

CONTRACT
FOR DEBRIS REMOVAL
RELATED TO HURRICANE IKE
IN COUNTY OF POLK, DRAFT SCOPE OF WORK TEXAS
UNIT PRICE BY CUBIC YARDS

1.0 GENERAL.

The purpose of this contract is to remove and dispose of all eligible debris from public ~~Polk County~~ Rights-of-Way (ROW) within Polk County, Texas. The area to be included as part of this contract is located within the legal boundaries of Polk County, Texas.

2.0 SERVICES.

2.1 The Contractor shall provide for debris removal and disposal of all eligible debris from the County of Polk ROW.

2.2 The debris shall be taken to an approved dumpsite(s) indicated on the attached maps. All necessary permits shall be obtained by the Contractor.

2.3 The estimated amount of debris to be removed under this contract is shown on the individual bid schedules, but not guaranteed. The unit price on the individual bid schedules will be used for payment.

2.4 Haul and Dispose. The work shall consist of clearing, separating, and removing any and all eligible debris (see definitions of eligible debris in paragraph 4 herein) from public property only, including ROW of streets and roads. Work shall include: 1) examining and sorting debris to determine whether or not debris is eligible and to determine whether eligible debris is burnable or non-burnable (or other categories specific to the project site); 2) loading and sorting the debris; 3) hauling the eligible debris to an approved dumpsite(s). Ineligible debris shall not be loaded, hauled, or dumped under this contract. The Contractor is liable for all ineligible debris handled during the life of this contract. The Contracting Officer's Representative (COR) (~~or other contracting term used by the local community.~~ This should be changed throughout the contract) shall be immediately notified of any ineligible debris placed at the right of way for collection.

2.4.1 The Contractor shall not mix C & D debris with non-vegetative matter. *construction & demolition*

2.4.2 The Contractor shall make a maximum of 3 passes with a minimum of one weekend between each pass. The Contractor shall not move from one designated work area to another designated work area without prior approval from the Contracting Officer's Representative (COR).

- 2.5 Any eligible debris, such as fallen trees, which extend onto the public ROW, State or County, from private property, shall be cut at the point where it enters the ROW. Only that part of the debris that lies within the ROW shall be removed. Hazardous limbs are considered eligible debris and are defined as limbs greater than two inches in diameter that are still hanging in the tree and are threatening a public use area, such as a trail, sidewalk, road, etc. Trees in the public ROW with more than 50% of the crown broken are eligible debris and shall be removed. The Contractor shall not enter onto private property during the performance of this contract without written permission and waivers on forms prescribed by the county.
- 2.6 Contractors shall note that a portion of the project will occur in residential areas. The Contractors should exercise due care to minimize any damages to trees, shrubs, landscaping and general property. The Contractor shall repair any damages caused by the Contractor's equipment in a timely manner at no expense to the County. The debris work area shall be left clear of debris and cleaned, as is reasonable and practical under the conditions of this project.
- 2.7 The Contractor shall use equipment and perform work in a manner to prevent damages to the County's infrastructure facilities and adjacent ROWs, including all landscaped areas. The Contractor shall repair any damages caused by the Contractor's equipment in a timely manner at no expense to the County. All tracked equipment shall be approved by the County prior to use. All loading equipment is required to operate from the street/road using buckets and/or boom and grapple devices to remove and load the debris. Any damage to private property, sidewalks, curbs, or streets shall be repaired at the expense of the Contractor.
- 2.8 The Contractor shall conduct the work so as not to interfere with the disaster response and recovery activities of federal, state, and local governments or agencies, or of any public utilities.
- 2.9 The government reserves the right to inspect the site, verify quantities and review operations at any time.
- 2.10 All work shall be accomplished in a safe manner in accordance with County Safety standards and OSHA standards.
- 3.0 LOAD TICKETS.**
- 3.1 Load Tickets shall be used for recording the cubic yard volume of debris removed for disposal. A copy of the load ticket to be used by the Contractor shall be submitted for COR County approval prior to beginning work. The Contractor shall provide all load tickets to the County. The load ticket numbers shall be sequentially numbered. The load tickets shall be a minimum of four-parts. A sample load ticket is included as an attachment.
- 3.2 Each ticket shall contain the following information:
- Ticket Number

