

# **ANNEX K**

# **PUBLIC WORKS & ENGINEERING**



**CITY OF PHARR, TEXAS**

# APPROVAL & IMPLEMENTATION

## Annex K

### PUBLIC WORKS & ENGINEERING

Electronically Submitted by: \_\_\_\_\_  
Public Works Director

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Date

  
\_\_\_\_\_  
EMC Signature

07/18/15  
Date



# **ANNEX K**

## **Public Works & Engineering**

### **I. AUTHORITY**

See Section I of the Basic Plan for general authorities.

Texas Government Code, Section 418.023, Clearance of Debris.

### **II. PURPOSE**

The purpose of this annex is to outline the local organization, operational concepts, responsibilities, and procedures to accomplish coordinated public works and engineering activities during emergency situations.

### **III. EXPLANATION OF TERMS**

#### **A. Acronyms**

DPS	Texas Department of Public Safety
EOC	Emergency Operations Center
EMC	Emergency Management Coordinator
FEMA	Federal Emergency Management Agency
GDEM	Governor's Division of Emergency Management
IC	Incident Commander
ICP	Incident Command Post
ICS	Incident Command System
NIMS	National Incident Management System
NRP	National Response Plan
SAR	Search and Rescue
SOP	Standard Operating Procedures
TAHC	Texas Animal Health Commission
DSHS	Texas Department of State Health Services
TCEQ	Texas Commission on Environmental Quality
TDSR	Temporary Debris Storage and Reduction
TRRN	Texas Regional Resource Network
TxDOT	Texas Department of Transportation

#### **B. Definitions**

1. Debris Clearance. Clearing roads of debris by pushing debris to the roadside.
2. Debris Disposal. Placing mixed debris and or the residue of debris volume reduction operations into an approved landfill.
3. Debris Removal. Debris collection and transport to a temporary storage site for sorting and/or volume reduction or to a permanent disposal site. Debris removal also includes damaged structure demolition and removal.

## **IV. SITUATION & ASSUMPTIONS**

### **A. Situation**

1. See the general situation statement and hazard summary in Section IV.A of the Basic Plan.
2. This jurisdiction anticipates emergency situations may occur which threaten public health, safety, and property. An emergency situation of this nature may require emergency public works and engineering services.

### **B. Assumptions**

1. Employing public works and engineering personnel and equipment during pre-disaster operations should minimize disaster damage. Advance preparation of personnel and equipment may also hasten restoration efforts.
2. Local departments are responsible for the public works and engineering function may have insufficient resources to remove the debris created by a major emergency or disaster and accomplish other recovery tasks.
3. Public works & engineering departments and departments are expected to accomplish expedient repair and restoration of essential services and vital facilities. Dependent on the scale of the operation(s), major reconstruction initiatives will likely require contract assistance.
4. Public works and engineering will be able to organize and carry out debris clearance in the aftermath of an emergency. Large scale debris and/or hazardous material operations, however, will likely require external assistance.
5. Private construction companies, engineering firms, and equipment rental contractors have staff and equipment resources that may be contracted to carry out public works and engineering activities during emergency situations. However, local government may have to compete with businesses and individuals seeking those resources for repairs or rebuilding.
6. Assistance may be available from other jurisdictions through inter-local agreements and from commercial firms through contingency contracts. Some types of emergency situations, including earthquakes, hurricanes, and floods may affect large areas, making it difficult to obtain assistance from usual sources.
7. Damage to chemical plants, power lines, sewer and water distribution systems, and secondary hazards, such as fires, may result in health and safety hazards. These hazards could pose a threat to public works and engineering personnel and impede operational capabilities.
8. Alternate disposal methods and facilities may be needed as local landfills and waste disposal facilities may prove inadequate to deal with large amounts of debris. Special considerations must be made if the debris has been contaminated with chemicals or petroleum products.
9. If local capabilities prove inadequate to deal with a major emergency or disaster, state, and/or federal resources will be available to assist in debris removal and restoration of essential services.

## **V. CONCEPT OF OPERATIONS**

### **1. A. General**

The general public works and engineering tasks to be performed during emergency situations include:

1. For slowly developing emergency situations, take actions to protect government facilities, equipment, and supplies prior to the onset of hazardous conditions.
2. Provide heavy equipment support for search and rescue operations.
3. Conduct damage-assessment surveys of public facilities, roads, bridges, and other infrastructure.
4. Inspect damaged structures along with other departments.
5. Clear debris from roadways and make repairs to reopen transportation arteries.
6. Make expedient repairs to essential public facilities to restore operations or protect them from further damage.
7. Help manage the removal of debris from public property and debris disposal operations for public and private property.
8. Assist in controlling public access to hazardous areas.

### **1. B. Protecting Resources and Preserving Capabilities**

1. Public works and engineering resources may be employed during slow developing emergency situations to protect and limit damage to government facilities, equipment, and essential utilities. Protective actions may include sandbagging, building protective levees, ditching, installing protective window coverings, or removing vital equipment. Public works and engineering elements are expected to identify buildings and other infrastructure that will benefit from protective measures and, in coordination with the departments or agencies that occupy those facilities, carry out necessary protective actions.

2. If time permits, public works and engineering elements are also expected to take action in advance of an emergency situation to preserve response and recovery capabilities by protecting vital equipment and supplies, either in place or by relocating them to a safe location. It is desirable for agencies to enter into advanced agreements with other agencies or jurisdictions to ensure the safety and security of vital equipment and resources.

### **C. Search & Rescue (SAR) Support**

Public works and engineering crews may be required to provide heavy equipment support for search and rescue operations, particularly support for search operations in collapsed buildings.

### **D. Damage Assessment**

1. Public works and engineering will work with other city departments to do damage assessments of public buildings, homes, businesses, roads, bridges, and other infrastructure following a disaster. Damage assessment procedures and forms used in the assessment processes are discussed in Debris Management Plan, Annex J, Recovery.
2. City personnel shall inspect damaged structures. Inspections are conducted to identify unsafe structures and, if necessary, take actions to restrict entry and

- occupancy until the structures can be made safe.
3. Damaged buildings posing an immediate threat to public health and safety should be appropriately posted to restrict public access pending repairs or demolition by building officials.

#### **E. Debris Clearance and Removal**

*See Appendix 2, Debris Management Plan*

#### **F. Temporary Repairs and Restoration**

1. The public works, engineering and other city staff is expected to make timely temporary repairs to government-owned buildings and other infrastructure essential to emergency response and recovery operations. Building contents should be removed or restricted until the restoration process is complete. Personnel should coordinate with building occupants to determine which areas and equipment have the highest priority for protection.
2. Hazardous situations may result in damage to computers storing vital government records and/or hard copy records, such as building plans, legal documents, tax records, and other documents. When computers or paper records are damaged, it is essential to obtain professional technical assistance for restoration as soon as possible.
3. It is generally impractical to restore buildings sustaining major damage during the emergency response phase. Major repairs will normally be postponed until recovery operations commence and will typically be performed by contract personnel.

#### **G. Actions by Phases of Emergency Management:**

1. Prevention
  - a. Identify vulnerabilities of existing public buildings, roads, bridges, water systems, and sewer systems to known hazards and take steps to lessen vulnerabilities.
  - b. Reduce vulnerability of new public facilities to known hazards through proper design and site selection.
  - c. Develop plans to protect facilities and equipment at risk from known hazards.
  - d. Install emergency generators in key facilities and have portable generators available to meet unexpected needs. Ensure procedures are in place to maintain and periodically test back-up sources of power, such as generators and fuel, in the event of an emergency power loss.
2. Preparedness
  - a. Ensure government buildings, roads and bridges, and public works equipment are in good repair.
  - b. Ensure an adequate number of personnel are trained to operate heavy equipment and other specialized equipment.

- c. Stockpile materials needed to protect and repair structures, roads, bridges, and other infrastructure.
- d. Develop general priorities for clearing debris from roads.
- e. Maintain an adequate quantity of barricades and temporary fencing.
- f. Maintain current maps and plans of government facilities, roads, bridges, and utilities.
- g. Review plans, evaluate emergency staffing needs in light of potential requirements, and make tentative emergency task assignments.
- h. Establish and train damage survey teams.
- i. Execute contingency contracts for emergency equipment and services with local contractors and execute agreements with individuals and businesses to borrow equipment.
- j. Develop procedures to support or accomplish the tasks outlined in this annex.
- k. Ensure government-owned vehicles and other equipment can be fueled during an electrical outage.

### 3. Response

- a. If warning is available, take actions to protect government facilities and equipment.
- b. Survey areas affected by a hazard, assess damage, and determine the need and priority for expedient repair or protection to prevent further damage. Report damage assessments to the EOC.
- c. Upon request, provide heavy equipment support for SAR operations. See Annex R, Search and Rescue.
- d. Clear roads of debris. **See Appendix 2. (Debris Management Plan)**
- e. Inspect damaged buildings to determine if they are safe for occupancy.
- f. Remove debris from public property and manage proper debris disposal. See Appendix 2.
- g. Make repairs to damaged government facilities and equipment, as needed.
- h. Coordinate with the Energy & Utilities staff to arrange for emergency electrical service, if required, to support emergency operations.
- i. Assist the Water & Sewer Department/Utility Department/other in making emergency repairs to government-owned utility systems, as necessary. See Annex L, Utilities.
- j. Restrict access to hazardous areas, using barricades and temporary fencing, upon request.

4. Recovery
  - a. Repair or contract repairs to government-owned buildings, roads, bridges, and other infrastructure.
  - b. Support community clean up efforts, as necessary.
  - c. Participate in compiling estimates of damage and response and recovery costs.
  - d. Participate in post-incident review of emergency operations and make necessary changes to improve emergency plans and procedures.

## **VI. ORGANIZATION & ASSIGNMENT OF RESPONSIBILITIES**

### **A. Organization**

1. The function of public works and engineering during emergency situations shall be carried out in the framework of our normal emergency organization described in Section VI.A of the Basic Plan, and in accordance with National Incident Management System (NIMS)/National Response Plan (NRP) protocols. Preplanning for emergency public works and engineering tasks shall be conducted to ensure staff and procedures needed to manage resources in an emergency situation are in place.
2. During an Incident of National Significance or Disaster Declaration under the Stafford Act Public Assistance Program, Public Works and Engineering may integrate, as required, with the National Response Plan (NRP), Emergency Support Function (ESF) #3 activities. The Federal ESF #3 will develop work priorities in cooperation with state, local, and/or tribal governments and in coordination with the Federal Coordinating Officer and/or the Federal Resource Coordinator. (See Annex 3, Public Works and Engineering – National Response Plan).

### **B. Assignment of Responsibilities**

1. The Public Works Director will serve as the Public Works Officer during emergencies and will:
  - a. Coordinate certain pre-emergency programs to reduce the vulnerability of local facilities and other infrastructure to known hazards. See Annex P, Hazard Mitigation.
  - b. Manage the public works and engineering function during emergency situations in accordance with the NIMS.
  - c. Oversee the restoration of key facilities and systems and debris removal following a disaster.
  - d. Develop and implement procedures to ensure a coordinated effort between the various local departments and agencies that perform the public works and engineering functions. Ensure appropriate emergency response training for assigned personnel in accordance with Section IX.D of the Basic Plan.
  - e. Identify contractors who can provide heavy and specialized equipment support during emergencies and individuals and businesses that may be willing to lend

equipment to local government during emergencies and make initial contact with them.

f. Assist the Resource Manager in maintaining a current list of public works and engineering resources. See Annex M, Resource Management. [In an effort to facilitate assistance pursuant to mutual aid agreements, our available resources are typed according to NIMS and a part of the Texas Regional Response Network (TRRN).]

g. Maintain this annex.

2. The Public Works Department will:

a. Carry out pre-disaster protective actions for impending hazards, including identifying possible facilities for debris storage and reduction.

b. Conduct damage assessments in the aftermath of disaster.

c. Repair and protect damaged government facilities along with other departments.

d. Provide heavy and specialized equipment support for SAR operations.

e. Carry out debris clearance and removal management. See Appendix 2.(Debris Management Plan).

f. With the assistance of the Legal Officer, negotiate inter-local agreements for public works and engineering support.

g. Maintain stockpiles of disaster supplies such as sandbags, plastic sheeting, and plywood.

3. The City Engineer will:

a. Develop damage assessment procedures and provide training for damage survey teams.

b. Provide engineering services and advice to the Incident Commander and EOC staff.

c. Assist in conducting damage assessments in the aftermath of an emergency. See Annex J, Recovery.

d. Safeguard vital engineering records.

4. Transportation Department will:

a. Maintain reasonable stockpiles of emergency paving materials.

b. Make emergency repairs to city roads, bridges, culverts, and drainage systems.

c. Supervise debris clearance from the public right-of-way and support debris removal operations.

- d. Emplace traffic control devices where needed for public safety.
  - e. Provide personnel and equipment to aid in SAR operations as needed.
  - f. Provide heavy equipment support for protective actions taken prior to an emergency and for response and recovery operations.
  - g. Assist in repairs to government-owned utilities and drainage systems.
5. The Inspection Department/other will:
- a. Support damage assessment operations.
  - b. Determine if access to damaged structures should be restricted or if they should be condemned and demolished.
  - c. Inspect expedient shelter and mass care facilities for safety.
6. Parks and Recreation Department will:
- a. Assess damage to parks and recreation facilities and assist in assessing damage to other facilities; and support damage assessment operations.
  - b. Provide personnel and light equipment support for public works and engineering operations.
  - c. Upon request, establish and staff a facility to sort and catalog property removed from damaged government-owned facilities.

## **VII. DIRECTION & CONTROL**

**A.** The Mayor shall, pursuant to NIMS, provide general guidance for the public works and engineering function and, when necessary, approve requests for state or federal resources.

**B.** The Incident Commander (IC) will manage public works and engineering emergency resources committed to an incident site and shall be assisted by a staff commensurate with the tasks to be performed and resources committed to the operation. If the EOC is not activated, the IC may request additional resources from local departments and agencies. The IC may also request authorized officials to activate mutual aid agreements or emergency response contracts to obtain additional resources.

