment and development of an agency’s emergency response capabilities.

The four-phase emergency management concept summarized in the [preceding sections](#) incorporates the 13-step IEMS process, summarized below. IEMS is an iterative process, with each analysis and incident evaluation readjusting the long-term development plan.

1. ***Hazards Analysis***—the identification of all potential hazards that could threaten the community or jurisdiction, and assessment of the potential impact of each hazard. This is part of both the mitigation and the preparedness activities described earlier in this chapter.
2. ***Capability Assessment***—the jurisdiction’s capability for performing the necessary emergency management functions (evacuation, communications, etc.) to respond to the identified hazards. Current capabilities of the system should be compared with FEMA standards, which have been adopted from the National Fire Protection Association’s (NFPA) NFPA-1600, *Recommended Practice for Disaster Management* (21).
3. ***Emergency Operations Plans***—descriptions of the emergency procedures that will be followed in event of any of the identified hazards. The functions described should be common to all emergency response efforts, regardless of the specific hazard involved.
4. ***Capability Maintenance***—updates to the emergency plan, maintenance of equipment, training, and exercises.
5. ***Mitigation Efforts***—where possible, applying codes, ordinances, and other preventative measures to reduce the potential impacts of identified hazards on the jurisdiction’s resources.

6. ***Emergency Operations***—response to actual emergency conditions, carried out according to current plans. This response phase of emergency management is described earlier in this chapter.
7. ***Evaluation***—lessons learned from actual emergency situations; updating capability assessments and capability shortfalls. This is part of the recovery phase described earlier in this chapter.
8. ***Capability Shortfall***—analysis of the difference between optimum (FEMA standard) capabilities and current capabilities.
9. ***Multi-year Development Plan***—scheduling and funding of capability improvements.
10. ***Annual Development Increment***—year-by-year detailed schedule for carrying out the multi-year development plan.
11. ***State/Local Resources***—identification of funding and support available through state and local government for development of emergency response capabilities.
12. ***Federal Resources***—similar to #11; applications for federal support.
13. ***Annual Work Increment***—updating of emergency operations and the multi-year development plan to incorporate improvements in system capabilities (9).

A complete instructional course on IEMS for project managers is available on FEMA's website at <http://www.fema.gov/EMI/is11st.htm>.





## CHAPTER 4. CONCLUSIONS AND FUTURE TASKS

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From both the descriptions of transit agency emergency plans and the examples of plans received to date, it appears that great variation exists in the scope and level of procedural detail of these plans. While a majority of transit agencies in Texas demonstrate the initiative and capability to provide emergency response assistance to their respective cities and counties, a number of them could benefit from information and assistance in further developing aspects of their plans such as interorganizational agreements, training, and evaluation activities. The next phases of this study will explore options for providing this type of information as part of the developed guidance. A proposed outline for the guidebook to be developed in Task 3 follows.

### **Chapter 1. Introduction**

- Transit's roles in emergency management
- Texas legislation on emergency management planning
- Principles of emergency management planning

### **Chapter 2. Mitigation—Minimizing Potential Hazards**

### **Chapter 3. Preparedness—The Emergency Management Plan**

- Risk/hazard assessment
- Transit agency resource assessment
- Identification of emergency response roles
- “Chain of command” and communications
- Interorganizational agreements
- Emergency procedures
- Education, training, and evaluation

### **Chapter 4. Emergency Response**

- Activating emergency response
- Assessing, monitoring, and communications
- Decision-making aids and policies
- Communicating with media and the public

### **Chapter 5. Recovery**

- Restoring normal service and operations
- After-action reports and assessment

### **Chapter 6. Integrated Emergency Management System (IEMS) and Capability Building**

### **Appendix — Emergency Planning Resources**

- Contacts for FEMA, the Texas Division of Emergency Management Planning, and others
- Documents including the FTA's *Critical Incident Management Guidelines* and *Recommended Emergency Preparedness Guidelines for Urban, Rural, and Specialized Transit Systems*



