Attachment R-1

Financial Assurance Cost Estimate

DEP Form #	62-701.900(28)
Form Title	Closure Cost Estimating Form
for Solid Waste Facilities	
Effective Date	January 6, 2010
Incorporated in Rule 62-701.630(3), F.A.C.	

Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

CLOSURE COST ESTIMATING FORM FOR SOLID WASTE FACILITIES

Date of DEP Approval: _____

I. GENERAL INFORMATION:

Facility Name: Hardee County Landfill WACS ID: SWD/25/40612
Permit Application or Consent Order No.: 38414-011-SO/01 Expiration Date: 5/12/2013
Facility Address: 685 Airport Road, Wauchula, FL 33873
Permittee or Owner/Operator: Hardee County
Mailing Address: 685 Airport Road, Wauchula, FL 33873

Latitude: 27° 34' 17" N Longitude: 81° 46' 58" W
Coordinate Method: USGS Mapping Datum: NAD 83/90 West Zone of the State Plane Coordinate
Collected by: Shane Fischer Company/Affiliation: SCS Engineers

Solid Waste Disposal Units Included in Estimate:

Phase / Cell	Acres	Date Unit Began Accepting Waste	Active Life of Unit From Date of Initial Receipt of Waste	If active: Remaining life of unit	If closed: Date last waste receeived	If closed: Official date of closing
Phase I	12.31	NA	NA	NA	October 26, 2010	01/03/12
Phase II Section I	6.29	May 1, 2008	07/01/14	23 months	NA	NA
Phase II Section II	6.20	To Be Determined	02/01/37	NA	NA	NA

Total disposal unit acreage included in this estimate. Closure: 12.49 Long-Term Care: 24.80

Facility Type: X Class I _____ Class III _____ C&D Debris Disposal
(Check all that apply) _____ Other _____

II. TYPE OF FINANCIAL ASSURANCE DOCUMENT (Check Type)

_____ Letter of Credit * _____ Insurance Certificate X Escrow Account

_____ Performance Bond * _____ Financial Test _____ Form 28 (FA Deferral)

_____ Guarantee Bond * _____ Trust Fund Agreement

* - Indicates mechanisms that require the use of a Standby Trust Fund Agreement

Northwest District
160 Governmental Center
Pensacola, FL 32502-5794
850-595-8360

Northeast District
7825 Baymeadows Way, Ste. B200
Jacksonville, FL 32256-7590
904-807-3300

Central District
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767
407-894-7555

Southwest District
13501 N. Telecom Pky
Temple Terrace, FL 33637
813-632-7600

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33901-3881
239-332-6975

Southeast District
400 North Congress Ave., Suite 200
West Palm Beach, FL 33401
561-681-6600

III. ESTIMATE ADJUSTMENT

40 CFR Part 264 Subpart H as adopted by reference in Rule 62-701.630, Florida Administrative Code (F.A.C.) sets forth the meth of annual cost estimate adjustment. Cost estimates may be adjusted by using an inflation factor or by recalculating the maximum of closure in current dollars. Select one of the methods of cost estimate adjustment below.

_____ **(a) Inflation Factor Adjustment** X **(b) Recalculated or New Cost Estimates**

Inflation adjustment using an inflation factor may only be made when a Department approved closure cost estimate exists and no changes have occurred in the facility operation which would necessitate modification to the closure plan. The inflation factor is de from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its surve Current Business. The inflation factor is the result of dividing the latest published annual Deflator yby the Deflator for the previous The inflation factor may also be obtained from the Solid Waste website www.dep.state.fl.us/waste/categories/swfr or call the Financial Coordinator at (850)-245-8706.

This adjustment is based on the Department approved closing cost estimate dated: _____

Latest Department Approved **Closing Cost** Estimate:		Current Year Inflation Factor, **e.g. 1.02**		Inflation Adjusted Closing Cost Estimate:
_____	x	_____	=	$0.00

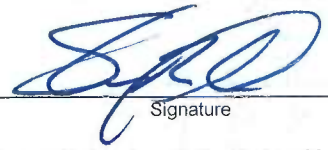
This adjustment is based on the Department approved long-term care cost estimate dated: _____

Latest Department Approved Annual **Long-Term Care** Cost Estimate:		Current Year Inflation Factor, **e.g. 1.02**		Inflation Adjusted Annual Long-Term Care Cost Estimate
_____	x	_____	=	$0.00

Number of Years of Long Term Care Remaining: x _____

Inflation Adjusted Long-Term Care Cost Estimate: = $0.00

Signature by: _____ **Owner/Operator** X **Engineer** (check what applies)



Signature

4041 Park Oaks Blvd., Suite 100
Address

Shane R. Fischer, P.E., Project Manager
Name & Title

Tampa, Florida 33610
City, State, Zip Code

4/1/13
Date

sfischer@scsengineers.com
E-Mail Address

(813) 621-0080
Telephone Number

IV. ESTIMATED CLOSING COST (check what applies)

X **Recalculated Cost Estimate** _____ **New Facility Cost Estimate**

Notes: 1. Cost estimates for the time period when the extent and manner of landfill operation makes closing most expensive
2. Cost estimate must be certified by a professional engineer.
3. Cost estimates based on third party suppliers of material, equipment and labor at fair market value
4. In some cases, a price quote in support of individual item estimates may be required

Description	Unit	Number of Units	Cost / Unit	Total Cost
1. Proposed Monitoring Wells	**(Do not include wells already in existence.)**			
	EA	0.00	$0.00	$0
			Subtotal Proposed Monitoring Wells:	$0
2. Slope and Fill (bedding layer between waste and barrier layer):				
Excavation	CY	12,172	$0.55	$6,695
Placement and Spreading	CY	24,344	$10.25	$249,526
Compaction	CY	24,344	$0.75	$18,258
Off Site Material	CY	24,344	$10.25	$249,526
Delivery	CY	0	$0.00	$0
			Subtotal Slope and Fill:	$524,005
3. Cover Material (Barrier Layer):				
Off-Site Clay	CY	0.00	$0.00	$0
Synthetics - 40 mil	SY	76,685	$3.24	$248,459
Synthetics - GCL	SY	0.00	$0.00	$0
Synthetics - Composite	SY	76,685	$5.67	$434,804
Synthetics - Other (explain)		0.00	$0.00	$0
			Subtotal Cover Material:	$683,263
4. Top Soil Cover:				
Off-Site Material	CY	48,689	$10.25	$499,062
Delivery	CY	48,689	$0.00	$0
Spread	CY	48,689	$0.00	$0
			Subtotal Top Soil Cover :	$499,062
5. Vegetative Layer				
Sodding	SY	73,033	$1.53	$111,740
Hydroseeding	AC	0.00	$0.00	$0
Fertilizer	AC	0.00	$0.00	$0
Mulch	AC	0.00	$0.00	$0
Other (explain)		0	$0.00	$0
			Subtotal Vegetative Layer:	$111,740
6. Stormwater Control System:				
Earthwork	CY	0	$0.00	$0
Grading	SY	0	$0.00	$0
Piping	LF	1,080	$32.27	$34,852
Ditches	LF	0	$0.00	$0
Berms	LF	0	$0.00	$0
Control Structures	EA	4	$2,000.00	$8,000
Other (explain)	EA	1	$2,000.00	$2,000
Discharge Structure			Subtotal Stormwater Control System:	$44,852

Description	Unit	Number of Units	Cost / Unit	Total Cost
7. Passive Gas Control				
Wells	EA	15	$4,750.00	$71,250
Pipe and Fittings	LF	0	$0.00	$0
Monitoring Probes	EA	0	$0.00	$0
NSPS/Title V requirements	LS	0	$0.00	$0
			Subtotal Passive Gas Control:	$71,250
8. Active Gas Extraction Control				
Traps	EA	0	$0.00	$0
Sumps		0	$0.00	$0
Flare Assembly	EA	0	$0.00	$0
Flame Arrestor	EA	0	$0.00	$0
Mist Eliminator	EA	0	$0.00	$0
Flow Meter	EA	0	$0.00	$0
Blowers	EA	0	$0.00	$0
Collection System	LF	0	$0.00	$0
Other (explain)		0	$0.00	$0
			Subtotal Active Gas Extraction:	$0
9. Security System				
Fencing	LF	0	$0.00	$0
Gate(s)	EA	0	$0.00	$0
Sign(s)	EA	0	$0.00	$0
			Subtotal Security System:	$0
10. Engineering:				
Closure Plan Report	LS	1	$133,753	$133,753
Certified Engineering Drawings	LS	1	$25,471	$25,471
NSPS/Title V Air Permit	LS	0	$0.00	$0
Final Survey	LS	1	$15,204	$15,204
Certification of Closure	LS	1	$25,331	$25,331
Other (explain)	LS	1	$17,788	$17,788
(Bidding Services)			Subtotal Engineering:	$217,547

Description	Hours	Cost / Hour	Hours	Cost / Hour	Total Cost
11. Professional Services					
	Contract Management		Quality Assurance		
P.E. Supervisor	64	$195	16	$195	$15,600
On-Site Engineer	200	$145	100	$145	$43,500
Office Engineer	40	$115	120	$115	$18,400
On-site Technician	240	$88	960	$88	$105,600
Other (Admin. Cost)	40	$60	40	$60	$4,800
Reimbursables	NA	$2,018	NA	$34,030	$36,048

Description	Unit	Number of Units	Cost / Unit	Total Cost
Quality Assurance Testing	LS	1	$14,000	$14,000.00
			Subtotal Professional Services:	$237,948

	Subtotal of 1-11 Above:	$2,389,668
12. Contingency	10% of Subtotal of 1-11 Above	10%
	Subtotal Contingency:	$238,967
	Estimated Closing Cost Subtotal:	$2,628,630

Description	**Total Cost**
13. Site Specific Costs	
Mobilization (10% of Sub-total 1-11)	$238,970
Waste Tire Facility	$617
Materials Recovery Facility	$46,525
Special Wastes	$0
Leachate Management System Modification	$0
Other (Household Hazardous Waste Building)	$7,603
Annual Cost for Leachate Disposal	$280,000
Subtotal Site Specific Costs:	$573,720
TOTAL ESTIMATED CLOSING COSTS ($):	$3,202,350

V. ANNUAL COST FOR LONG-TERM CARE

See 62-701.600(1)a.1., 62-701.620(1), 62-701.630(3)a. and 62-701.730(11)b. F.A.C. for required term length. For landfills certified closed and Department accepted, enter the remaining long-term care length as "Other" and provide years remaining.

(Check Term Length) _____ 5 years _____ 20 years **X** 30 years _____ Other, _____ Years

Notes: 1. Cost estimates must be certified by a professional engineer.
2. Cost estimates based on third party suppliers of material, equipment and labor at fair market value.
3. In some cases, a price quote in support of individual item estimates may be required.

All items must be addressed. Attach a detailed explanation for all entries left blank.

