NOTICE TO THE PUBLIC WILLIAMSON COUNTY COMMISSIONER'S COURT APRIL 28TH, 2009 9:30 A.M.

The Commissioner's Court of Williamson County, Texas will meet in regular session in the Commissioner's Courtroom, 710 Main Street, in Georgetown, Texas to consider the following items:

- 1. Review and approval of minutes.
- 2. Consider noting in minutes any off right-of-way work on any County road done by Road & Bridge Unified System.
- 3. Hear County Auditor concerning invoices, bills, Quick Check Report, and Wire Transfers submitted for payment and take appropriate action including, but not limited to approval for payment provided said items are found by the County Auditor to be legal obligations of the county.
- 4. Citizen comments. Except when public hearings are scheduled for later in the meeting, this will be the only opportunity for citizen input. The Court invites comments on any matter affecting the county, whether on the Agenda or not. Speakers should limit their comments to three minutes. Note that the members of the Court may not comment at the meeting about matters that are not on the agenda.

CONSENT AGENDA

The Consent Agenda includes non-controversial and routine items that the Court may act on with one single vote. The Judge or a Commissioner may pull any item from the consent agenda in order that the court discuss and act upon it individually as part of the Regular Agenda. (Items 5-13)

5. Discuss and consider approving a line item transfer for the Debt Service Fund:

Fiscal Impact

From/To	Acct No.	Description	Amount	Sort Seq
From	0600.0600.006625	'08 Ltd. Tax Notes - Int	\$36,300.00	01
То	0600.0600.003309	Arbitrage Payment	\$11,300.00	02
То	0600.0600.004999	Miscellaneous	\$25,000.00	03

6. Discuss and consider approving a line item transfer for the District Attorney:

Fiscal Impact

From/To	Acct No.	Description	Amount	Sort Seq
From	0100.0440.004623	DA/Equipment Lease	950.00	
То	0100.0440.004621	DA/Copier Rental	950.00	

7. Discuss and consider approving line item transfer for JP 4

Fiscal Impact

From/To	Acct No.	Description	Amount	Sort Seq
From	0100-0454-003006	JP4/Office Equipment	\$48.08	
То	0100-0454-004544	JP4/Repairs to Office Equip	\$48.08	

8. Consider approving a line item transfer for the Elections Department.

Fiscal Impact

From/To	Acct No.	Description	Amount	Sort Seq
From	0100-0492-001107	Temp Labor-Seasonal Help	\$1,500.00	
То	0100-0492-001110	Overtime	\$1,500.00	

- 9. Consider approving the Waiver of Penalty and Interest to customers as requested by the Williamson County Tax Assessor/Collector.
- 10. Consider approving property tax collections for the month of March 2009 for the Williamson County Tax Assessor/Collector.
- Consider and take appropriate action on authorizing the transfer of equipment and a vehicle to auction, donation or destruction, and the transfer of a vehicle between county departments. (Complete list filed with official minutes)
- 12. Discuss and consider final plat approval of Teravista, Section 14B, Pct. 1.
- 13. Discuss and consider revised preliminary plat approval for Saratoga Springs, Section 3, Pct. 2.

REGULAR AGENDA

- 14. Discuss and take appropriate action on resolution proclaiming May 2009 as National Historic Preservation Month in Williamson County.
- 15. Hear presentation on use of propane for energy efficiency and Clean Air and take appropriate action if desired for application for Energy Efficiency and Conservation Block Grant Program (EECBG) and other related energy grants.
- 16. Discuss and take appropriate action on road bond program.
- 17. Discuss and take appropriate action on TxDOT revised Advanced Funding Agreement for Williamson County 0914-05-141 for the construction of a bridge replacement on CR 104 at Mankins Branch.
- 18. Discuss and take appropriate action on Resolution for TxDOT Advanced Funding Agreement Williamson County 0914-05-141 for construction of a bridge replacement on CR 104 at Mankins Branch.
- 19. Discuss and consider approving Civil Engineering Consultants Professional Service Agreement (PSA) for the County Road 258, Phase Two project.
- 20. Consider and take appropriate action on Participation Agreements for the Williamson County Road Bond Program for mitigation for the following projects: IH 35 northbound access, O'Connor extension and SH 45 access, and CR 175 improvements.
- 21. Discuss and take appropriate action regarding Agreement between Bartlett Volunteer Fire Department and Williamson County.
- 22. Discuss and take appropriate action regarding Agreement between Emergency Service District #6, Weir and Williamson County.
- 23. Authorize the County Judge to execute an Interlocal Cooperation Agreement with the Williamson County conservation Foundation, Inc.
- 24. Discuss and take appropriate action on Amendment No. 1 to the TechShare Resource Sharing Addendum for the Common Integrated Justice System (CIJS) Court Administration System.

- 25. Discuss and take appropriate action on a proposed lease agreement with Electronic Corporate Pages, Inc. to install and operate radio communication equipment and building on private property in Florence, Texas.
- 26. Discuss and take appropriate action on the proposed Community Development Block Grant program priorities for FY2009-2013.
- 27. Discuss and take appropriate action on renewal of agreement with the Texas Health Institute to participate in the Texas Mental Health Transformation Initiative grant program with the Texas Department of State Health Services.
- 28. Discuss and take action regarding the Jester Williamson County Annex in Round Rock
- 29. Discuss and consider approving payment for a tire collection event.
- 30. Consider awarding bids received to purchase a quantity of 37 Paperless Ticket-Writer Systems for Williamson County Sheriff's Office to the lowest and best bid meeting specifications- Brazos Technology Corp.
- 31. Consider awarding bids received for Asphalt Mixes, Asphalt Cement & Cut Back Asphalt and Asphalt Emulsions to the lowest bid meeting specifications complete list attached
- 32. Consider approving extending contract between Williamson County Jail and Aramark Correctional Food Services on a month to month basis to allow for proposed price increase to be reviewed for annual renewal.
- 33. Discuss and consider approval of an order declaring an emergency and a grave necessity due to unforeseeable circumstances and approve a budget amendment for Victim's Assistance Garage Sale Donations:

Fiscal Impact

From/To	Acct No.	Description	Amount	Sort Seq
	0100.0560.003671	V. A. Donations	\$1,441.00	01

34. Discuss and consider approval of an order declaring an emergency and a grave necessity due to unforeseeable circumstances and approve a budget amendment for Victim's Assistance Garage Sale Donations:

Fiscal Impact

From/To	Acct No.	Description	Amount	Sort Seq
	0100.0000.367400	Donations	\$1,441.00	01

35. Discuss and take appropriate action regarding current pending legislation.

EXECUTIVE SESSION

- 36. Discuss real estate (EXECUTIVE SESSION as per VTCA Govt. Code sec. 551.0721 Deliberation Regarding Real Property.)
- 37. Discuss pending or contemplated litigation (EXECUTIVE SESSION as per VTCA Govt. Code sec. 551.071 consultation with attorney.)
- 38. Deliberation regarding Economic Development Negotiations (EXECUTIVE SESSION as per VTCA Govt. Code sec. 551.087 Deliberation regarding Economic Development Negotiations.)
- 39. Discuss and take appropriate action on real estate.
- 40. Discuss and take appropriate action on pending or contemplated litigation.
- 41. Discuss and take appropriate action concerning deliberation regarding Economic Development Negotiations.
- 42. Comments from Commissioners.

Dan /	A G	attis	County	Judge

This notice of meeting was posted in the locked box located on the south side of the Williamson County Courthouse, a place readily accessible to the general public at all times, on the _____ day of _____, 2009 at _____ and remained posted for at least 72 continuous hours preceding the scheduled time of said meeting.

TIF and Arbitrage for Debt Service, LIT, 4/28/09 Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Lisa Moore, County Auditor

By:

Submitted Melanie Denny

For:

Department: County Auditor

Agenda Consent

Category:

0011001

Information

Agenda Item

Discuss and consider approving a line item transfer for the Debt Service Fund:

Background

Did not include budget dollars for the Leander TIF and arbitrage. TIF amount was not known during the budget process. Oversight in budget for arbitrage expenditures. Did not include arbitrage calculation services.

Fiscal Impact

From/To	Acct No.	Description	Amount	Sort Seq
From	0600.0600.006625	'08 Ltd. Tax Notes - Int	\$36,300.00	01
То	0600.0600.003309	Arbitrage Payment	\$11,300.00	02
То	0600.0600.004999	Miscellaneous	\$25,000.00	03

Attachments

No file(s) attached.

Form Routing/Status

Form Started By: Lisa Started On: 04/20/2009 08:11

Moore AM Final Approval Date: 04/20/2009

District Attorney Line Item Transfer

Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Sandi Andrews, District Attorney

By:

For:

Submitted

Sandi Andrews

Department: District Attorney

Agenda Category:

Consent

Information

Agenda Item

Discuss and consider approving a line item transfer for the District Attorney:

Background

Fiscal Impact

From/To	Acct No.	Description	Amount	Sort Seq
From	0100.0440.004623	DA/Equipment Lease	950.00	
То	0100.0440.004621	DA/Copier Rental	950.00	

Attachments

No file(s) attached.

Form Routing/Status

Route Seq Inbox Approved By Date Status
1 County Judge Exec Asst. Wendy Coco 04/23/2009 08:27 AM APRV
4 Budget Ashlie Koenig 04/23/2009 11:39 AM APRV

Form Started By: Sandi Andrews Started On: 04/21/2009 03:57

PM

Line Item Transfer

Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Jessica Schmidt, J.P. Pct. #4

By:

For:

Submitted

Jessica Schmidt

Department: J.P. Pct. #4

Agenda Category:

Consent

Information

Agenda Item

Discuss and consider approving line item transfer for JP 4

Background

Please transfer \$48.08 from line item 0100-0454-003006 Office Equipment to line item 0100-0454-004544 Repairs to Office Equipment. We have \$250.00 budgeted for Office Equipment and need \$298.08 to pay for labor to Metroplex Control Systems, Inc. for unanticipated repairs to security equipment.

Fiscal Impact

From/To	Acct No.	Description	Amount Sort Seq
From	0100-0454-003006	JP4/Office Equipment	\$48.08
То	0100-0454-004544	JP4/Repairs to Office Equip	\$48.08

Attachments

No file(s) attached.

Form Routing/Status

Rοι	ute
-----	-----

Seq	Inbox	Approved By	Date	Status
1	County Judge Exec Asst.	Wendy Coco	04/23/2009 08:27 AM	APRV
4	Budget	Ashlie Koenig	04/23/2009 08:44 AM	APRV
5	Jessica Schmidt (Originator)	Jessica Schmidt	04/23/2009 09:04 AM	APRV
8	Budget	Ashlie Koenig	04/23/2009 11:39 AM	APRV
			Started On: 04/22/2000	00.46

Form Started By: Jessica Schmidt Started On: 04/22/2009 09:46

AM

Line Item Transfer

Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Kay Eastes, Elections

By:

For:

Submitted D

Rick Barron

Department: Elections

Agenda Category:

Consent

Information

Agenda Item

Consider approving a line item transfer for the Elections Department.

Background

Fiscal Impact

From/To	Acct No.	Description	Amount	Sort Seq
From	0100-0492-001107	Temp Labor-Seasonal Help	\$1,500.00	
То	0100-0492-001110	Overtime	\$1,500.00	

Attachments

No file(s) attached.

Form Routing/Status

Route Seq Inbox Approved By Date Status

1 County Judge Exec Asst. Wendy Coco 04/23/2009 08:27 AM APRV

4 Budget Ashlie Koenig 04/23/2009 11:46 AM APRV

Form Started By: Kay Eastes Started On: 04/22/2009 09:55

AM

Consider approval of Waiver of Penalty and Interest to customers Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Kathryn Morehouse, County Tax Assessor Collector

By:

Submitted

Deborah Hunt

For:

Department: County Tax Assessor Collector

Agenda Category:

Consent

Information

Agenda Item

Consider approving the Waiver of Penalty and Interest to customers as requested by the Williamson County Tax Assessor/Collector.

Background

In accordance with Section 33.011 of the Texas Property Tax Code. "The Governing body of a taxing unit shall waive penalties and may provide for the waiver of interest if interest on a delinquent tax is an act or omission of any officer, employee, or agent of the taxing unit of the appraisal district in which the taxing unit participates caused or resulted in the taxpayer's failure to pay the tax before the delinquency and if the tax is paid within 21 days after the taxpayer knows or should know of the delinquency."

Fiscal Impact

From/To Acct No. Description Amount Sort Seq

Attachments

Link: Waiver of P&I

Link: Waiving of P&I Mar 31 09

Form Routing/Status

Started On: 04/20/2009 09:49 Form Started By: Kathryn Morehouse AM

Williamson County Tax Assessor/Collector Deborah M. Hunt, CTA

April 24, 2009 Date:

To: Members of the Commissioners Court

Deborah M. Hunt, CTA From:

Subject: Waiver of Penalty & Interest

In accordance with Section 33.011 of the Texas Property Tax Code, "The Governing Body of a taxing unit shall waive penalties and may provide for the waiver of interest if interest on a delinquent tax is an act or omission of an officer, employee, or agent of the taxing unit or the appraisal district in which the taxing unit participates caused or resulted in the taxpayer's failure to pay the tax before delinquency and if the tax is paid within 21 days after the taxpayer knows or should know of the delinquency."

412 Vance St., Ste. #1 Taylor, Texas 76574 Phone: (512) 352-4140 Fax: (512) 352-4143

Account #	NAME	P&I	Description
			Waive P & I due to admin./software
			error. Supplemental Bill was not sent
R042394	Delcon Homes LLC	\$185.77	to new owners in early January 2009.
			Waive P & I due to admin./software
			error. Supplemental Bill was not sent
R374290	Luna, Roel	\$62.81	to new owners in early January 2009.
			Waive P & I due to admin./software
		.	error. Supplemental Bill was not sent
R490517	Salazar, Crisanne	\$44.27	to new owners in early January 2009.
	Pelzel, Beulah Schultz (Le)		
R061326	& Terrence	\$52.88	Waive P & I due to USPS error.
	Stewart, Timothy M &		
R333918	Cynthia Y	\$777.95	Waive P & I due to delivery error.
			Waive P & I due to admin./software
			error. Supplemental Bill was not sent
R075155	Darling, Bill	\$110.76	to new owners in early January 2009.
11070100	Danning, Din	V.1017 0	to new entries in early earliarly 2000.
			Maire D. R. I. dire to MCAD arror
	Brown, James M & Edith J &		Waive P & I due to WCAD error.
R043001	Ralph H & Diane L Tapper	\$96.04	Ownership not changed in a timely manner.
11043001	Kaipii ii & Diane L Tappei	ψ90.04	manner.
R416322	Klimas, Walter & Judy E	\$284.35	Waive P & I due to USPS error.
K410322	Millias, Waiter & Judy E	Φ 204.33	Walve F & Fude to OSFS ellor.
Doggoo	Cobring Louris lay	\$200.40	Waive D. 9 Liduo to LICDO array
R033300	Gehring, Laurie Joy	\$299.40	Waive P & I due to USPS error.
			Waive P & I due to WCAD error.
	Denton Melrose Properties	.	Ownership not changed in a timely
R325463	LP	\$19.25	manner.
			Waive P & I due to WCAD error.
	Wilson Family Communities		Ownership not changed in a timely
R418218	Inc.	\$396.96	manner.

Property Tax Collections - March 2009 Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Cathy Atkinson, County Tax Assessor Collector

By:

Submitted

Deborah Hunt

For:

Department: County Tax Assessor Collector

Agenda Category:

Consent

Information

Agenda Item

Consider approving property tax collections for the month of March 2009 for the Williamson County Tax Assessor/Collector.

Background

Fiscal Impact

From/To Acct No. Description Amount Sort Seq

Attachments

Link: 030109-033109 GWI-RFM

Form Routing/Status

Form Started By: Cathy Atkinson Started On: 04/21/2009 10:38

 AM

YEAR TO DATE - COLLECTION REPORT Williamson County - GWI/RFM Property Taxes March 1-31, 2009

The same of the sa	Total All	Rollbacks	2007 & Prior	2008	Description
HAMMAN MARKET LEASTER MARKET M	Total All \$157,402,572.56	1,035,051.77	r 2,198,266.31	\$154,169,254.48	ı Tax Roll
	(\$277,036.80)	26,810.92	(58,004.83)	(\$245,842.89)	Adjustments
T TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	(\$277,036.80) \$157,125,535.76	\$1,061,862.69	\$2,140,261.48	\$153,923,411.59	Adjusted Tax Roll
- 1	\$1,167,921.88	25,273.16	54,302.43	\$1,088,346.29	Adjustments Adjusted Tax Roll Tax Collected P & I Collected
	\$119,190,43	1,876.01	17,530.15	\$99,784.27	P & I Collected
TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	\$26,073.10	0.00	25,990.45	\$82,65	Variance
The state of the s	\$7,289,762.78	213,208.99	1,375,478.54	\$5,701,075.25	Uncollected Balance
	\$26,073.10 \$7,289,762.78 \$149,835,772.98 95.36%	848,653.70	764,782.94	\$148,222,336.34	YTD Collected
	95.36%	79.92%	35.73%	96.30%	Percent Percent Collected Collected w/P & I
	95.44%	80.10%	36.55%	96.36%	Percent Percent Collected Collected w/P & I
***************************************				97.42%	Percent Collected w/P & I & Prior Years

2008 MONTHLY BREAKDOWN

\$149,835,772.98	\$7,289,762.78	\$26,073.10	\$119,190.43	\$1,167,921.88	\$157,125,535.76	(\$474,682.83)	\$157,600,218,59	Mar-09
\$148,641,778,00	\$8,958,440.59	\$9,009.50	\$168,705.55	\$3,277,986.65	\$157,600,218.59	_	\$157,814,617.97	Feb-09
\$145,354,781.85	\$12,459,836.12	\$0.00	\$0.00	\$352.33	\$157,814,617.97	\$0.00	\$157,814,617.97	Jan-09 Adj
\$145,354,429.52	\$12,460,188.45	\$150.29	\$29,213.77	\$57,894,115.69	\$157,814,617.97	(\$12,303.14)	\$157,826,921.11	Jan-09
\$87,460,163.54	\$70,366,757.57	\$576.63	\$31,775.03	\$80,904,301.24	\$157,826,921.11		\$157,573,252.91	Dec-08
\$6,555,285.67	\$151,017,967.24	\$129.17	\$23,852.16	\$6,137,650.01	\$157,573,252.91	-	\$157,533,840.59	Nov-08
\$417,506,49	\$157,116,334.10	\$1,071.72	\$ 65,150.92	\$416,434.77	\$157,533,840.59	\$131,268.03	\$157,402,572.56	Oct-08

Consent Agenda

Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Ursula Stone, Purchasing

By:

Department: Purchasing

Agenda Category:

Consent

Information

Agenda Item

Consider and take appropriate action on authorizing the transfer of equipment and a vehicle to auction, donation or destruction, and the transfer of a vehicle between county departments.

(Complete list filed with official minutes)

Background

Fiscal Impact

From/To Acct No. Description Amount Sort Seq

Attachments

Link: Asset Transfers

Form Routing/Status

Route Seq Inbox Approved By Date Status
1 Purchasing Jonathan Harris 04/23/2009 08:39 AM APRV
2 County Judge Exec Asst. Wendy Coco 04/23/2009 11:01 AM APRV

Form Started By: Ursula Stone Started On: 04/23/2009 08:27

AM

Williamson County

1. 1. 2. 2. 1. 1. 1. 1.	- 10 MA - 1 - 1 - 1 - 1 - 1
Print	-orm

☐ TRAN	ISFER bet ween county departments	C^{T}	RADE-IN for new assets for the coun	ity	
· ·	at the earliest auction	(C) D	ONATION to a non-county entity		
Asset L	ist:				
Quantity	Description (year, make, model, etc.)		Manufacturer ID# (serial, service tag, or VIN)	County Tag#	Condition of Asset: (Working, Non- Working, Unknown
7	Admin short sleeve shirts (worn,stained,torn,faded)	bi an	#	no tag #	Non-Working
20	pair BDU pants navy (worn,faded,torn)	no id	11 12	no tag #	Non-Working
1	Class A long sleeve shirls (stained,lorn,used)	no id	#	no tag #	Non-Working
8	Taclical shirts s/s (worn,torn,stained,faded)	na id	#	no tag #	Non-Working
					Non-Working
					Non-Working
					Non-Werking
	all insignias has been removed-unsuitable for reissue				Non-Working
	involved:				
	ransferor Department): 570 - Correction Invento	огу			
	or - Elected Official/Department Head/ ed Staff:		Cantact Davison		
			Contact Person:		
L.C. Marsh Print Nan	· · · · · · · · · · · · · · · · · · ·		Maria Barraza Print Name	······································	
ســــــــــــــــــــــــــــــــــــ	Meshell				
Signature	3	,	+1 (512) 943-1324 Phone Number		
Date An	ril 15, 2009		, , , , , , , , , , , , , , , , , , , ,		
		1241			
Transfere Authoriz	feree Department/Auction/Trade-in/Donee): ee - Elected Official/Department Head/ ed Staff OR Donee - Representative: (If being for Sale or Trade-in, no signature is necessary.)	9	Contact Person:	.,,	
Print Nan	ne ne	70	Print Name		
Signature	1		Phone Number		
Date					
	s donated to a non-county entity: e accepts the above assets and has determine	ed the F	air Market Value of assets to be \$		TAMOR IS TRANSMITTE
	Forward to Co	unt	ty Auditor's Offic	ce	
Thic Chan-					
		in Comi	missioners Court on	 	
	ge Status was approved as agenda item #	in Com	missioner's Court on		

Williamson CountyAsset Status Change Form

1	1.1.15	344	ARREST CONTRACTOR AND A
		1111	nt Form
ě		1,11	11 1 01 111

The follo	owing asset(s) is(are) considered for: (select o	ine)	 ,			
	SFER bet ween county departments	TRADE-IN for new assets for the cour	itv			
	at the earliest auction	DONATION to a non-county entity				
Asset L	ist:					
Quantity	Description (year, make, model, etc.)	Manufacturer ID# (serial, service tag, or VIN)	County Tag#	Condition of Assets (Working, Non- Working, Unknown		
26	pair Class A pants navy (worn,torn,stained)	no ld#	no lag #	Non-Working		
1	pair 511 black pants (worn,faded,stained)	no id #	no tag #	Non-Working		
3	Polo shirts (worn,torn,faded,stained)	ло id #	no tag #	Non-Working		
8	Class B short sleeve shirts (stained,tom,used)	no id #	no tag #	Non-Working		
1	Class A long sleeve shirts (stained,torn,used)	no id #	no tag #	Non-Working		
				Nan-Working		
				Non-Working		
	all insignias have been removed-not suitable for reissue			Non-Working		
Parties i	nvolved:					
	ransferor Department): 560 Law Enforcement Inver	ntory				
	or - Elected Official/Department Head/					
Autnoriz	ed Staff:	Contact Person:				
L.C. Marsh		Patricia Amlson				
Print Nan سدی	and the second s	Print Name				
	market (+1 (512) 943-1349				
Signatur	2	Phone Number				
Date <u>Ap</u>	ril 15,2009					
TO (Trans	feree Department/Auction/Trade-in/Donee):					
Authoriz	ee - Elected Official/Department Head/ ed Staff OR Donee - Representative: (If being for Sale or Trade-in, no signature is necessary.)	Contact Person:				
Print Nan	ne	Print Name	,,,,,			
Signature	2	Phone Number				
Date						
	s donated to a non-county entity: e accepts the above assets and has determined	the Fair Market Value of assets to be \$	<u> </u>			
	Forward to Cou	ınty Auditor's Offi	ce			
This Chang	ge Status was approved as agenda Item # in	•				
	the accet(c) was(were) delivered to warehouse on					

Williamson County

Print Form

C TRAN	SFER bet ween county departments	C TRADE-IN for new assets for the coun	ity	
SALE a	t the earliest auction	C DONATION to a non-county entity		
Asset Li	st:			
Quantity	Description (year, make, model, etc.)	Manufacturer ID# (serial, service tag, or VIN)	County Tag#	Condition of Assets (Working, Non- Working, Unknown
1	2004 Durabrand Television Model #DU1301	#KD, S.N.053140411674	no tag #	Non-Warking
1	2007 Durabrand Television Model #DTV1307	#KD, S.N.057170205236	no tag #	Non-Working
1	2006 Durabrand Television Model #BH1304D	S.N. UNREADABLE	no tag #	Nan-Working
				Non-Working
	1			Non-Working
	X Sale proce	ed 5		Non-Werking
	X Sale processhould be a Commission	leposted to		Non-Working
	Commis	SARV X		Non-Warking
Parties i	nvolved:			
	ransferor Department): 570 Corrections			
Transfer Authoriz	or - Elected Official/Department Head/	Carlo d Barrer		
		Contact Person:		
L.C. Marsh		Patricia Amison		
Print Nan	ne	Print Name		
	11/p-fall	+1 (512) 943-1349		
Signature		Phone Number		777
Date Ap	ril 14,2009		1.1.	
	feree Department/Auction/Trade-in/Donee):	MINISTER CONTRACTOR OF THE PROPERTY OF THE PRO		
	ee - Elected Official/Department Head/			
	ed Staff OR Donee - Representative: (If being for Sale or Trade-іл, по signature is necessary.)	Contact Dovern		
пррточеа	or sale of trade in, no signature is necessary.)	Contact Person:		
Print Nan	ne	Print Name		
Signature		Phone Number		THE CONTRACT OF THE PERSON OF
Date				
	s donated to a non-county entity: e accepts the above assets and has determined	the Fair Market Value of assets to be \$		
		ınty Auditor's Offi	ce	
This Chanc	ge Status was approved as agenda item # in	•		
	the asset(s) was(were) delivered to warehouse on	by		

Williamson County Asset Status Change Form

Print Form

The following asset(s) is(are) considered for: (select one) (**TRANSFER bet ween county departments** (**SALE at the earliest auction** (**DONATION to a non-county entity* Asset List:	ty	
© SALE at the earliest auction	ty	
• •		
Asset List:	In 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
		Candising #5 A
Quantity Description Manufacturer ID# (year, make, model, etc.) (serial, service tag, or VIN)	County Tag#	Condition of Assets (Working, Non- Working, Unknown)
1 HP PRINTER 4050N	100035	Working
1 HP PRINTER 4050N	100019	Working
1 DELL CRT 17" MONITOR 84779-A1A003	NONE	Working
1 DELL CRT 17" MONITOR NONE	NONE	Working
1 HP PRINTER 4050N	100326	Working
2 DELL CRT 17" MONITORS 781S	NONE	Working
1 DELL MINI PC SX260	C00245	Working
	C00241	Working
Parties involved:		
FROM (Transferor Department): TAX ASSESSOR/COLLECTOR		
Transferor - Elected Official/Department Head/		
Authorized Staff: Contact Person:		
JEFF THIEL JEFF THIEL		
Print Name 943-3528		
Signature () Phone Number		
Date April 17, 2009		
TO (Transferee Department/Auction/Trade-in/Donee):		
Transferee - Elected Official/Department Head/		
Authorized Staff OR Donee - Representative: (If being approved for Sale or Trade-in, no signature is necessary.) Contact Person:		
Contact Person.		
Print Name Print Name		
Signature Phone Number		
Date		
For assets donated to a non-county entity: The Donee accepts the above assets and has determined the Fair Market Value of assets to be \$		
Forward to County Auditor's Offi	ce	
This Change Status was approved as agenda item # in Commissioner's Court on		

This Change Status was approved as agenda item #	in Commissioner's Court on	
If for Sale, the asset(s) was(were) delivered to warehouse on	by	

Williamson County

Print Form

The foll	owing asset(s) is(are) considered for: (select o	one)	·		
C TRAN	SFER bet ween county departments	C TRADE-IN for new assets for the cour	nty		
f '	at the earliest auction	C DONATION to a non-county entity			
Asset L Quantity	Description (year, make, model, etc.)	Manufacturer ID# (serial, service tag, or VIN)	County Tag#	Condition of Assets (Working, Non- Working, Unknown	
8	WIRED KEYBOARDS	NONE	NONE	Working	
3	WIRELESS KEYBOARDS	NONE	NONE	Warking	
8	CORDED MOUSE	NONE	NONE	Working	
3	WIRELESS MOUSE	NONE	NONE	Warking	
1	WIRELESS KEYBOARD CONTROLLER	NONE	NONE	Working	
3	HANDHELD SCANNERS	NONE	NONE	Working	
9	KEYBOARD PIECES FOR EXTENSION	NONE	NONE	Working	
	POWER CORDS FOR MINI PCS	NONE	NONE	Working	
TO (Trans	ril 17, 2009 feree Department/Auction/Trade-In/Donee): ee - Elected Official/Department Head/	943-3528 Phone Number			
	ed Staff OR Donee - Representative: (If being for Sale or Trade-in, no signature is necessary.)	Contact Person:			
Print Nan	ne	Print Name	<u>, </u>		
Signature Date	•	Phone Number			
	s donated to a non-county entity: e accepts the above assets and has determined	 			
This Chan	FORWARD COL ge Status was approved as agenda item # In	unty Auditor's Offi	ce		
	the asset(s) was(were) delivered to warehouse on	by			

Williamson County

Print Form

The foll	owing asset(s) is(are) considered for: (sele		Changeronn					
SALE at the earliest auction		CI	C TRADE-IN for new assets for the county					
		(E	ONATION to a non-county entity					
Asset L	ist;			The transfer of the transfer o				
Quantity	Description (year, make, model, etc.)		Manufacturer ID# (serial, service tag, or VIN)	County Tag#	Condition of Assets (Working, Non- Working, Unknown)			
6	KVM SWITCHES	NON	JE	NONE	Working			
5	KVM CABLES	иои	E	NONE	Working			
7	SPEAKER SETS WITH CORDS	NON	E	NONE	Working			
9	POWER CORDS	NON	E	NONE	Working			
9	MEMORY DIMMS 128MB TO 256MB	NON	E	NONE	Working			
1	BOX MISC COMPUTER CORDS	NON	E	NONE	Working			
1	BOX MISC PHONE EQUIPMENT/ACCESSORIES	NON	E	NONE	Working			
1	DELL PC	4100		C00305	Working			
JEFF THIE Print Nar Signatur Date A <u>F</u>	ne A		Contact Person: JEFF THIEL Print Name 943-3528 Phone Number					
Transfer Authoriz	ee - Elected Official/Department Head/ sed Staff OR Donee - Representative: (If bei for Sale or Trade-in, no signature is necessary.)	ng	Contact Person:					
Print Nan	ne		Print Name					
Signatur	9	***************************************	Phone Number					
Date								
F or asset The Done	es donated to a non-county entity: ee accepts the above assets and has determi	ned the	Fair Market Value of assets to be \$					
This Chan	Forward to C		ty Auditor's Offi	ce				

This Change Status was approved as agenda item #	In Commissioner's Court on	
If for Sale, the asset(s) was(were) delivered to warehouse on	by _	

Williamson CountyAsset Status Change Form

Print Form ;

The follo	owing asset(s) is(are) considered for: (select o	one)						
C TRAN	SFER bet ween county departments	C TRADE-IN for new assets for the cour	nty					
© SALE	at the earliest auction	DONATION to a non-county entity						
Asset L	ist:							
Quantity	Description (year, make, model, etc.)	Manufacturer ID# (serial, service tag, or VIN)	County Tag#	Condition of Assets (Working, Non- Working, Unknown				
1	DELL MINI PC	SX260	C00073	Working				
1	DELL MINI PC	SX260	C00248	Working				
1	DELL MINI PC	SX260	C00247	Working				
1	DELL MINI PC	SX260	C00071	Working				
1	DELL MINI PC	SX270	C00070	Warking				
1	DELL COMPUTER TOWER	4100	C00246	Working				
1	DELL COMPUTER TOWER	4100	C00284	Working				
	HP PRINTER nvolved:	4050N	100074	Working				
	ne A	JEFF THIEL Print Name 943-3528 Phone Number						
Authoriz	ee - Elected Official/Department Head/ ed Staff OR Donee - Representative: (If being for Sale or Trade-in, no signature is necessary.)	Contact Person:						
Print Nam	ne	Print Name		Sand Harveston Reference				
Signature Date		Phone Number						
For asset. The Done	s donated to a non-county entity: e accepts the above assets and has determined	the Fair Market Value of assets to be \$						
		unty Auditor's Offi	ce	70				
This Chang	ge Status was approved as agenda item # ir	•						
	the asset(s) was(were) delivered to warehouse on	by						

Williamson County

Print Form

The follo	owing asset(s) is(are) considered for: (select o	ne)					
← TRANSFER bet ween county departments		C TRADE-IN for new assets for the county					
=	at the earliest auction	C DONATION to a non-county entity					
Asset L Quantity	Description	Manufacturer ID# (serial, service tag, or VIN)	County Tag#	Condition of Assets (Working, Non- Working, Unknown)			
1	UPS POWER SUPPLY	A0067356	NONE	Non-Working			
1	DELL MINI PC	SX270	C00280	Non-Working			
1	DELL 17" LCD MONITOR	1705FPS	NONE	Non-Working			
1	DELL 17" LCD MONITOR	E17FP	NONE	Non-Working			
1	DELL COMPUTER TOWER	4300	NONE	Non-Working			
1	HP PRINTER	895CXI	NONE	Non-Working			
1	VCR	23GD0154	NONE	Non-Working			
	DELL 17" LCD MONITOR	MX07R47748233J01T	NONE	Non-Working			
	me A	JEFF THIEL Print Name 943-3528 Phone Number					
Transfer Authoriz	ee - Elected Official/Department Head/ ed Staff OR Donee - Representative: (If being for Sale or Trade-In, no signature is necessary.)	Contact Person:					
Print Nar	ne	Print Name					
Signatur	2	Phone Number					
Date							
	ts donated to a non-county entity: se accepts the above assets and has determined	the Fair Market Value of assets to be \$	half-run.				
•	Forward to Co	unty Auditor's Offi	ce				
This Chan	ge Status was approved as agenda Item # ir	Commissioner's Court on					

This Change Status was approved as agenda Item #	In Commissioner's Court on	
If for Sale, the asset(s) was(were) delivered to warehouse on	by	

Williamson County

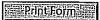
					**		٠			
		Ρ								

The follo	owing asset(s) is(are) considered for: (select o	ne)					
C TRAN	SFER bet ween county departments	C TRADE-IN for new assets for the coun	ty				
	at the earliest auction	C DONATION to a non-county entity	DONATION to a non-county entity				
Asset L Quantity	Description (year, make, model, etc.)	Manufacturer ID# (serial, service tag, or VIN)	County Tag#	Condition of Assets (Working, Non- Working, Unknown)			
1	DELL 17" LCD MONITOR	NONE	NONE	Non-Warking			
1	DELL 4100	NONE	C01604	Non-Working			
1	DELL XPST550	NONE	C000073	Non-Working			
1	DELL 4100	NONE	C00285	Non-Working			
1	CRT SECURITY MONITOR	40CM1201BWBA	NONE	Non-Working Non-Working			
				Non-Working			
Parties i	nvolved:			Non-Working			
FROM (Transferor Department): WILLIAMSON COUNTY TAX AS Transferor - Elected Official/Department Head/ Authorized Staff: JEFF THIEL Print Name Signature Date APRIL 17, 2009		Contact Person: JEFF THIEL Print Name 943-3528 Phone Number					
Transfere Authoriz approved	feree Department/Auction/Trade-in/Donee): ee - Elected Official/Department Head/ ed Staff OR Donee - Representative: (If being for Sale or Trade-in, no signature is necessary.)	Contact Person:					
Print Nan	ne	Print Name					
Signature		Phone Number					
Date							
	s donated to a non-county entity: e accepts the above assets and has determined	the Fair Market Value of assets to be \$		1			
	Forward to Cou	unty Auditor's Offi	ce				
This Chang	ge Status was approved as agenda item # in	Commissioner's Court on					
	the accet(s) was(worn) delivered to wavehourn on		.				

Williamson County Vehicle Retirement Form

1GCEC19VX3Z282892				#5759
Vehicle Identification I	Number			Door Number
851495	2003	CHEVROLET	1500 XCAB	WHITE
License Plate Number	Year	Make	Model	Color
DENNIS ALLMAN CSR		ISOR		4901
Driver Assigned to Vel	nicle	11.		Department
Reason for Retiremen	nt:	•		
Accident: Attach a Acciden	Damage t Report	e to County Property I	ncident Property Incider	nt Report or the Official
⊠ High Mileage: List a	actual m	ileage 130255		
⊠ Not mechanically s				
Other: Explain				
 SALE at the earliest TRADE-IN for new to a not DONATION to a not SALVAGE for parts 	assets fo n-count	r the county		
○ TRADE-IN for new property of the propert	assets foon-count rtment I	or the county y entity Head/Authorized Sta	ff Signature s Manager - M	L M
○ TRADE-IN for new property of the propert	assets foon-count rtment I	or the county y entity Head/Authorized Sta	s Manager - M	L M
C TRADE-IN for new or DONATION to a no SALVAGE for parts Elected Official/Department JUDGE DAN GA	assets for on-count of the second of the sec	or the county y entity Head/Authorized Sta	s Manager - M	Date OY, 17,
C TRADE-IN for new or DONATION to a no SALVAGE for parts Elected Official/Department Print JUDGE DAN GA Forward Authorized Litigation	assets for on-count of the last on & Insu	r the county y entity Head/Authorized Sta For Fleet Service	s Manager - Mes Use Only	L M
C TRADE-IN for new or DONATION to a no SALVAGE for parts Elected Official/Department Print JUDGE DAN GA Forward Authorized Litigation	assets for on-count or timent in the second	r the county y entity Head/Authorized Star For Fleet Service Irance Release Form of and moved to Auction	Signature S Manager - M S Use Only Stained A Yard	L M
TRADE-IN for new Components SALVAGE for parts Elected Official/Depart Print JUDGE DAN GA Forward Authorized Litigation Vehicle Marked for	assets for on-count or timent in the second	r the county y entity Head/Authorized Star For Fleet Service Irance Release Form of and moved to Auction	Signature S Manager - M S Use Only Stained A Yard	A M

Williamson County



	owing asset(s) is(are) considered for: (sele						
			TRADE-IN for new assets for the county				
i '	at the earliest auction	ODONATION to a non-county entity					
Asset L	IST: 		and in a salar kelebih sanara				
Quantity	Description (year, make, model, etc.)	Manufacturer ID# (serial, service tag, or VIN)	County Tag#	Condition of Assets (Working, Non- Working, Unknown)			
1	2002 Chevrolet 1500 XCAB	1GCEC19V42Z282532		Working			
•							
Parties	involved:	1					
	ransferor Department): FLEET SERVCIES AUCTIO	N VEHICLE					
	or - Elected Official/Department Head/ red Staff:	Contact Person:					
MIKE FOX		7		· · · · · · · · · · · · · · · · · · ·			
Print Nar		Print Name					
Signatur		943-3362 Phone Number		. "			
Date Ap	orll 15, 2009						
TO (Trans	sferee Department/Auction/Trade-in/Donee): CC	DMMUNITY SERVICE RESTITUTION DEPT#4901					
	ee - Elected Official/Department Head/ ed Staff OR Donee - Representative: (If be	t					
	for Sale or Trade-in, no signature is necessary.)	Contact Person:					
JUDGE DA	AN GATTIS						
Print Nar	me	Print Name					
Signature	=	Phone Number					
Date	Apr. 17, 2009 is donated to a non-county entity:						
For asset	s donated to a non-county entity:	to all the Colonia desired to the second second					
The Done	ee accepts the above assets and has determi			·			
	Forward to C	ounty Auditor's Offi	ice				
This Chan	ge Status was approved as agenda item #	in Commissioner's Court on					

This Change Status was approved as agenda item #	in Commissioner's Court on	
If for Sale, the asset(s) was(were) delivered to warehouse on	by	

Final Plat Approval

Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Nickey Lawrence, Unified Road System

By:

For:

Submitted

Joe England

Department: Unified Road System

Agenda Category:

Consent

Information

Agenda Item

Discuss and consider final plat approval of Teravista, Section 14B, Pct. 1.

Background

Fiscal Impact

From/To Acct No. Description Amount Sort Seq

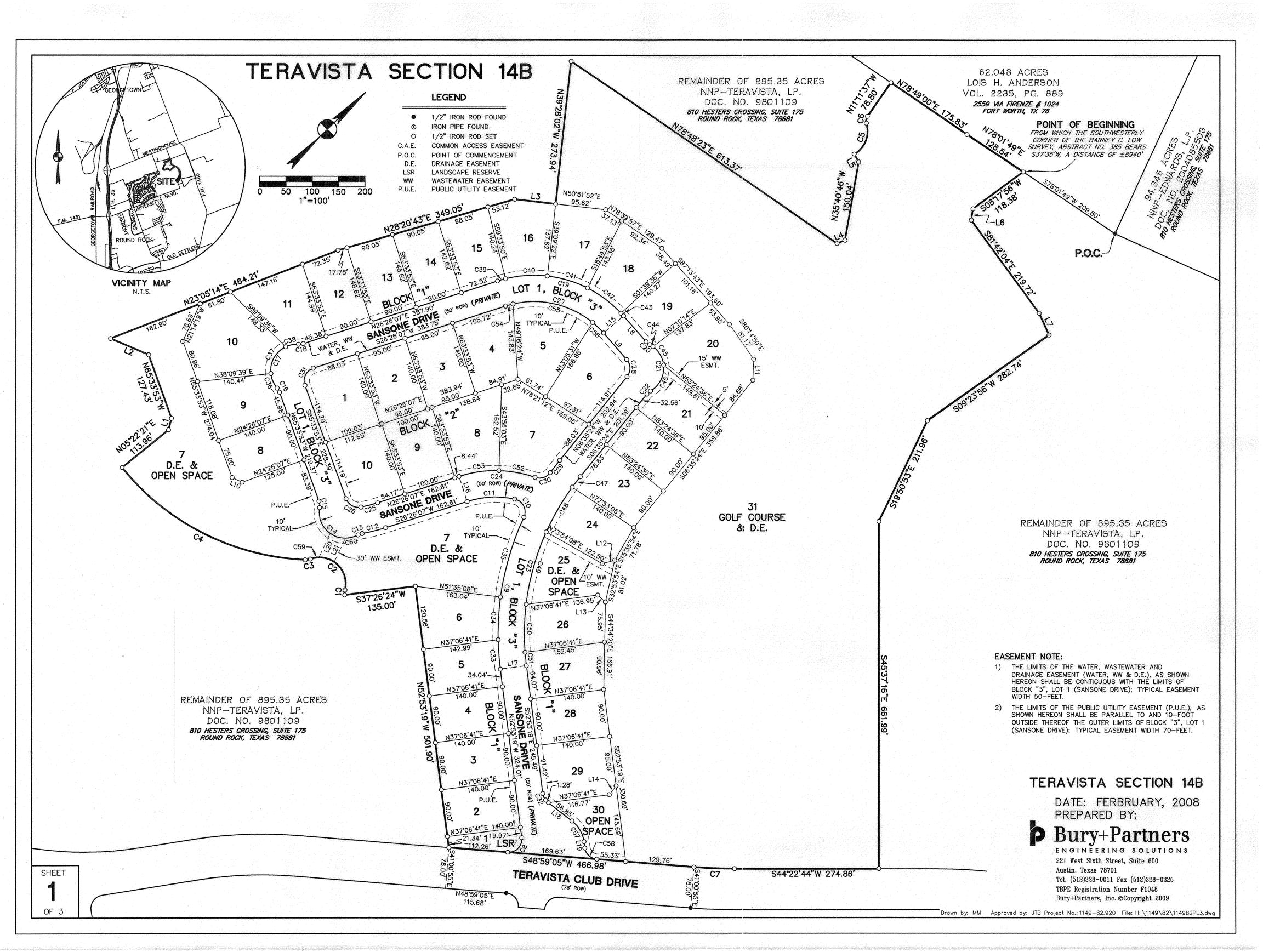
Attachments

Link: Engineers/projects

Form Routing/Status

Form Started By: Nickey Lawrence Started On: 04/22/2009 03:05

PM



FIELDNOTE DESCRIPTION:

OF A 35.724 ACRE TRACT OR PARCEL OF LAND OUT OF THE BARNEY C. LOW SURVEY, ABSTRACT NO. 385, SITUATED IN WILLIAMSON COUNTY, TEXAS, BEING A PART OF THE REMAINING PORTION OF THAT CERTAIN 895.35 ACRE TRACT OF LAND CONVEYED TO NNP-TERAVISTA, LP BY DEED OF RECORD IN DOCUMENT NO. 9801109 OF THE OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS: SAID 35.724 ACRES BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

COMMENCING, AT A 1/2 INCH IRON ROD FOUND AT AN ANGLE POINT IN THE NORTHERLY LINE OF THE REMAINING PORTION OF SAID 895.35 ACRE TRACT, BEING THE SOUTHEASTERLY CORNER OF THAT CERTAIN 62.048 ACRE TRACT OF LAND CONVEYED TO LOIS H. ANDERSON BY DEED OF RECORD IN VOLUME 2235, PAGE 889 OF THE OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS;

THENCE, S78'01'49"W, ALONG A PORTION OF THE NORTHERLY LINE OF THE REMAINING PORTION OF SAID 895.35 ACRE TRACT, BEING A PORTION OF THE SOUTHERLY LINE OF SAID 62,048 ACRE TRACT. A DISTANCE OF 209.80 TO A 1/2 INCH IRON ROD WITH CAP SET FOR THE POINT OF BEGINNING, AND NORTHEASTERLY CORNER HEREOF;

THENCE, LEAVING THE SOUTHERLY LINE OF SAID 62,048 ACRE TRACT, OVER AND ACROSS THE REMAINING PORTION OF SAID 895.35 ACRE TRACT, FOR THE EASTERLY LINE HEREOF, THE FOLLOWING SEVEN (7) COURSES AND DISTANCES:

- 1) S0817'56"W, A DISTANCE OF 118.38 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR AN ANGLE POINT;
- 2) S36'42'04"E, A DISTANCE OF 21.21 FEET TO A 1/2 INCH IRON ROD WITH CAP SET
- 3) S81'42'04"E, A DISTANCE OF 219.72 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR AN ANGLE POINT;
- 4) S69'54'29"E, A DISTANCE OF 45.72 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR AN ANGLE POINT;
- 5) S09'23'56"W, A DISTANCE OF 282.74 FEET TO A 1/2 INCH IRON ROD WITH CAP SET
- 6) S19'50'53"E, A DISTANCE OF 211.96 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR AN ANGLE POINT;
- 7) S45'37'16"E, A DISTANCE OF 661.99 FEET TO A 1/2 INCH IRON ROD WITH CAP SET IN THE NORTHWESTERLY LINE OF TERAVISTA CLUB DRIVE (78' R.O.W.), FOR THE MOST EASTERLY CORNER HEREOF:

THENCE, ALONG THE NORTHWESTERLY LINE OF TERAVISTA CLUB DRIVE, FOR A PORTION OF THE EASTERLY LINE HEREOF, THE FOLLOWING THREE (3) COURSES AND DISTANCES:

- 1) S44°22'44"W, A DISTANCE OF 274.86 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR THE POINT OF CURVATURE OF A CURVE TO THE RIGHT;
- 2) ALONG SAID CURVE TO THE RIGHT HAVING A RADIUS OF 961.00 FEET, A CENTRAL ANGLE OF 04'36'21", AN ARC LENGTH OF 77.25 FEET AND A CHORD WHICH BEARS \$46'40'55"W, A DISTANCE OF 77.23 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR THE POINT OF TANGENCY OF SAID CURVE;
- 3) S48'59'05"W, A DISTANCE OF 466.98 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR THE MOST SOUTHERLY CORNER HEREOF;

THENCE, LEAVING THE NORTHWESTERLY LINE OF TERAVISTA CLUB DRIVE, OVER AND ACROSS THE REMAINING PORTION OF SAID 895.35 ACRE TRACT, FOR THE IRREGULAR WESTERLY LINE HEREOF, THE FOLLOWING TWENTY-ONE (21) COURSES AND DISTANCES;

- 1) N52'53'19"W, A DISTANCE OF 501.90 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR AN ANGLE POINT;
- 2) S37'26'24"W, A DISTANCE OF 135.00 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR THE POINT OF CURVATURE OF A NON-TANGENT CURVE TO THE RIGHT;
- 3) ALONG SAID NON-TANGENT CURVE TO THE RIGHT HAVING A RADIUS OF 25.00 FEET, A CENTRAL ANGLE OF 21'02'22", AN ARC LENGTH OF 9.18 FEET, AND A CHORD WHICH BEARS N42'22'08"W, A DISTANCE OF 9.13 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR THE POINT OF REVERSE CURVATURE OF A CURVE TO THE LEFT;
- 4) ALONG SAID REVERSE CURVE TO THE LEFT HAVING A RADIUS OF 50.00 FEET, A CENTRAL ANGLE OF 123'59'43", AN ARC LENGTH OF 108.21 FEET AND A CHORD WHICH BEARS S86'09'11"W, A DISTANCE OF 88.29 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR THE POINT OF REVERSE CURVATURE OF A CURVE TO THE RIGHT;

TERAVISTA SECTION 14B

- 5) ALONG SAID REVERSE CURVE TO THE RIGHT HAVING A RADIUS OF 25.00 FEET. A CENTRAL ANGLE OF 22'41'31", AN ARC LENGTH OF 9.90 FEET AND A CHORD WHICH BEARS S35'30'05"W. A DISTANCE OF 9.84 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR THE POINT OF COMPOUND CURVATURE OF A CURVE TO THE RIGHT;
- 6) ALONG SAID COMPOUND CURVE TO THE RIGHT HAVING A RADIUS OF 475.00 FEET, A CENTRAL ANGLE OF 48'31'31", AN ARC LENGTH OF 402.29 FEET AND A CHORD WHICH BEARS S71'06'36"W, A DISTANCE OF 390.37 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR THE END OF SAID COMPOUND CURVE;
- 7) NO5'22'21"E, A DISTANCE OF 113.96 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR AN ANGLE POINT;
- 8) N30'57'39"W, A DISTANCE OF 22.32 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR AN ANGLE POINT:
- 9) N65°33'53"W, A DISTANCE OF 127.43 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR AN ANGLE POINT:
- 10) S67"17'33"W, A DISTANCE OF 78.93 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR AN ANGLE POINT;
- 11) N23'05'14"E, A DISTANCE OF 464.21 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR AN ANGLE POINT:
- 12) N28'20'43"E, A DISTANCE OF 349.05 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR AN ANGLE POINT:
- 13) N50'51'52"E, A DISTANCE OF 78.28 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR AN ANGLE POINT;
- 14) N39'28'02"W, A DISTANCE OF 273.94 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR THE MOST WESTERLY CORNER HEREOF;
- 15) N78'48'23"E, A DISTANCE OF 613.37 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR AN ANGLE POINT:
- 16) N21'33'48"E, A DISTANCE OF 16.23 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR AN ANGLE POINT;
- 17) N35'40'46"W, A DISTANCE OF 150:04 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR AN ANGLE POINT:
- 18) N74'51'59"W. A DISTANCE OF 17.20 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR THE POINT OF CURVATURE OF A NON-TANGENT CURVE TO THE LEFT;
- 19) ALONG SAID NON-TANGENT CURVE TO THE LEFT HAVING A RADIUS OF 50.00 FEET, A CENTRAL ANGLE OF 78'20'51", AN ARC LENGTH OF 68.37 FEET, AND A CHORD WHICH BEARS N24'02'24"W. A DISTANCE OF 63.17 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR THE POINT OF CURVATURE OF A REVERSE CURVE TO THE
- 20) ALONG SAID REVERSE CURVE TO THE RIGHT HAVING A RADIUS OF 15.00 FEET, A CENTRAL ANGLE OF 52'01'12", AN ARC LENGTH OF 13.62 FEET AND A CHORD WHICH BEARS N37"12'13"W, A DISTANCE OF 13.16 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR THE END OF SAID REVERSE CURVE;
- 21) N11"1"37"W, A DISTANCE OF 78.80 FEET TO A 1/2 INCH IRON ROD WITH CAP SET IN THE NORTHERLY LINE OF THE REMAINING PORTION OF SAID 895.35 ACRE TRACT, BEING THE SOUTHERLY LINE OF SAID 62.048 ACRE TRACT FOR THE NORTHWESTERLY CORNER HEREOF:

THENCE, ALONG A PORTION OF THE NORTHERLY LINE OF THE REMAINING PORTION OF SAID 895.35 ACRE TRACT, BEING A PORTION OF THE SOUTHERLY LINE OF SAID 62.048 ACRE TRACT, FOR THE NORTHERLY LINE HEREOF, THE FOLLOWING TWO (2) COURSES AND DISTANCES:

- 1) N78'49'00"E, A DISTANCE OF 175.83 FEET TO A 1/2 INCH IRON ROD WITH CAP SET FOR AN ANGLE POINT;
- 2) N78'01'49"E, A DISTANCE OF 128.54 FEET TO THE POINT OF BEGINNING. CONTAINING AN AREA OF 35.724 ACRES (1,556,144 SQ. FT.) OF LAND, MORE OR LESS, WITHIN THESE METES AND BOUNDS.