- Contract Number
- Contractor Name
- Date
- Truck or Roll-off Number
- Truck Capacity
- Point of Debris Collection
- Loading Departure Time
- Dump Arrival Time
- Percent of Load
- Actual Debris Volume
- Debris Eligibility (Y/N)

3.3 A minimum four-part numbered load ticket will be issued by a County monitor prior to transport of the debris from the loading site. The entire four-part load ticket is given to the vehicle operator. Upon arrival at the dumpsite, the vehicle operator will give the entire four-part load ticket to the County monitor. The County monitor will verify the hauler and equipment and establish a percent of truck capacity of the eligible cubic yardage of debris load. After documenting percentage to the nearest 5%, the County monitor will calculate the actual cubic yardage of the load. The actual cubic yard will be recorded on the load ticket by the County monitor to the nearest cubic yard. The County monitor will document the data on the load ticket. The County monitor will give one copy to the vehicle operator. One copy is then given to the Contractor, the original is kept by the County and the fourth to FEMA. The load tickets shall be submitted with the daily operational report.

4.0 DEBRIS CLASSIFICATION.

4.1 Eligible Debris. Eligible debris is considered all storm related debris which is located within the public right of way and defined below. Storm debris in State ROW is only eligible when the debris is clearly collected from private property.

4.2 Stumps. The removal and disposal of all stumps may be paid on the cubic yard basis, regardless of size or whether or not the stumps require extraction by the Contractor. Stumps 24" or larger hauled separate from other debris shall be individually measured and converted to cubic yards using the attached TABLE by COR. Uprooted stumps with an exposed root ball on improved public property or ROW 24" or larger that create an immediate threat to life, public health, and safety which have to be extracted by mechanical means may be addressed on a case by case basis by the County after FEMA approval. Stumps not approved in advance by FEMA shall be paid for on a cubic yard basis.

4.3 Vegetative Hurricane Debris. The Contractor will only be responsible for the removal of vegetative debris.

5.0 PERFORMANCE SCHEDULE.

5.1 The Contractor shall commence performance within twenty-four (24) hours of receipt of notice to proceed.

- 5.2 Prior to commencing debris removal operations, a Contractor shall, with the County's direction, provide a work plan showing where operations will begin and which streets/roads will be cleared on a 7-and 14 day projection. The plan shall be updated every Monday.
- 5.3 All activity associated with debris operations shall be performed during 7am through 7 pm. The Contractor will work 7 days per week, including holidays.
- 5.4 Maximum allowable time for completion shall be October 27, 2008, unless the County initiates additions or deletions to the contract by written change orders. Both parties pursuant to applicable city, county, state and federal law will equitably negotiate subsequent changes in cost and completion time.

6.0 EQUIPMENT.

- 6.1 All trucks and other equipment must be in compliance with all applicable federal, state, and local rules and regulations. All trucks and other equipment shall be equipped with back up alarms. Any truck used to haul debris must be capable of rapidly dumping its load without the assistance of other equipment. Sideboards or other extensions to the bed are allowable provided they meet all applicable rules and regulations, cover the front and both sides, and are constructed in a manner to withstand severe operating conditions. The sideboards are to be constructed of 2" by 6" boards or greater and not to extend more than two feet above the metal bedsides. All extensions are subject to acceptance or rejection by the County. The Contractor shall provide means to rapidly unload any trailer that does not have a means for dumping. All trailers shall have a metal-framed exterior and a minimum of 5/8" plywood (not wafer board) interior walls. All equipment used to haul debris shall be equipped with a tailgate that will effectively contain the debris during transport and permit the truck to be filled to capacity. **Plastic webbing is not acceptable for a tailgate.** All hauling equipment shall be measured and marked for its load capacity. The Contractor is responsible for ensuring all loading and transport equipment complies with state and local laws. The Contractor, prior to use, shall inspect all equipment. The Contractor will provide a form for this purpose.
- 6.2 Trucks and other heavy equipment designated for use under this contract shall be equipped with two signs, one attached to each side. These signs shall be furnished by the Contractor. The signs remain the property of the County and will be returned to the County at the conclusion of the contract. Magnetic signs are not permitted. The signs shall contain the following information:

- Company Name
- Truck Number
- Cubic Yardage
- Inspector's Name and Date

An example sign is included as an attachment.