Description	Sampling Frequency (Events/Year)	Number of Wells	(Cost/Well) / Event	Annual Cost
1. Groundwater Monitoring [62-701.510(6), and (8)(a)]				
Monthly	12	0	$0.00	$0
Quarterly	4	0	$0.00	$0
Semi-Annually	2	9	$600.00	$10,800
Annually	1	0	$0.00	$0
			Subtotal Groundwater Monitoring:	$10,800
2. Surface Water Monitoring [62-701.510(4), and (8)(b)]				
Monthly	12	0	0	$0
Quarterly	4	0	0.00	$0
Semi-Annually	2	1	650	$1,300
Annually	1	0	0.00	$0
			Subtotal Surface Water Monitoring:	$1,300
3. Gas Monitoring [62-701.400(10)]				
Monthly	12	0	$0.00	$0.00
Quarterly	4	15	$57.00	$3,420
Semi-Annually	2	0	$0.00	$0.00
Annually	1	0	$0.00	$0.00
			Subtotal Gas Monitoring:	$3,420
4. Leachate Monitoring [62-701.510(5), (6)(b) and 62-701.510(8)c]				
Monthly	12	0	$0.00	$0.00
Quarterly	4	0	$0.00	$0
Semi-Annually	2	0	$0.00	$0.00
Annually	1	1	$967	$967
Other (explain) _____	0	0	$0.00	$0.00
			Subtotal Leachate Monitoring:	$967

Description	Unit	Number of Units/Year	Cost / Unit	Annual Cost
5. Leachate Collection/Treatment Systems Maintenance				
Maintenance				
Collection Pipes	LF	16,290.0	$0.46	$7,493
Sumps, Traps	EA	0	$0.00	$0.00
Lift Stations	EA	0	$0.00	$0
Cleaning	LS	0.0	$0.00	$0.00
Tanks	EA	2	$500.00	$1,000

Description	Unit	Number of Units/Year	Cost / Unit	Annual Cost
5. (Continued)				
Impoundments				
Liner Repair	SY	0	$0.00	$0
Sludge Removal	CY	0	$0.00	$0
Aeration Systems				
Floating Aerators	EA	0	$0.00	$0
Spray Aerators	EA	0	$0.00	$0
Disposal				
Off-site (Includes transportation & disposal)	LS	1	$280,000.00	$280,000
		Subtotal Leachate Collection /Treatment System Maintenance:		$288,493
6. Groundwater Monitoring Well Maintenance				
Monitoring Wells	LF	30	$13.33	$400
Replacement	EA	0.2	$2,000.00	$400
Abandonment	EA	9.0	$25.00	$225.00
		Subtotal Groundwater Monitoring Well Maintenance:		$1,025
7. Gas System Maintenance				
Piping, Vents	LF	10	$95.00	$950
Blowers	EA	0	$0.00	$0.00
Flaring Units	EA	0	$0.00	$0
Meters, Valves	EA	0	$0.00	$0.00
Compressors	EA	0	$0.00	$0.00
Flame Arrestors	EA	0	$0.00	$0.00
Replace Monitoring Probes	LS	1	$775.00	$775.00
			Subtotal Gas System Maintenance:	$1,725
8. Landscape Maintenance				
Mowing	AC	99.2	$27.88	$2,770
Fertilizer	AC	0	$0.00	$0
			Subtotal Landscape Maintenance:	$2,770
9. Erosion Control and Cover Maintenance				
Sodding	SY	1,210	$1.53	$1,851
Regrading	AC	1	$2,000	$2,000
Liner Repair	SY	200	$3.69	$738
Clay	CY	0	$0.00	$0.00
		Subtotal Erosion Control and Cover Maintenance:		$4,589
10. Storm Water Management System Maintenance				
Conveyance Maintenance	LS	1	$2,150	$2,150
		Subtotal Storm Water Management System Maintenance:		$2,150
11. Security System Maintenance				
Fences	LS	1	$810.00	$810
Gate(s)	EA	1	$515.00	$515
Sign(s)	EA	0	$0.00	$0
			Subtotal Security System:	$1,325

Description	Unit	Number of Units/Year	Cost / Unit	Annual Cost
12. Utilities	LS	1	500	$500
			Subtotal Utilities:	$500
13. Leachate Collection/Treatment Systems Operation				
P.E. Supervisor	HR	24	$195.00	$4,680
On-Site Engineer	HR	0	$0.00	$0
Office Engineer	HR	0	$0.00	$0.00
On-Site Technicial	HR	48	$95.00	$4,560
Materials	LS	0	$0.00	$0
		Subtotal Leachate Collection/Treatment Systems Operation:		$9,240
14. Administrative				
P.E. Supervisor	HR	12	$195.00	$2,340
On-Site Engineer	HR	0	$0.00	$0
Office Engineer	HR	0	$0.00	$0.00
On-Site Technicial	HR	48	$88.00	$4,224
Other (consulting)	LS	0	$0.00	$0
			Subtotal Administrative:	$6,564
15. Contingency	5%	% of Subtotal of 1-14 Above		$334,394
			Subtotal Contingency:	$16,720

Description	Unit	Number of Units/Year	Cost / Unit	Annual Cost
16. Site Specific Costs				
NA	0	0	0	$0
NA	0	0	0	$0
NA	0	0	0	$0
			Subtotal Site Specific Costs:	$0
			ANNUAL LONG-TERM CARE COST ($/Year):	**$351,588**
			Number of Years of Long-Term Care:	30
			TOTAL LONG-TERM CARE COST ($):	**$10,547,648**

VI. CERTIFICATION BY ENGINEER

This is to certify that the Cost Estimates pertaining to the engineering features of the this solid waste management facility have been examined by me and found to conform to engineering principals applicable to such facilities. In my professional judgement, the Cost Estimates are a true, correct and complete representation of the financial liabilities for closing and/or long-term care of the facility and comply with the requirements of Rule 62-701.630 F.A.C. and all other Department of Environmental Protection rules, and statutes of the State of Florida. It is understood that the Cost Estimates shall be submitted to the Department annually, revised or adjusted as required by Rule 62-701.630(4), F.A.C.

Signature

Shane R. Fischer, P.E., Project Manager
Name & Title (please type)

6/28/13
Date

58026
Florida Registration Number
(please affix seal)

SCS Engineers, 4041 Park Oaks Blvd. Suite 100
Mailing Address

Tampa, Florida 33610
City, State, Zip Code

sfischer@scsengineers.com
E-Mail Address

(813) 621-0080
Telephone Number

VII. SIGNATURE BY OWNER/OPERATOR

Signature of Applicant

Teresa Carver, Solid Waste Director
Name & Title (please type)

teresa.carver@hardeecounty.net
E-Mail Address (if available)

685 Airport Road
Mailing Address

Wauchula, Florida 33873
City, State, Zip Code

(863) 773-5089
Telephone Number

CLIENT	PROJECT	JOB NO.
Hardee County	Phase II Section II Expansion	09199033.23

SUBJECT	BY	DATE
	SRF	8/31/12
	CHECKED	DATE
Financial Assurance		

1.) Monitoring Wells

All monitoring wells constructed during the bottom liner construction. No additional wells proposed at the time of this cost estimate.

2.) Slope and Fill (bedding layer between waste and barrier layer)

Excavation

Final 3D closure surface area over the Phase II Section II Expansion is 657,300 square feet. Assumed 6 inches of excavation will be requried throughout the Phase II Section II closure area of unsuitable surface material = 12,172 cubic yards.

- Cost obtained from Attachment 1 September 8, 2010 ERC General Contracting Services, Inc. Bid Prices for the Phase I Closure project. Bid Item No. 005. Excavation cost of $0.55/CY.

Placement and Spreading

Quantity based on 3D surface area over the Phase II Section II Expansion is 657,300 square feet of cover that will be 12 inches in depth = 24,344 cubic yards.

- Cost obtained from Attachment 1 September 8, 2010 ERC General Contracting Services, Inc. Bid Prices for the Phase I Closure project. Bid Item No. 006. Placement and spreading cost = $10.25/cubic yard.

Compaction

Quantity based on the volume above for Placement and Spreading (24,344 cubic yards).

- Cost obtained from Attachment 1 September 8, 2010 ERC General Contracting Services, Inc. Bid Prices for the Phase I Closure project. Bid Item No. 007. Compaction cost at $0.25/SY @ 12 inch lifts = $0.75/cubic yard.

Off Site Material

Quantity based on the volume above for Placement and Spreading (24,344 cubic yards).
12 inches in depth = 24,344 cubic yards.

- Cost obtained from Attachment 1 September 8, 2010 ERC General Contracting Services, Inc. Bid Prices for the Phase I Closure project. Bid Item No. 006. Placement and spreading cost = $10.25/cubic yard.

Delivery

Included in the material prices = $0.00/cubic yard

3.) Cover Material (Barrier Layer)

Off-Site Clay - Not anticipated at the time of this cost estimate.

Synthetics - 40 mil - Quantity based on 3D surface area of closure plus an additional 5% for loss factor. The closure surface area was estimated to be 657,300 square feet plus 5% for loss = 690,165 square feet = 76,685 square yards.

- Cost obtained from Attachment 1 September 8, 2010 ERC General Contracting Services, Inc. Bid Prices for the Phase I Closure project. Bid Item No. 008. Cost for liner material and installation = $0.36/square foot => $3.24/square yard.

Synthetics - GCL - Not anticipated at the time of this cost estimate.

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Hardee County	Phase II Section II Expansion	09199033.23

SUBJECT	BY	DATE
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Financial Assurance		

3.) Cover Material (Barrier Layer) (Continued)

Synthetics - Composite - Quantity based on 3D surface area of closure plus an additional 5% for loss factor. The closure surface area was estimated to be 657,300 square feet plus 5% for loss = 690,165 square feet = 76,685 square yards.

- Cost obtained from Attachment 1 September 8, 2010 ERC General Contracting Services, Inc. Bid Prices for the Phase I Closure project. Bid Item No. 010. The cost for a geocomposite material and its installation = $0.63/square foot = $5.67/square yard.

=

Synthetics - Other - Not anticipated at the time of this cost estimate.

4.) Top Soil Cover

Off-Site Material - Final 3D closure surface area over the Phase II Section II Expansion is 657,300 square feet. Assumed the following:

6 inch topsoil layer used =>	12,172	cubic yards
18 inch protective layer =>	36,517	cubic yards
Total off-site material requried =>	48,689	cubic yards

- Cost obtained from Attachment 1 September 8, 2010 ERC General Contracting Services, Inc. Bid Prices for the Phase I Closure project. Bid Item No. 006. The cost for topsoil and protective cover soil layer material and installation were the same at $10.25/cubic yard.

Delivery
Included in the material prices = $0.00/cubic yard

Spread
Included in the material prices = $0.00/cubic yard

5.) Vegetative Layer

Sodding - Final 3D closure surface area over the Phase II Section II Expansion is 657,300 square feet. Assumed the following:

3D surface area = 657,300 square feet = 73,033 square yards

- Cost obtained from Attachment 1 September 8, 2010 ERC General Contracting Services, Inc. Bid Prices for the Phase I Closure project. Bid Item No. 029.

= $0.17/square foot
= $1.53/square yard

Hydroseeding - Not anticipated at the time of this cost estimate.

Fertilizer - Not anticipated at the time of this cost estimate.

Mulch - Not anticipated at the time of this cost estimate.

CLIENT	PROJECT	JOB NO.
Hardee County	Phase II Section II Expansion	09199033.23

SUBJECT	BY	DATE
	SRF	8/31/12
Financial Assurance	CHECKED	DATE

6.) Stormwater Control System

Earthwork - Included in Piping cost identified below based on RS Means.

Grading - Will not be required, will be constructed during the bottom liner construction.

Piping - Length of downchute piping is taken from the conceptual closure drawing. Unit cost is based on RS Means.

RS Means G1030 805 1330	$4.56	LF trenching, compacting, and backfilling
RS Means 33 41 13.50 1070	$28.50	LF for 24 inches
RS Means City Factor	0.976	
Total =	$32.27	per LF

LF of piping estimated to be = 1,080 feet * $3,227/linear foot = $34,852

Ditches - Will not be required, will be constructed during the bottom liner construction.

Berms - Will not be required, will be constructed during the bottom liner construction.

Control Structures - Quantity of structures is taken from the conceptual closure drawing. Unit cost is based on FDOT Pay Item.

FDOT Pay Item Index number 0430611129 (U-Endwall/Baffles, STD 261, 1:4 SLP, 24 inches) $2,000 each
Energy dissipater structures to be 4

Other - Not anticipated at the time of this cost estimate.

7.) Passive Gas Control

Wells - Quantity based on the conceptual closure drawing with the following assumptions:

Passive gas vents =	1	well/acre
Final closure EL =	173.1	ft NGVD
Liner system bottom (lowest within cell) EL =	78.5	ft NGVD
Max depth from closure EL to bottom liner EL =	94.6	feet
Depth of well above bottom liner EL =	20	feet
Avergage depth of each well will be =	74.6	feet
to account for sideslope assume each well =	50	feet
Final 3D closure surface area =	657,300	sf
=	15	acres
Total passive vents required =	15	gas vents

- Cost obtained from Attachment 1 September 8, 2010 ERC General Contracting Services, Inc. Bid Prices for the Phase I Closure Bid Item No. 024a.