LINE TABLE

BEARING	DISTANCE
N30*57'39"W	22.32'
S67'17'33"W	78.93'
N50*51'52"E	78.28'
N21*33'48"E	16.23'
N74*51'59"W	17.20'
S36'42'04"E	21.21
S69*54'29"E	45.72'
S86*35'24"E	65.37
N86*35'24"W	67.12'
S69°26'07"W	21.21'
S43'23'54"E	39.72'
S29'23'42"W	21.25
N861610"E	19.62'
N07*53'19"W	21.21'
N03*24'34"E	50.00'
S63*33'54"E	50.00'
S37'06'34"W	50.00'
N82*06'41"E	58.13'
N52*53'19"W	12.22'
	50.70'
S2016'30"E	50.24'
	N30*57'39"W S67*17'33"W N50*51'52"E N21*33'48"E N74*51'59"W S36*42'04"E S69*54'29"E S86*35'24"E N86*35'24"W S69*26'07"W S43*23'54"E S29*23'42"W N86*16'10"E N07*53'19"W N03*24'34"E S63*33'54"E S37*06'34"W N82*06'41"E N52*53'19"W N20*16'30"W

AREA SUMMARY

RESIDENTIAL	_ LOTS	
LOT #	AREA SF	
2	12,650	1
3	12,600	
4	12,600	
5	12,656	
6	15,137	
8	12,488	
9	14,012	
10	21,599	
11	15,772	
12	13,272	
13	13,241	
14	12,971	
15	13,140	Г
16	14,872	
17	15,102	
18	14,878	
19	13,251	L
20	22,311	
21	13,211	L
22	12,600	L
23	12,823	L
24	13,520	T
26	13,719	
27	13,186	
28	12 600	

15,240

369,401

LOT #	AREA SF
LOT 1, BLK 2	15,460
2.	13,300
3	13,300
4	14,380
5	17,749
6	15,991
7	20,689
8	16,270
9	14,000
10	15,247
TOTAL BLK 2	156,386

OPEN A	REAS
LOT #	AREA SF
LOT 1, BLK 1	4,834
LOT 7, BLK 1	122,496
LOT 25, BLK 1	14,657
LOT 30, BLK 1	10,873
LOT 31, BLK 1	745,731
TOTAL	898,591

TOTAL AREAS		
TOTAL BLK 1	1,267,992	
TOTAL BLK 2	156,386	
SANSONE DRIVE	131,766	
SUBDIVISION TOTAL	1,556,144	

CURVE TABLE

RADIUS ARC LENGTH CHORD LENGTH CHORD BEARING

110.	DEL 17	TIVABIOS	AIXO ELINOTIT	CONDINE CENTRAL	CHOILD DEAKIN
C1	21'02'22"	25.00'	9.18'	9.13'	S42'22'08"E
C2	123'59'43"	50.00'	108.21'	88.29'	S86°09'11"W
СЗ	22'41'31"	25.00'	9.90'	9.84'	N35*30'05"E
C4	48'31'31"	475.00'	402.29'	390.37	N71*06'36"E
C5	78'20'51"	50.00'	68.37'	63.17'	N24'02'24"W
C6	52'01'12"	15.00'	13.62'	13.16'	S3712'13"E
C7	4*36'21"	961.00'	77.25'	77.23'	N46*40'55"E
C8	101'52'25"	25.00'	44.45'	38.82'	N01°57'07"W
C9	3216'29"	525.00'	295.73'	291.84'	S36*45'05"E
C10	102*57'05"	25.00'	44.92'	39.12'	N72'05'23"W
C11	29*59'57"	175.00'	91.63'	90.58'	S41°26'06"W
C12	8'06'22"	325.00'	45.98'	45.94'	N30*29'18"E
C13	18'42'43"	25.00'	8.16'	8.13'	S25*11'08"W
C14	127'43'44"	50.00'	111.46'	89.78'	N79*41'38"E
C15	29'07'23"	25.00'	12.71'	12.57'	N51°00'11"W
C16	21'02'22"	25.00'	9.18'	9.13'	N76'05'04"W
C17	134'04'44"	50.00'	117,01'	92.08'	S19'33'53"E
C18	21'02'22"	25.00'	9.18'	9.13'	N36'57'18"E
C19	66'58'29"	225.00'	263.01'	248.29'	S59*55'22"W
C20	21'02'22"	25.00'	9.18'	9.13'	N82*53'25"E
C21	122'04'44"	50.00'	106.53'	87.50'	N46'35'24"W
C22	21'02'22"	25.00'	9.18'	9.13'	S03*55'47"W
C23	46'17'55"	475.00'	383.83'	373.47'	S29*44'22"E
C24	37'27'10"	225.00'	147.08'	144.47'	S45*09'42"W
C25	6*46'45"	275.00'	32.54'	32.52'	N29'49'30"E
C26	81'13'15"	25.00'	35.44'	32.55'	N73'49'30"E
C27	66*58'29"	175.00	204.56'	193.11'	S59*55'22"W
C28	80'00'00"	25.00'	34.91'	32.14'	N46'35'24"W
C29	315'57"	525.00	29.93'	29.92'	S0813'23"E
C30	73'44'38"	25.00'	32.18'	30.00'	N27°00'58"E
C31	92'00'00"	25.00	40.14'	35.97	S19*33'53"E
C32			-		
C33	45'00'00"	25.00'	19.63'	19.13'	N75'23'19"W
C34	6*07'09"	525.00'	56.07'	56.04'	S49*49'45"E
C35	8*52'08" 17*17'12"	525.00'	81.27'	81.18'	S42*20'07"E
C36		525.00'	158.40'	157.80'	S29*15'27"E
	34*45'53"	50.00'	30.34'	29.87'	S69*13'18"E
C37	70'38'53"	50.00'	61.65'	57.82'	S16'30'55"E
C38	28'39'58"	50.00'	25.02'	24.76'	S33'08'30"W
C39	4.00,02	225.00'	15.71	15.71'	S28*26'09"W
C40	20*24'29"	225.00'	80.14'	79.72'	S40'38'24"W
C41	20'24'29"	225.00'	80.14'	79.72'	S61*02'53"W
C42	20'24'29"	225.00'	80.14'	79.72'	S81°27'21"W
C43	1*45'00"	225.00'	6.87'	6.87'	N87'27'54"W
C44	7*56'08"	50.00'	6.93'	6.92'	S76*20'18"W
C45	47'50'16"	50.00'	41.75'	40.54'	N75'46'30"W
C46	66'18'21"	50.00'	57.86'	54.69'	N18'42'12"W
C47	2*59'56"	475.00'	24.86'	24.86'	S08'05'22"E
C48	11'55'31"	475.00'	98.86'	98.69'	S15*33'05"E
C49	17"14'54"	475.00'	142.99'	142.45'	N30'08'17"W
C50	10'59'50"	475.00'	91.17'	91.03'	S44*15'39"E
C51	3*07'45"	475.00'	25.94'	25.94'	S51°19'27"E
C52	17*49'21"	225.00'	69.99'	69.71'	S54*58'37"W
C53	19*37'49"	225.00'	77.09'	76.71	S36*15'02"W
C54	4*48'50"	175.00'	14.70'	14.70'	S28*50'32"W
C55	52'42'47"	175.00'	161.00'	155.38'	S57*36'21"W
C56	9'26'51"	175.00'	28.86'	28.82'	S88'41'10"W
C57	45'00'00"	60.00'	47.12'	45.92'	N75'23'19"W
C58	78'07'35"	25.00'	34.09'	31.51'	N88'02'53"E
C59	19'07'50"	50.00'	16.69'	16.62'	N33'43'15"E
C60	28'22'15"	50.00'	24.76'	24.51	S30'00'54"W

1. ALL PLAT BOUNDARY CORNERS ARE STAKED WITH 1/2-INCH IRON RODS WITH PLASTIC CAPS STAMPED "BURY&PARTNERS" UNLESS OTHERWISE INDICATED.

- 2. GAS SERVICE WILL BE PROVIDED BY ATMOS ENERGY. 3. ELECTRIC SERVICE WILL BE PROVIDED BY ONCOR ELECTRIC DELIVERY.
- 4. NO PORTION OF THIS PLAT LIES WITHIN THE BOUNDARIES OF THE 100-YEAR FLOOD PLAIN OF A WATERWAY THAT IS WITHIN THE LIMITS OF STUDY OF THE FEDERAL FLOOD INSURANCE ADMINISTRATION PANEL NO 48491C0485E, DATED SEPTEMBER 26, 2008. ALL PORTIONS OF THIS PLAT LIE IN ZONE X.
- 5. OPEN SPACE AND/OR DRAINAGE AND STORM SEWER EASEMENT LOTS WITHIN THE BOUNDARIES OF THIS PLAT WILL BE MAINTAINED BY THE DEVELOPER OR, AFTER TITLE TRANSFER, THE HOME OWNERS ASSOCIATION, PURCHASER, MUNICIPAL UTILITY DISTRICT, OR NON-PROFIT CORPORATION
- 6. SIDEWALKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DEVELOPMENT AGREEMENT BY AND BETWEEN THE CITY OF ROUND ROCK AND THE OWNER AS DATED AUGUST 27, 1998.
- ALL RIGHTS-OF-WAY ARE 50-FEET WIDE UNLESS OTHERWISE NOTED.
- 8. ALL CUL-DE-SAC RADII ARE 50-FEET UNLESS OTHERWISE NOTED.
- 9. FOR CORNER LOTS WITH DRIVEWAYS FACING THE FRONT STREET, DRIVEWAYS WILL BE LOCATED NEAR THE LOT LINE FURTHEST FROM THE SIDE STREET. FOR CORNER LOTS WITH DRIVEWAYS FACING THE SIDE STREET, DRIVEWAYS WILL BE LOCATED NEAR THE BACK LOT LINE AND THE GARAGE FOR SAID LOT WILL HAVE A 20 FOOT SETBACK FROM THE SIDE STREET.
- 10. BUILDING SLAB ELEVATIONS SHALL BE A MINIMUM ONE FOOT ABOVE ANY POINT ON THE LOT WITHIN FIVE FEET OF THE PERIMETER OF THE BUILDING.
- 11. NO STRUCTURE OR LAND ON THIS PLAT SHALL HEREAFTER BE LOCATED OR ALTERED WITHOUT FIRST SUBMITTING A CERTIFICATE OF COMPLIANCE APPLICATION FORM TO THE WILLIAMSON COUNTY FLOOD PLAIN ADMINISTRATOR. (PHONE NO.: 512-930-4390)
- 12. WATER AND SEWER SERVICE FOR THIS SUBDIVISION WILL BE PROVIDED BY WILLIAMSON COUNTY M.U.D. NO. 11.
- ALL DEVELOPMENT OF THE LOTS IN THIS SUBDIVISION ARE SUBJECT TO THE CONDITIONS, COVENANTS, AND RESTRICTIONS AS SET FORTH IN DOCUMENT NUMBER 2001080404 IN THE OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS.

- 14. ALL BEARINGS SHOWN HEREON ARE REFERENCED TO THE STATE PLANE COORDINATE SYSTEM, TEXAS CENTRAL ZONE IN TERMS OF NAD83/93 DATUM EXPRESSED IN U.S. SURVEY FEET. SURFACE DISTANCES SHOWN HEREON MAY BE CONVERTED TO GRID BY MULTIPLYING BY THE COMBINED FACTOR OF
- 15. BUILDING SETBACKS WILL BE IN ACCORDANCE WITH THE CITY OF ROUND ROCK ZONING ORDINANCE IN EFFECT AS OF SEPTEMBER 10, 1998, IN ACCORDANCE WITH THE DEVELOPMENT AGREEMENT BETWEEN THE CITY OF ROUND ROCK, TEXAS AND NEWLAND-ROUND ROCK ASSOCIATES, L.P. PER CITY ORDINANCE NO. G-98-08-27-9C1

29

TOTAL BLK 1

- 16. INTERIOR LOTS SHALL HAVE A TWENTY-FIVE (25') FRONT BUILDING SETBACK, A TWENTY-FOOT (20') REAR BUILDING SETBACK AND FIVE-FOOT (5') BUILDING SETBACKS ON EACH SIDE, DETACHED REAR GARAGES HAVE A THREE-FOOT (3') SIDE SETBACK AND A THREE-FOOT (3') REAR SETBACK UNLESS THE ADJOINING LOT HAS THE SAME DESCRIBED THREE-FOOT (3') SETBACK, IN SUCH CASE, THE SETBACK FOR THE DETACHED GARAGE SHALL BE FIVE-FEET (5').
- 17. CORNER LOTS SHALL HAVE A TWENTY-FIVE (25') FRONT BUILDING SETBACK, A TWENTY-FOOT (20') REAR BUILDING SETBACK AND FIVE-FOOT (5') INTERIOR SIDE SETBACK. STREET SIDE BUILDING SETBACK LINES ARE TEN-FEET (10'). SIDE-LOADING DÉTACHED REAR GARAGES SHALL BE SET BACK TWENTY-FEET (20') FROM THE SIDE STREET AND THREE-FOOT FROM THE REAR PROPERTY LINE, FRONT LOADING DETACHED REAR GARAGES MUST BE BUILT ON THE INTERIOR SIDE OF THE LOT. DETACHED FRONT LOADING REAR GARAGES SHALL HAVE A THREE-FOOT (3') SIDE SETBACK AND THREE-FOOT (3') REAR SETBACK UNLESS THE ADJOINING LOT HAS THE DESCRIBED THREE-FOOT (3') SETBACKS, IN SUCH CASE, THE SETBACK FOR THE DETACHED GARAGE SHALL BE FIVE-FEET (5')
- 18. THIS SUBDIVISION IS SUBJECT TO THAT CERTAIN DECLARATION OF RESTRICTIVE COVENANTS RECORDED AS _____, OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS. LOT 1 DOCUMENT NO. _____ BLOCK "3", IS HEREBY DESIGNATED AS A PRIVATE STREET.
- 19. LOT 1, BLOCK 3 IS A PRIVATE ROADWAY TO BE MAINTAINED BY THE TERAVISTA COMMUNITY ASSOCIATION, INC., IN ACCORDANCE WITH THAT CERTAIN PRIVATE STREET DECLARATION RECORDED AS DOCUMENT NO. ______ IN THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS.
- 20. WILLIAMSON COUNTY WILL NOT ACCEPT OR MAINTAIN THE ROADS WITHIN THE SUBDIVISION UNLESS THE ROADS HAVE BEEN CONSTRUCTED TO MEET THE COUNTY STANDARDS IN EFFECT ON THE DATE OF ACCEPTANCE.

TERAVISTA SECTION 14B

DATE: FEBRUARY, 2008 PREPARED BY:



221 West Sixth Street, Suite 600 Austin, Texas 78701 Tel. (512)328-0011 Fax (512)328-0325 TBPE Registration Number F1048 Bury+Partners, Inc. ©Copyright 2009

Drawn by: MM Approved by: JTB Project No.:1149-82.920 File: H:\1149\82\114982PL3.dwq

SHEET

TERAVISTA SECTION 14B

STATE OF TEXAS)(KNOW ALL MEN BY THESE PRESENTS; COUNTY OF WILLIAMSON)(

THAT NNP-TERAVISTA, LP, SOLE OWNER OF THE CERTAIN TRACT OF LAND SHOWN HEREON AND BEING A PORTION OF THE TRACT OF LAND DESCRIBED IN A DEED RECORDED IN DOCUMENT NUMBER 9801109 OF THE OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS, DOES HEREBY SUBDIVIDE THE 35.724 ACRES AS SHOWN HEREON. THIS SUBDIVISION IS TO BE KNOWN AS "TERAVISTA SECTION 14B". THE OWNER ACKNOWLEDGES THAT IT IS THE RESPONSIBILITY OF THE OWNER, NOT THE COUNTY, TO ASSURE COMPLIANCE WITH THE PROVISIONS OF ALL APPLICABLE STATE, FEDERAL, AND LOCAL LAWS AND REGULATIONS RELATING TO THE ENVIRONMENT, INCLUDING THE ENDANGERED SPECIES ACT, STATE AQUIFFR REGULATIONS, AND MUNICIPAL WATERSHED ORDINANCES.

NNP-TERAVISTA, LP, A TEXAS LIMITED PARTNERSHIP
BY: NNP-TV COMMUNITIES, LP, A TEXAS LIMITED PARTNERSHIP, GENERAL PARTNER
BY: NNP-TV MANAGEMENT, LLC, A DELAWARE LIMITED LIABILITY COMPANY, GENERAL PARTNER
810 HESTERS CROSSING, SUITE 175 ROUND ROCK, TEXAS 78681

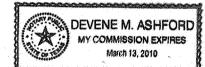
NAME: Assistant Vice Ansietant

STATE OF TEXAS
COUNTY OF WILLIAMSON

KNOW ALL MEN BY THESE PRESENTS;

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THE ______ DAY OF ______ DAY OF ______ OF NNP-TV MANAGEMENT, LLC, A DELAWARE LIMITED LIABILITY COMPANY, ITS GENERAL PARTNER, ON BEHALF OF SAID NNP-TV COMMUNITIES, LP, A TEXAS LIMITED PARTNERSHIP, ITS GENERAL PARTNER, ON BEHALF OF NNP-TERAVISTA, LP, A TEXAS LIMITED PARTNERSHIP.

NOTARY PUBLIC, STATE OF TEXAS
PRINTED NAME: DEVENE M ASHFORD
MY COMMISSION EXPIRES: 03-13-2010



HEALTH DEPARTMENT APPROVAL

BASED UPON THE REPRESENTATIONS OF THE ENGINEER OR SURVEYOR WHOSE SEAL IS AFFIXED HERETO, AND AFTER REVIEW OF THE PLAT AS REPRESENTED BY THE SAID ENGINEER OR SURVEYOR, I FIND THAT THIS PLAT COMPLIES WITH THE WILLIAMSON COUNTY FLOOD PLAIN REGULATIONS AND WILLIAMSON COUNTY ON—SITE SEWERAGE FACILITY REGULATIONS. THIS CERTIFICATION IS MADE SOLELY UPON SUCH REPRESENTATIONS AND SHOULD NOT BE RELIED UPON FOR VERIFICATIONS OF THE FACTS ALLEGED. THE WILLIAMSON COUNTY AND CITIES HEALTH DISTRICT AND WILLIAMSON COUNTY DISCLAIMS ANY RESPONSIBILITY TO ANY MEMBER OF THE PUBLIC FOR INDEPENDENT VERIFICATION OF THE REPRESENTATIONS, FACTUAL OR OTHERWISE, CONTAINED IN THIS PLAT AND THE DOCUMENTS ASSOCIATED WITHIN IT.

PAULO PINTO
DIRECTOR OF ENVIRONMENTAL SERVICES

3/27/09 DATE:

FLOODPLAIN NOTE

NO PORTION OF THIS PLAT LIES WITHIN THE BOUNDARIES OF THE 100—YEAR FLOOD PLAIN OF A WATERWAY THAT IS WITHIN THE LIMITS OF STUDY OF THE FEDERAL FLOOD INSURANCE ADMINISTRATION PANEL NO 4049160485E DATED SEPT. 26 2008 ALL PORTIONS OF THIS PLAT LIE IN ZONE X (AREAS DETERMINED TO BE OUTSIDE 500—YEAR FLOODPLAIN).

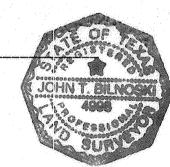
THIS TRACT IS NOT LOCATED WITHIN THE EDWARDS AQUIFER RECHARGE ZONE.

STATE OF TEXAS)
COUNTY OF WILLIAMSON)

KNOW ALL MEN BY THESE PRESENTS;

THAT I, JOHN T. BILNOSKI, A REGISTERED PROFESSIONAL LAND SURVEYOR, DO HEREBY CERTIFY THAT I PREPARED THIS PLAT FROM AN ACTUAL AND ACCURATE ON—THE—GROUND SURVEY OF THE LAND AND THAT THE CORNER MONUMENTS SHOWN THEREON WERE PROPERLY PLACED UNDER MY PERSONAL SUPERVISION, IN ACCORDANCE WITH THE SUBDIVISION REGULATIONS OF WILLIAMSON COUNTY, TEXAS, AND THE FIELD NOTES SHOWN HEREON MATHEMATICALLY CLOSE.

JOHN T. BILNOSKI, R.P.L.S.
TEXAS REGISTRATION NO. 4998
BURY & PARTNERS, INC.
221 WEST SIXTH STREET, SUITE 600
AUSTIN, TEXAS 78701



PRIVATE STREET DEDICATION:

THAT, NNP-TERAVISTA, LP, A TEXAS LIMITED PARTNERSHIP, AS THE OWNER OF THAT CERTAIN 35.724 ACRE TRACT OF LAND BEING COMPRISED OF DO HEREBY DEDICATE TO THE PUBLIC FOREVER THE USE OF ALL EASEMENTS SHOWN HEREON, UNLESS OTHERWISE INDICATED, SUBJECT TO ANY EASEMENTS AND/OR RESTRICTIONS HERETOFORE GRANTED AND NOT RELEASED. FURTHER THAT RESPONSIBILITY FOR MAINTENANCE AND TAXATION OF PRIVATE STREET(S), SANSONE DRIVE, SHALL BE VESTED IN A PROPERTY OWNERS ASSOCIATION FOR THE ADMINISTRATION OF THE PROPERTY DESCRIBED HEREIN PURSUANT TO THAT CERTAIN DECLARATION OFRESTRICTIVE COVENANTS RECORDED AS DOCUMENT NO.

______, OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, AND AN EXPRESS EASEMENT IS HEREBY GRANTED ACROSS SAID PRIVATE STREETS AND ANY COMMON AREAS FOR THE USE OFTHE SURFACE FOR ALL GOVERNMENTAL FUNCTIONS, VEHICULAR AND NON—VEHICULAR, INCLUDING FIRE AND POLICE PROTECTION, SOLID AND OTHER WASTE MATERIAL PICK UP AND ANY OTHER PURPOSE ANY GOVERNMENTAL AUTHORITY DEEMS NECESSARY, AND WE DO FURTHER AGREE THAT ALL GOVERNMENTAL ENTITIES, THEIR AGENTS OR EMPLOYEES, SHALL NOT BE RESPONSIBLE OR LIABLE AS A RESULT OF GOVERNMENTAL VEHICLES TRAVERSING OVER SAME.

GENERAL INFORMATION:

SANSONE DRIVE

LENGTH 2,517 LF DESIGN SPEED 25 MPH

ENGINEER

Bury+Partners

ENGINEER BURY+Partners

221 WEST SIXTH STREET SUITE 600

AUSTIN, TEXAS 78701

(512) 328-0011 FAX (512) 328-0325

SURVEYOR

Bury+Partners

ENGINEERING SOLUTIONS

221 WEST SIXTH STREET SUITE 600

AUSTIN, TEXAS 78701

(512) 328-0011 FAX (512) 328-0325

OWNER'S RESPONSIBILITIES

IN APPROVING THIS PLAT BY THE COMMISSIONERS COURT OF WILLIAMSON COUNTY, TEXAS, IT IS UNDERSTOOD THAT THE BUILDING OF ALL STREETS, ROADS, AND OTHER PUBLIC THOROUGHFARES AND A IY BRIDGES OR CULVERTS NECESSARY TO BE CONSTRUCTED OR PLACED IS THE RESPONSIBILITY OF THE OWNERS OF THE TRACT OF LAND COVERED BY THIS PLAT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS PRESCRIBED BY THE COMMISSIONERS COURT OF WILLIAMSON COUNTY, TEXAS. SAID COMMISSIONERS COURT ASSUMES NO OBLIGATION TO BUILD ANY OF THE STREETS, ROADS OR OTHER PUBLIC THOROUGHFARES SHOWN ON THIS PLAT OR OF CONSTRUCTING ANY OF THE BRIDGES OR DRAINAGE IMPROVEMENTS IN CONNECTION THEREWITH. THE COUNTY WILL ASSUME NO RESPONSIBILITY FOR DRAINAGE WAYS OR EASEMENTS IN THE SUBDIVISION, OTHER THAN THOSE DRAINING OR PROTECTING THE ROAD SYSTEM AND STREETS.

THE COUNTY ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF REPRESENTATIONS BY THE OTHER PARTIES IN THIS PLAT. FLOOD PLAIN DATA, IN PARTICULAR, MAY CHANGE DEPENDING ON SUBSEQUENT DEVELOPMENT. IT IS FURTHER UNDERSTOOD THAT THE OWNERS OF THE TRACT OF LAND COVERED BY THIS PLAT MUST INSTALL AT THEIR OWN EXPENSE ALL TRAFFIC CONTROL DEVICES AND SIGNAGE THAT MAY BE REQUIRED BEFORE THE STREETS IN THE SUBDIVISION HAVE FINALLY BEEN ACCEPTED FOR MAINTENANCE BY THE COUNTY.

JULISON BOWN 4/16/09
WILLIAMSON COUNTY ADDRESSING COORDINATOR
FINAL PLAT APPROVAL

STATE OF TEXAS X COUNTY OF WILLIAMSON X

KNOW ALL MEN BY THESE PRESENTS;

I, DAN A. GATTIS, COUNTY JUDGE OF WILLIAMSON COUNTY, TEXAS DO HEREBY CERTIFY THAT THIS MAP OR PLAT, WITH FIELD NOTES ATTACHED HEREON, THAT A SUBDIVISION, TERAVISTA SECTION 14B FINAL PLAT, HAVING BEEN FULLY PRESENTED TO THE COMMISSIONER'S COURT OF WILLIAMSON COUNTY, TEXAS AND BY THE SAID COURT DULY CONSIDERED, WAS ON THIS DAY APPROVED AND SAID PLAT IS AUTHORIZED TO BE REGISTERED AND RECORDED IN THE PROPERTY RECORDS OF THE COUNTY CLERK OF WILLIAMSON COUNTY, TEXAS.

DAN A. GATTIS, COUNTY JUDGE WILLIAMSON COUNTY, TEXAS

DATE:

COUNTY OF WILLIAMSON X

I, NANCY RISTER, CLERK OF THE COUNTY COURT OF SAID COUNTY, DO HEREBY CERTIFY THAT
THE FOREGOING INSTRUMENT IN WRITING, WITH ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR
RECORD IN MY OFFICE ON THE DAY OF _______, 20______A.D., AT ______ O'CLOCK, ___M.,

AND DULY RECORDED THIS THE DAY OF ______, 20____A.D. AT _____ O'CLOCK __ M.,

IN THE PLAT RECORDS OF SAID COUNTY, IN CABINET ______, SLIDE(S)_____.

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT THE COUNTY COURT OF SAID

COUNTY, AT MY OFFICE IN GEORGETOWN, TEXAS, THE DATE LAST SHOWN ABOVE WRITTEN.

NANCY RISTER, CLERK, COUNTY COURT OF WILLIAMSON COUNTY, TEXAS

BY: DEPUTY

TERAVISTA SECTION 14B

DATE: FERBRUARY, 2008 PREPARED BY:



ENGINEERING SOLUTION: 221 West Sixth Street, Suite 600 Austin, Texas 78701 Tel. (512)328-0011 Fax (512)328-0325 TBPE Registration Number F1048 Bury+Partners, Inc. ©Copyright 2009

FN07-133(MM)
Drawn by: MM Approved by: JTB Project No.:1149-82.920 File: H:\1149\82\114982PL2.dw

SHEET

OF 3

OWNER
NNP-TERAVISTA, LP, A TEXAS LIMITED PARTNERSHIP
810 HESTERS CROSSING, SUITE 175
ROUND ROCK, TEXAS 78681
(512) 244-6667 FAX (512) 244-6875

Revised Preliminary Plat Saratoga Springs, Section 3 Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Nickey Lawrence, Unified Road System

By:

For:

Submitted

Joe England

Department: Unified Road System

Agenda Category:

Consent

Information

Agenda Item

Discuss and consider revised preliminary plat approval for Saratoga Springs, Section 3, Pct. 2.

Background

The original preliminary that was approved included Section 1, Section 2 and Section 3. The developer is asking for approval to revise Section 3 so that it can be phased into Section 3A, 3B, 3C and 3D.

Fiscal Impact

From/To Acct No. Description Amount Sort Seq

Attachments

No file(s) attached.

Form Routing/Status

Started On: 04/23/2009 09:27 Form Started By: Nickey Lawrence AM

Resolution for National Historic Preservation Month

Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Connie Watson, County Judge

By:

For:

Submitted C

Connie Watson

Department: County Judge

Agenda Category:

Regular Agenda Items

Information

Agenda Item

Discuss and take appropriate action on resolution proclaiming May 2009 as National Historic Preservation Month in Williamson County.

Background

Fiscal Impact

From/To Acct No. Description Amount Sort Seq

Attachments

Link: Historic Preservation Month Resolution

Form Routing/Status

Form Started By: Connie Watson Started On: 04/23/2009 08:21

' AM

State of Texas County of Williamson Know all men by these presents:

THAT ON THIS, the 28th day of April 2009, the Commissioners' Court of Williamson County, Texas, met in duly called session at the Courthouse in Georgetown, with the following members present;

Dan A Gattis, County Judge Lisa L. Birkman, Commissioner, Precinct One Cynthia P. Long, Commissioner, Precinct Two Valerie Covey, Commissioner, Precinct Three Ron Morrison, Commissioner, Precinct Four

And at said meeting, among other business, the Court considered the following

RESOLUTION

WHEREAS, historic preservation is an effective tool for managing growth, revitalizing neighborhoods, fostering local pride and maintaining community character while enhancing livability; and

WHEREAS, historic preservation is relevant for communities across the nation, both urban and rural, and for Americans of all ages, all walks of life and all ethnic backgrounds; and

WHEREAS, it is important to celebrate the role of history in our lives and the contributions made by dedicated individuals in helping to preserve the tangible aspects of the heritage that has shaped us as a people; and

WHEREAS, "This Place Matters" is the theme for National Preservation Month 2009, cosponsored by the Georgetown Main Street Program, Downtown Georgetown Association, Williamson Museum, Georgetown Heritage Society and National Trust for Historic Preservation

Therefore Be It Resolved that the Williamson County Commissioners Court declares May 2009 as National Historic Preservation Month, and call upon the citizens of Williamson County to join their fellow citizens across the United States in recognizing and participating in this special observance.

RESOLVED THIS 28th DAY OF APRIL, 2009

Attest:	
Nancy E. Rister	Dan A. Gattis
Williamson County Clerk	Williamson County Judge

Energy Efficiency

Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Grimes Kathy, Commissioner Pct. #2

By: Submitted

Commissioner Ron Morrison

For:

Department: Commissioner Pct. #2

Agenda Category:

Regular Agenda Items

Information

Agenda Item

Hear presentation on use of propane for energy efficiency and Clean Air and take appropriate action if desired for application for Energy Efficiency and Conservation Block Grant Program (EECBG) and other related energy grants.

Background

As part of the federal government stimulus package, \$209 million has been allocated to Texas cities, counties and Indian tribes to promote energy efficiency and conservation. The Energy Efficiency and Conservation Block Grant Program (EECBG) provides grants to U.S. local governments, states, territories, and Indian tribes, to fund projects that reduce energy use and fossil fuel emissions, and that improve in energy efficiency. Williamson County was allocated \$611,600 through program formulas that used population data from the 2007 U.S. Census. The purpose of the Program is to assist eligible entities in 1. Implementing strategies to reduce fossil fuel emissions in a manner that is environmentally sustainable and maximizes benefits for local and regional communities; 2. Reduces the total energy use of the eligible entities; and 3. Improves energy efficiency in the transportation sector, building sector, or other appropriate sectors. Deadline for grant applications are June 25, 2009 at 5:00 PM.

Other grants available are the U.S. Department of Energy/Clean Cities FY09 Petroleum Reduction Technologies Projects for the Transportation Sector. The 4-year grant awards will range from \$5 to \$15 million. The City of Austin/Central Texas Clean Cities are coordinating competitive grant applications on behalf of the region for clean vehicle funding opportunities available; if interested in participating a letter of intent is due on May 1, 2009.

Also available to Williamson County are grants through the Texas Railroad Commission for purchase of alternative fuel source vehicles.

Fiscal Impact

From/To Acct No. Description Amount Sort Seq

Attachments

Link: Tax Savings Update

Link: Tax Savings

Link: Green House Gas Report

Link:

Link: DOE Grant

Link: City of Austin LOI

Link: School Bus Examples Link: Propane Presentation

Form Routing/Status

Started On: 04/22/2009 08:47 Form Started By: Grimes Kathy

AM

FEDERAL \$0.50/GALLON MOTOR FUEL TAX-CREDIT UPDATE

CLAIMING THE CREDIT ON BULK PURCHASES AND FORKLIFTS

Most state and local governments, non-profit agencies and users of propane, including forklift operators, will be registering for the first time with the Internal Revenue Service (IRS) as alternative fuel users so they can claim the 50-cents-a-gallon propane alternative fuel excise tax credit on their bulk fuel purchases used in motor vehicles. These entities can claim the credit if they purchase propane in bulk and refuel their own vehicles. For forklift operators, "refueling" is defined as loading a full cylinder onto a forklift, regardless of who filled the cylinder.

Registering for the Credit

Each entity wishing to claim the credit must register. To register, you must file IRS Form 637. A sample form is available at www.propane.tx.gov. Once approved, the IRS will issue a 637 number with "AL" at the end, indicating IRS authorization to file as an alternative fueler. If the entity already has a 637 number, the entity must still file an amended form indicating a desire to begin claiming the tax credit.

Entities can expect a response from the IRS within 20 days of filing a correctly filled out Form 637. It's a good idea

to send the application via certified mail, in order to have a record of when the application was sent and when the IRS office received it. IRS staff will check on the IRS filing status of the company officers and/or owners listed on the form. They must be in compliance for the application to proceed.

Site Review

After passing the internal review, the Form 637 is forwarded to the appropriate IRS field office for an on-site

inspection. Within 15 days, an agent will contact the entity to schedule a time to review the following information, if applicable:

- W-4 (Employment Tax Reporting)
- IRS Form 2290 (Road Tax for Heavy Vehicles)
- Financial Status
- Internal Financial Controls, including applicant's past payment history for tax liabilities
- Purchases and Sales of Propane
- List of Propane Suppliers
- Presence of Bulk Storage Tank



Recommendation for Approval/Disapproval

Based on the information gathered during the onsite review, the agent will recommend Approval or Disapproval of the registration application.

637 Number Means "You're Registered"

Entities can expect to the IRS to issue them a 637 number within three to four weeks after the on-site visit. The IRS can frequently expedite the process if the entity requests it.

Followup Review

Within six to twelve months after receiving a 637 number, the IRS will in all likelihood send an agent to conduct an on-site review to verify that the registered entity has made the propane purchases it reported and has used the fuel for motor fuel. The agent may cross-check with propane suppliers on sales to the entity as propane motor fuel. If there is a discrepancy, the IRS can assess penalties and pull the 637 registration, which would keep the former registrant from claiming the tax credit.



SAVE 55.1¢ A GALLON. CONVERT YOUR VEHICLE TO PROPANE.

Besides longer engine life and cleaner air, you'll save on motor fuel excise taxes—55.1 cents on every gallon. Here's how propane can lower your motor fuel tax bite:

MOTOR	FUEL	EXCISE T	AX COMPARIS	ON
		GASOLINE	PROPANE	DIFFERENCE
FEDERAL		18.4 ¢*	18.3 ¢	0.1 ¢
STATE		20.0 ¢	15.0 ¢	5.0 ¢
Federal Motor Fuel Exc	cise Tax Cre	dit	50 ¢	50 ¢
			SAVINGS	55.1¢

^{* 0.1¢} per gallon Leaking Underground Storage Tank fund

Propane state motor fuel tax is not collected at the pump. Users buy an annual prepaid tax decal based on vehicle weight and miles traveled (see back). SCHOOL DISTRICTS and COUNTIES ARE EXEMPT FROM THE STATE PROPANE MOTOR FUEL TAX. Government agencies and non-profit educational organizations are exempt from the federal tax.

Call 1-800-64-CLEAR for more information.

PREI	PAID	LIQUE	FIED G	AS FEI	S
Vehicle Weight	Class	Less than 5,000 mi.	5000 to 9,999 mi.	10,000 to 14,999 mi	1 <i>5,</i> 000 mi. and over
Less than 4,000 lbs	Α	\$ 30.00	\$ 60.00	\$ 90.00	\$ 120.00
4,000 to 10,000 lbs	В	42.00	84.00	126.00	168.00
10,001 to 15,000 lbs	С	48.00	96.00	144.00	192.00
15,001 to 27,500 lbs	D	84.00	168.00	252.00	336.00
27,501 to 43,500 lbs	Е	126.00	252.00	378.00	504.00
43,501 lbs and over	F	186.00	372.00	558.00	744.00
Transit co. motor bus*	T	\$ 440.00			
Motor vehicle dealer*	Z	Must pay tax to	permitted liquefied	gas dealer upon fu	eling

^{*} Rate not based on weight

Federal Highway Tax: If an LP-gas supplier delivers LP-gas into the motor fuel tank of your vehicle, the supplier must collect federal tax at that time. LP-gas may be delivered to you in bulk quantities by your LP-gas supplier, tax free. Then you, as the user, report and pay the federal tax direct, as you fill your vehicle(s) from your own bulk storage tank. Internal Revenue Service Form 720, "Quarterly Federal Excise Tax Return" is used for this tax reporting.

State Tax Decal: Tax decals are available at the State Comptroller of Public Accounts, Capitol Station, Austin, Texas, 78774 or call 1-800-252-1383 for more information.



Texas Railroad Commission

Alternative Fuels Research & Education Division PO Box 12967
Austin, TX 78711-2967
1-800-64-CLEAR
www.propane.tx.gov

Propane Reduces Greenhouse Gas Emissions: A Comparative Analysis



Acknowledgements This report was sponsored by the Propane Education & Research Council (PERC) and prepared by Energetics Incorporated. Matt Antes, Ross Brindle, Joe McGervey, Lindsay Pack, and Beth Zotter, all with Energetics, are the principle authors of the report. Valuable guidance was provided by Brian Feehan, Mark Leitman, and Greg Kerr, PERC; Phil Squair, National Propane Gas Association; and Larry Osgood and Bob Myers, technical consultants to PERC. Propane's Greenhouse Gas Emissions: A Comparative Analysis

Table of Contents

Exe	cutive Summary	iv
I.	Purpose of Report	1
II.	About Climate Change	1
III.	Methodology	6
	Summary of Findings	
V.	Applications	15
	Distributed Generation	
	Irrigation Pumps	17
	Forklifts	
	Medium-Duty Engines	19
	Light-Duty Trucks	20
	Residential Water Heaters	
	Residential Space Heating	22
VI.	Appendix A – Glossary	
	Appendix B – Assumptions and References	24

Executive Summary

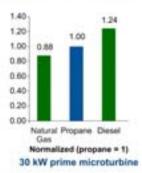
This study quantifies the greenhouse gas profile of propane and other fuels in selected applications. Cutting across propane market segments including residential, power generation, engine fuel, agriculture, and other applications, this analysis uses energy consumption rates, emissions factors, and equipment efficiencies for various energy options to estimate greenhouse gas emissions associated with the use of those energy options. The applications analyzed include:

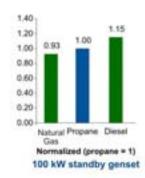
- Distributed Generation
- Irrigation Pumps
- Forklifts
- Medium-Duty Engines
- Light-Duty Trucks
- Residential Water Heaters
- Residential Space Heating

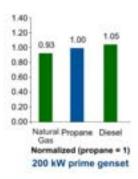
The results of the analysis show that propane is among the most attractive options for avoiding greenhouse gas emissions in every application considered. At the point of use, propane has a lower carbon content than gasoline, diesel, heavy fuel oil, or ethanol. Natural gas (methane) generates fewer carbon dioxide (CO_2) emissions per Btu than propane, but natural gas is chemically stable when released into the air and produces a global warming effect 25 times that of carbon dioxide. This means that one pound of methane produces the same effect on climate change as 25 pounds of carbon dioxide.

With propane's short lifetime in the atmosphere and low carbon content, it is advantageous from a climate change perspective in comparison to other fuels in many applications. The graphs on the following page (p. v) demonstrate propane's climate change performance across the applications analyzed in this study. (Propane emissions = 1, and all other fuels are normalized against it for comparison).

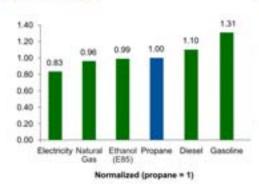
Distributed Generation



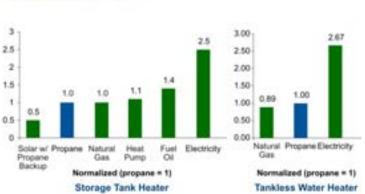




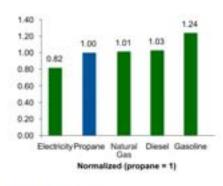
Irrigation Pumps



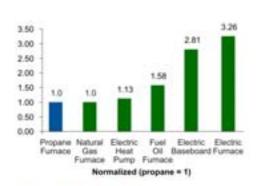
Residential Water Heaters



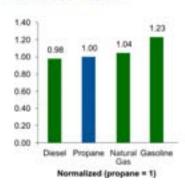
Forklifts



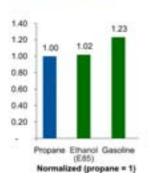
Residential Space Heating



Medium-Duty Engines



Light-Duty Trucks



I. Purpose of Report

With the causes of climate change becoming more evident, there is an increased focus on technologies and energy sources that can reduce emissions of greenhouse gases. While scientists continue to debate the magnitude of potential impacts from climate change, policymakers in the United States and abroad are considering options for addressing the issue. As an Environmental Protection Agency (EPA)-approved clean alternative fuel, propane offers lower greenhouse gas emissions than many other fuel options without compromising performance in a wide range of applications.

This study quantifies the greenhouse gas profile of propane and other fuels in selected applications. Cutting across propane market segments including residential, power generation, engine fuel, agriculture, and other applications, this analysis uses energy consumption rates, emissions factors, and equipment efficiencies for various energy options to estimate greenhouse gas emissions associated with the use of those energy options. The applications analyzed include:

- Distributed Generation
- Irrigation Pumps
- Forklifts
- Medium-Duty Engines
- Light-Duty Trucks
- Residential Water Heaters
- Residential Space Heating

The substantive and carefully documented information in this report is intended to inform policymakers, the propane industry, and other interested parties as they make important decisions regarding climate change.

II. About Climate Change

Greenhouse gases keep the earth at a comfortable temperature, allowing most of the energy from the sun to pass through the atmosphere and warm the earth while blocking much of the outward radiation from the earth. However, increasing concentrations of greenhouse gases in the atmosphere are cause for concern. Rather than maintaining equilibrium, high concentrations of greenhouse gases are now affecting the global climate system, leading to "climate change."

Greenhouse Gases Compared to Criteria Air Pollutants

Greenhouse gases are different than the criteria air pollutants that have been regulated by the EPA since 1970. Criteria pollutants, which include ozone, nitrogen dioxide, sulfur dioxide, carbon monoxide, lead, and particulate matter, are released in the atmosphere from fuel leaks, secondary reactions, or undesired side-products during combustion. While these pollutants cause health problems and contribute to smog and acid rain, they do not directly contribute to climate change. The amount of criteria air emissions depends on several variables including fuel characteristics, combustion conditions, and use of pollution control equipment, and it is sensitive to maintenance and operational practices (Climate Leaders 2004).

In contrast, greenhouse gases are not federally regulated and cause changes to the environment on a global scale. Unlike criteria pollutants, the most prevalent GHG – carbon dioxide – is a necessary byproduct of fossil fuel combustion. The amount of carbon dioxide released depends not on leaks or side reactions, but on the amount of carbon in the fuel and the amount of fuel consumed. While chemically reactive criteria air pollutants stay in the air for days or months, greenhouse gases are non-reactive and remain in the atmosphere for decades to centuries (Rubin and Rao 2002).

Table 2.1. Carbon dioxide and criteria air pollutants have several important differences

	Carbon dioxide	Criteria pollutants
Source of emissions	 necessary byproduct of combustion 	 fuel leak or undesired side product of combustion
Regulation	 currently unregulated at federal level in the U.S. 	 federally regulated by Clean Air Act
Quantity released	 depends mainly on carbon content of fuel and amount of fuel consumed 	depends on many factors
Scale of impact	• global	local or regional
Lifetime in atmosphere	decades to centuries	days to months

Greenhouse Gas Emissions from Fuel Combustion

In general, lighter hydrocarbons release less carbon dioxide during combustion than heaver hydrocarbons, because lighter hydrocarbons consist of fewer carbon atoms per molecule. The mass of carbon dioxide released per Btu of fuel – the "carbon content" – is a good first-order indicator of the CO_2 emissions comparison between fuels. The carbon content for eight common fuels is shown in Table 2.2.

While it is a good indicator, carbon content represents only part of the CO₂ emissions equation. The amount of fuel consumed plays an equally important role. Fuel consumption varies by fuel type and technology for each application. For example, since diesel (compression) engines are generally more efficient than spark-ignition engines, some of the CO₂ emissions disadvantage of diesel compared to other fuels is offset. (Further details for estimating CO₂ emissions are provided in the Methodology section.)

Small amounts of methane and nitrous oxide are also emitted during combustion, though they play

Table 2.2. Carbon dioxide released per Btu		
Fuel Type	kg CO₂ per million Btu	
Natural Gas	52.8	
LPG	62.7	
Ethanol (E85)	66.6	
Motor Gasoline	70.5	
Kerosene	70.7	
Distillate Fuel (Diesel)	72.5	
Residual Fuel (Heavy fuel oil)	78.6	
Bituminous Coal 92.1		
Estimates based on chemical composition of the fuel with 99 percent		

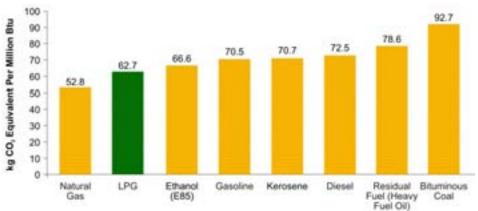
Estimates based on chemical composition of the fuel with 99 percent combustion.

Source: DOE 1994.

a minor role in affecting climate change as compared to carbon dioxide. In the U.S., methane and nitrous oxide together represent less than 1% of the total CO_2 -equivalent emissions from stationary combustion sources (Climate Leaders 2004).

The Greenhouse Gas (GHG) footprint of LPG is relatively small compared to other fuels in terms of total emissions and emissions per unit of energy consumed. LPG has the lowest on-site emission rate of the major energy sources, with the exception of natural gas (see Figure 1). In terms of life-cycle greenhouse gas emissions, LPG produces significantly lower emissions than gasoline, diesel, and electricity on a per-Btu basis. Actual life-cycle emission levels depend on the nature and efficiency of the end-use application, however, and therefore must be estimated on an application-specific basis.

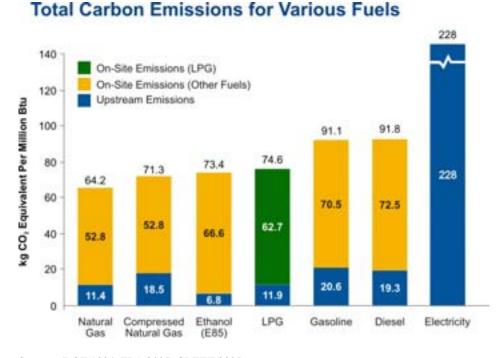
Figure 1:
On-Site Carbon Emissions for Various Fuels



Sources: DOE 1994, EPA 2007

On-site emissions estimates based on chemical composition of the fuel with 99 percent combustion.

Figure 2:



Sources: DOE 1994, EPA 2007, GREET 2007

On-site emissions estimates based on chemical composition of the fuel with 99 percent combustion. Actual life-cycle emissions vary by application; in many cases, electricity provides more useful energy on a per-Btu basis.

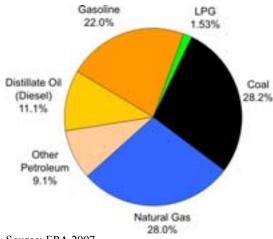
LPG represents a small but important part of the U.S. energy consumption. Figure 3 shows the contribution of the major fuels (U.S. EPA 2007) and LPG represents 1.53% of energy consumed in the U.S. in 2005.

Because of LPG's relatively low GHG emission rate, its share of GHG emissions is smaller than its share of energy supply. Figure 4 shows the relative contribution to total U.S. GHG emissions by fossil fuel combustion and from other sources. CO₂ emissions from fossil fuel combustion represent 79% of total emissions, while LPG combustion represents only 1.05% of total U.S. emissions.

The balance of emissions (21%) is from industrial processes that emit CO₂ directly (i.e., cement kilns), methane (i.e., landfills and natural gas leaks), nitrous oxide (i.e., agricultural fertilizer), and fluorine-containing halogenated substances (i.e., hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6) from refrigerants and industrial processes).

Figure 5 illustrates the relative contribution to total energyrelated CO₂ emissions for the U.S. in 2005. Although LPG contributes 1.53% of the U.S. energy supply, its share of energy-related CO₂ emissions is 1.32%. Coal, the highestemitting major fuel, represents 28.2% of the U.S. energy supply and 36.4% of energy-related CO₂.

Figure 3: Shares of U.S Energy Consumption (2005) (Total: 78,742 trillion Btu)



Source: EPA 2007

Figure 4: Shares of Greenhouse Gas Emissions (2005) (Total: 7,260 million MT CO₂)

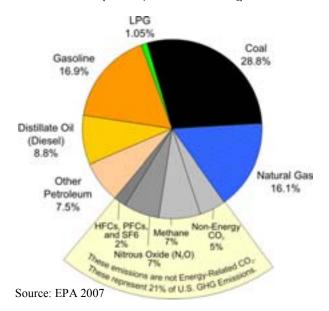
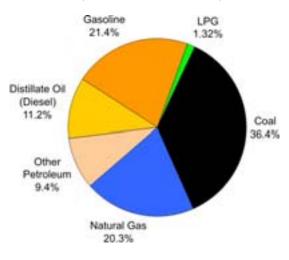


Figure 5: Shares of Energy-Related **Greenhouse Gas Emissions (2005)** (Total: 5,751 million MT CO₂)



Source: EPA 2007

Propane's Effect on Climate Change

Propane is not a direct greenhouse gas when released into the air. Propane vapor is unstable in the atmosphere—it is chemically reactive and commonly removed by natural oxidation in the presence of sunlight or knocked down by precipitation. It is also removed from the atmosphere faster than it takes for it to become well-mixed and have impacts on global climate. Current measurements have not found a global climate impact from propane emissions.^{1,2}

When used as a fuel, propane does emit carbon dioxide and small amounts of nitrous oxide and methane. Upstream extraction and production of fuels such as propane from natural gas or crude oil generates greenhouse gas emissions, and end-use combustion of any hydrocarbon releases carbon dioxide as discussed above. However, compared to conventional fuel supplies, propane generates fewer GHG emissions in almost every application. At the point of use, propane has a lower carbon content than gasoline, diesel, heavy fuel oil, or ethanol (Table 2.2). Natural gas (methane) generates fewer CO₂ emissions per Btu than propane, but natural gas is chemically stable when released into the air and produces a global warming effect 25 times that of carbon dioxide. This means that one pound of methane produces the same effect on climate change as 25 pounds of carbon dioxide.

With propane's short lifetime in the atmosphere and low carbon content, it is advantageous compared to other petroleum fuels in many applications.

Upstream vs. End-Use Emissions

When quantifying the greenhouse gas emissions that result from the use of energy, it is important to distinguish between the emissions released at the location where the energy is consumed and the emissions released as a result of extracting and processing a refined and usable energy product to that location. The fuel lifecycle begins where the raw feedstock is extracted from the well or mine and ends where the fuel is consumed to power a vehicle, appliance, or other technology.

Emissions released at the point of use are termed "end-use emissions," while those emissions that occur along the delivery pathway are termed "upstream emissions." Upstream emissions include all emissions resulting from the recovery, processing, and transport of fuel to the point of delivery to the end-user.

Energy use is not the only source of upstream emissions. Other production processes also release greenhouse gases. For example, the growing of crops for biofuels production requires the application of nitrogen fertilizer, which causes the formation of nitrous oxide, while natural gas refining causes the release of fugitive emissions of methane. These processes have been quantified by the Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) Model (GREET 2007), making it a valuable tool for comparative lifecycle analyses of fuel systems.

The inclusion of upstream emissions in an analytical comparison of different fuel options can have a significant impact on the results. Limiting the comparison to end-use emissions only, for example, can give the impression that electricity, with zero end-use emissions, is an energy source with no greenhouse gas emissions. Limiting the analysis to end-use emissions would therefore mask the very large fraction of upstream emissions caused by the combustion of fossil fuels for the purpose of electricity generation.

This analysis is intended to give a full lifecycle accounting of greenhouse gas emissions resulting from the use of propane and other fuels for specific applications. By reporting upstream and end-use emissions separately, it is intended that this report will provide a better picture of the impacts of different fuels, and a more useful and informative data set than would be provided by aggregating emissions or restricting the analysis to end-use emissions only.

5

¹The Intergovernmental Panel on Climate Change (IPCC) reports that "Given their short lifetimes and geographically varying sources, it is not possible to derive a global atmospheric burden or mean abundance for most VOC from current measurements." VOCs explicitly include propane (IPCC TAR 2001).

²While VOCs participate in the formation of tropospheric ozone, the climate effect from ozone is not highly understood by scientists and is not one of the six greenhouses gases being considered for regulation by Congress.

III. Methodology

This section describes the general methodology used for all applications. Application-specific assumptions are provided in Appendix B.

Basis for Comparison of Applications

Ten different propane applications were analyzed in order to quantify the lifecycle greenhouse gas emissions of propane fuel systems compared to other fuels. These ten applications were selected to represent not only a variety of market sectors, but also a range of market shares – from well-established propane markets such as forklifts to emerging propane technologies such as the propane-powered light-duty truck.

Each propane technology was compared to alternative fuels commonly used for the same application. Operational variables such as size, hours of operation, and frequency of use were chosen to represent an average or typical use of the technology. Data were obtained from published test results, vendor-supplied specifications, and government studies, and were supplemented with other sources to determine what constituted a typical use. These sources were also used to estimate the energy efficiency of each fuel system. For most applications, the efficiencies were used to determine the amount of fuel needed to deliver an equivalent energy service (e.g., miles traveled or heat supplied) for propane and for each competing fuel option. For some fuels, such as electricity, energy efficiency differences from propane are the result of two different technology designs. In other instances, however, there are only slight differences in technology design between the propane-configured technology and alternate fuel configurations. Where application-specific data was not available, the relative efficiencies of the fuel systems under comparison were based on efficiencies reported for similar technologies.

Upstream Analysis

Upstream emissions as defined in this analysis are the sum of all emissions resulting from the recovery, processing, and transport of fuel from wellhead to the point of delivery to the end-user. These emissions are conveniently quantified by the GREET Model, which was used to estimate the upstream portion of the lifecycle GHG emissions of each fuel system evaluated in this study. The model is used to calculate emissions, in grams per million Btu, of multiple pollutants, including the three greenhouse gases evaluated in this study: carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Table 3.1 gives the upstream emission factors used in this study, which were obtained by running the GREET model.

Table 3.1. Upstream emissions factors (grams per million Btu)

•				•
	CO_2	CH ₄	N_2O	Total CO ₂ equivalent
LPG	8,938	115	0.16	11,855
NG*	5,407	239	0.09	11,397
CNG	12,207	248	0.19	18,455
Electricity	219,707	296	3.12	228,036
Gasoline	17,476	109	1.31	20,595
Diesel	16,629	105	0.27	19,346
E85	-6,810	114	36.08	6,789

^{*} Model output for CNG with compression efficiency set to 100% (removing emissions from compression).

Source: GREET 2007

Upstream emission factors will vary depending on the model's input parameters. These parameters include the type, fractional share, and efficiency of power plants used to generate electricity; market shares of different fuel formulations; fuel feedstock shares and refining efficiencies; and fuel

transportation mode, distance, and mode share. For all fuels except uncompressed natural gas, the default parameter values in the model were used to calculate upstream emission factors.³

The upstream emissions associated with LPG production depend on its feedstock – natural gas or crude oil. LPG is separated from natural gas during production and from crude oil during refining. The model attributes to LPG, on a Btu-fractional basis, emissions produced from the recovery and refining of these feedstocks before the separation of LPG.⁴ As a result, the upstream emissions attributed to LPG depend on the relative contribution of natural gas and crude oil to LPG production. The feedstock shares for LPG used for this analysis are 60% from natural gas and 40% from crude, which are the default values in GREET. LPG produced from crude oil has slightly higher GHG emissions than LPG produced from natural gas refining.

Table 3.2 shows the formulas used to calculate total upstream GHG emissions. Upstream emission factors (in grams per million Btu) were multiplied by total fuel consumption required by each fuel system (in million Btu) in order to obtain total upstream emissions for CO_2 , CH_4 , and N_2O . The total mass of each gas was multiplied by its global warming potential (GWP). Total upstream emissions of GHGs, in metric tons of CO_2 equivalent, was obtained by summing the terms. The values used for global warming potential were those developed by the Intergovernmental Panel on Climate Change (IPCC 2007). Following the widely accepted convention established by the IPCC, results were reported in metric tons of CO_2 equivalent.

Table 3.2. Upstream GHG emissions

For each fuel:

metric tons (GHG) = grams (GHG)/MMBtu (fuel) * MMBtu of fuel consumed $/ 10^6$

Total metric tons of CO_2 equivalent = metric tons $CO_2*(1)$ + metric tons $CH_4*(25)$ + metric tons $N_2O*(298)$

End-use Analysis

End-use emissions are specific to the technology used for each application, and therefore different sources were necessary to estimate various end-use emission factors. The U.S. Department of Energy and the Environmental Protection Agency publish end-use carbon content emission factors for a number of different technologies, and were the source of some of the end-use emission factors used in the applications analyzed. Other sources of end-use emission factors include Delucchi 2000 and GREET

7

³ GREET is designed to quantify the lifecycle emissions of vehicles, and because vehicles using natural gas run on compressed natural gas (CNG), the model does not allow the user to select uncompressed natural gas as a fuel choice. Some applications in this study, however, required the comparison of propane to uncompressed natural gas. Because the compression of natural gas requires a significant amount of energy (and therefore adds to its upstream emissions), the GREET model input for natural gas compression efficiency was set to 100% in order to remove the emissions associated with compression. Compression efficiency as defined by the GREET model is equal to HV/(energy in + HV), where HV is the heating value of the fuel. Setting efficiency at 100% therefore makes energy in equal to zero.

⁴ In other words, all products produced from either crude or natural gas are assumed to begin their lifecycle at the wellhead, even though they have not been physically separated from the feedstock. If a given product stream represents 5% of the Btu content of the feedstock, for example, then that product is assigned 5% of the emissions attributed to the feedstock before refining and separation. This method of assigning emissions is not influenced by the economic value of the product or feedstock.

