United States Department of Agriculture
Natural Resources Conservation Service

OMB No. 0578-0030
NRCS-PDM-20

DAMAGE SURVEY REPORT (DSR)
Emergency Watershed Protection Program – Recovery

Section 1A

Date of Report: 09/18/2005

DSR Number: 103-05-012 Project Number: _____

NRCS Entry Only
Eligible: YES ☐ NO ☐
Approved: YES ☐ NO ☐
Funding Priority Number (from Section 4) ____
Limited Resource Area: YES ☐ NO ☐

Section 1B Sponsor Information

Sponsor Name: St. Tammany Parish

Address: P.O. Box 628

City/State/Zip: Covington, LA 70434

Telephone Number: (985) 898-2552 Fax: (985) 898-5205

Section 1C Site Location Information

County: St. Tammany State: LA Congressional District: 01

Latitude: 30.33996 - Start. Longitude: -89.759156 - Start Section: 14 Township: 8S Range: 14E
30.368475 -89.760767 - End

UTM Coordinates: Slidell NE3008942, Has - No. 16

Drainage Name: W-15 Canal - Reach 1 (LA 41 South to LA 11) Reach: 11,400 Feet

Damage Description: Debris is reducing the capacity of W-15. Drainage is severely impeded. Debris consists mostly trees.

Section 1D Site Evaluation

All answers in this Section must be YES in order to be eligible for EWP assistance.

Site Eligibility	YES	NO	Remarks
Damage was a result of a natural disaster?*	✔		Hurricane Katrina - August 29, 2005
Recovery measures would be for runoff retardation or soil erosion prevention?*	✔		
Threat to life and/or property?*	✔		
Event caused a sudden impairment in the watershed?*	✔		
Imminent threat was created by this event?**	✔		
For structural repairs, not repaired twice within ten years?**	✔		
Site Defensibility			
Economic, environmental, and social documentation adequate to warrant action (Go to pages 3, 4, 5 and 6 ***)	✔		
Proposed action technically viable? (Go to Page 9 ***)	✔		

Have all the appropriate steps been taken to ensure that all segments of the affected population have been informed of the EWP program and its possible effects? YES ☑ NO ☐

Comments: _____

* Statutory
** Regulation
*** DSR Pages 3 through 5 are required to support the decisions recorded on this summary page. If additional space is needed on this or any other page in this form, add appropriate pages.

DSR NO: 103-05-012

Section 1E Proposed Action

Describe the preferred alternative from Findings: Section 5 A:

Removal of storm debris from channel using conventional methods involving sawyers, cable equipment and Trackhoes.

Total installation cost identified in this DSR: Section 3: $ 143,056.00

Section 1F NRCS State Office Review and Approval

Reviewed By: _____ Date Reviewed: _____
State EWP Program Manager

Approved By: _____ Date Approved: _____
State Conservationist

PRIVACY ACT AND PUBLIC BURDEN STATEMENT

NOTE: The following statement is made in accordance with the Privacy Act of 1974, (5 U.S.C. 552a) and the Paperwork Reduction Act of 1995, as amended. The authority for requesting the following information is 7 CFR 624 (EWP) and Section 216 of the Flood Control Act of 1950, Public Law 81-516, 33 U.S.C. 701b-1; and Section 403 of the Agricultural Credit Act of 1978, Public Law 95334, as amended by Section 382, of the Federal Agriculture Improvement and Reform Act of 1996, Public Law 104-127, 16 U.S.C. 2203. EWP, through local sponsors, provides emergency measures for runoff retardation and erosion control to areas where a sudden impairment of a watershed threatens life or property. The Secretary of Agriculture has delegated the administration of EWP to the Chief or NRCS on state, tribal and private lands.

Signing this form indicates the sponsor concurs and agrees to provide the regional cost-share to implement the EWP recovery measure(s) determined eligible by NRCS under the terms and conditions of the program authority. Failure to provide a signature will result in the applicant being unable to apply for or receive a grant the applicable program authorities. Once signed by the sponsor, this information may not be provided to other agencies. IRS, Department of Justice, or other State or Federal Law Enforcement agencies, and in response to a court or administrative tribunal.

The provisions of criminal and civil fraud statutes, including 18 U.S.C. 286, 287, 371, 641, 651, 1001; 15 U.S.C. 714m; and 31 U.S.C. 3729 may also be applicable to the information provided. According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0578-0030. The time required to complete this information collection is estimated to average 117/1.96 minutes/hours per response, including the time for reviewing instructions, searching existing data sources, field reviews, gathering, designing, and maintaining the data needed, and completing and reviewing the collection information.

USDA NONDISCRIMINATION STATEMENT

"The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, martial status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programms.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202)720-2600 (vocie and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, SW., Washington, DC 20250-9410, or call (800)795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Civil Rights Statement of Assurance

The program or activities conducted under this agreement will be in compliance with the nondiscrimination provisions contained in the Titles VI and VII of the Civil Rights Act of 1964, as amended; the Civil Rights Restoration Act of 1987 (Public Law 100-259); and other nondiscrimination statutes: namely, Section 504 of the Rehabilitation Act of 1973, Title IX of the Amendments of 1972, the Age Discrimination Act of 1975, and the Americans with Disabilities Act of 1990. They will also be in accordance with regulations of the Secretary of Agriculture (7 CFR 15, 15a, and 15b), which provide that no person in the United States shall on the grounds of race, color, national origin, gender, religion, age or disability, be excluded from participation in, be denied the benefits of, or otherwise subjected to discrimination under any program or activity receiving Federal financial assistance from the U.S. Department of Agriculture or any agency thereof.

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Section 2 Environmental Evaluation

2A Resource Concerns	2B Existing Condition	2C Alternative Designation		
		Proposed Action	No Action	Alternative
		Debris removal using conventional equipment	Leave debris in stream	Debris removal using helicopter
		2D Effects of Alternatives		
Soil				
Bank erosion	20 tons/acre	5 tons/acre	20 tons/acre	5 tons/acre
Soil quality	Soil quality reduced	Soil quality improved	Soil quality reduced	Soil quality improved
Water				
Downstream water rights				
DO	Low/potential problem	Improved DO	Low /potential problem	Improved DO
BOD	Raised BOD	Lower BOD	Raised BOD	Lower BOD
SS/Turbidity	Increased SS/turbidity	Decreased SS/turbidity	Increased SS/turbidity	Decreased SS/turbidity
Air				
PM-10	attainment	attainment	attainment	attainment
Plant				
Aquatic health/vigor	Poor	Improved	Poor	Improved
Forestland Health/Vigor	Decreased	Increased	Decreased	Increased
Animal				
Aquatic habitat	Ecological balance upset	Ecological balance restored	Ecological balance upset	Ecological balance restored
Forest habitat	Ecological balance upset	Ecological balance restored	Ecological balance upset	Ecological balance restored
Other				
Aesthetics	Poor due to clutter	Improved	Poor due to clutter	Improved

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Section 2E Special Environmental Concerns