- 6.3 Prior to commencing debris removal operations, the Contractor shall present to the County, all trucks, trailers, or containers that will be used for hauling debris.

Each truck or trailer will be measured to determine the load capacity. Each truck or trailer shall be numbered and clearly display the load capacity for identification with a permanent marking. The County may, at any time, request that the trucks be re-measured. The Contractor shall notify the COR each time a new truck, trailer or container is to be used under this contract. No capacity can exceed 100% of the measured volume.

- 6.4 Trucks or equipment, which are designated for use under this contract, shall not be used for any other work during the working hours of this contract. The Contractor shall not solicit work from private citizens or others to be performed in the designated work area during the period of this contract. Under no circumstances will the Contractor mix debris hauled for others with debris hauled under this contract.
- 6.5 Loading equipment used under this contract shall be rubber tired and sized properly to fit loading conditions. Excessive size loading equipment (6 CY and up) and non-rubber tired equipment must be approved by the COR.
- 6.6 The Contractor shall provide an inspection tower at each dumpsite. This tower shall be constructed such that the County monitor can see the bed when empty and to fully view the debris load (at least 10 feet above the existing ground surface), establishing the volume. The inspection tower shall be constructed to meet all local, state and federal safety requirements. The tower shall be constructed using pressure treated wood. The floor area shall be 8' x 8', constructed of 2" x 8" joists, 16" O.C. with 3/4" plywood supported by four 6" x 6" posts. The perimeter of the floor area shall be protected by a 4 foot high wall constructed of 2" x 4" studs and 1/2" plywood. The floor area shall be covered with a corrugated tin roof. The roof shall provide a minimum of 6'-6" of head room below the support beams. Access shall be provided by wooden steps with a hand rail. The towers shall include a writing surface area. The Contractor shall remove and dispose of the inspection towers following completion of the debris removal at the direction of the COR. The Contractor shall provide portable restroom facilities at all dumpsites.

7.0 REPORTING.

- 7.1 The Contractor shall submit a report to the COR each day for the term of the contract. A sample daily haul record is attached. Each report shall contain, at a minimum, the following information:
- Contractor's Name
 - Contract Number
 - Truck Number
 - Location of work
 - Day of Report
 - Daily and cumulative totals of debris removed, by category
- 7.2 Discrepancies between the daily operations report and the corresponding load tickets shall be reconciled no later than the following day.

8.0 OTHER CONSIDERATIONS.

8.1 The Contractor shall supervise and direct the work using skillful labor and proper equipment for all tasks. Safety of the Contractor's personnel and equipment is the responsibility of the Contractor. Additionally, the Contractor shall pay for all materials, personnel, taxes, and fees necessary to perform under the terms of this contract.

The Contractor is, and shall be, in the performance of all work services and activities under this Contract, an Independent Contractor and not an employee, agent or servant of Polk County. All persons engaged in any of the work or services performed pursuant to this Contract shall, at all times, and in all places, be subject to the Contractor's sole direction, supervision, and control. The Contractor shall exercise control over the means and manner in which it and its employees perform the work, and in all respects the Contractor's relationship and the relationship of its employees to Polk County shall be that of an independent Contractor and not as employees or agents of Polk County.

8.2 The Contractor shall be duly licensed in accordance with the city's, state's, and county's statutory requirements to perform the work.

8.3 The Contractor shall be responsible for taking corrective action in response to any notices of violations issued as a result of the Contractors or any Sub-Contractors' actions or operations during the performance of this contract. Corrections for any such violations shall be at no additional cost to the County.

8.4 The Contractor shall be responsible for control of pedestrian and vehicular traffic in the work area. The Contractor shall provide all flag persons, signs, equipment, and other devices necessary to meet federal, state, and local requirements. The traffic control personnel and equipment shall be in addition to the personnel and equipment required in other parts of this contract. At a minimum, one flag person should be posted at each approach to the work area. Work shall be accomplished in a safe manner in accordance with County Safety standards and OSHA standards.