## REFERENCES

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1. “C-TRAN Reacts as Rivers Rise.” *Passenger Transport*, Vol. 54, No. 11, March 11, 1996, p. 11.
2. “C-TRAN Helps Out Community in Emergencies.” *Passenger Transport*, Vol. 55, No. 5, February 3, 1997, p. 4.
3. “Harrisburg’s CAT Activates Snow, Flood Contingency Plans.” *Passenger Transport*, Vol. 54, No. 10, March 4, 1996, p. 4.
4. “Oklahoma City Metro Transit Aids City in Bombing Aftermath.” *Passenger Transport*, Vol. 53, No. 19, May 8, 1995, p. 1.
5. *Public Transit—Lifeline in Time of Community Crisis*. Brochure published by the American Public Transit Association, Washington, D.C., 1992.
6. Fahey, R.M., and Gray, G.E. “Bay Area Emergency Ferry Service: Transportation Relief after the October 17, 1989, Earthquake.” *Transportation Research Record 1297*, Transportation Research Board, Washington, D.C., 1991, pp. 148-161.
7. “Fort Worth Restores Service 72 Hours after Severe Hailstorm.” *Passenger Transport*, Vol. 53, No. 21, May 22, 1995, p. 3.
8. Berlin, S. “Transit Systems, Personnel Rise to Emergencies.” *Passenger Transport*, Vol. 56, No. 50, December 21, 1998, p. 12.
9. Federal Transit Administration, *Critical Incident Management Guidelines*, U.S. Department of Transportation, Report No. DOT-VNTSC-FTA-98-5, 1998.
10. *State of Texas Emergency Management Plan, 1996 Edition*. Texas Department of Public Safety, Division of Emergency Management.
11. *Annex S—Transportation—to the State of Texas Emergency Management Plan, 1996 Edition*. Texas Department of Transportation.
12. *Annex E—Evacuation—to the State of Texas Emergency Management Plan, 1996 Edition*. Texas Department of Transportation.
13. Terrell, Arleeta, Deputy CEO, Jefferson Parish Department of Transit Administration, Gretna, Louisiana. Telephone conversation, October 13, 1998.

14. Comprehensive Emergency Management Plan. Manatee County Government, Emergency Management Division, March 17, 1997,  
[http://www.co.manatee.fl.us/em\\_html/mccemp/plan\\_1.htm](http://www.co.manatee.fl.us/em_html/mccemp/plan_1.htm).
15. “Everyone is Safety-Responsible At Washington’s WMATA,” *Passenger Transport*, Vol. 56, No. 50, December 21, 1998, p. 1.
16. Hathaway, W.T., and Markos, S.H. *Recommended Emergency Preparedness Guidelines for Urban, Rural, and Specialized Transit Systems*. U.S. Department of Transportation, Research and Special Programs Administration, Volpe National Transportation Systems Center, Cambridge, MA, 1991.
17. O’Hare, R. *Tools for Transit Risk-Exposure Identification and Treatment for Bus Systems*, Transit Cooperative Research Program, National Research Council, Washington, D.C., 1996.
18. Kaplan, L. *Emergency and Disaster Planning Manual*, McGraw-Hill, 1996.
19. Waugh, W., and Hy, R. *Handbook of Emergency Management*, Greenwood Press, 1990.
20. Gillis, T.K. *Emergency Exercise Handbook*, PennWell Books, Tulsa, 1996.
21. National Fire Protection Association (NFPA), *NFPA 1600: Recommended Practice for Disaster Management, 1995 Edition*.

## Appendix A. Emergency Management: Metropolitan Transit Authorities.

Transit System	Area-Wide Emergency Plan	Recent Incidents/Activities
Capitol Metro—Austin	Part of EMP for City of Austin; vehicles and drivers available for emergency response requests from other city agencies	Evacuations for apartment complex fires; buses also used as climate-controlled shelters for evacuees, firefighters, and EMS personnel
DART—Dallas	Part of EMP for Dallas; vehicles and drivers available to police, fire, and other departments on request	Evacuations for apartment complex and office fires, gas leaks, and bomb threats
METRO—Houston	Maintains an Emergency Operations Center (EOC) during emergency/disaster situations; METRO police and transit operations work together to carry out evacuations	Flood evacuations (none recently); buses used as shelters for firefighters
RTA—Corpus Christi	Part of city EMP; monitor weather conditions, evacuation assistance, vehicles and drivers available for any emergency situation	Simulation of airport evacuation/medical transport in November 1998
Sun Metro—El Paso	Part of El Paso EMP; evacuation, transport, shelter; traffic control/road blocks; additional sedans for police; communication assistance; weather/road condition monitoring	Have assisted with small incidents; provided transport for firefighters in training scenarios
The T—Fort Worth	Part of Fort Worth EMP	Evacuations, most recently in response to a hailstorm; participate in Fort Worth disaster-planning scenarios
VIA—San Antonio	VIA attends Local Emergency Planning Committee (LEPC) meetings; planning to coordinate with LEPC on emergency plan for major propane release	Transported students away from a haz-mat plume at the school; hurricane evacuations for homeless and others with no access to transportation