Resource Consideration	Existing Condition	Alternatives and Effects		
		Proposed Action	No Action	Alternative
Clean Water Act Waters of the U.S.	Poor water quality/Low DO High BOD	Improved water quality; improved BOD&DO	Poor water quality	Improved water quality; improved BOD&DO
Coastal Zone Management Areas	Water flow patterns altered	Water flow patterns restored; minimal adverse impacts as a result of project	Water flow patterns altered;	Water flow patterns restored; minimal impacts as a result of project
Coral Reefs	N/A			
Cultural Resources	(FOTG) none observed on-site	(FOTG) none observed on-site	(FOTG) none observed on-site	(FOTG) none observed on-site
Endangered and Threatened Species	(FOTG) (Federal/State lists) none observed on-site	(FOTG) (Federal/State lists) none observed on-site	(FOTG) (Federal/State lists) none observed on-site	(FOTG) (Federal/State lists) none observed on-site
Environmental Justice	Increased risk of flooding to low income and minorities. High risk of flooding.	Decreased risk of flooding to low income and minorities. Lower risk of flooding.	Increased risk of flooding to low income and minorities. High risk of flooding.	Decreased risk of flooding to low income and minorities. Lower risk of flooding.
Essential Fish Habitat	(FOTG) No EFH	(FOTG) No EFH	(FOTG) No EFH	(FOTG) No EFH
Fish and Wildlife Coordination	State level review by project type with USFWS&LDWF; Consultation not required for debris removal.	State level review by project type with USFWS&LDWF; Consultation not required.	State level review by project type with USFWS&LDWF; Consultation not required.	State level review by project type with USFWS&LDWF; Consultation not required.
Floodplain Management	100-year floodplain function is impaired	100-year floodplain function restored	100-year floodplain function is impaired	100-year floodplain function restored
Invasive Species	None identified	None identified	None identified	None identified
Migratory Birds	Food&cover quality reduced	Food&cover quality improved	Food&cover quality reduced	Food&cover quality improved
Natural Areas	(FOTG) None present	(FOTG) None present	(FOTG) None present	(FOTG) None present
Prime and Unique Farmlands	(FOTG) None present	(FOTG) None present	(FOTG) None present	(FOTG) None present
Riparian Areas	2.5 acres of riparian habitat impacted by flooding due to debris accumulation	2.5 acres if riparian habitat improved by debris removal	2.5 acres of riparian habitat impacted by flooding due to debris accumulation	2.5 acres if riparian habitat improved by debris removal
Scenic Beauty	(FOTG) None present	(FOTG) None present	(FOTG) None present	(FOTG) None present
Wetlands	Open water containing debris. Emergent/wooded wetlands also littered with debris.	Debris removed from open water and adjacent to stream. Wetlands not adversely impacted.	Open water containing debris. Emergent/wooded wetlands also littered with debris.	Debris removed from open water and adjacent to stream. Wetlands not adversely impact
Wild and Scenic Rivers	(FOTG) (LDWF scenic streams list) Scenic stream tributary Increased SS/Turbidity	(FOTG) (LDWF scenic streams list) Scenic stream tributary Decreased SS/Turbidity	(FOTG) (LDWF scenic streams list) Scenic stream tributary Increased SS/Turbidity	(FOTG) (LDWF scenic streams list) Scenic stream tributary Decreased SS/Turbidity

Completed By: Michael Nichols Date: 09/15/2005

DSR NO: 103-05-012

Section 2F Economic

This section must be completed by each alternative considered (attach additional sheets as necessary).

	Future Damages ($)	Damage Factor (%)	Near Term Damage Reduction
Properties Protected (Private)			
19 Homes @ 150,000/Home	2,850,000.00	0 .25	712,500.00
Properties Protected (Public)			
Business Losses			
Other			
		Total Near Term Damage Reduction $	712,500.00
		Net Benefit (Total Near Term Damage Reduction minus Cost from Section 3)	569,444.00

Completed By: AB Date: 09/13/2005

Section 2G Social Consideration This section must be completed by each alternative considered

(attach additional sheets as necessary).

	YES	NO	Remarks
Has there been a loss of life as a result of the watershed impairment?	☐	✔	Not in the immediate area but several deaths attributable to the storm occurred in the Parish
Is there the potential for loss of life due to damags from the wate rshed impairment?	✔	☐	
Has access to a hospital or medical facility been impaired by watershed impairment?	✔	☐	Yes - many downed trees blocking access
Has the community as a whole been adversely impacted by the watershed impairment (life and property ceases to operate in a normal capacity)	✔	☐	Impairment increased flooding impacts throughout the community
Is there a lack or has there been a reduction of public safety due to watershed impairment?	✔	☐	

Completed By: MN, BL, DC Date: 09/13/2005

DSR NO: _____
103-05-012

Section 2H Group Representation and Disability Information

This section is completed only for the preferred alternative selected.

Group Representation	Number
American Indian/Alaska Native Female Hispanic	
American Indian/Alaska Native Female Non-Hispanic	
American Indian/Alaska Native Male Hispanic	
American Indian/Alaska Native Male Non-Hispanic	
Asian Female Hispanic	
Asian Female Non-Hispanic	
Asian Male Hispanic	
Asian Male Non-Hispanic	
Black or African American Female Hispanic	
Black or African American Female Non-Hispanic	10
Black or African American Male Hispanic	
Black or African American Male Non-Hispanic	10
Hawaiian Native/Pacific Islander Female Hispanic	
Hawaiian Native/Pacific Islander Female Non-Hispanic	
Hawaiian Native/Pacific Islander Male Hispanic	
Hawaiian Native/Pacific Islander Male Non-Hispanic	
White Female Hispanic	
White Female Non-Hispanic	26
White Male Hispanic	
White Male Non-Hispanic	26
Total Group	72

Census tract(s) T040704, BG2

Completed By: AB Date: 09/20/2005

DSR NO: 103-05-012

Section 2I. Required consultation or coordination between the lead agency and/or the RFO and another governmental unit including tribes:

Easements, permissions, or permits:

Access permission will be required. Agreement will be between landowners and St. Tammany Parish Government

Mitigation Description:

No mitigation required.

Agencies, persons, and references consulted, or to be consulted:

U.S. Army Corps of Engineers
New Orleans District
Brain Breaux

LA Dept. of Wildlife and Fisheries
Scenic Streams Division
Keith Casleo
Baton Rouge, LA (225) 765-2800

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Section 3 Engineering Cost Estimate

Completed By: BL, BH Date: 09/20/2005

This section must be completed by each alternative considered (attach additional sheets as necessary).

Proposed Recovery Measure (including mitigation)	Quantity	Units	Unit Cost ($)	Amount ($)
Proposed Action- Debris removal with conventional equipment				0.00
Debris removal	11400	ft	12.04	137,256.00
Mobilization	1	LS	5,000.00	5,000.00
Seeding and Fertilization	4	Ac	200.00	800.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
				0.00
Total Installation Cost (Enter in Section 1F)$				143,056.00

Unit Abbreviations:

AC	Acre	LS	Lump Sum
CY	Cubic Yard	SF	Square Feet
EA	Each	SY	Square Yard
HR	Hour	TN	Ton
LF	Linear Feet	Other (Specifiy)	

DSR NO: 103-05-012

Section 4 NRCS EWP Funding Priority

Complete the following section to compute the funding priority for the recovery measures in this application (see instructions on page 10).

Priority Ranking Criteria	Yes	No		Ranking Number Plus Modifer
1. Is this an exigency situation?	☑	☐	1	1e
2. Is this a site where there is serious, but not immediate threat to human life?	☐	☐		
3. Is this a site where buildings, utilities, or other important infrastructure components are threatened?	☐	☐		
4. Is this site a funding priority established by the NRCS Chief?	☐	☐		
The following are modifiers for the above criteria			**Modifier**	
a. Will the proposed action or alternatives protect or conserve federally-listed threatened and endangered species or critical habitat?				
b. Will the proposed action or alternatives protect or conserve cultural sites listed on the National Register of Historic Places?				
c. Will the proposed action or alternatives protect or conserve prime or important farmland?				
d. Will the proposed action or alternatives protect or conserve existing wetlands?				
e. Will the proposed action or alternatives maintain or improve current water quality conditions?			e	
f. Will the proposed action or alternatives protect or conserve unique habitat, including but not limited to, areas inhabited by State-listed species, fish and wildlife management area, or State identified sensitive habitats?				