**C.** The EOC will be activated for major emergencies and disasters. When the EOC is activated, the Public Works Officer will manage the emergency public works and engineering function from the EOC. The IC shall direct resources committed to the incident site and coordinate resource requests through the Public Works Officer. The Public Works Officer shall manage resources not committed to the incident site and coordinate the provision of additional resources from external sources.

**D.** The Public Works Officer will respond to mission priorities established by the IC or the EMC/EOC Supervisor, direct departments and agencies with public works and engineering resources to accomplish specific tasks, and coordinate task assignments to achieve overall

objectives.

**E.** The Public Works Officer will identify public and private sources from which needed resources can be obtained during an emergency and coordinate with the Resource Manager to originate emergency procurements or to obtain such resources by lease, rental, borrowing, donation, or other means.

**F.** A major emergency or disaster may produce substantial property damage and debris requiring a lengthy recovery operation. In such incidents, it may be desirable to establish a Debris Removal Task Force to manage debris removal and disposal. The task force may continue to operate even after the EOC deactivates. See Appendix 2 for the organization and responsibilities of this element.

**G.** Normal supervisors of public works and engineering personnel participating in emergency operations will exercise their usual supervisory responsibilities over assigned personnel, subject to NIMS span of control guidelines. Organized crews from other jurisdictions responding pursuant to inter-local agreements will normally operate under the direct supervision of their own supervisors. Individual volunteers will work under the supervision of the individual heading the team or crew to which they are assigned.

**H.** The line of succession for the Public Works Director is:

1. Assistant Director
2. Field Supervisor
3. Field Personnel

## **VIII. READINESS LEVELS**

### **A. Readiness Level IV - Normal Conditions**

See the mitigation and preparedness activities in Section V.G.

### **B. Readiness Level III - Increased Readiness**

1. Review Debris Management Plan and other procedures
2. Inform key city personnel of responsibilities.
3. Monitor the situation.
4. Check equipment readiness and correct deficiencies.
5. Check emergency supply status and fill shortfalls.

### **C. Readiness Level II - High Readiness**

1. Monitor the situation.
2. Alert key personnel for possible emergency duty.
3. Increase short-term readiness of equipment if possible.
4. Review inter-local agreements and contracts for resource support and alert potential resource providers of possible emergency operations.
5. Identify personnel to staff the ICP and EOC.

#### **D. Readiness Level I - Maximum Readiness.**

1. Mobilize selected public works and engineering personnel.
2. Implement plans to protect government facilities and equipment.
3. Ensure equipment is loaded and fueled; consider precautionary deployment of resources.
4. Dispatch personnel to the ICP and EOC when activated.
5. Advise resource suppliers of situation.
6. Continue to monitor the situation.

### **IX. ADMINISTRATION & SUPPORT**

#### **A. Resource Support**

1. A listing of local public works and engineering equipment is provided in Annex M, Resource Management.
2. Should our local resources prove to be inadequate during an emergency; requests will be made for assistance from other local jurisdictions, other agencies, and industry in accordance with existing mutual-aid agreements and contracts.
3. If the public works and engineering resources available locally, from other jurisdictions, and from businesses pursuant to contracts are insufficient to deal the emergency situation, assistance may be requested from the State. The [County Judge/Mayor] should approve requests for state aid, which should be forwarded to the Disaster District Committee (DDC) Chair in McAllen. Cities must request resource support from their county before requesting assistance from the State in accordance with Section V.F of the Basic Plan.

#### **B. Communications**

The public works and engineering communications network is depicted in Appendix 1.

#### **C. Key Facilities**

A listing of key local facilities, providing a general priority for damage assessment, debris clearance, and repair, is contained in Annex G, Law Enforcement. The IC/EMC/EOC Supervisor shall determine the specific priority for public works and engineering work on each of these facilities in the aftermath of an emergency.

#### **D. Reporting**

In addition to reports that may be required by their parent organization, public works and engineering departments and agencies participating in emergency operations should provide appropriate situation reports to the IC, or if an incident command operation has not been established, to the EOC. The IC will forward periodic reports to the EOC. Pertinent information will be incorporated into the Initial Emergency Report and periodic Situation Reports. The essential elements of information for the Initial Emergency Report and the Situation Report are outlined in Appendices 2 and 3 to Annex N (Direction and Control).

## **E. Records**

Expenses incurred in carrying out emergency response and recovery operations for certain hazards may be recoverable from the responsible party, insurers, or as a basis for requesting reimbursement for certain allowable costs from the state and/or federal government. Hence, all public works and engineering elements will maintain detailed records of labor, materials, equipment, contract services, and supplies consumed during large-scale emergency operations.

## **F. Post Incident Review**

For large-scale emergency operations, the Mayor, City Manager, and/or EMC shall organize and conduct an after action critique of emergency operations in accordance with the guidance provided in Section IX.F of the Basic Plan. The After Action Report will serve as the basis for an Improvement Plan.

## **X. ANNEX DEVELOPMENT & MAINTENANCE**

**A.** The City Public Works Director is responsible for developing and maintaining this annex.

**B.** This annex will be reviewed annually and updated in accordance with the schedule outlined in Section X of the Basic Plan.

**C.** Departments and agencies assigned responsibilities in this annex will develop and maintain SOPs covering those responsibilities.

## **XI. REFERENCES**

**A.** DEM, Texas Disaster Recovery Manual.

**B.** FEMA, Public Assistance Debris Management Guide (FEMA-325).

**C.** FEMA, State and Local Guide for All-Hazard Emergency Operations Planning (SLG-101).

**D.** FEMA, Reducing Losses in High Risk Flood Hazard Areas: A Guidebook for Local Officials (FEMA-116).

## **APPENDICES:**

Appendix 1 Debris Management  
Appendix 2 Debris Management Plan  
Appendix 3 Public Works Resources

## **Appendix 1: DEBRIS MANAGEMENT**

### **1. Objectives**

The objectives of debris management in the aftermath of an emergency are to:

- A. Reopen roads and provide access to facilities that provide essential support services.
- B. Remove debris from public property.
- C. Assist citizens in removing debris from private property through debris removal contractor.
- D. Reduce the volume of debris going to disposal facilities to extend the life of those facilities and reduce costs.
- E. Ensure hazardous materials are segregated from other debris and properly disposed of.

### **2. Explanation of Terms**

A. Debris is the remains of things destroyed or damaged as a result of natural or man-made disasters. Disaster debris may include yard waste, building materials, household items, personal property, hazardous household products, batteries, automobiles, boats, hazardous chemicals, spoiled food, dead animals, and other materials. Some types of debris pose a threat to health, safety, and the environment.

B. Categorization of Debris. There are a variety of schemes for categorizing debris. In this appendix, the following categorization is used:

1) Burnable Materials, which include:

- a) Burnable Natural Debris – generally trees, shrubs, and vegetation
- b) Burnable Construction and Demolition (C&D) Debris – wooden structural members and other wood products such as roof decking, siding, doors

2) Non-burnable Debris – plastic, glass, metal, sheet rock, roofing shingles, carpet, tires, treated lumber, bricks, concrete, soil, and similar items. Household waste is a type of non-burnable debris.

3) Hazardous Debris – industrial and household hazardous waste, paint, materials containing asbestos, batteries, petroleum products, agricultural chemicals, dead animals, and similar products.

### **3. Situation & Assumptions**

A. Situation

1) The type and quantity of debris generated by an emergency situation is a function of the type of event, the location of impact, and the magnitude, intensity, and duration.

2) The quantity and type of debris generated, its location, and the size of the area

over which it is spread affect the choice of removal and disposal methods, the costs incurred in doing so, and the time it will take to accomplish the task.

B. Assumptions

- 1) Emergency situations requiring debris removal may occur at any time.
- 2) Local government may have insufficient resources to remove debris created by a major emergency or disaster and accomplish other recovery tasks.
- 3) If local debris removal capabilities are insufficient, the chief elected official may issue a local disaster declaration and request State assistance in debris removal. If the local emergency situation is of such magnitude that the Governor requests a Presidential Disaster Declaration and such a declaration is approved, federal resources could become available.
- 4) For major emergencies or disasters, private contractors may be needed to collect, reduce the volume of, and dispose of debris.
- 5) Citizens should assist in removing debris from the immediate area of their homes and businesses, but will generally need government assistance in removing it for disposal.
- 6) Citizens are often willing to help their neighbors in removing debris. Proper public information can encourage such cooperative action, speeding up the process and reducing costs.

4. **Concept of Operations: Debris Management Plan**

A. Phased Approach. Debris management shall be conducted in phases, including:

- 1) Phase 1 - Emergency Roadway Clearance (see "street clearance") Appendix 2
  - a) Following a disaster, the top priority is to clear major roads and routes providing access to key population support facilities such as hospitals, to allow for the movement of emergency vehicles, resumption of critical services, and damage assessment. Emergency roadway clearance also facilitates the deployment of external response elements and delivery of emergency equipment and supplies. In initial roadway debris clearance, debris is normally pushed to the side of the road with no attempt to remove or dispose of it.
  - b) Local government is responsible for clearing city streets, county roads, and their rights of way. The Texas Department of Transportation (TxDOT) is responsible for clearing state and federal highways and the rights of way for such highways along with debris disposal resulting from the clearing process.
  - c) In this phase, crews equipped with chain saws will generally be required to cut up downed trees and heavy equipment will be needed to move the remains. If possible, heavy equipment used for moving debris should be equipped with protective cabs and all personnel should wear protective equipment. Fire hydrants, driveway cutouts, and utility valves should be left unobstructed.
  - d) Electrical systems are often damaged by the same hazards that create

substantial debris, public works and engineering crews may need to coordinate their efforts to remove debris with utility crews.

2) Phase 2 – Debris Removal and Disposal (see Debris Management Plan)

a) Debris Removal from Public Property.

(1) In the aftermath of a disaster, it may be necessary to remove debris from a variety of public property, including:

- (a) Roads and rights of way.
- (b) Government buildings, grounds, and parking lots.
- (c) Parks and recreation facilities.
- (d) Storm drainage systems and reservoirs.

(2) If the emergency situation resulted in a Presidential Disaster Declaration, the expense of debris removal from public property may be partially reimbursed by the federal government if the debris must be removed to:

- (a) Eliminate immediate threats to life, public health and safety.
- (b) Eliminate immediate threats of significant damage to improved public or private property.
- (c) Ensure economic recovery of the affected community.

Large-scale debris removal and disposal operations can be extremely costly. It is vital to determine if federal assistance will be provided and the rules that apply to such assistance before commencing debris removal operations. See the DEM *Texas Disaster Recovery Manual* for further information.

(3) State law provides that state resources may not be used to clear or remove debris from local public property unless the local government presents the State an unconditional authorization for removal.

b) Debris Removal from Private Property.

(1) Debris removal from private property, including demolishing condemned structures, is generally the responsibility of the property owner, and the cost may be wholly or partly covered by insurance. If there has been a Presidential Disaster Declaration and debris on private property is so widespread that public health, safety, or the economic recovery is threatened, local government may be partially reimbursed for the cost of debris removal from private property. Local government normally has responsibility for picking up and disposing of debris from private property placed at the curb and bears the cost of that effort.

(2) When the Governor has issued a disaster declaration for an emergency situation, § 418.023 of the Government Code law provides that state resources may be used to remove debris from private property. As a general rule, the property owner must authorize removal of debris, grant unrestricted access, and indemnify the state against any claim resulting from the removal. As the Executive Order of the Governor Relating to Emergency Management provides that county judges and mayors who have issued a local disaster declaration may exercise the emergency

powers of the Governor on an appropriate local scale, local governments may remove debris from private property subject to the same conditions cited above. Attachment 1 to this appendix provides a sample Debris Removal Access Agreement that should be used to meet statutory requirements.

B. Preparation for Debris Removal (see Debris Management Plan)

Considerable time and labor can be saved in the debris removal process by sorting debris from public property and encouraging the public to sort debris from private property before it is picked up. A proactive public outreach program should advise the public of the actions they can take to facilitate pickup, including:

- 1) Sorting debris into categories – burnable natural debris, burnable construction and demolition debris, non-burnable debris, and potentially hazardous debris.
- 2) Placing sorted debris piles at curbside.
- 3) Keeping debris off roadways and away from fire hydrants and utility valves.
- 4) Disposing of household waste in normal refuse containers.

C. Estimating the Amount of Debris

In determining the means to be used to remove and dispose of debris, it is essential that local officials have a reasonable estimate of the amount of debris that must be removed and eventually disposed of. Attachment 3 to this appendix provides a methodology that may be used to estimate the amount of debris that must be removed.

D. Determining Debris Removal Strategy

1) After an estimate of the amount of debris that needs to be removed is made, options for removing the debris should be evaluated in terms of their cost and timeliness.

2) The general strategies for debris removal and processing are:

a) Removal and processing of debris by local government.

(1) Advantages:

Direct government control.

(2) Disadvantages:

Normally requires diversion of significant government resources from regular functions and makes them unavailable for other recovery tasks. Speed of debris removal may be constrained by the government equipment and personnel available.

Local government may lack specialized equipment and skills needed to carry out all aspects of debris removal.

b) Removal and processing of debris by contractors.

(1) Advantages:

Speed of debris removal may be increased by contracting for additional resources.

If local contractors are used, may provide local economic benefit.

(2) Disadvantages:  
Requires detailed contracts.  
Requires extensive oversight and inspection.

c) Removal and processing of debris by a combination of local government and contractors.

3) If contractors are used, the disaster area should be divided into geographic sectors for control purposes and bids solicited based on the estimated quantity of debris in each sector. In defining sectors, it is desirable to group properties of like type, construction, and with similar vegetation together. This will also facilitate estimating the quantity of debris that needs to be removed.

4) Debris may be removed by one time collection of all debris at each property or using multiple passes to collect different types of material that have been pre-sorted by the property owner.

E. Establishing Temporary Debris Management Sites/Debris Storage and Reduction (DMS/TDSR) Facilities.

1) The effective disposal of large quantities of disaster debris requires that suitable temporary storage and volume reduction facilities be established. Such facilities hold debris until it can be sorted, reduced in volume, and dispatched to an appropriate disposal facility. Sorting and volume reduction can significantly reduce the costs of disposing of debris and prevent potentially serious environmental problems.