## Appendix B. Emergency Management: Rural Transit Providers.

Transit System	Area-Wide Emergency Plan	Recent Incidents/Activities
Alamo Area COG	Future goal	Experience with recent floods prompted the beginnings of a plan for future
Bee Community Action Agency	Bee County Emergency Plan	Hold annual hurricane drills
Brazos Transit	Emergency vehicle-use agreement with counties	
City of Del Rio	Follow Texas state plan	During August flood: transport/evacuation, delivered water
Colorado Valley Transit	Emergency vehicle-use agreement with counties and associated cities	Provided evacuations during recent floods in Wharton; paid for by transit funding
Concho Valley COG—Thunderbird Transit	Not an official part of area plan	During recent storms, other local agencies called Thunderbird Transit to ask what to do
El Paso County	Emergency vehicle-use agreement with County Sheriff's Dept.	
Golden Crescent	Emergency vehicle-use agreement with counties; follow guidelines from the Administration on Aging and the American Red Cross for the evacuation/protection of senior citizens	During floods in Victoria, transit vehicles were not allowed in certain areas due to lack of communication with area emergency personnel
Gulf Coast Center—Connect Transit	Emergency vehicle-use agreement with counties	Chemical spills; hurricane evacuations
Heart of Texas COG	No	During recent ice storm, altered normal routes to provide essential trips for dialysis, etc.
Hill Country Transit District	Emergency vehicle-use agreement with counties	
Hunt County Committee on Aging	Future goal	
Kleburg County	Part of County Action Plan—Kingsville Emergency Planning Group	Hurricane evacuations during past 10 years
Panhandle Community Services	All vehicles that are county or state funded are available for fire department use; held class several years ago to train sheriff's department in operation of vehicles	No—standing by during tornado once but not called in

**Appendix B. Emergency Management: Rural Transit Providers (continued).**

Transit System	Area-Wide Emergency Plan	Recent Incidents/Activities
Parker County Transportation Services	Agreement with county to provide vehicles and drivers for emergency response	Evacuation testing scenario planned with county; drivers have had evacuation training
Rolling Plains Management Corporation	Agreement with counties to provide vehicles and drivers for emergency response	
Services Program for Aging Needs (SPAN)	Firemen take charge of buses during emergencies (cities of Denton and Lewisville)	Participate in county-wide mock disaster scenarios; provided vehicles for evacuation during last year's flooding and during a hotel fire
Texoma COG	Informal emergency vehicle-use agreement with COG	



## Appendix C. Emergency Management: Non-MTA Urbanized Transit Providers.

Transit System	Area-Wide Emergency Plan	Recent Incidents/Activities
City of Arlington—Handi-Tran	City of Arlington emergency plan	Assistance after train derailment
City of Abilene	Abilene EMP—Transportation Annex; quantity and capacity of buses are listed; first resource for evacuation (school buses and private Sunset Stages also listed)	Provided evacuation during chlorine leak in 1996
Beaumont Transit	Part of county EMP; separate agreement with municipal utility company for transport of utility emergency crews in event of large-scale disaster	Evacuations for hotel fires
City of Grand Prairie	As part of city government, transit services have informal agreement with other city departments for vehicles and drivers on request	Assisted Grand Prairie Police Department with evacuation of nursing home residents following a fire
City of Mesquite	Agreement with city to provide vehicles and drivers for emergency response	Evacuation and personnel transport for chemical spill two years ago; standing by one year ago when a gas truck overturned
City of Lewisville	One “backup” bus is kept at the fire station, ready for use for evacuation, transport of resources, etc.	
City of Galveston	STEP program: evacuation services for seniors (65+) and disabled people, by prearranged registration; transit and EMS are involved; funding provided by the city; future of program is uncertain	The system has been tested but not utilized
Laredo Municipal Transit System	Agreement with DPS, county, fire department	Provided evacuation during recent river rising; provided assistance after train derailment
Port Arthur Transit	Part of city’s emergency plan	