Enter priority computation in Section 1A, NRCS Entry, Funding priority number.

Remarks:

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Section 5A Findings

Finding: Indicate the preferred alternative from Section 2 (Enter to Section 1E):

Removal of Storm debris from channel by conventional methods.

I have considered the effects of the action and the alternatives on the Environmental Economic, Social; the Special Environmental Concerns; and the extraordinary circumstances (40 CFR 1508.27). I find for the reasons stated below, that the preferred alternative:

✓ Has been sufficiently analyzed in the EWP PEIS (reference all that apply)
Chapter 5.2.2.1.2
Chapter 5.2.2.2.2
Chapter _____
Chapter _____
Chapter _____

____ May require the preparation of an environmental assessment or environmental impact statement. The action will be referred to the NRCS State Office on this date:

NRCS representative of the DSR team

Title: H. Barbour. District Cons Date: 9/20/05

Section 5B Comments:

Section 5C **Sponsor Concurrence:**

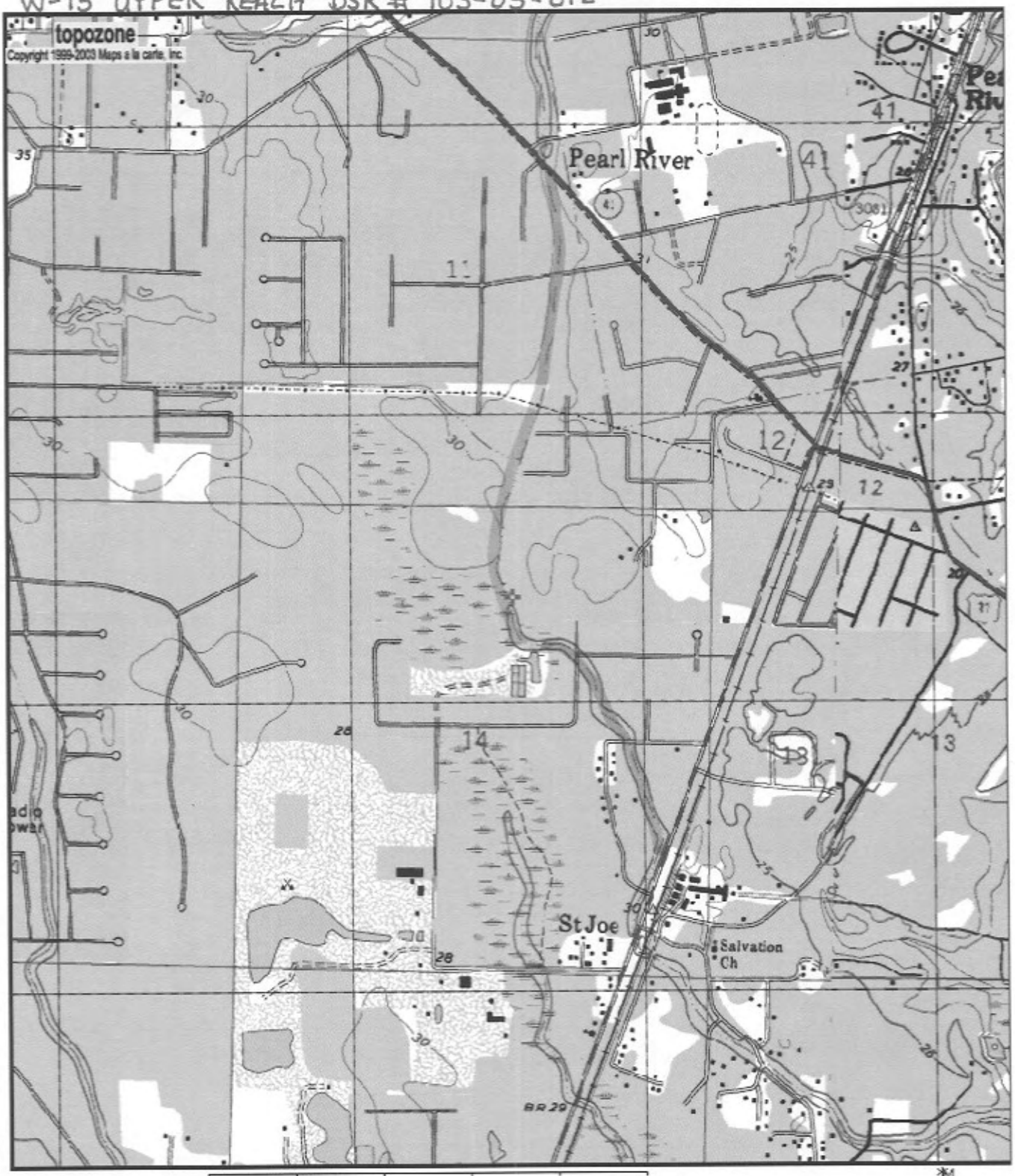
Sponsor Representative

Title: _____ Date: _____

Section 6 Attachments:

A. Location Map
B. Site Plan or Sketches
C. Other (explain)

W-15 UPPER REACH DSR # 103-D5-012



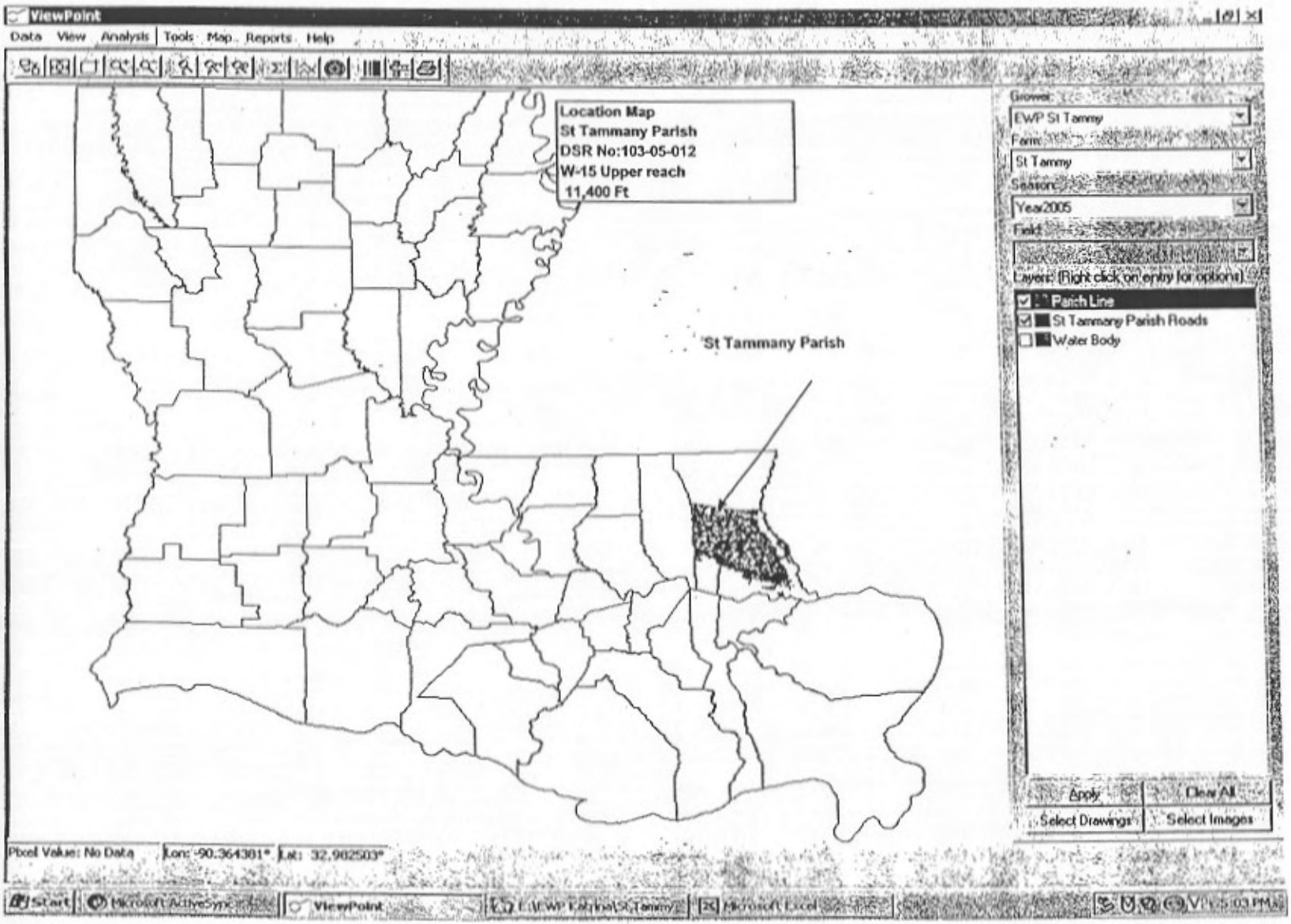
0 0.3 0.6 0.9 1.2 1.5 km

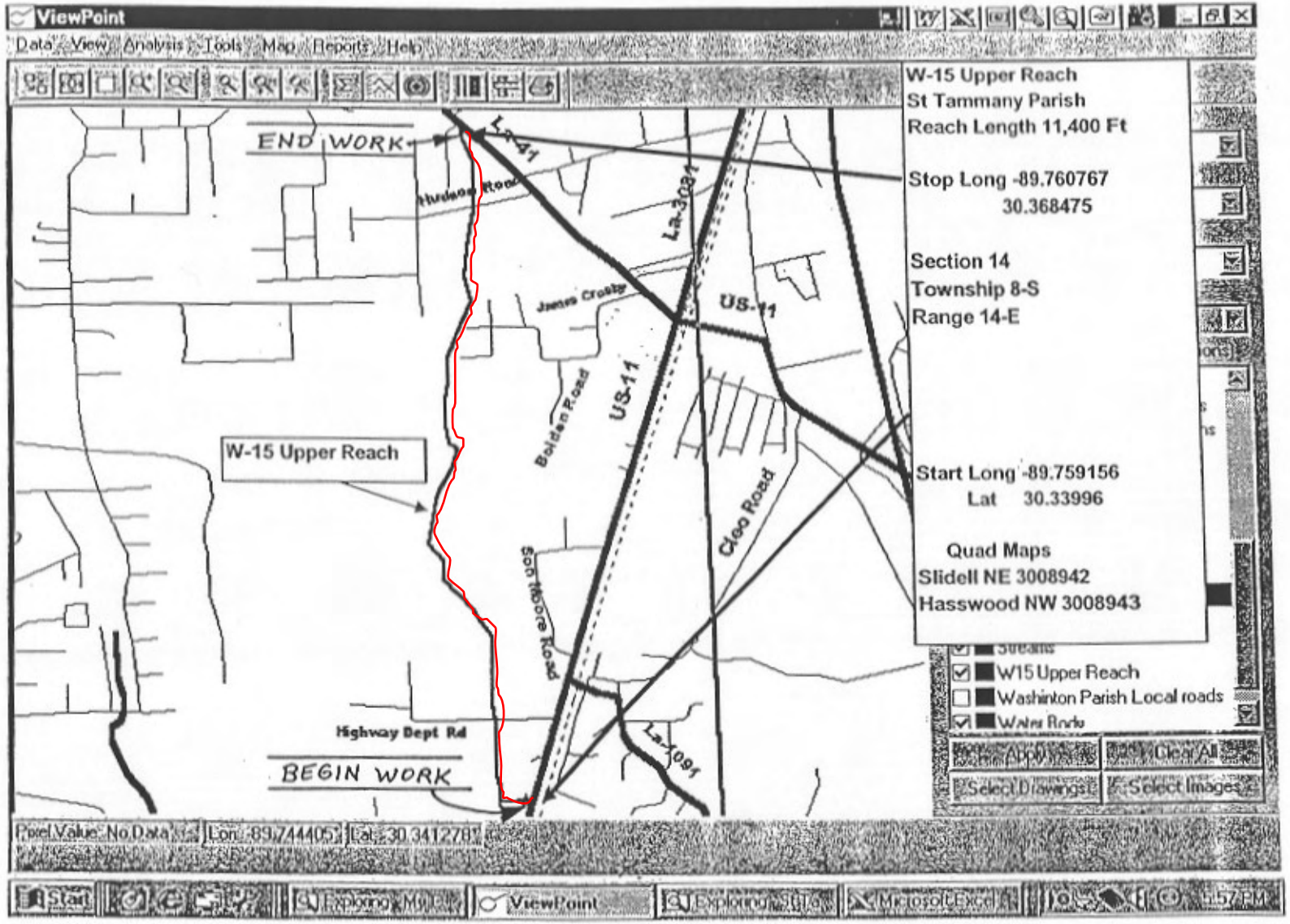
0 0.2 0.4 0.6 0.8 1 mi

Map center is 30.3553°N, 89.7616°W (WGS84/NAD83)
Slidell quadrangle
Projection is UTM Zone 16 NAD83 Datum

M
G

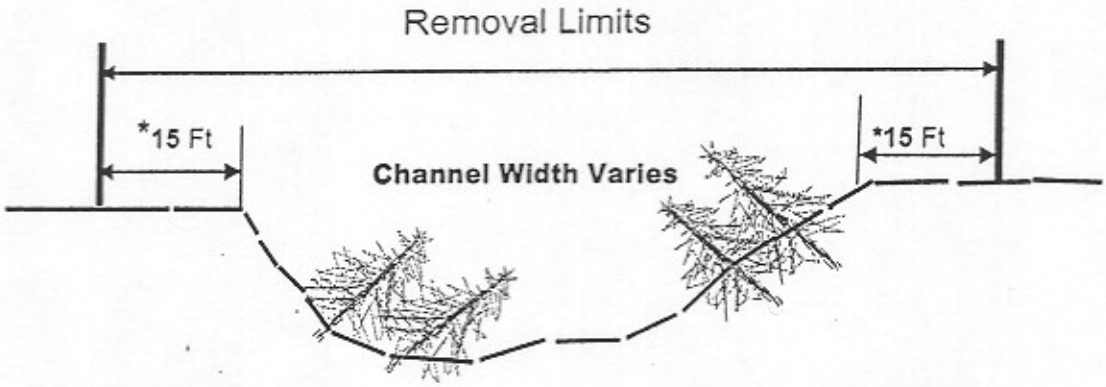
M=0.329
G=-1.397


ViewPoint
Data View Analysis Tools Map Reports Help
Location Map
St Tammany Parish
DSR No:103-05-012
W-15 Upper reach
11,400 Ft
St Tammany Parish
Grower:
EWP St Tammy
Farm:
St Tammy
Season:
Year2005
Field:
Layers: (Right click on entry for options)
Parish Line
St Tammany Parish Roads
Water Body
Apply
Clear All
Select Drawings
Select Images
Pixel Value: No Data
Lon: -90.364381°
Lat: 32.982503°
Start
ViewPoint