= $95.00 /LF of well

Cost per well is the average depth of each well times the cost per foot of well

= $4,750.00 per well

CLIENT	PROJECT	JOB NO.
Hardee County	Phase II Section II Expansion	09199033.23

SUBJECT	BY	DATE
Financial Assurance	SRF	8/31/12
	CHECKED	DATE

8.) Active Gas Extraction Control

An active gas collection system is not proposed at the time of this cost estimate.

9.) Security System

The security fencing, gates, and signs have been installed for the entire site. No additional security devices are anticipated at the time of this cost estimate.

10.) Engineering

All engineering costs and services are estimated by SCS Engineers. These costs would be typical for any third party engineering consulting firm to perform these tasks.

Closure Plan Report - Refer to Attachment 1 for the Manpower and Fee estimates.

Certified Engineering Drawings - Included in the Closure Plan Report. Refer to Attachment 1 for the Manpower and Fee estimates.

NSPS/Title V Air Permit - Not requried at the time of this cost estimate.

Final Survey - Refer to Attachment 1 for the Manpower and Fee estimates.

Certification of Closure - Refer to Attachment 1 for the Manpower and Fee estimates.

Other (explain) - Refer to Attachment 1 for the Manpower and Fee estimates.

11.) Professional Services

Refer to Attachment 1 for the Manpower and Fee estimates.

12.) Contingency

A contingency amount of 10% of the total cost was used in the cost estimate. This value is consistent with actual contingency values used in bidding landfill construction projects.

13.) Contingency

Mobilization - 10% of Sub-total 1-11 (of the total cost of construction)

Waste Tire Facility - Regrading and seeding to be used.

- Cost obtained from Attachment 1 September 8, 2010 ERC General Contracting Services, Inc. Bid Prices for the Phase I Closure project. Bid Item No. 007. Subbase final grading and compaction cost = $0.25/square yard

- Cost obtained from Attachment 1 September 8, 2010 ERC General Contracting Services, Inc. Bid Prices for the Phase I Closure project. Bid Item No. 030. Seeding cost = $0.04/square foot = $0.36/square yard.

CLIENT	PROJECT	JOB NO.
Hardee County	Phase II Section II Expansion	09199033.23

SUBJECT	BY	DATE
	SRF	8/31/12
Financial Assurance	CHECKED	DATE

13.) Contingency (Continued)

Area of Waste Tire Facility is taken from the conceptual closure drawing = 9,100 square feet = 1,011 square yards

Final grading and compaction cost = $253

Seeding cost = $364

Total cost = $617

Materials Recovery Facility - Demolition of 11,800 SF (1,311 SY) building - regrading and seeding.

11,800 square foot steel building 25 feet tall = 295,000 CF

Unit cost is based on RS Means Item 0241 16.13 - 00200. Use 50% for building with no interior wall.

$0.31/CF * 295,000 CF * 0.50% = $45,725

Regrading and seeding to be used.

- Cost obtained from Attachment 1 September 8, 2010 ERC General Contracting Services, Inc. Bid Prices for the Phase I Closure project. Bid Item No. 007. Subbase final grading and compaction cost = $0.25/square yard

- Cost obtained from Attachment 1 September 8, 2010 ERC General Contracting Services, Inc. Bid Prices for the Phase I Closure project. Seeding cost => $0.04 /SF
= $0.36 /SY

$0.25/SY + $0.36/SY = $0.61 /SY

1,300 SY * $0.61/SY = $800

Materials Recovery Facility Total = $45,725 + $800 = $46,525

Special Wastes - Not requried at the time of this cost estimate.

Leachate Management System Modification - Not anticipated at the time of this cost estimate.

Other (Household Hazardous Waste Building) - Demolition of 2,400 SF (267 SY) building - regrading and seeding.

2,400 square foot steel building 20 feet tall = 48,000 CF

Unit cost is based on RS Means Item 0241 16.13 - 00200. Use 50% for building with no interior wall.

$0.31/CF * 48,000 CF * 0.50% = $7,440

Regrading and seeding to be used.

CLIENT	PROJECT	JOB NO.
Hardee County	Phase II Section II Expansion	09199033.23

SUBJECT	BY	DATE
	SRF	8/31/12
Financial Assurance	CHECKED	DATE

13.) Contingency (Continued)

- Cost obtained from Attachment 1 September 8, 2010 ERC General Contracting Services, Inc. Bid Prices for the Phase I Closure project. Bid Item No. 007. Subbase final grading and compaction cost = $0.25/square yard

- Cost obtained from Attachment 1 September 8, 2010 ERC General Contracting Services, Inc. Bid Prices for the Phase I Closure project. Seeding cost => $0.04 /SF
= $0.36 /SY

$0.25/SY + $0.36/SY = $0.61 /SY

2,400 SF / 9 SF/SY = 267 SY

267 SY * $0.61/SY = $163

Household Hazardous Waste Building Total = $7,440 + $163 = $7,603

CLIENT	PROJECT	JOB NO.
Hardee County	Phase II Section II Expansion	09199033.23

SUBJECT	BY	DATE
	SRF	8/31/12
	CHECKED	DATE
Financial Assurance		

1.) Groundwater Monitoring

- 9 groundwater monitoring wells monitored Semi-Annually

- Cost obtained from PBS&J $1,000/well = $567 ~ $600 per well = 9 * $600 = $5,400/event = $10,800/year

2.) Surface Water Monitoring

- 1 surface water monitoring location monitored Semi-Annually

- Cost obtained from PBS&J, $619/location ~ $650/location * 1 location = $650/event * 2 events/year = $1,300/year

3.) Gas Monitoring

- 15 landfill gas monitoring locations monitored quarterly

- Cost obtained from PBS&J, $57/location/quarter = $855/quarter * 4 quarters per year = $3,420/year

4.) Leachate Monitoring

- 1 leachate sampling location monitored Annually

- Cost obtained from PBS&J = $967

5.) Leachate Collection/Treatment Systems Maintenance

Collection Pipes - A leachate cleaning and inspection estimate was provided by Florida JetClean.
The total cost for services is $37,095.

Pipe cleaning and inspection wil be performed every 5 years.

$37,095/5 years = $7,419/year

3,000 feet of Phase I leachate collection pipe
6,340 feet of Phase II Section I Groundwater collection pipe
2,350 feet of Phase II Section I leachate collection pipe
1,300 feet of Phase I toe drain pipes
3,000 feet of Phase II Section II leachate collection pipe
300 feet of Phase II Section II Groundwater collection pipe

Total = 16,290 feet of pipe

$7,419/16,290 = $0.46 per ft/year

Sumps, Traps - Not anticipated at the time of this cost estimate, flushed during pipe cleaning.

Lift Stations - Not anticipated at the time of this cost estimate, flushed during pipe cleaning.

CLIENT	PROJECT	JOB NO.
Hardee County	Phase II Section II Expansion	09199033.23

SUBJECT	BY	DATE
	SRF	8/31/12
Financial Assurance	CHECKED	DATE

5.) Leachate Collection/Treatment Systems Maintenance (Continued)

Cleaning - Included during the pipe cleaning.

Tanks - $500 per tank per year.

Liner Repair - Not anticipated at the time of this cost estimate.

Sludge Removal - Not anticipated at the time of this cost estimate.

Aeration Systems - Not anticipated at the time of this cost estimate.

Disposal - Leachate generation rate

Total leachate hauled for treatment = 4,000,000 gallons per year

6.) Groundwater Monitoring Well Maintenance

Monitoring Wells - Assume replacment cost provided by Terracon. Each well 30 feet deep = $2,000
$2,000/30 feet = $66.67/LF once every five years = $14

Replacement - Monitoring well replacement = $2,000
$2,000 per well / 5 years = $400/year

Abandonment - $750 per well
12 wells to be abandoned in 30 years.
9 wells * $750/well = $6,750
$6,750/30 years = $225/year
$225/9 wells = $25/well/year

7.) Gas System Maintenance

Estimate one passive vent will need to be repaired per year. Requires 8 hours of technicians time at $65/hour
Material to repair passive vent = $200
Vehicle usage per day = $75
Total = $775 per year

Piping, Vents - Assume 10 LF of pipe to be replaced per year at $95/LF = $950

8.) Landscape Maintenance

Mowing - Unit cost is based on RS Means Item 32 0190.19 4190. $0.64/1,000 square feet. Assume facility will be mowed quarterly.
Mowing area - 24.80 acres * 4 times per year = 99.2 acres
99.2 acres = 4,321,152 square feet
4,321,152 square feet / 1,000 = 4,321
$0.64 * 4,321 = $2,766/year = $27.88/acre

CLIENT	PROJECT	JOB NO.
Hardee County	Phase II Section II Expansion	09199033.23

SUBJECT	BY	DATE
	SRF	8/31/12
	CHECKED	DATE
Financial Assurance		

8.) Landscape Maintenance (Continued)

Fertilizer - Not anticipated at the time of this cost estimate.

9.) Erosion Control and Cover Maintenance

Sodding - Assume 0.25 acres of erosion wash per year.
Sod quantity - 0.25 acres * 43,560 sf/acre*1 SY/9 SF = 1,210 SY
1,210 SY * $1.53/SY = $1,851/year

Regrading - Assume a lump sum of $2,000.

Liner Repair - Assume 100 SY/year of 40-mil and 60-mil
- Cost obtained from Attachment 1 September 8, 2010 ERC General Contracting Services, Inc. Bid Prices for the Phase I Closure project. Bid Item No. 008. Cost for liner material and installation = $0.36/square foot => $3.24/square yard.

- 40-mil cost = $0.36/SF * 9 SF/SY = $3.24/SY
- Cost = $3.24 * 100 SY = $324

- Cost obtained from Attachment 1 September 8, 2010 ERC General Contracting Services, Inc. Bid Prices for the Phase I Closure project. Bid Item No. 010. Cost for liner material and installation = $0.46/square foot => $4.14/square yard.

60-mil cost = $0.46/SF * 9 SF/SY = $4.14/SY
Cost = $4.14 * 100 SY = $414

Total liner repair cost = $324 + $414 = $738/year = $3.69/SY

Clay - Not anticipated at the time of this cost estimate.

10.) Storm Water Management System Maintenance

Conveyance Maintenance - Assume 100 LF of pipe to be replaced every 5 years.
Cost = 100 LF * $15/LF = $1,500

Assume 1 FDOT Type "C" inlet replace every 5 years.
$1,736/5 years = $347/year

Assume 1 FDOT Energy Dissipator replaced every 5 years.
$1,500/5 years = $300/year

Total maintenance = $1,500 + $350 + $300 = $2,150

11.) Security System Maintenance

Fences - Unit cost is based on RS Means Item 32 31 13.40 1600 at $16.20/LF.
Assume 50 LF of fence to be replaced per year
Fence Cost = $16.20 * 50 LF = $810/year

CLIENT	PROJECT	JOB NO.
Hardee County	Phase II Section II Expansion	09199033.23

SUBJECT	BY	DATE
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Financial Assurance		

11.) Security System Maintenance (Continued)

Gates - Unit cost is based on RS Means Item 32 31 13.20 5090 at $2,575.

Assume replace one gate every 5 years
Gates Cost - $2,575/5 years = $515/year

Sign - Not anticipated at the time of this cost estimate.

12.) Utilities

- $500/year assumed.

13.) Leachate Collection/Treatment Systems Operation

P.E. Supervisor - 2 hours required per month at $165/hour.

On-Site Engineer - Not anticipated at the time of this cost estimate.

Office Engineer - Not anticipated at the time of this cost estimate.

On-Site Technician - Staff Professional 4 hours required per month at $85/hour.

Materials - Not anticipated at the time of this cost estimate.

14.) Administrative

P.E. Supervisor - 1 hour required per month at $165/hour.

On-Site Engineer - Not anticipated at the time of this cost estimate.

Office Engineer - Not anticipated at the time of this cost estimate.

On-Site Technician - Staff Professional 4 hours required per month at $85/hour.

Other - Not anticipated at the time of this cost estimate.

15.) Contingency

- 5% of estimated subtotal cost.

16.) Site Specific Costs

- Not anticipated at the time of this cost estimate.