8.5 The Contractor is responsible for obtaining all applicable environmental and regulatory permits prior to the Contractor commencing operations.

8.6 The Contractor is responsible for dust control. The Contractor shall be in compliance with all state and local laws for dust control.

8.7 The COR/County may suspend Contractor operations due to inclement weather. The performance period may be extended for weather delays.

8.8 The Contractor shall employ as many local residents and Sub-Contractors as possible as part of this contract.

9.0 FINAL DISPOSITION.

The method of final disposal will be determined by the contracting authority. Landfill disposal fees are the responsibility of the Contractor.

10.0 MEASUREMENT.

Measurement for all debris removed shall be by the cubic yard as determined by the eligible debris delivered to dumpsite, as supported by the load ticket. Load tickets shall document measurement.

11.0 BONDING AND INSURANCE.

- 11.1** Prior to signing of contract, Contractor agrees to furnish the County with all applicable certificates of insurance. Within 24 hours following signing of contract, Contractor shall provide copies of insurance policies including all endorsements. In addition, a payment and performance bond equal to the bid or \$1,000,000.00, whichever is higher, is required within 24 hours of award of the contract. The Contractor shall be able to cover expenses associated with a major recovery operation prior to the initial payment and between subsequent payments as well as the aforementioned bonds and insurance. Contractor mobilization costs will not be paid if the Contractor is unable to obtain bonding.

Before commencing any of the work provided for herein, the Contractor shall submit to Polk County, certificates evidencing that insurance of the types and the amounts specified below with companies acceptable to Polk County has been obtained by the Contractor and Contractor shall maintain such insurance during the term of this Contract. The insurance coverage to be obtained and provided by Contractor extends to, and includes, the following:

- a. **Worker's Compensation:** Statutory Worker's Compensation coverage:
 - b. **Commercial General Liability:** Commercial General Liability insurance written on a standard liability policy form with minimum limits of \$250,000.00 per occurrence bodily insurance liability, \$100,000.00 per occurrence for property liability, and \$500,000.00 coverage in aggregate:
 - c. **Automobile Liability:** Comprehensive automobile liability insurance insuring all automobiles/vehicles, with minimum limits of liability of \$250,000.00 per occurrence of bodily injury, \$100,000.00 per occurrence for property damage and \$500,000.00 coverage in the aggregate;
 - d. **Umbrella Policy:** Umbrella coverage in the amount of \$2,000,000.00 overlying commercial general liability and motor vehicles policies.
 - e. **Additional Insured:** The policies and endorsements required hereunder shall be endorsed to name Polk County as an additional insured; and
 - f. **General:** All such certificates shall provide that said insurance will not be cancelled during the Term of this Contract without thirty (30) days prior written notice to Polk County.
- 11.2** The Contractor shall save and hold the County harmless from and against all liability, claims and demands on account of personal injuries (including without limitation workmen's compensation and death claims) or property loss or damages of any kind whatsoever, which arise out of or be in any manner connected with, or are claimed to arise out of or be in any manner connected with, the performance of this contract, regardless of whether such injury, loss or damage shall be caused by, or be claimed to be caused by, the negligence or other fault of the Contractor, any Sub-Contractor, agent or employee.