ViewPoint
Data View Analysis Tools Map Reports Help
W-15 Upper Reach
St Tammany Parish
Reach Length 11,400 Ft
Stop Long -89.760767
30.368475
Section 14
Township 8-S
Range 14-E
Start Long -89.759156
Lat 30.33996
Quad Maps
Slidell NE 3008942
Hasswood NW 3008943
END WORK
BEGIN WORK
W-15 Upper Reach
La-41
La-3081
US-11
Boldan Road
Cleo Road
Son Moore Road
Highway Dept Rd
La-1091
W15 Upper Reach
Washinton Parish Local roads
Water Body
Apply
Clear All
Select Drawings
Select Images
Pixel Value: No Data
Lon: -89.744405
Lat: 30.341278
Start
ViewPoint
Microsoft Excel

DSR No:103-05-012
W-15 Upper Reach
St Tammany Parish

Debris Removal



Typical Section Not to Scale

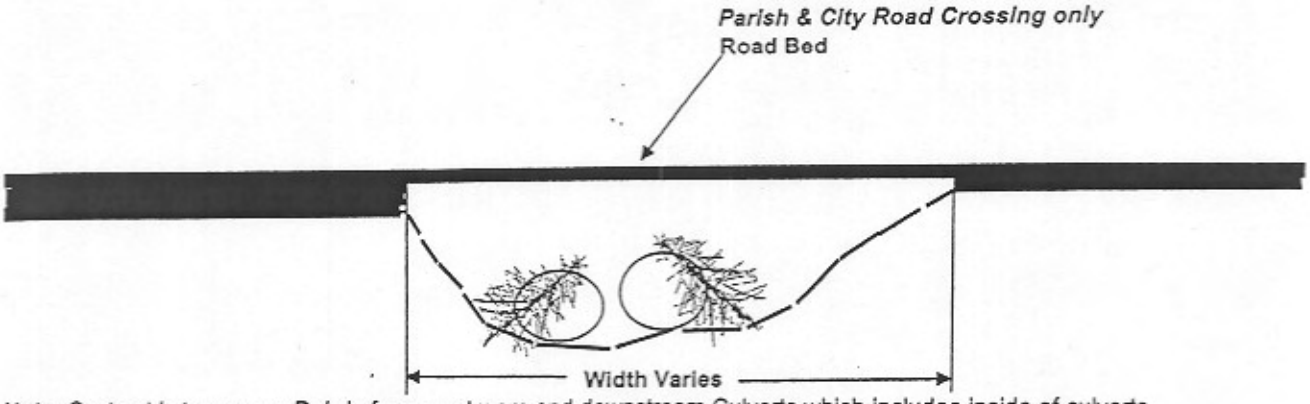
Notice:
48 Hours Before Digging
Call 1-800-272-3020

**Note :Rights of way on both sides*

Exception *it may be possible that trees which were located outside of the the rightaway may have fallen into the right of way, these trees will be remove which may be located outside of the right of way.*

DSR No:103-05-012
W-15 Upper Reach
St Tammany Parish

Debris Removal



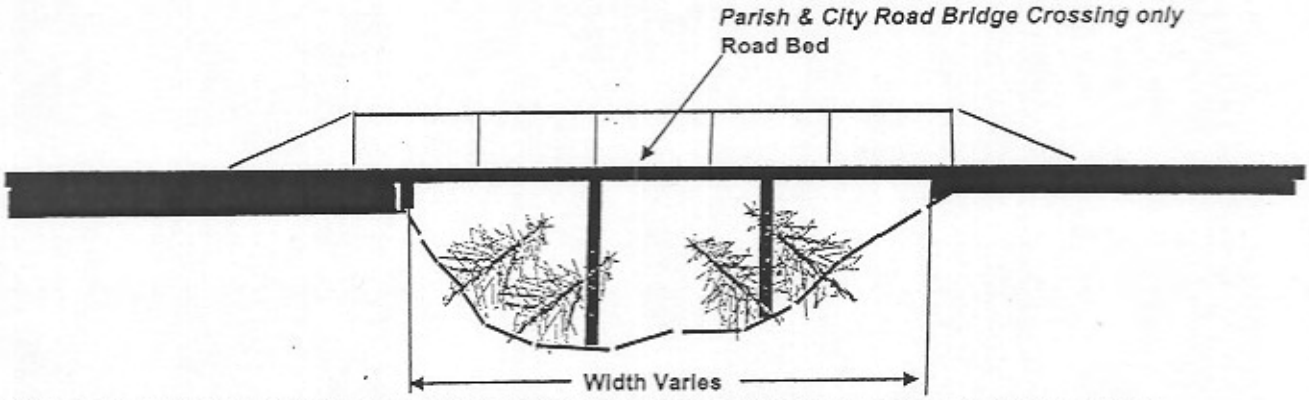
Note: Contract is to remove Debris from upstream and downstream Culverts which includes inside of culverts
Exception: All Crossing which cross State or Federal highways are not included in contract

Typical Road Culvert type Crossing
Not to Scale

Notice:
48 Hours Before Digging
Call 1-800-272-3020

DSR No:103-05-012
W-15 Upper Reach
St Tammany Parish

Debris Removal



Note: Contract is to remove Debris from upstream and downstream Bridge which includes underside of bridge
Exception: All Crossing which cross State or Federal highways are not included in contract

Typical Road Bridge Crossing
Not to Scale

Notice:
48 Hours Before Digging
Call 1-800-272-3020

SPECIAL PROVISIONS

1. Not all pipelines and other utilities are shown on the plans. It is the responsibility of the contractor to contact **Louisiana One Call at 1-800-272-3020** and the appropriate owner of any utility within the work area to assist him/her in the location of unmarked utilities prior to the start of his/her work.

2. When performing work in the vicinity of utilities and/or other structures the contractor shall take extreme care not to damage said utilities and/or structures. Any damages resulting from improper construction will be the responsibility of the contractor, and repairs of such damages will be made by the contractor at his/her expense. The contractor shall further restore at his/her own expense all injured property caused by any negligent act of omission or commission on his/ her part or on the part of his/her agent, including sidewalks, curbing, sodding, shrubs, pipes, conduits, sewers, buildings, fences, bridges, retaining walls, tanks, power lines, levees or any other building or private property to a condition as good as it was when he/she entered upon the right of way.

3. The convenience of the general public and of residents along the work shall be provided for in a reasonably adequate and satisfactory manner. Where existing roads are not available for use as detours, all traffic shall be permitted to pass through the work. In such cases the vehicles of the traveling public shall have precedence over the contractor's vehicles to the end that the traveling public's vehicles shall not be unduly delayed for the convenience of the contractor. The contractor shall provide and station competent flagmen whose sole duties shall consist of directing and controlling the movement of public traffic either through or around the work. A flagman shall also be stationed wherever equipment, trucks, etc., enter or leave a thoroughfare from the construction area. The design and application of all signals, pavement markings, channelizing devices and warning sign shall conform the " Louisiana Manual on Uniform Traffic Control Devices", 1988 edition, as revised.