HARDEE COUNTY CLASS I LANDFILL
PHASE I CLOSURE
PROJECT NO. SW-10-256
Bid Opening September 8, 2010

Item No.	Item Description	Unit of Measure	Estimated Quantity		ERC General Contracting Services, Inc. Unit Price	ERC General Contracting Services, Inc. Amount	COMANCO Environmental Corporation Unit Price	COMANCO Environmental Corporation Amount		T & K Construction LLC Unit Price	T & K Construction LLC Amount	Southeast Environmental Contracting, Inc. Unit Price	Southeast Environmental Contracting, Inc. Amount	Environmental Specialties International, Inc. Unit Price	Environmental Specialties International, Inc. Amount	Masci Corporation Unit Price	Masci Corporation Amount
001	Mobilization/Demobilization	LS	1		$120,000.00	$120,000.00	$250,000.00	$250,000.00		$207,000.00	$207,000.00	$150,000.00	$150,000.00	$274,000.00	$274,000.00	$225,000.00	$225,000.00
002	Site Clearing/Grubbing and Scraping	LS	1		$18,000.00	$18,000.00	$50,000.00	$50,000.00		$46,300.00	$46,300.00	$100,000.00	$100,000.00	$135,760.00	$135,760.00	$50,000.00	$50,000.00
003	Survey	LS	1		$20,000.00	$20,000.00	$45,000.00	$45,000.00		$85,100.00	$85,100.00	$35,000.00	$35,000.00	$119,000.00	$119,000.00	$75,000.00	$75,000.00
004	Temporary Erosion and Sedimentation Control	LS	1		$5,000.00	$5,000.00	$10,000.00	$10,000.00		$27,800.00	$27,800.00	$25,000.00	$25,000.00	$27,500.00	$27,500.00	$30,000.00	$30,000.00
005	Excavation of Unsuitable Soil/Waste (Intermediate Cover Soil Layer/Grading Layer)	CY	45,000		$0.55	$24,750.00	$1.25	$56,250.00		$2.51	$112,950.00	$6.00	$270,000.00	$3.01	$135,450.00	$7.00	$315,000.00
006	Fill for Excavated Unsuitable Soil/Waste (Intermediate Cover Soil Layer/Grading Layer)	CY	60,000		$10.25	$615,000.00	$9.10	$546,000.00		$9.08	$544,800.00	$10.00	$600,000.00	$8.29	$497,400.00	$12.00	$720,000.00
007	Subbase Final Grading/Compaction (Top of Intermediate Cover Soil Layer/Grading Layer)	SY	70,296		$0.25	$17,574.00	$0.75	$52,722.00		$0.47	$33,039.12	$1.00	$70,296.00	$1.36	$95,602.56	$5.00	$351,480.00
008	40 mil Textured LLDPE Geomembrane	SF	331,703	a	$0.36	$119,413.08	$0.32	$106,144.96		$0.47	$155,900.41	$0.40	$132,681.20	$0.4330	$143,627.40	$0.5000	$165,851.50
009	60 mil Textured HDPE Geomembrane	SF	332,596	a	$0.46	$152,994.16	$0.47	$156,320.12	a	$0.60	$199,557.60	$0.50	$166,298.00	$0.6474	$215,322.65	$0.5800	$192,905.68
010	300 mil Biplanar Geocomposite	SF	664,299	a	$0.63	$418,508.37	$0.50	$332,149.50		$0.59	$391,936.41	$0.60	$398,579.40	$0.6643	$441,293.83	$0.8000	$531,439.20
011	Protective Soil Cover Layer (18 Inches)	SF	21,500		$10.25	$220,375.00	$12.50	$268,750.00		$10.78	$231,770.00	$12.00	$258,000.00	$8.51	$182,965.00	$12.00	$258,000.00
012	Topsoil Layer (6 Inches)	CY	6,000		$10.25	$61,500.00	$6.00	$36,000.00		$2.84	$17,040.00	$10.00	$60,000.00	$8.30	$49,800.00	$15.00	$90,000.00
013	Drainage Sand Layer (24 Inches)	CY	27,450		$9.50	$260,775.00	$13.00	$356,850.00		$14.18	$389,241.00	$15.00	$411,750.00	$11.36	$311,832.00	$18.00	$494,100.00
014	Geosynthetic Clay Liner	SF	14,750		$0.62	$9,145.00	$1.00	$14,750.00		$0.86	$12,685.00	$0.60	$8,850.00	$0.9520	$14,042.00	$1.0000	$14,750.00
015	18-inch Diameter ADS N-12 Downchute Pipe	LF	710		$15.00	$10,650.00	$25.00	$17,750.00		$27.20	$19,312.00	$24.00	$17,040.00	$29.63	$21,037.30	$55.00	$39,050.00
016	12-inch Diameter ADS N-12 Downchute Pipe	LF	260		$10.00	$2,600.00	$15.00	$3,900.00		$21.40	$5,564.00	$18.00	$4,680.00	$20.60	$5,356.00	$50.00	$13,000.00
017	FDOT Index No. 261 Baffled Endwall	EA	3		$1,500.00	$4,500.00	$1,500.00	$4,500.00		$2,610.00	$7,830.00	$10,000.00	$30,000.00	$2,331.60	$6,994.80	$8,100.00	$24,300.00
018	GFFR Lined Stormwater Swale and Downchute Pipe Outfall Area	SF	9,150		$5.00	$45,750.00	$7.50	$68,625.00		$5.77	$52,795.50	$8.00	$73,200.00	$7.06	$64,599.00	$7.00	$64,050.00
019	Riprap Lined Temporary Stormwater Flume	LF	690		$35.00	$24,150.00	$45.00	$31,050.00		$46.90	$32,361.00	$50.00	$34,500.00	$72.19	$49,811.10	$50.00	$34,500.00
020	6 Inch Diameter ADS N-12 Toe Drain (Slotted Pipe)	LF	1,380		$5.00	$6,900.00	$23.00	$31,740.00		$13.60	$18,768.00	$28.00	$38,640.00	$33.39	$46,078.20	$50.00	$69,000.00
021	6 Inch Diameter ADS N-12 Toe Drain (Solid Wall Pipe)	LF	140		$5.00	$700.00	$18.00	$2,520.00		$8.90	$1,246.00	$10.00	$1,400.00	$15.49	$2,168.60	$50.00	$7,000.00
022	Crushed Concrete or Gravel Access Ramp	SY	2,020		$6.00	$12,120.00	$8.00	$16,160.00		$22.75	$45,955.00	$12.00	$24,240.00	$19.09	$38,561.80	$20.00	$40,400.00
023	Horizontal Landfill Gas Vent Trench Installation	LF	2,700		$25.00	$67,500.00	$35.00	$94,500.00		$34.00	$91,800.00	$40.00	$108,000.00	$77.00	$207,900.00	$50.00	$135,000.00
024	Vertical Landfill Gas Vent Installation																
024a	30 Inch Diameter Bore With 6 Inch Diameter PVC Casing	LF	352		$95.00	$33,440.00	$95.00	$33,440.00		$103.10	$36,291.20	$130.00	$45,760.00	$238.00	$83,776.00	$125.00	$44,000.00
024b	30 Inch Diameter Bore With 4 Inch Diameter HDPE SDR 17 Casing	LF	180		$95.00	$17,100.00	$50.00	$9,000.00		$119.80	$21,564.00	$125.00	$22,500.00	$238.00	$42,840.00	$120.00	$21,600.00
024c	Boring Refusal	LF	133		$18.00	$2,394.00	$30.00	$3,990.00		$64.00	$8,512.00	$40.00	$5,320.00	$20.00	$2,660.00	$30.00	$3,990.00
025	6 Inch Diameter HDPE SDR 17 Stormwater Pipe	LF	50		$10.00	$500.00	$15.00	$750.00		$31.80	$1,590.00	$15.00	$750.00	$39.52	$1,976.00	$45.00	$2,250.00
026	12 mil Geosynthetic Rain Tarp	SF	122,082	a	$0.40	$48,832.80	$0.25	$30,520.50		$0.31	$37,845.42	$0.25	$30,520.50	a $0.9520	$116,222.06	$0.55	$67,145.10
027	ConCover 180	SF	210,083	a	$0.40	$84,033.20	$0.18	$37,814.94		$0.24	$50,419.92	$0.25	$52,520.75	$0.18	$37,814.94	$0.50	$105,041.50
028	Western/Northern Perimeter Swale	LS	1		$10,000.00	$10,000.00	$15,000.00	$15,000.00		$17,900.00	$17,900.00	$22,000.00	$22,000.00	$41,993.90	$41,993.90	$48,700.00	$48,700.00
029	Sodding	SF	341,200		$0.17	$58,004.00	$0.18	$61,416.00		$0.20	$68,240.00	$0.20	$68,240.00	$0.23	$78,476.00	$0.30	$102,360.00
030	Seeding	SF	35,000		$0.04	$1,400.00	$0.045	$1,575.00		$0.06	$2,100.00	$0.050	$1,750.00	$0.05	$1,750.00	$0.10	$3,500.00
	BID TOTAL			b		**$2,493,608.61**		$2,745,188.02	b		$2,975,213.58	b	$3,267,515.85	b	$3,493,611.14		$4,338,412.98

a = Calculation Correction
b = Total Correction

MANPOWER AND FEE ESTIMATE - ITEMS 10 AND 11, FINANCIAL ASSURANCE
HARDEE COUNTY REGIONAL LANDFILL
PHASE II SECTION II CLOSURE

Task Key

10 a - Closure Plan Report
10 b - FDEP Coordination
10 c - Certified Drawings
10 d - Bidding
10 e - Final Survey
10 f - Construction Certification
11 a - Contract Management
11 b - CQA

	Engineering						Professional Services		Total	Rate	Total
Personnel	**10 a**	**10 b**	**10 c**	**10 d**	**10 e**	**10 f**	**11 a**	**11 b**	**(hours)**	**($)**	**($)**
Office Director						8			8	210	1,680
Project Director	30	16	4	16			64	16	146	195	28,470
Project Manager	200	16	16	40		40	200	100	612	145	88,740
Senior Project Professional	200	8	16	24		80			328	125	41,000
Project Professional	180		60	24			40	120	424	115	48,760
Staff Professional	180		16						196	95	18,620
Associate Staff Professional					24				24	80	1,920
Designer	180		80	8		16			284	100	28,400
Drafter	80		30			24			134	72	9,648
Senior Technician 2				16		40	240	960	1,256	88	110,528
Secretarial/Clerical	40	2	8	8		8	40	40	146	60	8,760
Subtotal Labor (hours)	1,060	26	40	120	24	136	520	1,100	3,558		
Subtotal Labor ($)	123,810	6,560	24,160	17,368	1,920	24,808	69,600	118,300			386,526
Reimbursables (See Table 2)	2,475	467	1,140	365	11,551	455	1,755	29,591			47,799
G&A, 15 percent reimbursables	371	70	171	55	1,733	68	263	4,439			7,170
Total reimbursables	2,846	537	1,311	420	13,284	523	2,018	34,030			54,969
Subtotal, Fee Estimate	**126,656**	**7,097**	**25,471**	**17,788**	**15,204**	**25,331**	**71,618**	**152,330**			**441,495**

	Closure Application				**Construction Costs**			
	Total =		**133,753**			Total =	**282,271**	
				Total 10a,b,c,d,e,f		**217,547**	Total 11a&11b	**223,948**

MANPOWER AND FEE ESTIMATE - ITEMS 10 AND 11, FINANCIAL ASSURANCE
HARDEE COUNTY REGIONAL LANDFILL
PHASE II SECTION II CLOSURE

REIMBURSABLES ESTIMATE (Task Amounts)

Task Key

10 a - Closure Plan Report
10 b - FDEP Coordination
10 c - Certified Drawings
10 d - Bidding
10 e - Final Survey
10 f - Construction Certification
11 a - Contract Management
11 b - CQA

Reimbursable Total = 47,800

Reimbursable	Unit Cost ($)	Unit	10 a	10 b	10 c	10 d	10 e	10 f	11 a	11 b	Total Units	Total ($)
Subconsultants, Topographic survey	1	LS					11,551				11,551	11,551
Subcontractors/Drillers	1	LS									0	0
Laboratory Services	1	EA								14,000	14,000	14,000
Vehicle Mileage (Auto)	0.51	MI	30	30		30		30			120	61
Vehicle Mileage (Truck)	75	DA									0	0
Company Vehicle	55	DA	2	2		1		1	10	10	26	1,430
Truck	55	DA				1				96	97	5,335
Parking & Tolls	1	LS									0	0
Meals	36	DA								96	96	3,456
Lodging, Hotel	55	DA								96	96	5,280
Telephone Calls	5	EA	35	10		5		5	50	75	180	900
Faxes	6	PG	20	7		5		5	25	25	87	522
Postage & Freight	10	LS	25	5		5		5	50	50	140	1,400
Reproduction (Xerox)	0.1	EA	1,550	500	500	200		500	1,550		4,800	480
Reproduction (Graphics) CADD	3	EA	250	50	180	25		50	50		605	1,815
Computer (CADD)	5	HR	180		110	8	0	16	0	0	314	1,570

SCS ENGINEERS FEE SCHEDULE
(Effective January 1, 2012 through June 30, 2012)

	Rate/Hour ($)
Principal/Office Director……..	210
Project Director	195
Senior Project Advisor…….	160
Senior Project Manager	160
Project Manager…….…….	145
Senior Project Professional.....	125
Project Professional	115
Designer ……..……	100
Staff Professional.....	95
Senior Technician 2	88
Senior Technician 1	70
Associate Staff Professional	80
Draftsperson ……..……..	72
Technician	62
Office Services Manager	75
Secretarial/Clerical	60

1. The hourly rates are effective through June 30, 2012. Work performed thereafter is subject to a new Fee Schedule issued for the period beginning July 1, 2012.