12.0 PAYMENT.

- 12.1 Payment for work completed may be invoiced on a monthly basis. Invoices shall be based on reconciled load tickets from the daily operational reports. Payment will be based on the unit pricing submitted by the Contractor in the attached BIDDING SCHEDULE.
- 12.2 Time is of the essence to the performance hereunder and the County shall recover from the Contractor any delay costs caused by the acts or omissions of the Contractor or its agents. Except as otherwise provided herein, payment shall be made for actual work accepted and completed. If the Contractor has not been paid within thirty days following the date of hand delivery to the County's authorized agent of said invoice, the Contractor shall also be paid a late payment charge consisting of interest calculated at the rate of one and one-half percent per month calculated from the expiration of the thirty day period until fully paid. Payment made is based on the post mark date or hand delivery date. No late payment interest shall be due and owing for payments withheld in good faith for reasonable cause.
- 12.3 For reasonable cause and/or when satisfactory progress has not been achieved by the Contractor during any period for which a payment is to be made, the County's authorized agent may retain a percentage of said payment, not to exceed 5% of the contract value to insure performance of the contract. Said cause and progress shall be determined by the County's authorized agent, in his sole discretion, based on his assessment of any past performance of the Contractor and the likelihood that such performance will continue. Upon completion of all contract requirements, retained amounts shall be paid promptly less any offsets or deductions authorized hereunder or by law.
- 12.4 Any work performed that is not eligible according to FEMA regulations will not be paid for by the County.
- 12.5 The County may withhold payment or final payment for reasons including, but not limited to the following: unsatisfactory job performance or progress, defective work, disputed work, failure to comply with material provisions of the contract, third party claims filed or reasonable evidence that a claim will be filed or other reasonable cause. *(added a sentence)*
- 12.6 Final payment, less any offsets or deductions authorized hereunder or by law, shall be made within thirty days of the certification of completion of the project by the County's authorized agent provided the Contractor has completed filing of all contractually required documents and certifications with the County's authorized agent including acceptable evidence of the satisfaction of all claims or liens.

13.0 CHANGES, ADDITIONS, DEDUCTIONS, AND EXTRA WORK.

- 13.1 Upon proper action by the County Commissioner's Court, the County's authorized agent may authorize changes, additions or deductions from the work to be performed by written notice to the Contractor. No extra work shall be

done or any obligation incurred except upon written order by the County's authorized agent upon authorization by the County Commissioner's Court. If any change causes an increase or decrease in the Contractor's cost of, or the time required for, the performance of any part of the work under this contract, the county's authorized agent, with County Commissioner's Court authorization, shall make an equitable adjustment and modify the contract in writing.

- 13.2 This contract may only be amended by means of written document signed by both parties and approved authorization as set forth above. A right created for under this contract may not be waived except in writing, signed by the party waiving the right, and authorized as set forth above.

14.0 TERMINATION OF CONTRACT.

- 14.1 This contract may be terminated at any time for the convenience of the County. The County agrees to pay the Contractor for all work completed through the termination date, as well as any demobilization costs that were a part of the original contract.

- 14.2 This contract shall be terminated for cause if the Contractor defaults in the performance of any of the terms hereof, including but not limited to: unsatisfactory job performance or progress, defective work, disputed work, failure to comply with material provisions of the contract, third party claims filed or reasonable evidence that a claim will be filed, or other reasonable cause; or otherwise fails to cure any other deficiency identified by the County's authorized agent within 24 hours of delivery of notice of said deficiency. The County retains all other legal or equitable rights or remedies existing as a result of said default, including but not limited to any legal process necessary to obtain any sureties securing this contract. Any reasonable attorney's fee incurred in enforcing this contract will not exceed 5% of said contract price.

15.0 WARRANTIES AND REPRESENTATIONS.

- 15.1 This contract is binding upon and inures to the benefit of the County or Assigns and is the whole agreement of the parties and governed by the Law of the State of Texas. The appropriate venue for any litigation resulting hereunder is the Polk County District Court, Polk County, Livingston, Texas.

- 15.2 The Contractor shall comply with all Federal, State, and County laws, ordinances, and regulations. The Contractor shall not discriminate against any employee or applicant due to sex, race, color, creed, national origin or ancestry. The Contractor further certifies he is eligible to perform this contract under local and Federal law, is not now and has never been debarred from performing Federal or State government contracts and that all Sub-Contractors used in the performance of this contract have the same qualifications.

16.0 DEFICIENCIES, CORRECTIVE ACTIONS AND DEDUCTIONS.

- 16.1 When the Contractor's work does not conform to the Contract requirements completely, a deficiency exists. If a deficiency(s) is serious enough to render a

service unacceptable, it is also considered a defect. Defects are important in determining if non-compliance levels have been exceeded for services inspected.