4. The contractor shall arrange his/her work so that no undue or prolonged blocking of business establishments or private residences will occur. Material and equipment stored on the right of way and project site shall be so placed, and the work at all times shall be so conducted, as to insure minimum danger and obstruction to the traveling public.

5. When transporting equipment, supplies, and material to and from the construction site, the contractor shall take the most direct route when leaving a major thoroughfare.

6. Fire hydrants shall be accessible at all times to the Fire Department. No materials or other obstructions shall be placed closer to a fire hydrant than permitted by ordinances, rules or regulations. In the absence of such ordinances, rules or regulations, obstructions shall not be placed within fifteen (15) feet of a fire hydrant.

7. Contractor holds harmless and indemnifies the landowners for any and all damages and personnel injuries suffered or caused as a result of contractors operations.

Construction Specification 6—Seeding, Sprigging, and Mulching

1. Scope

The work consists of preparing the area for treatment; furnishing and placing seed, sprigs, mulch, fertilizer, inoculant, lime, and other soil amendments; and anchoring mulch in designated areas as specified.

2. Material

Seed—All seed shall conform to the current rules and regulations of the state where it is being used and shall be from the latest crop available. It shall meet or exceed the standard for purity and germination listed in section 7.

Seed shall be labeled in accordance with the state laws and the U.S. Department of Agriculture rules and regulations under the Federal Seed Act in effect on the date of invitations for bids. Bag tag figures are evidence of purity and germination. No seed will be accepted with a test date of more than 9 months before the delivery date to the site.

Seed that has become wet, moldy, or otherwise damaged in transit or storage will not be accepted. The percent of noxious weed seed allowable shall be as defined in the current State laws relating to agricultural seeds. Each type of seed shall be delivered in separate sealed containers and fully tagged unless exception is granted in writing by the contracting officer.

Fertilizer—Unless otherwise specified, the fertilizer shall be a commercial grade fertilizer. It shall meet the standard for grade and quality specified by State law. Where fertilizer is furnished from bulk storage, the contractor shall furnish a supplier's certification of analysis and weight. When required by the contract, a representative sample of the fertilizer shall be furnished to the contracting officer for chemical analysis.

Inoculants—The inoculant for treating legume seeds shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species and shall not be used later than the date indicated on the container or as otherwise specified. A mixing medium, as recommended by the manufacturer, shall be used to bond the inoculant to the seed. Two times the amount of the inoculant recommended by the manufacturer shall be used except four times the amount shall be used when seed is applied using a hydraulic seeder. Seed shall be sown within 24 hours of treatment and shall not remain in the hydraulic seeder longer than 4 hours.

Lime and other soil amendments—Lime shall consist of standard ground agriculture limestone, or approved equivalent. Standard ground agriculture limestone is defined as ground limestone meeting current requirements of the State Department of Agriculture. Other soil amendments shall meet quality criteria and application requirements specified in section 7.

Mulch tackifiers—Asphalt emulsion tackifiers shall conform to the requirements of ASTM D 977, Specification for Emulsified Asphalt. The emulsified asphalt may be rapid setting, medium setting, or slow setting. Nonasphaltic tackifiers required because of environmental considerations shall be as specified in section 7.

Straw mulch material—Straw mulch shall consist of wheat, barley, oat or rye straw, hay, grass cut from native grasses, or other plants as specified in section 7. The mulch material shall be air-

dry, reasonably light in color, and shall not be musty, moldy, caked, or otherwise of low quality. The use of mulch that contains noxious weeds is not permitted. The contractor shall provide a method satisfactory to the contracting officer for determining weight of mulch furnished.

Other mulch materials—Mulching materials, such as wood cellulose fiber mulch, mulch tackifiers, synthetic fiber mulch, netting, and mesh, are other mulching materials that may be required for specialized locations and conditions. These materials, when specified, must be accompanied by the manufacturer's recommendations for methods of application.

3. Seeding mixtures, sod, sprigs, and dates of planting

The application rate per acre for seed mixtures, sprigs, or sod and date of seeding or planting shall be as shown on the plans or as specified in section 7.

4. Seedbed preparation and treatment

Areas to be treated shall be dressed to a smooth, firm surface. On sites where equipment can operate on slopes safely, the seedbed shall be adequately loosened (4 to 6 inches deep) and smoothed. Depending on soil and moisture conditions, disking or cultipacking, or both, may be necessary to properly prepare a seedbed. Where equipment cannot operate safely, the seedbed shall be prepared by hand methods by scarifying to provide a roughened soil surface so that broadcast seed will remain in place.

If seeding is to be accomplished immediately following construction operations, seedbed preparation may not be required except on a compacted, polished, or freshly cut soil surface.

Rocks larger than 6 inches in diameter, trash, weeds, and other debris that will interfere with seeding or maintenance operations shall be removed or disposed of as specified in section 7.

Seedbed preparation shall be discontinued when soil moisture conditions are not suitable for the preparation of a satisfactory seedbed as determined by the contracting officer's technical representative (COTR).

5. Seeding, sprigging, fertilizing, mulching, and stabilizing

All seeding or sprigging operations shall be performed in such a manner that the seed or sprigs are applied in the specified quantities uniformly in the designated areas. The method and rate of seed application shall be as specified in section 7. Unless otherwise specified, seeding or sprigging shall be accomplished within 2 days after final grading is completed and approved.

Fertilizer, lime, and other soil amendments shall be applied as specified in section 7. When specified, the fertilizer and soil amendments shall be thoroughly incorporated into the soil immediately following surface application.

The rate, amount, and kind of mulching or mesh shall be as specified in section 7. Mulches shall be applied uniformly to the designated areas. They shall be applied to areas seeded not later than 2 working days after seeding has been performed. Straw mulch material shall be stabilized within 24 hours of application using a mulch crimper or equivalent anchoring tool or by a suitable tackifier. When the mulch crimper or equivalent anchoring tool is used, it shall have straight blades and be the type manufactured expressly for and capable of firmly punching the mulch into the soil. Where the equipment can be safely operated, it shall be operated on the contour. Hand methods shall be used where equipment cannot safely operate to perform the work required.

The tackifier shall be applied uniformly over the mulch material at the specified rate, or it shall be injected into the mulch material as it is being applied. Mesh or netting stabilizing materials shall be applied smoothly, but loosely on the designated areas. The edges of these materials shall be buried or securely anchored using spikes or staples as specified in section 7.

The contractor shall maintain the mesh or netting areas until all work under the contract has been completed and accepted. Maintenance shall consist of the repair of areas damaged by water erosion, wind, fire, or other causes. Such areas shall be repaired to reestablish the intended condition and to the design lines and grades required by the contract. The areas shall be refertilized, reseeded, and remulched before the new application of the mesh or netting.

6. Measurement and payment

Method 1—For items of work for which specific unit prices are established in the contract, each area treated is measured as specified in section 7 and the area calculated to the nearest 0.1 acre. Payment for treatment is made at the contract unit price for the designated treatment, which will constitute full compensation for completion of the work.

When specified as an item of work, mesh or netting is measured to the nearest square yard of surface area covered and accepted. Payment is made at the contract unit price and will constitute full compensation for completion of the work.

Method 2—For items of work for which specific lump sum prices are established in the contract, the quantity of work will not be measured for payment. Payment for this item is made at the contract lump sum price for the item and will constitute full compensation for the completion of the work.

Method 3—For items of work for which lump sum prices are established in the contract, payment is made as the work proceeds. Progress payments will be determined as specified in section 7. Payment of the lump sum contract price will constitute full compensation for completion of the work.