2. The above rates include salary, overhead, administration, and profit. Other direct expenses, such as analyses of air, water and soil samples, reproduction, travel, subsistence, subcontractors, computers, and other reimbursable fees, are billed in accordance with the attached reimbursable fee schedule or at cost, plus 15 percent for administration.

3. For special situations, such as expert court testimony, hourly rates for principals of the firm will be on an individually-negotiated basis.

SCS ENGINEERS
REIMBURSABLES FEE SCHEDULE
(Effective Jan 1, 2012 through June 30, 2012)

ADMINISTRATION/MILEAGE	Unit Cost ($)	Unit
Reimbursable		
Vehicle Mileage	0.555	mile
Truck Usage	$75	day
Reproduction – Black and White Copies	0.10	each
Reproduction - Color Copies	0.75	each
CAD Usage	5	hour

EQUIPMENT/FIELD SUPPLIES	Rate ($)	Unit
Sampling Trailer, Field Equipped	250	Day

Field-equipped sampling trailer includes equipment and supplies for soil and groundwater sampling, decontamination, health and safety, logs, packing and shipping, and miscellaneous uses.

Calibration:		
Conductivity Standards *	1	Ounce
Isobutylene *	1	Liter
Methane in Air OVA Calibration Gas *	1	Liter
Pentane in Air *	1	Liter
pH Buffer Solutions (4,7,10) *	1	Ounce
Decontamination Equipment:		
Brushes *	5	Day
Distilled/Deionized Water *	1	Gallon
Isopropyl Alcohol *	1	Ounce

EQUIPMENT/FIELD SUPPLIES	**Rate ($)**	**Unit**
Liquinox Soap Concentrate *	1	Ounce
Plastic Buckets *	5	Day
Poly Sheeting *	1	Square Foot
Health and Safety Equipment:		
Altair 4 Monitor	10/100	Day/Month
Half-face/Full-face Respirators	20	Day
Personal H2S Monitor	5/50	Day/Month
Respirator Cartridges	10	Each
Tyvec Coveralls	5	Each
Hydrogeology Pumps:		
Centrifugal Trash Pump *	15	Day
Grundfos Submersible Pump	25	Day
Peristaltic Pump *	15	Day
Whale Pump*	15	Day
Indoor Air Quality Equipment:		
Bore scope	50	Day
DryCalc DC-Lite Calibrator	25	Day
Moisture Encounter ME-1	40	Day
Protimeter Mini Moisture Meter	35	Day
SKC Air Sampling Pump and Calibrator	15	Day
TSI IAQ Calc Air Quality Meter	50	Day
Zefon International Bio-Sampler Pump	50	Day
Industrial Hygiene Equipment:		
CrowCon Gasman Meter – HF	25	Day
CrowCon Gasman Meter – H2S	25	Day
CrowCon Gasman Meter – SO2	25	Day
CrowCon Gasman Meter – NH3	25	Day
CrowCon Gasman Meter – CO	25	Day
DC-10 Noise Calibrator	25	Day
NoisePro DL	25	Day
TES1350 Sound Level Meter	25	Day

SCS ENGINEERS
FEE SCHEDULE (Continued)
(Effective Jan 1, 2012 through June 30, 2012)
Page 4

EQUIPMENT/FIELD SUPPLIES	**Rate ($)**	**Unit**
TSI VelociCalc/Micro Velometer	50	Day
Walchek II Air Screening System	50	Day
Landfill Gas Field Equipment		
Wellhead	15	Day
Blower on Skid	45	Day
Media Measurement Equipment:		
Conductivity Meter *	15	Day
Draeger Air Screening System *	20	Day
DO Meter*	15	Day
GasTech Gas Meter	50	Day
GEM Soil Gas Meter	125	Day
Heath Porta FID II OVA *	50	Day
Horiba U-10 Water Quality Meter	60	Day
Oil/Water Interface Probe	25	Day
pH Meter *	15	Day
Temperature Meter *	15	Day
Tier 2 Gauge	50	Day
Turbidity Meter *	15	Day
Water Level Indicator *	15	Day
YSI Cond/Temp/Salinity Meter *	50	Day
Miscellaneous Equipment:		
Absorbent Material	15	Cubic Foot
Air Compressor	60	Day
Cordless Saw	20	Day
Generator	60	Day
Global Positioning System (GPS)	45	Day
Hammer Drill	15	Day
Laser Level Surveying Package	75	Day
Power Inverter	10	Day
Regent Lighting*	5	Day
Ryobi Drill	7	Day
Silicon Tubing *	2	Foot

EQUIPMENT/FIELD SUPPLIES	**Rate ($)**	**Unit**
Teflon Tubing *	4	Foot
Traffic Control Cones *	5	Day
Transit Level Surveying Package	50	Day
Tygon Tubing *	2	Foot
Video Camera	50	Day
Walky Talkys*	10	Day
Soil Sampling Equipment:		
Hand Drill Auger System	25	Day
Sampling Tube - Acrylic, SS	5	Day
Slide Hammer *	10	Day
Bar Punch	10	Day
SS Bowls, Spoons, Scoops, etc. *	5	Day
SS Hand Auger - Bucket, Dutch *	10	Day
Water Sampling Equipment:		
QED Micropurge w/Flow Cell*	200	Day
Reusable Teflon Bailer/Lanyard *	5	Day

* = Included in standard trailer rental.

FLORIDA JETCLEAN

HIGH PRESSURE WATER JETTING – VACUUM EXTRACTION
EXPLOSION PROOF INSPECTION - PIPE LOCATING – NO DIG REPAIRS

7538 Dunbridge Drive
Odessa, FL 33556
www. floridajetclean.com

TEL : 800-226-8013
FAX : 813-926-4616

PROPOSAL

DATE : 8/31/2012
TO : Shane Fischer – SCS Engineers
FROM : Ralph Calistri (floridajetclean@yahoo.com)
SUBJECT : Leachate Collection System Maintenance at Hardee County Landfill

Thank you for your inquiry. We confirm our capability and interest in carrying out this work at the Hardee County Landfill.

FLORIDA JETCLEAN specializes in leachate collection system maintenance and inspection, and has developed a considerable amount of specific expertise in this field over the last 20+ years. Our company has worked at an extensive number of landfills in Florida, Georgia, the Carolinas, Delaware, and westward to Arkansas. We have worked with most engineering companies active in this field, and have also fostered excellent working relationships with the regulatory authorities. We use modified jetting equipment designed to achieve extended pipe distances found in landfill environments and our explosion proof camera equipment complies with OSHA and regulatory mandates for methane environments. Substantial references are available on request.

1) **Florida Jetclean, Inc. is consistently successful in Leachate pipe cleaning because of our ability to address extended distances from a single point of entry.** Typical lower-end equipment is designed for much shorter pipes in sewer environments and is just not capable of distances required in Leachate collection systems. We will provide very capable, high-end equipment, and seasoned operators to help ensure success. Our current distance record from a single point of entry is 1,650'.

2) Florida Jetclean, Inc. uses only **explosion proof** (certified Class 1, Division 1, Gas Groups C & D) tractor-driven or push-rod video inspection equipment. **THIS CERTIFICATION IS MANDATED BY OSHA IN METHANE PIPING.** Our equipment and procedures fully meet OSHA and DEP requirements, and **we will put it in writing.**

Proposal to provide high-pressure water-jetting and explosion-proof video-inspection services on the Phase I leachate collection system and the Phase II Section I & II

leachate collection and groundwater collection systems at the Hardee County Landfill, as follows:

Approximately
3,000’ of Phase I Leachate Collection Pipe
6,340’ of Phase II Section I Groundwater Collection Pipe
2,350’ of Phase II Section I Leachate Collection Pipe
1,300’ of Phase II Section I Toe Drains
Two days of vacuum extraction of dislodged sediments from pump stations and sumps.

Total Cost For Above = $ 29,227.50

Plus Additional Pipe
3,150' of Phase II Section II Leachate Collection Pipe
1,000' of Phase II Section II Groundwater Underdrain

Total Cost For Additional Pipe = $ 7,868.50

The proposal is subject to the following :

- The above pipe cleaning covers biomass and light silt removal. Scale removal and blockage penetration may require the use of 10,000PSI/20GPM pipeline water-blasting equipment billable at $1,950/day. Pipes affected by heavy silting may require additional hourly billing.
- An adequate, no charge, on site water supply for jetcleaning.
- Debris vacuum extracted from landfill vaults to be dumped back on site at no charge.
- 2 wheel drive vehicle access within 10’-15’ of each cleanout or manhole
- Continuity of access allowing work to be carried out on a single mobilization
- Exposed and opened cleanouts/manholes at ground level
- Standby time chargeable at $200.00 per hour should delays not of our making delay progress e.g. bad weather, access problems, high leachate flow levels etc.
- Pricing is unrelated to actual or achieved footages but on the number of setups required and the time we anticipate being on site.
- Current technology limitations may preclude the use of tractor video systems (range 1250’) in 8” lines restricted to cleanout access. If a push video system has to be used, we will be limited to a maximum 500’ from each point of entry.
- Our equipment and procedures fully meet OSHA and DEP requirements. In particular our video inspection equipment is certified Class 1, Division 1, Groups C & D (i.e. explosion proof). This is mandated in methane piping by OSHA.
- Video log and report together with DVD's will be provided after completion.