2007. For vehicle applications, end-use emission factors were based on those used in the GREET model for 2005 model year vehicles.⁵

Total end-use emissions were obtained in the same way as total upstream emissions, by summing the GWP-adjusted end-use emissions of CO₂, CH₄, and N₂O. Unlike upstream emissions factors, however, the units used for end-use emission factors depended on the application. While Btu-based emission factors were applied to some of the applications, the total mass of GHGs emitted from light- and mid-duty trucks was calculated on a grams-per-mile basis, rather than a grams-per-mmBtu basis. The formulas used to calculate end-use emission factors are shown by application in Table 3.3.

Table 3.3. End-use GHG emissions

Water heaters, forklifts, irrigation pumps, space heaters:

For each fuel:

metric tons (GHG) = grams (GHG)/MMBtu (fuel) * MMBtu of fuel consumed $/ 10^6$

Light-duty trucks, mid-duty trucks:

For each fuel:

metric tons (GHG) = grams (GHG)/mile * miles traveled / 10^6

All applications:

Total metric tons of CO_2 equivalent = metric tons $CO_2*(1)$ + metric tons $CH_4*(25)$ + metric tons $N_2O*(298)$

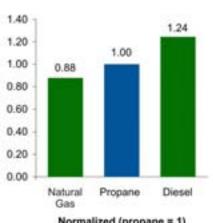
8

⁵ These emission factors were obtained from the spreadsheet "greet1.7.xls." Vehicle performance data is tabulated for every fifth model year. The user must select the year 2015 to get performance data for 2010 model year vehicles.

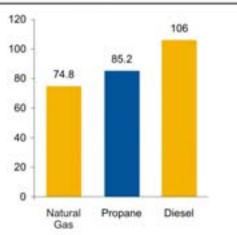
IV. Summary of Findings

Distributed Generation

30 kW prime microturbine.

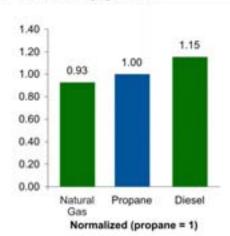


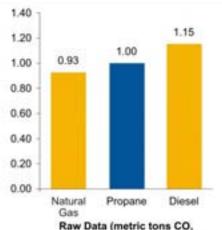
Normalized (propane = 1)



Raw Data (metric tons CO, equivalent per unit per year)

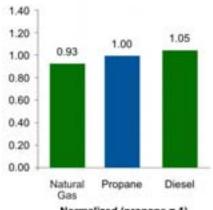
100 kW standby genset



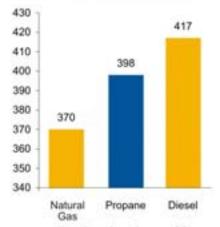


Raw Data (metric tons CO, equivalent per unit per year)

200 kW prime genset.

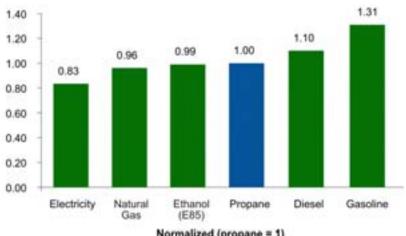


Normalized (propane = 1)

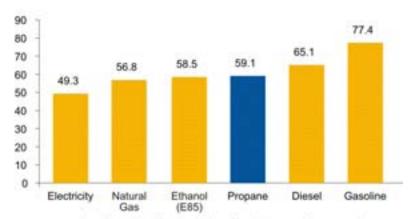


Raw Data (metric tons CO, equivalent per unit per year)

Irrigation Pumps

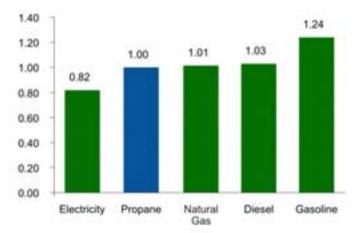




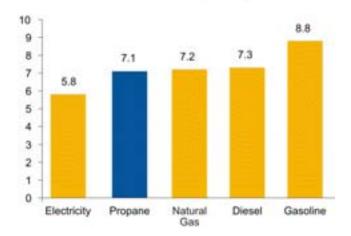


Raw Data (metric tons CO, equivalent per unit per year)

Forklifts

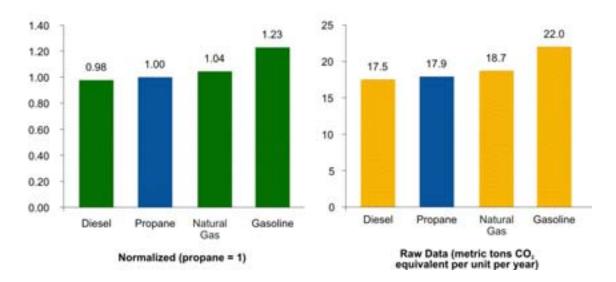


Normalized (propane = 1)

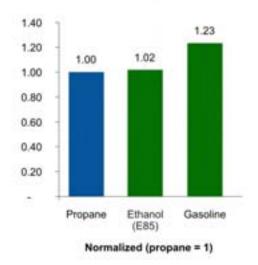


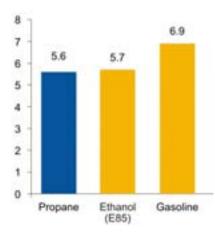
Raw Data (metric tons CO, equivalent per unit per year)

Medium-Duty Engines



Light-Duty Trucks

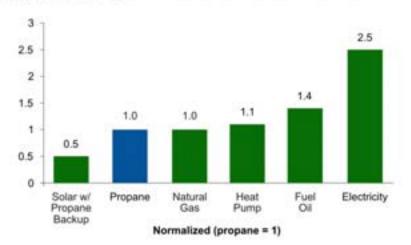


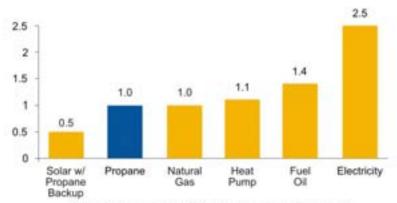


Raw Data (metric tons CO, equivalent per unit per year)

Residential Water Heaters

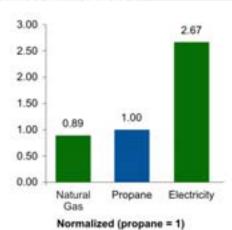
Storage Tank Heater_

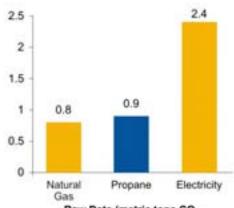




Raw Data (metric tons CO, equivalent per unit per year)

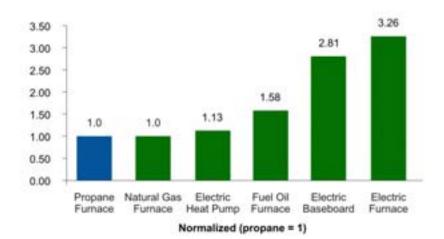
Tankless Water Heater_

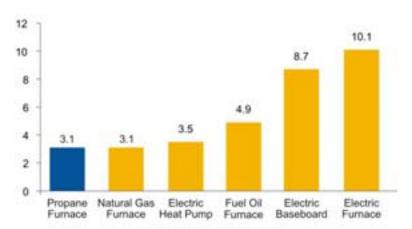




Raw Data (metric tons CO, equivalent per unit per year)

Residential Space Heating





Raw Data (metric tons CO, equivalent per unit per year)

V. Applications

The following pages present a series of one-page summaries for the ten applications considered in this study. Each summary contains energy end-use data, market data, and a comparison of the climate change effects of fuels used in the application. The summaries also include a listing of key assumptions and references. A complete list of assumptions and references for each application is shown in Appendix B.

- **Distributed Generation** Distributed generation (DG) technology provides electricity to off-grid areas and serves as a backup source of power for hospitals, factories, telecommunication centers, and other crucial operations. In total, approximately 12.3 million DG units are currently installed in the U.S., running mainly on diesel fuel, although the use of systems that use propane and natural gas are rapidly growing.
- Irrigation Pumps U.S. farms rely on approximately 500,000 irrigation pumps to deliver water from reservoirs, lakes, streams, and wells for crop production. The majority of irrigation pumps operate using electric motors and diesel fuel. The smallest pumps are often operated by electric motors, while higher capacity wells tend to be operated by diesel, natural gas, and propane engines.
- Forklifts Unlike most vehicles, forklifts use fuel not only for vehicle propulsion but also for load lifting work. Indoor air quality concerns restrict the use of diesel for heavy-duty jobs; electric forklifts are normally used for light-duty jobs, while propane can be used for both.
- Medium-Duty Engines Medium-duty engines are used for many commercial and municipal
 vehicles, including school buses. Diesel currently fuels the majority of school buses in the U.S.,
 despite the EPA considering its exhaust as one of the air pollutants that pose the greatest risks to
 public health. Many school districts have been moving to alternative fuels such as propane and
 compressed natural gas to address this issue.
- **Light-Duty Trucks** Light-duty trucks, such as the Ford F-150, constitute a significant portion of the U.S. vehicle fleet. While gasoline fuels the majority of light-duty trucks in the U.S., ethanol (E85) and propane have gained greater use in recent years.
- **Residential Water Heaters** Residential water heaters include both tank storage units as well as instantaneous ("tankless") water heaters. Both types of water heaters can be gas-fueled or electric. Fuel oil and solar power are also used for storage tank water heating.
- **Residential Space Heating** Homes are most commonly heated by either a centralized system that moves warm air through ducts, or by separate heating units (usually electric) distributed throughout the home. Furnaces can be gas-fired (natural gas or propane), oil-fired, or electric. Nearly five million U.S. households rely on propane for home heating (EIA 2001).

Distributed Generation

Distributed generation (DG) refers to the production of electricity at or near the point at which the power is used. Distributed generators are used in residential and industrial sectors as a prime source of electricity or as a backup source in case of emergency. Prime generators are often used in remote areas not reached by the power grid, or by users that require greater reliability than the local utility can provide. Backup generators include standby supply for hospitals, factories, telecommunication centers, and other critical operations.

Generation capacities for onsite usage typically range from a few kilowatts to several hundred kilowatts. Types of DG that are fueled by propane include microturbines, generator sets (gensets), polymer electrolyte membrane (PEM) fuel cells and solid oxide fuel cells (SOFC). Microturbines operate like jet engines that produce electricity instead of thrust, while gensets consist of a combustion engine driving an electrical generator. Fuel cells generate electricity by the chemical combination of fuel and oxygen. GHG emissions analyses were conducted for three combinations of capacities, operating use (prime/standby), and type (microturbine/genset), and are intended to present an emissions profile representative of common distributed generation use.

Market Data

In total, there are approximately 12.3 million DG units installed in the U.S. with an aggregate capacity of 222 GW (DG Monitor 2005). In the commercial sector, about 5% of businesses have the ability to generate electricity onsite, with 78% of those businesses using DG for emergency backup generation (EIA 2006). Most of the installed DG capacity is combustion gensets, with alternative types of DG rapidly growing. The microturbine industry is an emerging technology, with the leading supplier – Capstone – having delivered about 2,500 units (30 kW and 60 kW units) (Gas Plants, Inc. 2006).

Climate Change Comparison

Climate Cha	Climate Change Comparison					
	Annual Greenhouse Gas Lifecycle Emissions per unit					
(metric ton	s CO ₂ equivale	ent)			
	30 kW pri	me microturbii	ne			
	Total	End-use	Upstream			
Diesel	106	84.3	22.0			
Natural gas	74.8	62.7	12.1			
LPG	85.2	72.3	12.9			
	100 kW standby genset					
	Total	End-use	Upstream			
Diesel	1.88	1.50	0.39			
Natural gas	1.51	1.27	0.24			
LPG	1.63	1.38	0.24			
	200 kW	' prime genset				
	Total	End-use	Upstream			
Diesel	417	331	86.0			
Natural gas	370	311	58.5			
Propane	398	338	59.2			

Energy End-Use Data

Energy End-Use Data					
Performance and Energy Use Characteristics of Representative DG ²					
Fuel	Electrical Energy Use				
	Efficiency, HHV (%)	(MMBtu/unit/yr)			
30	kW prime micro	turbine			
Diesel	22.7	1151			
Natural gas	23.6	1107			
LPG	23.6	1107			
1	00 kW standby g	genset			
Diesel	33.5	20.3			
Natural gas	31.0	22.0			
LPG	32.7	20.9			
	200 kW prime ge	enset			
Diesel	38.8	4493			
Natural gas	32.5	5359			
LPG	34.2	5091			

Key Assumptions

- Energy use is based on vendor specs for power-only (no CHP) 60Hz gensets operating at 100% nameplate load for 7 hours per day for prime and 20 hours per year for standby.
- 2. Emissions from point of extraction to point of use based on GREET model.

See Appendix B for full list of assumptions and references.

Footnotes

- 1. GHG emission profiles for PEMs and SOFCs have not been separately evaluated in this study.
- Representative generators for 30 kW microturbines: Capstone C30 Liquid Fuel, Capstone C30 Natural Gas; 100kW genset: John Deere J150U, Cummins 100GGHH; 200kW genset: Armstrong AJD200, Caterpillar G3508

Irrigation Pumps

Irrigation pumps deliver water from reservoirs, lakes, streams, and wells to farm fields for crop production. Most irrigation pumps are centrifugal, driven by an engine connected to the drive shaft (see

diagram). The energy required to run a pump is measured in terms of fuel consumption or electric power use of the engine driving the shaft. Most irrigation pumps range in size from 30 to 300 hp and operate at a steady speed and load for many hours, often 24 to 48 hours nonstop. The effectiveness in converting fuel or electricity to mechanical power to drive the irrigation pump varies based on the type of engine, operating conditions, engine load, and maintenance. This emissions analysis compares properly loaded and maintained 100 hp engines driving centrifugal irrigation pumps.

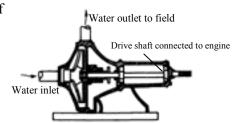
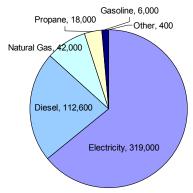


Diagram of centrifugal irrigation pump. Source: Scherer 1993.

Market Data

In the U.S. there are approximately 500,000 irrigation pumps, powered by fuels and electricity.



The smallest pumps are often operated by electric motors, while higher capacity wells tend to be operated by diesel, natural gas, and propane engines. Source: USDA 2004.

Energy End-Use Data

Energy Use from 100hp Irrigation Pumps (MMBtu/unit/yr)

	Fuel Use	
Fuel	Rate	Source
Ethanol (E85)	829	Smajstrla and Zazueta 2003; DOE-EPA 2007.
Diesel	704	Smajstrla and Zazueta 2003.
Gasoline	829	Smajstrla and Zazueta 2003.
Natural gas	843	Evans, Sneed, and Hunt 1996.
LPG	767	Smajstrla and Zazueta 2003.
Electricity	217	Smajstrla and Zazueta 2003.

Climate Change Comparison

Annual Greenhouse Gas Lifecycle Emissions for 100hp Irrigation Pump (metric tons CO₂ equivalent)

1	00 0 0 2 0	9 0 0	,
		End-	Up-
Fuel	Total	use	stream
Electricity	49.3	0	49.3
Natural gas	56.8	47.5	9.2
Ethanol (E85)	58.5	57.3	1.1
LPG	59.1	50.2	8.9
Diesel	65.1	51.6	13.5
Gasoline	77.4	60.5	16.9

(a) Credit is given to biodiesel for carbon sequestration during crop production

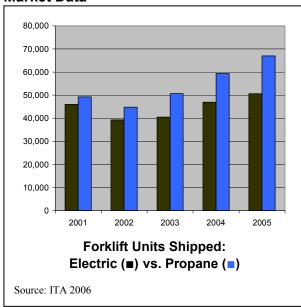
Key Assumptions

- Upstream emissions (from point of extraction to point of use) are based on GREET model.
- 2. Emissions at point of use are based on 100 hp irrigation pump operating 749 hours per year.

Forklifts

Forklifts are used to move and stack loads, usually in warehouses. Unlike most vehicles, fuel is used not only for vehicle propulsion (with maximum speeds usually between 10-15 mph), but also for load lifting work. A large variety of forklifts can run on propane. Other fuels commonly used for forklifts are electricity, compressed natural gas (CNG), gasoline, and diesel. Fuel choice may depend on load size and air quality concerns – electric forklifts are normally used for light-duty jobs, while diesel fuel is typically used for extremely heavy-duty loads and is restricted to outdoor use for air quality reasons. Propane is used for both light- and heavy-duty applications.

Market Data



Energy End-Use Data

Fuel	MMBtu per forklift per year
Electric	26
LPG	88
CNG	92
Diesel	74
Gasoline	90

Based on an average LPG forklift using 973 gallons per year (Delucchi 2000) and under 100 horsepower.

Climate Change Comparison

	Metric tons CO₂ equivalent per forklift per year			
Fuel	Up- Total End-use stream			
Electric	5.8	0.0	5.8	
LPG	7.1	6.1	1.0	
CNG	7.2	5.6	1.7	
Diesel	7.3	5.9	1.4	
Gasoline	8.8	7.0	1.9	

(Note: Totals may not add due to rounding)

Key Assumptions

- 1. Assumes as in Delucchi 2000 that twothirds of forklift energy use goes to vehicle propulsion and one-third goes to lifting.
- 2. For forklifts powered by fuels other than propane, the relative efficiencies of lifting and propulsion compared to a propane-based system were used to estimate the fuel consumption of those vehicles.
- 3. Thermal engine efficiencies estimated by Delucchi were used to calculate fuel required for lifting work.
- 4. Relative fuel efficiencies used by the GREET model for 6000-8500 lbs. GVW vehicles were used to calculate fuel required for propulsion.

Medium-Duty Engines

Medium-duty engines are used for many commercial and municipal vehicles, including school buses. Diesel currently fuels the majority of school buses in the U.S. today, despite the fact that exposure to diesel exhaust is known to cause a number of adverse health effects. Diesel exhaust is also among the air pollutants considered by the EPA to pose the greatest risks to public health (CARB 1998, EPA 2003). As a consequence, many school districts across the country have been looking for alternatives to diesel in order to fuel their school bus fleets. A propane-powered school bus using an EPA-certified 8.1L Liquid Propane Injection (LPI) system is one such alternative.

Market Data

There are approximately 450,000 school buses transporting 24 million school children each school day (School Bus Fleet 2007). Propane fuels more than 1,400 of those school buses in the United States (PERC 2000).

Energy End-Use Data

Fuel	MMDtu per bue per veer
	MMBtu per bus per year
Diesel	189
LPG	240
CNG	252
Gasoline	240

Based on a standard size (Type C) school bus traveling 9,000 miles per year.

Climate Change Comparison

	Metric tons CO ₂ equivalent per bus per year			
Fuel	Up- Total End-use stream			
Diesel	17.5	13.9	3.7	
LPG	17.9	15.1	2.8	
CNG	18.7	14.0	4.7	
Gasoline	22.0	17.0	4.9	

(Note: Totals may not add due to rounding)

Key Assumptions

- 1. Assumes fuel efficiencies for diesel and CNG buses reported in ANTARES Group 2004.
- 2. Fuel efficiencies for LPG and gasoline vehicles were estimated by applying the ratio of fuel efficiencies used by the GREET model for 6000-8500 lbs. GVW vehicles (the largest size class in the model) to CNG school bus fuel efficiency reported by ANTARES Group.

Light-Duty Trucks

Light-duty trucks, such as the Ford F-150, constitute a significant portion of the U.S. vehicle fleet. While gasoline fuels the majority of light-duty trucks in the U.S., ethanol (E85) and propane have gained greater use in recent years. The Roush F-150 pickup uses Liquid Propane Injection (LPI) technology to make the F-150 a dedicated propane vehicle. Using an engine computer specifically calibrated for propane, the LPI system directly replaces the OEM gasoline injection system. The propane-powered F-150 offers the same performance as a gasoline-powered pickup truck. Ethanol (E85) may also be used in Ford's flex-fuel model of the F-150, which can be fueled by either regular gasoline or E85. E85 is composed of 85% ethanol and 15% petroleum by volume.

Market Data

The Ford F-series pick-up trucks have been the top-selling vehicle in the United States for 25 consecutive years, with close to 1,000,000 vehicles sold in each of the past several years (Forbes.com 2006).

Energy End-Use Data

Fuel	MMBtu per vehicle per year
LPG	75
E85	75
Gasoline	75

Based on a pickup truck traveling 10,000 miles per year.

Climate Change Comparison

	Metric tons CO2 equivalent per vehicle per year		
Fuel	Total	End- use	Up-stream
LPG	5.6	4.7	0.9
Ethanol (E85)	5.7	5.2	0.5
Gasoline	6.9	5.3	1.5

(Note: Totals may not add due to rounding)

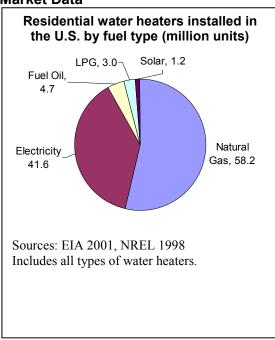
Key Assumptions

- 1. Fuel efficiencies used by the GREET model for 6000-8500 lbs. GVW vehicles were used to calculate fuel use for equivalent miles traveled. See appendix for values
- 2. GHG emissions factors for E85 are specifically for combustion in a flex-fuel vehicle.

Residential Water Heaters

Propane residential water heaters include both tank storage units as well as instantaneous ("tankless") water heaters. While storage water heaters keep a constantly available supply of hot water, tankless units heat water as it is supplied to the end user. Both storage and tankless units can be gas-fueled or electric. Gas water heaters are designed to run on either propane or natural gas. Fuel oil and solar power, however, are only used for storage tank water heating. Solar water heaters frequently use electricity to pump water through the collector, and solar water heating systems almost always require a conventional heater as a backup for cloudy days (DOE 2005d). Heat pump water heaters use electricity to move heat rather than generate it directly. They are more efficient than electric water heaters but very few are commercially available.

Market Data



Energy End-Use Data

Storage tank heater			
Fuel	MMBtu per unit per year		
Solar w/ LPG backup	7		
LPG	16		
Natural gas	16		
Heat pump	5		
Fuel oil	16		
Electricity	11		

Tankless water heater

	MMBtu per unit per	
Fuel	year	
Natural gas	12	
LPG	12	
Electricity	11	

Based on equal hot water delivery compared to a propane storage water heater using an average 15.8 MMBtu/yr (EIA 2001), equal to 173 gallons of LPG per year.

Climate Change Comparison

Storage tank heater			
	Metric tons CO2 equivalent per unit per year		
Fuel	end- up- total use stream		
Solar w/ LPG			
backup	0.5	0.3	0.2
LPG	1.0	8.0	0.2
Natural gas	1.0	0.8	0.2
Heat pump	1.1	0.0	1.1
Fuel oil	1.4	1.1	0.3
Electricity	2.5	0.0	2.5

Tankless water heater

	Metric tons CO2 equivalent per unit per year			
Fuel	end- up- total use stream			
Natural gas	8.0	0.7	0.1	
LPG	0.9	8.0	0.1	
Electricity	2.4	0.0	2.4	

Key Assumptions

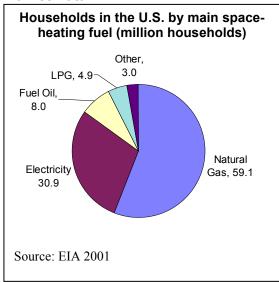
- 1. Energy efficiencies based on the highest energy factor reported in the GAMA Directory of Certified Efficiency Ratings (GAMA 2006). Solar water heater energy efficiency based on DOE 2005c.
- 2. Fuel consumption of propane storage tank heater based on average residential energy consumption for water heating. Tankless propane fuel consumption based on relative efficiency compared to a tank heater. See appendix for efficiency values (energy factors) used.
- 3. Solar water heater uses electricity for fluid circulation. Solar water heater delivers 60% of water heating load with remaining 40% from a backup LPG system.

Residential Space Heating

Homes are most commonly heated by either a centralized system that moves warm air through ducts or by separate heating units (usually electric) distributed throughout the home. Furnaces can be gas-fired, oil-fired, or electric; most gas furnaces can be fueled by either natural gas or propane. Heat pumps use electricity to heat air, but do so by moving heat rather than generating heat by electrical resistance. This makes heat pumps more efficient than electric radiators, and allows them to deliver more heat energy than they use in electricity.

Because boilers have the same range of energy efficiencies as furnaces, they were not added to the analysis, but their greenhouse gas emissions can reasonably be assumed to be comparable to those of furnaces. Similarly, a number of different electric resistance heating units can be used to heat rooms, but because they all convert nearly 100% of electricity into useful heat, their emissions impact will be similar to electric baseboard heating.

Market Data



Energy End-Use Data

Fuel	MMBtu per heating system per year
LPG Furnace	47
Natural Gas Furnace	47
Electric Heat Pump	15
Fuel Oil Furnace	53
Electric Baseboard	38
Electric Furnace	44

Based on a furnace delivering 38 million Btu of useful heat, typical of a furnace in a winter climate zone such as the mid-Atlantic.

Climate Change Comparison

	Metric tons CO2 equivalent per heating system per year		
Fuel	Total	End-use	Up- stream
LPG Furnace	3.1	2.5	0.6
Natural Gas Furnace	3.1	2.5	0.6
Electric Heat Pump	3.5	0.0	3.5
Fuel Oil Furnace	4.9	3.9	1.0
Electric Baseboard	8.7	0.0	8.7
Electric Furnace	10.1	0.0	10.1

Key Assumptions

- 1. Estimated useful heat delivered by a propane furnace was 38 million Btu, and was based on an average energy consumption of 52.6 million Btu per year of propane in a region with 4000-5499 heating degree days (EIA 2001) after estimated average efficiency (15%) and duct losses (15%) were applied.
- 2. Energy efficiencies based on the highest annual fuel utilization efficiency (AFUE) reported in the GAMA Directory of Certified Efficiency Ratings (GAMA 2006) for gas and fuel oil furnaces with greater than 60,000 Btu-hour ratings.
- 3. Assumed 100% conversion efficiency of electric heaters and electric furnaces.

VI. Appendix A – Glossary

Carbon dioxide (CO₂) equivalent

The amount of carbon dioxide by weight emitted into the atmosphere that would produce the same estimated radiative forcing as a given weight of another radiatively active gas. Carbon dioxide equivalents are computed by multiplying the weight of the gas being measured (for example, methane) by its estimated global warming potential (which is 21 for methane). "Carbon equivalent units" are defined as carbon dioxide equivalents multiplied by the carbon content of carbon dioxide (i.e., 12/44) (EIA 2007).

End-use

Pertaining to the ultimate consumption of energy or fuel (adapted from "end user," EIA 2007).

Global Warming Potential (GWP)

An index used to compare the relative radiative forcing of different gases without directly calculating the changes in atmospheric concentrations. GWPs are calculated as the ratio of the radiative forcing that would result from the emission of one kilogram of a greenhouse gas to that from the emission of one kilogram of carbon dioxide over a fixed period of time, such as 100 years (EIA 2007).

Greenhouse Gases (GHG)

Those gases, such as water vapor, carbon dioxide, nitrous oxide, methane, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride, that are transparent to solar (short-wave) radiation but opaque to long-wave (infrared) radiation, thus preventing long-wave radiant energy from leaving Earth's atmosphere. The net effect is a trapping of absorbed radiation and a tendency to warm the planet's surface. (EIA 2007).

Lifecycle

The process from raw material acquisition (including exploration and production) through end-use by the consumer.

Radiative forcing

A change in average net radiation at the top of the troposphere (known as the tropopause) because of a change in either incoming solar or exiting infrared radiation. A positive radiative forcing tends on average to warm the earth's surface; a negative radiative forcing on average tends to cool the earth's surface. Greenhouse gases, when emitted into the atmosphere, trap infrared energy radiated from the earth's surface and therefore tend to produce positive radiative forcing (EIA 2007).

Upstream

Pertaining to any process, or the sum total of processes, used to produce or deliver energy up to the point of consumption by the end-user. Concerns all processes used in the transformation of raw feedstock into fuel, including raw material extraction, processing, transportation, distribution, and storage (adapted from diagram, Argonne National Laboratory 2007).

VII. Appendix B – Assumptions and References

About Climate Change

References

Climate Leaders. 2004. Direct Emissions from Stationary Combustion Sources. *Climate Leaders Greenhouse Gas Inventory Protocol Core Module Guidance*. U.S. Environmental Protection Agency (EPA) (October). http://www.epa.gov/climateleaders/docs/stationarycombustionguidance.pdf

Intergovernmental Panel on Climate Change (IPCC). 2001. Atmospheric Chemistry and Greenhouse Gases. *Climate Change 2001: The Scientific Basis*. http://www.grida.no/climate/ipcc_tar/wg1/pdf/TAR-04.PDF

Rubin, Edward S. and Anand B Rao. 2002. *A Technical, Economic and Environmental Assessment of Amine-based CO₂ Capture Technology for Power Plant Greenhouse Gas Control*. Technical Progress Report, prepared by Center for Energy and Environmental Studies, Carnegie Mellon University, Pittsburgh, PA, for U.S. Department of Energy, National Energy Technology Laboratory, Pittsburgh, PA, DOE/DE-FC26-00NT40935 (October). http://www.iecm-online.com/ESRubin/esr%20papers/2001f%20Rao%20and%20Rubin%20DOENETL%20Oct.pdf

U.S. Department of Energy (DOE). 1994. Sector-Specific Issues and Reporting Methodologies Supporting the General Guidelines for the Voluntary Reporting of Greenhouse Gases under Section 1605(b) of the Energy Policy Act of 1992. Volume 1: Part 1, Electricity supply sector; Part 2, Residential and commercial buildings sector; Part 3. Industrial sector, DOE/PO-0028-Vol. 2 (October). http://www.osti.gov/bridge/servlets/purl/10196818-8dgiqi/webviewable/

U.S. Environmental Protection Agency (EPA). 2007. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2005*. Table A-10, EPA 430-R-07-002 (April).

Methodology

References

The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) Model. 2007. GREET 2, Version 1.7. UChicago Argonne, LLC.

Intergovernmental Panel on Climate Change (IPCC) 2007. Climate Change 2007: The Physical Science Basis: Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. http://ipcc-wgl.ucar.edu/wgl/wgl-report.html

Distributed Generation

Assumptions

- 1. Energy use is based on vendor specs for power-only (no CHP) 60Hz gensets operating at 100% nameplate load.
- 2. End-use energy consumption data are based on reported fuel use in vendor specifications of representative generators. Representative generators for 30 kW microturbines: Capstone C30 Liquid Fuel, Capstone C30 Natural Gas; 100kW genset: John Deere J150U, Cummins 100GGHH; 200kW genset: Armstrong AJD200, Caterpillar G3508. (Vendor specs 2007)
- 3. Capstone C30 microturbine is operated at ambient temperatures above 35°F (a propane pump and vaporizer is unnecessary) (Gas Plants, Inc. 2006).

- 4. Methane and nitrous oxide emission factors are based on Delucchi 2000.
- 5. Carbon content (kg CO2/million Btu) of all fuels evaluated assumes 99% combustion. Table B.1 DOE 1994.
- 6. Energy content of fuels based on EIA 2007 and EIA 2007a.
- 7. Upstream emissions (from point of extraction to point of use) for all fuels are based on GREET model version 1.5 (GREET Model 2007).
- 8. Assume representative standby generator operates 20 hours per year. (15 min. per week for exercising = 13 hours, plus 7 hours of operation average in a poor power area). Source: email correspondence with PERC May 15, 2007.
- 9. Prime power units can operate from 4-10 hours per day. Assume 7 hours per day for an average unit. Source: email correspondence with PERC May 15, 2007.
- 10. Global warming potentials (GWP) are used to combine the three greenhouse gases into metric tons of carbon dioxide equivalent. GWPs for this study are based on 100 year time horizon: CO2 = 1, methane = 25, nitrous oxide = 298 (IPCC 2007).

References

Delucchi, Mark. 2000. LPG and Other Alternative Fuels for Highway Vehicles, Forklifts, and Household Heating: A Fuelcycle Analysis of Emissions of Urban Air Pollutants and Greenhouse-Gases. Institute of Transportation Studies, University of California Davis (March).

DG Monitor. 2005. *Installed Base of U.S. Distributed Generation: 2005 Edition*. Resource Dynamics Corporation.

Energy Information Administration (EIA). 2007. Thermal Conversion Factors. *Monthly Energy Review* (April), 157. http://www.eia.doe.gov/emeu/mer/pdf/mer.pdf

Energy Information Administration (EIA). 2007a. Thermal Conversion Factor Source Documentation. *Approximate Heat Content of Natural Gas.* (Table A4). http://www.eia.doe.gov/emeu/mer/pdf/pages/sec12_4.pdf

Energy Information Administration (EIA). 2006. Consumption and Expenditures Tables for Non-Mall Buildings. 2003 Commercial Buildings Energy Consumption Survey (CBECS) Detailed Tables (December).

http://www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed_tables_2003/detailed_tables_2003.html#consumexpen03

Intergovernmental Panel on Climate Change (IPCC). 2007. Changes in Atmospheric Constituents and in Radiative Forcing. *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.* Chapter 2. http://ipcc-wg1.ucar.edu/wg1/Report/AR4WG1_Ch02.pdf

Gas Plants, Inc. 2006. Propane-Fueled Microturbine Case Study: Potential of Propane as a Microturbine Fuel. Prepared for the Propane Education and Research Council (September 1). http://www.propanecouncil.org/files/10466 Superior MT CaseStudy.pdf

The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) Model. 2007. GREET, Version 1.5. UChicago Argonne, LLC.

U.S. Department of Energy (DOE). 1994. Sector-Specific Issues and Reporting Methodologies Supporting the General Guidelines for the Voluntary Reporting of Greenhouse Gases under Section 1605(b) of the Energy Policy Act of 1992. Volume 1: Part 1, Electricity supply sector; Part 2, Residential and commercial buildings sector; Part 3. Industrial sector, DOE/PO-0028-Vol. 2 (October). http://www.osti.gov/bridge/servlets/purl/10196818-8dgiqi/webviewable/

Vendor specs. 2007.

- Armstrong AJD200. *Armstrong AJD Line Diesel Powered*. Armstrong Power Trade. http://www.armstrongpower.com/b144-ajd.pdf (accessed May 2007).
- Capstone C30 Liquid Fuel. 2006. *C30 Liquid Fuel MicroTurbine Performance Specifications*. Capstone Turbine Corporation. http://www.microturbine.com/_docs/PDS_C30LiqFuelPerSpecs1R.pdf (accessed May 2007).
- Capstone C30 Natural Gas. 2006. *C30 Natural Gas MicroTurbine Performance Specifications*. Capstone Turbine Corporation. http://www.microturbine.com/_docs/PDS_C30NatGasPerfSpecs1R.pdf (accessed May 2007).
- Caterpillar G3508. 2001. *Gas Petroleum Engine G3508: Caterpillar Engine Specifications*. Caterpillar. http://www.cat.com/cda/files/98936/7/lehw0810.pdf (accessed May 2007).
- Cummins 100GGHH. Cummins Power Generation. *Exhaust Emission Data Sheet 100GGHH*. http://www.onan-generators.biz/cart/PDF/industrial/gas/LP/GGHH-60-em.pdf (accessed May 2007).
- John Deere J150U. *J150U Diesel Genset*. SDMO Industries. http://www.sdmo.com/sitev3/files/pdf/GB/J150U.pdf (accessed May 2007).

Irrigation Pumps

Assumptions

- 1. Fuel and electricity use are based on performance standards determined for internal combustion engines using standard accessories, including a water pump, fan, and radiator (Smajstrla and Zazueta 2003).
- 2. Methane and nitrous oxide emission factors are based on Delucchi 2000 unless otherwise noted below.
- 3. Assume methane emissions are 2% higher from E85 combustion than gasoline combustion based on a hydrocarbon emissions analysis from small engines in this study: Varde 2002.
- 4. Carbon content (kg CO2/million Btu) of all fuels evaluated assumes 99% combustion. Table B.1 DOE 1994.
- 5. Energy content of fuels based on EIA 2007, Bioenergy Feedstock Information Network 2007, and Evans, Sneed, and Hunt 1996.
- 6. There is no meaningful difference in engine efficiency between E85 and gasoline. Fuel usage of E85 is higher due to ethanol's lower energy content (EPA-DOE 2007).
- 7. Upstream emissions (from point of extraction to point of use) for all fuels are based on GREET model version 1.5 (GREET Model 2007).
- 8. Upstream ethanol emissions are based on the GREET model for converting corn to ethanol. The emissions and energy use involved in the production of corn are calculated on the basis of the amount of fuel and chemicals (fertilizer, herbicides, and insecticides) used per bushel. Energy efficiency of 97.7% is assumed for ethanol transportation, storage, and distribution. The figure below presents the stages that are included for the upstream ethanol calculations in GREET 1.5.

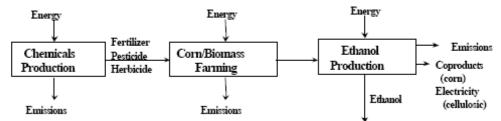


Diagram of upstream elements for calculating emissions from ethanol fuel production. Figure 4.1 from GREET 2007.

- 9. Assume representative irrigation pump operates 749 hours per year. Source Autumn Wind Associates 2004, page 20.
- 10. Global warming potentials (GWP) are used to combine the three greenhouse gases into metric tons of carbon dioxide equivalent. GWPs for this study are based on 100 year time horizon: CO2 = 1, methane = 25, nitrous oxide = 298 (IPCC 2007).

References

Autumn Wind Associates. 2004. Low-emission LPG Agricultural Engine Market Development Program Report for Texas and California. *PERC Low-Emission Agricultural Engine Development Program Report* (March).

Delucchi, Mark. 2000. LPG and Other Alternative Fuels for Highway Vehicles, Forklifts, and Household Heating: A Fuelcycle Analysis of Emissions of Urban Air Pollutants and Greenhouse-Gases. Institute of Transportation Studies, University of California Davis (March).

Energy Information Administration (EIA). 2007. Thermal Conversion Factors. *Monthly Energy Review* (April), 157. http://www.eia.doe.gov/emeu/mer/pdf/mer.pdf

Evans, Robert, R.E. Sneed, and J.H. Hunt. 1996. *Irrigation Management Strategies to Improve Water-& Energy-Use Efficiencies*, AG 452-5. North Carolina Cooperative Extension Service (June). http://www.bae.ncsu.edu/programs/extension/evans/ag452-5.html

The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) Model. 2007. GREET, Version 1.5. UChicago Argonne, LLC.

Intergovernmental Panel on Climate Change (IPCC). 2007. Changes in Atmospheric Constituents and in Radiative Forcing. Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Chapter 2. http://ipcc-wg1.ucar.edu/wg1/Report/AR4WG1_Ch02.pdf

Scherer, Thomas F. 1993. *Irrigation Water Pumps*, AE-1057. North Dakota State University Extension Service (April). http://www.ag.ndsu.edu/pubs/ageng/irrigate/ae1057w.htm#Factors

Smajstrla, A.G., B.F. Castro, and G.A. Clark. 2002. *Energy Requirements for Drip Irrigation of Tomatoes in North Florida*, BUL289. Agricultural and Biological Engineering Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida (July). http://edis.ifas.ufl.edu/AE044

Smajstrla, A.G. and F.S. Zazueta. 2003. *Loading Effects on Irrigation Power Unit Performance*, AE242. Agricultural and Biological Engineering Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida (June). http://edis.ifas.ufl.edu/AE047

U.S. Department of Agriculture (USDA). 2004. Farm and Ranch Irrigation Survey (2003). 2002 Census of Agriculture. Vol. 3, Special Studies, Part 1, AC-02-SS-1 (November). http://www.nass.usda.gov/census/census02/fris/fris03.pdf

U.S. Department of Energy (DOE). 1994. Sector-Specific Issues and Reporting Methodologies Supporting the General Guidelines for the Voluntary Reporting of Greenhouse Gases under Section 1605(b) of the Energy Policy Act of 1992. Volume 1: Part 1, Electricity supply sector; Part 2, Residential and commercial buildings sector; Part 3. Industrial sector, DOE/PO-0028-Vol. 2 (October). http://www.osti.gov/bridge/servlets/purl/10196818-8dgiqi/webviewable/

U.S. Environmental Protection Agency (EPA), U.S. Department of Energy (DOE). EPA-DOE 2007. www.fueleconomy.gov. *Alternative Fuel Vehicles*. U.S. Department of Energy (DOE), Energy Efficiency and Renewable Energy (EERE); U.S. Environmental Protection Agency (EPA) (accessed May 2007). http://www.fueleconomy.gov/feg/current.shtml

Varde, Keshav S. 2002. *Final Report: Control of Exhaust Emissions from Small Engines Using E-10 and E-85 Fuels*. University of Michigan-Dearborn (October 10). http://www.michigan.gov/documents/CIS_EO_Control_of_Emissions-E85-Final_AF-E-_87915_7.pdf

Forklifts

Assumptions

- 1. Average fuel use of 973 gallons of propane per year is based on market data provided in Delucchi 2000, which cites 400,000 forklifts using 389 million gallons of propane annually.
- 2. The analysis used the assumption by Delucchi that two-thirds of forklift energy use goes to vehicle propulsion and one-third goes to lifting. This fraction was not based on actual usage data, but was considered by the author to be a reasonable assumption.
- 3. For forklifts powered by fuels other than propane, the relative efficiencies of lifting and propulsion compared to a propane-based system were used to estimate the fuel consumption of those vehicles.
- 4. Relative fuel efficiencies used by the GREET model for 6000-8500 lbs. GVW vehicles, model year 2010, were used to calculate fuel use for equivalent miles traveled. The ratio of the fuel economy of each vehicle type (in miles per gasoline equivalent gallon) relative to a gasoline powered vehicle are as follows: electric 3.5; LPG and gasoline 1.0, CNG .95; diesel 1.31.
- 5. Thermal engine efficiencies were used to calculate fuel use for equivalent lifting work in Btus. Forklift engine thermal efficiencies used were those used by Delucchi: LPG and CNG 28.0%; gasoline 26.7%; diesel 28.5%. Electric motor thermal efficiency was assumed to be 95%.
- 6. Upstream emission factors were based on the output of the GREET model (GREET 2007). See text for a discussion of the assumptions used with this model.
- 7. End-use emission factors were based on those used in the GREET model for 6000-8500 lbs. GVW vehicles, given in grams-per-mile in the "greet1.7.xls" input file provided with the model. Emission factors were converted from grams-per-mile to grams-per-MMBtu of fuel.

References

The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) Model. 2007. GREET 2, Version 1.7. UChicago Argonne, LLC.

Delucchi, Mark. 2000. LPG and Other Alternative Fuels for Highway Vehicles, Forklifts, and Household Heating: A Fuelcycle Analysis of Emissions of Urban Air Pollutants and Greenhouse-Gases. Institute of Transportation Studies, University of California Davis (March).

Industrial Truck Association (ITA). 2006. Information purchased by the Propane Education and Research Council (PERC).

Medium-Duty Engines

Assumptions

- 1. Different fuel systems were evaluated based on the emissions resulting from the delivery of an equivalent energy service miles traveled.
- 2. The assumption of 9,000 miles traveled per year was based on the same assumption by ANTARES Group (ANTARES Group 2004).
- 3. The following fuel economy values (in diesel-equivalent gallons) were used in the comparative analysis: LPG school bus 5.2; CNG school bus 5.0; diesel school bus 6.6; gasoline school bus 5.2. Fuel efficiency for CNG and diesel vehicles were those reported by ANTARES. This source assumed that LPG buses had the same fuel economy as CNG vehicles. But because the fuel tanks of CNG vehicles are heavier than those of LPG vehicles and create a fuel economy penalty, the relative fuel efficiencies used by the GREET model (GREET 2007) were used to get a more accurate estimate LPG fuel economy. Relative fuel efficiencies used by the GREET model for 6000-8500 lbs. GVW vehicles, model year 2010, were used to estimate the fuel economy of LPG as well as gasoline school buses. The fuel economy of the LPG vehicle in the GREET model is 5.3% higher than that of a CNG vehicle (on an equivalent gallon basis). This difference was applied to reported fuel economy for CNG school buses in order to calculate fuel economy for an LPG bus. Because the GREET model assumes that LPG and gasoline vehicles have the same fuel efficiency on an equivalent gallon basis, gasoline bus fuel efficiency was assumed to be equal to the LPG bus value.
- 4. Upstream emission factors were based on the output of the GREET model. See text for a discussion of the assumptions used with this model.
- 5. End-use emission factors were based on those used in the GREET model for 6000-8500 lbs. GVW vehicles

References

ANTARES Group, Inc. 2004. *Economic Analysis of Alternative Fuel School Buses*. Prepared for the US Department of Energy, Clean Cities Program.

California Air Resources Board (CARB), Scientific Review Panel,1998. SRP findings on the report: "Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant" as adopted at the Panel's April 22, 1998 meeting. http://www.arb.ca.gov/toxics/dieseltac/combined.pdf

The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) Model. 2007. GREET 2, Version 1.7. UChicago Argonne, LLC.

U.S. Environmental Protection Agency (EPA), Office of Transportation and Air Quality, 2003. "What You Should Know About Diesel Exhaust and School Bus Idling" EPA420-F-03-021 (June). http://epa.gov/otaq/retrofit/documents/f03021.pdf

Propane Education and Research Council (PERC). 2000. Across the Country School Bus Fleet Managers Find Safety, Savings, and Environmental Quality with Propane. Press release (October 4). http://www.propanecouncil.org/newsroom/press_releaseDetail.cfv?id=86 (accessed June 2007).

School Bus Fleet. 2007. Frequently Asked Questions. http://www.schoolbusfleet.com/t inside.cfm?action=fag (accessed June 2007).

Light-Duty Trucks

Assumptions

- 1. Different fuel systems were evaluated based on the emissions resulting from the delivery of an equivalent energy service miles traveled.
- 2. A typical pickup truck was estimated to travel 10,000 miles per year.
- 3. The following fuel economy values (in gasoline-equivalent gallons) were those used in the GREET model (GREET 2007), and were used in the comparative analysis: LPG, gasoline, and E85 16.7.
- 4. Upstream emission factors were based on the output of the GREET model. See text for a discussion of the assumptions used with this model.
- 5. End-use emission factors were based on those used in the GREET model for 6000-8500 lbs. GVW vehicles, given in grams-per-mile in the "greet1.7.xls" input file provided with the model.

References

ANTARES Group, Inc. 2004. *Economic Analysis of Alternative Fuel School Buses*. Prepared for the US Department of Energy, Clean Cities Program.

California Air Resources Board (CARB), Scientific Review Panel,1998. SRP findings on the report: "Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant" as adopted at the Panel's April 22, 1998 meeting. http://www.arb.ca.gov/toxics/dieseltac/combined.pdf

Forbes.com. 2006. Best-Selling Cars 2006. http://www.forbes.com/2006/09/08/cx_dl_0911featslide.html?partner=msnbc

The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) Model. 2007. GREET 2, Version 1.7. UChicago Argonne, LLC

U.S. Environmental Protection Agency (EPA), Office of Transportation and Air Quality, 2003. "What You Should Know About Diesel Exhaust and School Bus Idling" EPA420-F-03-021 (June). http://epa.gov/otaq/retrofit/documents/f03021.pdf

Residential Water Heaters

Assumptions

- 1. The highest reported energy efficiency for each type of water heater was used in the analysis. The energy efficiency of a water heater is designated by its energy factor, which is the ratio of the heat delivered (as hot water) to the energy consumed (i.e., electricity, natural gas, LPG, or oil) according to a specific test procedure (DOE 2000).
- 2. Energy factors for all water heaters except solar water heaters were based on the highest reported energy factor in the GAMA Directory of Certified Efficiency Ratings (GAMA 2006) for each type of unit. The GAMA source did not include solar hot water heater efficiency ratings. The energy factor of solar hot water heaters was based on the highest value in the range provided by DOE's Office of Energy Efficiency and Renewable Energy (DOE 2005(b)). This energy factor assumes that some amount of electricity is used to circulate fluid. Energy factors for storage tank water heaters were: solar 11.0, LPG 0.67, natural gas 0.67, heat pump 2.28, fuel oil 0.68, electric 0.95. Energy factors for tankless water heaters were: LPG 0.85, natural gas 0.85, electric 0.99.
- 3. Although heat pump water heaters may be used for tankless water heating, there were no tankless heat pump models listed in the GAMA directory and therefore were not evaluated in the analysis.

- 4. Solar water heaters are typically integrated with another hot water heating system running on gas, oil, or electricity. Solar water heaters typically serve 50-75% of the hot water load (DOE 2005(b)). Typical values for LPG was selected as the backup system, with the solar water heater system serving 60% of the load.
- 5. Fuel consumption of LPG storage tank heater based on the average fuel consumption of a residential hot water heating system of 15.8 MMBtu, based on EIA 2001.
- 6. Upstream emission factors were based on the output of the GREET model (see text for a discussion of the assumptions used with this model).
- 7. End-use emission factors were those used in Delucchi 2000.

References

Delucchi, Mark. 2000. LPG and Other Alternative Fuels for Highway Vehicles, Forklifts, and Household Heating: A Fuelcycle Analysis of Emissions of Urban Air Pollutants and Greenhouse-Gases. Institute of Transportation Studies, University of California Davis (March).

Energy Information Administration, 2001. 2001 Residential Energy Consumption Survey: Household Energy Consumption and Expenditures Tables.

http://www.eia.doe.gov/emeu/recs/recs2001/detailcetbls.html#heating

Gas Appliance Manufacturer's Association (GAMA), 2006. Directory of Certified Efficiency Ratings. Arlington, Virginia. http://www.gamapower.org/water.php

The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) Model. 2007. GREET 2, Version 1.7. UChicago Argonne, LLC.

National Renewable Energy Laboratory (NREL), 1998. *Solar Hot Water Technology*. DOE/GO-10098-467. http://www.nrel.gov/docs/fy00osti/23668.pdf

- U.S. Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy. 2005. Electric Resistance Heating. *A Consumer's Guide to Energy Efficiency and Renewable Energy* (September 12). http://www.eere.energy.gov/consumer/your_home/space_heating_cooling/index.cfm/mytopic=12520 (accessed May 2007)
- U.S. Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy. 2005a. Furnaces and Boilers. *A Consumer's Guide to Energy Efficiency and Renewable Energy* (September 12). http://www.eere.energy.gov/consumer/your_home/space_heating_cooling/index.cfm/mytopic=12530 (accessed May 2007).
- U.S. Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy. 2005b. Heat Pump Systems. *A Consumer's Guide to Energy Efficiency and Renewable Energy* (September 12). http://www.eere.energy.gov/consumer/your_home/space_heating_cooling/index.cfm/mytopic=12610 (accessed May 2007).
- U.S. Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy. 2005c. Solar Water Heater Energy Efficiency. *A Consumer's Guide to Energy Efficiency and Renewable Energy* (September 12).

http://www.eere.energy.gov/consumer/your_home/water_heating/index.cfm/mytopic=12900 (accessed May 2007).

U.S. Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy. 2005d. Solar Water Heaters. *A Consumer's Guide to Energy Efficiency and Renewable Energy* (September 14).

http://www.eere.energy.gov/consumer/your_home/water_heating/index.cfm/mytopic=12850 (accessed May 2007).

U.S. Department of Energy (DOE), Building Research and Standards Office, 2000. *Technical Support Document: Energy Efficiency Standards for Consumer Products: Residential Water Heaters*. Washington, D.C.

http://www.eere.energy.gov/buildings/appliance_standards/residential/waterheat_0300_r.html

Residential Space Heating

Assumptions

- 1. Different fuel systems were evaluated based on the emissions resulting from the delivery of an equivalent energy service the amount of useful heat supplied to the home.
- 2. Estimated useful heat delivered by a propane furnace was 38 million Btu, and was based on an average energy consumption of 52.6 million Btu per year of propane in a region with 4000-5499 heating degree days (EIA 2001) after estimated average efficiency losses (15%) and duct losses (15%) were applied.
- 3. The highest reported energy efficiency for each type of space heater was used in the analysis. The energy efficiency of a space heater is designated by its annual fuel utilization efficiency (AFUE), which is the ratio of heat output of the furnace or boiler compared to the total energy consumed by a furnace or boiler (DOE 2005a).
- 4. The energy efficiency for gas and fuel oil furnaces were based on the highest reported AFUE in the GAMA Directory of Certified Efficiency Ratings (GAMA 2006). AFUE values for furnaces were: LPG and natural gas 95.7, fuel oil 85.0. An AFUE of 100 was assumed for the electric furnace based on the upper end of the range given in DOE 2005a.
- 5. Electric heat pump energy efficiency is determined by its heating season performance factor (HSPF), which is the ratio of heat delivered in Btus to the electricity consumed in Watt-hours. A HSPF of 10.0 was used for the heat pump, since it was the highest value in the range reported in DOE 2005b.
- 6. Duct heat losses of 15% were assumed for the furnace and heat pump systems, and were applied after conversion efficiency losses. The heat transfer efficiency of the electric resistance baseboard heating system was assumed to be 100% based on DOE 2005.
- 7. It was assumed that gas and oil furnaces met GAMA's guideline for electrical efficiency (GAMA 2006), meaning their electricity usage during a typical heating season is 2% or less of the total energy used by the furnace. Therefore, emissions resulting from electricity consumption by these furnaces was not calculated.
- 8. Upstream emission factors were based on the output of the GREET model (GREET 2007). See text for a discussion of the assumptions used with this model.
- 9. End-use emission factors were those used in Delucchi 2000.

References

Delucchi, Mark. 2000. LPG and Other Alternative Fuels for Highway Vehicles, Forklifts, and Household Heating: A Fuelcycle Analysis of Emissions of Urban Air Pollutants and Greenhouse-Gases. Institute of Transportation Studies, University of California Davis (March).

Energy Information Administration, 2001. 2001 Residential Energy Consumption Survey: Household Energy Consumption and Expenditures Tables.

http://www.eia.doe.gov/emeu/recs/recs2001/detailcetbls.html#heating

Gas Appliance Manufacturer's Association (GAMA), 2006. Directory of Certified Efficiency Ratings. Arlington, Virginia. http://www.gamapower.org/water.php

The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) Model. 2007. GREET 2, Version 1.7. UChicago Argonne, LLC.

- U.S. Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy. 2005. Electric Resistance Heating. *A Consumer's Guide to Energy Efficiency and Renewable Energy* (September 12). http://www.eere.energy.gov/consumer/your_home/space_heating_cooling/index.cfm/mytopic=12520 (accessed May 2007)
- U.S. Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy. 2005a. Furnaces and Boilers. *A Consumer's Guide to Energy Efficiency and Renewable Energy* (September 12). http://www.eere.energy.gov/consumer/your_home/space_heating_cooling/index.cfm/mytopic=12530 (accessed May 2007).
- U.S. Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy. 2005b. Heat Pump Systems. *A Consumer's Guide to Energy Efficiency and Renewable Energy* (September 12). http://www.eere.energy.gov/consumer/your_home/space_heating_cooling/index.cfm/mytopic=12610 (accessed May 2007).

Glossary

References

Argonne National Laboratory. 2007. GREET is "Gold Standard" for Well-to-Wheel Analyses of Vehicle/Fuel Systems. http://www.transportation.anl.gov/software/GREET/greet_gold_standard.html (accessed June 2007).

Energy Information Administration (EIA). 2007. Energy Glossary (online). http://www.eia.doe.gov/glossary/ (accessed June 2007).