2) Sorting. DMS/TDSR facilities sort debris and send it to the most appropriate facility for treatment or disposal. Sorting is needed to separate burnable from non-burnable materials and segregate hazardous products for disposal at authorized facilities and identify debris that can be burned, chipped or ground, recycled, or simply disposed of at a landfill without treatment.

3) The volume of debris can be greatly reduced by a variety of methods, including:

a) Incineration. This method includes open burning, use of air curtain pit incineration (trench burners), or use of portable air curtain incinerators. Incineration of burnable debris typically reduces its volume by 95 percent.

b) Chipping and grinding. Chipping and grinding is appropriate for clean, woody debris and typically reduces its volume by 75 percent. However, chipping and grinding normally costs as much as incineration and unless the resulting mulch can be disposed of without cost or at a profit, local government may incur additional costs to have the residual material hauled to a landfill.

c) Recycling. Recycling debris may present an opportunity to reduce the overall cost of disposal. Metals, lumber, and soil are the most likely candidates for recycling. Before local government attempts to operate a recycling operation, it is essential to determine if there is, in fact, a market for the materials sorted out in the recycling process; otherwise the output may simply have to be hauled to a landfill. Specialized contractors may be willing to undertake recycling, particularly if it involves large amounts of well sorted debris.

4) Site Selection (See Debris Management Plan)

a) Criteria pertinent to selecting DMS/TDSR facilities are:

- (1) Preferably government-owned.
- (2) Large enough to accommodate a storage area, a sorting area, and volume reduction operations area(s).
- (3) Reasonable proximity to disaster areas and debris disposal sites.
- (4) Good road access.
- (5) Not in a residential area or in the vicinity of schools, churches, or other facilities with concentrations of population.
- (6) Not in an environmentally sensitive area, such as wetlands or a water well field.

b) Local landfills and possible local sites for TDSR facilities are described in Attachment 2 to this appendix. The selection of specific sites to be used for TDSR facilities will normally be made by a team of local, state, and, where appropriate, federal personnel, who are familiar with the local area and the specific environmental regulations governing such facilities. Attachment 3 to this appendix provides methods for determining space requirements for TDSR sites and estimating the quantity of debris that must be disposed of after processing.

F. Public Information and Instructions (See Debris Management Plan)

1) In the aftermath of an emergency situation, the Public Information staff should provide the public detailed information on debris removal and disposal plans and procedures. Providing appropriate instructions to the public concerning debris removal can significantly reduce the time and costs involved. Public information on debris removal must start as soon as possible after the disaster – before people start moving and stacking large amounts of debris.

2) Public instructions should encourage citizens to:

- a) Assist their neighbors, particularly the elderly or infirm, in removing debris.
- b) Move debris to curbside for pickup.
- c) Separate debris into the categories determined by local officials.
- d) Keep debris piles away from fire hydrant and utility valves.

3) Public information should keep citizens advised of:

- a) Debris pickup schedules and the system of pickup, if various types of debris will be picked up on different days.
- b) Self help disposal guidelines for citizens and businesses that wish to haul their own debris to a debris storage area or landfill.

4) The normal methods of public information dissemination through the media should be used to provide information to the public. If loss of electric power has occurred, extra effort must be made to reach those without power using door hangers, flyers, signs, and, if necessary, door-to-door outreach.

G. Regulatory Issues and Technical Assistance (see Debris Management Plan)

1) The Texas Commission on Environmental Quality (TCEQ) regulates the disposal of waste, including hazardous waste. TCEQ also issues emergency permits for debris incineration. Hence, the advice and assistance of TCEQ should be obtained in developing and implementing plans for debris disposal.

2) The Texas Department of State Health Services (DSHS) is the state agency responsible for ensuring food safety. The assistance of DSHS should be sought when there are questions regarding the safety of foodstuffs in damaged retail stores, warehouses, and processing facilities. DSHS has the authority to condemn unsafe foodstuffs so that they can be disposed of.

3) The Texas Animal Health Commission (TAHC) can provide advice and assistance regarding the disposition of dead animals. TAHC may also help identify stray live animals so they can be returned to their owners.

**5. Organization**

A. Phase 1 - Emergency Roadway Clearance

During Phase 1, our normal emergency organization as outlined in the Section VI.A of the Basic Plan and this annex should coordinate debris clearance operations. Debris clearance will normally be managed from the EOC. However, if debris is localized, an incident command operation may be established at the incident site to manage debris clearance.

B. Phase 2 - Debris Removal and Disposal

1) For small-scale debris removal and disposal operations, our normal emergency organization as outlined in the Basic Plan and this annex may coordinate debris removal and disposal.

2) For major emergencies or disasters that result in large volumes of debris, removal and disposal may have to continue for an extended period. For these situations, a Debris Management Task Force, consisting of personnel from those departments and agencies having the required expertise, shall be formed to manage debris removal and disposal operations. The Task Force should be comprised of personnel to perform the following functions:

a) Operations: Plan debris removal and processing, manage the use of government resources, and monitor the use of contract resources committed to the task.

b) Contracting & Procurement: Develop contracts for services and/or equipment, obtain bids, and award contracts.

c) Legal: Contract review, manage authorizations for debris removal, and prepare legal documents for building condemnation and land acquisition.

d) Administration: Provide supply, administrative, and accounting support.

e) Engineering: Damage assessment, develop scopes of work and specifications for contracts, and prepare cost estimates.

f) Public Information: Provide information and instructions relating to debris removal to the public.

It may be desirable to organize the Debris Management Task Force as an ICS operation under an Incident Commander.

3) If the government uses its own resources to remove debris, the primary role of the operations staff is to plan and supervise debris removal. If contractors will be removing debris, then the primary role of the operations staff is to monitor contractor work and ensure contract provisions are followed.

## 6. **Task Assignments**

### A. Phase 1 - Emergency Roadway Clearance

Task assignments shall be as stated in Section VI.B of this annex.

### B. Phase 2 - Debris Removal and Disposal Phase

Task assignments shall be determined by the Debris Management Task Force leader. General tasks of the various components of the Task Force are described in the Chapter 3 of the *FEMA Debris Management Guide* (FEMA-325).

**Attachment 1**

**Debris Removal Access Agreement**

I/We \_\_\_\_\_, the owner(s) of the property

commonly \_\_\_\_\_ identified \_\_\_\_\_ as

\_\_\_\_\_  
(street address)

\_\_\_\_\_, \_\_\_\_\_, State of

Texas

(city/town)

(county)

do hereby grant and give freely and without coercion, the right of access and entry to said property to the City of Pharr, its agencies, contractors, and subcontractors thereof, for the purpose of removing and cleaning any or all storm-generated debris of whatever nature from the above described property.

It is fully understood that this agreement is not an obligation to perform debris clearance. The undersigned agrees and warrants to hold harmless the City of Pharr, State of Texas, its agencies, contractors, and subcontractors, for damage of any type, whatsoever, either to the above described property or persons situated thereon and hereby release, discharge, and waiver any action, either legal or equitable that might arise out of any activities on the above described property. The property owner(s) will mark any storm damaged sewer lines, water lines, and other utility lines located on the described property.

I/We (have \_\_\_\_\_, have not \_\_\_\_\_)(will \_\_\_\_\_, will not \_\_\_\_\_) received any compensation for debris removal from any other source including Small Business Administration (SBA), National Resource Conservation Service (NRCS), private insurance, individual and family grant program or any other public assistance program. I will report for this property any insurance settlements to me or my family for debris removal that has been performed at government expense. For the considerations and purposes set forth herein, I set my hand this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_.

\_\_\_\_\_  
Owner

\_\_\_\_\_  
Owner

\_\_\_\_\_  
Telephone No.

\_\_\_\_\_  
Address

\_\_\_\_\_  
Witness

**NOTE: Other examples can be found in the Debris Management Plan.**

## **Attachment 2**

### **Landfills & Potential Temporary Debris Storage and Reduction (TDSR) Sites**

#### **1. 1. Landfills**

- a. a. Name: Edinburg Regional Landfill-Permit # 956
  - 1. 1) Address: 8601 N. Jasman Road
  - 2. 2) Operated by: Edinburg Reg. Landfill
  - 3. 3) Estimated capacity remaining (cubic yards):9,749,673
  - 4. 4) Estimated daily processing capacity: 3,000 tons a day
  - 5. 5) Normal operating schedule: 7am-5pm Mon-Sat.
  - 6. 6) Restrictions: Yes
  - 7. 7) Fees:35.00 per ton (many change annualy)
  - 8. 8) Other Factors:
  
- a. b. Name:
  - 1. 1) Address:
  - 2. 2) Operated by:
  - 3. 3) Estimated capacity remaining (cubic yards):
  - 4. 4) Estimated daily processing capacity:
  - 5. 5) Normal operating schedule:
  - 6. 6) Restrictions:
  - 7. 7) Fees:
  - 8. 8) Other Factors:

#### **1. 2. Possible DMS/TDSR Facilities**

- a. a. Name: (See Debris Management Plan)
  - 1. 1) Address:
  - 2. 2) Owner:
  - 3. 3) Site size (acres):
  - 4. 4) Fenced?
  - 5. 5) Road access:
  - 6. 6) Neighbors:
  - 7. 7) Environmental concerns:

## **Attachment 3**

### **Debris Estimation**

This attachment contains the following tabs:

1. Tab A – Estimating Debris Quantity.

This tab includes two worksheets (Worksheet 1 and Worksheet 2) which outline a methodology that can be used to estimate the quantity of debris produced by a disaster. The methodology allows the user to estimate the debris in various geographic areas (sectors) and then sum the amount of debris in each sector to determine the overall volume of debris that must be dealt with. The sectors developed in this process can be used in operational planning and contracting. To the extent possible, sectors should be drawn to encompass areas with buildings of similar construction and vegetative cover.

[The methodology in this tab should not be used for hurricane debris; use the methodology in Tab E instead.]

2. Tab B – Estimating Debris Removal Time. This tab includes two worksheets (Worksheet 3 and Worksheet 4). The worksheets provide a methodology that can be used to estimate the time in days that it will take to remove specific quantities of debris given a known set of hauling resources and a reasonable estimate of the cycle time for those resources (time spent in pickup, hauling, unloading, and, waiting on one trip).

3. Tab C – Estimating Debris Disposal Quantity. Worksheet 5 outlines a method to determine the volume of debris that will have to be disposed of after sorting and volume reduction, given information on the composition of debris that must be disposed of. To utilize this methodology, you must remove a sample of debris in each sector and sort it to determine the characteristics of the debris from that sector. If the sample of debris is not representative of debris in the sector, this method will be inaccurate.

4. Tab D – Estimating Requirements for Debris Processing. Worksheet 6 can be used to estimate how much space will be required for temporary debris storage and reduction facilities. This worksheet is based on a US Army Corps of Engineers methodology.

5. Tab E – Estimating Hurricane Debris Quantity. Worksheet 7 can be used to estimate the quantity of debris produced by a hurricane. This worksheet is based on US Army Corps of Engineers methodology.

**Tab A  
ESTIMATING DEBRIS QUANTITY**

Complete a separate Worksheet 1 for each Sector.  
Transfer results from each Worksheet 1 to Worksheet 2.  
CF = cubic feet & CY = cubic yards

**Use Tab E for Estimating Hurricane Debris**

<b>WORKSHEET 1</b>				
<b>Sector:</b>				
Description:		N = Number	M = Multiplier	CY = (N x M)
A. Homes (1800-2000 square feet)		100	300	30000
B. Mobile Homes		130	80	10400

C. Other Buildings	L = Length/ft	W = Width/ft	H = Height/ft	CF = (LxWxH)	CY = (CF/27) x.33
Convention Center	250	60	10	150000	1833
Fire Station #1	100	100	12	120000	1467
Whitney Elementary School	125	100	10	125000	1527
Subtotal [sum the right column]					4827

D. Debris Piles	L = Length/ft	W = Width/ft	H = Height/ft	CF = (LxWxH)	CY (CF/27)
Winterhaven Park	150	8	4	4800	177
Universal Estates	80	20	8	12800	474
Park Street	100	16	5	8000	296
Subtotal [sum the right column]					947

<b>WORKSHEET 2</b>	Sector A	Sector B	Sector C	Sector D
<i>Debris Volume Estimate (cubic yards/CY)</i>				
A. Homes [from Worksheet 1]	30000	4200		
B. Mobile Homes [from Worksheet 1]	10400	2400		
C. Other Buildings [from Worksheet 1]	4827	1021		
SD = Structural debris (A + B + C)	45227	7621		
V = Vegetation Multiplier [see note]	1.3	1.1		
ST = Subtotal (SD x V)	58795	8383		
D. Debris Piles [from Worksheet 1]	947	1200		
E. SV = Sector Volume (ST + D)	59742	9583		

	TOTAL [add entries in row E above]69325			
--	---	--	--	--

Note:

V= Vegetative Multiplier:	<u>Vegetative Cover</u>	<u>V =</u>
	None	1
	Light	1.1
	Medium	1.3
	Heavy	1.5

**Tab B**  
**ESTIMATING DEBRIS REMOVAL TIME**

Worksheets 3 and 4 may be used to estimate the time it will take to remove a quantity of debris given information on the quantity and capacity of the hauling resources available and estimates of the cycle time for those resources. Cycle time is the time it takes a cargo truck to complete a round trip. Cycle time is computed by adding the time it takes to load a truck, the round-trip travel time between the loading point and the off-load point, unloading time, and any unproductive waiting time. This methodology will be most accurate if you use times observed during actual operations, not theoretical numbers.