**Appendix C. Emergency Management: Non-MTA Urbanized Transit Providers (continued).**

Transit System	Area-Wide Emergency Plan	Recent Incidents/Activities
Temple Transit	Emergency vehicle-use agreement with Temple’s police and fire departments	
Tyler Transit	All available buses in Tyler are on the call list for emergencies: Tyler Transit, school buses, church buses	Mock disaster test is planned for October 1999
Waco Transit	City of Waco EMP—Transportation Annex.; entire transit system may be called to emergency service	Semiannual testing scenarios; actual evacuation of a neighborhood during a recent bomb threat

## Appendix D: Surveyed Transit Systems—Contact Information

Contact	Company	Phone	Fax	Address
<b>MTAs:</b>				
Shayna Davis	Capital Metro	512/389-7425	512/389-0474	2910 East Fifth Street Austin, TX 78702
Linda Watson	Regional Transportation Authority	512/883-2287	512/887-7266	1812 South Alameda Corpus Christi, TX 78404-2933
Roger Snoble	Dallas Area Rapid Transit	214/749-3278	214/749-3655	P.O. Box 660163 Dallas, TX 75266-0163
Joe Acosta	Sun Metro (City of El Paso)	915/533-1220	915/534-5816	700 A. San Francisco El Paso, TX 79901
Deanna Anderson	Fort Worth Transit Authority	817/215-8700	817/871-6217	P.O. Box 1477 Fort Worth, TX 76101
Claude Strickland	Metropolitan Transit Authority	713/739-4831	713/759-9537	P.O. Box 61429 Houston, TX 77208-1429
John Milam	Via Metropolitan Transit	210/362-2000	210/227-0584	P.O. Box 12489 San Antonio, TX 78212
<b>Urban Systems:</b>				
John T. Autry	Citylink	915/676-6403	915/676-6407	1189 S. Second Street Abilene, TX 79602
Judy Phelps	Amarillo Transit Company	806/342-9142	806/376-6616	P.O. Box 1971 Amarillo, TX 79186
Sue Stevens	City of Arlington/Handitran	817/459-5390	817/275-2286	P O Box 231 Arlington, TX 76010
William Munson	Beaumont Transit System	409/835-7895	409/832-3609	500 Milam Beaumont, TX 77701
Veronica Rolen	City of Denton	940/349-8490	940/349-7307	215 E. McKinney Denton, TX 76201
William Segorsky	City of Galveston	409/766-2106	409/763-4847	P.O. Box 779 Galveston, TX 77553
Doan Stephens	City of Grand Prairie	972/237-8319	972/237-8116	P.O. Box 534045 Grand Prairie, TX 75053-4045
Gilbert Segovia	Laredo Municipal Transit System	956/795-2250	956/795-2258	401 Scott Street Laredo, TX 78040
Wayne Martin	City of Lewisville	972/219-3780	972/219-3487	P.O. Box 299002 Lewisville, TX 75029-9002
Roxanne Pitts	City of Longview / East Texas Council of Governments	903/984-8641	903/237-1009	3800 Stone Road Longview, TX 75662
Chris Phelps	Citibus	806/767-2380	806/767-2387	P.O. Box 2000 Lubbock, TX 79457