Propane Reduces Greenhouse Gas Emissions: A Comparative Analysis



Acknowledgements This report was sponsored by the Propane Education & Research Council (PERC) and prepared by Energetics Incorporated. Matt Antes, Ross Brindle, Joe McGervey, Lindsay Pack, and Beth Zotter, all with Energetics, are the principle authors of the report. Valuable guidance was provided by Brian Feehan, Mark Leitman, and Greg Kerr, PERC; Phil Squair, National Propane Gas Association; and Larry Osgood and Bob Myers, technical consultants to PERC. Propane's Greenhouse Gas Emissions: A Comparative Analysis

Table of Contents

Exe	cutive Summary	iv
I.	Purpose of Report	1
II.	About Climate Change	1
III.	Methodology	6
	Summary of Findings	
V.	Applications	15
	Distributed Generation	
	Irrigation Pumps	17
	Forklifts	
	Medium-Duty Engines	19
	Light-Duty Trucks	20
	Residential Water Heaters	
	Residential Space Heating	22
VI.	Appendix A – Glossary	
	Appendix B – Assumptions and References	24

Executive Summary

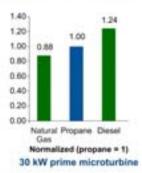
This study quantifies the greenhouse gas profile of propane and other fuels in selected applications. Cutting across propane market segments including residential, power generation, engine fuel, agriculture, and other applications, this analysis uses energy consumption rates, emissions factors, and equipment efficiencies for various energy options to estimate greenhouse gas emissions associated with the use of those energy options. The applications analyzed include:

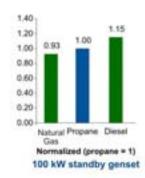
- Distributed Generation
- Irrigation Pumps
- Forklifts
- Medium-Duty Engines
- Light-Duty Trucks
- Residential Water Heaters
- Residential Space Heating

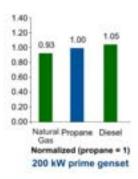
The results of the analysis show that propane is among the most attractive options for avoiding greenhouse gas emissions in every application considered. At the point of use, propane has a lower carbon content than gasoline, diesel, heavy fuel oil, or ethanol. Natural gas (methane) generates fewer carbon dioxide (CO_2) emissions per Btu than propane, but natural gas is chemically stable when released into the air and produces a global warming effect 25 times that of carbon dioxide. This means that one pound of methane produces the same effect on climate change as 25 pounds of carbon dioxide.

With propane's short lifetime in the atmosphere and low carbon content, it is advantageous from a climate change perspective in comparison to other fuels in many applications. The graphs on the following page (p. v) demonstrate propane's climate change performance across the applications analyzed in this study. (Propane emissions = 1, and all other fuels are normalized against it for comparison).

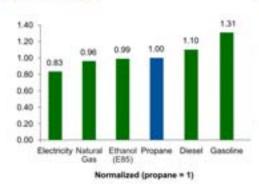
Distributed Generation



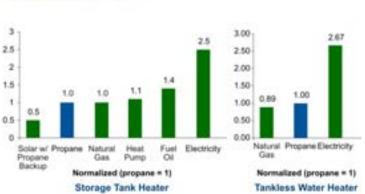




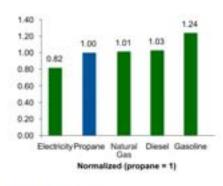
Irrigation Pumps



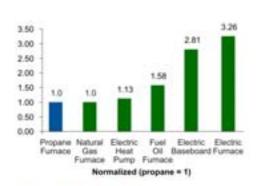
Residential Water Heaters



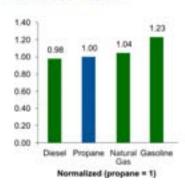
Forklifts



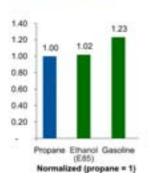
Residential Space Heating



Medium-Duty Engines



Light-Duty Trucks



I. Purpose of Report

With the causes of climate change becoming more evident, there is an increased focus on technologies and energy sources that can reduce emissions of greenhouse gases. While scientists continue to debate the magnitude of potential impacts from climate change, policymakers in the United States and abroad are considering options for addressing the issue. As an Environmental Protection Agency (EPA)-approved clean alternative fuel, propane offers lower greenhouse gas emissions than many other fuel options without compromising performance in a wide range of applications.

This study quantifies the greenhouse gas profile of propane and other fuels in selected applications. Cutting across propane market segments including residential, power generation, engine fuel, agriculture, and other applications, this analysis uses energy consumption rates, emissions factors, and equipment efficiencies for various energy options to estimate greenhouse gas emissions associated with the use of those energy options. The applications analyzed include:

- Distributed Generation
- Irrigation Pumps
- Forklifts
- Medium-Duty Engines
- Light-Duty Trucks
- Residential Water Heaters
- Residential Space Heating

The substantive and carefully documented information in this report is intended to inform policymakers, the propane industry, and other interested parties as they make important decisions regarding climate change.

II. About Climate Change

Greenhouse gases keep the earth at a comfortable temperature, allowing most of the energy from the sun to pass through the atmosphere and warm the earth while blocking much of the outward radiation from the earth. However, increasing concentrations of greenhouse gases in the atmosphere are cause for concern. Rather than maintaining equilibrium, high concentrations of greenhouse gases are now affecting the global climate system, leading to "climate change."

Greenhouse Gases Compared to Criteria Air Pollutants

Greenhouse gases are different than the criteria air pollutants that have been regulated by the EPA since 1970. Criteria pollutants, which include ozone, nitrogen dioxide, sulfur dioxide, carbon monoxide, lead, and particulate matter, are released in the atmosphere from fuel leaks, secondary reactions, or undesired side-products during combustion. While these pollutants cause health problems and contribute to smog and acid rain, they do not directly contribute to climate change. The amount of criteria air emissions depends on several variables including fuel characteristics, combustion conditions, and use of pollution control equipment, and it is sensitive to maintenance and operational practices (Climate Leaders 2004).

In contrast, greenhouse gases are not federally regulated and cause changes to the environment on a global scale. Unlike criteria pollutants, the most prevalent GHG – carbon dioxide – is a necessary byproduct of fossil fuel combustion. The amount of carbon dioxide released depends not on leaks or side reactions, but on the amount of carbon in the fuel and the amount of fuel consumed. While chemically reactive criteria air pollutants stay in the air for days or months, greenhouse gases are non-reactive and remain in the atmosphere for decades to centuries (Rubin and Rao 2002).

Table 2.1. Carbon dioxide and criteria air pollutants have several important differences

	Carbon dioxide	Criteria pollutants
Source of emissions	 necessary byproduct of combustion 	 fuel leak or undesired side product of combustion
Regulation	 currently unregulated at federal level in the U.S. 	 federally regulated by Clean Air Act
Quantity released	 depends mainly on carbon content of fuel and amount of fuel consumed 	depends on many factors
Scale of impact	• global	local or regional
Lifetime in atmosphere	decades to centuries	days to months

Greenhouse Gas Emissions from Fuel Combustion

In general, lighter hydrocarbons release less carbon dioxide during combustion than heaver hydrocarbons, because lighter hydrocarbons consist of fewer carbon atoms per molecule. The mass of carbon dioxide released per Btu of fuel – the "carbon content" – is a good first-order indicator of the CO_2 emissions comparison between fuels. The carbon content for eight common fuels is shown in Table 2.2.

While it is a good indicator, carbon content represents only part of the CO₂ emissions equation. The amount of fuel consumed plays an equally important role. Fuel consumption varies by fuel type and technology for each application. For example, since diesel (compression) engines are generally more efficient than spark-ignition engines, some of the CO₂ emissions disadvantage of diesel compared to other fuels is offset. (Further details for estimating CO₂ emissions are provided in the Methodology section.)

Small amounts of methane and nitrous oxide are also emitted during combustion, though they play

Table 2.2. Carbon dioxide released per Btu			
Fuel Type	kg CO₂ per million Btu		
Natural Gas	52.8		
LPG	62.7		
Ethanol (E85)	66.6		
Motor Gasoline	70.5		
Kerosene	70.7		
Distillate Fuel (Diesel)	72.5		
Residual Fuel (Heavy fuel oil)	78.6		
Bituminous Coal	92.1		
Estimates based on chemical composition of the fuel with 99 percent			

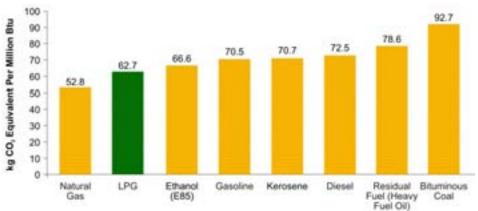
Estimates based on chemical composition of the fuel with 99 percent combustion.

Source: DOE 1994.

a minor role in affecting climate change as compared to carbon dioxide. In the U.S., methane and nitrous oxide together represent less than 1% of the total CO_2 -equivalent emissions from stationary combustion sources (Climate Leaders 2004).

The Greenhouse Gas (GHG) footprint of LPG is relatively small compared to other fuels in terms of total emissions and emissions per unit of energy consumed. LPG has the lowest on-site emission rate of the major energy sources, with the exception of natural gas (see Figure 1). In terms of life-cycle greenhouse gas emissions, LPG produces significantly lower emissions than gasoline, diesel, and electricity on a per-Btu basis. Actual life-cycle emission levels depend on the nature and efficiency of the end-use application, however, and therefore must be estimated on an application-specific basis.

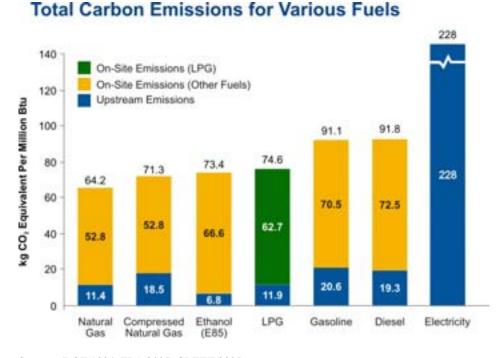
Figure 1:
On-Site Carbon Emissions for Various Fuels



Sources: DOE 1994, EPA 2007

On-site emissions estimates based on chemical composition of the fuel with 99 percent combustion.

Figure 2:



Sources: DOE 1994, EPA 2007, GREET 2007

On-site emissions estimates based on chemical composition of the fuel with 99 percent combustion. Actual life-cycle emissions vary by application; in many cases, electricity provides more useful energy on a per-Btu basis.

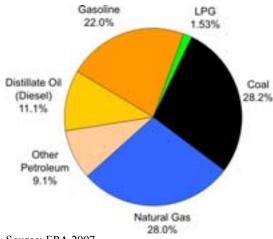
LPG represents a small but important part of the U.S. energy consumption. Figure 3 shows the contribution of the major fuels (U.S. EPA 2007) and LPG represents 1.53% of energy consumed in the U.S. in 2005.

Because of LPG's relatively low GHG emission rate, its share of GHG emissions is smaller than its share of energy supply. Figure 4 shows the relative contribution to total U.S. GHG emissions by fossil fuel combustion and from other sources. CO₂ emissions from fossil fuel combustion represent 79% of total emissions, while LPG combustion represents only 1.05% of total U.S. emissions.

The balance of emissions (21%) is from industrial processes that emit CO₂ directly (i.e., cement kilns), methane (i.e., landfills and natural gas leaks), nitrous oxide (i.e., agricultural fertilizer), and fluorine-containing halogenated substances (i.e., hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6) from refrigerants and industrial processes).

Figure 5 illustrates the relative contribution to total energyrelated CO₂ emissions for the U.S. in 2005. Although LPG contributes 1.53% of the U.S. energy supply, its share of energy-related CO₂ emissions is 1.32%. Coal, the highestemitting major fuel, represents 28.2% of the U.S. energy supply and 36.4% of energy-related CO₂.

Figure 3: Shares of U.S Energy Consumption (2005) (Total: 78,742 trillion Btu)



Source: EPA 2007

Figure 4: Shares of Greenhouse Gas Emissions (2005) (Total: 7,260 million MT CO₂)

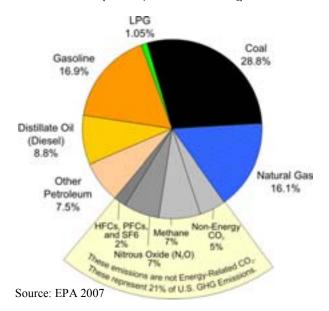
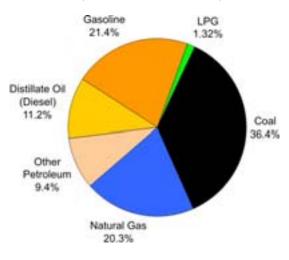


Figure 5: Shares of Energy-Related **Greenhouse Gas Emissions (2005)** (Total: 5,751 million MT CO₂)



Source: EPA 2007

Propane's Effect on Climate Change

Propane is not a direct greenhouse gas when released into the air. Propane vapor is unstable in the atmosphere—it is chemically reactive and commonly removed by natural oxidation in the presence of sunlight or knocked down by precipitation. It is also removed from the atmosphere faster than it takes for it to become well-mixed and have impacts on global climate. Current measurements have not found a global climate impact from propane emissions.^{1,2}

When used as a fuel, propane does emit carbon dioxide and small amounts of nitrous oxide and methane. Upstream extraction and production of fuels such as propane from natural gas or crude oil generates greenhouse gas emissions, and end-use combustion of any hydrocarbon releases carbon dioxide as discussed above. However, compared to conventional fuel supplies, propane generates fewer GHG emissions in almost every application. At the point of use, propane has a lower carbon content than gasoline, diesel, heavy fuel oil, or ethanol (Table 2.2). Natural gas (methane) generates fewer CO₂ emissions per Btu than propane, but natural gas is chemically stable when released into the air and produces a global warming effect 25 times that of carbon dioxide. This means that one pound of methane produces the same effect on climate change as 25 pounds of carbon dioxide.

With propane's short lifetime in the atmosphere and low carbon content, it is advantageous compared to other petroleum fuels in many applications.

Upstream vs. End-Use Emissions

When quantifying the greenhouse gas emissions that result from the use of energy, it is important to distinguish between the emissions released at the location where the energy is consumed and the emissions released as a result of extracting and processing a refined and usable energy product to that location. The fuel lifecycle begins where the raw feedstock is extracted from the well or mine and ends where the fuel is consumed to power a vehicle, appliance, or other technology.

Emissions released at the point of use are termed "end-use emissions," while those emissions that occur along the delivery pathway are termed "upstream emissions." Upstream emissions include all emissions resulting from the recovery, processing, and transport of fuel to the point of delivery to the end-user.

Energy use is not the only source of upstream emissions. Other production processes also release greenhouse gases. For example, the growing of crops for biofuels production requires the application of nitrogen fertilizer, which causes the formation of nitrous oxide, while natural gas refining causes the release of fugitive emissions of methane. These processes have been quantified by the Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) Model (GREET 2007), making it a valuable tool for comparative lifecycle analyses of fuel systems.

The inclusion of upstream emissions in an analytical comparison of different fuel options can have a significant impact on the results. Limiting the comparison to end-use emissions only, for example, can give the impression that electricity, with zero end-use emissions, is an energy source with no greenhouse gas emissions. Limiting the analysis to end-use emissions would therefore mask the very large fraction of upstream emissions caused by the combustion of fossil fuels for the purpose of electricity generation.

This analysis is intended to give a full lifecycle accounting of greenhouse gas emissions resulting from the use of propane and other fuels for specific applications. By reporting upstream and end-use emissions separately, it is intended that this report will provide a better picture of the impacts of different fuels, and a more useful and informative data set than would be provided by aggregating emissions or restricting the analysis to end-use emissions only.

5

¹The Intergovernmental Panel on Climate Change (IPCC) reports that "Given their short lifetimes and geographically varying sources, it is not possible to derive a global atmospheric burden or mean abundance for most VOC from current measurements." VOCs explicitly include propane (IPCC TAR 2001).

²While VOCs participate in the formation of tropospheric ozone, the climate effect from ozone is not highly understood by scientists and is not one of the six greenhouses gases being considered for regulation by Congress.

III. Methodology

This section describes the general methodology used for all applications. Application-specific assumptions are provided in Appendix B.

Basis for Comparison of Applications

Ten different propane applications were analyzed in order to quantify the lifecycle greenhouse gas emissions of propane fuel systems compared to other fuels. These ten applications were selected to represent not only a variety of market sectors, but also a range of market shares – from well-established propane markets such as forklifts to emerging propane technologies such as the propane-powered light-duty truck.

Each propane technology was compared to alternative fuels commonly used for the same application. Operational variables such as size, hours of operation, and frequency of use were chosen to represent an average or typical use of the technology. Data were obtained from published test results, vendor-supplied specifications, and government studies, and were supplemented with other sources to determine what constituted a typical use. These sources were also used to estimate the energy efficiency of each fuel system. For most applications, the efficiencies were used to determine the amount of fuel needed to deliver an equivalent energy service (e.g., miles traveled or heat supplied) for propane and for each competing fuel option. For some fuels, such as electricity, energy efficiency differences from propane are the result of two different technology designs. In other instances, however, there are only slight differences in technology design between the propane-configured technology and alternate fuel configurations. Where application-specific data was not available, the relative efficiencies of the fuel systems under comparison were based on efficiencies reported for similar technologies.

Upstream Analysis

Upstream emissions as defined in this analysis are the sum of all emissions resulting from the recovery, processing, and transport of fuel from wellhead to the point of delivery to the end-user. These emissions are conveniently quantified by the GREET Model, which was used to estimate the upstream portion of the lifecycle GHG emissions of each fuel system evaluated in this study. The model is used to calculate emissions, in grams per million Btu, of multiple pollutants, including the three greenhouse gases evaluated in this study: carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Table 3.1 gives the upstream emission factors used in this study, which were obtained by running the GREET model.

Table 3.1. Upstream emissions factors (grams per million Btu)

•				•
	CO_2	CH ₄	N_2O	Total CO ₂ equivalent
LPG	8,938	115	0.16	11,855
NG*	5,407	239	0.09	11,397
CNG	12,207	248	0.19	18,455
Electricity	219,707	296	3.12	228,036
Gasoline	17,476	109	1.31	20,595
Diesel	16,629	105	0.27	19,346
E85	-6,810	114	36.08	6,789

^{*} Model output for CNG with compression efficiency set to 100% (removing emissions from compression).

Source: GREET 2007

Upstream emission factors will vary depending on the model's input parameters. These parameters include the type, fractional share, and efficiency of power plants used to generate electricity; market shares of different fuel formulations; fuel feedstock shares and refining efficiencies; and fuel

transportation mode, distance, and mode share. For all fuels except uncompressed natural gas, the default parameter values in the model were used to calculate upstream emission factors.³

The upstream emissions associated with LPG production depend on its feedstock – natural gas or crude oil. LPG is separated from natural gas during production and from crude oil during refining. The model attributes to LPG, on a Btu-fractional basis, emissions produced from the recovery and refining of these feedstocks before the separation of LPG.⁴ As a result, the upstream emissions attributed to LPG depend on the relative contribution of natural gas and crude oil to LPG production. The feedstock shares for LPG used for this analysis are 60% from natural gas and 40% from crude, which are the default values in GREET. LPG produced from crude oil has slightly higher GHG emissions than LPG produced from natural gas refining.

Table 3.2 shows the formulas used to calculate total upstream GHG emissions. Upstream emission factors (in grams per million Btu) were multiplied by total fuel consumption required by each fuel system (in million Btu) in order to obtain total upstream emissions for CO_2 , CH_4 , and N_2O . The total mass of each gas was multiplied by its global warming potential (GWP). Total upstream emissions of GHGs, in metric tons of CO_2 equivalent, was obtained by summing the terms. The values used for global warming potential were those developed by the Intergovernmental Panel on Climate Change (IPCC 2007). Following the widely accepted convention established by the IPCC, results were reported in metric tons of CO_2 equivalent.

Table 3.2. Upstream GHG emissions

For each fuel:

metric tons (GHG) = grams (GHG)/MMBtu (fuel) * MMBtu of fuel consumed $/ 10^6$

Total metric tons of CO_2 equivalent = metric tons $CO_2*(1)$ + metric tons $CH_4*(25)$ + metric tons $N_2O*(298)$

End-use Analysis

End-use emissions are specific to the technology used for each application, and therefore different sources were necessary to estimate various end-use emission factors. The U.S. Department of Energy and the Environmental Protection Agency publish end-use carbon content emission factors for a number of different technologies, and were the source of some of the end-use emission factors used in the applications analyzed. Other sources of end-use emission factors include Delucchi 2000 and GREET

7

³ GREET is designed to quantify the lifecycle emissions of vehicles, and because vehicles using natural gas run on compressed natural gas (CNG), the model does not allow the user to select uncompressed natural gas as a fuel choice. Some applications in this study, however, required the comparison of propane to uncompressed natural gas. Because the compression of natural gas requires a significant amount of energy (and therefore adds to its upstream emissions), the GREET model input for natural gas compression efficiency was set to 100% in order to remove the emissions associated with compression. Compression efficiency as defined by the GREET model is equal to HV/(energy in + HV), where HV is the heating value of the fuel. Setting efficiency at 100% therefore makes energy in equal to zero.

⁴ In other words, all products produced from either crude or natural gas are assumed to begin their lifecycle at the wellhead, even though they have not been physically separated from the feedstock. If a given product stream represents 5% of the Btu content of the feedstock, for example, then that product is assigned 5% of the emissions attributed to the feedstock before refining and separation. This method of assigning emissions is not influenced by the economic value of the product or feedstock.

2007. For vehicle applications, end-use emission factors were based on those used in the GREET model for 2005 model year vehicles.⁵

Total end-use emissions were obtained in the same way as total upstream emissions, by summing the GWP-adjusted end-use emissions of CO₂, CH₄, and N₂O. Unlike upstream emissions factors, however, the units used for end-use emission factors depended on the application. While Btu-based emission factors were applied to some of the applications, the total mass of GHGs emitted from light- and mid-duty trucks was calculated on a grams-per-mile basis, rather than a grams-per-mmBtu basis. The formulas used to calculate end-use emission factors are shown by application in Table 3.3.

Table 3.3. End-use GHG emissions

Water heaters, forklifts, irrigation pumps, space heaters:

For each fuel:

metric tons (GHG) = grams (GHG)/MMBtu (fuel) * MMBtu of fuel consumed $/ 10^6$

Light-duty trucks, mid-duty trucks:

For each fuel:

metric tons (GHG) = grams (GHG)/mile * miles traveled / 10^6

All applications:

Total metric tons of CO_2 equivalent = metric tons $CO_2*(1)$ + metric tons $CH_4*(25)$ + metric tons $N_2O*(298)$

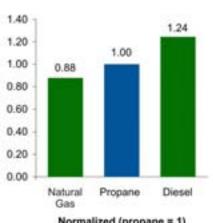
8

⁵ These emission factors were obtained from the spreadsheet "greet1.7.xls." Vehicle performance data is tabulated for every fifth model year. The user must select the year 2015 to get performance data for 2010 model year vehicles.

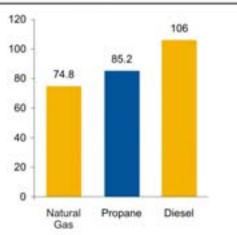
IV. Summary of Findings

Distributed Generation

30 kW prime microturbine.

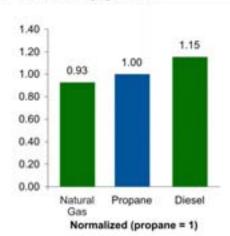


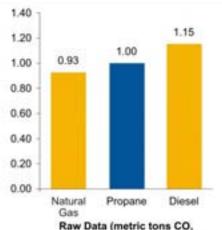
Normalized (propane = 1)



Raw Data (metric tons CO, equivalent per unit per year)

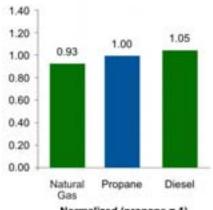
100 kW standby genset



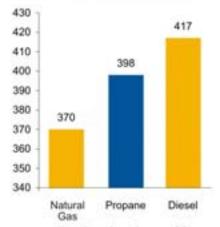


Raw Data (metric tons CO, equivalent per unit per year)

200 kW prime genset.

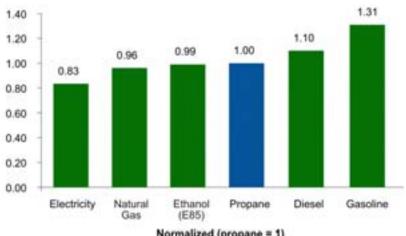


Normalized (propane = 1)

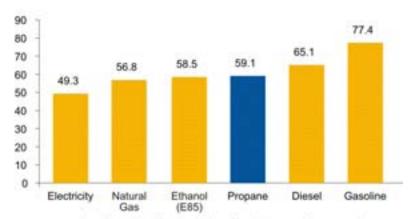


Raw Data (metric tons CO, equivalent per unit per year)

Irrigation Pumps

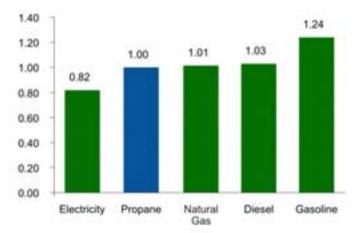




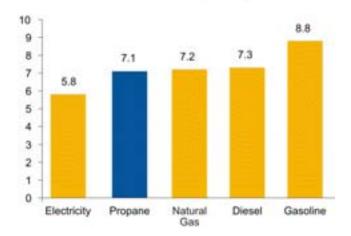


Raw Data (metric tons CO, equivalent per unit per year)

Forklifts

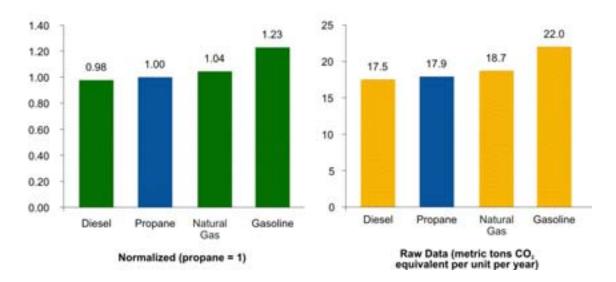


Normalized (propane = 1)

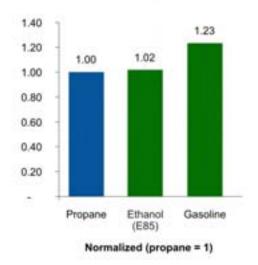


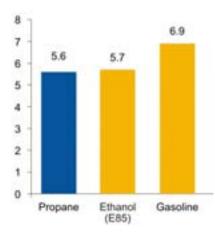
Raw Data (metric tons CO, equivalent per unit per year)

Medium-Duty Engines



Light-Duty Trucks

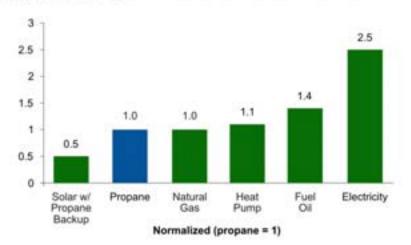


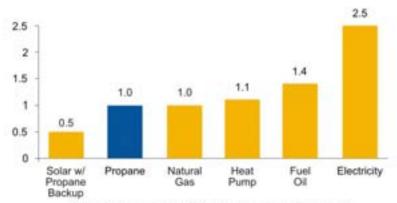


Raw Data (metric tons CO, equivalent per unit per year)

Residential Water Heaters

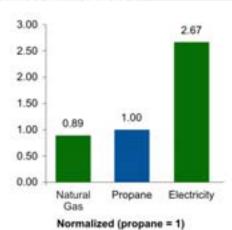
Storage Tank Heater_

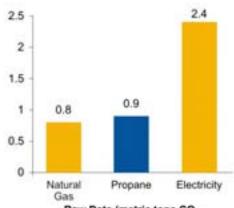




Raw Data (metric tons CO, equivalent per unit per year)

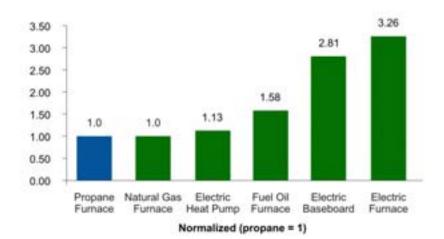
Tankless Water Heater_

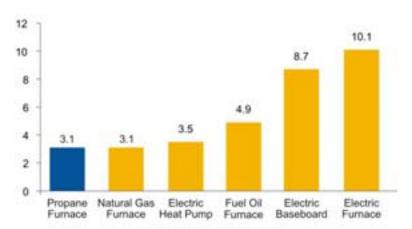




Raw Data (metric tons CO, equivalent per unit per year)

Residential Space Heating





Raw Data (metric tons CO, equivalent per unit per year)

V. Applications

The following pages present a series of one-page summaries for the ten applications considered in this study. Each summary contains energy end-use data, market data, and a comparison of the climate change effects of fuels used in the application. The summaries also include a listing of key assumptions and references. A complete list of assumptions and references for each application is shown in Appendix B.

- **Distributed Generation** Distributed generation (DG) technology provides electricity to off-grid areas and serves as a backup source of power for hospitals, factories, telecommunication centers, and other crucial operations. In total, approximately 12.3 million DG units are currently installed in the U.S., running mainly on diesel fuel, although the use of systems that use propane and natural gas are rapidly growing.
- Irrigation Pumps U.S. farms rely on approximately 500,000 irrigation pumps to deliver water from reservoirs, lakes, streams, and wells for crop production. The majority of irrigation pumps operate using electric motors and diesel fuel. The smallest pumps are often operated by electric motors, while higher capacity wells tend to be operated by diesel, natural gas, and propane engines.
- Forklifts Unlike most vehicles, forklifts use fuel not only for vehicle propulsion but also for load lifting work. Indoor air quality concerns restrict the use of diesel for heavy-duty jobs; electric forklifts are normally used for light-duty jobs, while propane can be used for both.
- Medium-Duty Engines Medium-duty engines are used for many commercial and municipal
 vehicles, including school buses. Diesel currently fuels the majority of school buses in the U.S.,
 despite the EPA considering its exhaust as one of the air pollutants that pose the greatest risks to
 public health. Many school districts have been moving to alternative fuels such as propane and
 compressed natural gas to address this issue.
- **Light-Duty Trucks** Light-duty trucks, such as the Ford F-150, constitute a significant portion of the U.S. vehicle fleet. While gasoline fuels the majority of light-duty trucks in the U.S., ethanol (E85) and propane have gained greater use in recent years.
- **Residential Water Heaters** Residential water heaters include both tank storage units as well as instantaneous ("tankless") water heaters. Both types of water heaters can be gas-fueled or electric. Fuel oil and solar power are also used for storage tank water heating.
- **Residential Space Heating** Homes are most commonly heated by either a centralized system that moves warm air through ducts, or by separate heating units (usually electric) distributed throughout the home. Furnaces can be gas-fired (natural gas or propane), oil-fired, or electric. Nearly five million U.S. households rely on propane for home heating (EIA 2001).

Distributed Generation

Distributed generation (DG) refers to the production of electricity at or near the point at which the power is used. Distributed generators are used in residential and industrial sectors as a prime source of electricity or as a backup source in case of emergency. Prime generators are often used in remote areas not reached by the power grid, or by users that require greater reliability than the local utility can provide. Backup generators include standby supply for hospitals, factories, telecommunication centers, and other critical operations.

Generation capacities for onsite usage typically range from a few kilowatts to several hundred kilowatts. Types of DG that are fueled by propane include microturbines, generator sets (gensets), polymer electrolyte membrane (PEM) fuel cells and solid oxide fuel cells (SOFC). Microturbines operate like jet engines that produce electricity instead of thrust, while gensets consist of a combustion engine driving an electrical generator. Fuel cells generate electricity by the chemical combination of fuel and oxygen. GHG emissions analyses were conducted for three combinations of capacities, operating use (prime/standby), and type (microturbine/genset), and are intended to present an emissions profile representative of common distributed generation use.

Market Data

In total, there are approximately 12.3 million DG units installed in the U.S. with an aggregate capacity of 222 GW (DG Monitor 2005). In the commercial sector, about 5% of businesses have the ability to generate electricity onsite, with 78% of those businesses using DG for emergency backup generation (EIA 2006). Most of the installed DG capacity is combustion gensets, with alternative types of DG rapidly growing. The microturbine industry is an emerging technology, with the leading supplier – Capstone – having delivered about 2,500 units (30 kW and 60 kW units) (Gas Plants, Inc. 2006).

Climate Change Comparison

Climate Change Comparison							
	Annual Greenhouse Gas Lifecycle Emissions per unit						
(metric tons CO ₂ equivalent)							
	30 kW prime microturbine						
	Total	End-use	Upstream				
Diesel	106	84.3	22.0				
Natural gas	74.8	62.7	12.1				
LPG	85.2	72.3	12.9				
	100 kW	standby gense	et				
	Total	End-use	Upstream				
Diesel	1.88	1.50	0.39				
Natural gas	1.51	1.27	0.24				
LPG	1.63	1.38	0.24				
	200 kW	' prime genset					
	Total End-use Upstream						
Diesel	417	331	86.0				
Natural gas	370	311	58.5				
Propane	398	338	59.2				

Energy End-Use Data

Energy End-Use Data						
Performance and Energy Use Characteristics of Representative DG ²						
Fuel						
	Efficiency, HHV (%)	(MMBtu/unit/yr)				
30	kW prime micro	turbine				
Diesel	22.7	1151				
Natural gas	23.6	1107				
LPG	23.6	1107				
1	100 kW standby genset					
Diesel	33.5	20.3				
Natural gas	31.0	22.0				
LPG	32.7	20.9				
	_					
	200 kW prime genset					
Diesel	38.8	4493				
Natural gas	32.5	5359				
LPG	34.2	5091				

Key Assumptions

- Energy use is based on vendor specs for power-only (no CHP) 60Hz gensets operating at 100% nameplate load for 7 hours per day for prime and 20 hours per year for standby.
- 2. Emissions from point of extraction to point of use based on GREET model.

See Appendix B for full list of assumptions and references.

Footnotes

- 1. GHG emission profiles for PEMs and SOFCs have not been separately evaluated in this study.
- Representative generators for 30 kW microturbines: Capstone C30 Liquid Fuel, Capstone C30 Natural Gas; 100kW genset: John Deere J150U, Cummins 100GGHH; 200kW genset: Armstrong AJD200, Caterpillar G3508

Irrigation Pumps

Irrigation pumps deliver water from reservoirs, lakes, streams, and wells to farm fields for crop production. Most irrigation pumps are centrifugal, driven by an engine connected to the drive shaft (see

diagram). The energy required to run a pump is measured in terms of fuel consumption or electric power use of the engine driving the shaft. Most irrigation pumps range in size from 30 to 300 hp and operate at a steady speed and load for many hours, often 24 to 48 hours nonstop. The effectiveness in converting fuel or electricity to mechanical power to drive the irrigation pump varies based on the type of engine, operating conditions, engine load, and maintenance. This emissions analysis compares properly loaded and maintained 100 hp engines driving centrifugal irrigation pumps.

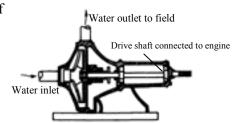
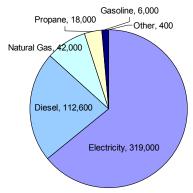


Diagram of centrifugal irrigation pump. Source: Scherer 1993.

Market Data

In the U.S. there are approximately 500,000 irrigation pumps, powered by fuels and electricity.



The smallest pumps are often operated by electric motors, while higher capacity wells tend to be operated by diesel, natural gas, and propane engines. Source: USDA 2004.

Energy End-Use Data

Energy Use from 100hp Irrigation Pumps (MMBtu/unit/yr)

	Fuel Use	
Fuel	Rate	Source
Ethanol (E85)	829	Smajstrla and Zazueta 2003; DOE-EPA 2007.
Diesel	704	Smajstrla and Zazueta 2003.
Gasoline	829	Smajstrla and Zazueta 2003.
Natural gas	843	Evans, Sneed, and Hunt 1996.
LPG	767	Smajstrla and Zazueta 2003.
Electricity	217	Smajstrla and Zazueta 2003.

Climate Change Comparison

Annual Greenhouse Gas Lifecycle Emissions for 100hp Irrigation Pump (metric tons CO₂ equivalent)

(
		End-	Up-	
Fuel	Total	use	stream	
Electricity	49.3	0	49.3	
Natural gas	56.8	47.5	9.2	
Ethanol (E85)	58.5	57.3	1.1	
LPG	59.1	50.2	8.9	
Diesel	65.1	51.6	13.5	
Gasoline	77.4	60.5	16.9	

(a) Credit is given to biodiesel for carbon sequestration during crop production

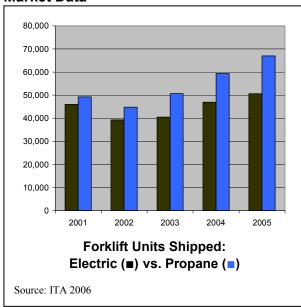
Key Assumptions

- Upstream emissions (from point of extraction to point of use) are based on GREET model.
- 2. Emissions at point of use are based on 100 hp irrigation pump operating 749 hours per year.

Forklifts

Forklifts are used to move and stack loads, usually in warehouses. Unlike most vehicles, fuel is used not only for vehicle propulsion (with maximum speeds usually between 10-15 mph), but also for load lifting work. A large variety of forklifts can run on propane. Other fuels commonly used for forklifts are electricity, compressed natural gas (CNG), gasoline, and diesel. Fuel choice may depend on load size and air quality concerns – electric forklifts are normally used for light-duty jobs, while diesel fuel is typically used for extremely heavy-duty loads and is restricted to outdoor use for air quality reasons. Propane is used for both light- and heavy-duty applications.

Market Data



Energy End-Use Data

0,		
Fuel	MMBtu per forklift per year	
Electric	26	
LPG	88	
CNG	92	
Diesel	74	
Gasoline	90	

Based on an average LPG forklift using 973 gallons per year (Delucchi 2000) and under 100 horsepower.

Climate Change Comparison

	Metric tons CO₂ equivalent per forklift per year		
Fuel	Total	End-use	Up- stream
Electric	5.8	0.0	5.8
LPG	7.1	6.1	1.0
CNG	7.2	5.6	1.7
Diesel	7.3	5.9	1.4
Gasoline	8.8	7.0	1.9

(Note: Totals may not add due to rounding)

Key Assumptions

- 1. Assumes as in Delucchi 2000 that twothirds of forklift energy use goes to vehicle propulsion and one-third goes to lifting.
- 2. For forklifts powered by fuels other than propane, the relative efficiencies of lifting and propulsion compared to a propane-based system were used to estimate the fuel consumption of those vehicles.
- 3. Thermal engine efficiencies estimated by Delucchi were used to calculate fuel required for lifting work.
- 4. Relative fuel efficiencies used by the GREET model for 6000-8500 lbs. GVW vehicles were used to calculate fuel required for propulsion.

Medium-Duty Engines

Medium-duty engines are used for many commercial and municipal vehicles, including school buses. Diesel currently fuels the majority of school buses in the U.S. today, despite the fact that exposure to diesel exhaust is known to cause a number of adverse health effects. Diesel exhaust is also among the air pollutants considered by the EPA to pose the greatest risks to public health (CARB 1998, EPA 2003). As a consequence, many school districts across the country have been looking for alternatives to diesel in order to fuel their school bus fleets. A propane-powered school bus using an EPA-certified 8.1L Liquid Propane Injection (LPI) system is one such alternative.

Market Data

There are approximately 450,000 school buses transporting 24 million school children each school day (School Bus Fleet 2007). Propane fuels more than 1,400 of those school buses in the United States (PERC 2000).

Energy End-Use Data

Fuel	MMPtu per bue per veer
	MMBtu per bus per year
Diesel	189
LPG	240
CNG	252
Gasoline	240

Based on a standard size (Type C) school bus traveling 9,000 miles per year.

Climate Change Comparison

	Metric tons CO ₂ equivalent per bus per year		
Fuel	Total	End-use	Up- stream
Diesel	17.5	13.9	3.7
LPG	17.9	15.1	2.8
CNG	18.7	14.0	4.7
Gasoline	22.0	17.0	4.9

(Note: Totals may not add due to rounding)

Key Assumptions

- 1. Assumes fuel efficiencies for diesel and CNG buses reported in ANTARES Group 2004.
- 2. Fuel efficiencies for LPG and gasoline vehicles were estimated by applying the ratio of fuel efficiencies used by the GREET model for 6000-8500 lbs. GVW vehicles (the largest size class in the model) to CNG school bus fuel efficiency reported by ANTARES Group.

Light-Duty Trucks

Light-duty trucks, such as the Ford F-150, constitute a significant portion of the U.S. vehicle fleet. While gasoline fuels the majority of light-duty trucks in the U.S., ethanol (E85) and propane have gained greater use in recent years. The Roush F-150 pickup uses Liquid Propane Injection (LPI) technology to make the F-150 a dedicated propane vehicle. Using an engine computer specifically calibrated for propane, the LPI system directly replaces the OEM gasoline injection system. The propane-powered F-150 offers the same performance as a gasoline-powered pickup truck. Ethanol (E85) may also be used in Ford's flex-fuel model of the F-150, which can be fueled by either regular gasoline or E85. E85 is composed of 85% ethanol and 15% petroleum by volume.

Market Data

The Ford F-series pick-up trucks have been the top-selling vehicle in the United States for 25 consecutive years, with close to 1,000,000 vehicles sold in each of the past several years (Forbes.com 2006).

Energy End-Use Data

Fuel	MMBtu per vehicle per year
LPG	75
E85	75
Gasoline	75

Based on a pickup truck traveling 10,000 miles per year.

Climate Change Comparison

	Metric tons CO2 equivalent per vehicle per year		
Fuel	Total	End- use	Up-stream
LPG	5.6	4.7	0.9
Ethanol (E85)	5.7	5.2	0.5
Gasoline	6.9	5.3	1.5

(Note: Totals may not add due to rounding)

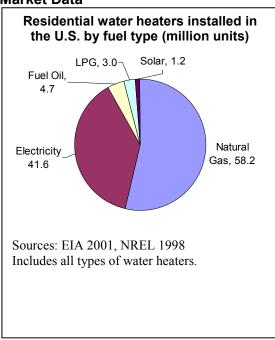
Key Assumptions

- 1. Fuel efficiencies used by the GREET model for 6000-8500 lbs. GVW vehicles were used to calculate fuel use for equivalent miles traveled. See appendix for values
- 2. GHG emissions factors for E85 are specifically for combustion in a flex-fuel vehicle.

Residential Water Heaters

Propane residential water heaters include both tank storage units as well as instantaneous ("tankless") water heaters. While storage water heaters keep a constantly available supply of hot water, tankless units heat water as it is supplied to the end user. Both storage and tankless units can be gas-fueled or electric. Gas water heaters are designed to run on either propane or natural gas. Fuel oil and solar power, however, are only used for storage tank water heating. Solar water heaters frequently use electricity to pump water through the collector, and solar water heating systems almost always require a conventional heater as a backup for cloudy days (DOE 2005d). Heat pump water heaters use electricity to move heat rather than generate it directly. They are more efficient than electric water heaters but very few are commercially available.

Market Data



Energy End-Use Data

Storage tank heater			
Fuel	MMBtu per unit per year		
Solar w/ LPG backup	7		
LPG	16		
Natural gas	16		
Heat pump	5		
Fuel oil	16		
Electricity	11		

Tankless water heater

	MMBtu per unit per	
Fuel	year	
Natural gas	12	
LPG	12	
Electricity	11	

Based on equal hot water delivery compared to a propane storage water heater using an average 15.8 MMBtu/yr (EIA 2001), equal to 173 gallons of LPG per year.

Climate Change Comparison

Storage tank heater			
	Metric tons CO2 equivalent per unit per year		
Fuel	total	end- use	up- stream
Solar w/ LPG			
backup	0.5	0.3	0.2
LPG	1.0	8.0	0.2
Natural gas	1.0	0.8	0.2
Heat pump	1.1	0.0	1.1
Fuel oil	1.4	1.1	0.3
Electricity	2.5	0.0	2.5

Tankless water heater

	Metric tons CO2 equivalent per unit per year		
Fuel	total	end- use	up- stream
Natural gas	0.8	0.7	0.1
LPG	0.9	8.0	0.1
Electricity	2.4	0.0	2.4

Key Assumptions

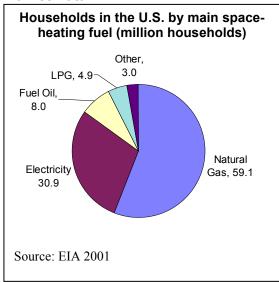
- 1. Energy efficiencies based on the highest energy factor reported in the GAMA Directory of Certified Efficiency Ratings (GAMA 2006). Solar water heater energy efficiency based on DOE 2005c.
- 2. Fuel consumption of propane storage tank heater based on average residential energy consumption for water heating. Tankless propane fuel consumption based on relative efficiency compared to a tank heater. See appendix for efficiency values (energy factors) used.
- 3. Solar water heater uses electricity for fluid circulation. Solar water heater delivers 60% of water heating load with remaining 40% from a backup LPG system.

Residential Space Heating

Homes are most commonly heated by either a centralized system that moves warm air through ducts or by separate heating units (usually electric) distributed throughout the home. Furnaces can be gas-fired, oil-fired, or electric; most gas furnaces can be fueled by either natural gas or propane. Heat pumps use electricity to heat air, but do so by moving heat rather than generating heat by electrical resistance. This makes heat pumps more efficient than electric radiators, and allows them to deliver more heat energy than they use in electricity.

Because boilers have the same range of energy efficiencies as furnaces, they were not added to the analysis, but their greenhouse gas emissions can reasonably be assumed to be comparable to those of furnaces. Similarly, a number of different electric resistance heating units can be used to heat rooms, but because they all convert nearly 100% of electricity into useful heat, their emissions impact will be similar to electric baseboard heating.

Market Data



Energy End-Use Data

Fuel	MMBtu per heating system per year
LPG Furnace	47
Natural Gas Furnace	47
Electric Heat Pump	15
Fuel Oil Furnace	53
Electric Baseboard	38
Electric Furnace	44

Based on a furnace delivering 38 million Btu of useful heat, typical of a furnace in a winter climate zone such as the mid-Atlantic.

Climate Change Comparison

	Metric tons CO2 equivalent per heating system per year		
Fuel	Total	End-use	Up- stream
LPG Furnace	3.1	2.5	0.6
Natural Gas Furnace	3.1	2.5	0.6
Electric Heat Pump	3.5	0.0	3.5
Fuel Oil Furnace	4.9	3.9	1.0
Electric Baseboard	8.7	0.0	8.7
Electric Furnace	10.1	0.0	10.1

Key Assumptions

- 1. Estimated useful heat delivered by a propane furnace was 38 million Btu, and was based on an average energy consumption of 52.6 million Btu per year of propane in a region with 4000-5499 heating degree days (EIA 2001) after estimated average efficiency (15%) and duct losses (15%) were applied.
- 2. Energy efficiencies based on the highest annual fuel utilization efficiency (AFUE) reported in the GAMA Directory of Certified Efficiency Ratings (GAMA 2006) for gas and fuel oil furnaces with greater than 60,000 Btu-hour ratings.
- 3. Assumed 100% conversion efficiency of electric heaters and electric furnaces.

VI. Appendix A – Glossary

Carbon dioxide (CO₂) equivalent

The amount of carbon dioxide by weight emitted into the atmosphere that would produce the same estimated radiative forcing as a given weight of another radiatively active gas. Carbon dioxide equivalents are computed by multiplying the weight of the gas being measured (for example, methane) by its estimated global warming potential (which is 21 for methane). "Carbon equivalent units" are defined as carbon dioxide equivalents multiplied by the carbon content of carbon dioxide (i.e., 12/44) (EIA 2007).

End-use

Pertaining to the ultimate consumption of energy or fuel (adapted from "end user," EIA 2007).

Global Warming Potential (GWP)

An index used to compare the relative radiative forcing of different gases without directly calculating the changes in atmospheric concentrations. GWPs are calculated as the ratio of the radiative forcing that would result from the emission of one kilogram of a greenhouse gas to that from the emission of one kilogram of carbon dioxide over a fixed period of time, such as 100 years (EIA 2007).

Greenhouse Gases (GHG)

Those gases, such as water vapor, carbon dioxide, nitrous oxide, methane, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride, that are transparent to solar (short-wave) radiation but opaque to long-wave (infrared) radiation, thus preventing long-wave radiant energy from leaving Earth's atmosphere. The net effect is a trapping of absorbed radiation and a tendency to warm the planet's surface. (EIA 2007).

Lifecycle

The process from raw material acquisition (including exploration and production) through end-use by the consumer.

Radiative forcing

A change in average net radiation at the top of the troposphere (known as the tropopause) because of a change in either incoming solar or exiting infrared radiation. A positive radiative forcing tends on average to warm the earth's surface; a negative radiative forcing on average tends to cool the earth's surface. Greenhouse gases, when emitted into the atmosphere, trap infrared energy radiated from the earth's surface and therefore tend to produce positive radiative forcing (EIA 2007).

Upstream

Pertaining to any process, or the sum total of processes, used to produce or deliver energy up to the point of consumption by the end-user. Concerns all processes used in the transformation of raw feedstock into fuel, including raw material extraction, processing, transportation, distribution, and storage (adapted from diagram, Argonne National Laboratory 2007).

VII. Appendix B – Assumptions and References

About Climate Change

References

Climate Leaders. 2004. Direct Emissions from Stationary Combustion Sources. *Climate Leaders Greenhouse Gas Inventory Protocol Core Module Guidance*. U.S. Environmental Protection Agency (EPA) (October). http://www.epa.gov/climateleaders/docs/stationarycombustionguidance.pdf

Intergovernmental Panel on Climate Change (IPCC). 2001. Atmospheric Chemistry and Greenhouse Gases. *Climate Change 2001: The Scientific Basis*. http://www.grida.no/climate/ipcc_tar/wg1/pdf/TAR-04.PDF

Rubin, Edward S. and Anand B Rao. 2002. *A Technical, Economic and Environmental Assessment of Amine-based CO₂ Capture Technology for Power Plant Greenhouse Gas Control*. Technical Progress Report, prepared by Center for Energy and Environmental Studies, Carnegie Mellon University, Pittsburgh, PA, for U.S. Department of Energy, National Energy Technology Laboratory, Pittsburgh, PA, DOE/DE-FC26-00NT40935 (October). http://www.iecm-online.com/ESRubin/esr%20papers/2001f%20Rao%20and%20Rubin%20DOENETL%20Oct.pdf

U.S. Department of Energy (DOE). 1994. Sector-Specific Issues and Reporting Methodologies Supporting the General Guidelines for the Voluntary Reporting of Greenhouse Gases under Section 1605(b) of the Energy Policy Act of 1992. Volume 1: Part 1, Electricity supply sector; Part 2, Residential and commercial buildings sector; Part 3. Industrial sector, DOE/PO-0028-Vol. 2 (October). http://www.osti.gov/bridge/servlets/purl/10196818-8dgiqi/webviewable/

U.S. Environmental Protection Agency (EPA). 2007. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2005*. Table A-10, EPA 430-R-07-002 (April).

Methodology

References

The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) Model. 2007. GREET 2, Version 1.7. UChicago Argonne, LLC.

Intergovernmental Panel on Climate Change (IPCC) 2007. Climate Change 2007: The Physical Science Basis: Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. http://ipcc-wgl.ucar.edu/wgl/wgl-report.html

Distributed Generation

Assumptions

- 1. Energy use is based on vendor specs for power-only (no CHP) 60Hz gensets operating at 100% nameplate load.
- 2. End-use energy consumption data are based on reported fuel use in vendor specifications of representative generators. Representative generators for 30 kW microturbines: Capstone C30 Liquid Fuel, Capstone C30 Natural Gas; 100kW genset: John Deere J150U, Cummins 100GGHH; 200kW genset: Armstrong AJD200, Caterpillar G3508. (Vendor specs 2007)
- 3. Capstone C30 microturbine is operated at ambient temperatures above 35°F (a propane pump and vaporizer is unnecessary) (Gas Plants, Inc. 2006).

- 4. Methane and nitrous oxide emission factors are based on Delucchi 2000.
- 5. Carbon content (kg CO2/million Btu) of all fuels evaluated assumes 99% combustion. Table B.1 DOE 1994.
- 6. Energy content of fuels based on EIA 2007 and EIA 2007a.
- 7. Upstream emissions (from point of extraction to point of use) for all fuels are based on GREET model version 1.5 (GREET Model 2007).
- 8. Assume representative standby generator operates 20 hours per year. (15 min. per week for exercising = 13 hours, plus 7 hours of operation average in a poor power area). Source: email correspondence with PERC May 15, 2007.
- 9. Prime power units can operate from 4-10 hours per day. Assume 7 hours per day for an average unit. Source: email correspondence with PERC May 15, 2007.
- 10. Global warming potentials (GWP) are used to combine the three greenhouse gases into metric tons of carbon dioxide equivalent. GWPs for this study are based on 100 year time horizon: CO2 = 1, methane = 25, nitrous oxide = 298 (IPCC 2007).

References

Delucchi, Mark. 2000. LPG and Other Alternative Fuels for Highway Vehicles, Forklifts, and Household Heating: A Fuelcycle Analysis of Emissions of Urban Air Pollutants and Greenhouse-Gases. Institute of Transportation Studies, University of California Davis (March).

DG Monitor. 2005. *Installed Base of U.S. Distributed Generation: 2005 Edition*. Resource Dynamics Corporation.

Energy Information Administration (EIA). 2007. Thermal Conversion Factors. *Monthly Energy Review* (April), 157. http://www.eia.doe.gov/emeu/mer/pdf/mer.pdf

Energy Information Administration (EIA). 2007a. Thermal Conversion Factor Source Documentation. *Approximate Heat Content of Natural Gas.* (Table A4). http://www.eia.doe.gov/emeu/mer/pdf/pages/sec12_4.pdf

Energy Information Administration (EIA). 2006. Consumption and Expenditures Tables for Non-Mall Buildings. 2003 Commercial Buildings Energy Consumption Survey (CBECS) Detailed Tables (December).

http://www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed_tables_2003/detailed_tables_2003.html#consumexpen03

Intergovernmental Panel on Climate Change (IPCC). 2007. Changes in Atmospheric Constituents and in Radiative Forcing. *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.* Chapter 2. http://ipcc-wg1.ucar.edu/wg1/Report/AR4WG1_Ch02.pdf

Gas Plants, Inc. 2006. Propane-Fueled Microturbine Case Study: Potential of Propane as a Microturbine Fuel. Prepared for the Propane Education and Research Council (September 1). http://www.propanecouncil.org/files/10466 Superior MT CaseStudy.pdf

The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) Model. 2007. GREET, Version 1.5. UChicago Argonne, LLC.

U.S. Department of Energy (DOE). 1994. Sector-Specific Issues and Reporting Methodologies Supporting the General Guidelines for the Voluntary Reporting of Greenhouse Gases under Section 1605(b) of the Energy Policy Act of 1992. Volume 1: Part 1, Electricity supply sector; Part 2, Residential and commercial buildings sector; Part 3. Industrial sector, DOE/PO-0028-Vol. 2 (October). http://www.osti.gov/bridge/servlets/purl/10196818-8dgiqi/webviewable/

Vendor specs. 2007.

- Armstrong AJD200. *Armstrong AJD Line Diesel Powered*. Armstrong Power Trade. http://www.armstrongpower.com/b144-ajd.pdf (accessed May 2007).
- Capstone C30 Liquid Fuel. 2006. *C30 Liquid Fuel MicroTurbine Performance Specifications*. Capstone Turbine Corporation. http://www.microturbine.com/_docs/PDS_C30LiqFuelPerSpecs1R.pdf (accessed May 2007).
- Capstone C30 Natural Gas. 2006. *C30 Natural Gas MicroTurbine Performance Specifications*. Capstone Turbine Corporation. http://www.microturbine.com/_docs/PDS_C30NatGasPerfSpecs1R.pdf (accessed May 2007).
- Caterpillar G3508. 2001. *Gas Petroleum Engine G3508: Caterpillar Engine Specifications*. Caterpillar. http://www.cat.com/cda/files/98936/7/lehw0810.pdf (accessed May 2007).
- Cummins 100GGHH. Cummins Power Generation. *Exhaust Emission Data Sheet 100GGHH*. http://www.onan-generators.biz/cart/PDF/industrial/gas/LP/GGHH-60-em.pdf (accessed May 2007).
- John Deere J150U. *J150U Diesel Genset*. SDMO Industries. http://www.sdmo.com/sitev3/files/pdf/GB/J150U.pdf (accessed May 2007).