<b>WORKSHEET 3</b>	Sector A	Sector B	Sector C	Sector D
<i>Debris to be Removed in cubic yards (CY) from Worksheet 2 or 7</i>	59742	9583		
<i>Removal Cycle (all times in hours)</i>				
B. Estimated loading time	.2	.2		

	C. Estimated travel time (roundtrip). 4	.6		
D. Estimated unload time	.1	.1		
E. Estimated waiting time	.1	.1		
F. Cycle time (B+C+D+E)	.8	1.0		
G. Daily work period	7.5	7.5		
H. Cycles per day (G / F)	9	7		
<i>Removal Time</i>				
I. Capacity (CY) per cycle [ Worksheet 4]	136	136		
J. Capacity (CY) per day [H x I]	1224	952		
K. Days to Clear Sector [A / J]	48.8	10.0		
Days to Clear All Sectors [add entries in Row K above]	58.8			

<b>WORKSHEET 4</b>	Truck Capacity (CY)	Units Available	C. Group Capacity (AxB)
<i>Equipment</i>			
Dump Truck, Light	6	4	24
Dump Truck, Medium	8	4	32
Dump Truck, Heavy	10	8	80
Capacity Per Cycle (CY) [sum the right column]			136

Note: In estimating units available, it is essential to consider that some equipment may not operationally ready each day. Hence, an out-of-service factor based on local experience should be applied to obtain a realistic estimate of equipment available for use on a daily basis.

**Tab C**  
**ESTIMATING DEBRIS DISPOSAL QUANTITY**

Worksheet 5 provides a method of estimating the volume of debris that will have to be disposed of after volume reduction. It requires taking a **sample of the debris in each sector** to determine the percent of burnable debris (B below), the percent of burnable C&D debris (C below), the percent of non-burnable debris (D below) broken down by recyclable materials (D-1) and other material (D-2), and the percent of hazardous debris. In taking a sample, it is desirable to include debris from at least 10 properties.

<b>Worksheet 5</b>	<b>Sector 1</b>	<b>Sector 2</b>	<b>Sector 3</b>	<b>Sector 4</b>
<i>Sample Debris Characteristics</i>				
A. Debris volume [from Worksheet 2]	59742	9583		
B. % Burnable Natural Debris	.30	.40		
C. % Burnable C&D Debris	.32	.28		
D. % Non-Burnable Debris	.35	.32		
D-1. Potentially Recyclable	.07	.10		
D-2. Landfill	.28	.20		

	E. % Hazardous Debris.03	.02		
<i>Disposal Volume (cubic yards)</i>				
F. Burnable Natural Debris (A x B)	17922	3833		
F-1. Amount to be chipped/ground <sup>1</sup>	200	0		
F-2. Amount to be burned	17722	3833		
G. Burnable C&D Debris (A x C)	19117	2683		
H. Total Burnable (F-2 + G)	36839	6516		
I. Volume for disposal after burning (H x .05)	1841	326		
J. Volume for disposal after chipping or shredding (F-1 x .25)	50	0		
K. Non-Burnable Debris (A x D)	20910	3067		
L. Less Non-Burnables to be Recycled <sup>2</sup>	5400	767		
Volume of Non-Burnables for Disposal (K - L)	15510	2300		
N. Volume (Non-hazardous) for Landfill Disposal (I + J + M) <sup>3</sup>	17401	5693		
Total for Landfill Disposal [add quantities in row N above]	23094			
O. Volume for Hazmat Disposal (A x E)	1792	191		
P. Total for Hazmat Disposal [add quantities in row O above]	1983			

**Notes:**

1. Local officials need to decide how much debris to chip or grind instead of burning. The quantity should be based on a) the amount of chipped/ground wood that local government wants to retain for use as mulch and b) the amount that can be disposed of without cost or at some profit to landscape products firms. Since chipping and grinding costs approximately the same as burning and produces a higher volume of residue, there is little reason to chip and grind instead of burning if you also have to pay to have the resulting mulch hauled away.
2. This number should be based on the proportion of recyclable materials for which you can determine there is a ready market. Recycling materials for which there is no market simply leaves you sorted debris to haul to the landfill.
3. If mulch produced in the chipping and grinding operation is hauled away without cost, do not include it (Item J) in the equation because disposal of that material is no longer your problem.

**Tab D**  
**ESTIMATING REQUIREMENTS FOR DEBRIS STORAGE & PROCESSING SITES**

This methodology may be used to determine the space required for debris storage and processing sites.

It assumes that:

1. Debris will be stacked 10 feet high.
2. 40 percent of a site will be used for storage; 60 percent will be used for sorting areas, separation between debris piles, roads, site buffers, and burn pits

<b>WORKSHEET 6</b>		
A. Debris Volume in cubic yards (CY) [From Worksheet 2 or 7]		69325
B. CY per acre assuming 10' stack height <sup>1</sup>		16117
C. Acres for debris storage only (A/B)		4.3
D. Multiplier for processing, roads, & buffers		1.66
E. Required facility area in acres <sup>2</sup>		7.1

Notes:

1. If you plan to use a stack height other than the typical 10 feet, use the following formula to compute CY per acre:

$$\text{CY} = (\text{stack height in feet} / 3) \times 4840$$

2. Where the area requirement is large, the requirement is generally satisfied by establishing several sites that, taken collectively, provided the needed area.

**Tab E**  
**ESTIMATING HURRICANE DEBRIS QUANTITY**

Worksheet 7 may be used to estimate the quantity of debris that must be removed. This worksheet uses the formula  $Q = H \times C \times V \times B \times S$ , where:

- Q = the quantity of debris in cubic yards (CF)
- H = the number of households
- C = the storm factor in CY:
- V = the vegetation characteristic multiplier:
- B = the business/commercial use multiplier
- S = the storm precipitation characteristic multiplier

<b>WORKSHEET 7</b>	Sector A	Sector B	Sector C	Sector D
<i>Debris Volume Estimate - Hurricane</i>				
1. H = households	5167	2100		
2. C = Storm category	26	8		
3. V = Vegetation multiplier	1.5	1.1		
4. B = Business/commercial multiplier	1.3	1.0		
5. S = Storm precipitation multiplier	1.3	1.3		
6. $Q = H \times C \times V \times B \times S$	340557	24024		
<b>TOTAL</b> (add columns in item 6 above)	364581			

Notes:

1. H = Households. If you do not know the number of households, estimate the number by dividing the population of the area by 3.

2. C = Hurricane Category

<u>Category</u>	<u>C =</u>
2	
8	
26	
50	
80	

3. V = Vegetative Multiplier

<u>Vegetative Cover</u>	<u>V =</u>
None	1
Light	1.1
Medium	1.3
Heavy	1.5

4. B = Business/Commercial Density Multiplier

<u>Density</u>	<u>B =</u>
Light	1.0
Medium	1.2
Heavy	1.3

5. S = Storm Precipitation Multiplier

<u>Precipitation</u>	<u>S =</u>
None to Light	1.0
Medium to Heavy	1.3

**Appendix 2: Debris Management Plan**



**Debris Management Plan**

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**City of Pharr**

## **Purpose**

This plan will define roles, responsibilities, and procedures and provide guidance for development and implementation of elements involved in managing debris removal operations. The plan is to address the City's needs before and after debris generating event happens in three phases. **Phase I** will be the normal operations planning and preparation before a debris generating event. **Phase II** will be the immediate response and actions taken after a debris generating event by city staff. **Phase III** will be the recovery phase in which full implementation of all elements to remove debris from city will be underway.

## **Concept of Operations**

The concept of operations describes how debris management activities will be conducted in response to debris generating events.

The preparation of this Plan is to better respond to subsequent emergency debris management/removal situations. This Plan provides key information that will help the City coordinate and manage debris removal efforts and address the extraordinary demands that may be placed on city or contractor resources for debris management/removal following a disaster event.

## **ACRONYMS AND DEFINITIONS**

**C&D Debris:** Construction and Demolition Debris

**City:** City of Pharr

**Contractor:** City approved contractor to perform debris clearance, removal, disposal, reduction, recycling.

**Critical Public Service Facilities:** Police, Fire, Public Works, WWTP, WTP, Medical buildings, Fueling stations, Generator/Power supplier

**DM:** Debris Manager

**DMS:** Debris Management Site

**DPW:** Department of Public Works

**EOC:** Emergency Operations Center

**HHW:** Household Hazardous Waste

**IC:** Incident Commander

**ICS:** Incident Command System

**MOA:** Memorandum of Agreement

**MOU:** Memorandum of Understanding

**PPE:** Personal Protective Equipment

**PIO:** Public Information Officer

**Plan:** Disaster Debris Management Plan

**ROE:** Right-of-Entry

**ROW:** Right-of-Way

**Stafford Act:** Robert T. Stafford Disaster Relief and Emergency Assistance Act

**State:** The State of Texas

**TCEQ:** Texas Commission on Environmental Quality

**TDSR:** Temporary Debris Storage and Reduction (same as DMS)

**TxDOT:** Texas Department of Transportation

**Utilities:** Department of Public Utilities

**WTP:** Water Treatment Plant

**WWTP:** Waste Water Treatment Plant

**Applicant** – State agency, local government or eligible private nonprofit organization that intends on applying for Federal Emergency Management Agency (FEMA) Public Assistance (PA) grants.

### **Code of Federal Regulations: Title 44 – Emergency Management and Assistance**

– The Code of Federal Regulations – Title 44 Emergency Management and Assistance

(44 CFR) provide procedural requirements for the PA Program operations. These regulations are designed to implement a statute based upon FEMA's interpretation of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act). They govern the PA Program and outline program procedures, eligibility, and funding.

**Construction and Demolition Debris** – FEMA Publication 325 defines construction and demolition (C&D) debris as damaged components of buildings and structures such as lumber and wood, gypsum wallboard, glass, metal, roofing material, tile,

carpeting and floor coverings, window coverings, plastic pipe, concrete, fully cured asphalt, heating, ventilation and air conditioning systems and their components, light fixtures, small consumer appliances, equipment, furnishings and fixtures. Current eligibility criteria include:

- n Debris must be located within a designated disaster area and be removed from an eligible applicant's improved property or right-of-way;
- n Debris removal must be the legal responsibility of the applicant; and
- n Debris must be a result of the major disaster event.

**Debris Removal Contractor** – contractor hired by the City of Pharr (City) to remove and dispose of debris that is a result of a severe debris-generating event.

**FEMA Publication 322 – Public Assistance Guide** – Provides a general overview of the FEMA PA Program protocol immediately following a disaster. The PA Program provides the basis for the federal/local cost sharing program. This document specifically describes the entities eligible for reimbursement under the PA Program,

**FEMA Publication 323 – Applicant Handbook** – The Applicant Handbook (Handbook) is the official “how to” for local governments who are considering applying for reimbursement following a disaster through the PA Program. The Handbook provides the rules, procedures and sample documents that local governments need as the applicant to FEMA. The publication is formatted so that the applicant has a step-by-step guide for each phase of the reimbursement process including what information is critical to ensure reimbursement.

**FEMA Publication 325 – Debris Management Guide** – This publication is specifically dedicated to the rules, regulations and policies associated with the debris cleanup process. Familiarity with this publication and any revisions, can aid a local government to limit the amount of non-reimbursable expenses. The Debris Management Guide provides the framework for the debris removal process authorized by the Stafford Act including:

- n Eliminating immediate threats to lives, public health and safety;
- n Eliminating immediate threats of significant damage to improved public or private property; or
- n Ensuring the economic recovery of the affected community to the benefit of the community-at-large.

**Hanger** – A hanger is a hazardous limb that poses significant threat to the public. The current eligibility requirements for leaning trees according to FEMA Publication 325 are:

- n The limb is greater than two inches in diameter;
- n The limb is still hanging in a tree and threatening a public-use area; and
- n The limb is located on improved public property.

**Hazardous Stump** – A stump is defined as hazardous and eligible for reimbursement if all of the following criteria are met:

- n The stump has 50 percent or more of the root-ball exposed;
- n The stump is greater than 24 inches in diameter when measured 24 inches from

- the ground;
- n The stump is located on a public right-of-way; and
- n The stump poses an immediate threat to public health and safety.

**Household Hazardous Waste** – The Resource Conservation and Recovery Act defines hazardous wastes as materials that are ignitable, reactive, toxic or corrosive.

Examples of household hazardous waste (HHW) include items such as paints, cleaners, pesticides, etc. Due to the nature of hazardous waste certified technicians must be used to handle, capture, recycle, reuse and dispose of hazardous waste.

**Leaner** – A tree is considered hazardous and defined as a “leaner” when the tree’s present state is caused by a disaster, the tree poses a significant threat to the public and the tree is six inches in diameter or greater, measured two feet from the ground or at chest height. The current eligibility requirements for leaning trees according to FEMA Publication 325 are:

- n The tree has more than 50 percent of the crown damaged or destroyed (requires written documentation from an arborist);
- n The tree has a split trunk or broken branches that expose the heartwood;
- n The tree has fallen or been uprooted within a public use area; or
- n The tree is leaning at an angle greater than 30 degrees.

**Monitoring person** – The monitoring person may be city staff or may be under contract with the City to monitor debris removal operations. The monitoring person ensures the debris removal contractor is working within the scope-of-work contracted by the City and documents debris removal operations.

**Robert T. Stafford Disaster Relief and Emergency Assistance Act** – Provides the authorization of the PA Program. The fundamental provisions of this act are as follows:

- n Assigns FEMA the authority to administer federal disaster assistance;
- n Defines the extent of coverage and eligibility criteria of the major disaster assistance programs;
- n Authorizes grants to the states; and
- n Defines the minimum federal cost-sharing levels.

**Vegetative Debris** – As outlined in FEMA Publication 325, vegetative debris consists of whole trees, tree stumps, tree branches, tree trunks and other leafy material. Vegetative debris will largely consist of mounds of tree limbs and branches piled along the public right-of-way by residents. Current eligibility criteria include:

- n Debris must be located within a designated disaster area and be removed from an eligible applicant’s improved property or right-of-way;
- n Debris removal must be the legal responsibility of the applicant; and
- n Debris must be a result of the major disaster event.

**White Goods** – As outlined in FEMA Publication 325, white goods are defined as discarded household appliances such as refrigerators, freezers, air conditioners, heat

pumps, ovens, ranges, washing machines, clothes dryers and water heaters. White goods can contain ozone-depleting refrigerants, mercury or compressor oils that the federal Clean Air Act prohibits from being released into the atmosphere. The Clean Air Act specifies that only certified technicians can extract refrigerants from white goods before they can be recycled. The eligibility criteria for white goods are as follows:

- n White goods must be located within a designated disaster area and be removed from city right-of-way;
- n White goods removal must be the legal responsibility of the owner; and
- n White goods must be a result of the major disaster event.