All Methods—The following provisions apply to all methods of measurement and payment. Compensation for any item of work described in the contract, but not listed in the bid schedule is included in the payment for the item of work to which it is made subsidiary. Such items and the item(s) to which they are made subsidiary are identified in section 7.

7. Items of work and construction details

(See next sheet)

7. Items of work and construction details

Items of work to be performed in conformance with this specification and the construction details therefor are:

Subsidiary Item, Permanent Vegetation Seeding, Fertilization and Mulching

a. Permanent Vegetation Seeding

(1) This item will consist of furnishing and applying seed according to the following specifications:

(2) Seeding for permanent cover will be done on all bare areas such as channel slopes, berms, spoil placement areas and any other distrubed areas. Fertilizer and seed will not be applied to areas with perennial ponded water.

(3) No seedbed preparation will be required if the construction equipment has produced a scarified surface and the seeding is done the day the areas to be seeded are worked. If the construction equipment has produced a slick surface, or seeding is not done the day the areas are worked, a seedbed will be prepared by scarifying the soil surface with a spike-tooth harrow or similar implement to a depth of one (1) inch. When more than one species of vegetation is required, each species shall be seeded separately. Permanent vegetation seeding will be applied at the following rates:

Seeding Period	Species	Minimum % pure Live Seed	Pure Live Seed (lb./ac)
Mar 1 - Aug 31	Common Bermuda-grass (hulled)	83	45
Sep 1 - Dec 31	Tall Fescue	80	35
Jan 1 - Feb 28	Common Bermuda-grass(unhulled) and	80	20
	Common Bermuda-grass (hulled) and	83	20
	Rye Grass	82	25

b. Fertilization

(1) This item will consist of furnishing and applying fertilizer to all areas to be seeded according to the following specifications:

(2) Fertilizer will be a 1-1-1 ratio of N, P, and K, and will contain at least 13 lbs. of each per 100 lbs. of material.

Fertilizer rate (13-13-13 basis)	(14 lbs. per 1000 sq ft) or (600 lbs. per acre)

(1) One application of fertilizer will be applied at the time of planting as directed by the Government Representative.

c. Mulching

(1) No mulching will be required on this contract.

d. No separate payment will be made for this item. Compensation for this subsidiary item shall be included in Specification 203, Channel Obstruction Removal.

Construction Specification 8—Mobilization and Demobilization

1. Scope

The work consists of the mobilization and demobilization of the contractor's forces and equipment necessary for performing the work required under the contract. It does not include mobilization and demobilization for specific items of work for which payment is provided elsewhere in the contract. Mobilization will not be considered as work in fulfilling the contract requirements for commencement of work.

2. Equipment and material

Mobilization shall include all activities and associated costs for transportation of contractor's personnel, equipment, and operating supplies to the site; establishment of offices, buildings, and other necessary general facilities for the contractor's operations at the site; premiums paid for performance and payment bonds including coinsurance and reinsurance agreements as applicable; and other items specified in section 4 of this specification.

Demobilization shall include all activities and costs for transportation of personnel, equipment, and supplies not required or included in the contract from the site; including the disassembly, removal, and site cleanup of offices, buildings, and other facilities assembled on the site specifically for this contract.

This work includes mobilization and demobilization required by the contract at the time of award. If additional mobilization and demobilization activities and costs are required during the performance of the contract as a result of changed, deleted, or added items of work for which the contractor is entitled to an adjustment in contract price, compensation for such costs will be included in the price adjustment for the item or items of work changed or added.

3. Payment

Payment will be made as the work proceeds, after presentation of paid invoices or documentation of direct costs by the contractor showing specific mobilization and demobilization costs and supporting evidence of the charges of suppliers, subcontractors, and others. When the total of such payments is less than the lump sum contract price, the balance remaining will be included in the final contract payment. Payment of the lump sum contract price for mobilization and demobilization will constitute full compensation for completion of the work.

Payment will not be made under this item for the purchase costs of materials having a residual value, the purchase costs of materials to be incorporated in the project, or the purchase costs of operating supplies.

4. Items of work and construction details

(See next page.)

4. **Items of work and construction details**

Items of work to be performed in conformance with this specification and the construction details therefor are:

a. Subsidiary Item, Mobilization and Demobilization

(1) This item shall consist of mobilizing and demobilizing personnel and equipment in preparation to perform the work within the scope of this contract.

(2) This item shall not include transportation of personnel, equipment and operating supplies between and within the work limit areas of this Contract.

(3) Fences, which must be cut or removed for access, shall be repaired or replaced by the Contractor at his/her expense to equal or exceed the quality of fencing that was in place prior to cutting or removal.

(4) Access shall be as shown on the drawings. If alternate routes are obtained by the Contractor, they must be approved by the NRCS prior to use. All access routes shall be restored, by the Contractor, to a condition equal to or better than the condition prior to the commencement of work under this contract.

(5) No separate payment will be made for this item. Compensation for this subsidiary item shall be included in Specification 203, Channel Obstruction Removal

Construction Specification 9—Traffic Control

1. Scope

The work shall consist of establishing traffic control and maintaining safe, convenient use of public roads and rights-of-way.

2. Traffic and access

The contractor's operations shall cause no unnecessary inconvenience to the public. The public rights-of-way shall be maintained at all times unless interruption is authorized by proper local authority. Contractor's authorized closing or detour plans shall be provided to the engineer for approval.

Safe and adequate access shall be provided and maintained to all public protection devices and to all critical utility control locations. Facility access shall be continuous and unobstructed unless otherwise approved.

3. Storage of equipment and material in public streets

Construction materials and equipment shall not be stored or parked on public streets, roads, or highways. During any material or equipment loading or unloading activities that may temporarily interfere with traffic, an acceptable detour shall be provided for the duration of the activity. Any associated expense for this activity is the responsibility of the contractor.

Excavated material, including suitable material that is intended for adjacent trench backfill or other earth backfill as specified in section 5 of this specification, shall not be stored on public streets, roads, or highways that remain in service for the public. Any waiver of this requirement must be obtained from the proper local authority and approved by the engineer. All excess and unsuitable material shall be removed from the site as soon as possible. Any spillage shall be removed from roadways before they are used by the public.

4. Street closures, detours, and barricades

The contractor shall comply with the requirements of all applicable responsible units of government for closure of any street, road, or highway. The contractor shall provide the required barriers, guards, lights, signs, temporary bridges, and flaggers together with informing the public of any detours and construction hazards by the most suitable means available, such as local newspapers or radio stations. The contractor is also responsible for compliance with additional public safety requirements that may arise during construction. The contractor shall furnish, install, and, upon completion of the work, promptly remove all signs, warning devices, and other materials used in the performance of this work.

Unless otherwise specified, the contractor shall notify, in writing, the fire chief, police chief, county sheriff, state patrol, schools that operate school buses, or any other government official as may be appropriate no less than 7 days before closing, partly closing, or reopening any street, road, or highway.

Unless otherwise specified, the contractor shall furnish to the engineer a written plan showing the proposed method of signing, barricading for traffic control, and safety for street detours and closures.

All temporary detours will be maintained to ensure use of public rights-of-way is provided in a safe manner. This may include dust control, grading, and graveling as required in section 7 of this specification.