Irrigation Pumps

Assumptions

- 1. Fuel and electricity use are based on performance standards determined for internal combustion engines using standard accessories, including a water pump, fan, and radiator (Smajstrla and Zazueta 2003).
- 2. Methane and nitrous oxide emission factors are based on Delucchi 2000 unless otherwise noted below.
- 3. Assume methane emissions are 2% higher from E85 combustion than gasoline combustion based on a hydrocarbon emissions analysis from small engines in this study: Varde 2002.
- 4. Carbon content (kg CO2/million Btu) of all fuels evaluated assumes 99% combustion. Table B.1 DOE 1994.
- 5. Energy content of fuels based on EIA 2007, Bioenergy Feedstock Information Network 2007, and Evans, Sneed, and Hunt 1996.
- 6. There is no meaningful difference in engine efficiency between E85 and gasoline. Fuel usage of E85 is higher due to ethanol's lower energy content (EPA-DOE 2007).
- 7. Upstream emissions (from point of extraction to point of use) for all fuels are based on GREET model version 1.5 (GREET Model 2007).
- 8. Upstream ethanol emissions are based on the GREET model for converting corn to ethanol. The emissions and energy use involved in the production of corn are calculated on the basis of the amount of fuel and chemicals (fertilizer, herbicides, and insecticides) used per bushel. Energy efficiency of 97.7% is assumed for ethanol transportation, storage, and distribution. The figure below presents the stages that are included for the upstream ethanol calculations in GREET 1.5.

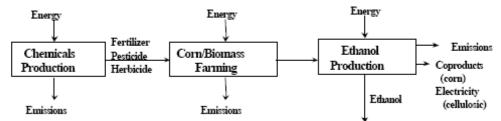


Diagram of upstream elements for calculating emissions from ethanol fuel production. Figure 4.1 from GREET 2007.

- 9. Assume representative irrigation pump operates 749 hours per year. Source Autumn Wind Associates 2004, page 20.
- 10. Global warming potentials (GWP) are used to combine the three greenhouse gases into metric tons of carbon dioxide equivalent. GWPs for this study are based on 100 year time horizon: CO2 = 1, methane = 25, nitrous oxide = 298 (IPCC 2007).

References

Autumn Wind Associates. 2004. Low-emission LPG Agricultural Engine Market Development Program Report for Texas and California. *PERC Low-Emission Agricultural Engine Development Program Report* (March).

Delucchi, Mark. 2000. LPG and Other Alternative Fuels for Highway Vehicles, Forklifts, and Household Heating: A Fuelcycle Analysis of Emissions of Urban Air Pollutants and Greenhouse-Gases. Institute of Transportation Studies, University of California Davis (March).

Energy Information Administration (EIA). 2007. Thermal Conversion Factors. *Monthly Energy Review* (April), 157. http://www.eia.doe.gov/emeu/mer/pdf/mer.pdf

Evans, Robert, R.E. Sneed, and J.H. Hunt. 1996. *Irrigation Management Strategies to Improve Water-& Energy-Use Efficiencies*, AG 452-5. North Carolina Cooperative Extension Service (June). http://www.bae.ncsu.edu/programs/extension/evans/ag452-5.html

The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) Model. 2007. GREET, Version 1.5. UChicago Argonne, LLC.

Intergovernmental Panel on Climate Change (IPCC). 2007. Changes in Atmospheric Constituents and in Radiative Forcing. Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Chapter 2. http://ipcc-wg1.ucar.edu/wg1/Report/AR4WG1_Ch02.pdf

Scherer, Thomas F. 1993. *Irrigation Water Pumps*, AE-1057. North Dakota State University Extension Service (April). http://www.ag.ndsu.edu/pubs/ageng/irrigate/ae1057w.htm#Factors

Smajstrla, A.G., B.F. Castro, and G.A. Clark. 2002. *Energy Requirements for Drip Irrigation of Tomatoes in North Florida*, BUL289. Agricultural and Biological Engineering Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida (July). http://edis.ifas.ufl.edu/AE044

Smajstrla, A.G. and F.S. Zazueta. 2003. *Loading Effects on Irrigation Power Unit Performance*, AE242. Agricultural and Biological Engineering Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida (June). http://edis.ifas.ufl.edu/AE047

U.S. Department of Agriculture (USDA). 2004. Farm and Ranch Irrigation Survey (2003). 2002 Census of Agriculture. Vol. 3, Special Studies, Part 1, AC-02-SS-1 (November). http://www.nass.usda.gov/census/census02/fris/fris03.pdf

U.S. Department of Energy (DOE). 1994. Sector-Specific Issues and Reporting Methodologies Supporting the General Guidelines for the Voluntary Reporting of Greenhouse Gases under Section 1605(b) of the Energy Policy Act of 1992. Volume 1: Part 1, Electricity supply sector; Part 2, Residential and commercial buildings sector; Part 3. Industrial sector, DOE/PO-0028-Vol. 2 (October). http://www.osti.gov/bridge/servlets/purl/10196818-8dgiqi/webviewable/

U.S. Environmental Protection Agency (EPA), U.S. Department of Energy (DOE). EPA-DOE 2007. www.fueleconomy.gov. *Alternative Fuel Vehicles*. U.S. Department of Energy (DOE), Energy Efficiency and Renewable Energy (EERE); U.S. Environmental Protection Agency (EPA) (accessed May 2007). http://www.fueleconomy.gov/feg/current.shtml

Varde, Keshav S. 2002. *Final Report: Control of Exhaust Emissions from Small Engines Using E-10 and E-85 Fuels*. University of Michigan-Dearborn (October 10). http://www.michigan.gov/documents/CIS_EO_Control_of_Emissions-E85-Final_AF-E-_87915_7.pdf

Forklifts

Assumptions

- 1. Average fuel use of 973 gallons of propane per year is based on market data provided in Delucchi 2000, which cites 400,000 forklifts using 389 million gallons of propane annually.
- 2. The analysis used the assumption by Delucchi that two-thirds of forklift energy use goes to vehicle propulsion and one-third goes to lifting. This fraction was not based on actual usage data, but was considered by the author to be a reasonable assumption.
- 3. For forklifts powered by fuels other than propane, the relative efficiencies of lifting and propulsion compared to a propane-based system were used to estimate the fuel consumption of those vehicles.
- 4. Relative fuel efficiencies used by the GREET model for 6000-8500 lbs. GVW vehicles, model year 2010, were used to calculate fuel use for equivalent miles traveled. The ratio of the fuel economy of each vehicle type (in miles per gasoline equivalent gallon) relative to a gasoline powered vehicle are as follows: electric 3.5; LPG and gasoline 1.0, CNG .95; diesel 1.31.
- 5. Thermal engine efficiencies were used to calculate fuel use for equivalent lifting work in Btus. Forklift engine thermal efficiencies used were those used by Delucchi: LPG and CNG 28.0%; gasoline 26.7%; diesel 28.5%. Electric motor thermal efficiency was assumed to be 95%.
- 6. Upstream emission factors were based on the output of the GREET model (GREET 2007). See text for a discussion of the assumptions used with this model.
- 7. End-use emission factors were based on those used in the GREET model for 6000-8500 lbs. GVW vehicles, given in grams-per-mile in the "greet1.7.xls" input file provided with the model. Emission factors were converted from grams-per-mile to grams-per-MMBtu of fuel.

References

The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) Model. 2007. GREET 2, Version 1.7. UChicago Argonne, LLC.

Delucchi, Mark. 2000. LPG and Other Alternative Fuels for Highway Vehicles, Forklifts, and Household Heating: A Fuelcycle Analysis of Emissions of Urban Air Pollutants and Greenhouse-Gases. Institute of Transportation Studies, University of California Davis (March).

Industrial Truck Association (ITA). 2006. Information purchased by the Propane Education and Research Council (PERC).

Medium-Duty Engines

Assumptions

- 1. Different fuel systems were evaluated based on the emissions resulting from the delivery of an equivalent energy service miles traveled.
- 2. The assumption of 9,000 miles traveled per year was based on the same assumption by ANTARES Group (ANTARES Group 2004).
- 3. The following fuel economy values (in diesel-equivalent gallons) were used in the comparative analysis: LPG school bus 5.2; CNG school bus 5.0; diesel school bus 6.6; gasoline school bus 5.2. Fuel efficiency for CNG and diesel vehicles were those reported by ANTARES. This source assumed that LPG buses had the same fuel economy as CNG vehicles. But because the fuel tanks of CNG vehicles are heavier than those of LPG vehicles and create a fuel economy penalty, the relative fuel efficiencies used by the GREET model (GREET 2007) were used to get a more accurate estimate LPG fuel economy. Relative fuel efficiencies used by the GREET model for 6000-8500 lbs. GVW vehicles, model year 2010, were used to estimate the fuel economy of LPG as well as gasoline school buses. The fuel economy of the LPG vehicle in the GREET model is 5.3% higher than that of a CNG vehicle (on an equivalent gallon basis). This difference was applied to reported fuel economy for CNG school buses in order to calculate fuel economy for an LPG bus. Because the GREET model assumes that LPG and gasoline vehicles have the same fuel efficiency on an equivalent gallon basis, gasoline bus fuel efficiency was assumed to be equal to the LPG bus value.
- 4. Upstream emission factors were based on the output of the GREET model. See text for a discussion of the assumptions used with this model.
- 5. End-use emission factors were based on those used in the GREET model for 6000-8500 lbs. GVW vehicles

References

ANTARES Group, Inc. 2004. *Economic Analysis of Alternative Fuel School Buses*. Prepared for the US Department of Energy, Clean Cities Program.

California Air Resources Board (CARB), Scientific Review Panel,1998. SRP findings on the report: "Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant" as adopted at the Panel's April 22, 1998 meeting. http://www.arb.ca.gov/toxics/dieseltac/combined.pdf

The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) Model. 2007. GREET 2, Version 1.7. UChicago Argonne, LLC.

U.S. Environmental Protection Agency (EPA), Office of Transportation and Air Quality, 2003. "What You Should Know About Diesel Exhaust and School Bus Idling" EPA420-F-03-021 (June). http://epa.gov/otaq/retrofit/documents/f03021.pdf

Propane Education and Research Council (PERC). 2000. Across the Country School Bus Fleet Managers Find Safety, Savings, and Environmental Quality with Propane. Press release (October 4). http://www.propanecouncil.org/newsroom/press_releaseDetail.cfv?id=86 (accessed June 2007).

School Bus Fleet. 2007. Frequently Asked Questions. http://www.schoolbusfleet.com/t inside.cfm?action=fag (accessed June 2007).

Light-Duty Trucks

Assumptions

- 1. Different fuel systems were evaluated based on the emissions resulting from the delivery of an equivalent energy service miles traveled.
- 2. A typical pickup truck was estimated to travel 10,000 miles per year.
- 3. The following fuel economy values (in gasoline-equivalent gallons) were those used in the GREET model (GREET 2007), and were used in the comparative analysis: LPG, gasoline, and E85 16.7.
- 4. Upstream emission factors were based on the output of the GREET model. See text for a discussion of the assumptions used with this model.
- 5. End-use emission factors were based on those used in the GREET model for 6000-8500 lbs. GVW vehicles, given in grams-per-mile in the "greet1.7.xls" input file provided with the model.

References

ANTARES Group, Inc. 2004. *Economic Analysis of Alternative Fuel School Buses*. Prepared for the US Department of Energy, Clean Cities Program.

California Air Resources Board (CARB), Scientific Review Panel,1998. SRP findings on the report: "Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant" as adopted at the Panel's April 22, 1998 meeting. http://www.arb.ca.gov/toxics/dieseltac/combined.pdf

Forbes.com. 2006. Best-Selling Cars 2006. http://www.forbes.com/2006/09/08/cx_dl_0911featslide.html?partner=msnbc

The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) Model. 2007. GREET 2, Version 1.7. UChicago Argonne, LLC

U.S. Environmental Protection Agency (EPA), Office of Transportation and Air Quality, 2003. "What You Should Know About Diesel Exhaust and School Bus Idling" EPA420-F-03-021 (June). http://epa.gov/otaq/retrofit/documents/f03021.pdf

Residential Water Heaters

Assumptions

- 1. The highest reported energy efficiency for each type of water heater was used in the analysis. The energy efficiency of a water heater is designated by its energy factor, which is the ratio of the heat delivered (as hot water) to the energy consumed (i.e., electricity, natural gas, LPG, or oil) according to a specific test procedure (DOE 2000).
- 2. Energy factors for all water heaters except solar water heaters were based on the highest reported energy factor in the GAMA Directory of Certified Efficiency Ratings (GAMA 2006) for each type of unit. The GAMA source did not include solar hot water heater efficiency ratings. The energy factor of solar hot water heaters was based on the highest value in the range provided by DOE's Office of Energy Efficiency and Renewable Energy (DOE 2005(b)). This energy factor assumes that some amount of electricity is used to circulate fluid. Energy factors for storage tank water heaters were: solar 11.0, LPG 0.67, natural gas 0.67, heat pump 2.28, fuel oil 0.68, electric 0.95. Energy factors for tankless water heaters were: LPG 0.85, natural gas 0.85, electric 0.99.
- 3. Although heat pump water heaters may be used for tankless water heating, there were no tankless heat pump models listed in the GAMA directory and therefore were not evaluated in the analysis.

- 4. Solar water heaters are typically integrated with another hot water heating system running on gas, oil, or electricity. Solar water heaters typically serve 50-75% of the hot water load (DOE 2005(b)). Typical values for LPG was selected as the backup system, with the solar water heater system serving 60% of the load.
- 5. Fuel consumption of LPG storage tank heater based on the average fuel consumption of a residential hot water heating system of 15.8 MMBtu, based on EIA 2001.
- 6. Upstream emission factors were based on the output of the GREET model (see text for a discussion of the assumptions used with this model).
- 7. End-use emission factors were those used in Delucchi 2000.

References

Delucchi, Mark. 2000. LPG and Other Alternative Fuels for Highway Vehicles, Forklifts, and Household Heating: A Fuelcycle Analysis of Emissions of Urban Air Pollutants and Greenhouse-Gases. Institute of Transportation Studies, University of California Davis (March).

Energy Information Administration, 2001. 2001 Residential Energy Consumption Survey: Household Energy Consumption and Expenditures Tables.

http://www.eia.doe.gov/emeu/recs/recs2001/detailcetbls.html#heating

Gas Appliance Manufacturer's Association (GAMA), 2006. Directory of Certified Efficiency Ratings. Arlington, Virginia. http://www.gamapower.org/water.php

The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) Model. 2007. GREET 2, Version 1.7. UChicago Argonne, LLC.

National Renewable Energy Laboratory (NREL), 1998. *Solar Hot Water Technology*. DOE/GO-10098-467. http://www.nrel.gov/docs/fy00osti/23668.pdf

- U.S. Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy. 2005. Electric Resistance Heating. *A Consumer's Guide to Energy Efficiency and Renewable Energy* (September 12). http://www.eere.energy.gov/consumer/your_home/space_heating_cooling/index.cfm/mytopic=12520 (accessed May 2007)
- U.S. Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy. 2005a. Furnaces and Boilers. *A Consumer's Guide to Energy Efficiency and Renewable Energy* (September 12). http://www.eere.energy.gov/consumer/your_home/space_heating_cooling/index.cfm/mytopic=12530 (accessed May 2007).
- U.S. Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy. 2005b. Heat Pump Systems. *A Consumer's Guide to Energy Efficiency and Renewable Energy* (September 12). http://www.eere.energy.gov/consumer/your_home/space_heating_cooling/index.cfm/mytopic=12610 (accessed May 2007).
- U.S. Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy. 2005c. Solar Water Heater Energy Efficiency. *A Consumer's Guide to Energy Efficiency and Renewable Energy* (September 12).

http://www.eere.energy.gov/consumer/your_home/water_heating/index.cfm/mytopic=12900 (accessed May 2007).

U.S. Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy. 2005d. Solar Water Heaters. *A Consumer's Guide to Energy Efficiency and Renewable Energy* (September 14).

http://www.eere.energy.gov/consumer/your_home/water_heating/index.cfm/mytopic=12850 (accessed May 2007).

U.S. Department of Energy (DOE), Building Research and Standards Office, 2000. *Technical Support Document: Energy Efficiency Standards for Consumer Products: Residential Water Heaters*. Washington, D.C.

http://www.eere.energy.gov/buildings/appliance_standards/residential/waterheat_0300_r.html

Residential Space Heating

Assumptions

- 1. Different fuel systems were evaluated based on the emissions resulting from the delivery of an equivalent energy service the amount of useful heat supplied to the home.
- 2. Estimated useful heat delivered by a propane furnace was 38 million Btu, and was based on an average energy consumption of 52.6 million Btu per year of propane in a region with 4000-5499 heating degree days (EIA 2001) after estimated average efficiency losses (15%) and duct losses (15%) were applied.
- 3. The highest reported energy efficiency for each type of space heater was used in the analysis. The energy efficiency of a space heater is designated by its annual fuel utilization efficiency (AFUE), which is the ratio of heat output of the furnace or boiler compared to the total energy consumed by a furnace or boiler (DOE 2005a).
- 4. The energy efficiency for gas and fuel oil furnaces were based on the highest reported AFUE in the GAMA Directory of Certified Efficiency Ratings (GAMA 2006). AFUE values for furnaces were: LPG and natural gas 95.7, fuel oil 85.0. An AFUE of 100 was assumed for the electric furnace based on the upper end of the range given in DOE 2005a.
- 5. Electric heat pump energy efficiency is determined by its heating season performance factor (HSPF), which is the ratio of heat delivered in Btus to the electricity consumed in Watt-hours. A HSPF of 10.0 was used for the heat pump, since it was the highest value in the range reported in DOE 2005b.
- 6. Duct heat losses of 15% were assumed for the furnace and heat pump systems, and were applied after conversion efficiency losses. The heat transfer efficiency of the electric resistance baseboard heating system was assumed to be 100% based on DOE 2005.
- 7. It was assumed that gas and oil furnaces met GAMA's guideline for electrical efficiency (GAMA 2006), meaning their electricity usage during a typical heating season is 2% or less of the total energy used by the furnace. Therefore, emissions resulting from electricity consumption by these furnaces was not calculated.
- 8. Upstream emission factors were based on the output of the GREET model (GREET 2007). See text for a discussion of the assumptions used with this model.
- 9. End-use emission factors were those used in Delucchi 2000.

References

Delucchi, Mark. 2000. LPG and Other Alternative Fuels for Highway Vehicles, Forklifts, and Household Heating: A Fuelcycle Analysis of Emissions of Urban Air Pollutants and Greenhouse-Gases. Institute of Transportation Studies, University of California Davis (March).

Energy Information Administration, 2001. 2001 Residential Energy Consumption Survey: Household Energy Consumption and Expenditures Tables.

http://www.eia.doe.gov/emeu/recs/recs2001/detailcetbls.html#heating

Gas Appliance Manufacturer's Association (GAMA), 2006. Directory of Certified Efficiency Ratings. Arlington, Virginia. http://www.gamapower.org/water.php

The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) Model. 2007. GREET 2, Version 1.7. UChicago Argonne, LLC.

- U.S. Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy. 2005. Electric Resistance Heating. *A Consumer's Guide to Energy Efficiency and Renewable Energy* (September 12). http://www.eere.energy.gov/consumer/your_home/space_heating_cooling/index.cfm/mytopic=12520 (accessed May 2007)
- U.S. Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy. 2005a. Furnaces and Boilers. *A Consumer's Guide to Energy Efficiency and Renewable Energy* (September 12). http://www.eere.energy.gov/consumer/your_home/space_heating_cooling/index.cfm/mytopic=12530 (accessed May 2007).
- U.S. Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy. 2005b. Heat Pump Systems. *A Consumer's Guide to Energy Efficiency and Renewable Energy* (September 12). http://www.eere.energy.gov/consumer/your_home/space_heating_cooling/index.cfm/mytopic=12610 (accessed May 2007).

Glossary

References

Argonne National Laboratory. 2007. GREET is "Gold Standard" for Well-to-Wheel Analyses of Vehicle/Fuel Systems. http://www.transportation.anl.gov/software/GREET/greet_gold_standard.html (accessed June 2007).

Energy Information Administration (EIA). 2007. Energy Glossary (online). http://www.eia.doe.gov/glossary/ (accessed June 2007).



ARRA GRANTS	US DOE/Clean Cities FY 09 Petroleum Reduction Technologies Projects for the Transportation Sector				
	DE-PS26-09NT01236-00 - Area of Interest 4.				
	Infrastructure and/or purchase/retrofit or repower of vehicles to run on alternative fuels.				
Application Closing date	Round 1: 5/29/2009 Round 2: 09/30/2009				
Expected Selection Notification	Round 1: Aug 2009				
Date	Round 2: Dec 2009				
Method of Submittal	Through the Industry Interactive Procurement System (IIPS) at http://e-				
	<u>center.doe.gov</u> . Application forms available to download on this website.				
	Registration with IIPS required prior to application submittal.				
Available Funding	\$300,000,000				
Award Min/Max	\$5,000,000-\$15,000,000				
Funding Type	Grant.				
Award Areas	30 geographical areas US wide				
Eligible Entities	State or local government or MTA or combination of these, and a Clean Cities				
	coalition. Can carry out projects in partnership with public and private entities.				
ARRA Funding priorities	Shovel Ready projects.				
	Jobs directly created/retained as result of project plus indirectly created in				
	industries or services supporting the project.				
	Iron, steel, and manufactured goods used in construction, alteration, maintenance				
	or repair of a public building or public work must be produced in the US.				
	Requirement that all laborers and mechanics on project paid at rates not less than				
	those on similar projects in the locality as determined by USC Title 40, Chapter				
	31, Subchapter IV				
Program Funding Priorities	Petroleum reduction benefits (gallons of petroleum fuels displaced).				
	Emissions reductions.				

	Rapid project implementation.					
	Probability of project success					
	Project cost and cost share.					
	Project sustainability after term of the grant					
Eligible Activities	Refueling infrastructure: new or upgrades/improvements; may have multiple					
	fuels at one location, public access important; can include multiple sites in one					
	application. Must include public awareness campaign re alternative fuels.					
	Vehicles: purchase of new OEM vehicles or retrofit/conversion/repower of new					
	and/or used conventional vehicles to run on alt fuels or utilize advanced					
	technologies.					
	Applications can be to implement vehicles and/or support fueling					
	infrastructure projects.					
Eligible Vehicles	LDVs: alternative fueled, fuel cell electric, electric hybrids, plug-in hybrids,					
	diesel with MY 2009 later compliant emissions plus biodiesel, neighborhood					
	electric vehicles (NEV) only if electric vehicle replaces a full-size on-road					
	vehicle.					
	Medium and HDVs: Alternative fueled vehicles, fuel cell electric, plug-in					
	hybrids, hydraulic hybrid. Hybrids must be powered exclusively by					
	alternative fuels.					
	Off-road: ground support vehicles at public airports, freight loading and handling					
	high fuel use vehicles.					
Percent funding/cost share	LDVs: hybrids and diesel powered vehicles incremental cost up to					
_	\$2,000/vehicles; NEVs up to \$2,000 per vehicle not to exceed the actual cost;					
	alternative fueled and advanced technology vehicles up to \$50,000 incremental					
	cost.					
	Medium and HDVs: alternative fueled and advanced technology vehicles up to					
	\$200,000 incremental cost; electric plug-in hybrid/hydraulic hybrids up to					
	\$500,000 incremental costs; fuel cell up to \$1,000,000 incremental costs.					
	All off-road vehicles up to \$50,000 incremental cost.					
	Infrastructure: up to 50% of the allowable costs.					
	Cost Share: at least 50% of the total project costs.					

Anticipated Outputs	Expected number of sites and vehicles in the project.				
	Estimate of the vehicles and fuel use or degree of use of the project.				
	Jobs/preserved/created directly and indirectly				
Anticipated Outcomes	Estimate of energy security benefits (petroleum reduction)				
_	Estimates of emissions reductions.				
	Job creation/preservation directly and indirectly.				
Project Period	4 years: vehicle deployment and infrastructure development completed in 2 years,				
	final 2 years for data collection.				
Project Narrative Requirements	Probability of project success based on technical approach and work plan				
plus scoring	statement of project objectives – 30%				
	Probability of Project success based on team expertise and prior experience –				
	20%				
	Ability to preserve or create jobs through rapid project implementation – 20%				
	Energy Security and Environmental Benefits – 20%				
	Project Cost and cost share – 10%				
Federal Forms required	SF 424- Application for Federal Assistance.				
	Site locations.				
	Project Narrative file – must not exceed 30 pages , including maps, photos, etc.				
	8.5"x11' with 1" margins.				
	Project Summary/Abstract file.				
	SF 424 A Budget Information.				
	Budget Justification File.				
	ARRA 2009 Additional Budget justification.				
	Subaward Budget Files.				
	Budget for FFRDC Contractor, if applicable.				
	Project Management Plan.				
	Commitment letters from 3 rd parties.				
	Biographical sketches.				
	SF-LLL Disclosure of lobbing activities.				
	Vehicle Cost information for Alt Fuel and advanced technology vehicles Pilot				
	Program Information Table.				

	Refueling Infrastructure for Alternative fuels and Advanced Technology Vehicle				
	pilot Program Table.				
Reporting requirements	Quarterly Progress Report				
	Quarterly Financial Status Report				
	Annual Special Status Report				
	Annual Indirect Cost Proposal				
	Annual Inventory Report of Federally Owned Property if any.				
	Final Scientific/Technical Report within 90 days after end of project period.				
	Final Financial Status Report within 90 days after end of project period.				

City of Austin/Central Texas Clean Cities Intent to Submit Form - Due Friday May 1, 2009

The City of Austin and Central Texas Clean Cities are coordinating competitive grant applications on behalf of the region for clean vehicle funding opportunities through the American Reinvestment and Recovery Act (ARRA) under the US DOE Clean Cities FY 09 Petroleum Reduction Technologies Projects for the Transportation Sector, Area of Interest 4. The following are the areas of emphasis:

Primary Contact:	
Contact Title:	
Contact E-Mail:	
Contact Phone Number:	
Contact Address:	,
2. In which emphasis areas are you interest	ed in partnering? Mark all that apply.
Purchase of Other Light Duty Alterna Purchase of Medium/Heavy Duty Hybrid, etc)	cture eles (All-Electric, Hybrid-Electric, Plug-In Hybrid, etc) ative Fuel Vehicles e.g. CNG, LNG, E85 etc Electric Vehicles (All-Electric, Hybrid-Electric, Plug-In avy Duty Alternative Fuel Vehicles (CNG, LNG, E85 etc)
	vehicles, please specify how many vehicles of each type: Light Duty
4. If you are interested in refueling/recharg	ing infrastructure, which fuel(s) are you interested in?
4. If you are interested in refueling/recharg☐ Biodiesel (B-20 only)	ing infrastructure, which fuel(s) are you interested in?
☐ Biodiesel (B-20 only) ☐ Ethanol (E-85)	ing infrastructure, which fuel(s) are you interested in?
☐ Biodiesel (B-20 only) ☐ Ethanol (E-85)	ing infrastructure, which fuel(s) are you interested in?
☐ Biodiesel (B-20 only) ☐ Ethanol (E-85) ☐ Compressed Natural Gas	ing infrastructure, which fuel(s) are you interested in?
☐ Biodiesel (B-20 only) ☐ Ethanol (E-85)	ing infrastructure, which fuel(s) are you interested in?
☐ Biodiesel (B-20 only) ☐ Ethanol (E-85) ☐ Compressed Natural Gas ☐ Liquefied Natural Gas	ing infrastructure, which fuel(s) are you interested in?
☐ Biodiesel (B-20 only) ☐ Ethanol (E-85) ☐ Compressed Natural Gas ☐ Liquefied Natural Gas ☐ Propane	ing infrastructure, which fuel(s) are you interested in?

If yes, identify, if possible, funds or in-kind assets:

DALLAS COUNTY SCHOOLS

Transportation Department

612 N. Zang Blvd. Dallas, Texas 75208

Transportation Director: Tim Jones (214) 944-4520, tjones@dcschools.com

BACKGROUND FACTS

Largest propane school-bus fleet in State of Texas 908 sq. miles, 320,000 students
Transports 11 million student passengers annually
Annual school-bus mileage – 20,000,000+
Current annual usage of propane – 870,000 gals.

FLEET FACTS

Total School Buses 1,545

545 Propane

• 918 Diesel

82 Other

Total Other Vehicles 216

9 Propane

58 Diesel

149 Gasoline

Refueling facilities: 7

Gallons on-site propane storage: 106,000 gallons

Years using propane: 15 years

PROPANE COST SAVINGS

Annual savings to district through use of propane:

LPG has historically been 30 percent less expensive to gasoline. The current IRS rebate of \$0.50/gal is creating a \$400,000 per year saving for Dallas County Schools.

ADDITIONAL COMMENTS/QUOTES

Dallas County Schools has also retrofitted over 550 diesel buses to lower emission technology as well as purchasing the lowest emission standards available. Dallas County Schools' Board of Trustees has resolved to require lower emission purchases. DCS has adopted an anti-idling procedure and guidelines as well.

"The OEM LPG bus and new retrofit LPG systems are very exciting for DCS to renew our LPG lower emission fleet."

--Tim Jones, Director of Transportation

DENTON INDEPENDENT SCHOOL DISTRICT

Transportation Department 5093 East McKinney Denton, Texas 76208 (940) 369-0300 or (940) 369-0097 Transportation Director: Gene Holloway

BACKGROUND FACTS

Fourth largest propane school-bus fleet in State of Texas 180 sq. miles, 20,870 students
Transports 1.8 million student passengers annually
Annual school-bus mileage: 1.7 million miles
Current annual usage of propane: 300,000+ gals.

FLEET FACTS

Total school buses: 144

- 77 Propane
- 36 Bio-diesel equipped with particulate filters
- 31 Unleaded (scheduled for replacement with propane units)

Purchased: 44 Blue Bird propane buses, April 25, 2008; delivery August-Sept., 2008 Other vehicles:

14 diesel (box trucks, riding lawn mowers, backhoe, 1-ton pickup, 3-ton box trucks) 1 propane (forklift)

49 unleaded (pickups, passenger/cargo vans, tow truck, dump truck, bucket truck) Propane refueling facilities: 1, dual-pump capability; 2 satellite facilities planned

Gallons on-site propane storage: 18,000 gallons

Years using propane: 13 years

ADDITIONAL COMMENTS/QUOTES

Denton I.S.D. is committed to being a leader in the campaign to promote clean air. At D.I.S.D., "We practice what we teach!" Our fleet life-cycle replacement program is focused on becoming 100 percent propane. The Railroad Commission of Texas Propane Incentive Programs will assist us in this effort. The 50¢ per gallon offered by the Motor Fuel Tax Credit Program and the Propane Vehicle Initiative Program can provide D.I.S.D. with approximately \$1.8 million in funding to augment our current propane program. --Gene Holloway



NORTHSIDE INDEPENDENT SCHOOL DISTRICT

Transportation Department 12005 Leslie Road Helotes, Texas 78254 (210) 397-0900

Transportation Director: Rafael Salazar

BACKGROUND FACTS

Second-largest propane school-bus fleet in State of Texas

355 sq. miles, 85,000students

Transports 40,000 students each day

Annual school-bus mileage: 8,000,000 miles Current annual usage of propane: 450,000 gallons

FLEET FACTS

Total School Buses 685

- 351 Propane
- 324 Diesel
- 31 Unleaded

Total Other Vehicles

- 0 Propane
- 1 Diesel
- 26 Gasoline

Propane refueling facilities: 4

Gallons on-site propane storage: 56,000 gallons total at four stations

(South 8,000 gal., Culebra 12,000 gal., North 12,000 gal., and Rhodes 12,000 gal.)

Years using propane: 27

PROPANE COST SAVINGS

Annual savings to district through use of propane:

- * 2007 Federal Propane Tax Credit estimated at \$226,079
- * Average cost per gallon between Propane (\$1.54) and Diesel (\$3.00)

ADDITIONAL COMMENTS/QUOTES

We were one of the first school districts to make a commitment to propane, and the first customer in the country to purchase the new dedicated propane Blue Bird buses in 2007. Northside ISD is taking delivery of 16 propane school buses this year, and our community and our staff recognize and enjoy the cleanliness of propane.

--Rafael Salazar



ALVIN INDEPENDENT SCHOOL DISTRICT

Transportation Center 2780 W. Highway 6 Alvin, Texas 77511

Transportation Director: John Ralph, jralph@alvinisd.net, (281) 245-2992 Fleet Maintenance Manager: Butch Passmore, rpassmore@alvinisd.net

BACKGROUND FACTS

Fifth largest propane school-bus fleet in State of Texas

250 sq. miles, 15,334 students

Transports 1,242,000 students annually Annual school-bus mileage: 1,962,500 miles Current annual usage of propane: 206,146 gallons

FLEET FACTS

Total School Buses 128

 73 Propane 81 Diesel

Total Other Vehicles

- 4 Propane
- 4 Diesel
- 97 Gasoline

Refueling facilities: 1

Gallons on-site propane storage: 18,000 gallons

Years using propane: 27 years

PROPANE COST SAVINGS

Annual savings to district through use of propane:

Current price this week (April 28-May 2, 2008) for propane is \$1.79/gal vs. \$3.51/gal for diesel. We also receive a \$0.50/gal. rebate for propane used. In 2006-07, we received \$92,152.00 in rebates. Vehicle maintenance is reduced due to greater brake and tire life with propane, mainly due to the inherent braking of the throttled engine and less weight on the steering axle.

ADDITIONAL COMMENTS/QUOTES

The new generation propane engine shows promise of fuel mileage that comes close to the mileage we experience with diesel. A demo propane bus was impressive while doubling the mileage we experienced with current propane powered-buses.

Driver comments: "Wow!". Bus accelerates quicker, shortening the route time for students.

Environmental considerations: These engines require no particulate trap or the related services. The emissions are lower due to the inherently cleaner-burning fuel. The emission system has proved itself for over 30 years of use. The engine has a smaller environmental footprint due to the decreased uses of lubricants and coolant.

--John Ralph











Why is propane essential for Williamson County?

- Reduced emissions near non-attainment
 - Clean Air Act
- Saves taxpayer dollars:
 - Reduced fleet fuel cost
 - State and federal funds to reduce vehicle acquisition costs
 - Reduced vehicle maintenance costs





What is Propane?

 Propane is a hydrocarbon (C3H8) and is sometimes referred to as liquefied petroleum gas, LP-gas or LPG.

 Propane is non-toxic and does not contaminate ground water or soil.





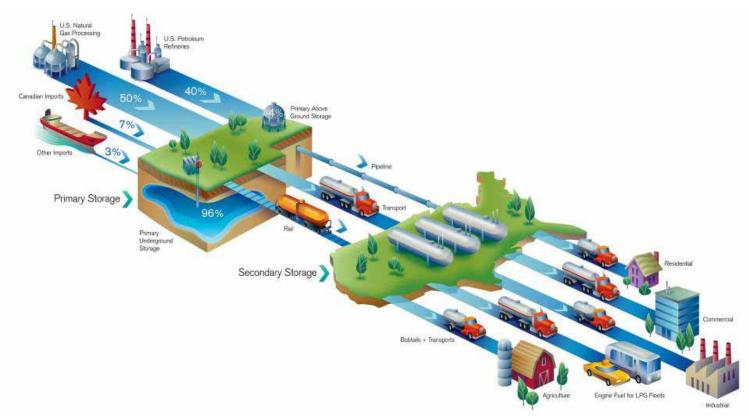
Why Propane? Because...

- It's domestically produced
- It's environmentally-friendly
- It's readily available
- Now more than ever there are more vehicle and mower choices
- It's easy on a county's pocket book





90 % Produced in US







Do You Know What The Principal Green House Gases (EPA) Are?

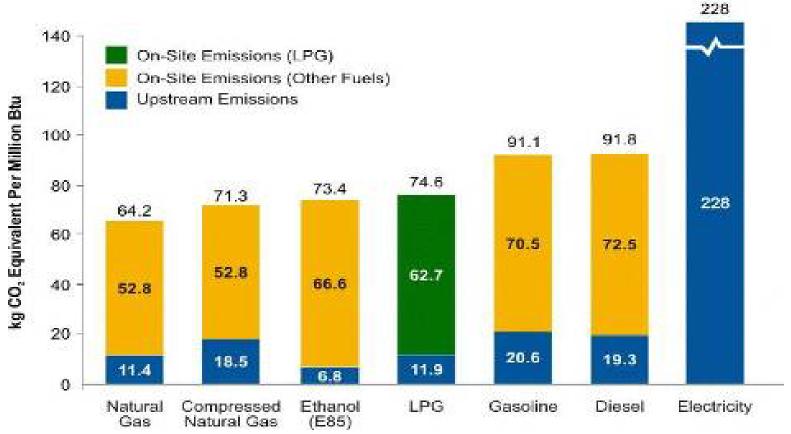
They are:

- Carbon Dioxide CO₂
- Methane (principal component of natural gas)
- Nitrogen Oxide (NOx)





 Cleaner than gasoline/diesel as approved by the Clean Air Act of 1990 and National Policy Act of 1992 and 2005

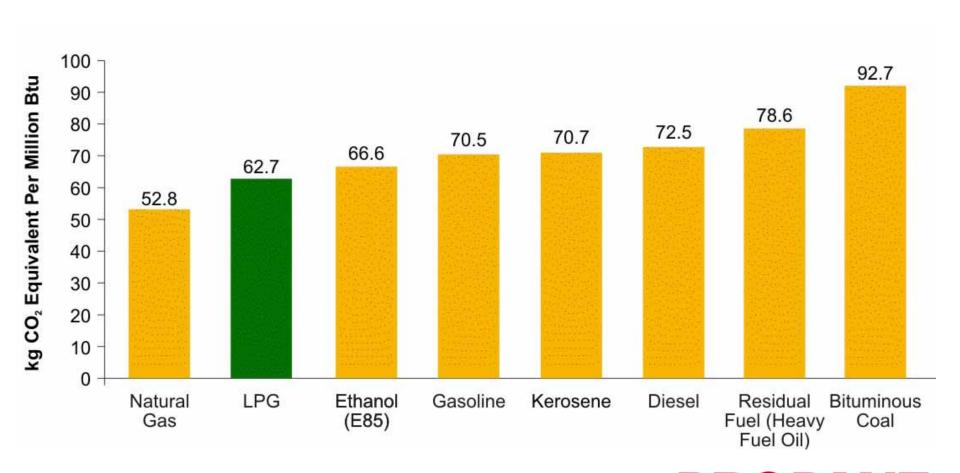


Sources: DOE 1994, EPA 2007, GREET 2007 On-site emissions estimates based on chemical composition of the fuel with 99 percent combustion. Actual life-cycle emissions vary by application.





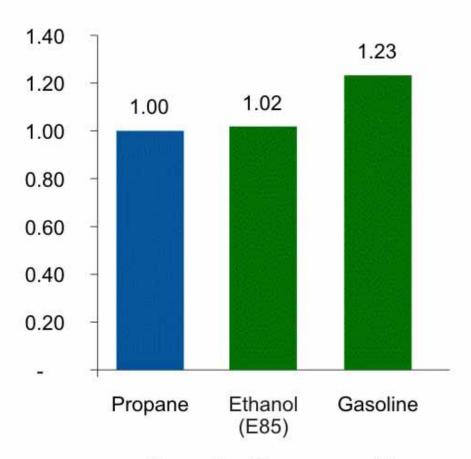
On Site Carbon Emissions







Light-duty trucks emissions



Normalized (propane = 1)





Propane: It's CLEAN-BURNING

 Propane vehicles are EPA certified and produce significantly LESS CO₂, NOx, hydrocarbons and GHG emissions than gasoline or diesel engines. Additionally, propane vehicles produce LESS CO₂ than fuel oil and ethanol.

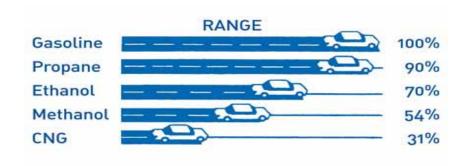






Going the Distance

 Propane gives you the highest volumetric efficiency of all alternative fuels. That means a vehicle range comparable to gasoline and better than any of the other alternatives.

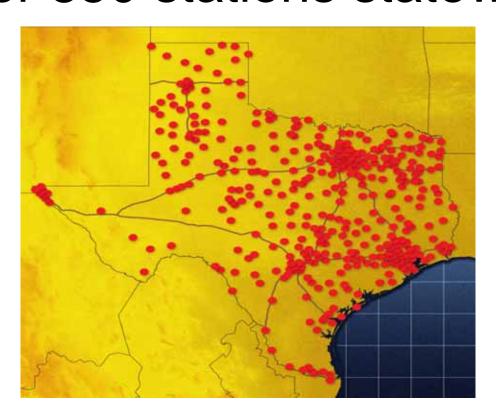


 Propane fueled vehicles compare favorably with their gasoline counterparts on power, acceleration, and cruising speeds.





Propane: It's Readily Available Over 850 stations statewide

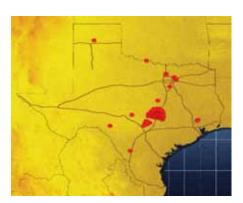






Propane





Bio-Diesel

CNG/LNG





Ethanol





Multiple platforms available for county vehicles





Chevy Impala

Chevy Silverado





GMC Topkick Series

GMC Topkick Series
 4500-8500 with liquid propane injection (LPI) system designed by CleanFuel USA. Retrofit with any body.

System can be put on any 8.1 L My 2005-2009.







Roush Performance

Liquid Propane Injection





F-250 & F-350

E-150, E-250 & E-350





Propane: It's Economical

- Propane can save you 30-50% over diesel or gasoline.
- And if you are a registered alternative fueler, you could qualify for a \$.50/gallon tax credit from the Federal government even if you are TAX EXEMPT.







County Savings Case Study

- CARTS is the second-largest rural transit fleet in State of Texas.
- Service area size:7,500 sq. mi
- Transports 350,000 passengers annually
- Annual transit bus mileage—
 1.6 million miles
- Annual usage of propane about 150,000 gallons
- 33 propane transit buses
- Annual savings: \$150,000







Denton ISD

77 school buses

- Propane Tax Credit Program 2006-2009
 - DISD qualifies for a 50¢ per gallon tax credit for each gallon of propane purchased from October 1, 2006 to September 30, 2009.
 - DISD usage of LPG/Propane per year = 298,844 gallons
 - 298,844 gal. x 50¢ per gal. = \$149,422.00 per yr.
 - Estimated Propane Credit Total \$600,000.00+ (2006-09)
 - RCC anticipates the program may carry over to 2012-13
 - Total estimated return to DISD = \$1,200,000+





Dallas ISD and Northside ISD

- Dallas ISD 545 Propane Buses
 - \$400,000 per year rebated from IRS on the
 .50 cpg fuel credit
- Northside ISD 351 Propane Buses
 - \$226,079 rebated from IRS for fuel in 2007





Grants available to replace medium duty trucks

- For dedicated (mono-fuel) medium duty vehicles and school buses through the Alternative Fuels Research & Education Division (AFRED) of the Railroad Commission of Texas (RRC).
- Average grant is between \$23K to \$25K





RRC Grants: Eligible Counties

Bastrop • Bexar • Brazoria •

Caldwell • Chambers • Collin •

Comal • Dallas • Denton • Ellis •

Ft. Bend • Galveston • Gregg •

Guadalupe • Harris • Hardin •

Harrison • Hays • Jefferson •

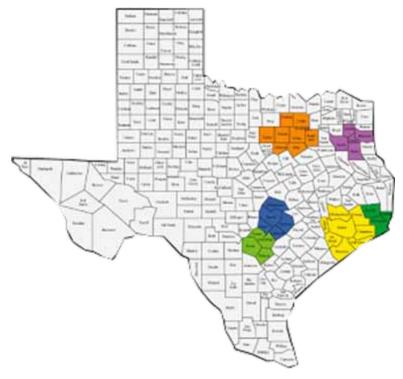
Johnson • Kaufman • Liberty •

Montgomery • Orange • Parker •

Rockwall • Rusk • Smith •

Tarrant • Travis • Upshur •

Waller • Williamson • Wilson







Propane Lawn Mowers

- Propane Lawn Mowers are environmental-friendly alternative to gasoline and diesel mowers.
- Many of the Propane Lawn Mower models today meet the proposed 2012 EPA air standards. Emitting almost significantly fewer hydrocarbons.
- Reduced opportunity for fuel theft.
- This allows counties to mow on OZONE ACTION DAYS.







Propane Lawn Mowers



You are just not just saving fuel, your saving money from those lost gallons and typically for fleet lawn mower customers, propane may be 30-50 % less than gasoline and diesel through propane fuel contracts.





Mower Grants Available through Clean Cities



Propane Lawn Mower Grants are available up to \$2,500 in non-attainment and near non-attainment areas through a state agency's local Clean Cities Coalition with funding from the Propane Education & Research Council (PERC).





Examples of local fleets using propane.

- CARTS
- TxDot
- Travis County
- City of Austin
- Railroad Commission of Texas





Contact

Tony Dale
Chairman
Texas Propane Educational
and Marketing Foundation

Cedar Park, TX 512-260-7482



TxDOT AFA for CR 104 at Mankins Branch 0914-05-141

Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Marie Walters, Road Bond

By:

Department: Road Bond

Agenda Category:

Regular Agenda Items

Information

Agenda Item

Discuss and take appropriate action on TxDOT revised Advanced Funding Agreement for Williamson County 0914-05-141 for the construction of a bridge replacement on CR 104 at Mankins Branch.

Background

Revisions were made to update the consturciton costs. This AFA replaces the Agreements sent under cover letter dated February 23, 2009.

Fiscal Impact

From/To Acct No. Description Amount Sort Seq

Attachments

Link: TxDOT AFA CR104 at Mankins Branch 0914-05-141

Form Routing/Status

Form Started By: Marie Started On: 04/22/2009 06:00

Walters PM

Final Approval Date: 04/23/2009



AWER 15426 * AUSTIN, TEXAS 78701-5426 * (512) 832-7000

March 31, 2009

Williamson County 0914-05-141 CR 104 at Mankins Branch

Honorable Dan Gattis, Sr. County Judge 710 Main Street, Suite 101 Georgetown, Texas 78626

Dear Judge Gattis:

Enclosed are two **revised** Advance Funding Agreements for the above referenced project. The project consists of the construction of a bridge replacement on CR 104 at Mankins Branch. Revisions were made to update the construction costs. The documents will replace the Agreements sent under cover letter dated February 23, 2009.

Please return the two executed documents to my attention for final processing. A fully executed agreement will be returned for your records.

Williamson County will locally let and administer the Project. Therefore, as stipulated in Article 13i of the Agreement, Williamson County will be responsible for 100% for any costs in excess of the authorized amount of \$1,029,600 in addition to the 10% of the costs up to the authorized amount.

If you have any questions, please contact me at (512) 832-7050.

Sincerely,

Patricia L. Crews-Weight, P.E.

Director of Design - AUS

Attachments

cc: John Wagner, P.E.

An Equal Opportunity Employer

STATE OF TEXAS §
COUNTY OF TRAVIS §



ADVANCE FUNDING AGREEMENT For Bridge Replacement or Rehabilitation Off the State System

THIS Advance Funding Agreement (the Agreement) is made by and between the State of Texas, acting by and through the Texas Department of Transportation, hereinafter called the "State", and Williamson County, acting by and through its duly authorized officials, hereinafter called the "Local Government."

WITNESSETH

WHEREAS, Title 23, United States Code Section 144 authorizes federal funds to assist the States in the replacement or rehabilitation of deficient bridges located on public highways, roads and streets, including those under the jurisdiction of local governments; and

WHEREAS, the Texas Transportation Code, Sections 201.103 and 222.052 establish that the State shall plan and make policies for the construction of a comprehensive system of state highways and public roads in cooperation with local governments; and

WHEREAS, the Local Government owns a bridge or bridges located on a public road or street located at CR 104 at Mankins Branch and said bridge(s) is included in the currently approved off-state system federal-aid Highway Bridge Replacement and Rehabilitation Program (HBRRP) as authorized by Texas Transportation Commission Minute Order number 110479, dated March, 2006; and

WHEREAS, the Governing Body of the Local Government has approved entering into this Agreement by resolution or ordinance which is attached hereto and made a part hereof as Attachment A and which provides for development of the specific programmed replacement or rehabilitation project, hereinafter called the "Project", identified in the location map shown as Attachment B.

NOW, **THEREFORE**, in consideration of the premises and of the mutual covenants and agreements of the parties hereto, to be by them respectively kept and performed as hereinafter set forth, it is agreed as follows:

AGREEMENT

1. Period of this Agreement

This Agreement becomes effective when signed by the last party whose signing makes the Agreement fully executed. This Agreement shall remain in effect until terminated as provided in Article 2.

2. Conditions for Termination of this Agreement

- a. The Agreement is terminated in writing with the mutual consent of the parties; or
- b. Breach of this Agreement, in which case any cost incurred shall be paid by the breaching party; or
- c. If the Local Government elects not to develop the project and the project does not proceed, in which case the Local Government agrees to reimburse the State for 100 percent of its reasonable actual direct and indirect costs incurred for the project.

3. Amendments

Amendments to this Agreement may be made due to changes in the character of the work, the terms of the Agreement, or the responsibilities of the parties. Amendments shall be enacted through a mutually agreed upon, written amendment executed by all parties to this Agreement.

4. Remedies

This Agreement shall not be considered as specifying the exclusive remedy for any Agreement default, but all remedies existing at law and in equity may be availed of by either party to this Agreement and shall be cumulative.

5. Scope of Work

The scope of work for this Agreement is the replacement or rehabilitation of the bridge(s) identified in the recitals of this Agreement. This replacement or rehabilitation shall be accomplished in the manner described in the plans, specifications and estimates developed in accordance with this Agreement and which are incorporated herein by reference.

6. Right of Way and Real Property

The Local Government is responsible for the provision and acquisition of all necessary right of way and will not be reimbursed with federal or state funds for the required right of way.

The Local Government authorizes the State, its consultant, contractor, or other designated representative to enter the site(s) of said bridge(s) and adjacent right of way or relocation right of way to perform surveys, inspections, construction and other activities necessary to replace or rehabilitate said bridge and approaches.

7. Adjustment of Utilities

The Local Government shall be responsible for the adjustment, removal, or relocation of utility facilities in accordance with applicable State laws, regulations, rules, policies, and procedures, including any cost to the State of a delay resulting from the Local Government's failure to ensure that utility facilities are adjusted, removed, or relocated before the scheduled beginning of construction. The Local Government will not be reimbursed with federal or state funds for the cost of required utility work." The Local Government must obtain advance approval for any variance from established procedures. Before a construction contract is let, the Local Government shall provide, at the State's request, a certification stating that the Local Government has completed the adjustment of all utilities that must be adjusted before construction is completed.

8. Environmental Assessment and Mitigation

Development of the Project must comply with the National Environmental Policy Act and the National Historic Preservation Act of 1966, which require environmental clearance of federal-aid projects.

- a. The Local Government is responsible for the identification and assessment of any environmental problems associated with the development of the Project governed by this Agreement.
- b. Cost participation in environmental assessment and remediation work shall be paid by the parties in the same ratio as construction costs and will be included in the construction costs identified in Attachment C, "Estimate of Direct Costs".
- c. The Local Government is responsible for providing any public meetings or public hearings required for development of the environmental assessment

The Local Government will not begin construction of the Project until identified environmental problems have been remediated, unless provided for otherwise.

9. Compliance with Texas Accessibility Standards and ADA

All parties to this Agreement shall ensure that the plans for and the construction of the Project subject to this Agreement are in compliance with the Texas Accessibility Standards (TAS) issued by the Texas Department of Licensing and Regulation, under the Architectural Barriers Act, Article 9102, Texas Civil Statutes. The TAS establishes minimum accessibility requirements to be consistent with minimum accessibility requirements of the Americans with Disabilities Act (P.L. 101-336) (ADA).

10. Architectural and Engineering Services will be Provided by the Local Government

The Local Government shall prepare or cause to be prepared the engineering plans, specifications, and estimates (PS&E) necessary for the development of the Project. The PS&E shall be prepared in accordance with all applicable laws, policies and regulations deemed necessary by the State. The Local Government shall submit the completed PS&E to the State for review and comment and make any required revision, if necessary, and within the State's PS&E Review and Processing Schedule. The Local Government will not bid the construction contract until the final PS&E have been approved by the State.

The engineering plans shall conform to the design criteria in the State's <u>Roadway Design Manual</u>, <u>Bridge Design Manual</u>, the current <u>Standard Specifications for Construction and Maintenance of Highways</u>, <u>Streets</u>, <u>and Bridges</u> and the Texas Accessibility Standards.

11. Construction Responsibilities

a. The Local Government shall advertise for construction bids, issue bid proposals, receive and tabulate the bids and award and administer the contract for construction of the Project. Administration of the contract includes the responsibility for construction engineering and for issuance of any change orders, supplemental agreements, amendments, or additional work orders, which may become necessary subsequent to the award of the construction contract. In order to ensure federal funding eligibility, projects must be authorized by the State prior to advertising for construction. Upon State approval, a contract for the construction of the project in accordance with existing Local Government procedures and applicable laws will be issued by the Local Government.

- b. All change orders or supplemental agreements deemed necessary by the Local Government, subsequent to the award of the contract shall be the responsibility of the Local Government and are subject to the approval of the State. The Local Government will be responsible for any contractor claims that are the result of any delays that may be incurred by the contractor. Change order work to be performed by the construction contractor shall only be authorized by the Local Government after approval is granted from the State. The work shall not begin until all applicable Local and State signatures have been affixed to the change order and/or supplemental agreements.
- c. Upon completion of the Project, the State will issue a "Notification of Completion" acknowledging the Project's construction completion.

12. Project Maintenance

After the Project has been completed, the Local Government shall accept full ownership, and operate and maintain the facilities authorized by this Agreement for the benefit of and at no charge of toll to the public. This covenant shall survive the completion of construction under this Agreement.

13. Local Project Sources and Uses of Funds

- a. A Project Cost Estimate is provided in Attachment C, "Estimate of Direct Costs".
- b. Attachment C provides a source of funds estimate as well as the estimated direct preliminary engineering, construction engineering, and construction costs for the Project in total and by the Local Government.
- c. The required Local Government participation is based solely upon the State's estimate of the eligible work at the time this Agreement is executed and will not be adjusted during construction except as needed to include any Project cost item or portion of a cost item ineligible for state or federal participation. In addition to its share of estimated direct engineering and construction costs, the Local Government is responsible for the direct cost of any project cost item or portion of a cost item that is not eligible for federal participation under the federal HBRRP.

The Local Government is also responsible for any cost resulting from changes made at the request of the Local Government.

- d. If at the completion or termination of the Project the State determines that additional funding is required by the Local Government, the State shall notify the Local Government in writing. The Local Government shall make payment to the State within thirty (30) days from receipt of the State's written notification.
- e. Upon completion of the Project, the State will perform an audit of the Project costs. Any funds due to the Local Government, the State, or the Federal Government will be promptly paid by the owing party.
- f. The State will not pay interest on any funds provided by the Local Government.

CSJ #0914-05-141 District # 14 - Austin Code Chart 64 #50246 Project: BR () OX

NBI Structure #142460AA0498001

CFDA #20.205

- g. The Local Government funding participation responsibilities include Project direct costs only, except when the Project is terminated before completion at the request of the Local Government as addressed in the Termination provision of this Agreement.
- h. The state auditor may conduct an audit or investigation of any entity receiving funds from the state directly under the contract or indirectly through a subcontract under the contract. Acceptance of funds directly under the contract or indirectly through a subcontract under this contract acts as acceptance of the authority of the state auditor, under the direction of the legislative audit committee, to conduct an audit or investigation in connection with those funds.

An entity that is the subject of an audit or investigation must provide the state auditor with access to any information the state auditor considers relevant to the investigation or audit

i. The total estimated cost of this project is \$1,029,600 and shall be funded jointly from Federal, State, and Local Government funds. Federal funds in an amount not to exceed \$823,680.00 will be utilized to authorize the performance for contracted items for the Project. The Local Government will be responsible for any costs in excess of the authorized amount of \$1,029,600. Contractor monthly progress payments will be handled solely by the Local Government. The Local Government will submit a monthly billing statement to the State for costs expended on the Project and the State will reimburse the Local Government 90% of the billed amount. Any costs over the authorized funds of \$1,029,600 will be the Local Government's responsibility at 100%.