## **A. Planning (Phase I) 72 hours before event**

Normal Operations is the period of time when the City is not in any serious threat of a disaster event. Rules and regulations dictating operational procedures change periodically, the information in the Plan should be updated annually to reflect such changes. Prior to an emergency, key City staff will meet and discuss:

- City employees are prepared and ready (Standby status).
- Key departments identified with their roles and responsibilities,
- All equipment/materials necessary should be checked and cleared for use,
- All DMS: pictures taken showing “before” status, Baseline data collected on each site.
- Approved DMS must have executed MOU/MOA and TCEQ pre-approval.
  - ✓ **Note:** *For towns with no appropriate areas to site a DMS, it is essential to identify appropriate regional DMS’ that can be used and enter into an agreement with the appropriate parties for its use before an emergent situation arises. A shared service agreement may be utilized for setting up regional DMS with neighboring towns.*
- Plan to activate an emergency hotline number for information/requests from residents
- Plan with Waste Management on immediate response to debris management
- Review road clearing list and critical public service facilities priority list(s),
- The City’s debris removal contractors should be put **on alert** by the City that their contracts may be activated. Discussions with the monitoring crew(s) and debris removal contractors should address the following key issues:
  - n Availability and amount of assets that will be dedicated to debris removal operations;
  - n Estimated time of mobilization;
  - n Exchange of mobile contact information; and
  - n Identification of staging area(s) for truck certification

## **B. Response (Phase II) 0-48 hour after event**

Immediate response to a disaster is a very important step for setting the tone on how the recovery will go. This section covers the initial actions taken by city staff in response to a debris-generating event. Actions necessary in the short-term response phase include:

- 1. Activation of EOC and Plan:** An Incident Commander or Debris Manager (IC/DM) will be activated along with the Emergency Operations Center (EOC). The

IC/DM will be the city's Mayor, EMC or assignee and will be a component of the EOC. Key city departments will be on standby especially: Police, Fire, DPW, Parks, and Utilities. Hotline for residents to call if they have questions/concerns should be activated. The Mayor or City Manager can provide general guidance and may authorize programs and projects for debris management.

- *The primary decision maker is the Debris Manager. The Debris Manager should be knowledgeable of the processes, procedures, personnel, resources, and limitations. It is important for the Debris Manager to be kept informed at all times, and to keep communication and coordination efforts between departments a priority.*
- *The Debris Manager has overall responsibility for the operations, planning, logistics, and cost of the debris management operations. The Debris Manager assigns tasks to team members and tracks the completion of tasks to ensure quick implementation of the debris removal operations.*

## **2. Incident Command System (ICS)**

i. City of Pharr will employ ICS, an integral part of National Incident Management System (NIMS), in managing emergencies. *When the EOC is activated, it is essential to establish a line of communication between the Incident Command/Debris Manager Post and the EOC*

ii. The Incident Commander/Debris Manager(IC/DM) is responsible for carrying out the ICS function of command (managing the incident). The four other major management activities that form the basis of ICS are operations, planning, logistics, and finance/administration. For small-scale incidents, the IC/DM and one or two individuals may perform all of these functions. For larger incidents, a number of individuals from different departments or agencies may be assigned to separate staff sections charged with those functions.

iii. An IC/DM using response resources from one or two departments or agencies can handle the majority of emergency situations. Departments or agencies participating in this type of incident response will normally obtain support through their own department or agency.

iv. In emergency situations where other jurisdictions or the state or federal government are providing significant response resources or technical assistance, it is generally desirable to transition from the normal ICS structure to a Unified Command structure. This arrangement helps to ensure that all participating agencies are involved in developing objectives and strategies to deal with the emergency.

**3 (a). Debris Removal Priorities:** *Priority has been placed on re-establishing transportation and communication throughout the city. Debris will include fallen trees, limbs, trash, furniture, food waste, scrap tires, utility poles and wires, vehicles, building materials, hazardous materials, infectious materials, animal carcasses, silt and mud, etc. The City has identified critical roads (see "Clearance of Streets") that will be the first priority to remove debris from following a debris generating event. Waste Management shall be contacted and shall assist city with initial response cleanup.*

As mentioned in the previous paragraph, first priority shall be to clear debris from roadways to allow movement throughout the city and ingress/egress to critical public facilities such as Fire stations, Police stations, Public Works yard, Waste Water Treatment plant, Water Treatment plant, medical treatment buildings, and other critical public service facilities. Other essential, but perhaps non-critical facilities include schools, non-critical municipal buildings, power generation sites, temporary shelters for disaster victims or animals etc.

**3 (b). Activation of Debris Removal contracts:** The debris removal company is: **XX(contact info)XXXXXXXXXX**. Public Works Department will make contact with contractor and will inform IC/DM of such. Contact with debris removal contractor will be made once it is determined that the debris generating event is imminent. (48-72 hours before event and placed on standby).

**4. Initial assessment of damage/Tracking of Resources:** Immediately after the debris generating event, the city will conduct an initial assessment of damage or blockage of city roads and critical public service facilities and report back to Incident Commander/Debris Manager. Tracking of City resources during initial surveying after debris generating event will be done by each individual department; (i.e. Public Works resources will be tracked by Public Works Department). The contractor will be responsible for tracking its own resources once in city.

**5. Meetings and Briefings:** Meetings will be held immediately upon activation of Emergency Operations Center (EOC) and appointment of Incident Commander/Debris Manager (IC/DM). The main purpose of the meetings is to brief Mayor, City Commission, City Manager, Debris Manager and EOC staff on current and future debris management activities. Debris management staff (Police, Fire, DPW, Utilities and Code Compliance) should participate in all EOC meetings and provide reports as necessary.

## **C. Recovery (Phase III) 48-60 hours after event**

This phase of the debris management plan covers actions necessary to complete the debris removal, reduction, and disposal activities. *The city approved contractor should already have been contacted and on site by this phase.* Actions necessary for recovery from debris-generating events include:

### **1. Activate Temporary Debris Storage and Reduction Sites/Debris Management Sites (TDSR/DMS) (Done by City)**

City of Pharr has identified the following as temporary debris staging sites. TCEQ clearance and landowner agreement must be executed before this point so as to have a clear written authorization on how sites will be used. Agreement should state that site(s) will be used for as much as 6 months or longer, after debris generating event. As part of the emergency preparation, baseline data should be gathered from the site to document the state of the land before debris is deposited. Roads or paths might need to be built to access some sites. The following action items are recommended to compile baseline information:

n **Photograph the Site** – Digital photos should be taken to capture the state of the site before debris reduction activities begin. Photos should be updated

periodically throughout the project to document the progression of the site.  
n **Record Physical Features** – Records should be kept detailing the physical layout and features of the site. Items such as existing structures, fences, landscaping, etc. should be documented in detail.

**The following are sites that have been deemed available at a moment's notice for debris staging: (City owned property)**

**North 13.5 ac (Appendix C-1)**

- a. Fire Dept. (Future Site) (approx. 10 ac) on Eldora 401 W. Eldora
- b. Public Works yard (approx. 3.5 ac) 1015 E. Ferguson
- c. TBD

**Central 39.2 ac (Appendix C-2)**

- d. P.A.L. Office site (3.2 ac-park area) 415 E. Clark
- e. Old Whitney school site (approx. 16ac-Jackson and Kelly) 1600 W. Kelly
- f. Open land next to WWT plant: (approx. 20ac) 2100 S. Veterans Road

**South 106 ac (Appendix C-3)**

- g. Jones Box Park: (approx. 18 ac) 1201 Rosa Lane
- h. Pharr Produce Subd.: (approx. 87 ac) Military Hwy and South U.S. 281
- i. Old Water Treatment Plant Location: (approx. 1 ac) 1511-1515 W. Dicker Road
  
- j. Household Hazardous Waste Site (approx. 5 ac) 1301 W. Medina

*\*Approximate number of city owned land (in acres) available: **158.7***

**2. Begin Truck Certification (Done by Contractor)**

Truck certification is the most important function in initiating a debris removal operation. Accuracy and documentation of all measurements is critical. All debris removal trucks hauling debris under a volumetric contract with the City must have their capacity and dimensions measured, sketched, photographed and documented on a truck certification form (See Appendix). Each debris removal truck will be assigned a unique number for debris tracking and invoice reconciliation purposes.

*Contractor shall supply City staff with truck certification information upon request by city.* Truck certifications should contain:

- n Unique truck number, capacity, dimensions and/or sketch
- n Driver name
- n Driver phone number

**NOTE:** Contractor will make sure that city identified streets are used as much as possible when transporting debris and those trucks are not overweight.

**3. Monitoring (Done by DPW)**

The City of Pharr Public Works Department will designate and manage a person or persons for monitoring. The primary function of monitoring with regards to disposal monitoring is to document the disposal of disaster debris at approved DMS.

Monitors perform quality assurance/quality control (QA/QC) checks on all load tickets and haul-out tickets to ensure that information is complete. Monitoring verifies that the following actions are taking place:

- n Inspection of truck placards for authenticity and signs of tampering;
- n Ensuring only debris specified within the City's scope of work is collected; and
- n Verification that all required fields on the load ticket have been completed.

Afterwards, the disposal monitor will document the amount of debris collected by

making a judgment call on vehicle fullness (typically on a percentage basis).

The

percentage documented for each debris removal vehicle is later applied to the calculated cubic yard capacity of the vehicle to determine the amount of debris collected. The disposal monitor's responsibilities include, but are not limited to:

- n Completing and physically controlling load tickets;
- n Ensuring debris removal trucks are accurately credited for their loads;
- n Ensuring trucks are not artificially loaded;
- n Ensuring hazardous waste is not mixed in with loads;
- n Ensuring all debris is removed from the debris removal trucks before exiting the DMS or final disposal site; and
- n Trucks are sticking to debris routes
- n Ensuring all debris is disposed at a properly permitted landfill; and
- n Matching landfill receipts and/or scale house records to haul-out tickets.
- n License number, state issued, and expiration
- n Tag number, state issued, and expiration
- n Vehicle measurements
- n Sketch of the vehicle

#### **4. Curbside/Public Property/Rights-of-Way Debris Removal (Done by Contractor)**

Curbside collection entails residents piling their disaster-related debris along the ROW. It is critical that residents segregate their debris in categories such as vegetative, C&D, HHW and white goods. This will help prevent the contamination of debris loads and expedite the cleanup process. Debris deposited on public lands including the right-of-way will be the responsibility of the Contractor to remove. In some cases, where a health and/or safety threat exists, private property owners may move event related debris to the public right-of-way for removal by contractor. City officials must authorize the movement of debris from private property to ROW for contractor to pick up.

#### **5. Private Property Debris Removal (Done By Contractor)**

Debris deposited on private property is the legal responsibility of the property owner. The City will provide instructions to the property owners for separation of debris and steps to follow if they are unable to put debris from their property on the curbside for pickup. A "Right-of-Entry"(ROE), form and authorization to proceed from Debris Manager will be needed when working on removing debris from private property. It will be the responsibility of the contractor to obtain such authorization from property owner. ROE forms will be available from the Department of Public Works. Contractor will pick up debris and haul it to either a temporary debris removal site or to a regulated waste facility. **Photos** – It is in the interest of the City to photograph conditions of private property before and after debris removal is completed. The photos will assist in the verification of address and scope-of-work on the property and dispute any damages claims.

**6. Hazardous Waste/White Goods Removal:** The City of Pharr will make sure contractor is working closely with Federal and State environmental protection agencies to ensure proper removal and disposal of hazardous waste. The city has identified a location as the drop off site for House Hold Hazardous Waste. Contractor will be responsible for procedures establishing a staging area for hazardous waste at site. Focus will be to include lining with an impermeable material where ever needed, dikes, or such so chemicals do not leak into the groundwater and soil. Contractor will be responsible for having personal at all times to assure compliance with TCEQ rules and regulations.

### **HHW**

HHW includes gasoline cans, aerosol spray cans, paint, lawn chemicals, batteries, fire extinguishers, fluorescent lamps, household electronics, etc. HHW removal is eligible for FEMA reimbursement if the debris is a result of the debris-generating event and removed from publicly maintained property and roadways whose maintenance is the responsibility of the City. HHW should be collected separately and disposed of or recycled at a properly permitted facility. The following action items are recommended with regards to HHW removal:

- n Communicate to City residents the segregation of HHW following an event. It is important that residents separate HHW from other debris, such as vegetative, C&D, etc, to ensure that HHW does not enter the debris stream at DMS locations.
- n Measures should still be taken jointly by the debris removal contractor and the monitoring staff to identify, segregate and dispose of intermingled HHW at DMS locations.
- n Interface with TCEQ. Describe the HHW collection program and permitted facility to be used for disposal or recycling. (If reported)

### **White Goods**

White goods include refrigerators, freezers, air conditioners, heat pumps, ovens, ranges, washing machines, clothes dryers, etc. White goods debris removal is eligible for FEMA reimbursement if the debris is a result of the debris-generating event and removed from publicly maintained property and roadways whose maintenance is the responsibility of the City. White goods debris that contains ozone depleting refrigerants, mercury or compressor oils need to have such materials removed by a certified technician before recycling. All state and federal laws should be followed regarding the final disposal of removed refrigerants, mercury, or compressor oils. Collection of white goods can be conducted internally, or contracted out. The following action items are recommended to with regards to white goods removal:

- n Communicate the eligibility of white goods to City residents following an event. It is important that residents separate white goods from other debris to ensure that white goods are not mixed with C&D or vegetative debris during collection.
- n Interface with TCEQ. Describe the white goods collection program and permitted facility to be used for disposal of recovered refrigerants, mercury or compressor oils. (If reported)

### **7. (Intentionally left blank)**

## **8. Temporary debris storage and reduction site closeout (City and Contractor)**

After the debris has been completely removed from the TDSR, the site must be returned to its previous use and condition or better. Debris Manager will inspect and authorize the demobilization of the TDSR site as well as the final approval for site once cleaned. The contractor needs to follow procedures for site closure.