5. General and specific references

All signs, signals, barricades, use of flaggers, and other traffic control and public safety devices shall conform to the general requirements set forth in the Manual of Uniform Traffic Control Devices (MUTCD) and the latest edition of *Standard Highway Signs and Standard Alphabets for Highway Signs* and/or OSHA *Construction Industry Standards (29 CFR Part 1926), Subpart G, Signs, Signals, and Barricades* unless otherwise specified in section 7 of this specification.

6. Measurement and payment

For items of work for which specific lump sum prices are established in the contract, payment for the work is made at the contract lump sum price. Progress payments will be made based upon the percentage of estimated total time that traffic control will be required unless otherwise specified in section 7 of this specification. Payment will constitute full compensation for all flaggers, labor, materials, equipment, and all other items necessary and incidental to completion of the work.

Compensation for any item of work described in the contract, but not listed in the bid schedule will be included in the payment for the item of work to which it is made subsidiary. Such items and items to which they are made subsidiary are identified in section 7 of this specification.

7. Items of work and construction details

7. Items of Work

Items of work to be performed in conformance with this specification are:

a. Bid Item 4, Traffic Control

(1) This item shall consist of providing the necessary traffic control devices (signs, signals, markings, personnel, etc.) where needed, to allow for the safe and expeditious movement of traffic through and adjacent to the construction area for the completion of this contract.

(2) The contractor, shall have a comprehensive traffic control plan. The plan shall address, as a minimum, the following requirements:

(a) The design and application of all signals, pavement markings, channelizing devices, and warning signs shall conform to the *"Louisiana Manual on Uniform Traffic Control Devices"*, 1988 Edition, as revised.

(b) Channelizing and delineation devices shall be used to mark all construction areas. These shall be Type II and/or Type III barricades, and/or barrels, all fully reflectional with lights, and weighted with sandbags.

(c) Any traffic control devices (signs, signals, markings) which exist as part of the normal pre-construction scheme, and that do not apply to an appropriate situation, or are in the way of construction, shall be covered, removed, or relocated by the contractor.

(d) The roadway and all traffic control devices shall be restored to original conditions by the contractor.

(e) All excavations shall be covered, backfilled, or protected, (see "b", above) at night and when work is not in progress. Excavated pits, etc., shall be fully fenced or barricaded (see "b", above) to prevent access by pedestrians.

(f) All materials/machines shall be stored outside of the road surface, creating no sight distance problems, and fully delineated as in "b", above.

(g) If sections of roadway are totally closed, the contractor shall notify the sheriff's traffic division, 911 operators, the fire department, and any major traffic generators (i.e. schools, etc.). A three working day, minimum, advance notice will be required.

(h) On totally closed sections of the roadway, the contractor shall provide access for local traffic only.

(i) The contractor shall check traffic control devices on a daily basis as a minimum when beginning and ending the work day, to insure adherence to the plans and proper adequacy of devices for day and night visibility. On weekends, devices shall be checked a minimum once per day.

(j) Flagman and/or sheriff's control shall be provided as specified by the COTR.

(k) Yellow, high visibility pennant barrier flagging (nylon rope with plastic pennants) shall be strung between Type II barricades and barrels/drums, only as directed by the COTR.

(l) This traffic control device plan indicates general traffic control devices to be used on this project. It is anticipated that conditions will vary depending on the phase under construction and that the arrangement of those devices will be reviewed on a daily basis. Should the contractor have any question as to the arrangement of those devices, the COTR shall be notified to make an inspection of the site.

(m) Contractor shall provide for the movement of pedestrians for the entire length of the contract. As much as possible, the contractor shall not obstruct existing sidewalks, thereby obstructing pedestrian movements. If existing sidewalks must be obstructed, the contractor shall provide for the movement of pedestrians by posting appropriate signing, such as, "Sidewalk Closed-Use Other Side of Street". Signing shall be reflectorized and lighted at night.

(n) Also, where trenches are excavated outside the roadway surface, the contractor shall provide each dwelling at least one accessible crossing of the backfilled trench area, for use by pedestrians.

(o) As much as possible, the contractor shall provide access to area businesses.

(3) No separate payment will be made for this item. Compensation for this subsidiary item shall be included in Specification 203, Channel Obstruction Removal.

Construction Specification 203—Channel Obstruction Removal

1. Scope

The work shall consist of the cleanup of designated channel areas consisting of the removal and disposal of trees, logs, stumps, brush, tops, rubbish, debris and other items as specified in Section 8 deposited in the channel.

2. Access

Access shall be designated by NRCS unless alternate routes are obtained by the Contractor and approved by NRCS. All access routes shall be restored, by the Contractor, to the condition prior to the commencement of work under this contract.

3. Limits of Work

Each end of each reach of the channel and its tributaries designated for obstruction removal will be referenced to identified roads or other structures or landmarks or be marked by the Government Representative by means of stakes, flags, or other suitable markers.

4. Removal

Flow obstructions shall be removed by methods including, but not limited to, sawing, cabling, winching, lifting, or dragging. No excavation for floatation or any other reasons will be allowed.

The following guidelines will be used to determine which trees, stumps, and brush to remove. **The final determination will be made by the Government Representative.**

a. All downed trees, brush, limbs, tops, vines, and other washed-in woody vegetative materials lying completely or partially within the stream banks shall be removed.

b. Undermined or storm damaged trees within or outside the banks which are still standing but likely to fall into the stream shall be removed.

c. Stumps of downed trees within the channel banks shall not be removed unless otherwise noted in Section 8 of this specification.

All building materials, manufactured items, and other loose foreign debris lying completely or partially within the limits of designated areas.

5. Disposal

All material produced from "Channel Obstruction Removal", shall be hauled to the nearest public landfill or disposed of as specified in Section 8 of this specification.

Sediment removed from the watercourses shall be placed and spread as specified in Section 8. No sediment shall be placed on improved property except where directed or allowed by NRCS to fill stump holes, ruts, and other local depressions. Alternate methods of disposal proposed by the Contractor must be approved by NRCS.

Debris shall not be placed in tributaries, side ditches, floodplains nor other defined water entrances to the watercourse being cleaned.

8. Items of work and construction details

Items of work to be performed in conformance with this specification and the construction details therefore are:

a. Bid Item 1, Channel Obstruction Removal

(1) This item shall consist of the removal and disposal of all obstructions caused by Hurricane Katrina from within the specified limits shown on the drawing or as staked in the field.

(2) The lateral work limits shall be as shown on the drawings. The beginning and ending work limits are as shown on the "Site Location Maps". When debris removal is required at bridge and culvert locations, the work limits shall be the distance necessary to remove all floating and submerged accumulated debris. At bridges and culverts, both sides of the channel may be used as work sides if conditions warrant.

(3) All woody debris within the work limits shall be removed. Vegetative debris longer than 18 inches or having a diameter greater than 2 inches within the work limits shall be removed. This is to include, but is not limited to all debris (trees, root balls which have been displaced, etc.) that is a part of the debris within the work limits. Leaning trees, (those which are leaning over the channel and are identified for removal), shall be cut off at the ground line leaving the root mass in place.

(4) The contractor is responsible for any debris, which his operation may dislodge and float downstream of the work area.

(5) All debris removed from within the work limits shall be disposed of by loading and hauling to the public landfill site shown on the Disposal Site Map. The contractor is responsible for payment of any tipping fees.

(6) Any hazardous material encountered, such as batteries, used motor oil, scrap tires, white goods, any item which could contain CFC's, etc., shall be loaded and hauled to an approved hazard waste disposal site.

(7) Payment for this item shall also include full compensation for related subsidiary items Mobilization and Demobilization, Traffic Control, and Seeding, Sprigging and Mulching.