14. Notices

All notices to either party by the other required under this Agreement shall be delivered personally or sent by certified or U.S. mail, postage prepaid, addressed to such party at the following addresses:

State:

Austin District Engineer

P.O. Drawer 15426

Austin, Texas 78761-5426

Local Government:

Williamson County Judge

710 Main St., Suite 101 Georgetown, Texas 78626

All notices shall be deemed given on the date so delivered or so deposited in the mail, unless otherwise provided herein. Either party may change the above address by sending written notice of the change to the other party. Either party may request in writing that such notices shall be delivered personally or by certified U.S. mail and such request shall be honored and carried out by the other party.

CSJ #0914-05-141 District # 14 - Austin Code Chart 64 #50246 Project: BR () OX

NBI Structure #142460AA0498001

CFDA #20.205

15. Legal Construction

In case one or more of the provisions contained in this Agreement shall for any reason be held invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provisions and this Agreement shall be construed as if it did not contain the invalid, illegal or unenforceable provision.

16. Responsibilities of the Parties

The parties to this Agreement agree that no party is an agent, servant, or employee of the other party and each party agrees it is responsible for its individual acts and deeds as well as the acts and deeds of its contractors, employees, representatives, and agents.

17. Ownership of Documents

Upon completion or termination of this Agreement, all documents prepared by the State shall remain the property of the State. All data prepared under this Agreement shall be made available to the State without restriction or limitation on their further use.

All documents produced or approved or otherwise created by the Local Government shall be transmitted to the State in the form of photocopy reproduction on a monthly basis as required by the State. The originals shall remain the property of the Local Government. At the request of the State, the Local Government shall submit any information required by the State in the format directed by the State.

18. Compliance with Laws

The parties shall comply with all federal, state, and local laws, statutes, ordinances, rules and regulations, and the orders and decrees of any courts or administrative bodies or tribunals in any manner affecting the performance of this Agreement. When required, the Local Government shall furnish the State with satisfactory proof of this compliance.

19. Sole Agreement

This Agreement constitutes the sole and only agreement between the parties and supersedes any prior understandings or written or oral agreements respecting this Agreement's subject matter.

20. Office of Management and Budget (OMB) Cost Principles

In order to be reimbursed with federal funds, the parties shall comply with the Cost Principles established in OMB Circular A-87 that specify that all reimbursed costs are allowable, reasonable and allocable to the Project.

21. Procurement and Property Management Standards

The parties shall adhere to the procurement standards established in Title 49 CFR §18.36 and with the property management standard established in Title 49 CFR §18.32.

22. Inspection of Books and Records

The parties to the Agreement shall maintain all books, documents, papers, accounting records and other documentation relating to costs incurred under this Agreement and shall make such materials available to the State, the Local Government, and, if federally funded, the Federal Highway Administration (FHWA), and the U.S. Office of the Inspector General, or their duly authorized representatives for review and inspection at its office during the contract period and for four (4) years from the date of completion of work defined under this contract or until any impending litigation, or claims are resolved. Additionally, the State, the Local Government, and the FHWA and their duly authorized representatives shall have access to all the governmental records that are directly applicable to this Agreement for the purpose of making audits, examinations, excerpts, and transcriptions.

23. Office of Management and Budget (OMB) Audit Requirements

The parties shall comply with the requirements of the Single Audit Act of 1984, P.L. 98-502, ensuring that the single audit report includes the coverage stipulated in OMB Circular No. A-128 through August 31, 2000 and stipulated in OMB Circular A-133 after August 31, 2000.

24. Civil Rights Compliance

The parties to this Agreement shall comply with the regulations of the U.S. Department of Transportation as they relate to nondiscrimination (49 CFR Chapter 21 and 23 CFR §710.405(B)), and Executive Order 11246 titled "Equal Employment Opportunity," as amended by Executive Order 11375 and supplemented in the Department of Labor Regulations (41 CFR Part 60).

25. Disadvantaged Business Enterprise Program Requirements

The parties shall comply with the Disadvantaged/Minority Business Enterprise Program requirements established in 49 CFR Part 26.

26. Debarment Certifications

The parties are prohibited from making any award at any tier to any party that is debarred or suspended or otherwise excluded from or ineligible for participation in Federal Assistance Programs under Executive Order 12549, "Debarment and Suspension." By executing this agreement, the [Contractor, Local Government, Engineer, or whatever] certifies that it is not currently debarred, suspended, or otherwise excluded from or ineligible for participation in Federal Assistance Programs under Executive Order 12549. The parties to this contract shall require any party to a subcontract or purchase order awarded under this contract to certify its eligibility to receive Federal funds and, when requested by the State, to furnish a copy of the certification.

27. Lobbying Certification

In executing this Agreement, the signatories certify to the best of his or her knowledge and belief, that:

- a. No federal appropriated funds have been paid or will be paid by or on behalf of the parties to any person for influencing or attempting to influence an officer or employee of any federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.
- b. If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with federal contracts, grants, loans, or cooperative agreements, the signatory for the Local Government shall complete and submit the Federal Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- c. The parties shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

By executing this Agreement, the parties affirm this lobbying certification with respect to the Project and affirm this certification of the material representation of facts upon which reliance will be made. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Title 31 U.S.C. §1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

28. Successors and Assigns

The State and the Local Government each binds itself, its successors, executors, assigns, and administrators to the other party to this Agreement and to the successors, executors, assigns, and administrators of such other party in respect to all covenants of this Agreement.

29. Local Government Restrictions

In the case that the local government has an existing, future or proposed local ordinance commissioners court order, rule policy, or other directive that is more restrictive than the state or federal regulations that results in an increase cost to the State for the project, the local government is responsible for all increased costs associated with the ordinance, order, policy, directive, or change.

30. Signatory Warranty

The signatories to this Agreement warrant that each has the authority to enter into this Agreement on behalf of the party represented.

IN TESTIMONY HEREOF, the parties hereto have caused these presents to be executed in duplicate counterparts.

CSJ #0914-05-141 District # 14 - Austin Code Chart 64 #50246 Project: BR () OX

Project: BR () OX NBI Structure #142460AA0498001

CFDA #20.205

THE LOCAL GOVERNMENT

	Signature	
	Printed Name of Signatory	
Title:	•	
Date:		
	ATE OF TEXAS for the Executive Director and approved for the Texas Transportation Commission	
the pur	se and effect of activating and/or carrying out the orders, established policies or work heretofore approved and authorized by the Texas Transportation Commission.	ork
the pur	se and effect of activating and/or carrying out the orders, established policies or work heretofore approved and authorized by the Texas Transportation Commission.	ork
the pur progra	se and effect of activating and/or carrying out the orders, established policies or wo	ork

ATTACHMENT A

RESOLUTION OR ORDINANCE OF LOCAL GOVERNMENT

CSJ #0914-05-141 District # 14 - Austin Code Chart 64 #50246

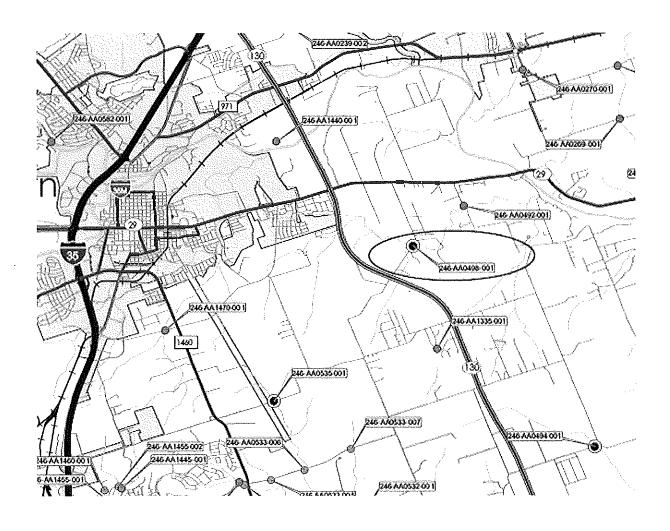
Project: BR () OX

NBI Structure #142460AA0498001

CFDA #20.205

ATTACHMENT B

PROJECT LOCATION MAP



ATTACHMENT C

ESTIMATE OF DIRECT COSTS

		Estimated Cost		Local Government Participation
Preliminary Engineering (PE) (Review Costs = 5% of Construction Costs)	(1)	\$ 44,000		
Ten (10) Percent or EDC Adjusted Percent of PE for Local Government Participation			(3)	\$ 4,400
Construction	***************************************	\$880,000		
Engineering and Contingency (E&C) (12%)		\$105,600		
The Sum of Construction and E&C	(2)	\$985,600	_	
Ten (10) Percent or EDC Adjusted Percent of the Sum of Construction and E&C for Local Government Participation			_(4)	\$98,560
Amount of Advance Funds Paid by Local Government *			_(5)_	\$0
Amount of Advance Funds to be Paid by Local Government *			(6)	\$102,960
Total Project Direct Cost	(1+2)	1,029,600		

^{*} Credited Against Local Government Participation Amount

TxDOT Resolution for AFA CR104 at Mankins Branch 0914-05-141

Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Marie Walters, Road Bond

By:

Department: Road Bond

Agenda Category:

Regular Agenda Items

Information

Agenda Item

Discuss and take appropriate action on Resolution for TxDOT Advanced Funding Agreement Williamson County 0914-05-141 for construction of a bridge replacement on CR 104 at Mankins Branch.

Background

Fiscal Impact

From/To Acct No. Description Amount Sort Seq

Attachments

Link: TxDOT Resolution for AFA 0914-05-141 CR104 at Mankins Branch

Form Routing/Status

Form Started By: Marie Started On: 04/22/2009 06:13

Walters PM

Final Approval Date: 04/23/2009

STATE OF TEXAS	*	THE COMMISSIONERS COURT OF
COUNTY OF WILLIAMSON	*	WILLIAMSON COUNTY, TEXAS
, 200_, the Commis	ssioners Co house in C	T that on this, the day of urt of Williamson County, Texas, met in Georgetown, Texas and at said meeting, he following.
R	RESOLU	TION:
County #0914-05-141 CR 104 at M construction of a bridge replacement the citizens of Williamson County.	Mankins Brant on CR 10	4 at Mankins Branch which would benefit at Mankins Branch which would be at Mankins Branch which which would be at Mankins Branch which which would be at Mankins Branch which which was at Mankins Branch which which which was at Mankins Branch which which which was at Mankins Branch which wh
RESOLVED this day of		200
		Dan A. Gattis, County Judge
Attest:		
Nancy E. Rister, County Clerk	_	

PSA Approval

Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Nickey Lawrence, Unified Road System

By:

For:

Submitted

Joe England

Department: Unified Road System

Agenda Category:

Regular Agenda Items

Information

Agenda Item

Discuss and consider approving Civil Engineering Consultants Professional Service Agreement (PSA) for the County Road 258, Phase Two project.

Background

Fiscal Impact

From/To Acct No. Description Amount Sort Seq

Attachments

Link: CR 258 PSA

Form Routing/Status

Form Started By: Nickey Lawrence Started On: 04/22/2009 01:32

PM

Final Approval Date: 04/23/2009

Contract No.	

Checklist

Prior to Initiation of Work

- Signed and Executed Agreement
- □ Scope of Services Appendix A
 - o Exhibit A Services to be provided by County
 - o Exhibit B Services to be provided by Engineer
 - o Exhibit C Work Schedule
 - o Exhibit D Fee Schedule
- □ Production Schedule Exhibit IV
- □ Hourly Rates of Engineer Exhibit II
- □ Work Authorization Attachment A to Exhibit I
 - o Supplemental Work Authorization for Additional Work (if applicable)
- □ Data to be provided to Engineer by County
 - o Plans
 - o Maps
 - o Studies
 - o Reports
 - o Field Notes
 - o Statistics
 - o Computations
 - o Other:
- □ Contractors Qualification Statement Appendix B
- Insurance
 - o Worker's Compensation
 - o Commercial General Liability Insurance
 - o Automobile Liability Insurance
 - o Professional Liability Errors and Omissions Insurance
 - Self Insurance Documentation
 - o Insurance Certificates for Subcontractors and/or Sub-consultants
 - o Approval of Insurance by County

Course of Work

- Original Engineering Work Product submittal
- □ "Completed" Engineering Work Product
- □ "Accepted" Engineering Work Product
- □ Modifications and/or Changes for Approval of Engineering Work Product
- □ "Approved" Engineering Work Product
- Revisions to Work Product
- □ Seal of Endorsement on all Engineering Work Product
- □ Data necessary for applications or documentation for permits and/or grants to be provided by Engineer to County

Contract No.	

Notices (as applicable)

- □ Notice of Suspension
- □ Notice of Reinstatement
- □ Notice of Termination
- □ Notice of Staffing Changes
- □ Written Report of Accident

Documentation for Payment

- □ Internal Revenue Form W-9
- □ Invoice for Services Rendered
 - o Supporting Documentation
 - o Report of Completion Percentage
- ☐ Invoice for Reimbursables
 - o Proof of prior payment by Engineer of Reimbursables

Contract	No.
----------	-----

PROFESSIONAL SERVICES AGREEMENT

TABLE OF CONTENTS

SECTION:	TIT	<u>LE:</u>	<u>PAGE</u>
I.	Emp	ployment of the Engineer	1
П.		ic Services of the Engineer	-1
III.	Fee	Schedule	3
IV.	Peri	od of Service	3
v.		rdination with the County	4
VI.	Revi	iew of Work Product	5
VII.	Revi	ision to Work Product	6
VIII.	Eng	ineer's Responsibility and Liability	6
IX.	Own	iership of Documents	8
X.		ntenance of and Right of Access to Records	8
XI.	Mise	cellaneous:	
	A.	Severability	9
	В.	Venue and Governing Law	9
	C.	Equal Opportunity in Employment	9
	D.	Certificate of Engineer	9
	E.	Notice	10
	F.	Insurance Requirements	11
	G.	Property Taxes	11
	H.	Successors and Assigns	11
	I.	Bidding Exemption	11
	J.	Taxpayer Identification	11
	K.	Compliance with Laws	11
	L.	Reports of Accidents	11
	M.	Definition of Engineer	12
	N.	Gender, Number and Headings	12
	Ο.	Incorporation of Exhibits & Attachments	12
	Р.	Entity Status	12
	Q.	Construction	12
	R.	Independent Contractor Relationship	12
	S.	No Waiver of Immunities	12
	Т.	Interest and Late Payments	12
	U.	Texas Public Information Act	13
	V.	Acknowledgement	13
	W.	Governing Terms and conditions	13
	Χ.	Entire Agreement	13
	Sign	nature Page	14

Contract No.	
--------------	--

TABLE OF CONTENTS (cont'd)

EXHIBIT I	Compensation for Professional Services	15
	Attachment A – Work Authorization	17
EXHIBIT II	Hourly Rates	19
EXHIBIT III	Compensation for Additional Professional Services	20
EXHIBIT IV	Production Schedule	21
EXHIBIT V	Procedures for Termination or Suspension	22
EXHIBIT VI	Equal Opportunity in Employment	24
EXHIBIT VII	Insurance Requirements	26
APPENDIX A	Scope of Services	27
APPENDIX B	Engineer's Qualification Statement	28

PROFESSIONAL SERVICES AGREEMENT

STATE OF TEXAS §

COUNTY OF WILLIAMSON §

This Professional Services Agreement (the "Agreement") is made and entered into this day by and between Williamson County, Texas, a political subdivision of the State of Texas, (the "County") and Don Durden Inc dba Civil Engineering Consultants (the "Engineer").

WHEREAS, County proposes to construct a 2-lane road with shoulders (County Road 258);

WHEREAS, *County* desires to obtain professional services for <u>design services</u>, <u>bidding services</u>. <u>and services during construction associated with the construction of a 10.000 +/- lf extension of CR 258 (the "Project")</u>;

WHEREAS, *Engineer* has the professional ability and expertise to fulfill the requirements of the *Project*, and to counsel *County* in the selection and analysis of cost-effective alternatives.

NOW, THEREFORE, *County* and *Engineer* agree to the performance of the professional services by *Engineer* and the payment for these services by *County* as set forth herein.

Section I Employment of the Engineer

County agrees to employ Engineer and Engineer agrees to perform professional engineering services for the Project as stated in the Sections to follow. As a condition to employment, it is specifically agreed that any disputes arising hereunder shall be submitted to the County Judge or his designee and/or agent as designated in the Scope of Services in Appendix A, or as otherwise designated (individually or collectively the "County Judge"). The County Judge shall have complete authority for the purpose of resolving technical matters. In all other cases, the decision of the Williamson County Commissioners Court shall be final and binding, subject to any civil remedies otherwise deemed appropriate by the parties hereto.

Section II Basic Services of the Engineer

- A. In consideration of the compensation herein provided, *Engineer* shall perform professional engineering services for the *Project*, which are acceptable to the *County Judge*, based on standard engineering practices and the scope of work described on the Exhibits attached to this Agreement. *Engineer* shall also serve as *County's* professional engineer in those phases of the *Project* to which this Agreement applies and will consult with and give advice to *County* during the performance of *Engineer's* services.
- B. *Engineer* shall not commence work until *Engineer* has been thoroughly briefed on the scope of the *Project* and has been notified in writing by the *County Judge* to proceed, as evidenced by a Work Authorization substantially in the form of Attachment A to Exhibit I.

- C. **County** shall provide **Engineer** with all existing plans, maps, studies, reports, field notes, statistics, computations, and other data in its possession relative to existing facilities and to this particular **Project** at no cost to **Engineer**; however, any and all such information shall remain the property of **County** and shall be returned, if the **County Judge** so instructs **Engineer**.
- D. *Engineer* shall perform the following Basic Scope of Services:
 - 1. The basic Scope of Services shall generally consist of all elements of work, materials and equipment required for the development of the *Project*, including any Public Hearings, satisfactory to the *County Judge* and the County's Commissioners Court, in accordance with the requirements, policies, and general practices of Williamson County.
 - 2. The following documents shall be used in the development of the *Project*:
 - a. TxDOT 2003 Texas Manual of Uniform Traffic Control Devices for Streets and Highways, including latest revisions
 - b. Texas Department of Transportation Construction Manual, latest edition
 - c. Texas Department of Transportation's Standard Specifications for Construction of Highways, Streets, and Bridges, 2004 (English units)
 - d. National-Environmental Policy Act (NEPA) *
 - e. Texas Accessibility Standards (TAS) of the Architectural Barriers Act,
 Article 9102, Texas Civil Statutes, Effective April 4, 1994, including latest
 revisions *
 - f. Americans with Disabilities Act (ADA) Regulations
 - g. U.S. Army Corps Regulations
 - h. Southern-Building Code, latest edition *
 - i. Uniform Building Code. Note: Williamson County will use the 1997
 Uniform Building Code (May 1, 1997), including latest revisions, as a guide
 for design. *
 - j. National-Electrical Code, latest edition *
 - k. Williamson County Design Criteria & Project Development Manual, latest edition
 - 1. TxDOT Bridge Division Foundation-Manual, latest edition *
 - m. American Association of State Highway and Transportation Officials (AASHTO), A Policy on Geometric Design of Highways and Streets, 5th Edition.
 - * Not Applicable
 - 3. Design Criteria Order of Precedence: Design Criteria for the *Project* development shall be according to the following descending order of precedence: Williamson County Design Criteria, Texas Department of Transportation Standards and Specifications, local City standards and specifications.
 - 4. As part of the Scope of Services, *Engineer* shall submit its work products to *County* for review at regular intervals.

5. The detailed Scope of Services for the *Project* is set forth herein as Appendix A to this Agreement, and is expressly incorporated and made a part hereof.

Section III Fee schedule

- A. For and in consideration of the performance by *Engineer* of the work described in the Scope of Services, *County* shall pay and *Engineer* shall receive the fee set forth in Exhibit I. The fee is based upon the hourly rates set forth in Exhibit II. Exhibits I and II are attached hereto and made a part hereof. Invoices shall be submitted by *Engineer* on a monthly basis and are due upon presentation of all items required hereunder, and shall be considered past due if not paid within thirty (30) calendar days of the due date.
- B. For the performance of services not specifically described in the Scope of Services *Engineer* shall receive the additional services compensation described in Exhibit III, which is attached hereto and made a part hereof. In the event of any dispute over the classification of *Engineer's* services as basic or additional services under this agreement, the decision of the *County Judge* shall be final and binding on *Engineer*.

Section IV Period of Service

- A. *Engineer* shall perform the professional services described in Appendix A, the Scope of Services, in accordance with the Production Schedule attached hereto as Exhibit IV and made a part hereof.
- B. This Agreement shall become effective upon the date approved by *County* and will remain in full force and effect for the period required for the design, construction contract award and construction of the *Project*, including warranty periods and any extensions of time, unless terminated earlier as provided for herein. *Engineer* shall complete all design work as described in the Scope of Services within 606 calendar days from receipt by *Engineer* of *County's* written Work Authorization and in accordance with the production timeline included in the Scope of Services.
- C. Neither *Engineer* nor *County* shall be responsible for delays caused by "Acts of God", non-county governmental processes, national emergency, or any other causes beyond *Engineer's* or *County's* reasonable control. Upon the discovery of such an event, *Engineer* shall notify *County*, and attend a special meeting with the *County Judge* to propose a program for a solution to the problem, and, if necessary, to establish an estimated period of time of suspension or extension of the work. A written request for an extension of time, when properly documented and justified by the circumstances, will be granted by the *County Judge*.
- D. **County** may suspend the work at any time for any reason without terminating this Agreement by giving written Notice of Suspension and the work may be reinstated and this Agreement resumed in full force and effect within sixty (60) days of receipt by **Engineer** of written Notice of Reinstatement from **County**. **Engineer**, upon receipt of a Notice of Suspension

shall follow the procedures described in the attached Exhibit V, which is attached hereto and made a part hereof. In the event such suspension of the *Project* or the *Engineer's* services hereunder extends for a period of ninety (90) days or more, consecutive or in the aggregate, *Engineer* may terminate this Agreement in writing and such termination shall be treated as a Notice of Termination as provided herein.

- E. Either party may terminate this Agreement for the substantial failure of the other party to perform in accordance with the terms of this Agreement (the substantiality of such failure to be based on standard engineering practices and the scope of work described on the Exhibits attached to this Agreement), through no material fault of the terminating party. *County* may unilaterally terminate this Agreement for reasons other than substantial failure by *Engineer* to perform by delivering a written Notice of Termination which shall take effect on the tenth day following **Engineer**'s receipt of same. If mutually agreed upon, the obligation to provide services under this Agreement may be terminated without cause upon thirty (30) days written notice. *Engineer* shall follow the procedures specified in Exhibit V upon issuance or receipt of such notice. In the event of termination of this Agreement because of the substantial failure of *Engineer* to perform, *County* may prosecute the work to completion by contract or otherwise and, in such a case, *Engineer* shall be liable for any additional costs incurred by *County*.
- F. Engineer specifically acknowledges that County will sustain damages for each day beyond the required dates of completion of the Preliminary and Design Phases as defined in the Scope of Services that the work has not been accepted and approved. Because of the impracticality and extreme difficulty of fixing and ascertaining County's actual damages, Engineer agrees that one-hundred and No/100 Dollars (\$100.00) per day shall be retained by County from any amounts due Engineer for every day that Engineer does not meet the production requirements set forth in Exhibit IV.
- G. Periods of time (i) during which a Notice of Suspension is in effect, or (ii) during which a submitted and complete engineering work product is in technical review, as described in Section VI, or (iii) during which a delay directly related to matters described in section IV(C) above, shall not be taken into account in computing the amount of liquidated damages. In the event that an engineering work product received by *County* is found to be incomplete, as defined in SectionVI, Paragraph B, the period of time from the original submittal of the engineering work product to the receipt of subsequent submittal necessary to produce a completed submittal will be taken into account in computing the number of days and the amount of liquidated damages
- H. All references to time in this Agreement shall be measured in calendar days unless otherwise specified.

Section V Coordination with the County

A. The *County Judge* will act on behalf of *County* with respect to the work to be performed under this Agreement. The *County Judge* shall have complete authority to interpret and

- define *County's* policies and decisions with respect to *Engineer's* services. The *County Judge* may designate representatives to transmit instructions and receive information.
- B. **Engineer** shall not commence work on any phase of the **Project** until a thorough briefing on the scope of the **Project** is received and a written Work Authorization is issued by the **County Judge** in substantially the form of Attachment A to Exhibit I.
- C. **Engineer** shall furnish all available data and reasonable assistance necessary for the development of applications or supporting documentation for any permits, grants, or planning advances as applicable to the professional services to be rendered pursuant to this Agreement, provided that **Engineer** shall not be obligated to develop additional data, appear at hearings, or prepare extensive reports, unless compensated for such work under other provisions of this Agreement.
- D. **Engineer** shall have the responsibility at all times under the terms of this Agreement to advise **County** whether in **Engineer's** judgment it is feasible to proceed with the recommendations given any constraints affecting the **Project**.
- E. *Engineer* shall cooperate and coordinate with *County's* staff, and other engineers and contractors as reasonable and necessary and as required by the *County Judge*.

Section VI Review of Work Product

- A. *Engineer's* engineering work product will be reviewed by *County* under its applicable technical requirements and procedures.
- B. Reports, plans, specifications, and supporting documents, (the "engineering work products"), shall be submitted by *Engineer* on or before the dates specified in the Production Schedule set forth in Exhibit IV. Upon receipt of the engineering work products, the submission shall be checked for completion. "Completion" shall be defined as: all of the required items (as defined by the scope of services described herein) have been included in the engineering work products in compliance with the requirements of this Agreement. The completeness of any engineering work product submitted to *County* shall be determined by *County* within thirty (30) days of such submittal and *County* shall notify *Engineer* in writing within such 30-day period if such work product has been found to be incomplete.
- C. If the submission is complete, *County* shall notify *Engineer* and *County's* technical review process will begin.
- D. If the submission is incomplete, *County* shall notify *Engineer*, who shall perform such professional services as are required to complete the work and resubmit it to *County*. This process shall be repeated until a submission is complete.
- E. **County** shall review the completed work for compliance with the scope of work. If necessary, the completed work shall be returned to **Engineer**, who shall perform any required work and resubmit it to **County**. This process shall be repeated until the work is accepted.

- "Acceptance" shall mean that in the *County Judge's* opinion substantial compliance with the requirements of this Agreement has been achieved.
- F. After acceptance, *Engineer* shall perform any required modifications, changes, alterations, corrections, redesigns, and additional work necessary to receive final approval by the *County Judge*. "Approval" in this sense shall mean formal recognition that the work has been fully carried out.
- G. After approval of final engineering work products, *Engineer* shall without additional compensation perform any work required as a result of *Engineer's* development of the products which is found to be in error or omission due to *Engineer's* negligence. However, any work required or occasioned for the convenience of *County* after approval of a final product shall be paid for as Additional Services.
- H. In the event of any dispute over the classification of *Engineer's* work products as complete, accepted, or approved under this Agreement, the decision of the *County Judge* shall be final and binding on *Engineer*, subject to any civil remedy or determination otherwise available to the parties and deemed appropriate by the parties.

Section VII Revision to Work Product

Engineer shall make without expense to County such revisions to the work product as may be required to correct negligent errors or omissions so the work product meets the needs of County, but after the approval of the work product any revisions, additions, or other modifications made at County's request which involve extra services and expenses to Engineer shall entitle Engineer to additional compensation for such extra services and expenses, provided however, that Engineer agrees to perform any necessary corrections to the work products, which are found to be in negligent error or omission as a result of the Engineer's development of the work product, at any time, without additional compensation. If it is necessary due to such error or omission by Engineer to revise the plans in order to make the Project constructible, Engineer shall do so without additional compensation. In the event of any dispute over the classification of Engineer's services as Basic or Additional Services under this Agreement, the decision of the County Judge shall be final and binding on Engineer, subject to any civil remedy or determination otherwise available to the parties and deemed appropriate by the parties.

Section VIII Engineer's Responsibility and Liability

- A. **Engineer** covenants to undertake no task in which a professional license or certificate is required unless he or someone under his direction is appropriately licensed. In the event such licensed individual's license expires, is revoked, or is canceled, **Engineer** shall inform **County** of such event within five working days.
- B. **Engineer** shall be responsible for conformance with applicable federal and state laws, county permitting requirements, and city ordinances currently in effect, except as otherwise directed

- by the *County Judge* regarding county permitting or similar requirements properly waivable by the *County Judge*.
- C. Acceptance and approval of the final plans by *County* shall not release *Engineer* of any responsibility or liability for the accuracy and competency of his designs, working drawings, specifications, or other documents or work performed under this Agreement. Neither acceptance nor approval by *County* shall be an assumption of responsibility or liability by *County* for any defect, error, or omission in the designs, working drawings, specifications, or other documents prepared by *Engineer*.
- ENGINEER SHALL INDEMNIFY, PROTECT, AND SAVE HARMLESS D. COUNTY, ITS OFFICIALS AND EMPLOYEES AND ITS AGENTS AND AGENTS' EMPLOYEES FROM AND AGAINST ALL CLAIMS, SUITS, ACTIONS, LIABILITY, LOSS, DAMAGE, REASONABLE ATTORNEY'S FEES, COSTS, AND EXPENSES (INCLUDING, BUT NOT LIMITED TO EXPENSES RELATED TO EXPERT WITNESSES) OF ANY KIND WHATSOEVER, TO THE EXTENT ARISING FROM ANY NEGLIGENT ACT, ENGINEER OR ANY OF OR **OMISSION** \mathbf{OF} ERROR SUBCONTRACTORS IN CONNECTION WITH THE PERFORMANCE OF SERVICES UNDER THIS AGREEMENT; PROVIDED, HOWEVER, ENGINEER SHALL NOT BE RESPONSIBLE FOR THE NEGLIGENCE OF ANY OTHER PARTY, OTHER THAN ITS SUBCONTRACTORS.
- E. **Engineer's** opinions of probable **Project** cost or construction cost represent **Engineer's** professional judgment as a design professional familiar with the construction industry, but **Engineer** does not guarantee that proposals, bids, or the construction cost, itself, will not vary from **Engineer's** opinions of probable cost.
- F. **Engineer** shall perform all services and responsibilities required of **Engineer** under this Agreement using at least that standard of care which a reasonably prudent engineer in Texas, who is licensed by the State Board of Engineers, or the State Board of Registered Professional Surveyors, as applicable, would use in similar circumstances.
- G. **Engineer** represents that it presently has, or is able to obtain, adequate qualified personnel in its employment for performance of the services required under this Agreement and that **Engineer** shall furnish and maintain, at its own expense, adequate and sufficient personnel and equipment, in the reasonable opinion of **County**, to perform the services when and as required and without delays. It is understood that **County** will approve assignment and release of all key **Engineer** and professional personnel.
- H. All employees of *Engineer* shall have such knowledge and experience as will enable them to perform the duties assigned to them. Any employee of *Engineer*, who in the opinion of *County* is incompetent or whose conduct becomes detrimental to the work or coordination with *County*, shall upon *County's* and/or *County Judge's* request be immediately removed from association with the *Project*.

- I. **Engineer** shall furnish all equipment, transportation, supplies, and materials required for its operations under this Agreement.
- J. *Engineer* shall place his Texas Professional Engineer's seal of endorsement on all documents and engineering data furnished to *County*, as required by law.
- K. *Engineer* is an independent contractor under this Agreement. Neither he nor any officer, agent or employee of *Engineer* shall be classified as an employee of *County*.

Section IX Ownership of Documents

- A. Any and all documents, including the original drawings, estimates, computer tapes, graphic files, tracings, calculations, analyses, reports, specifications, field notes, and data prepared by *Engineer* are the property of *County* and upon completion of the work or termination of this Agreement or as otherwise instructed by *County* and/or *County Judge*, shall be delivered to *County* in an organized fashion with *Engineer* retaining a copy.
- B. Any reuse by *Engineer* of any such documents described in subsection A above, without the specific written consent of *County* shall be at *Engineer's* sole risk and without liability or legal exposure to *County*. Should *Engineer* be terminated, *Engineer* shall not be liable for *County's* use of partially completed designs, plans, or specifications on this *Project* or any other project, except to the extent such documents were deemed complete or otherwise "Accepted" or "Approved" as provided herein or represent completed work sealed by *Engineer*, or Surveyor, as applicable, as specified by professional standards.
- C. **Engineer** will not be responsible for any use or any modifications to the plans and documents described in subsection A performed by any entity other than Williamson County, and **County's** respective engineers and contractors, without the specific written consent of **Engineer**. Any modification as described in this paragraph shall be made in accordance with all applicable professional standards.

Section X Maintenance of and Right of Access to Records

- A. **Engineer** agrees to maintain appropriate accounting records of costs, expenses, and payrolls of employees working on the **Project**, together with documentation of evaluations and study results for a period of three (3) years after final payment for completed services and all other pending matters concerning this Agreement have been closed.
- B. **Engineer** further agrees that **County** or its duly authorized representatives shall, until the expiration of three (3) years after final payment under this Agreement, have access to and the right to examine and photocopy any and all books, documents, papers and records of **Engineer**, which are directly pertinent to the services to be performed under this Agreement

for the purposes of making audits, examinations, excerpts, and transcriptions. *Engineer* agrees that *County* shall have access during normal working hours to all necessary *Engineer* facilities and shall be provided adequate and appropriate work space in order to conduct audits in compliance with the provisions of this section. *County* shall give *Engineer* reasonable advance notice of intended audits.

- C. Engineer further agrees to include in all its sub-consultant agreements hereunder a provision to the effect that the sub-consultant agrees that County shall, until the expiration of three (3) years after final payment under the subcontract, have access to and the right to examine and photocopy any directly pertinent books, documents, papers and records of such sub-consultant, involving transactions to the subcontract, and further, that County shall have access during normal working hours to all sub-consultant facilities, and shall be provided adequate and appropriate work space, in order to conduct audits in compliance with the provisions of this section together with subsection (D) hereof. County shall give sub-consultant reasonable advance notice of intended audits.
- D. **Engineer** and sub-consultant agree to photocopy such documents as may be requested by **County**. **County** agrees to reimburse **Engineer** for the cost of copies at the rate published in the Texas Administrative Code in effect as of the time copying is performed.

Section XI Miscellaneous

- A. Severability. If any provision of this Agreement shall be held invalid or unenforceable by any court of competent jurisdiction, such holding shall not invalidate or render unenforceable any other provision hereof, but rather this entire Agreement will be construed as if not containing the particular invalid or unenforceable provision or provisions, and the rights and obligation of the parties shall be construed and enforced in accordance therewith. The parties acknowledge that if any provision of this Agreement is determined to be invalid or unenforceable, it is the desire and intention of each that such provision be reformed and construed in such a manner that it will, to the maximum extent practicable, give effect to the intent of this Agreement and be deemed to be validated and enforceable.
- B. **Venue and Governing Law.** It is contemplated that this Agreement shall be performed in Williamson County, Texas, and the venue and jurisdiction of any suit, right, or cause of action arising out of or in connection with this Agreement shall lie exclusively in Williamson County, Texas. This Agreement shall be governed by and construed in accordance with the laws of the State of Texas.
- C. **Equal Opportunity in Employment. Engineer** agrees, during the performance of the services under this Agreement, to comply with the equal opportunity in employment provisions cited in Exhibit VI, which is attached hereto and made a part hereof.
- D. Certificate of Engineer. Engineer certifies that neither Engineer nor any members of Engineer's firm has:
 - (1) Employed or retained for a commission, percentage, brokerage, contingency fee, or other consideration, any firm or person (other than a bona fide employee working

solely for Engineer) to solicit or secure the work provided by the Agreement.

- (2) Agreed, as an expressed or implied condition for obtaining this contract, to employ or retain the services of any firm or person other than in connection with carrying out the work to be performed under this Agreement.
- (3) Paid or agreed to pay to any firm, organization, or person (other than bona fide employees working solely for *Engineer*) any fee, contribution, donation, or consideration of any kind for, or in connection with, procuring or carrying out the work provided under this Agreement.

Engineer further agrees that this certification may be furnished to any local, state or federal governmental agencies in connection with this Agreement and for those portions of the **Project** involving participation of agency grant funds and is subject to all applicable state and federal, criminal and civil laws.

E. **Notice.** Any notice to be given hereunder shall be in writing and may be affected by personal delivery in writing or by registered or certified mail, return receipt requested, addressed to the proper party, at the following address:

ENGINEER:

Don Durden Inc dba Civil Engineering Consultants

Rick Myrick, P.E.

11550 IH 10 West, Suite 395 San Antonio, Texas 78230

COUNTY:

Williamson County Judge Dan Gattis (or successor) 710 Main Street, Ste. 101 Georgetown, Texas 78626

with copy to:

Williamson County Attorney Jana Duty (or successor) 405 M.L.K. St., Box #7 Georgetown, Texas 78626 Attn: File No.

and to:

Prime Strategies, Inc. 1508 South Lamar Blvd. Austin, Texas 78704 Attn: Michael Weaver

and to:

HNTB

14 Galloping Road

Round Rock, Texas 78681 Attn: Mike Snare, P.E.

and to:	٠	

- F. *Insurance Requirements. Engineer* agrees during the performance of the services under this Agreement to comply with the INSURANCE REQUIREMENTS provisions described in Exhibit VII, which is attached hereto and made a part hereof.
- G. **Property Taxes.** Notwithstanding anything to the contrary herein, to the extent **County** becomes aware that **Engineer** is delinquent in the payment of property taxes related to property located in Williamson County at the time of invoicing, **Engineer** hereby assigns any payments to be made for services rendered hereunder to the Williamson County Tax Assessor-Collector for the payment of said delinquent taxes. Notwithstanding the above, **County** shall not have an affirmative duty to determine if **Engineer** is delinquent in the payment of property taxes.
- H. Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of County and Engineer and their respective successors, executors, administrators, and assigns. Neither County nor Engineer may assign, sublet, or transfer his interest in or obligations under this Agreement without the written consent of the other party hereto.
- I. **Bidding Exemption.** This Agreement is exempted from the bidding requirements of the County Purchasing Act pursuant to Section 262.024(a)(4) of the Local Government Code as this is a contract for professional services.
- J. *Taxpayer Identification. Engineer* shall provide to *County Judge* upon submittal of *Engineer's* initial invoice requesting payment Internal Revenue Form W-9 Request for Taxpayer Identification Number and Certification that is completed in compliance with the Internal Revenue Code, its rules and regulations.
- K. Compliance with Laws. Engineer shall comply with all federal, state, and local laws, statutes, ordinances, rules and regulations, and the orders and decrees of any courts or administrative bodies or tribunals in any matter affecting the performance of this Agreement, including, without limitation, Worker's Compensation laws, minimum and maximum salary and wage statutes and regulations, licensing laws and regulations. When required, the Engineer shall furnish the County with certification of compliance with said laws, statutes, ordinances, rules, regulations, orders, and decrees above specified.
- L. Reports of Accidents. Within 24 hours after Engineer becomes aware of the occurrence of any accident or other event which results in, or might result in, injury to the person or property of any third person (other than an employee of the Engineer), whether or not it results from or involves any action or failure to act by the Engineer or any employee or agent of the Engineer and which arises in any manner from the performance of this Agreement, the Engineer shall send a written report of such accident or other event to the County, setting forth a full and concise statement of the facts pertaining thereto. The Engineer shall also immediately send the County a copy of any summons, subpoena, notice, or other documents

- served upon the *Engineer*, its agents, employees, or representatives, or received by it or them, in connection with any matter before any court arising in any manner from the *Engineer*'s performance of work under this Agreement.
- M. **Definition of Engineer.** The term "**Engineer**" as used herein is defined as including Registered Professional Surveyors, as applicable to the work to be performed under this Agreement, and any reference to professional standards in regards to a Registered Professional Surveyor shall relate to those standards promulgated by the State Board of Registered Professional Surveyors.
- N. Gender, Number and Headings. Words of any gender used in this Agreement shall be held and construed to include any other gender, and words in the singular number shall be held to include the plural, unless the context otherwise requires. The headings and section numbers are for convenience only and shall not be considered in interpreting or construing this Agreement.
- O. Incorporation of Exhibits and Attachments. All of the Exhibits and Attachments, and Appendices referred to in the Agreement are incorporated by reference as if set forth verbatim herein.
- P. *Entity Status*. By my signature below, I certify that *Engineer* is a <u>Texas Corporation</u>, duly authorized to transact and do business in the State of Texas.
- Q. **Construction.** Each party hereto acknowledges that it and its counsel have reviewed this Agreement and that the normal rules of construction are not applicable and there will be no presumption that any ambiguities will be resolved against the drafting party in the interpretation of this Agreement.
- R. Independent Contractor Relationship. Both parties hereto, in the performance of this Agreement, shall act in an individual capacity and not as agents, employees, partners, joint ventures or associates of one another. The employees or agents of one party shall not be deemed or construed to be the employees or agents of the other party for any purposes whatsoever.
- S. **No Waiver of Immunities.**_Nothing in this Agreement shall be deemed to waive, modify or amend any legal defense available at law or in equity to **County**, its past or present officers, employees, or agents or employees, nor to create any legal rights or claim on behalf of any third party. **County** does not waive, modify, or alter to any extent whatsoever the availability of the defense of governmental immunity under the laws of the State of Texas and of the United States.
- T. Interest and Late Payments. County's payment for goods and services shall be governed by Chapter 2251 of the Texas Government Code. Invoices shall be paid by County within thirty (30) days from the date of the Williamson County Auditor's receipt of an invoice. Interest charges for any late payments shall be paid by County in accordance with Texas Government Code Section 2251.025. More specifically, the rate of interest that shall accrue on a late

payment is the rate in effect on September 1 of *County's* fiscal year in which the payment becomes due. The said rate in effect on September 1 shall be equal to the sum of one percent (1%); and (2) the prime rate published in the Wall Street Journal on the first day of July of the preceding fiscal year that does not fall on a Saturday or Sunday. In the event that a discrepancy arises in relation to an invoice, such as an incorrect amount on an invoice or a lack of documentation that is required to be attached to an invoice to evidence the amount claimed to be due, *County* shall notify the party requesting payment of such an invoice of the discrepancy. Following *County's* notification of any discrepancy as to an invoice, the party requesting payment must resolve the discrepancy and resubmit a corrected or revised invoice, which includes all required support documentation, to the Williamson County Auditor. *County* shall pay the invoice within thirty (30) days from the date of the Williamson County Auditor's receipt of the corrected or revised invoice. *County's* payment of an invoice that contains a discrepancy shall not be considered late, nor shall any interest begin to accrue until the thirty-first (31st) day following the Williamson County Auditor's receipt of the corrected or revised invoice.

- U. Texas Public Information Act. To the extent, if any, that any provision in this Agreement is in conflict with Tex. Gov't Code 552.001 et seq., as amended (the "Public Information Act"), the same shall be of no force or effect. Furthermore, it is expressly understood and agreed that County, its officers and employees may request advice, decisions and opinions of the Attorney General of the State of Texas in regard to the application of the Public Information Act to any items or data furnished to County as to whether or not the same are available to the public. It is further understood that County's officers and employees shall have the right to rely on the advice, decisions and opinions of the Attorney General, and that County, its officers and employees shall have no liability or obligation to any party hereto for the disclosure to the public, or to any person or persons, of any items or data furnished to County by a party hereto, in reliance of any advice, decision or opinion of the Attorney General of the State of Texas.
- V. *Acknowledgement.* As a duly authorized representative of *Engineer*, I acknowledge by my signature below that I have read and understand the above paragraphs and that *Engineer* has the obligation to ensure compliance with its provisions by itself and its employees, agents, and representatives.
- W. Governing Terms and Conditions. If there is an irreconcilable conflict between the terms and conditions set forth in Sections I. through XI. of this Agreement and the terms and conditions set forth in any Exhibit, Appendix or Attachment to this Agreement, the terms and conditions set forth in Sections I. through XI. of this Agreement shall control over the terms and conditions set forth in any Exhibit, Appendix or Attachment to this Agreement.

X. Entire Agreement. This Agreement represents the entire and integrated Agreement between County and Engineer and supersedes all prior negotiations, representations, or agreements, either oral or written. This Agreement may be amended only by written instrument signed by both County and Engineer. NO OFFICIAL, EMPLOYEE, AGENT, OR REPRESENTATIVE OF THE COUNTY HAS ANY AUTHORITY, EITHER EXPRESS OR IMPLIED, TO AMEND THIS CONTRACT, EXCEPT PURSUANT TO SUCH EXPRESS AUTHORITY AS MAY BE GRANTED BY THE COUNTY COMMISSIONERS COURT.

EXECUTED this day of	_, 200
THE ENGINEER:	
Don Durden Inc, dba Civil Engineering Consultants	WILLIAMSON COUNTY:
BY: Richard M. Myrick	BY:
Printed Name: Richard M. Myrick	Williamson County Judge
Title: Manager, Public Works Division	_
Reviewed as to Form By:	Assistant County Attorney
Funds Verified By:	County Contracts Management Auditor

EXHIBIT I

COMPENSATION FOR PROFESSIONAL SERVICES

ACTUAL COST OF SERVICES METHOD

[Note: A separate Compensation Agreement will be attached for Compensation on a Work-Order Basis]

SECTION 1 - BASIS FOR COMPENSATION

- 1.1 The not-to-be-exceeded fee for the performance of the Scope of Services described in the Agreement shall be the sum of \$188,709.00.
- 1.2 The basis of compensation for the services of principals and employees engaged in the performance of the work shall be the hourly rates set forth in attached Exhibit II.
- 1.3 **Engineer** shall be reimbursed for actual non-labor and subcontract expenses incurred in the performance of the services under this Agreement at the **Engineer**'s invoice cost.

SECTION 2 - NOT-TO-BE-EXCEEDED FEE

2.1 **Engineer** and **County** acknowledge the fact that the not-to-be-exceeded fee is the total estimated costs of services to be rendered under this Agreement. This not-to-be-exceeded fee is based upon the labor and non-labor costs set forth in Exhibit II to this Agreement and described above, estimated to be required in the performance of the various phases of work provided for under this Agreement. Should the actual costs of the services rendered under this Agreement be less than such estimated cost, then **Engineer** shall receive compensation for only those services actually rendered.

SECTION 3 – WORK AUTHORIZATIONS

- 3.1 **County** will prepare and issue Work Authorizations, in the form identified and attached hereto as Attachment A to authorize the **Engineer** to perform one or more tasks. Each Work Authorization will include a description of the work to be performed, a description of the tasks and milestones, a work schedule for the tasks, and a fee amount agreed upon by the **County** and **Engineer**. The amount payable for a Work Authorization shall be supported by the estimated cost of each work task as described in the Work Authorization. The Work Authorization will not waive the **Engineer's** responsibilities and obligations established in this Agreement. The executed Work Authorizations shall become part of this Agreement.
- 3.2 Work included in a Work Authorization shall not begin until *County* and *Engineer* have signed the Work Authorization. All work must be completed on or before the completion date specified in the Work Authorization. The *Engineer* shall promptly notify the *County* of any event which will affect completion of the Work Authorization, although such notification shall not relieve the *Engineer* from costs or liabilities resulting from delays in completion of

the Work Authorization. Any changes in the Work Authorization shall be enacted by a written Supplemental Work Authorization before additional work may be performed or additional costs incurred. Any Supplemental Work Authorization must be executed by both parties within the period specified in the Work Authorization. The *Engineer* shall not perform any proposed work or incur any additional costs prior to the execution, by both parties, of a Supplemental Work Authorization.

SECTION 4 - ADDITIONAL SERVICES

- 4.1 For additional services, compensation shall be negotiated in accordance with Exhibit III.
- 4.2 **Engineer** shall be compensated for extra services not included in the Scope of Services described in the Agreement on the basis specified in Exhibit III; however, **Engineer** shall not be compensated for work made necessary by **Engineer**'s negligent errors or omissions.
- 4.3 The maximum amount payable under this Agreement without modification (the "Compensation Cap") is \$208.000.00, provided that any amounts paid or payable shall be solely pursuant to a validly issued Work Authorization or any Supplemental Work Authorization related thereto. In no event may the aggregate amount of compensation authorized under Work Authorizations and Supplemental Work Authorizations exceed the Compensation Cap.

SECTION 5 – REQUIRED SUPPORTING DOCUMENTATION

- 5.1 Upon submittal of the initial invoice for service, *Engineer* shall provide *County Judge* with an Internal Revenue Form W-9, Request for Taxpayer Identification Number and Certification that is complete in compliance with the Internal Revenue Code, its rules and regulations.
- 5.2 All invoices submitted to *County Judge* will be accompanied by an original, complete packet of supporting documentation. Invoices should detail hours worked by staff person, with a description of the work performed by individuals. Invoices should also contain a representation of the percentage of completion relative to that segment of the *Project*.
- 5.3 For additional services performed pursuant to Section III B of this Agreement, a separate invoice or itemization of this work will be presented with the same requirements for supporting documentation as in Section 5.2 of this Exhibit.
- 5.4 Invoices requesting reimbursement for expenditures related to the project (reimbursables) must be accompanied by copies of the provider's invoice which was previously paid by *Engineer*.

ATTACHMENT A

WORK AUTHORIZATION NO. 1

This Work Authorization is made pursuant to the terms and conditions of the Agreement entered into by and between Williamson County, Texas, a political subdivision of the State of Texas, (the "County") and Don Durden, Inc. dba Civil Engineering Consultants (the "Engineer").

Part1. The *Engineer* will provide the following engineering services:

See Exhibit B - Services to be Provided by Engineer

- Part 2. The maximum amount payable for services under this Work Authorization without modification is \$188,709.00.
- **Part 3.** Payment to the *Engineer* for the services established under this Work Authorization shall be made in accordance with the Agreement.
- **Part 4.** This Work Authorization shall become effective on the date of final acceptance of the parties hereto and shall terminate on <u>October 31, 2010</u>, unless extended by a Supplemental Work Authorization.
- **Part 5.** This Work Authorization does not waive the parties' responsibilities and obligations provided under the Agreement.

Part 6. This Work Authorization is hereby accepted and acknowledged below.

EXECUTED this day of	, 200
ENGINEER:	COUNTY:
Don Durden, Inc. dba	Williamson County, Texas
Civil Engineering Consultants	•
By: Richard M. Myrich Signature	By:
Richard M. Myrick	
Printed Name	Printed Name
Manager, Public Works Division	County Judge
Title	Title

LIST OF EXHIBITS

Exhibit A - Services to be Provided by County

Exhibit B - Services to be Provided by Engineer

Exhibit C - Work Schedule

Exhibit D - Fee Schedule

EXHIBIT II

HOURLY RATES

1. Senior Project Manager	\$ <u>1</u>	50,0	0
2. Senior Engineer/Project Manager	\$ <u>1</u>	15.00	0
3. Project Engineer	\$ <u>1</u>	05.0	0
4. Engineer in Training	\$_	75.0	0
5. Engineering Technician	\$_	68.0	0
6. CADD Draftsperson	\$_	<u>68.0</u>	0
7. Secretary/Clerical	\$_	45.0	0
8. Expert Witness Testimony	\$		

EXHIBIT III

COMPENSATION FOR ADDITIONAL PROFESSIONAL SERVICES

- 1. The fees described in Exhibits I and II to this Agreement shall provide compensation to *Engineer* for the work described in the Basic Scope of Services of the Agreement.
- 2. For the performance of work not described in the Basic Scope of Services of the Agreement, *County* shall pay and *Engineer* shall receive, under a negotiated contract modification, compensation based upon the method and rates set forth in Exhibits I and II to the Agreement.
- 3. The performance of any additional services must be authorized in writing in advance by the *County Judge*.
- 4. In the event of any dispute over the classification of *Engineer's* services as either basic or additional services, the decision of the *County Judge* shall be final and binding.

EXHIBIT IV

PRODUCTION SCHEDULE

This Agreement shall become effective upon the date approved by *County* and will remain in full force and effect for the period required for the design, construction contract award and construction of the *Project*, including warranty periods and any extensions of time, unless terminated earlier as provided for herein. *Engineer* shall complete all design work as described in the Scope of Services within the timeline and/or schedule provided in the Scope of Services.

The number of days expiring from the date of submittal to *County* of a complete work product to the date the review is finished and comments returned to *Engineer* shall not be included within the days allowed for completion.

EXHIBIT V

PROCEDURES FOR TERMINATION OR SUSPENSION

Procedures for *Engineer* to follow upon receipt of Notice of Termination:

- 1. Upon receipt of a Notice of Termination and prior to the effective date of the termination, *Engineer* shall, unless the Notice otherwise directs, immediately begin to phase out and discontinue all services in connection with the performance of this Agreement and shall proceed to promptly cancel all existing orders and contracts insofar as such orders and contracts are chargeable to this Agreement. Within thirty (30) days after receipt of the Notice of Termination, *Engineer* shall submit a statement, showing in detail the services performed under this Agreement prior to the effective date of termination.
- 2. Copies of all completed or partially completed designs, plans, and specifications prepared under this Agreement prior to the effective date of termination shall be delivered to *County* as a pre-condition to final payment.
- 3. Upon the above conditions being met, *County* shall pay *Engineer* for approved services actually performed under this Agreement, less previous payments.
- 4. Failure by *Engineer* to submit the required statement and to comply with the above stated conditions without good and reasonable cause shall constitute a waiver by *Engineer* of any and all rights or claims to collect the fee that *Engineer* may rightfully be entitled to for services performed under this Agreement.

Procedures for *Engineer* to follow upon receipt of Notice of Suspension:

- 1. Upon receipt of a Notice of Suspension and prior to the effective date of the suspension, *Engineer* shall, unless the Notice otherwise directs, immediately begin to phase-out and discontinue all services in connection with the performance of this Agreement and shall prepare a statement detailing the services performed under this Agreement prior to the effective date of suspension. Copies of all completed or partially completed designs, plans and specifications prepared under this Agreement prior to the effective date of suspension shall be prepared for possible delivery to *County*, but shall be retained by *Engineer* unless requested by *County*.
- 2. During the period of suspension, *Engineer* may submit the above-referenced statement to *County* for payment of the approved services actually performed under this Agreement, less previous payments.

Procedures for *Engineer* to follow upon exercise of right to terminate for substantial failure of *County* to perform:

- 1. In the event that *Engineer* exercises such right to terminate, within thirty (30) days after receipt by *County* of *Engineer's* Notice of Termination, *Engineer* shall submit a statement detailing the services performed under this Agreement prior to the effective date of termination.
- Copies of all completed or partially completed reports, designs, plans, studies, specifications
 and other work product shall be delivered to *County* as a pre-condition to final payment.
 Upon the above conditions being met, *County* shall pay *Engineer* for approved services
 actually performed under this Agreement, less previous payments.
- 3. Failure by *Engineer* to submit the required statement and to comply with the above stated conditions without good and reasonable cause shall constitute a waiver by *Engineer* of any and all rights or claims to collect the fee that *Engineer* may rightfully be entitled to for services performed under this Agreement.

EXHIBIT VI

EQUAL OPPORTUNITY IN EMPLOYMENT

- A. *Engineer* will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. *Engineer* will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; termination; rates of pay or other forms of compensation, and selection for training, including apprenticeship. *Engineer* agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this non-discrimination clause.
- B. *Engineer* will, in all solicitations or advertisements for employees placed by or on behalf of *Engineer*, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.
- C. **Engineer** will send to the labor union representative or workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the Contract Compliance Officer advising the said labor union or worker's representatives of **Engineer's** obligations under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- D. Engineer will comply with the Regulations of the Department of Transportation (49 CFR 21 and 23 CFR 710.405) and all provisions of Executive Order 11246 of September 24, 1965, as amended by Executive Order 11375 (41 CFR 60) and of the rules, regulations and relevant order of the Secretary of Labor. In the event that federal financial assistance is provided for the Project, Engineer shall comply with 49 CFR 26, TxDOT's Disadvantaged Business Enterprises Program and any Memorandum of Understanding between the County and TxDOT pertaining to such Disadvantaged Business Enterprise Program.
- E. *Engineer* will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations and orders of the Secretary of Labor, or pursuant thereto; and will permit access to his books, records, and accounts by the Department and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.
- F. In the event of *Engineer's* non-compliance with the non-discrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and *Engineer* may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, as amended by Executive Order 11375 (41 CFR 60) or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

G. Engineer will include the provisions of paragraph (A.) through (F.) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 or Executive Order 11246 of September 24, 1965, as amended by Executive Order 11375 (41 CFR 60), so that such provisions will be binding upon each subcontractor or vendor. Engineer will take such action with respect to any subcontractor purchase order as the Department may direct as a means of enforcing such provisions, including sanctions for non-compliance: provided, however, that in the event Engineer becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by County or Federal Agency, Engineer may request County and United States to enter into such litigation to protect the interest of the United States.