### **D. Clearance of Streets:**

The City of Pharr has identified the following streets/thoroughfares as critical to the response and recovery of city functions and services. During the “Response Phase”, there is no attempt to physically remove or dispose of the debris, only to clear key access routes to expedite the:

- Movement of emergency vehicles,
- Law enforcement,
- Resumption of critical services and,
- Assessment of damage to key public facilities and utilities.

The clearing of these thoroughfares will be the priority immediately after a debris generating event. **U.S. I-69C/Cage (Owassa to Military); Veterans Rd. (Owassa-Military Hwy); and Jackson Rd. (Owassa to Military Hwy)** followed by:

The following streets will be cleared from Jackson Road to Veterans Blvd.

#### **North Zone**

Owassa  
Minnesota  
Nolana Loop  
Eldora  
Sioux Rd.  
Ferguson

#### **Central Zone**

Polk  
Bell St.  
Bus. 83  
Kelly Ave.  
Sam Houston  
Ridge Rd.  
Moore Rd.  
Hall Acres  
Rancho Blanco

#### **South Zone**

Juan Balli  
Thomas Rd.  
Dicker Rd.  
Las Milpas Rd.  
Anaya Rd.  
Hi-Line Rd.  
Military Hwy.

*\*Once all above mentioned Highways/arterials/collectors have been confirmed to be cleared, the following streets will be cleared next:*

#### **North Zone**

Sugar Rd. (Owassa-Bus. 83)  
N. Fir (Owassa-Minnesota)  
Raider Dr. (Nolana Loop-Eldora)

San Patricia (Ferguson-Polk)  
N. Cypress (Sioux-Ferguson)  
N. Fir (Sioux-Ferguson)

#### **Central Zone**

Flag (Polk-Bus. 83)  
Aster (Bell-State)  
Birch (Egley-State)  
Huisache (Polk-Sanchez)  
Hibiscus (Bus. 83-Kelly)  
Bluebonnet(Bus. 83-S. Hou.)  
Gumwood (Kelly-S. Hou)

Canna (Polk-State)  
Bell (Sugar- Veterans)  
Dogwood (Polk-Bus. 83)  
Juniper (Bell-Bus. 83)  
Palm Dr. (Bus. 83-S. Hou)  
Birch (Bus. 83-S. Hou)  
Juniper (Kelly-S. Hou)

State St. (Sugar-Dogwood)  
Athol (Bell-State)  
Fir St. (Polk-Bus. 83)  
Linden (Bell-Sanchez)  
Dahlia (Bus. 83-S. Hou.)  
Dogwood (Bus.83-S. Hou)

#### **South Zone**

Valdivia (Balli-Thomas)  
S. Azul (W. Monica-Balli)

Valdivia (Thomas-Longoria)  
Blanca Ln. (Cul-de-sac – Thomas)

Sol Brilla (Cul-de-Sac – Thomas)	Posada (Balli-Blue Jay)
La Quinta (Blanca-S. Cage)	Invierno (Thomas-Jeff)
Reba (Jeff-Dicker)	S. Rivera St. (W. Monica to Balli)
Longoria (Valdivia-S. Cage)	Banda (Thomas-Longoria)
Galaxy (Thomas-Jean)	Universal (S. Cage-Galaxy)
Chris (Thomas-Dicker)	St. Marie (Thomas-Dicker)
Darlene Dr. (All)	Colorado (Dicker-Rosa Ln)
S. Mariposa (Dicker-Rosa Ln)	S. Azul (Dicker to Rosa Ln)
S. Oro Ln (Dicker to Rosa Ln)	Morelos (Dicker-Rosa Ln)
Rosa Ln (Morelos-S. Colorado)	Jose St. (Ditch-Las Milpas Rd.)
Ruiseñor (Jose-S. Cage)	Siesta St. (All)
Navarro St. (All)	Puebla Dr. (S. Cage-Sinaloa)
Mould (Cedro-Anaya)	Steve Ln. (Cedro-Anaya)
Juniper (HiLine-Military Hwy).	

## **E. Responsibilities per Department:**

During the immediate response phase as well as the recovery, ALL CITY PERSONNEL WORKING DURING THE DEBRIS GENERATING EVENT WILL WEAR THEIR PERSONAL PROTECTION EQUIPMENT (PPE), AT ALL TIMES. The responsibilities of each department during the response phase include but are not limited to:

### **Public Information Officer (Appendix E & F)**

- Giving the public information about:
  - Segregating hazardous waste.
  - Placing debris at the curbside.
  - Keeping debris piles away from fire hydrants and valves.
  - Reporting illegal dumping.
  - Contractor will remove debris from undeveloped private property.
  - Debris pick-up schedules.(Information given by contractor)
  - Location of DMS.
  - Disposal methods and compliance with Environmental Protection Agency Regulations.
  - Restrictions and penalties for illegal dumping.
- Address questions such as:
  - What if I cannot pay for debris removal from my property?
  - What if I am unable to bring the debris to the curb for pickup?

### **Department of Public Works**

- Call city's Debris Removal Contractor to mobilize.
- Provide fuel for critical first responder vehicles/equipment.
- Developing strategies for animal control services search and rescue.
- Monitoring Team management and developing debris removal priorities
- Survey roads, bridges, traffic control devices and signs to determine damage and estimate of downtime for repair; report to DM/EOC
- Assess and report damage to City fleet vehicles and motorized equipment to DM/EOC.

### **Contractor**

- Removing debris from ROW and public/private property to TDSR's/DMS.
- Obtain ROE from resident before debris removal from private property.

- Operating debris reduction sites.
- Ensuring all debris is transported to the appropriate TDSR's or regulated waste facility and is complying with City and State guidelines and requirements.
- Ensuring all federal, state and local rules, laws and regulations are being followed.

### **Fire Department**

- Emergency Medical Response
- Fire suppression
- Search and Rescue

### **Police Department**

- Preserving peace and order
- Preventing and detecting crime
- Apprehending offenders and enforcing the law with city limits
- Support in security of DMS

### **I T Department**

- Two Way communication between departments (strike teams)/city hall
- Broadcasting of appropriate information to residents via social media on debris management by city. **(Appendix F)**
- Drone flyovers to identify problem area(s)/estimate debris amount
- Hotline activation for residents to call for info/concerns

### **Building Officials**

- Identify unsafe structures and recommend condemnation.
- Enforce building codes.
- Inspect construction sites for violations
- Code enforcement/Illegal dumping complaints

### **Public Utilities**

- Survey lift stations, water production and wastewater treatment plant and equipment for damage. Determine extent of damage to equipment and report estimated time and cost of repair.
- Maintain appropriate state and local status reports
- Assisting in emergency debris removal from city properties

### **Parks and Recreation**

- Responsible for all City parks and facilities movement of debris to ROW
- Assisting in emergency debris removal from city properties

### **Legal Department**

- Developing and reviewing all contracts.
- Securing all authorizations necessary for debris removal activities.
- Ensuring compliance with all environmental and historic preservation laws/regulations/policies.
- Reviewing rights-of-entry and hold harmless agreements.
- Reviewing private property insurance information and other assets to ensure benefits and resources are fully utilized.

### **Environmental Services Division (DPW)**

- Enforce stormwater regulations at all DMS. **(Appendix H)**
- Inspect all sites for violations
- Coordinating with debris removal contractor that work done is in compliance with State and Federal agencies, such as EPA and the State Historic Preservation Office. Following environmental laws/regulations/policies will be the responsibility of the contractor.
- Determining environmental monitoring and reporting requirements for DMS.

## **F. Regulatory and Technical Assistance**

### **Texas Commission on Environmental Quality (TCEQ)**

**Contact Info:** [oce@tceq.texas.gov](mailto:oce@tceq.texas.gov) 1-800-447-2827

- n Issues emergency permits for debris incineration and advice and assistance for debris disposal; and
- n Assistance on potential environmental impacts of debris removal and disposal operations.

### **Texas Department of State Health Services (TDSHS):**

**Contact info:** [www.dshs.state.tx.us](http://www.dshs.state.tx.us) 1-888-963-7111

- n Health and safety issues pertaining to debris removal and disposal operations.

### **Texas Historical Commission (THC):** [thc@thc.state.tx.us](mailto:thc@thc.state.tx.us) 512-463-6100

- n Responsible for review of any historical issues pursuant to Title 36 of the Code of Federal Regulations (36 CFR) Part 800.12.
- n Review of post-disaster Debris Management Site (DMS) plan applications.

### **Texas Department of Transportation (TxDOT):** [Rene.Garza@txdot.gov](mailto:Rene.Garza@txdot.gov) 956-702-6151/702-6260

- n Responsible for the design, construction and maintenance of the State highway system; and
- n Acts as the lead agency for emergency roadway debris clearance, removal, and disposal efforts along State and Federal highways.

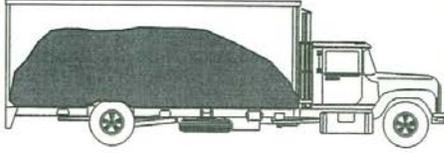
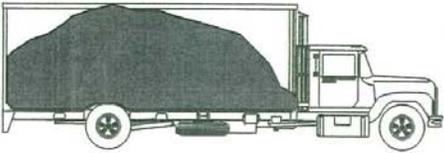
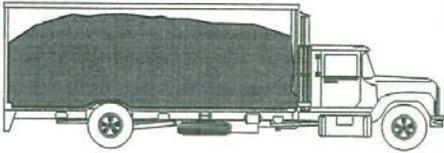
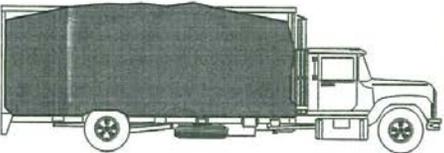
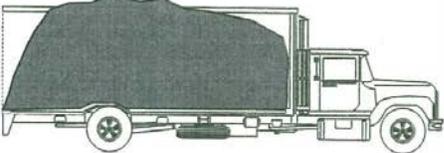
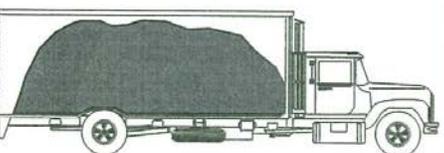
### **Texas Animal Health Commission (TAHC):** [comments@tahc.texas.gov](mailto:comments@tahc.texas.gov) 1-800-550-8242

- n Assistance regarding the disposition of dead animals

## **Appendix:**

# Appendix A

<b>DEBRIS MONITOR GUIDELINES FOR ESTIMATING QUANTITIES</b>	
	
<p>Truck without a structural tailgate. Its maximum load is automatically reduced to 85 percent of the rated truck size.</p>	<p>Truck without a tailgate. Its load capacity is automatically reduced to 85 percent. Slat-sided trucks may not be capable of being mechanically compacted. This means the truck capacity should be further reduced.</p>
	
<p>Truck without a tailgate. Its maximum load capacity is reduced to 85 percent. This truck is claimed to be 'fully loaded' with branches sticking above the top and beyond the back of the truck bed—the actual load is only 75 percent.</p>	<p>Truck with branches extending above the top of the truck sides. Although claiming to be 'fully loaded,' the load is filled with air pockets and the actual load is only 70 percent of the rated load capacity.</p>
	
<p>This 20-CY roll-off container has a tailgate (in open position). The load appears to be near top of truck sides and was estimated at 85 percent. The assessment was done from the ground; no monitor tower was used at this DMS (see next photograph).</p>	<p>This is the actual load from the 20-CY container truck shown on left. It measures approximately 4 CY when on the ground.</p>

<b>DEBRIS MONITOR GUIDELINES FOR ESTIMATING QUANTITIES</b>	
	
<p><b>60 Percent Debris Load in Truck</b></p> <p>If truck bed measured 20 cubic yards (CY), this 60 percent load would be 12 CY.</p>	<p><b>75 Percent Debris Load in Truck</b></p> <p>If truck bed measured 20 CY, this 75 percent load would be 15 CY.</p>
	
<p><b>85 Percent Debris Load in Truck</b></p> <p>If truck bed measured 20 CY, this 85 percent load would be 17 CY.</p>	<p><b>95 Percent Debris Load in Truck</b></p> <p>If truck bed measured 20 CY, this 95 percent load would be 19 CY.</p>
	
<p><b>85 Percent Debris Load in Truck w/ No Tailgate</b></p> <p>This truck has no structural tailgate—the capacity would automatically be reduced from 20 CY to 17 CY (85 percent reduction). Then the debris load itself is 85 percent of fully loaded—14.5 CY.</p>	<p><b>75 Percent Debris Load in Truck w/ No Tailgate</b></p> <p>This truck has no structural tailgate—the capacity would automatically be reduced from 20 CY to 17 CY (85 percent reduction). Then the debris load itself is 75 percent of fully loaded—12.8 CY.</p>

Appendix B: Sample Debris Monitoring Plan and Monitoring Forms

### DUMP TRUCK

**Measurements**

Truck Measurements      Length (L) =       Width (W) ft =       Height (H) ft =

Hoist Measurement      Length<sub>1</sub> (L<sub>1</sub>) ft =       Width (W<sub>H</sub>) ft =       Height<sub>H</sub> (H<sub>H</sub>) ft =

   Length<sub>2</sub> (L<sub>2</sub>) ft =

Radius      Radius ft =       Height (H) =

**Calculations**

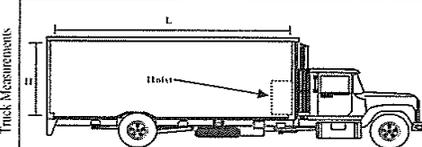
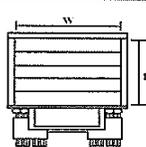
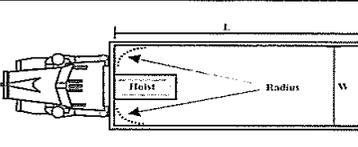
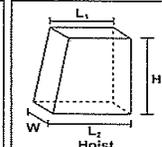
Bed Volume (Basic)      (LxWxH)/27 =  cyd

Hoist Volume      ((L<sub>1</sub>+L<sub>2</sub>/2) x W<sub>H</sub> x H<sub>H</sub>)/27 =  cyd