Contact	Company	Phone	Fax	Address
<b>Urban Systems (continued):</b>				
Susan Skiles	City of Mesquite	972/216-6411	972/216-8102	P.O. Box 850137 Mesquite, TX 75185-0137
Tom Kestranek	City of Port Arthur Port Arthur Transit	409/983-8767	409/983-8291	P.O. Box 1089 Port Arthur, TX 77640
Robert Wood	Texoma Council of Governments	903/813-3534	903/813-3539	3201 Texoma Parkway Suite 240 Sherman, TX 75090
Ed Kabobel	Temple Transit	254/298-5603	254/298-5637	Municipal Building 2 North Main Temple, TX 76501
Kevin Tyer	City of Tyler Tyler Transit System	903/531-1202	903/531-9418	412 West Locust Street Tyler, TX 75702
Kirk Scott	Waco Transit System	254/753-0113	254/753-8878	421 Columbus Ave. Waco, TX 76701
<b>Non-Urban Systems:</b>				
Gloria Ramos	Rural Economic Assistance League	512/668-3158	512/664-9695	301 Lucero Alice, TX 78332
Bob Whorton	Panhandle Community Services Inc.	806/372-2531	806/373-4351	P.O. Box 32150 Amarillo, TX 79120
B.P. Loya	Bee County Community Action Agency	512/358-5530	512/358-8947	P.O. Box 1540 Beeville, TX 78104
Margie Lewis	Brazos Transit System	409/779-7443	409/822-7758	504 E. 27th Street Bryan, TX 77803-4025
Will Evrard	Central Texas Opportunities Inc.	915/625-4167 x20	915/625-5044	P.O. Box 820 Coleman, TX 76834
Claudia Wickes	Colorado Valley Transit	409/732-6281	409/732-6283	P.O. Box 940 Columbus, TX 78934
Claudia Cowley	Caprock Community Action Assoc.	806/675-7307	806/675-2291	224 S. Berkshire Crosbyton, TX 79322
Jerry McMillan	Rolling Plains Management Corp.	800/633-0852	940/684-1718	P.O. Box 490 Crowell, TX 79227
Elsa Reyes	City of Del Rio	830/774-8571	830/703-5304	P.O. Box 4239 Del Rio, TX 78441
Erika Lissberger	SPAN Inc.	817/382-2224	817/383-8433	1800 Malone Denton, TX 76201-1746
David Marquez	County of El Paso	915/543-3848	915/546-2198	500 E. San Antonio Street Room 314 El Paso, TX 79901
Marty Hunter	Gulf Coast Center	409/763-2373	409/763-5538	P.O. Box 2490 Galveston, TX 77553
Barbara Perry	The Transit System, Inc.	254/897-2964	254/897-7922	P.O. Box 332 Glen Rose, TX 76043

Contact	Company	Phone	Fax	Address
<b>Non-Urban Systems (continued):</b>				
Sally A. Chavarria	Hunt County Committee on Aging	903/454-1444	903/454-4150	3720 O'Neal Street Greenville, TX 75401
Sandra Larsen	Kleberg County Human Services	512/595-8572	512/595-8578	720 E. Lee Kingsville, TX 78363
Janet Everheart	West Texas Opportunities, Inc.	806/872-8354	806/872-5816	P O Box 1308 Lamesa, TX 79331
Ed Casper	Collin County Committee on Aging	972/542-0106	972/542-3822	P O Box 396 McKinney, TX 75069
Reta Imboden	Palo Pinto County Transportation Council	817/328-1391	817/328-1392	P O Box 1055 Mineral Wells, TX 76068
Robert W. Stephens	Concho Valley Council of Governments	915/944-9666	915/944-9925	P O Box 60050 San Angelo, TX 76906
Jeannie Sagebiel	Alamo Area Council of Governments	210/362-5200	210/225-5937	118 Broadway, Suite 400 San Antonio, TX 78205
Ven Hammonds	Texoma Area Paratransit	903/893-4601 x222	903/893-4766	6104 Texoma Parkway Sherman, TX 75090
Irene Quilimaco	San Patricio County Community Action Agency	512/364-4290	512/364-5842	512 E. Sinton Sinton, TX 78387
Robert Fudge, P.E.	South Padre Island	956/761-6456	956/761-1659	P.O. Box 3410 South Padre Island, TX 78597
James C. Fisher	Ark-Tex Council of Governments	903/832-8636	903/832-3441	P.O. Box 5307 Texarkana, TX 75505
Lisa Cortinas	Golden Crescent Regional Planning Commission	512/578-1587	512-578-8865	P.O. Box 2028 Victoria, TX 77902
Jim Hart	Heart of Texas Council of Government	254/756-7822	254/756-0102	300 Franklin Avenue Waco, TX 76701-2244
Reagan Calhoun	Parker County Transportation Svc.	817/613-8729	817/599-7433	P.O. Box 1236 Weatherford, TX 76086