EXHIBIT VII

INSURANCE REQUIREMENTS

During the life of this Agreement, *Engineer* agrees to provide and maintain the following insurance:

- A. Worker's Compensation in accordance with statutory requirements.
- B. Commercial General Liability Insurance with a combined minimum Bodily Injury and Property Damage limits of \$1,000,000 per occurrence and \$2,000,000 in the aggregate, including coverage on same for independent subcontractor(s). WILLIAMSON COUNTY SHALL BE NAMED AS AN ADDITIONAL INSURED UNDER THIS COVERAGE.
- C. Automobile Liability Insurance for all owned, non-owned, and hired vehicles with combined minimum limits for Bodily Injury and Property Damage limits of \$1.000.000 per occurrence and \$2.000.000 in the aggregate. *Engineer* shall require any subcontractor(s) to provide Automobile Liability Insurance in the same minimum amounts.
- D. Professional Liability Errors and Omissions Insurance in the amount of \$2.000,000.
- E. In the event *Engineer* is self-insured in connection with any or all of the above-required insurance policies, *Engineer* shall submit proof of such self-insurance and all financial statements as reasonably required by the *County* in order to determine the acceptability of such self-insurance.

Engineer shall not commence any field work under this Agreement until he has obtained all required insurance and such insurance or self-insurance has been approved by **County**. **Engineer** shall not allow any subcontractor(s) to commence work to be performed in connection with this Agreement until all required insurance has been obtained and approved. Approval of the insurance by **County** shall not relieve or decrease the liability of **Engineer** hereunder.

The required insurance must be written by a company approved to do business in the State or Texas with a financial standing of at least an A- rating, as reflected in Best's insurance ratings or by a similar rating system recognized within the insurance industry at the time the policy is issued. *Engineer* shall furnish *County* with a certification of coverage issued by the insurer. *Engineer* shall not cause any insurance to be canceled nor permit any insurance to lapse. ALL INSURANCE CERTIFICATES SHALL INCLUDE A CLAUSE TO THE EFFECT THAT THE POLICY SHALL NOT BE CANCELED OR REDUCED, RESTRICTED OR LIMITED UNTIL TEN (10) DAYS AFTER COUNTY HAS RECEIVED WRITTEN NOTICE AS EVIDENCED BY RETURN RECEIPT OF REGISTERED OR CERTIFIED LETTER.

It is the intention of the *County* and the *County Judge*, and agreed to and hereby acknowledged by the *Engineer*, that no provision of this Professional Services Agreement shall be construed to require the *County* or the *County Judge* to submit to mandatory arbitration or mediation in the settlement of any claim, cause of action or dispute, except as specifically required in direct connection with an insurance claim or threat of claim under an insurance policy required under this Exhibit which absolutely requires arbitration or mediation of such claim, or as otherwise required by law or a court of law with jurisdiction over the provisions of this Agreement.

APPENDIX A

SCOPE OF SERVICES

THE ATTACHED SCOPE OF SERVICES IS INTENDED TO BE CONSISTENT WITH THE WILLIAMSON COUNTY PROFESSIONAL SERVICES AGREEMENT. TO THE EXTENT THE SCOPE IS INCONSISTENT WITH THE PROFESSIONAL SERVICES AGREEMENT, THE PROFESSIONAL SERVICES AGREEMENT WILL SUPERSEDE THE SCOPE AND WILL BE CONTROLLING.

THE ENGINEER SHALL PROVIDE EXPERT TESTIMONY IN ANY ADMINISTRATIVE OR COURT PROCEEDINGS THROUGH AN APPROPRIATE ENGINEERING PROFESSIONAL TO BE DETERMINED BY COUNTY AS ADDITIONAL SERVICES AT THE RATE OF COMPENSATION SET FORTH IN EXHIBIT II.

EXCEPT AS PROVIDED FOR FEE SERVICES OR WORK-ORDER BASED SERVICES, THE ATTACHED SCOPE OF SERVICES SHALL INCLUDE A PRODUCTION SCHEDULE REFLECTING A TIMELINE FOR THE EXECUTION OF THE PROJECT.

Scope of Services Appendix A

Exhibit A

Services to be Provided by County

The County Judge shall provide the services described below in connection with the design and construction of County Road 258.

Services During Design

- Provide all available data regarding County Road (CR) 258 to the Engineer for use in the design of the roadway. Such data shall include, but not be limited to:
 - o Boundary survey data for properties adjacent to the proposed right-of-way
 - o Roadway profile or cross-section data
 - o Roadway alignment data
 - o Any existing drainage data, including hydrologic analyses, hydraulic analyses, floodplain data, culvert sizing calculations, etc.
 - o Any existing subsurface information that classifies geotechnical conditions along the proposed right-of-way. Such information shall include soil borings, data reports, and interpretative reports
- Provide design standards to be incorporated into the work. Such standards shall include:
 - o Typical pavement section
 - o Preferred standard details
 - o Preferred material standards for various elements to be incorporated into the work such as pipe culverts, pavement markings, asphalts and oils, etc. If material standards are not available then the Engineer will develop material standards for those materials to be incorporated into the work.
 - o Williamson County Design Criteria & Project Development Manual, latest
 - o Specific revisions made by Williamson County to Uniform Building Code, Southern Building Code, and National Electric Code
 - o Available bid history data or average unit prices for common work items
- Provide timely reviews of submitted materials in accordance with approved project schedules.
- Sponsor and lead all public presentations associated with the project.
- Obtain all necessary easements and rights-of-way needed for the project.
- Conduct any environmental investigations that may be needed in order to satisfy state and federal requirements and provide the data to the Engineer for incorporation into the work. Such investigations may include cultural resource studies, archeological surveys, endangered species, wetland delineations, etc.

Services During Bidding

• Advertise the completed design in accordance with County procedures and conduct bid opening.

- Award the construction contract to the most qualified bidder in accordance local and state regulations.
- Issue appropriate notices-to-proceed.

Services During Construction

- Monitor the project for compliance to project schedule, technical quality, and contract requirements in accordance with County legal and procedural requirements.
- Manage the scope, quality, schedule, cost, and payment certifications for the construction and post-construction phases of the project.
- Establish and supervise the construction team by providing project team leadership including:
 - o Review of the scope of Engineer services during construction
 - o Defining the level of inspection services required, securing appropriate inspectors, and coordinating inspection and testing activities.
 - o Ensuring field personnel maintain adequate documentation of instructions provided to contractors and filing system for all project correspondence.
- Conduct required construction meetings.
- Coordinate all construction close-out procedures, including preparation of final record drawings by Engineer.

Exhibit B

Services to be Provided by Engineer

The Engineer shall provide those professional services needed to provide a complete design of CR 258, and develop plans suitable for bidding and construction by qualified contractors licensed in accordance with the laws of Texas and Williamson County. These services are described in greater detail below.

Assumptions

The Engineer recognizes that a significant amount of work has already been done by the County. This work includes:

- Establishment of roadway alignment and right-of-way requirements.
- Detailed topographical survey identifying ground elevations along left, center, and right roadway profiles.

As such, services normally associated with the Conceptual Design phase and Design Development phase will not be needed. For this project, the Engineer shall begin work in the Schematic Design phase.

Other assumptions that have impact on the Engineer's scope of services are as follows:

- Geotechnical soil borings and subsequent testing have been determined to <u>not</u> be necessary. As such, standard County typical paving sections will be used.
- Detailed specifications will not be prepared since reference specifications will be used. The reference specifications to be incorporated into the work include the TxDOT 2003 Texas Manual of Uniform Traffic Control Devices for Streets and Highways, including latest revisions, the TxDOT Construction Manual, latest edition, the TxDOT Standard Specification for Construction of Highways, Streets, and Bridges (2004). Required work items not covered by these standards will developed by the Engineer and incorporated into the documents.
- The preparation of detail sheets will be limited to only those special details required for the project. Typical details that are shown in standard sheets issued by the County or TxDOT will be included by reference. We will not reproduce these sheets for inclusion in the plan set.
- A drainage area map and associated drainage calculations will not be provided in the plan set. This data will be provided in a technical memorandum submitted to the County under separate cover.
- The construction contract and other front-end documents normally found in the project manual will be provided by Williamson County.
- Survey work associated with design shall be limited to supplementing data already provided by the County.

• Bidding services are not included. These include verification of qualifications of the apparent low bidder, development of the award recommendation, and tabulation of the bids.

Design Services

Schematic Design

The Schematic Design Phase includes work tasks needed to define work elements associated with the selected alignment. Since the roadway centerline alignment has already been selected for CR 258, this work will include the following:

- Development of the left, center, and right roadway profile in accordance with county and state grade limitations, as well as those recommended by the American Association of State and Highway Transportation Officials (AASHTO).
 - o Identification of roadway lowpoints in order to establish locations of needed drainage structures.
 - O Development of preliminary roadway cross-sections at intervals not to exceed 50-feet to establish relationship of roadway to adjacent properties. In addition, cross-sections will be taken at all driveway locations to determine whether additional construction easements are needed to accommodate driveway grades that may extend into adjacent properties.
 - O Develop a technical memorandum, entitled Roadway Profile Design. The memorandum will present the criteria used in establishing the profile, locating lowpoints, and describe the relationship of the roadway to adjacent properties. It will also identify any special issues that impact profile development and present special requirements for maintaining access to adjacent properties.
- Identify any detour routing requirements that may be needed to facilitate
 construction. If temporary roadways are to be constructed as a means to move
 traffic through the construction zone, develop temporary roadway design in
 sufficient detail as to allow quantification and preliminary pricing. This may
 include:
 - o Detour route alignment identification
 - Detour route profile development
 - Detour route cross-section development
- Conduct a hydrologic analysis to determine storm water runoff rates at roadway lowpoints for storm frequencies equal to 5-years, 10-years, 25-years, and 100-years. Conduct a hydraulic analysis to identify an appropriate pipe size to convey runoff from a 10-year storm safely across the proposed roadway without damaging the roadway or creating nuisance problems for adjacent property owners. Identify the impacts associated with runoff from a 25-year storm and a

100-year storm and provide recommendations to protect the roadway from damage caused by these storms.

A list of deliverables associated with the Schematic Design Phase is shown below in Table 1.

Table 1
List of Deliverables, Schematic Design Phase

Item No.	Document Description
1	Roadway Plan and Profile Sheets drawn at a scale equal to 1"=40' (3 rolls)
2	Preliminary Roadway Cross-sections
3	Roadway Profile Development Technical Memorandum
4	Roadway Detour Requirements
5	Drainage Design Technical Memorandum
6	Schematic Design Cost Estimate Memorandum

Construction Plan Preparation Phase

The Construction Plan Preparation phase includes work needed to develop plans and specifications suitable for bidding and subsequent construction. At this point in the project all critical design elements have been set and no changes are expected. All efforts are focused on developing appropriate documentation to communicate project requirements to the contractor. As a minimum, we anticipate developing the plan sheets described below in Table 2.

Table 2
Plan List

Plan List Item No.	Plan Description
1	Cover Sheet
2	Sheet Layout and Sheet Index
3	General Notes and Quantities
4	Roadway Plan and Profile, Sta 10+00 to Sta 16+00
5	Roadway Plan and Profile, Sta 16+00 to Sta 22+00
6	Roadway Plan and Profile, Sta 22+00 to Sta 28+00
7	Roadway Plan and Profile, Sta 28+00 to Sta 34+00
	Roadway Plan and Profile, Sta 34+00 to Sta 40+00
8	Roadway Plan and Profile, Sta 40+00 to Sta 46+00
9	Roadway Plan and Profile, Sta 46+00 to Sta 52+00
10	Roadway Plan and Profile, Sta 52+00 to Sta 58+00
11	Roadway Plan and Profile, Sta 58+00 to Sta 64+00
12	Roadway Plan and Profile, Sta 64+00 to Sta 70+00
13	Roadway Plan and Profile, Sta 70+00 to Sta 76+00
14	Roadway Plan and Profile, Sta 76+00 to Sta 82+00
15	Roadway Plan and Profile, Sta 82+00 to Sta 88+00
16	Roadway Plan and Profile, Sta 88+00 to Sta 94+00
17	Roadway Plan and Profile, Sta 94+00 to Sta 100+00
18	Roadway Plan and Profile, Sta 100+00 to Sta 106+00
19	Roadway Plan and Profile, Sta 106+00 to Sta 112+00
20	Miscellaneous Roadway Detail Sheet
	Driveway Detail Sheet
17	Cross-sections, Sta 10+00 to Sta 18+00

	and the same of th
18	Cross-sections, Sta 18+00 to Sta 26+00
19	Cross-sections, Sta 26+00 to Sta 34+00
20	Cross-sections, Sta 34+00 to Sta 42+00
21	Cross-sections, Sta 42+00 to Sta 50+00
22	Cross-sections, Sta 50+00 to Sta 58+00
23	Cross-sections, Sta 58+00 to Sta 66+00
24	Cross-sections, Sta 66+00 to Sta 74+00
25	Cross-sections, Sta 74+00 to Sta 82+00
26	Cross-sections, Sta 82+00 to Sta 90+00
27	Cross-sections, Sta 98+00 to Sta 106+00
28	Cross-sections, Sta 106+00 to Sta 112+00
29	Detour Plan and Profile, Traffic Control Plan
30	Culvert No. 1, Plan, Sections, Structural Details
31	Culvert No. 2, Plan, Sections, Structural Details
32	Signing and Pavement Marking Plan, Sheets 1 through 8
33	Storm Water Pollution Prevention Plan, Sheets 1 through 8

Specifications will be included by reference, except for those items for which no reference specification is available. In these cases, special specifications will be prepared by the Engineer. The front-end documents, including General Conditions, will be developed by the Engineer and will be based on County standards. Any deviations to these standards will be noted and included as special provisions in a separate section entitled *Special Conditions*.

The Engineer will submit preliminary plans and specifications to the County for review and approval. Plans will be submitted when they are 60-percent complete and at 90-percent complete. The project manual will be submitted for review with the 90-percent plan submittal. Comments from all reviews will be addressed in a timely manner to the satisfaction of the County. A list of required deliverables associated with this phase of work is shown below in Table 3.

Table 3
List of Deliverables, Construction Plan Preparation Phase

Item No.	Document Description
1	60-percent Construction Plans
2	Comment Response Memorandum
3	90-Percent Construction Plans and Specifications
4	Comment Response Memorandum
5	Final Construction Plans and Specifications
6	Engineer's Cost Estimate

Upon final approval of the construction plans, specifications, cost estimate the Engineer will deliver to the County electronic copies of the drawings and project manual on a compact disc. The data will be in a .pdf format suitable for uploading onto the County's website for distribution to interested bidders.

Bidding Services

The Engineer will provide assistance to the County to advertise the work so prospective bidders may become aware of the project requirements and prepare their bids accordingly.

Activities within this phase of work include those shown below:

- Distribution of contract documents to prospective bidders. The Engineer will
 deliver to the County an electronic version of the contract documents in .pdf
 format suitable for uploading onto the County's website.
- Development of no more than two (2) addenda.
- Development of responses to questions posed by respective bidders. The number of responses provided to contractors is limited to 10.
- Participation in pre-bid conference to include the development of an agenda and minutes of the meeting.
- Participation in bid opening and selection of apparent low bidder.
- Qualification of apparent low bidder and subsequent award of contract.
- Preparation of conformed construction documents incorporating changes and revisions that occurred during the bidding process. The Engineer will submit one reproducible set of conformed drawings to the County for their use.

Services During Construction

The Engineer will provide services during construction to clarify and interpret the construction plans and specifications. These services include participation in a preconstruction conference to answer questions from the Contractor about the work. Also included are services regarding the review of required contractor submittals to affirm the quality of equipment and materials to be used in the work. The number of submittals that the Engineer will review is limited to 20. This includes the initial review and one subsequent review should the initial review discover inadequacies in the original submission.

The Engineer will also respond to Contractor requests for information (RFI's) in order to clarify the intent of plans and specifications. The number of RFI's that the Engineer will answer is limited to 50.

The Engineer will also participate in monthly construction meetings and will visit the construction site twice each month to review the progress of the work and to confer with the County on issues regarding general conformance with contract documents. It is assumed that the construction period will not exceed 9 months. Therefore, the Engineer will attend 9 construction meetings. In addition, the Engineer will attend one additional meeting during the month to review issues that may have developed outside of the monthly progress meeting and to review the contractor's application for payment. Total number of meetings included in the scope of work is not expected to exceed 18.

The Engineer will also prepare record drawings of installed improvements based on contractor markups of the bid documents. Since these record drawings are based on contractor-supplied information, the Engineer is not responsible for the accuracy of

portrayed information. Record drawings will be prepared in a medium satisfactory to the County. Electronic copies of the drawings will also be provided. Electronic versions will be prepared using computer-aided design/drafting software that is compliant with County systems.

The Engineer will also be ready to prepare a maximum of 4 change orders should the need arise. This work will consist of the engineering necessary to properly define the change as to allow the contractor to price the work. Typically, this includes the development of plans and specifications to show the designer's intent.

Exhibit C Work Schedule

Activity DESIGN TIME: INF	Description	Orig	Cal	Pred	Suc	Early Start	Early Finish	FEB M A M J J A S O N D J F M A M J J A S O N D
PROJECT TIMELINE	TIMELINE							
6666	Working Days (8.3.A.1 - 5 day/wk)	431	A			04MAR09	18OCT10	
CR258, Pł	CR258, Phase II (Bond Job to Ronald Reagan Blvd)	eaga	ın Blvd	1				
Schematic	Schematic Design (30%)							
1000	Notice to Proceed	0	F			05MAR09		Notice to Proper the state of t
1010	Project Kick-off Meeting Review files from Milliamens Courts		7 7	2	1020	05MAR09	05MAR09	Project Kick-off Meeting 14 (1) 11 (1
1030	Prepare Draft Design Criteria	٦ -	- 1	1020	1050	11MAROS	11MARDS	P Keview iles from Williamson County P Promote Treat Desirer Citeds P Promote Treat Desirer Citeds
1040	Prepare Typical Sections	-		1020		11MAR09	11MAR09	Prepare Typical Sections 111111111111111111111111111111111111
1060	Prepare Project Layout	1	1 1	1020		11MAR09	11MAR09	Prepara Project Layout III III III III III III III III III I
1070	Prepare Plan/Profile Sheets	9	1 1	1020	1080,	11MAR09	27MAR09	Propose Plant Police Control of the
1100	Develop Drainage Area Maps	2		1020	1110	11MAR09	12MAR09	Develop Drainage Area Mapsi III III III III III III III III III I
1120	Prepare Preliminary Culvert I avoids	ئ د		1100	1120	13MAR09	17MAR09	Develop Discharge Rates III III III III III III III III III I
1050	Update Design Criteria	4 -		1030	0611	23MAR09	ZaMAROS	Triebate Preliminaly Culvert Layouts ************************************
1130	Develop Hydraulic Computation Sheets	2	1	1120	1140	25MAR09	26MAR09	Develop Hydraulic Computation Sheets
1140	Develop Drainage Design Tech. Memo.	4	1 1	1130		27MAR09	03APR09	(FPE) Develop Drainage Design Tech. Memo. 11 (1) (1) (1) (1) (1) (1) (1) (1) (1)
1080	Prepare Prelim, Design Cross Sections	5	1 1	1070	1150	30MAR09	27APR09	
1090	Develop Roadway Design Tech. Memo.	2	7	1070		30MAR09	01APR09	Develop Roadway Design Tech, Memo, 1111 111 1111 1111 1111 1111 1111 11
1150	Prepare Preliminary Construction	2	-	1080	1160	29APR09	30APR09	it III in Prepare Preliminary Construction Estimate 11111 (11111) in 11111 (11111) III (11111)
1160	Schematic Design Submittal	-	-	1150	1170	01MAY09	01MAY09	
1170	Review by Williamson County	무	-	160	1180	04MAY09	19MAY09	Review by Williamson County
Information	Schematic Review Meeting		-	1170	2010	20MAY09	19MAY09	11 (1) 111 111 Schematic Review Meeting 111 (1) 111 111 111 111 (1) (1) (1) (1)
2010	2010 Treement Williams Court	,	,		0000			
0 22	Illiculpulate Withinson County	٠ ;	OBLL !	B 5	2520,	ZUMAYOB	ZZMAYD9	Il III III III III III III III III III
02020	Develop Traffic Control Phasing Sheets	15	1 7	2010	2540,	26MAY09	19JUN09	11 111 111 111 111 111 111 111 111 111
2540	Prenate SWPPP Layouts	- "	1 2	2010	2550	26MAY09	26MAY09	11 11 11 11 12 Finalize Culvert Layouts 11 11 11 11 11 11 11
2570	Prepare Stoning and Pvmt Marking Olvs	o +-	- 1	2520	2580	ZEMAYUS	SHWAYDE	Simple Swippe Sw
2580	Calc. Storing and Pvmt Marking			2570	7007	28MAY09	SHMAYOR	HIGH HIGH HIGH FIRST THE RESEARCH THE RESEAR
2550	Calculate SWPPP Quantities	2	1 25	2540	2560	01JUN09	037UN09	Calculate SWPPP Quantilles
2560	Prepare SWPPP Summary	1	1 25	2550		04JUN09	04JUN09	11 111 111 111 11 Prepare SWPPP Summary 11 111 111 111 111 111 111 111 111 11
2590	Update Design Cross Sections	ıcı			2600	12JUN09	19JUN09	Undate Design Cross Sections
2000	Digital Constitution Estimate	- '	7	2590	2610,	22JUN09	22JUN09	— La constant Legale. Construction Estimate, it was unauten in the management of the
2620	Prepare List of TxDOT Sids. & Snecs.	7 -	- -	2600	7007	22.11 INOB	25 ILINOB	Prepare General Notes: III
2660	Intermediate Phase Submittal	-	1 26		2670	26JUNDB	26JUN09	Hill Hill Hill Hill Hill Hill Hill Hill
2670	Review by Williamson County	2	1 2E		2680	29JUN09	14JUL09	Register III III III III III III III III III I
2680	Intermediate Phase Review Meeting	1	1 ZE		3110	15JUL09	15JUL09	11 111 111 111 111 111 111 111 111 111
Final Design (90%)	n (90%)		-	Ī	ĺ			
3110	Incorporate Williamson County	3	1 2680		3120,	17JUL09	21JUL09	Incorporate Will
3120	Finalize SWPPP Plan Sheets	-	1 31	3110		23JUL09	23JUL09	4
Start date	04MAR09							יברל יוליבים ומתוושימים
Finish date	180CT10							Frogress bar
Run date	23FFB09		EXHIBITION		Eng.	: - Civil Eng. Consultants		Critical bar
Page number	1A		04,888,HO	(Bond Jor	2 7 7	eagan blvo	_	1
@ Primave	© Primavera Systems, Inc.							Start milestone point

Activity	Description	Orig	Cal	Pred	Suc	Early	Early	TEE M A M J J A S O N D J F M A M J J A S O N D
3130	Finalize Signing and Pvmt. Marking	-		3110		23,01,09	Zajulos	Hilling House Stanton and Pour Marking Sheets William House House Stanton and Pour Marking Sheets
3140	Finalize Design Cross Sections	4	_	3110	3150	23JUL09	29,10,09	Finalize Design Cross Sections
3150	Finalize General Notes	-		3140	3160	3070108	307NF09	THE TRANSPORT OF THE STREET OF
3160	Finalize List of TxDOT Stds, & Specs.	-	-	1 3150	3170	3070L09	307NF08	(1111111111111111111111111111111111111
3170	Prepare Prelim. Front-End Documents			1 3160	3180	31JUL09	31JUL09	The state of the s
3180	Final Phase Submittal	-		3170	3199	03AUG09	03AUG09	- The second of
3150	Review by Williamson County	9		3180	3200	04AUG09	19AUG09	HITH HITH HITH HITH SPECIAL DE WILLIAM DE WILLIAM DE WILLIAM HITH HITH HITH HITH HITH HITH HITH HIT
3200	Submit Final Plans (Signed & Sealed)	9	1	3190	4110	20AUG09	04SEP09	11111111111111111111111111111111111111
CR 258, P	CR 258, Ph. II - Construction Phase Services	Vice	10.					
Bid Phase								
4110	Prepare advertisement and submit to	2	_	3200	4120	08SEP09	09SEP09	Fit it i
4120	Advertise Project, dist. comments,	묾	-	1 4110	4130	11SEP09	06NOV09	the second secon
4130	Conduct bid opening	2		1 4120	4140	60AON60	10NOV09	
4140	Tabulate bids, qualify apparent low	10	1	1 4130	5110	1ZNOV09	04DEC09	11 111 111 111 111 111 111 111 111 111
Constructi	Construction Phase Services							
5110	Attend Pre-Construction Conference	-	1	1 4140	5120,	18DEC09	18DEC09	Hilling Hilling Hilling Hilling Hilling Hilling Pre-Construction Conference Hilling Hilling
5120	Review Contractor Submittals (20 max.)	100	1	1 5110		210509	02JUL10	
5130	Review Request for Information	100	1	5110		21DEC09	02JUL10	A STATE OF THE STA
5140	Atlend Monthly Constr. Migs. (1 per mo.)	150	1	5110		21DEC09	28SEP10	<u>:: L</u> :
5150	Attend Monthly Estimate Mtgs. (1 per	150	1	1 5110		21DEC09	28SEP10	
5160	Prepare Change Orders (4 max.)	100	-	1 5110		21DEC09	02JUL10	Preserve Transfer of Preserve Ch
5170	Construct Project	150	1	1 5110	5180	21DEC09	28SEP10	
5180	Prepare Record Drawings	10	-	5170		30SEP10	18OCT10	
1000	COCCAPACO							
Start date Finish date Data date Run date Page number © Primave	1 date 04MAR09 sh date 18OCT10 a date 23FEB09 e number 2A © Primavera Systems, Inc.		EXH CR 25	EXHIBIT C - Civ SR 258 (Bond Jo	vil Eng. C nb to R. F	EXHIBIT C - Civil Eng. Consultants CR 258 (Bond Job to R. Reagan Blvd)	÷	Early bar From Progress bar From Critical bar Summary bar Start milestone point

Exhibit D Fee Schedule

EXHIBIT D

WILLIAMSON COUNTY CONTRACT NO.

Project: CR 258

Limits: Ronald Reagan

TANTS
ONSULT
ERING CC
AGINEEF
CIVIL EI

Shellong	:			Τ	Τ	1					Γ	Γ			Т	Τ	Τ	П			Γ	Τ		Γ		П	Т	T	T	Т	Τ			Γ	Τ	Γ	_		\neg	П	Т	Т	Т	7	Т	Τ	Π	П
This part This	:		COST	S1 938 00	51.938.00		\$2,220.00	\$2,580.00	53,180.00	\$1,130.00	53,640.00	\$12,750.00	\$2,186.00	\$2,186.00	56,100.00	56,100.00	\$625,00	\$1,460.00	\$22,496.00		2211 00	\$211.00	\$1,229.00	515,610.00	\$17,839.00	\$16,512.00	516,512.00	\$2,652,00	51,320.00	51,326.00	59.544.00	\$44,106.00		00 071 15	51.140.00	\$2,018.00	\$1,202.00	\$3,220.00	53.037.00	\$978.00	32,003.00	56,700.00	CARE OU	2240.00	57.956.00	\$2,120.00	52,120.00	\$15,136.00
Triangle			HOURS PER SHEET	i						_											-	-	ដ	12				ų.	9	2				ŀ		92			_	173			<u>p</u>					
Track Obsolute Park Note Consolute Annale Conso							18	8	54	22	82	74	26	56	58 5	6 a	10	14	207		6	67	ភ	902	221	524	224	99	2 ;	2 5	144	552		45	22	52	14	40	8	12	8 1	. ·	₽ <	1	24	<u>1</u>	16	171
Triangle Properties Prope		600	CLERICAL	\$45.00	-					4		4		٥	e	7		٥	7			-			0		-				0	0			0			0		,	7	7			6		0	r)
The Property of the Property		200		568.00	-							0		0				0	0		a	2	8	120	128	144	144	Ç	2 0	2	24	298				16	4	20	24	9	6	96	מ	c	7 00		0	90
TASK DESCHIPTION LAND IS Near Project Register Formation and Proj. Management	,	004	ENGINEERING TECH	S68.00	-							0	12	12		3		Ð	12			0			0		0	24			24	24			0			0				1	r	2	2		0	2
TASK DESCRIPTION TASK DESCRI	ļ	023	SENIOR ENGINEERING TECH	\$84.00								Û		0		3		0	0			0			0		0				0	0			0			0			•	3	Ī		ŀ		0	0
CHAIL ENGINEER/AINE CONSULTANTS Street STRING STR	;	002	튭	\$75,00	-							0	4	₹	200	7 2	æ	4	58		-	1	2	딦	22	8	£,	no *	1	1	16	95		4	4	4	4	8	9	CZ +	, 5	2 -	*		4		0	28
CEC STAFF CODES CANADA C	;	019	DESIGN	\$100.00	Ţ-							0		-		9		0	0			0			0	1					-	0			0			0			•	-			0		0	. 0
TASK DESCRIPTION	1	018	PROJECT	\$105.00	-		9			4		무	В		9 5	4	2	9	64			0	4	64	99	20	57	4 0	4 0	ų.	8	100		8	83	9	9	12	80	4 6	3 6	35	‡ 0	3 6	8		0	8
CEC STAFF CODES TASK DESCRIPTION Formula test line. FC 110 Client Coordination and Proj. Management Sile Visit Coordination with Willeamson Country (3 Migs) Frepare Meetings with Willeamson Country (3 Migs) Frepare Design Technical Memorandum TASK CODE 1105 TOTAL 0 Frepare Design Technical Memorandum Frepare Design Summary Report (DSR) Update DSR as Project Progresses TASK CODE 1105 TOTAL 0 Frepare Design Summary Report (DSR) Frepare Design Cross Sections Frepare Design Cross Sections TASK CODE 1105 TOTAL 11 Frepare Design Cross Sections TASK CODE 1607 TOTAL 11 Frepare Design Cross Sections TASK CODE 1607 TOTAL 11 Frepare Summary Sheets TASK CODE 1607 TOTAL 16 Frepare Summary Sheets TASK CODE 1607 TOTAL 11 Frepare Summ		025	SENIOR	5115.00			9	72	12	2	16	48	2	2		-	1	N ¦	53			0	1	2	e e		3			16	16	19			0			0	-		-	-			c	8	ø	G 3
CEC STAFF CODES TASK DESCRIPTION CEC STAFF CODES TASK DESCRIPTION Foundate test fine. For 110 Cilent Coordination and Proj. Management Coordination with Williamson County Attent Meeting Minutes and Distribute Project Management Develop and Assemble Prel. Consir. Estimate (30, 60, 90%) Develop and Assemble Prel. Consir. Estimate (30, 60, 90%) Develop and Assemble Prel. Consir. Estimate (30, 60, 90%) Develop and Assemble Prel. Consir. Estimate (30, 60, 90%) Develop and Assemble Prel. Consir. Estimate (30, 60, 90%) Develop and Assemble Prel. Consir. Estimate (30, 60, 90%) Develop and Assemble Prel. Consir. Estimate (30, 60, 90%) Develop and Assemble Prel. Consir. Estimate (30, 60, 90%) Develop and Assemble Prel. Consir. Estimate (30, 60, 90%) Develop and Assemble Prel. Consir. Estimate (30, 60, 90%) Develop and Assemble Prel. Consir. Estimate (30, 60, 90%) Develop and Assemble Prel. Consir. Estimate (30, 60, 90%) Develop and Assemble Prel. Consir. Estimate (30, 60, 90%) Develop and Assemble Prel. Consir. Estimate (30, 60, 90%) Develop and Assemble Prel. Consir. Estimate (30, 60, 90%) Develop Estimate (30, 60, 90%) Develop Estimate (30, 60, 90%) Develop Destinate Area Mates Develop Destinate Area Mates Develop Destinate Area Mates Develop Destinate Technical Memorandum TASK CODE 1611 TOTAL Develop Destinate Area Mates Develop Destinate Area Mates Develop Destinate Technical Memorandum TASK CODE 1611 TOTAL Prepare SW3P Layous Develop Destinate Technical Memorandum TASK CODE 1611 TOTAL Prepare SW3P Layous Develop Destinate Technical Memorandum TASK CODE 1611 TOTAL Prepare SW3P Layous Develop Destinate Technical Memorandum TASK CODE 1611 TOTAL Prepare SW3P Layous Develop Destinate Technical Memorandum TASK CODE 1611 TOTAL Prepare SW3P Layous Develop Destinate Technical Memorandum TASK CODE 1611 TOTAL Prepare SW3P Layous Develop Destinate Technical Memorandum TASK CODE 1611 TOTAL Pr	ć	032	SENIOR PROJECT MANAGER	5150.00	1		9	В	12	Ci	12	40			-	-	+-	2	43			O			0	ı	-			4	2 2	16		-	0			0		ļ.		-			0	8	8	ថា
CIVIL ENGINEERING CONSUL I AN IS CEC STAFF CO TASK DESCRIPTION Foodrination with Williamson County Geordination and Proj. Management Sile Visit Geordination with Williamson County Altend Meeting Minules and Distribute Project Management TASK CODE 1103 T TASK CODE 1103 T TASK CODE 1103 T TASK CODE 1103 T Prepare Design Summary Report (DSR) Update DSR as Project Progresses TASK CODE 1100 T FC 160 Roadway Design Controls FC 160 Roadway Design Controls FC 160 Roadway Design Controls Frepare Design Summary Sheets Prepare Design Summary Sheets Frepare Design Summary Sheets Frepare Design Summary Sheets Frepare Design Summary Sheets Frepare Grading Summary Sheets FC 161 Drainage Gather Information regarding Existing Dainage Features, Facilities, a TASK CODE 1600 T Frepare Culvert Layous Brepare Culvert Layous Brepare Culvert Layous Brepare SW3P Summary Sheets Frepare SW3P Camilities Frepare SW3P Camilities Frepare SW3P Summary Sheets															-			-	-			-	-	-	£	8 8	2 -			1	67	88			0	-		-	2	-	,	7	-	-	. ~		0	G
	CIVIL ENGINEERING CONSULIANIS	CEC STAFF CODES		Rate	Formula test line	FC 110 Client Coordination and Proj. Management	Site Visit	Coordination with Williamson County	Attend Meetings with Williamson County (3 Migs)	Prepare Meeting Minutes and Distribute		TASK CODE 1104 TOTAL	Develop and Assemble Prel. Constr. Estimate (30, 60, 90%)	Develor Despire Design Technical Managements	TASK CODE 1108 1108 1108 WELLER WELLER TOTAL			TASK CODE 1110 TOTAL	FC 116 TOTAL	FC 160 Roadway Design Controls			Prepare Project Layout Sheet					Calculate Adatuway Colonillies Prepare Grading Summary Sheets	Pranara Earthwork Summary Shoats	OC/OA Reviews		FC 160 TOTAL	CO 454 Desimons	Gather Information regarding Existing Drainage Features, Facilities, etc.	TASK CODE 1617 TOTAL	Develop Drainage Area Maps			Prepare Culver Layouis	Davelop Hydraulic Computation Sheets Davelop Dashaga Tachnical Mampionism	l		Calculate SW3P Quantitles.	Prepare SW3P Summary Sheet				FC 161 TOTAL
			TASK							_	7	Т	Т	┰	1	Т	7			_		Ti		T		╗	Т				П	4					T	T			T	Т			Т	П		

EXHIBIT D

WILLIAMSON COUNTY CONTRACT NO.

Project: CR 258

Limits: Ronald Reagan

CIVIL ENGINEERING CONSULTANTS

		Т	Γ]	Γ	Τ	T	Γ	Г	<u> </u>	Γ		1		П	_		_		Γ	Γ	Г	Γ	_					Γ	Г		Г	Г	Г		<u></u>	Г	Г	П	Г
	COST	\$1,938,00	51,938.00		S1.958.00	\$1.958.00	\$782.00	\$918.00	51,700.00	\$530.00	\$530.00	\$4,188.00			51,476.00	\$650.00	\$1,476.00	5660.00	54,272.00	\$823.00	\$495.00	\$258.00	\$25,210.00	5537.00	\$5,360.00	2980.00	\$33,663,00	S799.00	\$693.00	\$1,707.00	5839.00	\$506.00	51,416.00	S3,870.00	\$496.00	\$2,408.00	\$12,734.00	55,160.00	55,160.00	\$55,829,00
	HOURS PER SHEET		 					57				•			20		20	В	-	9	_		F	7			_							_						
	TOTAL				28	28.12	₽	12	22	4	4	25			ន	6	23	В	26	=	-	62	325	7	72	11	436	11	8	21	1-	<u>پ</u>	8	38	9	윥	151	40	40	683
600	무	\$45,00	_			0			c c		o	Đ							0	 -	4						4	_						_			0		0	4
200	CADD	\$68.00	_		16	29		Ct	2		0	18			72		12		24	9		-	120	4	40		171	8	-		5		12		2	16	41		0	236
004	3ING	\$68.00	1			0	4	4	8		0	8		•					0				80				90			4	£ [2					12		0	95
023	SENIOR ENGINEEHING TECH	\$84.00				0			0		. 0	0							0								0										Đ		0	0
005	EIT	575.00	1		9	9	4	4	В		0	14			9	p	Ð	æ	24	4		1	60	2	24	8	99	ល	4	12	-	23	B	В	2	12	2		0	174
019	DESIGN	\$100,00	-			0			0		0	o							0								0										0		0	0
018	PHOJECT	\$105.00	-		4	4	2	23	4		o	В		,	2		2	CV:	8		Э		40				51	-	cı	44	-	-		16	2	47	31		0	8
025	SENIOR	\$115,00				0			0	cz	27	Ø							0	-		+	24	-		2	52		-	-	-	-		ю			10	24	24	63
032	SENIOR PHOJECT MANAGER	\$150.00				0			0	CI	2	23							0				-			-	2							9			¢)	무	91	24
	Sheats					0		-	-		-	-				,	-	-	5	2		-	S	-		C)	岩		-		-	무			23	2	130			171
CEC STAFF CODES	TASK DESCRIPTION	Hates	Formula test line.	FC 162 Signing, Pavement Markings and Channelization.	Prepare Signing and Pavement Marking Layouts	TASK CODE 1621 TOTAL	Determine Pavement Marking and Delineation Quantities	Prepare Pavement Marking Summary Sheet	TASK CODE 1627 TOTAL	LIC/OA Heviews	TASK CODE 1620 TOTAL	FC 162 TOTAL	GO 469 Missollanders (Bandum)	Demon Meanleage Control (Touched)	Decine Decommend Today Details	Design Division: District District	Priebaie Universaly Summary Sheets	ILJEVERD UNVEWAY DETAILS	TASK CODE 1634 TOTAL	Prepare Detour Layouts	Prepare/Distribute Apad Closure/Detour Notification Letters	Prepare Sequence of Work Narrative	Prepare Traffic Control Pian Phasing Layouts	Prepare Barricade Layout Sheets	Prepare 1 CP Cross Sections (Detours)	Develop CPM Construction Schedule	TASK CODE 1632 TOTAL		Prepare index of Sheets	Prapare Construction Estimate	Prepare General Notes	Prepare List of TxDOT Standard Drawings	Assemble Plans for Project Milestones (30%, 60% & 90%)	Attend Project Review Meeting @ 30%, 60% & 90%	Prepare Final Submittal	Provide Cross-Sections (Electronic Format/1 Set 11"x17" Paper Copy)	TASK CODE 1637 TOTAL	UC/CA Reviews	TASK CODE 1636 TOTAL	FC 163 TOTAL
	CEC TASK CODES				1621		1627	1627	0007	1620		-	_	1521	1837	1631	2 5	503		1632	1632	1632	1632	1632	1632	1835	2000	193/	163/	/201	1637	1637	1637	1637		1637	Т	1630		
					1			_		_	_			ļ				_ _	l.									_			_		=	_		L	╧	_	<u>_</u>	

EXHIBIT D

WILLIAMSON COUNTY CONTRACT NO.

Project: CR 258

Limits: Ronald Reagan

CIVIL ENGINEERING CONSULTANTS

		_	_	,	_	_	_		_	_	_,	_	_			_	-	_	_	_	_	_	, <u></u> -	
	COST	51.938.00	51 938 00	1	5530.00	S1 780 00	51,360.00	\$1.250.00	5565 00	C1 604 00	27,000,00	37,033.00	\$7,089.00			\$1,590.00	\$4,600.00	57.470.00	510.050.00	26.900.00	\$2.976.00	\$3.560.00	537,146.00	\$37,146,00
:	HZURS PEH SHEET							_					_											
	TOTAL				r.	#	14	12	2	100		2	ટ			12	44	18	8	8	40	48	380	380
600	占	\$45.00									5	3	5					İ						0
200	CADD OPERATOR	\$68.00	-							α		-	Đ					8			32	40	112	112
004	ENGINEERING TECH	S68.00									_	,	o o											0
023	SENIOR ENGINEERING TECH	\$84.00	-								c		0										0	0
005	EIT	575.00	+-		2	80	8	4	4	4	30	3 8	JC.				ţ.	12			2	_	24	24
019	DESIGN	\$100.00	1								-		0										Đ	0
018	PROJECT	\$105.00	-			4		4			8	c	٥		İ		몺	50	90		5	9	82	82
025	SENIOR ENGINEER	\$115.00	-		2	4	4	N	-	7	17	1,				6	to To	10	60	60	2		148	148
032	SENIOR PROJECT MANAGER	\$150,00			-	23	2	cı	-	23	40	4	2			æ	4	4					14	14
	Sheets										0	-	3					_	•				Þ	0
CEC STAFF CODES	TASK DESCRIPTION	Rates	Formula test line.	FC 210 Bid Phase Services	(Develop Addenda (2 max.)	Prepare Responses to Prospective Contractors (10 mex.)	Assist/attend pre-bid conference	Attend Bid Opening/Evaluate Bids	Review qualification of tow bidder	Prapara Revised Documents	TASK CODE 2101 TOTAL	IATOT A19 CB		FC 990 Construction Dhase Comings	י כ דרה כתומו המותו ב וופספ ספו גורפס	Attend Pre-Construction Conference	Review Confractor Submittals (20 Max.)	Review Requests for Information (RFI's) - (50 Max.)	Attend Monthly Project Progress Meetings (6 Max.)	Attend Monthly Construction Estimate Meetings (6 Max.)	Prepare Change Orders (4 Max.)	Prepare Record Drawings	TASK CODE 2201 TOTAL	FC 220 TOTAL
	CEC TASK CODES	_	_			- 1	- 1	2101	2101	2101						2201	- 1		- 1	- 1	-	2201		

DIRECT COSTS	Total Units	Unit Costs	Unit Costs Contract Cost
Copies 8 1/2" x 11 1/2" (per sheet)	100	50.10	\$10.00
Copies 11" x 17" (per sheet)	150	50.10	515.00
Mylar Plots (per sheet)	o	00.F2	20.00
Overnight Mail - Letter Size (Ea)	8	518,00	\$54.00
Overnight Mail - Oversized Box (Ea)	0	535.00	50.00
Mileage	4800	\$0.55	52,640.00
Lodging	0	\$85,000	\$0.00
Meats	0	S36.000	\$0.00
		TOTAL	C2 710 nn

	FUNCTION CODE BREAKDOWN	opand.	SENIOR	ייבואריי	היים ורמד		11 022710112	SENIOH		ı		- :::::	_	
		Sieces	PAOJECT		FHOJECT			ENGINEERING	FNEINFEHING	CADD	CLERICAL TOTAL	CIA	_	TSOS
			MANAGEH	באפואפור		ENGINEER	HAINING	TECHNICIAN	TECHNICIAN	OPERATOR		HOURS		
	Rates		\$150.00	\$115,00	\$105.00	\$100.00	875.00	\$84.00	\$68.00	\$68.00	545.00			
FC 110 C	FC 110 Cilent Coordination and Proj. Management	0	43	23	64	0	2B	0	칻		_	207	\$22.4	\$22,496.00
FC 160 #	FC 160 Roadway Design Controls	98	16	19	100	o	56	¢	24	298		552	544,1	544,106.00
FC 161 L	FC 161 Drainage	9	6	đ	09	o	82	o	cı	60	60	171	515,1	\$15,136.00
FC 162 5.	FC 162 Signing, Pavement Markings and Channelization,	1	cu	ณ	8	0	14	0	æ	1 1 1	0	25	54.1	\$4,188.00
FC 163 N	FC 163 Miscellaneous (Roadway)	171	24	63	06	0	174	0	25	236	4	683	\$55.6	\$55,829.00
FC 210 E	FC 210 Bid Phase Services	0	10	17	В	0	30	0	0		0	73	57.0	57,089.00
FC 220 C	FC 220 Construction Phase Services	0	14	148	62	0	24	٥	0	112	0	380	S37.1	\$37.146,00
	TOTAL SHEETS	599												
	TOTAL HOURS		118	311	412	0	666	0	138	732	14	2118		
	TOTAL FEE ESTIMATE		\$17,700.00	535,765.00	\$43,260.00	20.00	\$29,475.00	50.00	59,384.00	\$49,776.00	5630.00		S185,	\$185,990,00
	DIRECT COSTS												\$2,7	\$2,719.00

Page 3 of 3

\$188,709.00

Project Fee (Lump Sum)

CEC Fee

APPENDIX B

ENGINEER'S QUALIFICATIONS STATEMENT

Participation Agreements - CR 175, IH 35 and O'Connor Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Gary Boyd, Parks

By:

For:

Submitted

Gary Boyd

Department: Parks

Agenda Category:

Regular Agenda Items

Information

Agenda Item

Consider and take appropriate action on Participation Agreements for the Williamson County Road Bond Program for mitigation for the following projects: IH 35 northbound access, O'Connor extension and SH 45 access, and CR 175 improvements.

Background

Participation Agreements come to the Commissioners Court as per the Interlocal Agreement with the Williamson County Conservation Foundation.

Invoices for the mitigation fees are sent to the Road Bond Program.

Fiscal Impact

From/To Acct No. Description Amount Sort Seq

Attachments

Link: O'Connor PArt 1
Link: O'Connor Part 2
Link: O'Connor invoice
Link: IH 35 mitigation
Link: IH 35 Invoice

Link: CR 175 mitigation

Link: CR 175 replacement page 1

Link: CR 175 invoice

Form Routing/Status

Form Started By: Gary Boyd Started On: 04/23/2009 09:40

 AM

Final Approval Date: 04/23/2009





WILLIAMSON COUNTY REGIONAL HABITAT CONSERVATION PLAN

PARTICIPATION AGREEMENT

This WILLIAMSON COUNTY REGIONAL HABITAT CONSERVATION PLAN PARTICIPATION AGREEMENT (this "Participation Agreement") dated April 28, 2009, is entered into by the Williamson County Road Bond Program (the "Participant"), and the WILLIAMSON COUNTY CONSERVATION FOUNDATION, a Texas non-profit corporation (the "Foundation").

BACKGROUND

Williamson County, Texas, and the Foundation are the permittees under federal Endangered Species Act incidental take permit number TE-181840-0 dated October 21, 2008 (the "Permit"). The Permit authorizes "take" of certain listed species of wildlife occurring in Williamson County in exchange for implementation of the Williamson County Regional Habitat Conservation Plan (the "Plan"). The Foundation/Williamson County administers the Plan, which includes granting participation rights to applicants who enter into participation agreements. Through participation in the Plan, a participant receives authority for incidental "take" of listed species covered by the Permit, in accordance with the terms and conditions of the Permit and this Participation Agreement. Incidental take means take that results from, but is not the purpose of, carrying out an otherwise lawful activity. Participant is the owner of a tract or tracts of land (the "Property") located in Williamson County, Texas, and described on Exhibit "A" to this Participation Agreement.

AGREEMENT

- 1. Grant Of Participation Rights And Obligations Of Participant. The Foundation hereby grants to the Participant the right to participate in the Plan with respect to the Participant's proposed activities on the Property. Exhibit "B" to this Participation Agreement describes the Participant's proposed activities and the species to be covered under this Participation Agreement. The Participant represents and warrants that the activities proposed to be covered under this Participation Agreement will be carried out in full compliance with all applicable laws and regulations. This Participation Agreement covers only those activities described on Exhibit "B". The Participant shall consult with the Foundation before deviating in any material respect from the described activities. This Participation Agreement is entered into subject to all terms and conditions of the Permit, the Plan, and applicable law and regulations, and the Participant assumes and agrees to be bound by all of such terms and conditions, including without limitation those described on Exhibit "C" to this Participation Agreement.
- 2. <u>Participation Fee</u>. The Participant has paid to the Foundation the total sum of \$80,430.00 (Eighty thousand four hundred thirty and No hundredths Dollars) as the Participant's fee to participate in the Plan with respect to the Participant's proposed activities on the Property.

- 3. <u>Right To Inspect</u>. The Foundation, the County, and the U.S. Fish and Wildlife Service shall have the right to inspect the Property in order to ensure compliance with the terms of this Participation Agreement.
- 4. <u>Breach By Participant</u>. The Foundation shall provide Participant written notice specifying any breach of the terms of this Participation Agreement, and Participant shall have seven (7) days thereafter, or such other length of time the Foundation agrees in writing, to cure said breach. The Foundation, at its sole discretion and for good cause, including without limitation Participant's failure to cure any breach within the applicable timeframe, may terminate this Participation Agreement. Notification of breach and termination of participation rights shall be made by the Foundation to the Participant in writing at the address provided in Section 11.
- 5. Participant's Sole Recourse. In the event that this Participation Agreement is (i) ineffective or deficient with respect to the Property or Participant's proposed activities for any reason, or (ii) terminated in accordance with the terms and provisions of this Participation Agreement, Participant's sole recourse shall be to recover from the Foundation an amount not to exceed the total sum referenced in Section 2 of this Participation Agreement, upon surrender and termination of this Participation Agreement by Participant in writing to the Foundation; provided, Participant shall not be entitled to recover administrative fees from the Foundation.
- 6. <u>Covenants Run With The Land; Recordation</u>. Participant agrees that the covenants provided herein are intended to be binding upon any heirs, successors, and assigns in interest to the Property. Upon any transfer of any ownership interests to all or part of the Property, this Participation Agreement shall not terminate as to the Property, but rather shall continue in full force and effect and shall be fully binding upon any heirs, successors, and assigns in interest to the Property, or any portion thereof. Upon execution of this Participation Agreement by the Foundation and Participant, a Memorandum of Participation Agreement in form substantially the same as <u>Exhibit "D"</u> attached hereto and incorporated herein for all purposes, shall be signed, acknowledged, and recorded by the Participant in the Official Public Records of Williamson County, Texas. The Participant shall promptly provide a copy of the recorded Memorandum of Participation Agreement to the Foundation.
- 7. <u>Venue And Choice Of Law</u>. The obligations and undertakings of each of the parties to this Participation Agreement shall be performable in Williamson County, Texas, and this Participation Agreement shall be governed by and construed in accordance with the laws of the United States and the State of Texas.
- 8. Entirety Of Agreement And Modification. This instrument constitutes the entire agreement between the parties relating to the rights herein granted and the obligations herein assumed. Any prior agreements, promises, negotiations, or representations not expressly set forth in this Participation Agreement are of no force of effect. Any oral representations or modifications concerning this Participation Agreement shall be of no force or effect, excepting a subsequent modification in writing signed by the party to be charged and expressly approved by an authorized representative of such party.
- 9. <u>Non-Assignment</u>. Participant shall not sell, transfer, or assign all or any part of this Participation Agreement to a party other than a successive owner of all or a portion of the Property without prior written consent of the Foundation.

- 10. <u>Successors And Assigns</u>. This Participation Agreement shall be binding upon and inure to the benefit of the successors and assigns of the respective parties hereto, as and where authorized pursuant to this Participation Agreement.
- 11. <u>Notice</u>. All notices under this Participation Agreement shall be in writing and shall be deemed to have been properly given, delivered and received (a) as of the date of delivery if personally delivered, or (b) as of the date of deposit in the mail system if sent by United States certified mail, return receipt requested, postage prepaid. For purposes of notices, the addresses of the parties are as follows

PARTICIPANT:

Williamson County Road Bond Program C/O Williamson County 710 Main Ste. 101 Georgetown, Texas 78626

Attn: Foundation Application File No. 20090409

Fax: (512) 943-1662

FOUNDATION:

Williamson County Regional Habitat Conservation Plan Plan Administrator 350 Discovery Boulevard #207 Cedar Park, Texas 78613 Attn: Foundation Application File No. 20081204-1

Fax: (512) 260-4237

or to such other address as hereafter shall be designated in writing by the applicable party.

- 12. <u>Term Of Participation Agreement</u>. This Participation Agreement shall terminate upon the expiration or termination of the Permit.
- 13. <u>Headings</u>. The headings at the beginning of the various provisions of this Participation Agreement have been included only in order to make it easier to locate the subject covered by each provision and are not to be used in construing this Participation Agreement.
- 14. <u>Number And Gender Defined</u>. As used in this Participation Agreement, whenever the context so indicates, the masculine, feminine, or neuter gender and the singular or plural number shall each be deemed to include the others.

EXECUTED AS OF THE LAST DAY SET FORTH BELOW.

FOUNDATION:	PARTICIPANT;
By:	By:
Print Name:	Print Name:
Title:	Title:
Date:	Date:

Exhibit List:

Exhibit "A" - Description of Participant's Property, including GPS coordinates/points

Exhibit "B" - Covered Species and Participant's Proposed Activities Relative to Participation Agreement

Exhibit "C" - Special Terms and Conditions in Connection with 10(a) Permit #TE - 181840

Exhibit "D" – Williamson County Regional Habitat Conservation Plan Memorandum of Participation Agreement Relative to U.S. Fish and Wildlife Service Permit

EXHIBIT "A" TO PARTICIPATION AGREEMENT

Legal Description of Participant's Property, including GPS coordinates/points

(See attached exhibits,	hereinafter	described as	Exhibit A-1,	attached	hereto and	l consisting of	of 17
pages inclusive.)							

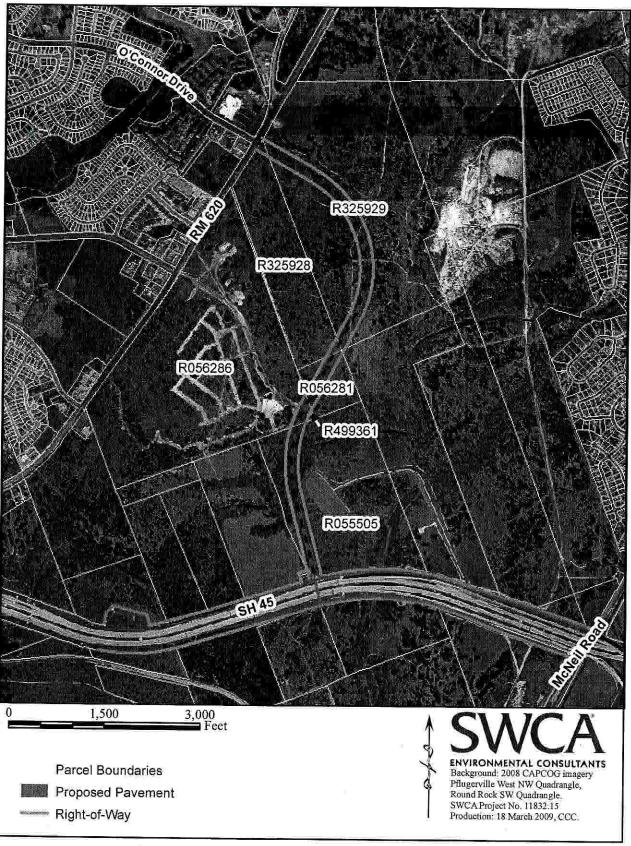


Figure B1. Parcel map for the O'Connor Drive extension.