Radius Volume      (3.14xR<sup>2</sup>xH)/27 =  cyd

Cubic Yards

Total =  cyd

---

### EXTRA TRAILER

**Measurements**

Truck Measurements (Basic)      Length (L) =       Width (W) ft =       Height (H) ft =

Hoist Measurement      Length<sub>1</sub> (L<sub>1</sub>) ft =       Width (W<sub>H</sub>) ft =       Height<sub>H</sub> (H<sub>H</sub>) ft =

   Length<sub>2</sub> (L<sub>2</sub>) ft =

Radius      Radius ft =       Height (H) =

**Calculations**

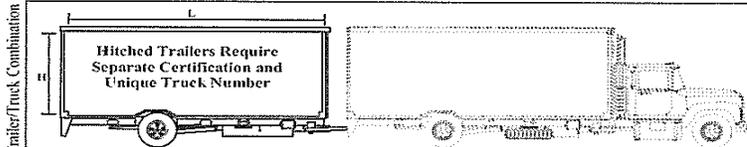
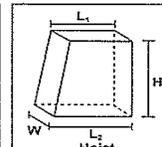
Bed Volume (Basic)      (LxWxH)/27 =  cyd

Hoist Volume      ((L<sub>1</sub>+L<sub>2</sub>/2) x W<sub>H</sub> x H<sub>H</sub>)/27 =  cyd

Radius Volume      (3.14xR<sup>2</sup>xH)/27 =  cyd

Cubic Yards

Total =  cyd

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### ROUND BOTTOM TRUCK

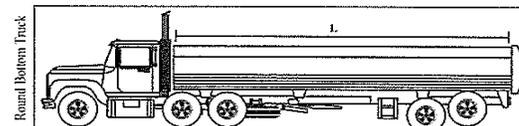
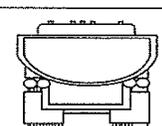
**Measurements**

Truck Measurements      Length (L) ft =       Diameter (D) ft =

**Calculations**

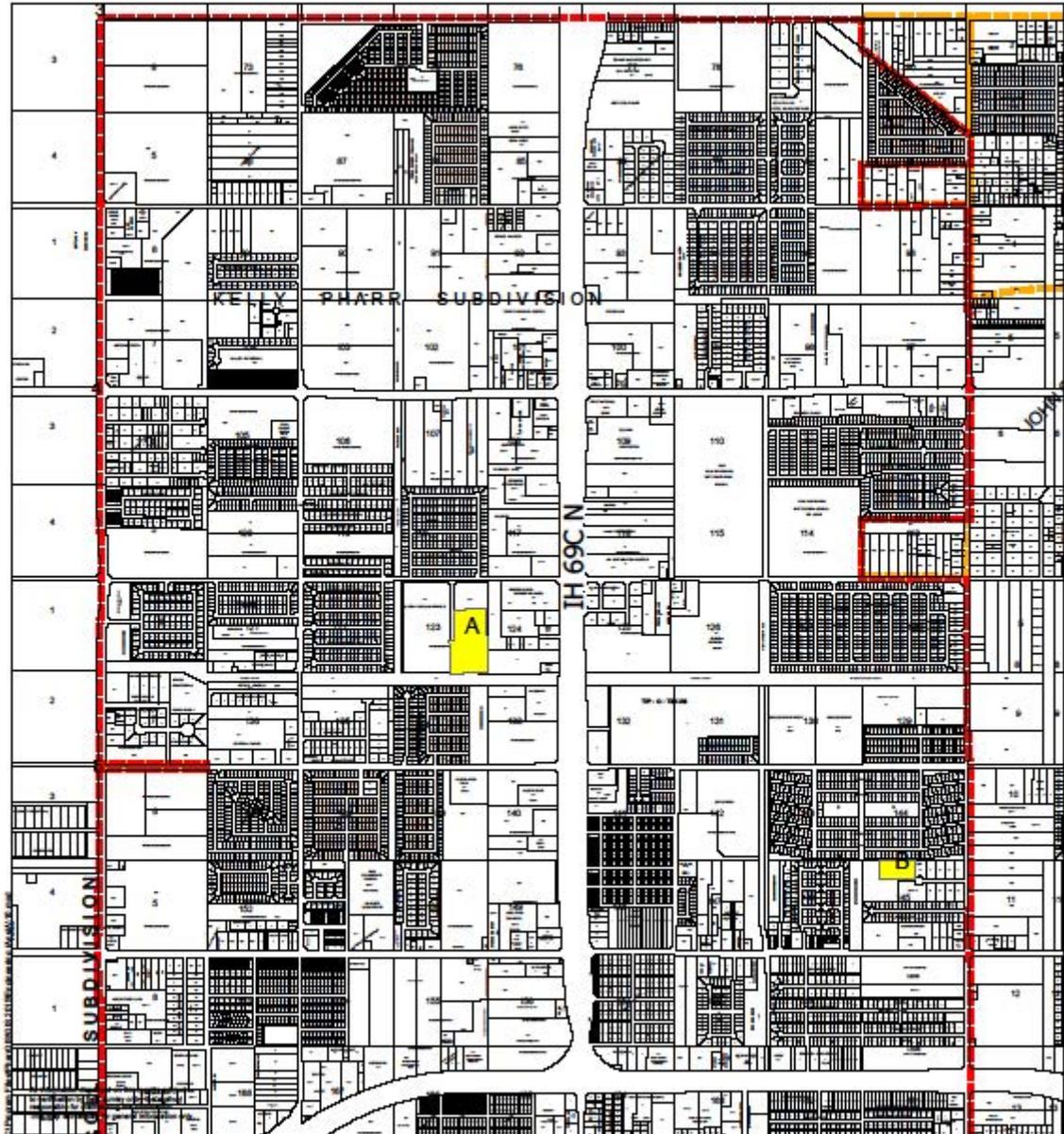
Approx. Volume (3.14 x (D/2)<sup>2</sup> x L) / 27 =  cyd (round bottom portion only)

Cubic Yards

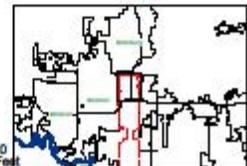
# Appendix C-1

## City of Pharr North Side

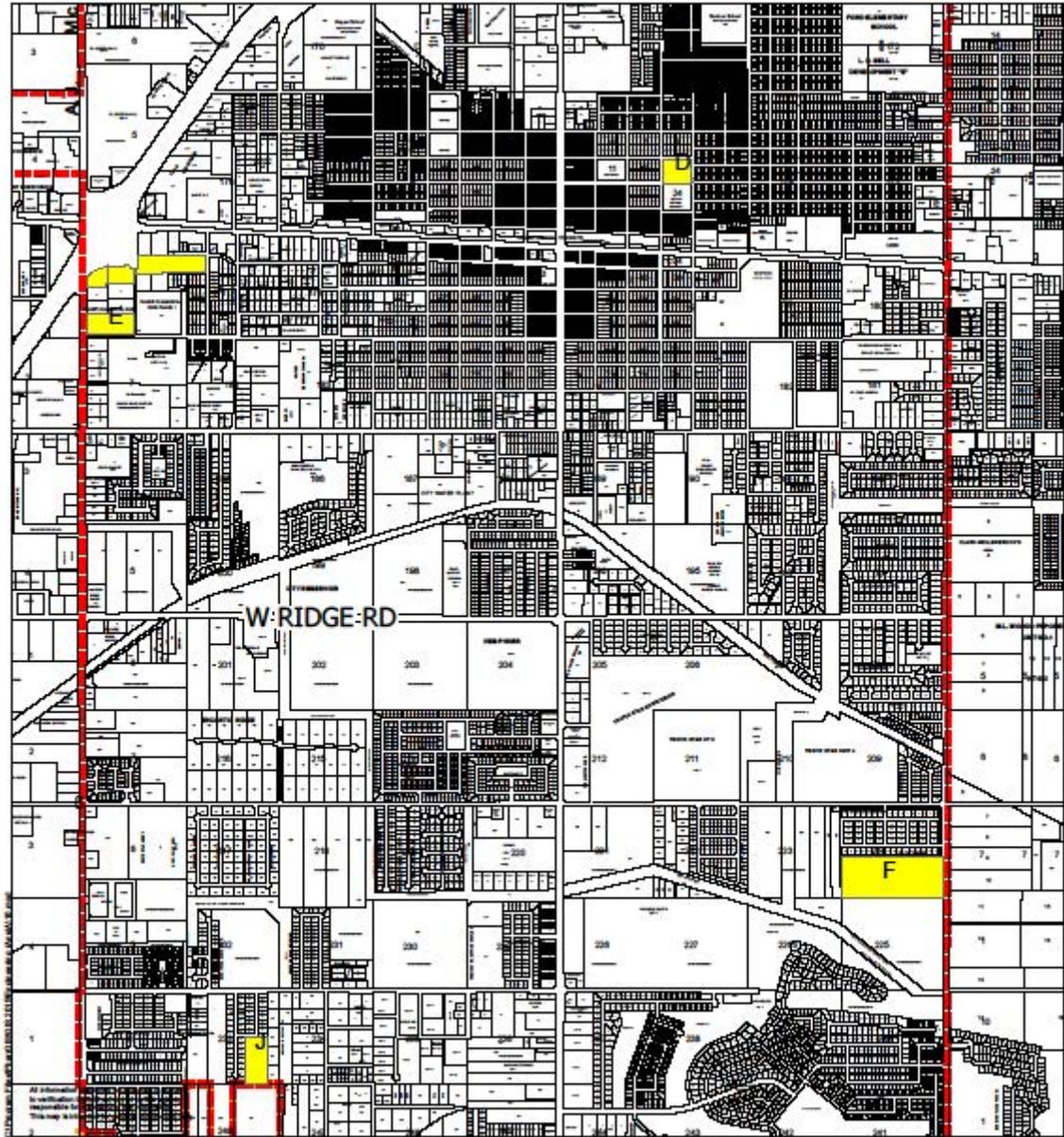


City of Pharr, Texas  
Engineering Department  
956.402.4242

Scale: 1 inch = 1,910 feet

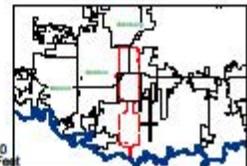


City of Pharr  
Central

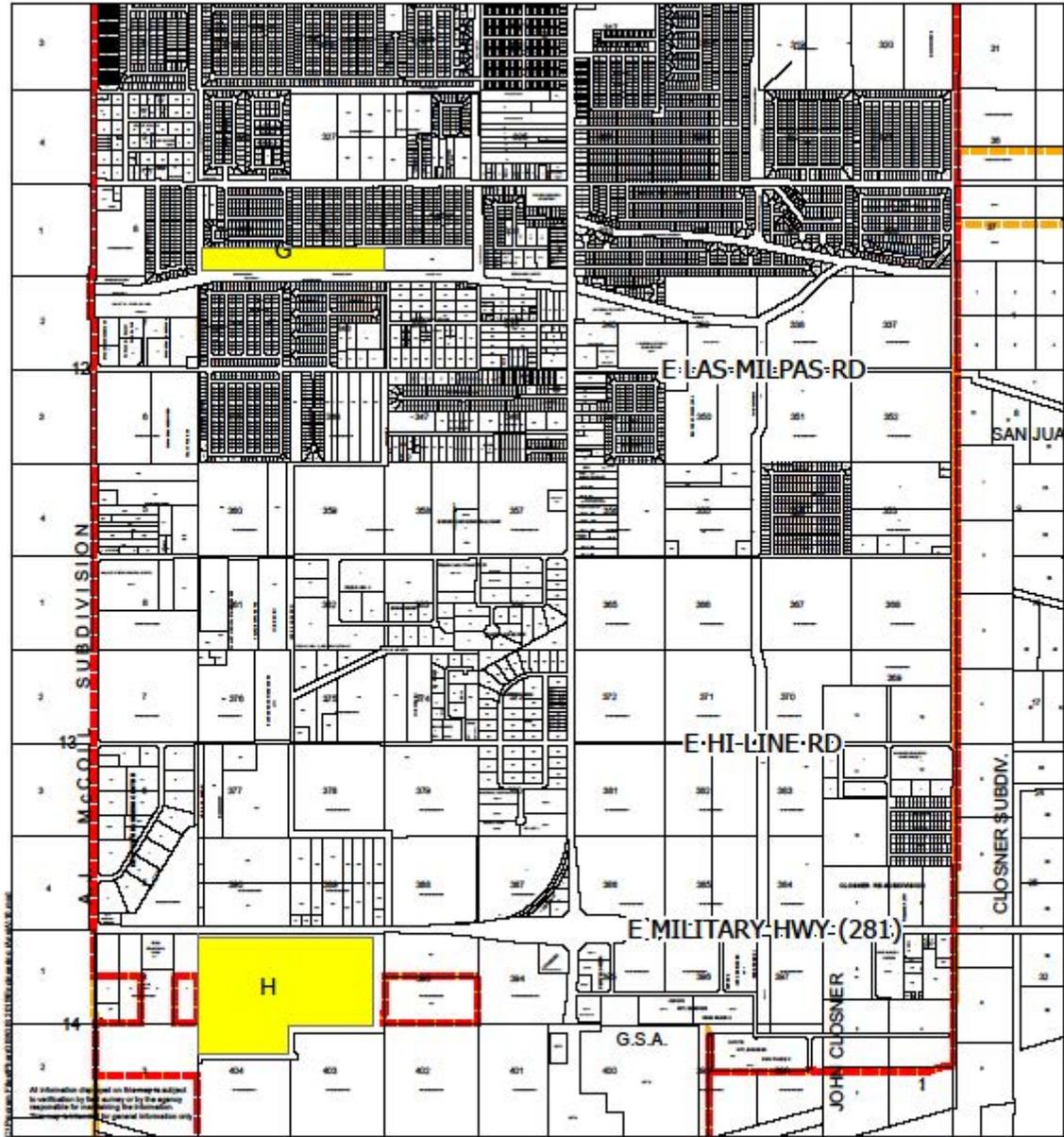


City of Pharr, Texas  
Engineering Department  
956.402.4242

Scale: 1 inch = 1,910 feet

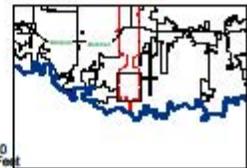


City of Pharr  
South Side



City of Pharr, Texas  
Engineering Department  
956.402.4242

Scale: 1 inch = 1,910 feet



# Appendix D



## RIGHT OF ENTRY AGREEMENT

City of Pharr, Texas

I/We \_\_\_\_\_, the owner(s) of the property commonly identified

as \_\_\_\_\_, City of Pharr,

Texas do hereby request aid in removing debris to prevent further damage to my/our property and therefore grant and give freely and without coercion, the right of access and entry to said property City of Pharr, or the United States Government, its employees, agents, contractors, and subcontractors thereof, pursuant to all applicable laws for the purpose of removing and clearing any or all storm-generated debris of whatever nature from the above described property.