- 16.2 Corrective Actions. If deficiencies are identified, the County must take action to correct those deficiencies using one, or in some cases a combination of, the following:
- 16.2.1 Stop Unsafe Work. The County's authorized agent may immediately stop work on that portion of the job affected by a safety hazard, until it is corrected.
- 16.2.2 Issue a Stop Work Order. The County's authorized agent may immediately stop work on that portion of the job affected for contractual non-compliance or procedural dispute, until it is corrected.
- 16.2.3 Reduced Value Deduction. The County may reduce the Contract price to reflect the reduced value of the services performed. This method is normally used when the work is performed by the County or another Contractor rather than the Contractor under this contract. The amount of the deduction is equal to the value of the service(s) not performed. As appropriate, calculation of deductions for certain deficiencies will be made using approved FEMA methods.
- 16.2.4 The County's authorized agent will notify the Contractor, in writing, of any observed noncompliance with the aforementioned Federal, State, or local laws or regulations. Such notice, when delivered to the Contractor at the site of the work, shall be deemed sufficient for the purpose. After receipt of such notice, immediately inform the County's authorized agent of proposed corrective action, and take such action as may be approved. If the Contractor fails or refuses to comply promptly, the County's authorized agent may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop orders shall be made the subject of a claim for extension of time, or for excess costs or damages by the Contractor.

17.0 NOTICES.

- 17.1 At the time of award, the Contractor shall designate, in writing, a COR to receive any notice required hereunder and who shall be available at the local work site in Polk County during all times that the Contractor is performing work in accordance herewith. A copy of said designation shall be provided to the County's authorized agent at the time of award.
- 17.2 The only County personnel authorized to receive any notice required hereunder is the County's authorized agent. Said notice must be hand delivered during normal business hours to the location designated by the County.

18.0 OTHER CONTRACTS.

The County reserves the right to issue other contracts or direct other Contractors to work within the area included in this contract excepting debris removal.

- Example Daily Haul Records
- Example Load Ticket
- Example Truck Placard
- Dumpsite Location Maps
- Bidding Schedule

20. ACCEPTANCE OF CONTRACT

The Contractor shall provide all the documentation required as per SECTION BONDING AND INSURANCE of this contract within the specified time limit, and providing a list of all Sub-Contracts and Proof of Insurance of al Sub-Contractors being used under this contract.

The Contractor shall provide Polk County Commissioners the required insurance certificate(s) with a clause that shows Indemnity and Hold Harmless from injuries, damages, or losses caused by the negligent actions of the Contractor or its Employees to Polk.

The Contractor shall provide proof of Workman's Compensation as required by the State of Texas.

As agreed upon by the County Commissioners and _____ (Contractor name) local sub-Contractors and individuals will be used, to the extent possible, during this debris removal project.

The Contractor agrees to complete the work in a professional, workmanlike manner and within the scope of work guidelines set forth above based on the unit pricing submitted by the Contractor in the attached BIDDING SCHEDULE.

IN WITNESS WHEREOF, the parties have agreed to the above requirements and have entered into the above contract this _____ (date).

POLK COUNTY, TEXAS _____ (Contractor)

BY: _____ [Name], [Title]

By: _____ [Name], [Title]

By: _____ [Name], [Title]

By: _____ [Name], [Title]

Debris Removal from Public Property Overview

Debris removal is the clearance, removal, and/or disposal of items such as trees, sand, gravel, building components, wreckage, vehicles, and personal property. Public Assistance funds are available to eligible applicants for debris clearance, removal and disposal operations. Eligible applicants include State and local governments, Indian tribes, and certain private nonprofit organizations. In order to be eligible for REMA funding, the debris removal work must:

- Be a direct result of a Presidentially declared disaster;
- Occur within the designated disaster area; and
- Be the responsibility of the applicant at the time of the disaster.

In addition, debris removal work must be necessary to:

- Eliminate an immediate threat to lives, public health and safety;
- Eliminate immediate threats of significant damage to improved public or private property; or
- Ensure the economic recovery of the affected community to the benefit of the community-at-large.

Examples of eligible debris removal activities include:

- Debris removal from a public right-of-way to allow the safe passage of emergency vehicles; and
- Debris removal from public property to eliminate health and safety hazards.