Regards,

Ralph Calistri – Florida Jetclean

Hardee County Water Quality and Landfill
Gas Monitoring and Reporting
PBS&J
June 16, 2006
Surface Water – Semi –annual sampling 1 location
Per sample ____$619_____ Yearly____$1,238_____
Ground Water-Semi –annual sampling 7 locations
Per point x (7 locations) = ____$567_____Yearly___$7,938___
Leachate Annual Sampling 1 Location
Per Sample _____$967_____
Ground Water Elevations- Semi-Annual 25 Locations
Per point x (25 locations) = _____$25____Yearly ___$1,250_____
Landfill Gas Testing and Reporting-Quarterly testing 15 Locations
Per Point ____$67_____x (15 Locations)= _$1,005__Yearly___$4,020___
Semi-Annual Groundwater Report – 2 Per year
Per Report ____$950____Yearly_____$1,900____
TOTAL ANNUAL COST = $17,313

Exhibit 4

31 23 Excavation and Fill

31 23 16 – Excavation

31 23 16.50 Excavation, Bulk, Scrapers

		Crew	Daily Output	Labor-Hours	Unit	2011 Bare Costs Material	Labor	Equipment	Total	Total Incl O&P
2600	5000' haul	B-33E	405	.035	B.C.Y.		1.46	5.60	7.06	8.40
2700	Towed, 10 C.Y., 1/4 push dozer, sand & gravel, 1500' haul	B-33B	560	.025			1.06	3.84	4.90	5.80
2720	3000' haul		450	.031			1.31	4.77	6.08	7.20
2730	5000' haul		365	.038			1.62	5.90	7.52	8.95
2750	Common earth, 1500' haul		420	.033			1.41	5.10	6.51	7.75
2770	3000' haul		400	.035			1.48	5.35	6.83	8.10
2780	5000' haul		310	.045			1.91	6.95	8.86	10.45
2785	Sandy clay & Loam, 1500' haul		454	.031			1.30	4.73	6.03	7.15
2790	3000' haul		432	.032			1.37	4.97	6.34	7.50
2795	5000' haul		340	.041			1.74	6.30	8.04	9.55
2800	Clay, 1500' haul		315	.044			1.88	6.80	8.68	10.30
2820	3000' haul		300	.047			1.97	7.15	9.12	10.85
2840	5000' haul		225	.062			2.63	9.55	12.18	14.45
2900	15 C.Y., 1/4 push dozer, sand & gravel, 1500' haul	B-33C	800	.018			.74	2.71	3.45	4.09
2920	3000' haul		640	.022			.92	3.39	4.31	5.10
2940	5000' haul		520	.027			1.14	4.17	5.31	6.30
2960	Common earth, 1500' haul		600	.023			.98	3.61	4.59	5.45
2980	3000' haul		560	.025			1.06	3.87	4.93	5.85
3000	5000' haul		440	.032			1.34	4.93	6.27	7.40
3005	Sandy clay & Loam, 1500' haul		648	.022			.91	3.34	4.25	5.05
3010	3000' haul		605	.023			.98	3.58	4.56	5.40
3015	5000' haul		475	.029			1.24	4.56	5.80	6.85
3020	Clay, 1500' haul		450	.031			1.31	4.82	6.13	7.25
3040	3000' haul		420	.033			1.41	5.15	6.56	7.80
3060	5000' haul		320	.044			1.85	6.75	8.60	10.25

31 23 19 – Dewatering

31 23 19.10 Cut Drainage Ditch

0010	CUT DRAINAGE DITCH									
0020	Cut drainage ditch common earth, 30" wide x 1' deep	B-11L	6000	.003	L.F.		.11	.09	.20	.26
0040	Clay and hill		4200	.004			.15	.13	.28	.37
0060	Cut new wet drainage ditch, 30" wide	↓	10000	.002	↓		.06	.05	.11	.16

31 23 19.20 Dewatering Systems

0010	DEWATERING SYSTEMS									
0020	Excavate drainage trench, 2' wide, 2' deep	B-11C	90	.178	C.Y.		7.10	3.56	10.66	14.60
0040	2' wide, 3' deep, with backhoe loader		135	.119			4.72	2.37	7.09	9.75
0050	Excavate sump pits by hand, light soil	1 Clab	7.10	1.127			38.50		38.50	59.50
0060	Heavy soil	"	3.50	2.286	↓		78.50		78.50	120
0065	Pumping 8 hr., attended 2 hrs. per day, including 20 L.F.									
0070	of suction hose & 100 L.F. discharge hose									
0080	2" diaphragm pump used for 8 hours	B-10H	4	3	Day		125	17.60	142.60	207
0090	Add per additional pump							71	71	78
0100	4" diaphragm pump used for 8 hours	B-10I	4	3			125	29.50	154.50	221
0110	Add per additional pump							117	117	129
0120	10 hrs. attended, 2" diaphragm pump	B-10H	1	12			500	70.50	570.50	835
0130	Add per additional pump							71	71	78
0140	3" centrifugal pump	B-10J	1	12			500	77.50	577.50	840
0150	Add per additional pump							78	78	86
0160	4" diaphragm pump	B-10I	1	12			500	117	617	885
0170	Add per additional pump							117	117	129
0180	6" centrifugal pump	B-10K	1	12			500	315	815	1,100
0190	Add per additional pump				↓			315	315	350
0200	Excavation 3' deep, 12" diameter	B-6	115	.209	L.F.		8.65	7.80	2.79	19.24	24.50

Exhibit 5

33 41 Storm Utility Drainage Piping

33 41 13 – Public Storm Utility Drainage Piping

	33 41 13.40 Piping, Storm Drainage, Corrugated Metal	Crew	Daily Output	Labor-Hours	Unit	2011 Bare Costs Material	Labor	Equipment	Total	Total Incl O&P
2640	30" diameter, 14 ga.	B-13	130	.431	L.F.	23	16.05	5.75	44.80	56
2660	36" diameter, 12 ga.		130	.431		27.50	16.05	5.75	49.30	61.50
2680	48" diameter, 12 ga.		110	.509		45.50	18.95	6.80	71.25	86.50
2690	60" diameter, 10 ga.	B-13B	78	.718		69	26.50	15.50	111	134
2695	72" diameter, 10 ga.	"	60	.933		78	34.50	20	132.50	161
2711	Bends or elbows, 12" diameter, 16 ga.	B-14	30	1.600	Ea.	136	58	10.70	204.70	249
2712	15" diameter, 16 ga.		25.04	1.917		168	69.50	12.80	250.30	305
2714	18" diameter, 16 ga.		20	2.400		188	87	16.05	291.05	360
2716	24" diameter, 14 ga.		16	3		274	109	20	403	490
2718	30" diameter, 14 ga.		15	3.200		345	116	21.50	482.50	580
2720	36" diameter, 14 ga.	B-13	15	3.733		470	139	50	659	780
2722	48" diameter, 12 ga.		12	4.667		645	174	62.50	881.50	1,050
2724	60" diameter, 10 ga.		10	5.600		990	208	75	1,273	1,500
2726	72" diameter, 10 ga.		6	9.333		1,250	345	125	1,720	2,050
2728	Wyes or tees, 12" diameter, 16 ga.	B-14	22.48	2.135		180	77.50	14.25	271.75	330
2730	18" diameter, 16 ga.		15	3.200		262	116	21.50	399.50	490
2732	24" diameter, 14 ga.		15	3.200		405	116	21.50	542.50	645
2734	30" diameter, 14 ga.		14	3.429		530	124	23	677	800
2736	36" diameter, 14 ga.	B-13	14	4		690	149	53.50	892.50	1,050
2738	48" diameter, 12 ga.		12	4.667		1,025	174	62.50	1,261.50	1,450
2740	60" diameter, 10 ga.		10	5.600		1,475	208	75	1,758	2,025
2742	72" diameter, 10 ga.		6	9.333		1,750	345	125	2,220	2,600
2780	End sections, 8" diameter	B-14	24	2		34	72.50	13.35	119.85	163
2785	10" diameter		22	2.182		44.50	79	14.55	138.05	186
2790	12" diameter		35	1.371		78	49.50	9.15	136.65	172
2800	18" diameter		30	1.600		108	58	10.70	176.70	218
2810	24" diameter	B-13	25	2.240		143	83.50	30	256.50	315
2820	30" diameter		25	2.240		246	83.50	30	359.50	430
2825	36" diameter		20	2.800		365	104	37.50	506.50	605
2830	48" diameter		10	5.600		930	208	75	1,213	1,425
2835	60" diameter	B-13B	5	11.200		985	415	242	1,642	1,975
2840	72" diameter	"	4	14		1,575	520	300	2,395	2,850
2850	Couplings, 12" diameter					11.20			11.20	12.30
2855	18" diameter					14.10			14.10	15.50
2860	24" diameter					18.10			18.10	19.90
2865	30" diameter					22			22	24.50
2870	36" diameter					26.50			26.50	29
2875	48" diameter					35			35	38.50
2880	60" diameter					51			51	56
2885	72" diameter				▼	63			63	69.50

33 41 13.50 Piping, Drainage & Sewage, Corrug. HDPE Type S

	PIPING, DRAINAGE & SEWAGE, CORRUGATED HDPE TYPE S									
1900	Not including excavation & backfill, bell & spigot									
1910	With gaskets, 4" diameter	B-20	475	.056	L.F.	.89	2.17		3.06	4.30
1920	6" diameter		400	.060		2.05	2.30		4.35	5.80
1930	8" diameter		380	.063		3.90	2.42		6.32	8
1940	10" diameter		370	.065		6.85	2.49		9.34	11.30
1950	12" diameter		340	.071		7.20	2.71		9.91	12.05
1960	15" diameter		300	.080		7.70	3.07		10.77	13.15
1970	18" diameter	B-21	275	.102		10	4.02	.47	14.49	17.65
1980	24" diameter		250	.112		14.30	4.43	.52	19.25	23.50
1990	30" diameter	▼	200	.140	▼	23.50	5.55	.64	29.69	36

Exhibit 6

CESP005 01/20/2011-08.00.54

Florida Department of Transportation
Item Average Unit Cost
From 2010/01/01 to 2010/12/31

Contract Type: ('CC') STATEWIDE
Displaying: VALID ITEMS WITH HITS
From: 0102 2 1 To: 0999999999

Item		No. of Conts	Weighted Average	Total Amount	Total Quantity	Unit Meas	Obs?	Description
0425	1461	10	$4,819.73	$67,476.21	14.000	EA	N	INLETS, CURB, TYPE J-6, <10'
0425	1471	4	$2,695.06	$21,560.44	8.000	EA	N	INLETS, CURB, TYPE 7, <10'
0425	1475	1	$2,000.00	$4,000.00	2.000	EA	N	INLETS, CURB, TYPE 7, PARTIAL
0425	1481	3	$2,560.34	$61,448.26	24.000	EA	N	INLETS, CURB, TYPE 8, <10'
0425	1483	1	$4,346.88	$4,346.88	1.000	EA	N	INLETS, CURB, TYPE 8, J BOT , <10'
0425	1501	1	$4,500.00	$9,000.00	2.000	EA	N	INLETS, DT BOT, TYPE A, <10'
0425	1505	1	$1,438.00	$2,876.00	2.000	EA	N	INLETS, DT BOT, TYPE A, PARTIAL
0425	1511	6	$2,986.09	$232,915.00	78.000	EA	N	INLETS, DT BOT, TYPE B, <10'
0425	1512	1	$3,500.00	$3,500.00	1.000	EA	N	INLETS, DT BOT, TYPE B, >10'
0425	1513	3	$3,790.20	$18,951.00	5.000	EA	N	INLETS, DT BOT, TYPE B, J BOT,<10'
0425	1515	4	$2,893.00	$43,395.00	15.000	EA	N	INLETS, DT BOT, TYPE B, PARTIAL
0425	1521	36	$1,736.69	$500,166.17	288.000	EA	N	INLETS, DT BOT, TYPE C, <10'
0425	1523	2	$2,222.80	$6,668.39	3.000	EA	N	INLETS, DT BOT, TYPE C,J BOT,<10'
0425	1525	7	$1,278.45	$12,784.52	10.000	EA	N	INLETS, DT BOT, TYPE C, PARTIAL
0425	1529	2	$1,896.55	$3,793.09	2.000	EA	N	INLETS, DT BOT, TYPE C, MODIFY
0425	1531	7	$1,906.66	$74,359.92	39.000	EA	N	INLETS, DT BOT, TYPE C, MOD, <10'
0425	1533	2	$2,148.00	$15,036.00	7.000	EA	N	INLETS, DT BOT, TYPE C, MOD, J BOT, <10'
0425	1535	1	$800.00	$1,600.00	2.000	EA	N	INLETS, DT BOT, TYPE C, MOD, PARTIAL
0425	1541	23	$2,433.74	$391,832.59	161.000	EA	N	INLETS, DT BOT, TYPE D, <10'
0425	1542	1	$4,039.42	$4,039.42	1.000	EA	N	INLETS, DT BOT, TYPE D, >10'
0425	1543	4	$3,535.76	$116,680.24	33.000	EA	N	INLETS, DT BOT,TYPE D, J BOT, <10'
0425	1544	1	$5,076.11	$5,076.11	1.000	EA	N	INLETS, DT BOT,TYPE D, J BOT, >10'
0425	1545	5	$1,745.98	$22,697.70	13.000	EA	N	INLETS, DT BOT,TYPE D, PARTIAL
0425	1549	9	$2,982.50	$116,317.66	39.000	EA	N	INLETS, DT BOT, TYPE D, MODIFY
0425	1551	10	$2,247.62	$150,590.63	67.000	EA	N	INLETS, DT BOT, TYPE E, <10'
0425	1553	2	$4,550.00	$9,100.00	2.000	EA	N	INLETS, DT BOT, TYPE E, J BOT, <10'
0425	1555	2	$827.05	$23,984.32	29.000	EA	N	INLETS, DT BOT, TYPE E, PARTIAL
0425	1559	2	$3,442.49	$27,539.88	8.000	EA	N	INLETS, DT BOT, TYPE E, MODIFY
0425	1561	7	$2,558.37	$33,258.87	13.000	EA	N	INLETS, DT BOT, TYPE F, <10'
0425	1562	1	$7,000.00	$7,000.00	1.000	EA	N	INLETS, DT BOT, TYPE F, >10'
0425	1563	1	$4,200.00	$4,200.00	1.000	EA	N	INLETS, DT BOT,TYPE F, J BOT, <10'
0425	1565	2	$1,866.67	$5,600.00	3.000	EA	N	INLETS, DT BOT,TYPE F, PARTIAL
0425	1571	3	$4,482.50	$17,930.00	4.000	EA	N	INLETS, DT BOT, TYPE G, <10'
0425	1581	8	$3,056.37	$51,958.27	17.000	EA	N	INLETS, DT BOT, TYPE H, <10'
0425	1589	3	$7,640.00	$30,560.00	4.000	EA	N	INLETS, DT BOT, TYPE H, MODIFY