It is fully understood that this permit is not an obligation to perform debris clearance. The undersigned agrees and warrants to hold harmless, City of Pharr, State of Texas and the United States Government, their agencies, contractors, and subcontractors, for damage of any type, whatsoever, either to the above described property or persons situated thereon and hereby release, discharge and waive any action, either legal or equitable that might arise out of

any activities on the above described property. *The property owner(s) will mark any storm damaged sewer lines, water lines and other utility lines located on the described property.*

I/We (have \_\_\_\_, have not \_\_\_\_), (will \_\_\_\_, will not \_\_\_\_) receive(d) any compensation for debris

removal from any other source including private insurance, individual and family grant program or any other public assistance program. I will report any insurance settlements made to me or my family for debris removal on this property that has been performed at government expense. I am fully aware that an individual who fraudulently or willfully misstates any fact in connections with this agreement shall be subject to a fine of not

more than \$10,000 or imprisoned for not more than one year or both.

### **STRUCTURAL DEMOLITION/REMOVAL**

I/We (do\_\_\_\_\_, do not\_\_\_\_\_) request demolition and/or removal of unsafe structures on the described property, and upon request, certify that I/we have dwelling and/or appurtenant structures located on the property that are storm damaged to the extent to be unsafe, uninhabitable and beyond reasonable repair. If City of Pharr debris removal plan allows structural demolition and/or removal of unsafe structures by this request, I/we extend right of entry for such purpose. By this authorization I/we state all personal effects of value to

me/us have been removed from the property. I/We understand that the City is not obligated to demolish or remove structures as part of the debris removal plan, and that any structures that may be removed under the program are recognized to be unsafe.

For the considerations and purposes set forth herein, I hereby set my hand this

\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

Owner Signature: \_\_\_\_\_

Owner Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Address Telephone: \_\_\_\_\_

Witness (Signature/Printed Name): \_\_\_\_\_

Address: \_\_\_\_\_

# Appendix E

## Instructions on segregating debris to be placed on City ROW

Pharr residents are asked to place any storm generated debris on the public right-of-way. The public right-of-way is the area of residential property that extends from the street to the sidewalk, ditch, utility pole or easement. Keep vegetative debris (**woody burnable debris such as limbs and shrubbery**) separated from construction and demolition debris, Household Hazardous Waste, and White Goods as they will be collected separately.

Any household hazardous waste, roof shingles or tires resulting from Storm Event, may be eligible for removal and should be separated at the curb. **Do not place near street intersections so as to obstruct view, on or close to water meter vault, fire hydrant or any other above-ground utility.** Only debris placed on the public right-of-way will be eligible for collection until further notice. If all debris is not picked up during the initial pass, please continue to push remaining debris to the right-of-way for collection on subsequent passes.

Storm generated debris on private property is the legal responsibility of the owner. List of landfills is available from city. Private property owners may request help from city but must obtain a Right-of-Entry authorization to be considered by city

### **Bagged Vegetative Debris**

Disaster related vegetative debris that is placed in garbage bags may be placed along the ROW for collection by the City's debris removal contractor. The collection of disaster related vegetative debris will follow the same standard yard trash collection.

### **Household Hazardous Waste (HHW)**

HHW includes gasoline cans, aerosol spray cans, paint, lawn chemicals, batteries, fire extinguishers, fluorescent lamps, household electronics, etc. It is important that residents separate HHW from other debris, such as vegetative, construction/demolition, etc.

### **White Goods**

White goods include refrigerators, freezers, air conditioners, heat pumps, ovens, ranges, washing machines, clothes dryers, etc. It is important that residents separate white goods from other debris to ensure that white goods are not mixed with C&D or vegetative debris during collection.

Please check the City of Pharr Web site **[www.pharr-tx.gov.com](http://www.pharr-tx.gov.com)** for additional information and updates on the debris removal process.

# Appendix F

## SAMPLE PRESS RELEASES

### For Immediate Release (Approximately 48-72 Hours Prior to Event)

**Pharr, Texas** – The potential for dangerous hurricane/tornado/flash flood conditions is eminent for the City of Pharr and its residents. In anticipation of a likely large debris-generating storm, residents are asked to secure or store all yard items that may become damaging projectiles. The City is prepared and has a plan in place to immediately respond following the event. Once dangerous conditions subside and roads have been cleared of obstructions, residents should bring any debris to the public right-of-way for removal.

The public right-of-way is the area of residential property that extends from the street to the sidewalk, ditch, utility pole or easement. Residents should separate clean, vegetative debris (woody burnable debris such as limbs and shrubbery) from construction and demolition debris. Do not mix hazardous material, such as paint cans, aerosol sprays, batteries, or appliances with construction and demolition debris. Household garbage, tires or roof shingles cannot be combined with any storm debris. Do not place debris near water meter vault, fire hydrant or any other above-ground utility. Only debris placed on the public right-of-way will be eligible for collection until further notice.

If all debris is not picked up during the initial pass, residents should continue to push remaining debris to the public right-of-way for collection on subsequent passes.

Check the City of Pharr Web site [www.pharr-tx.gov.com](http://www.pharr-tx.gov.com) for the location of these sites and the hours of operation or call **INSERT NUMBER**. The City of Pharr website will also provide City office closure times/date (including garbage collection and City facilities). All reconstruction debris (debris resulting from rebuilding) is the responsibility of the homeowner. Those items must be dropped off at the **INSERT LOCATION**. Pharr residents are encouraged to stay indoors until dangerous winds have passed. Please tune into local news channels for updated weather information.

### For Immediate Release (Approximately 0-48 Hours Following Event)

**Pharr, Texas** – The City of Pharr is beginning its recovery process in the wake of **INSERT EVENT**. Pharr residents are asked to place any storm generated debris on the public right-of-way.

The public right-of-way is the area of residential property that extends from the street to the sidewalk, ditch, utility pole or easement. Keep vegetative debris (woody burnable debris such as limbs and shrubbery) separated from construction and demolition debris, as they will be collected separately. Bagged debris should not be placed on the public right-of-way, only loose debris will be collected. Any household hazardous waste, roof shingles or tires resulting from **INSERT EVENT**, may be eligible for removal and should be separated at the curb.

Do not place near water meter vault, fire hydrant or any other above-ground utility. Only debris placed on the public right-of-way will be eligible for collection until further notice.

If all debris is not picked up during the initial pass, please continue to push remaining debris to the right-of-way for collection on subsequent passes. Household garbage

collection will resume to its normal schedule on **INSERT DATE AND TIME**. Please check the City of Pharr Web site [www.pharr-tx.gov](http://www.pharr-tx.gov) for additional information and updates on the debris removal process. For more information, please call the city's debris hotline at **INSERT NUMBER**.

### **For Immediate Release (72 hours Prior to final pass of debris removal)**

**Pharr, Texas.** – Final preparations are being made for the third and potentially final pass for debris removal in the wake of **INSERT EVENT**. Pharr residents should have all storm-generated debris in front of their homes on the public right-of-way (the area of residential property that extends from the street to the sidewalk, ditch, utility pole or easement) no later than **INSERT DATE** to be eligible for pick-up.

The City of Pharr will not be able to guarantee that debris placed on the public right-of-way after the specified deadline will be removed.

Residents should continue to separate vegetative debris (woody burnable debris such as limbs and shrubbery) and construction and demolition debris. Do not place debris near water meter vault, fire hydrant or any other above-ground utility. Hazardous household chemicals such as paint cans and batteries may be deposited at the **INSERT LOCATION**.

You can follow the debris removal efforts in your neighborhood and the rest of the city by going to the City of Pharr Web site [www.pharr-tx.gov](http://www.pharr-tx.gov), or by calling **INSERT NUMBER**.

# Appendix G

## Emergency Contact Information

Mayor	Ambrosio “Amos” Hernandez	<a href="mailto:mayor@pharr-tx.gov">mayor@pharr-tx.gov</a>
City Manager	Juan G. Guerra	<a href="mailto:juan.guerra@pharr-tx.gov">juan.guerra@pharr-tx.gov</a>
Commissioner #1	Eleazar Guajardo	<a href="mailto:commissioner1@pharr-tx.gov">commissioner1@pharr-tx.gov</a>
Commissioner #2	Robert “Bobby” Carrillo	<a href="mailto:commissioner2@pharr-tx.gov">commissioner2@pharr-tx.gov</a>
Mayor Pro Tem #3	Oscar Elizondo	<a href="mailto:mayorprotem@pharr-tx.gov">mayorprotem@pharr-tx.gov</a>
Alt. Mayor Pro Tem #4	Edmund Maldonado	<a href="mailto:commissioner4@pharr-tx.gov">commissioner4@pharr-tx.gov</a>
Commissioner #5	Ricardo Medina	<a href="mailto:commissioner5@pharr-tx.gov">commissioner5@pharr-tx.gov</a>
Commissioner #6	Mario Bracamontes	<a href="mailto:commissioner6@pharr-tx.gov">commissioner6@pharr-tx.gov</a>
Police	Ruben Villegas (956) 330-7398	<a href="mailto:ruben.villescas@pd.pharr-tx.gov">ruben.villescas@pd.pharr-tx.gov</a>
Fire	Jaime Guzman (956) 358-7168	<a href="mailto:jaime.guzman@fd.pharr-tx.gov">jaime.guzman@fd.pharr-tx.gov</a>
Utilities (Asst. C.M)	David Garza (956)	<a href="mailto:david.garza@pharr-tx.gov">david.garza@pharr-tx.gov</a>
Public Works	Roy Garcia (956) 279-9365	<a href="mailto:roy.garcia@pharr-tx.gov">roy.garcia@pharr-tx.gov</a>
IT/EMC	Jason Arms (956) 638-1411	<a href="mailto:jason.arms@pharr-tx.gov">jason.arms@pharr-tx.gov</a>
Parks/Rec.	Frank Marin (956) 460-7514	<a href="mailto:frank.marin@pharr-tx.gov">frank.marin@pharr-tx.gov</a>
Waste Management	Jaime Lopez (956) 702-0252	<a href="mailto:jlopez21@wm.com">jlopez21@wm.com</a>
Code Compliance	Rick Gamboa (956) 225-7597	<a href="mailto:rick.gamboa@pharr-tx.gov">rick.gamboa@pharr-tx.gov</a>
PIO	TBD (956)	
Debris Contractor	TBD (956)	

# Appendix H

## **Stormwater Management Controls Required at Debris Management Sites (DMS)**

### **Perimeter Control**

Temporary debris management areas should have perimeter controls surrounding the site to prevent discharge of stormwater runoff. In addition, buffers should be provided between debris stockpiles and all property lines. Examples of perimeter controls are:

- Stormwater controls, such as curbs, berms, hay bales, silt fences, jersey barriers or setbacks, to prevent discharge of runoff into nearby water bodies or storm inlets.
- Windblown debris controls, such as slatted fencing, tarping or other forms of cover.
- Preventative siltation/spill measures for storm drain inlets, such as oil booms or filter fabric inlet protection.
- Preventative tracking measures, such as gravel, quarry blend, or rumble strips at exits.

### **Debris Containment**

The debris categories below also require a cover or a berm. Covers include tarps and fabric frame structure. Berms include sand bags, hay bales and curbing.

#### ***Items to be placed in Dumpsters or other Storage Containers - cover and berm required***

- Oil Tanks
- Infectious/Medical Waste
- Putrescible solid waste debris
- E-Waste
- Hazardous Household Products (Paints, Cleaning Supplies, Solvents, etc.)
- Hazardous Materials (any waste that is toxic, corrosive, reactive or ignitable)

#### ***Items to be placed on Impervious Surfaces (parking lot, streets and concrete pads) – berm required***

- Vehicles (including boats and RVs)
- White Goods (Appliances)

#### ***Items to be placed on Pervious Surfaces (grass, sand and dirt) – berms required***

- Vegetative Waste • Bulky Waste
- Construction and Demolition Debris

## APPENDIX I

Sum of area (acres) information supplied by GIS department.

<u>Description</u>	<u>Acre</u>	<u>Sq Feet</u>	<u>Cubic Yard</u>
<i>Agricultural</i>	3946.12	171892987	3437859.74
<i>Business</i>	3258.92	141958555	2839171.1
<i>Govt</i>	98.73	4300678.8	86013.58
<i>S.F. R.</i>	3484.09	151766960	3035339.21
<i>Multifamily</i>	497.42	21667615	433352.3
<i>Mobile Home</i>	670.32	29199139	583982.78
<i>Drainage</i>	486.83	21206315	424126.3
	12442.4	541992251	<b>10839845</b>

*CY is based on a lvl 5 hurricane complete catastrophic debris generating event.*

*Based on USACE principals- 10,839,845.01 = **5,419,922.50 Tons***

*Debris forecasting: Square footage x .02 = Cubic Yards*

**"Historic disasters have shown that it takes 100 acres of land to process one million cubic yards of debris"- *FEMA 325 Public Assistance Debris Management Guide pg. 73***

**Formulas:** Conversion factors (USACE)

Construction/Demolition debris 2 cy = 1 Ton

Mobile Homes: single wide : 290 cy Double wide: 415 cy

Mixed Debris 4 cy = 1 Ton

Vegetative Debris

Hardwoods: 4 cy = 1 Ton

Softwoods: 6 cy = 1 Ton