Examples of ineligible debris removal activities include:

- Removal of debris, such as tree limbs and trunks, from an applicant's unimproved property or undeveloped land;
- Removal of pre-disaster sediment from engineered channels;
- Removal of debris from a natural channel unless the debris poses an immediate threat of flooding to improved property;
- Removal of debris from Federal lands or facilities that are the authority of another Federal agency or department, such as Federal-aid roads, USACE navigable waterways, and NRCS canals. See Public Assistance Fact Sheet 9580.202, Debris Removal Authorities of Other Federal Agencies, for a description of these authorities.

**ATTACHMENT
SAMPLE TRUCK PLACARD**

Company Name
Truck Number
Cubic Yards
Inspected by and Date

ATTACHMENT SAMPLE LOAD TICKET

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LOAD TICKET		
TICKET NUMBER:		
CONTRACT NUMBER:		
CONTRACTOR:		
DATE:		
DEBRIS QUANTITY:		
Truck No:	Capacity (CY):	
Load Size (CY):	Tons:	
Truck Driver:		
DEBRIS CLASSIFICATION:		
	Burnable	
	Non-Burnable	
	Mixed	
	Other	
LOCATION:		
Section/Area:	Dumpsite:	
	Time:	Inspector:
Loading		
Dumping		
Eligibility (Y/N):		
Original: Polk County, Livingston, Texas Yellow: Contractor Pink: Driver Gold: FEMA		

ATTACHMENT
EXAMPLE DAILY HAUL RECORD
CONTRACT NO. _____

DAILY REPORT					
CONTRACTOR:			DATE OF REPORT:		
CONTRACT NO:					
Truck No.	Location of Work	Local Collection Site Trips	Landfill Trips	Cubic Yard Totals	
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
		DAILY TOTALS			

DAILY HAUL RECORD

CONTRACT NO. _____

Date	Ticket #	Time	Truck #	Capacity	% Load	Actual Capacity	Eligible (Y/N)	Comments

Stump Conversion Table
Diameter to Volume Capacity

The quantification of the cubic yards of debris for each size of stump in the following table was derived from FEMA field studies conducted throughout the State of Florida during the debris removal operations following Hurricanes Charley, Frances, Ivan and Jeanne. The following formula is used to derive cubic yards:

$$\frac{[(\text{Stump Diameter}^3 \times 0.7854) \times \text{Stump Length}] + [(\text{Root Ball Diameter}^3 \times 0.7854) \times \text{Root Ball Height}]}{46656}$$

0.7854 is one-fourth Pi and is a constant.

46656 is used to convert inches to Cubic Yards and is a constant.

The formula used to calculate the cubic yardage used the following factors, based upon findings in the field:

- Stump diameter measured two feet up from ground
- Stump diameter to root ball diameter ratio of 1:3:6
- Root ball height of 31:

Stump Diameter (inches)	Cubic Yards
6	0.3
7	0.4
8	0.5
9	0.6
10	0.7
11	0.9
12	1
13	1.2
14	1.4
15	1.6
16	1.8
17	2.1
18	2.3
19	2.6
20	2.9
21	3.2
22	3.5
23	3.8
24	4.1
25	4.5
26	4.8
27	5.2
28	5.6
29	6
30	6.5
31	6.9
32	7.3
33	7.8
34	8.3
35	8.8
36	9.3
37	9.8
38	10.3
39	10.9
40	11.5
41	12
42	12.6
43	13.3
44	13.9
45	14.5
46	15.2

Stump Diameter (inches)	Cubic Yards
47	15.8
48	16.8
49	17.2
50	17.9
51	18.6
52	19.4
53	20.1
54	20.9
55	21.7
56	22.5
57	23.3
58	24.1
59	24.9
60	25.8
61	26.7
62	27.6
63	28.4
64	29.4
65	30.3
66	31.2
67	32.2
68	33.1
69	34.1
70	35.1
71	36.1
72	37.2
73	38.2
74	39.2
75	40.3
76	41.4
77	42.5
78	43.6
79	44.7
80	45.9
81	47
82	48.2
83	49.4
84	50.6