EXHIBIT 1

02 41 Demolition

02 41 13 – Selective Site Demolition

	02 41 13.88 Selective Demolition, Lawn Sprinkler Systems	Crew	Daily Output	Labor-Hours	Unit	Material	2011 Bare Costs Labor	Equipment	Total	Total Incl O&P
0600	Pop-up, 42' - 76' diam.	2 Skwk	50	.320	Ea.		14.20		14.20	22
0700	39' - 99' diameter		50	.320			14.20		14.20	22
0800	Sprinkler valves		40	.400			17.75		17.75	27
0900	Valve boxes		40	.400			17.75		17.75	27
1000	Controls		2	8			855		355	545
1100	Backflow preventer		4	4			178		178	272
1200	Vacuum breaker		4	4			178		178	272

02 41 13.90 Selective Demolition, Retaining Walls

0010	SELECTIVE DEMOLITION, RETAINING WALLS									
0020	See other retaining wall items in Section 02 41 13.33									
0100	Concrete retaining wall, 6' high, no reinforcing	B-9	12.70	3.150	L.F.		109	15.35	124.35	185
0200	8' high		10	4			139	19.50	158.50	235
0300	10' high		7.80	5.128			178	25	203	300
0400	With reinforcing, 6' high		11.50	3.478			121	16.95	137.95	204
0500	8' high		9	4.444			154	21.50	175.50	261
0600	10' high		7	5.714			199	28	227	335
0700	20' high		4	10			350	49	399	590
0800	Concrete cribbing, 12' high, open/closed face		126	.317	S.F.		11.05	1.55	12.60	18.60
0900	Interlocking segmental retaining wall	B-62	800	.030			1.12	.19	1.31	1.92
1000	Wall caps		600	.040			1.50	.25	1.75	2.55
1100	Metal bin retaining wall, 10' wide, 4-12' high	B-13	1200	.047			1.74	.62	2.36	3.33
1200	10' wide, 16-28' high		1000	.056			2.08	.75	2.83	3.99
1300	Stone filled gabions, 6' x 3' x 1'		170	.329	Ea.		12.25	4.40	16.65	23.50
1400	6' x 3' x 1'-6"		75	.747			28	10	38	53.50
1500	6' x 3' x 3'		25	2.240			83.50	30	113.50	160
1600	9' x 3' x 1'		75	.747			28	10	38	53.50
1700	9' x 3' x 1'-6"		33	1.697			63	22.50	85.50	121
1800	9' x 3' x 3'		12	4.667			174	62.50	236.50	335
1900	12' x 3' x 1'		42	1.333			49.50	17.85	67.35	95
2000	12' x 3' x 1'-6"		20	2.800			104	37.50	141.50	199
2100	12' x 3' x 3'		6	9.333			345	125	470	665

02 41 13.92 Selective Demolition, Parking Appurtenances

0010	SELECTIVE DEMOLITION, PARKING APPURTENANCES									
0100	Bumper rails, garage, 6" wide	B-6	300	.080	L.F.		2.99	1.07	4.06	5.75
0200	12" channel rail		300	.080			2.99	1.07	4.06	5.75
0300	Parking bumper, timber		1000	.024			.90	.32	1.22	1.71
0400	Folding, with locks	B-1	100	.240	Ea.		8.40		8.40	12.90
0500	Flexible fixed garage stanchion	B-6	150	.160			6	2.14	8.14	11.45
0600	Wheel stops, precast concrete		120	.200			7.50	2.67	10.17	14.30
0700	Thermoplastic		120	.200			7.50	2.67	10.17	14.30
0800	Pipe bollards, 6"-12" dia.		80	.300			11.25	4.01	15.26	21.50

02 41 16 – Structure Demolition

02 41 16.13 Building Demolition

0010	BUILDING DEMOLITION Large urban projects, incl. 20 mi. haul R024119-10									
0015	No foundation or dump fees, C.F. is vol. of building standing									
0020	Steel	B-8	21500	.003	C.F.		.11	.13	.24	.31
0050	Concrete		15300	.004			.16	.18	.34	.44
0080	Masonry		20100	.003			.12	.14	.26	.33
0100	Mixture of types, average		20100	.003			.12	.14	.26	.33
0500	Small bldgs, or single bldgs, no salvage included, steel	B-3	14800	.003			.12	.14	.26	.33
0600	Concrete		11300	.004			.16	.18	.34	.44
0650	Masonry		14800	.003			.12	.14	.26	.33

Exhibit 8

02 41 Demolition

02 41 16 – Structure Demolition

02 41 16.13 Building Demolition

		Crew	Daily Output	Labor-Hours	Unit	2011 Bare Costs Material	Labor	Equipment	Total	Total Incl O&P
0700	Wood	B-3	14800	.003	C.F.		.12	.14	.26	
0750	For buildings with no interior walls, deduct								50%	
1000	Demoliton single family house, one story, wood 1600 S.F.	B-3	1	48	Ea.		1,750	2,025	3,775	4,900
1020	3200 S.F.		.50	96			3,500	4,050	7,550	9,775
1200	Demoliton two family house, two story, wood 2400 S.F.		.67	71.964			2,625	3,025	5,650	7,325
1220	4200 S.F.		.38	128			4,675	5,375	10,050	13,100
1300	Demoliton three family house, three story, wood 3200 S.F.		.50	96			3,500	4,050	7,550	9,775
1320	5400 S.F.		.30	160			5,850	6,725	12,575	16,300
5000	For buildings with no interior walls, deduct								50%	

02 41 16.15 Explosive/Implosive Demolition

0010	EXPLOSIVE/IMPLOSIVE DEMOLITION R024119-10									
0011	Large projects									
0020	No disposal fee based on building volume, steel building									
0100	Concrete building	B-5B	16900	.003	C.F.		.11	.13	.24	
0200	Masonry building		16900	.003			.11	.13	.24	
0400	Disposal of material, minimum		16900	.003			.11	.13	.24	.31
0500	Maximum	B-3	445	.108	C.Y.		3.94	4.54	8.48	11
		"	365	.132	"		4.80	5.55	10.35	13.40

02 41 16.17 Building Demolition Footings and Foundations

0010	BUILDING DEMOLITION FOOTINGS AND FOUNDATIONS R024119-10									
0200	Floors, concrete slab on grade									
0240	4" thick, plain concrete	B-9	500	.080	S.F.		2.78	.39	3.17	4.69
0280	Reinforced, wire mesh		470	.085			2.96	.42	3.38	5
0300	Rods		400	.100			3.48	.49	3.97	5.90
0400	6" thick, plain concrete		375	.107			3.71	.52	4.23	6.25
0420	Reinforced, wire mesh		340	.118			4.09	.57	4.66	6.90
0440	Rods		300	.133			4.63	.65	5.28	7.80
1000	Footings, concrete, 1' thick, 2' wide	B-5	300	.187	L.F.		7.05	4.01	11.06	15.10
1080	1'-6" thick, 2' wide		250	.224			8.45	4.81	13.26	18.15
1120	3' wide		200	.280			10.60	6	16.60	22.50
1140	2' thick, 3' wide		175	.320			12.10	6.85	18.95	26
1200	Average reinforcing, add								10%	10%
1220	Heavy reinforcing, add								20%	20%
2000	Walls, block, 4" thick	1 Clab	180	.044	S.F.		1.53		1.53	2.34
2040	6" thick		170	.047			1.62		1.62	2.48
2080	8" thick		150	.053			1.83		1.83	2.81
2100	12" thick		150	.053			1.83		1.83	2.81
2200	For horizontal reinforcing, add								10%	10%
2220	For vertical reinforcing, add								20%	20%
2400	Concrete, plain concrete, 6" thick	B-9	160	.250			8.70	1.22	9.92	14.70
2420	8" thick		140	.286			9.95	1.39	11.34	16.80
2440	10" thick		120	.333			11.60	1.63	13.23	19.55
2500	12" thick		100	.400			13.90	1.95	15.85	23.50
2600	For average reinforcing, add								10%	10%
2620	For heavy reinforcing, add								20%	20%
4000	For congested sites or small quantities, add up to								200%	200%
4200	Add for disposal, on site	B-11A	232	.069	C.Y.		2.75	4.53	7.28	9.15
4250	To five miles	B-30	220	.109	"		4.15	8.90	13.05	16.05

02 41 16.33 Bridge Demolition

0010	BRIDGE DEMOLITION									
0100	Bridges, pedestrian, precast, 60' to 150' long	B-21C	250	.224	S.F.		8.35	7.30	15.65	20.50
0200	Steel, 50' to 160' long, 8' to 10' wide	"	500	.112			4.17	3.65	7.82	10.35
0300	Laminated wood, 80' to 130' long	G-12	300	.160			6.80	2.19	8.99	12.80

Exhibit 11

32 01 Operation and Maintenance of Exterior Improvements

32 01 30 – Operation and Maintenance of Site Improvements

	32 01 30.10 Site Maintenance	Crew	Daily Output	Labor-Hours	Unit	2011 Bare Costs Material	Labor	Equipment	Total	Total Incl O&P
6820	Spray after mulch	1 Clab	48	.167	M.S.F.		5.75		5.75	8.80
7100	Tree maintenance									
7140	Clear and grub trees, see Section 31 11 10.10									
7160	Cutting and piling trees, see Section 31 13 13.20									
7200	Fertilize, tablets, slow release, 30 grom/tree	1 Clab	100	.080	Ea.	.45	2.75		3.20	4.72
7280	Guying, including stakes, guy wire & wrap, see Section 32 94 50.10									
7300	Planting, trees, Deciduous, in prep. beds, see Section 32 93 43.20									
7400	Removal, trees see Section 32 96 43.20									
7420	Pest control, spray	1 Clab	24	.333	Ea.	20.50	11.45		31.95	40
7430	Systemic	"	48	.167	"	20.50	5.75		26.25	31.50

32 01 90 – Operation and Maintenance of Planting

32 01 90.13 Fertilizing

0010	FERTILIZING									
0100	Dry granular, 4#/M.S.F., hand spread	1 Clab	24	.333	M.S.F.	2.23	11.45		13.68	20
0110	Push rotary		140	.057		2.23	1.96		4.19	5.45
0112	Push rotary, per 1076 feet squared	↓	130	.062	Ea.	2.23	2.11		4.34	5.70
0120	Tractor towed spreader, 8'	B-66	500	.016	M.S.F.	2.23	.70	.45	3.38	3.98
0130	12' spread		800	.010		2.23	.44	.28	2.95	3.41
0140	Truck whirlwind spreader	↓	1200	.007		2.23	.29	.19	2.71	3.09
0180	Water soluable, hydro spread, 1.5#/M.S.F.	B-64	600	.027		2.29	.90	.50	3.69	4.45
0190	Add for weed control				↓	.39			.39	.43

32 01 90.19 Mowing

0010	MOWING									
1650	Mowing brush, tractor with rotary mower									
1660	Light density	B-84	22	.364	M.S.F.		16.50	13.35	29.85	37
1670	Medium density		13	.615			28	22.50	50.50	66.50
1680	Heavy density	↓	9	.889	↓		40.50	32.50	73	96
2000	Mowing, brush/grass, tractor, rotary mower, highway/airport median		13	.615			28	22.50	50.50	66.50
2010	Traffic safety flashing truck for highway/airport median mowing	A-2B	1	8	Day		267	171	438	595
4050	Lawn mowing, power mower, 18" - 22"	1 Clab	65	.123	M.S.F.		4.23		4.23	6.50
4100	22" - 30"		110	.073			2.50		2.50	3.83
4150	30" - 32"		140	.057			1.96		1.96	3.01
4160	Riding mower, 36" - 44"	B-66	300	.027			1.16	.75	1.91	2.56
4170	48" - 58"	"	480	.017	↓		.73	.47	1.20	1.60
4175	Mowing with tractor & attachments									
4180	3 gang reel, 7'	B-66	930	.009	M.S.F.		.38	.24	.62	.82
4190	5 gang reel, 12'		1200	.007			.29	.19	.48	.64
4200	Cutter or sickle-bar, 5', rough terrain		210	.038			1.66	1.06	2.72	3.65
4210	Cutter or sickle-bar, 5', smooth terrain		340	.024	↓		1.03	.66	1.69	2.25
4220	Drainage channel, 5' sickle-bar	↓	5	1.600	Mile		70	44.50	114.50	153
4700	Lawnmower, rotary type, sharpen (all sizes)	1 Clab	10	.800	Ea.		27.50		27.50	42
4705	Repair or replace part	"	7	1.143	"		39.50		39.50	60
5000	Edge trimming with weed whacker	↓	5760	.001	L.F.		.05		.05	.07

32 01 90.23 Pruning

0010	PRUNING									
0050	1-1/2" caliper	1 Clab	84	.095	Ea.		3.27		3.27	4.97
0060	2" caliper		70	.114			3.93		3.93	5.95
0070	2-1/2" caliper		50	.160			5.50		5.50	8.45
0080	3" caliper	↓	30	.267			9.15		9.15	14.05
0090	4" caliper, by hand	2 Clab	21	.762			26		26	40
0100	Aerial lift equipment	B-85	38	1.053			38.50	22.50	61	83.50
0110	6" caliper, by hand	2 Clab	12	1.333	↓		46		46	70.50

Exhibit 12

32 31 Fences and Gates

32 31 13 – Chain Link Fences and Gates

	32 31 13.30 Fence, Chain Link, Gates and Posts	Crew	Daily Output	Labor-Hours	Unit	2011 Bare Costs Material	Labor	Equipment	Total	Total Incl O&P
7815	Up to 20' wide swing	2 Skwk	.50	32	Ea.	5,025	1,425		6,450	7,700
7820	Up to 45' sliding		.50	32		5,525	1,425		6,950	8,250
7825	Overhead gate, 6' to 18' wide, sliding/cantilever		45	.356	L.F.	253	15.80		268.80	300
7830	Gate operators, digital receiver		7	2.286	Ea.	355	101		456	545
7835	Two button transmitter		24	.667		165	29.50		194.50	228
7840	3 button station		14	1.143		80	50.50		130.50	166
7845	Master slave system		4	4		335	178		513	635
7900	Auger fence post hole, 3' deep, medium soil, by hand	1 Clab	30	.267			9.15		9.15	14.05
7925	By machine	B-80	175	.183			6.75	3.54	10.29	14.15
7950	Rock, with jackhammer	B-9	32	1.250			43.50	6.10	49.60	73
7975	With rock drill	B-47C	65	.246			9.60	20	29.60	36.50

32 31 13.33 Chain Link Backstops

0010	CHAIN LINK BACKSTOPS									
0015	Backstops, baseball, prefabricated, 30' wide, 12' high & 1 overhang	B-1	1	24	Ea.	2,400	840		3,240	3,950
0100	40' wide, 12' high & 2 overhangs	"	.75	32		5,225	1,125		6,350	7,475
0300	Basketball, steel, single goal	B-13	3.04	18.421		1,375	685	246	2,306	2,850
0400	Double goal	"	1.92	29.167		990	1,075	390	2,455	3,175
0600	Tennis, wire mesh with pair of ends	B-1	2.48	9.677	Set	2,250	340		2,590	3,000
0800	Enclosed court	"	1.30	18.462	Ea.	9,700	645		10,345	11,700

32 31 13.40 Fence, Fabric and Accessories

0010	FENCE, FABRIC & ACCESSORIES									
0050	Fabric, 9 ga., galv., 1.2 oz. coat, 2" chain link, 4'	B-80A	304	.079	L.F.	3.03	2.71	.71	6.45	8.30
0100	5'		285	.084		3.77	2.89	.76	7.42	9.45
0150	6'		266	.090		7.15	3.10	.82	11.07	13.55
0200	7'		247	.097		8.55	3.34	.88	12.77	15.45
0250	8'		228	.105		11	3.62	.95	15.57	18.70
0300	9 ga., fused, 4'		304	.079		3.36	2.71	.71	6.78	8.65
0350	5'		285	.084		3.92	2.89	.76	7.57	9.60
0400	6'		266	.090		4.22	3.10	.82	8.14	10.30
0450	7'		247	.097		5.30	3.34	.88	9.52	11.85
0500	8'		228	.105		8.75	3.62	.95	13.32	16.20
0600	Barbed wire, galv., cost per strand		2280	.011		.13	.36	.10	.59	.79
0650	Vinyl coated		2280	.011		.22	.36	.10	.68	.89
0700	Extension arms, 3 strands		143	.168	Ea.	6.15	5.75	1.52	13.42	17.30
0750	6 strands, 2-3/8"		119	.202		12.40	6.95	1.82	21.17	26.50
0800	Eye tops, 2-3/8"		143	.168		1.78	5.75	1.52	9.05	12.50
0850	Top rail, incl. tie wires, 1-5/8", galv.		912	.026	L.F.	9.45	.90	.24	10.59	12.05
0900	Vinyl coated		912	.026		13.05	.90	.24	14.19	16
0950	Rail, middle/bottom, w/tie wire, 1-5/8", galv.		912	.026		9.45	.90	.24	10.59	12.05
1000	Vinyl coated		912	.026		13.05	.90	.24	14.19	16
1050	Reinforcing wire, coiled spring, 7 ga. galv.		2279	.011		.31	.36	.10	.77	.99
1100	9 ga., vinyl coated		2282	.011		.45	.36	.10	.91	1.15

32 31 23 – Plastic Fences and Gates

32 31 23.10 Fence, Vinyl

0010	FENCE, VINYL									
0020	White, steel reinforced, stainless steel fasteners									
0100	Picket, 4" x 4" posts @ 6' - 0" OC, 3' high	B-1	140	.171	L.F.	13.25	6		19.25	24
0150	4' high		130	.185		16.60	6.45		23.05	28
0200	5' high		120	.200		21	7		28	34
0250	Board (semi-privacy), 5" x 5" posts @ 7' - 6" OC, 5' high		130	.185		24	6.45		30.45	36.50
0300	6' high		125	.192		28.50	6.70		35.20	41.50
0350	Basketweave, 5" x 5" posts @ 7' - 6" OC, 5' high		160	.150		24.50	5.25		29.75	34.50

Exhibit 13

32 31 Fences and Gates

32 31 13 – Chain Link Fences and Gates

	32 31 13.20 Fence, Chain Link Industrial	Crew	Daily Output	Labor-Hours	Unit	2011 Bare Costs Material	Labor	Equipment	Total	Total Incl O&P
3108	10' high, in concrete	B-80	24	1.333	L.F.	281	49	26	356	415
3110	Cantilever type, in concrete		48	.667		137	24.50	12.90	174.40	202
3120	8' high, in concrete		24	1.333		141	49	26	216	260
3130	10' high, in concrete		18	1.778		156	65.50	34.50	256	310
5000	Double swing gates, incl. posts & hardware, in concrete									
5010	5' high, 12' opening, in concrete	B-80C	3.40	7.059	Opng.	550	240	52.50	842.50	1,025
5020	20' opening, in concrete		2.80	8.571		865	292	64	1,221	1,475
5060	6' high, 12' opening, in concrete		3.20	7.500		485	255	56	796	985
5070	20' opening, in concrete		2.60	9.231		725	315	68.50	1,108.50	1,350
5080	8' high, 12' opening, in concrete	B-80	2.13	15.002		515	555	290	1,360	1,725
5090	20' opening, in concrete		1.45	22.069		790	815	425	2,030	2,575
5100	10' high, 12' opening, in concrete		1.31	24.427		995	900	470	2,365	3,000
5110	20' opening, in concrete		1.03	31.068		1,375	1,150	600	3,125	3,900
5120	12' high, 12' opening, in concrete		1.05	30.476		1,350	1,125	590	3,065	3,825
5130	20' opening, in concrete		.85	37.647		1,900	1,400	730	4,030	5,000
5190	For aluminized steel add					20%				
7055	Braces, galv. steel	B-80A	960	.025	L.F.	2.02	.86	.23	3.11	3.79
7056	Aluminized steel	"	960	.025	"	2.43	.86	.23	3.52	4.24
7075	Fence, for small jobs 100 L.F. or less fence w/or wo gate, add				S.F.	20%			20%	

32 31 13.25 Fence, Chain Link Residential

0010	**FENCE, CHAIN LINK RESIDENTIAL**									
0011	Schedule 20, 11 gauge wire, 1-5/8" post									
0020	10' O.C., 1-3/8" top rail, 2" corner post, galv. stl., 3' high	B-80C	500	.048	L.F.	2.01	1.63	.36	4	5.10
0050	4' high		400	.060		4.72	2.04	.45	7.21	8.80
0100	6' high		200	.120		5.95	4.08	.89	10.92	13.80
0150	Add for gate 3' wide, 1-3/8" frame, 3' high		12	2	Ea.	82	68	14.90	164.90	210
0170	4' high		10	2.400		88	81.50	17.85	187.35	242
0190	6' high		10	2.400		94	81.50	17.85	193.35	249
0200	Add for gate 4' wide, 1-3/8" frame, 3' high		9	2.667		88	91	19.85	198.85	258
0270	4' high		9	2.667		92.50	91	19.85	203.35	263
0240	6' high		8	3		101	102	22.50	225.50	293
0350	Aluminized steel, 11 ga. wire, 3' high		500	.048	L.F.	5.50	1.63	.36	7.49	8.95
0380	4' high		400	.060		7.20	2.04	.45	9.69	11.50
0400	6' high		200	.120		9.85	4.08	.89	14.82	18.10
0450	Add for gate 3' wide, 1-3/8" frame, 3' high		12	2	Ea.	120	68	14.90	202.90	252
0470	4' high		10	2.400		126	81.50	17.85	225.35	283
0490	6' high		10	2.400		137	81.50	17.85	236.35	296
0500	Add for gate 4' wide, 1-3/8" frame, 3' high		10	2.400		129	81.50	17.85	228.35	287
0570	4' high		9	2.667		135	91	19.85	245.85	310
0540	6' high		8	3		144	102	22.50	268.50	340
0620	Vinyl covered, 9 ga. wire, 3' high		500	.048	L.F.	4.58	1.63	.36	6.57	7.95
0640	4' high		400	.060		5.10	2.04	.45	7.59	9.20
0660	6' high		200	.120		6.65	4.08	.89	11.62	14.55
0720	Add for gate 3' wide, 1-3/8" frame, 3' high		12	2	Ea.	120	68	14.90	202.90	252
0770	4' high		10	2.400		126	81.50	17.85	225.35	284
0760	6' high		10	2.400		127	81.50	17.85	226.35	285
0781	Add for gate 4' wide, 1-3/8" frame, 3' high		10	2.400		129	81.50	17.85	228.35	287
0820	4' high		9	2.667		135	91	19.85	245.85	310
0840	6' high		8	3		144	102	22.50	268.50	340
0920	Fence, for small jobs 100 L.F. fence or less w/or wo gate, add				S.F.	20%			20%	