DESCRIPTION

FOR A 19.084 ACRE TRACT OF LAND SITUATED IN THE JOHN McQUEEN SURVEY, ABSTRACT NO. 425, AND JACOB M. HARRELL SURVEY, ABSTRACT NO. 284 IN WILLIAMSON COUNTY, TEXAS, BEING A PORTION OF A CALLED 348.60 ACRE TRACT AS DESCRIBED IN THAT DEED TO ROBINSON ASSOCIATES etal OF RECORD IN DOCUMENT NO. 199978136 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, SAID 19.084 ACRE TRACT, AS SHOWN ON THE ACCOMPANYING SKETCH, IS MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

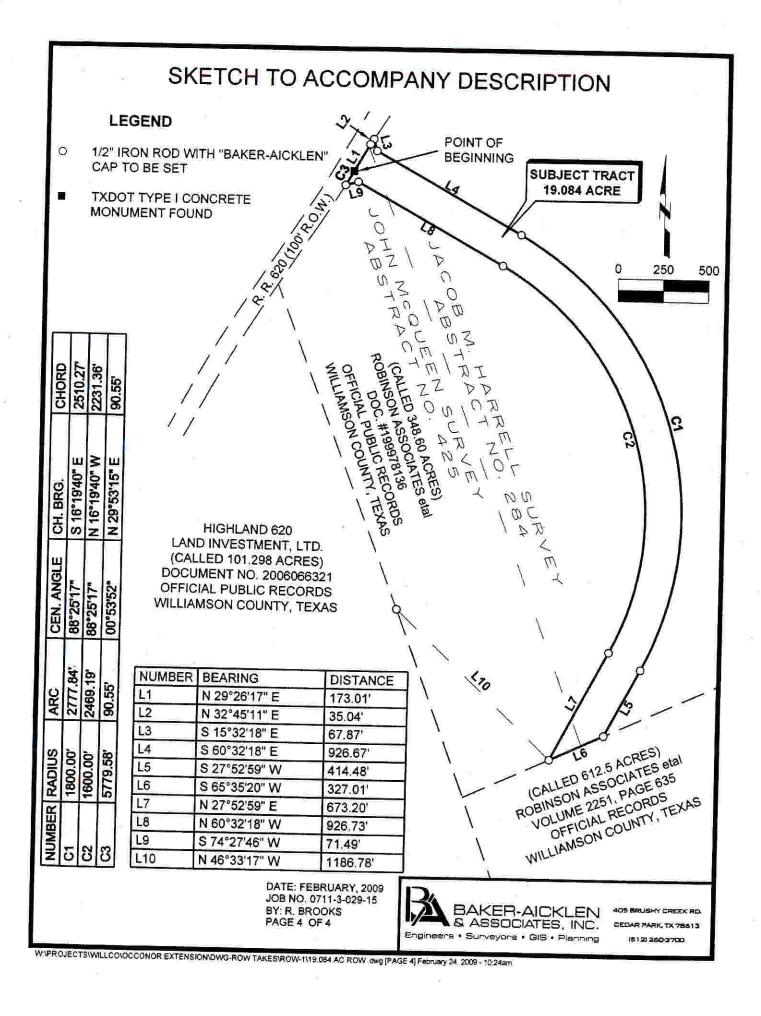
BEGINNING at a TXDOT concrete monument found for a point of tangency on the southeasterly right-of-way line of Ranch Road 620 (100' right-of-way width), same being a point of tangency on the northwesterly line of said 348.60 acre tract for a point of tangency and **POINT OF BEGINNING** hereof;

THENCE with the southeasterly right-of-way line of said Ranch Road 620, same being the northwesterly line of said 348.60 acre tract the following two (2) courses and distances:

- 1. N 29° 26' 17" E for a distance of 173.01 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for an angle point hereof, and
- 2. N 32° 45' 11" E for a distance of 35.04 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for the most northerly corner hereof;

THENCE departing the southeasterly right-of-way line of said Ranch Road 620, through the interior of said 348.60 acre tract the following four (4) courses and distances:

- 1. S 15° 32' 18" E for a distance of 67.87 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for an angle point hereof,
- 2. S 60° 32' 18" E for a distance of 926.67 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for a point of curvature hereof,



- 3. with the arc of a curve to the right, having a radius of 1800.00 feet, an arc length of 2777.84 feet, a central angle of 88° 25' 17", and a chord which bears S 16° 19' 40" E for a distance of 2510.27 feet to ½" iron rod with "Baker-Aicklen" cap to be set for a point of tangency hereof, and
- 4. S 27° 52' 59" W for a distance of 414.48 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for an angle point on the south line of said 348.60 acre tract, same being the north line of a called 612.5 acre tract as described in that deed to Robinson Associates etal, and recorded in Volume 2251, Pg. 635 of the Official Records of said County for the southeast corner hereof;

THENCE with the south line of said 348.60 acre tract, same being the north line of said 612.5 acre tract, S 65° 35' 20" W for a distance of 327.01 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for the most southerly corner hereof, from which a ½" iron rod with "Baker-Aicklen" cap to be set for an angle point on the southwesterly line of said 348.60 acre tract, same being the northeasterly line of a called 101.298 acre tract as described in that deed to Highland 620 Land Investment, Ltd., and recorded in Document No. 2006066321 of the Official Public Records of said County bears, N 46° 33' 17" W a distance of 1186.78 feet;

THENCE departing the north line of said 612.5 acre tract, through the interior of said 348.60 acre tract the following four (4) courses and distances:

- 1. N 27° 52' 59" E for a distance of 673.20 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for a point of curvature hereof,
- 2. with the arc of a curve to the left, having a radius of 1600.00 feet, an arc length of 2469.19 feet, a central angle of 88° 25' 17", and a chord which bears N 16° 19' 40" W for a distance of 2231.36 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for a point of tangency hereof,
- 3. N 60° 32' 18" W for a distance of 926.73 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for an angle point hereof, and
- 4. S 74° 27' 46" W for a distance of 71.49 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for a non-tangent point of curvature on the northwesterly line of said 348.60 acre

tract, same being the southeasterly right-of-way line of said Ranch Road 620 for the most westerly corner hereof;

THENCE with the southeasterly right-of-way line of said Ranch Road 620, same being the northwesterly line of said 348.60 acre tract, with the arc of a curve to the right, having a radius of 5779.58 feet, an arc length of 90.55 feet, a central angle of 00° 53' 52", and a chord which bears N 29° 53' 15" E for a distance of 90.55 feet to the POINT OF BEGINNING hereof and containing 19.084 acres of land.

Bearings shown hereon are referenced to Grid North for the Texas State Plane Coordinate System, Central Zone.

Surveyed under the direct supervision of the undersigned during October, 2008:

Parker J. Graham

Registered Professional Land Surveyor No. 5556

BAKER-AICKLEN & ASSOCIATES, INC.

405 Brushy Creek Road

Cedar Park, Texas 78613 (512) 260-3700

Job No.: 0711-3-029-15

Filename: W:\PROJECTS\WILLCO\OCCONOR EXTENSION\DWG-ROW TAKES\METES & BOUNDS\19.084

AC ROW.DOC

DESCRIPTION

FOR A 1.870 ACRE TRACT OF LAND SITUATED IN THE JOHN McQUEEN SURVEY, ABSTRACT 425 IN WILLIAMSON COUNTY, TEXAS, BEING A PORTION OF THE CALLED 193.96 ACRE TRACT IN DEED TO HRI DEVELOPMENT CORPORATION OF RECORD IN VOLUME 1660, PAGE 105 OF THE OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS, SAID 1.870 ACRE TRACT, AS SHOWN ON THE ACCOMPANYING SURVEY PLAT, IS MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING FOR REFERENCE at 3/4" iron pipe found at an interior ell corner of a called 612.5 acre tract of land in deed to Robinson Associates et al, of record in Volume 2251, Page 635 Official Records of said County, same being the southeast corner of said 193.96 acre tract;

THENCE with the westerly boundary line of said 612.5 acre tract, same being the south boundary line of said 193.96 acre tract, S 69°37'57" W for a distance of 143.25 feet to a 1/2" iron rod with plastic cap stamped "Baker-Aicklen" set for the southernmost southeasterly corner and POINT OF BEGINNING hereof:

THENCE continuing with the westerly boundary line of said 612.5 acre tract, same being the south boundary line of said 193.96 acre tract, S 69°37'57" W for a distance of 300.36 feet to a 1/2" iron rod with plastic cap stamped "Baker-Aicklen" set for the westernmost corner hereof, from which a 1/2" iron rod found at an angle point in the south boundary line of said 193.96 acre tract, bears S 69°37'57" W a distance of 1564.94 feet;

THENCE departing the westerly boundary line of said 612.5 acre tract, through the interior of said 193.96 acre tract, the following five (5) courses and distances:

- 1. N 27°52'59" E for a distance of 250.43 feet to a 1/2" iron rod with plastic cap stamped "Baker-Aicklen" set for an angle point in the northwesterly boundary line hereof,
- 2. N 17°07'01" W for a distance of 35.36 feet to a 1/2" iron rod with plastic cap stamped "Baker-Aicklen" set for an angle point in the northwesterly boundary line hereof,
- 3. N 27°52'59" E for a distance of 100.00 feet to a 1/2" iron rod with plastic cap stamped "Baker-Aicklen" set for an angle point in the northwesterly boundary line hereof,
- 4. N 72°52'59" E for a distance of 35.36 feet to a 1/2" iron rod with plastic cap stamped "Baker-Aicklen" set for an angle point in the northwesterly boundary line hereof, and

5. N 27°52'59" E for a distance of 191.83 feet to a 1/2" iron rod with plastic cap stamped "Baker-Aicklen" set on a point in the west boundary line of said 612.5 acre tract, same being the easterly boundary line of said 193.96 acre tract for the northernmost corner hereof, from which a 1/2" iron rod with plastic cap stamped "Baker-Aicklen" set for an angle point in the easterly boundary line of said 193.96 acre tract, bears N 20°37'14" W a distance of 1526.25 feet;

THENCE with the west boundary line of said 612.5 acre tract, same being the easterly boundary line of said 193.96 acre tract, S 20°37'14" E for a distance of 267.02 feet to a 1/2" iron rod with plastic cap stamped "Baker-Aicklen" set for the easternmost southeast corner hereof, from which a 3/4" iron pipe found at an interior ell corner of said 612.5 acre, same being the southeast corner of said 193.96 acre tract, said 3/4" iron pipe being the "BEGINNING FOR REFERENCE" point, bears S 20°37'14" E a distance of 127.35 feet;

THENCE departing west boundary line of said 612.5 acre tract, through the interior of said 193.96 acre tract, S 27°52'59" W for a distance of 191.25 feet to the POINT OF BEGINNING and containing 1.870 acres of land.

Bearings shown hereon are referenced to Grid North for the Texas State Plane Coordinate System, Central Zone.

Surveyed under the direct supervision of the undersigned during May, 2006:

Parker J. Graham

Registered Professional Land Surveyor No. 5556

BAKER-AICKLEN & ASSOCIATES, INC.

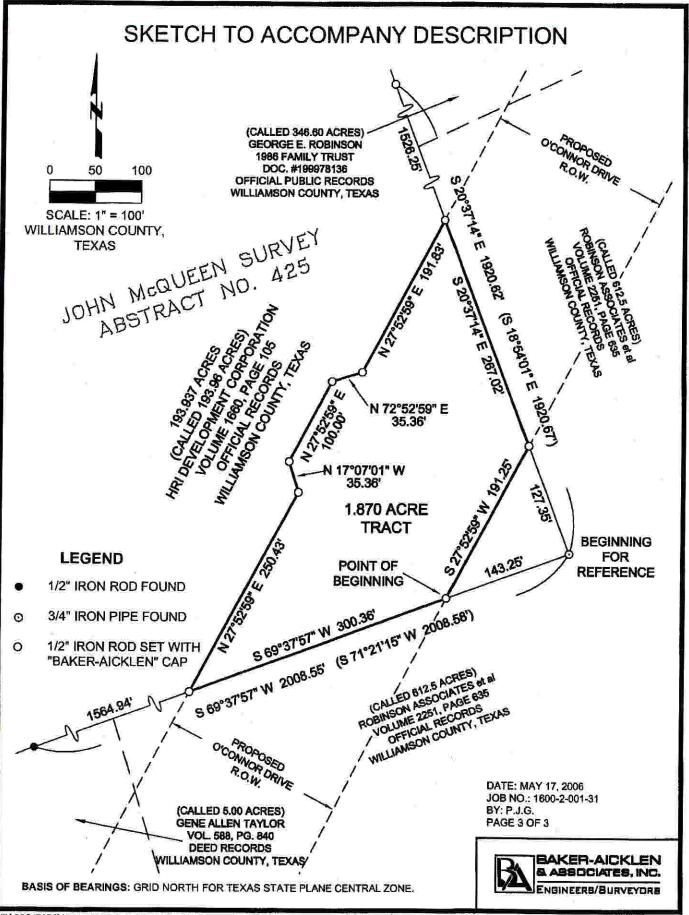
405 Brushy Creek Road

Cedar Park, Texas 78613

(512) 260-3700

Job No.: 1600-2-001-31

Filename: W:\PROJECTS\HIGHLAND-620 194 ACRES\METES-BOUNDS\O'CONNOR DRIVE.DOC



DESCRIPTION

FOR A 4.173 ACRE TRACT OF LAND SITUATED IN THE JOHN McQUEEN SURVEY, ABSTRACT 425, AND JACOB M. HARRELL SURVEY, ABSTRACT NO. 284 IN WILLIAMSON COUNTY, TEXAS, BEING A PORTION OF A CALLED 612.5 ACRE TRACT AS DESCRIBED IN THAT DEED TO ROBINSON ASSOCIATES etal OF RECORD IN VOLUME 2251, PAGE 635 OF THE OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS, SAID 4.173 ACRE TRACT, AS SHOWN ON THE ACCOMPANYING SKETCH, IS MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING FOR REFERENCE at a 3/4" iron pipe found at an interior ell corner of said 612.5 acre tract, same being the southeast corner of a called 101.298 acre tract as described in that deed to Highland 620 Land Investment, Ltd., and recorded in Document No. 2006066321 of the Official Public Records of said County, same being the Point of Termination of a Boundary Line Agreement recorded in Document No. 2007007592 of the Official Public Records of said County, same being the Point of Termination of a Boundary Line Agreement recorded in Document No. 2007007591 of the Official Public Records of said County;

THENCE with the westerly line of said 612.5 acre tract, same being the easterly line of said 101.298 acre tract, N 20° 40' 04" W for a distance of 126.96 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for the south corner and **POINT OF BEGINNING** hereof;

THENCE continuing with the westerly line of said 612.5 acre tract, same being the easterly line of said 101.298 acre tract, N 20° 40' 04" W for a distance of 267.12 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for the most westerly corner hereof, from which a ½" iron rod with "Baker-Aicklen" cap to be set for an angle point on the easterly line of said 101.298 acre tract, same being an angle point of the westerly line of a called 348.60 acre tract as described in that deed to Robinson Associates etal, and recorded in Document No. 199978136 of the Official Public Records of said County bears, N 20°40' 04" W a distance of 1525.30 feet;

THENCE departing the easterly line of said 101.298 acre tract, through the interior of said 612.5 acre tract, N 27° 52' 59" E for a distance of 691.28 feet to a ½" iron rod with "Baker-Aicklen" cap to be set on the north line of said 612.5 acre tract, same being the south line of said 348.60 acre tract for an angle point hereof;

THENCE with the north line of said 612.5 acre tract, same being the south line of said 348.60 acre tract, N 65° 35' 20" E for a distance of 327.01 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for the northeast corner hereof;

THENCE departing the south line of said 348.60 acre tract, through the interior of said 612.5 acre tract the following two (2) courses and distances:

- 1. S 27° 52' 59" W for a distance of 1097.96 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for a point of curvature hereof, and
- with the arc of a curve to the left, having a radius of 1900.00 feet, an arc length of 28.86 feet, a central angle of 00° 52' 13", and a chord which bears S 27° 26' 53" W for a distance of 28.86 feet, to the POINT OF BEGINNING hereof and containing 4.173 acres of land.

Bearings shown hereon are referenced to Grid North for the Texas State Plane Coordinate System, Central Zone.

Surveyed under the direct supervision of the undersigned during October, 2008:

Parker J. Graham U

Registered Professional Land Surveyor No. 5556 BAKER-AICKLEN & ASSOCIATES, INC.

405 Brushy Creek Road Cedar Park, Texas 78613

(512) 260-3700

Job No.: 0711-3-029-15

Filename: W:\PROJECTS\WILLCO\OCCONOR EXTENSION\DWG-ROW TAKES\METES & BOUNDS\4.173

AC ROW.DOC

DESCRIPTION

FOR A 11.330 ACRE TRACT OF LAND SITUATED IN THE MALCOM M. HORNSBY SURVEY, ABSTRACT 281, IN WILLIAMSON COUNTY, TEXAS, BEING A PORTION OF A CALLED 612.5 ACRE TRACT AS DESCRIBED IN THAT DEED TO ROBINSON ASSOCIATES etal OF RECORD IN VOLUME 2251, PAGE 635 OF THE OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS, SAID 11.330 ACRE TRACT, AS SHOWN ON THE ACCOMPANYING SKETCH, IS MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING FOR REFERENCE at a 3/4" iron pipe found at an interior ell corner of said 612.5 acre tract, same being the southeast corner of a called 101.298 acre tract as described in that deed to Highland 620 Land Investment, Ltd., and recorded in Document No. 2006066321 of the Official Public Records of said County, same being the Point of Termination of a Boundary Line Agreement recorded in Document No. 2007007592 of the Official Public Records of said County, same being the Point of Termination of a Boundary Line Agreement recorded in Document No. 2007007591 of the Official Public Records of said County;

THENCE with the westerly line of said 612.5 acre tract, same being the southerly line of said 101.298 acre tract, S 69° 54' 12" W for a distance of 125.71 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for the northeast corner and **POINT OF BEGINNING** hereof:

THENCE departing the southerly line of said 101.298 acre tract, through the interior of said 612.5 acre tract the following three (3) courses and distances:

- with the arc of a curve to the left, having a radius of 1900.00 feet, an arc length of 1184.40 feet, a central angle of 35° 42' 59", and a chord which bears S 03° 47' 31" W for a distance of 1165.31 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for a point of tangency hereof;
- 2. S 14° 03' 59" E for a distance of 1301.98 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for an angle point hereof, and
- 3. S 59° 03' 59" E for a distance of 55.77 feet to a point on the south line of said 612.5 acre tract, same being a point on the north right-of-way line of Williamson County State

Highway 45, Tract 1, (49.78 acres) as recorded in Document No. 2003027707 of the Official Public Records of said County for the southeast corner hereof;

THENCE with the south line of said 612.5 acre tract, same being the north right-of-way line of said S. H. 45, with the arc of a curve to the left, having a radius of 4386.39 feet, an arc length of 185.54 feet, a central angle of 02° 25' 39", and a chord which bears S 76°16' 31" W for a distance of 185.82 feet to a TXDOT Type II Brass Disc found for the most southerly southwest corner hereof;

THENCE with the south line of said 612.5 acre tract, same being the north right-of-way line of said S. H. 45, the following two (2) courses and distances:

- 1. N 17° 56' 33" W for a distance of 147.89 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for an angle point hereof, and
- 2. S 75° 10' 52" W for a distance of 43.62 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for an angle point hereof;

THENCE departing the north right-of-way line of said S. H. 45, through the interior of said 612.5 acre tract the following two (2) courses and distances:

- 1. N 14° 03' 59" W for a distance of 1193.33 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for a point of curvature hereof, and
- 2. with the arc of a curve to the right, having a radius of 2100.00 feet, an arc length of 1136.70 feet, a central angle of 31° 00′ 48″, and a chord which bears N 01° 26′ 25″ E for a distance of 1122.87 feet to a ½″ iron rod with "Baker-Aicklen" cap to be set for a point on the westerly line of said 612.5 acre tract, same being the south line of said 101.298 acre tract, same being a point on the Boundary Line Agreement as recorded in Document No. 2007007591 and the Boundary Line Agreement as recorded in Document No. 2007007592 of said County for the northwest corner hereof, from which a ¾″ iron pipe found for an angle point on the westerly line of said 612.5 acre tract, same being a point on the south line of a called 92.639 acre tract as described in that deed to Highland Six Twenty Residential, Ltd., and recorded in Document No. 2006066322 of the Official Public Records of said County bears, S 69° 54′ 12″ W a distance of 612.74 feet;

THENCE with the westerly line of said 612.5 acre tract, same being the south line of said 101.298 acre tract, same being the Boundary Line Agreement as recorded in Document No. 2007007591 and the Boundary Line Agreement as recorded in Document No. 2007007592 of said County, N 69° 54' 12" E for a distance of 258.59 feet to the POINT OF BEGINNING hereof and containing 11.330 acres of land.

Bearings shown hereon are referenced to Grid North for the Texas State Plane Coordinate System, Central Zone.

Surveyed under the direct supervision of the undersigned during October, 2008:

Parker J. Graham

Registered Professional Land Surveyor No. 5556

BAKER-AICKLEN & ASSOCIATES, INC.

405 Brushy Creek Road Cedar Park, Texas 78613

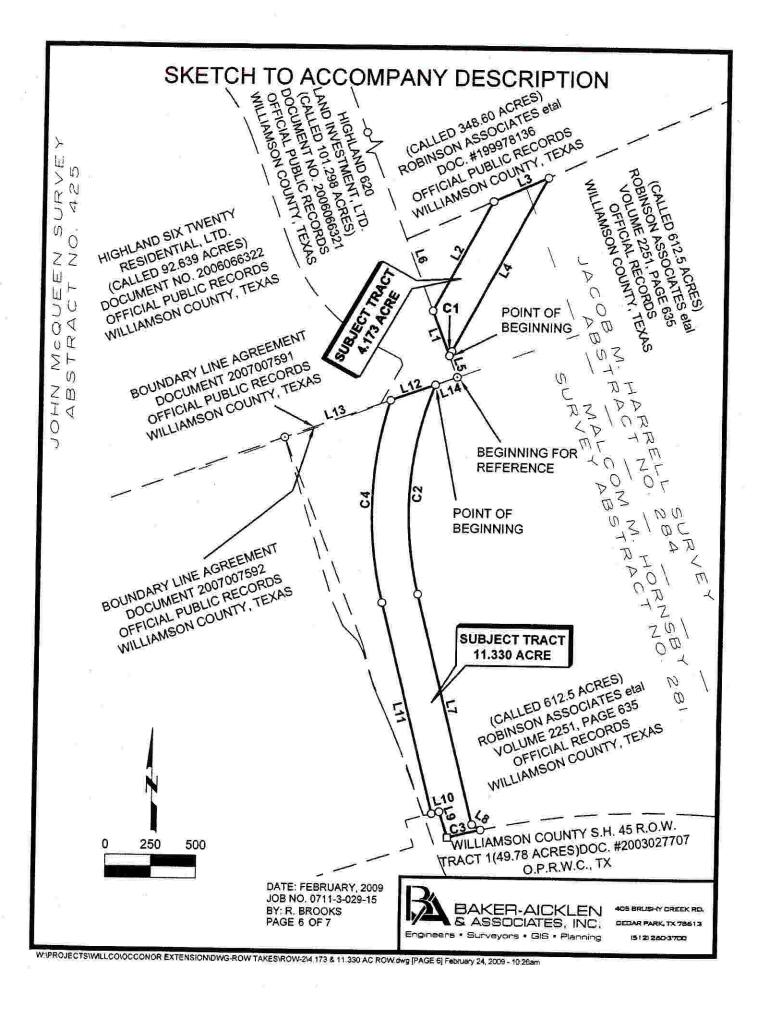
(512) 260-3700

Job No.: 0711-3-029-15

Filename: W:\PROJECTS\WILLCO\OCCONOR EXTENSION\DWG-ROW TAKES\METES & BOUNDS\11.330

AC ROW.DOC





SKETCH TO ACCOMPANY DESCRIPTION

NUMBER	RADIUS	ARC	CEN. ANGLE	CH. BRG.	CHORD
C1	1900.00	28.86'	00°52'13"	S 27°26'53" W	28.86
C2	1900.00'	1184.40'	35°42'59"	S 03°47'31" W	1165.31
C3	4386.39'	185.84	02°25'39"	S 76°16'31" W	185.82'
C4	2100.00'	1136.70'	31°00'48"	N 01°26'25" E	1122.87

NUMBER	BEARING	DISTANCE
L1	N 20°40'04" W	267.12
L2	N 27°52'59" E	691.28
L3	N 65°35'20" E	327.01'
L4	S 27°52'59" W	1097.96'
L5	N 20°40'04" W	126.96
L6	N 20°40'04" W	1525.30
L7	S 14°03'59" E	1301.98'
L8	S 59°03'59" E	55.77'
L9	N 17°56'33" W	147.89'
L10	S 75°10'52" W	43.62'
L11	N 14°03'59" W	1193.33
L12	N 69°54'12" E	258.59'
L13	S 69°54'12" W	612.74'
L14	S 69°54'12" W	125.71'

LEGEND

- O 1/2" IRON ROD WITH "BAKER-AICKLEN" CAP TO BE SET
- ⊙ 3/4" IRON PIPE FOUND
- □ TXDOT TYPE II BRASS DISC FOUND

DATE: FEBRUARY, 2009 JOB NO. 0711-3-029-15 BY: R. BROOKS PAGE 7 OF 7



STATE OF TEXAS T TRAVIS AND

Y=10.148.261.11

LOOP 1 ENDING

X=3,125,439,9430

Y=10.148.089.1360 S.H. 45 B STA. 461+50.52

LOOP 1 STA. B STA. 318+19.45

C.S.J. NO. 068

LOOP 1

PLAN S

NET LENGTH OF PROJECT = P

SURVEY LEGEND

= FOUND TXDOT BRONZE DISK IN CONCRETE

= SET TXDOT BRONZE DISK IN CONCRETE

= SET 1/2" IRON ROD W/TXDOT ALUM. CAP

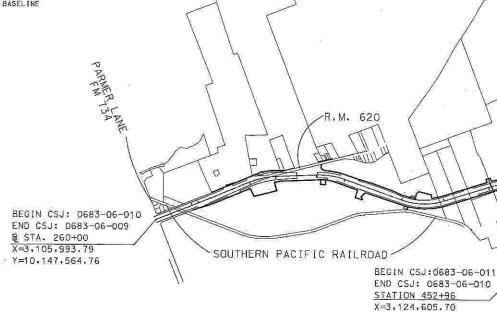
= FOUND 12" IRON ROD UNLESS OTHERWISE NOTED

= FOUND 4" x 4" TxDOT TYPE I CONCRETE MONUMENT

= CALCULATED POINT

P. = PROPERTY LINE

= PROPOSED BASELINE



NOTES:

- BEARINGS AND COORDINATES BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD 83, CENTRAL ZONE AND ADJUSTED TO SURFACE USING A SURFACE ADJUSTMENT FACTOR OF 1,00012.
- THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A COMMITMENT FOR TITLE INSURANCE AND MAY NOT INCLUDE EASEMENTS AND INFORMATION PERTAINING TO THESE TRACTS. RECORD INFORMATION SHOWN ON THIS MAP ARE BASED ON PUBLIC RECORD INFORMATION. THE SURVEYOR HAS NOT ABSTRACTED THESE TRACTS.
- THE BASELINE SHOWN HEREON IS PER A DESIGN SCHEMATIC FILE PROVIDED BY TURNER, COLLIE AND BRADEN, INC.
- D.E. INDICATES DRAINAGE EASEMENT
- 5. P.U.E. INDICATES PUBLIC UTILITY EASEMENT
- 6. D.R.W.C.T. INDICATES OFFICIAL RECORDS OF WILLIAMSON COUNTY TEXAS
- 7. W.C.P.R. INDICATES WILLIAMSON COUNTY PLAT RECORDS
- 8. W.C.D.R. INDICATES WILLIAMSON COUNTY DEED RECORDS
- 9. R.P.R.T.C.T. INDICATES REAL PROPERTY RECORDS OF TRAVIS COUNTY TEXAS
- 10. T.C.P.R. INDICATES TRAVIS COUNTY PLAT RECORDS
- 11. T.C.D.R. INDICATES TRAVIS COUNTY DEED RECORDS

ROPOSED Y PROJECT MSON COUNTY

. 45 JNT NO. -06-010, 0683-06-011 T LIMITS: MER LANE TO GREENLAWN BOULEVARD LE 1"=2000'



END PROJECT
END CSJ: 0683-06-011
STATION 598+30
X=3.138,843.38
Y=10.150.671.32

ROW Map and Documents Prepared and in Compliance with TTA Specifications:

Surveyor Date

ROW Map and Documents in Compliance with TTA Specifications:

Review Surveyor Date

Correct

Design Engineer Date

Completed Acquisition

TTA ROW Administrator Date

Completed Acquisition Final Approval

REVISED: DECEMBER 1. 2000 REVISED: NOVEMBER 7. 2000



SURVON INC.
PROFESSIONAL SURVEYORS
400 WEST 15TH ST., SUITE 1050
AUSTIN, TEXAS 16701
(512) 457-7870 FAX (512) 320-0898

AN Ingelitte and Index*cover45.

EXHIBIT "B" TO PARTICIPATION AGREEMENT

Covered Species and Participant's Proposed Activities Relative to Participation Agreement

Provide a summary describing the scope and nature of the proposed activities and uses of the Property. This summary should provide details regarding the proposed development plan, including square footage or acreage of limit of construction (limit of construction is any area within which any type of construction or land disturbance will occur, i.e., area for erosion controls, driveway, utilities). Attach conceptual plan that identifies the foregoing items.

A 200-foot Right-of-way (RoW) for extension of O'Connor Drive from RM 620 to interchange with SH 45 (project area includes a portion of SH 45 existing RoW comprising approximately 103.8 acres); O'Connor Drive RoW (approximately 35.8 acres) to be purchased by Williamson County under the Road Bond Program; from landowners Robinson Land LTD Partners and Highland 620 Land Development LTD.

Identify whi	ch of the followin	g species are covered by this Participation Agreement.
Yes	No	Golden-cheeked warbler
Yes	No	Black-capped vireo
X Yes	No	Bone Cave harvestman
X Yes	No	Coffin Cave mold beetle

EXHIBIT "C" TO PARTICIPATION AGREEMENT

Special Terms and Conditions in Connection with 10(a) Permit #TE - 181840

- 1. On property covered by this Participation Agreement, vegetation clearing activities within 300 feet of habitat will be conducted outside the GCWA or BCVI breeding seasons, as applicable, unless breeding season surveys performed by an Endangered Species Act section 10(a)(1)(A)-permitted biologist indicate that no GCWA or BCVI are present within 300 feet of the desired activity, or as otherwise approved on a case-by-case basis by the Service. The breeding season for the GCWA is March 1 to August 1. The breeding season for the BCVI is March 15 to September 1.
- Construction activities within, or within 300 feet of, GCWA or BCVI habitat may be conducted year round as long as such construction follows permitted clearing, as referenced above, in a reasonably prompt and expeditious manner indicating continuous activity.
- Clearing and construction activities authorized under the Permit shall be consistent with the current practices recommended by the Texas Forest Service to prevent the spread of oak wilt.
- 4. Upon locating a dead, injured, or sick GCWA or BCVI or any other endangered or threatened species in connection with road construction and other activities conducted by Participant that are covered by the Permit, Participant is required to contact the U.S. Fish and Wildlife Service's Law Enforcement Office, in Georgetown, Texas, (512) 863-5972, for care and disposition instructions. Extreme care should be taken in handling sick or injured individuals to ensure effective and proper treatment. Care should also be taken in handling dead specimens to preserve biological materials in the best possible state for analysis of cause of death. In conjunction with the care of sick or injured endangered/threatened species, or preservation of biological materials from a dead specimen, Participant and their contractor/subcontractor have the responsibility to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.

WILLIAMSON COUNTY REGIONAL HABITAT CONSERVATION PLAN

MEMORANDUM OF PARTICIPATION AGREEMENT RELATIVE TO U.S. FISH AND WILDLIFE SERVICE PERMIT (Permit No. TE-181840-0)

This WILLIAMSON COUNTY REGIONAL HABITAT CONSERVATION PLAN MEMORANDUM OF PARTICIPATION AGREEMENT RELATIVE TO U.S. FISH AND WILDLIFE SERVICE PERMIT (Permit No. TE-181840-0) (this "Memorandum") is made and executed by Williamson County Road Bond Program ("Participant"), effective as of the 28th day of April 2009.

WITNESSETH:

- 1. Permit. Williamson County, Texas, and the Foundation are the permittees under federal Endangered Species Act incidental take permit number TE-181840-0 dated October 21, 2008 (the "Permit"). The Permit authorizes "take" of certain listed species of wildlife occurring in Williamson County in exchange for implementation of the Williamson County Regional Habitat Conservation Plan (the "Plan"). The Foundation/Williamson County administers the Plan, which includes granting participation rights to applicants who enter into participation agreements. Through participation in the Plan, a participant receives authority for incidental "take" of listed species covered by the Permit, in accordance with the terms and conditions of the Permit and the participation agreement entered into by the participant.
- 2. Participation Agreement; Grant of Participation Rights and Obligations of Participant. Participant is the owner of a tract or tracts of land (the "Property") located in Williamson County, Texas, and described on Exhibit "A" to this Memorandum. Participant and the Foundation entered into the Williamson County Regional Habitat Conservation Plan Participation Agreement dated April 28, 2009 ("Participation Agreement," Foundation Application File No. 20090409). Under the Participation Agreement, the Foundation granted to the Participant the right to participate in the Plan with respect to the Participant's proposed activities on the Property. The Participation Agreement describes the Participant's proposed activities and the species to be covered under the Participation Agreement. The Participant also agreed under the Participation Agreement to assume and agree to be bound by all terms and conditions of the Permit, the Plan, and all applicable laws and regulations, including without limitation those terms and conditions specifically set forth as an exhibit to the Participation Agreement.

3.	Notice. Participant desires to execute this Memorandum and to have it filed of record in the Official Public Records of Williamson County, Texas, providing public and record notice to all persons as to the existence of the Participation Agreement. Further information regarding the Participation Agreement may be obtained by contacting the following:
	PARTICIPANT:
	Attn: Foundation Application File No. 20090409

FOUNDATION:

Phone: (512) 943-1550

Williamson County Regional Habitat Conservation Plan Plan Administrator 350 Discovery Boulevard #207 Cedar Park, Texas 78613 Attn: Foundation Application File No. 20090409

Phone: (512) 260-4226

[Remainder of page intentionally blank]

EXECUTED as of the el	ffective date first	written above.	
PARTICIPANT:			
Ву:			
Print Name:			
Title:			
	ACKNOWI	LEDGEMENT	
	nem o w	DEDGEMENT	
THE STATE OF TEXAS	§ 8		
COUNTY OF	§ §		
This instrument was ack	nowledged before	e me on	, 20, by
, on beha	alf of said	of	, a
			·
		NOTARY PU	JBLIC, State of Texas
		Print Name:	
My Commission Expires:			
Exhibits: "A" U.S. Fish and Wildlife Ser "B" Description of Participant'	vice Permit No. 's Property	TE-181840-0	
After Recording, Return To:			
Williamson County Regional Hal Plan Administrator 350 Discovery Boulevard #207 Cedar Park, Texas 78613	oitat Conservatio	n Plan	

<u>EXHIBIT A</u> <u>TO MEMORANDUM OF PARTICIPATION AGREEMENT</u>

U.S. Fish and Wildlife Service Permit No. TE-181840-0

(four pages following)



DEPARTMENT OF THE INTERIOR U.S. FISH AND WILDLIFE SERVICE

FEDERAL FISH AND WILDLIFE PERMIT

PERMITTEE

The County of Williamson

301 SE Inner Loop

Georgetown, Texas 78626

Phone: 512/943-1550 e-mail: dgattis@wilco.org

Williamson County Conservation Foundation

Cedar Park, Texas 78613 Phone: 512/733-5380

350 Discovery Boulevard

Email: lbirkman@wilco.org

9. TYPE OF PERMIT:

[X]

[]

Endangered Species - Incidental Take

2. AUTHORITY-STATUTES

REGULATIONS (Attached)

3. NUMBER

TE-181840-0

4. RENEWABLE

6. EFFECTIVE

10/16/2008

YES

NO

16 USC 1539(a)(1)(B)

50 CFR §§ 13 & 17

5. MAY COPY

7.EXPIRES

YES

NO

10/16/2038

[X]

[]

3-201 (1/97)

8. NAME AND TITLE OF PRINCIPAL OFFICER: (if #1 is a business) Mr. Daniel A. Gattis, County Judge (County) or successor. Lisa Birkman, President, Williamson County Conservation Foundation, Williamson County Commissioner (Foundation) or

successor.

10. LOCATION WHERE AUTHORIZED ACTIVITY MAY BE CONDUCTED: Williamson County, Texas.

11. CONDITIONS AND AUTHORIZATIONS:

- A. GENERAL CONDITIONS SET OUT IN SUBPART D OF 50 CFR 13, AND SPECIFIC CONDITIONS CONTAINED IN FEDERAL REGULATIONS CITED IN BLOCK #2, ABOVE, ARE HEREBY MADE A PART OF THIS PERMIT. ALL ACTIVITIES AUTHORIZED HEREIN MUST BE CARRIED OUT IN ACCORDANCE WITH AND FOR THE PURPOSES DESCRIBED IN THE APPLICATION SUBMITTED. CONTINUED VALIDITY, OR RENEWAL, OF THIS PERMIT IS SUBJECT TO COMPLETE AND TIMELY COMPLIANCE WITH ALL APPLICABLE CONDITIONS, INCLUDING THE FILING OF ALL REQUIRED INFORMATION AND REPORTS.
- B. THE VALIDITY OF THIS PERMIT IS ALSO CONDITIONED UPON STRICT OBSERVANCE OF ALL APPLICABLE FOREIGN, STATE, LOCAL OR OTHER FEDERAL LAW. THIS PERMIT DOES NOT WAIVE THE OBLIGATION TO ABIDE BY OTHER APPLICABLE FOREIGN, STATE, LOCAL OR FEDERAL LAW IN CARRYING OUT AUTHORIZED ACTIVITIES.
- C. VALID FOR USE BY PERMITTEES NAMED ABOVE.
- D. ACCEPTANCE OF THIS PERMIT SERVES AS EVIDENCE THAT THE PERMITTEE UNDERSTANDS AND AGREES TO ABIDE BY THE "GENERAL CONDITIONS FOR NATIVE ENDANGERED AND THREATENED WILDLIFE SPECIES PERMITS" (copy enclosed).

12. REPORTING REQUIREMENTS

Annual report due each January 1 throughout the life of the permit.

ISSUED B 2 Mills

Deputy Regional Director

10/21/08

- E. Permittee(s) are authorized to "Take" the following species: Bone Cave harvestman, Coffin Cave mold beetle, golden-cheeked warbler (GCWA), and black-capped vireo (BCVI) in Williamson County, Texas incidental to activities including, but not limited to, road construction, maintenance, and improvement projects; utility construction and maintenance; school development and construction; public or private construction and development; and land clearing.
- F. For GCWA, the loss of up to 6,000 acres of potential GCWA habitat is authorized over the life of the Permit. These impacts will be mitigated by a combination of purchasing mitigation credits from Hickory Pass Conservation Bank and/or other nearby conservation banks or by creating GCWA preserves.
- G. For BCVI, the loss of up to 4,267 acres of potential BCVI habitat is authorized over the life of the Permit. These impacts are mitigated primarily through habitat restoration, habitat management, enhancement of existing protected BCVI habitat, or an alternate, Service-approved mitigation program.
- H. On parcels covered by Participation Agreements, vegetation clearing activities within, or within 300 feet of, habitat will be conducted outside the GCWA or BCVI breeding seasons, as applicable, unless breeding season surveys performed by an Endangered Species Act section 10(a)(1)(A)-permitted biologist indicate that no GCWA or BCVI are present within, or within 300 feet of, the desired activity, or as otherwise approved on a case-by-case basis by the Service. The breeding season for the GCWA is March 1 to August 1. The breeding season for the BCVI is March 15 to September 1.
- Construction activities within, or within 300 feet of, GCWA or BCVI habitat may be conducted year round as long as such construction follows permitted clearing, as referenced above, in a reasonably prompt and expeditious manner indicating continuous activity.
- J. For Bone Cave harvestman and Coffin Cave mold beetle, up to 210 caves occupied by one or both species are authorized to be impacted. These impacts will be mitigated by acquiring and managing 9 to 15 karst fauna areas (KFAs), a minimum of three KFAs in each of the karst fauna regions occupied by the covered species.
- K. Clearing and construction activities authorized under this Permit shall be consistent with the current practices recommended by the Texas Forest Service to prevent the spread of oak wilt.
- L. The Service agrees that Williamson County or the Foundation may enter into "Participation Agreements" covering land within the Permit area. Participation

Agreements will stipulate that the Participant will be bound by and comply with those terms and conditions of this Permit applicable to the Participant's land and the Participant shall benefit from the authorization granted in this Permit. So long as this Permit remains in effect and a Participant is in compliance with the Participation Agreement, that Participant shall be deemed, with respect to that Participant's property covered by the Participation Agreement, to have the full benefits and authorities of this Permit with respect to that Participant's property. The Service agrees that a breach by a Participant of its obligations under a Participation Agreement will not be considered a violation by the Permittee, or any other Participant, of this Permit. In the event a Participant has materially breached its Participation Agreement then the Service, Williamson County, or the Foundation may terminate that Participation Agreement.

- M. Upon locating a dead, injured, or sick GCWA or BCVI or any other endangered or threatened species in connection with road construction and other activities conducted by Williamson County that are covered by this Permit, Permittees and/or Participant, as applicable, shall contact the U.S. Fish and Wildlife Service's Law Enforcement Office, in Georgetown, Texas, (512) 863-5972, for care and disposition instructions. Extreme care should be taken in handling sick or injured individuals to ensure effective and proper treatment. Care should also be taken in handling dead specimens to preserve biological materials in the best possible state for analysis of cause of death. In conjunction with the care of sick or injured endangered/threatened species, or preservation of biological materials from a dead specimen, Williamson County, the Foundation, and their contractor/subcontractor have the responsibility to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.
- N. Conditions of this Permit shall be binding on, and for the benefit of Williamson County and the Foundation.
- O. If during the tenure of this Permit authorized impacts are exceeded such that there may be an increase in the anticipated take of any covered species, Williamson County or the Foundation shall contact the Service and obtain authorization and/or amendment of the Permit before entering into participation agreements or commencing any other activities which might result in unauthorized impacts.
- P. Williamson County or the Foundation shall submit on January 1 of each year the Permit is in effect an Annual Report describing participation agreements entered into and conservation and management actions undertaken. The report will summarize the results of the biological monitoring and adaptive management process and findings. The Annual Report must include the locations of surveys, a description of any deviations from required survey protocols, personnel used, and documentation of all survey results as required in the protocols for the particular endangered species. In addition, the annual

report will review existing management and highlight areas where change in management approach may be needed and where prioritized research needs are reviewed. A copy of the annual report shall be submitted to the U.S. Fish and Wildlife Service Field Office 10711 Burnet, Suite 200, Austin, Texas 78758; and to the U.S. Fish and Wildlife Service, P.O. Box 1306, Room 4102, Albuquerque, New Mexico 87103.

- Q. The No Surprises Rule, found at 50 C.F.R. 17.22(b)(8) and 17.32(b)(8), is applicable to this Permit. Pursuant to the No Surprises Rule, the Service has determined that the RHCP adequately addresses the GCWA, BCVI, Bone Cave Harvestman, and Coffin Cave mold beetle.
- R. Acceptance of the Permit serves as evidence that Williamson County and the Foundation understand and agree to abide by the terms of the Permit and all applicable sections of Title 50 CFR Parts 13 and 17 pertinent to issued permits.

----END OF PERMIT # TE-181840-0----

EXHIBIT B TO MEMORANDUM OF PARTICIPATION AGREEMENT

Legal Description of Participant's Property

(See attached legal and project description, hereinafter described as Exhibit B-1, attached hereto and consisting of 17 pages inclusive.)

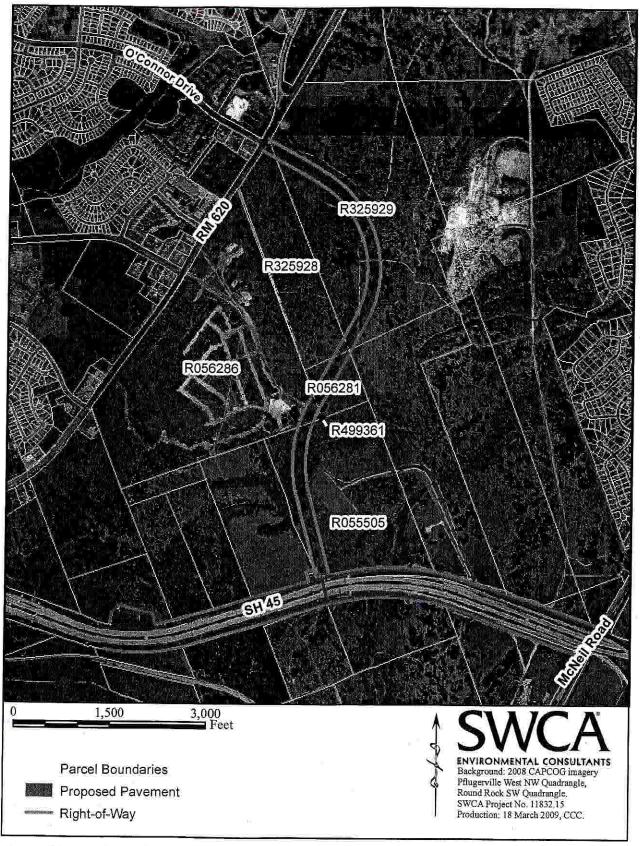


Figure B1. Parcel map for the O'Connor Drive extension.

DESCRIPTION

FOR A 19.084 ACRE TRACT OF LAND SITUATED IN THE JOHN McQUEEN SURVEY, ABSTRACT NO. 425, AND JACOB M. HARRELL SURVEY, ABSTRACT NO. 284 IN WILLIAMSON COUNTY, TEXAS, BEING A PORTION OF A CALLED 348.60 ACRE TRACT AS DESCRIBED IN THAT DEED TO ROBINSON ASSOCIATES etal OF RECORD IN DOCUMENT NO. 199978136 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, SAID 19.084 ACRE TRACT, AS SHOWN ON THE ACCOMPANYING SKETCH, IS MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

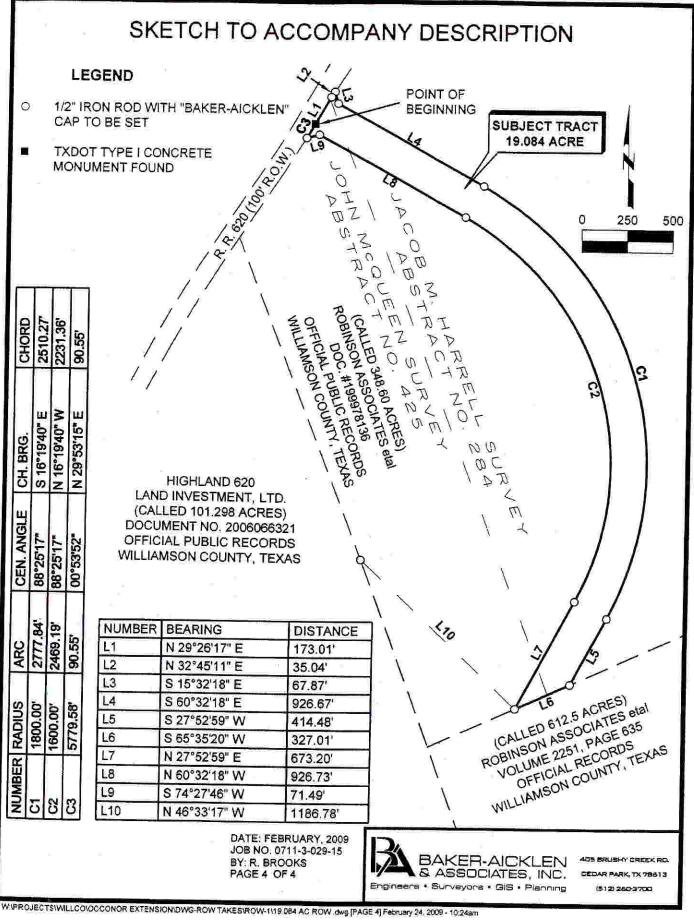
BEGINNING at a TXDOT concrete monument found for a point of tangency on the southeasterly right-of-way line of Ranch Road 620 (100' right-of-way width), same being a point of tangency on the northwesterly line of said 348.60 acre tract for a point of tangency and **POINT OF BEGINNING** hereof;

THENCE with the southeasterly right-of-way line of said Ranch Road 620, same being the northwesterly line of said 348.60 acre tract the following two (2) courses and distances:

- 1. N 29° 26' 17" E for a distance of 173.01 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for an angle point hereof, and
- 2. N 32° 45' 11" E for a distance of 35.04 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for the most northerly corner hereof;

THENCE departing the southeasterly right-of-way line of said Ranch Road 620, through the interior of said 348.60 acre tract the following four (4) courses and distances:

- 1. S 15° 32' 18" E for a distance of 67.87 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for an angle point hereof,
- 2. S 60° 32' 18" E for a distance of 926.67 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for a point of curvature hereof,



- 3. with the arc of a curve to the right, having a radius of 1800.00 feet, an arc length of 2777.84 feet, a central angle of 88° 25' 17", and a chord which bears S 16° 19' 40" E for a distance of 2510.27 feet to ½" iron rod with "Baker-Aicklen" cap to be set for a point of tangency hereof, and
- 4. S 27° 52' 59" W for a distance of 414.48 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for an angle point on the south line of said 348.60 acre tract, same being the north line of a called 612.5 acre tract as described in that deed to Robinson Associates etal, and recorded in Volume 2251, Pg. 635 of the Official Records of said County for the southeast corner hereof;

THENCE with the south line of said 348.60 acre tract, same being the north line of said 612.5 acre tract, S 65° 35' 20" W for a distance of 327.01 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for the most southerly corner hereof, from which a ½" iron rod with "Baker-Aicklen" cap to be set for an angle point on the southwesterly line of said 348.60 acre tract, same being the northeasterly line of a called 101.298 acre tract as described in that deed to Highland 620 Land Investment, Ltd., and recorded in Document No. 2006066321 of the Official Public Records of said County bears, N 46° 33' 17" W a distance of 1186.78 feet;

THENCE departing the north line of said 612.5 acre tract, through the interior of said 348.60 acre tract the following four (4) courses and distances:

- 1. N 27° 52' 59" E for a distance of 673.20 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for a point of curvature hereof,
- 2. with the arc of a curve to the left, having a radius of 1600.00 feet, an arc length of 2469.19 feet, a central angle of 88° 25' 17", and a chord which bears N 16° 19' 40" W for a distance of 2231.36 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for a point of tangency hereof,
- 3. N 60° 32' 18" W for a distance of 926.73 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for an angle point hereof, and
- 4. S 74° 27' 46" W for a distance of 71.49 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for a non-tangent point of curvature on the northwesterly line of said 348.60 acre

tract, same being the southeasterly right-of-way line of said Ranch Road 620 for the most westerly corner hereof;

THENCE with the southeasterly right-of-way line of said Ranch Road 620, same being the northwesterly line of said 348.60 acre tract, with the arc of a curve to the right, having a radius of 5779.58 feet, an arc length of 90.55 feet, a central angle of 00° 53' 52", and a chord which bears N 29° 53' 15" E for a distance of 90.55 feet to the POINT OF BEGINNING hereof and containing 19.084 acres of land.

Bearings shown hereon are referenced to Grid North for the Texas State Plane Coordinate System, Central Zone.

Surveyed under the direct supervision of the undersigned during October, 2008:

Parker I Graham

Registered Professional Land Surveyor No. 5556

BAKER-AICKLEN & ASSOCIATES, INC.

405 Brushy Creek Road Cedar Park, Texas 78613

(512) 260-3700

Job No.: 0711-3-029-15

Filename: W:\PROJECTS\WILLCO\OCCONOR EXTENSION\DWG-ROW TAKES\METES & BOUNDS\19.084

AC ROW.DOC

DESCRIPTION

FOR A 1.870 ACRE TRACT OF LAND SITUATED IN THE JOHN McQUEEN SURVEY, ABSTRACT 425 IN WILLIAMSON COUNTY, TEXAS, BEING A PORTION OF THE CALLED 193.96 ACRE TRACT IN DEED TO HRI DEVELOPMENT CORPORATION OF RECORD IN VOLUME 1660, PAGE 105 OF THE OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS, SAID 1.870 ACRE TRACT, AS SHOWN ON THE ACCOMPANYING SURVEY PLAT, IS MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING FOR REFERENCE at 3/4" iron pipe found at an interior ell corner of a called 612.5 acre tract of land in deed to Robinson Associates et al, of record in Volume 2251, Page 635 Official Records of said County, same being the southeast corner of said 193.96 acre tract;

THENCE with the westerly boundary line of said 612.5 acre tract, same being the south boundary line of said 193.96 acre tract, S 69°37'57" W for a distance of 143.25 feet to a 1/2" iron rod with plastic cap stamped "Baker-Aicklen" set for the southernmost southeasterly corner and **POINT OF BEGINNING** hereof;

THENCE continuing with the westerly boundary line of said 612.5 acre tract, same being the south boundary line of said 193.96 acre tract, S 69°37'57" W for a distance of 300.36 feet to a 1/2" iron rod with plastic cap stamped "Baker-Aicklen" set for the westernmost corner hereof, from which a 1/2" iron rod found at an angle point in the south boundary line of said 193.96 acre tract, bears S 69°37'57" W a distance of 1564.94 feet;

THENCE departing the westerly boundary line of said 612.5 acre tract, through the interior of said 193.96 acre tract, the following five (5) courses and distances:

- 1. N 27°52'59" E for a distance of 250.43 feet to a 1/2" iron rod with plastic cap stamped "Baker-Aicklen" set for an angle point in the northwesterly boundary line hereof,
- 2. N 17°07'01" W for a distance of 35.36 feet to a 1/2" iron rod with plastic cap stamped "Baker-Aicklen" set for an angle point in the northwesterly boundary line hereof,
- 3. N 27°52'59" E for a distance of 100.00 feet to a 1/2" iron rod with plastic cap stamped "Baker-Aicklen" set for an angle point in the northwesterly boundary line hereof,
- 4. N 72°52'59" E for a distance of 35.36 feet to a 1/2" iron rod with plastic cap stamped "Baker-Aicklen" set for an angle point in the northwesterly boundary line hereof, and

5. N 27°52'59" E for a distance of 191.83 feet to a 1/2" iron rod with plastic cap stamped "Baker-Aicklen" set on a point in the west boundary line of said 612.5 acre tract, same being the easterly boundary line of said 193.96 acre tract for the northernmost corner hereof, from which a 1/2" iron rod with plastic cap stamped "Baker-Aicklen" set for an angle point in the easterly boundary line of said 193.96 acre tract, bears N 20°37'14" W a distance of 1526.25 feet:

THENCE with the west boundary line of said 612.5 acre tract, same being the easterly boundary line of said 193.96 acre tract, S 20°37'14" E for a distance of 267.02 feet to a 1/2" iron rod with plastic cap stamped "Baker-Aicklen" set for the easternmost southeast corner hereof, from which a 3/4" iron pipe found at an interior ell corner of said 612.5 acre, same being the southeast corner of said 193.96 acre tract, said 3/4" iron pipe being the "BEGINNING FOR REFERENCE" point, bears S 20°37'14" E a distance of 127.35 feet;

THENCE departing west boundary line of said 612.5 acre tract, through the interior of said 193.96 acre tract, S 27°52'59" W for a distance of 191.25 feet to the POINT OF BEGINNING and containing 1.870 acres of land.

Bearings shown hereon are referenced to Grid North for the Texas State Plane Coordinate System, Central Zone.

Surveyed under the direct supervision of the undersigned during May, 2006:

Parker J. Graham

Registered Professional Land Surveyor No. 5556

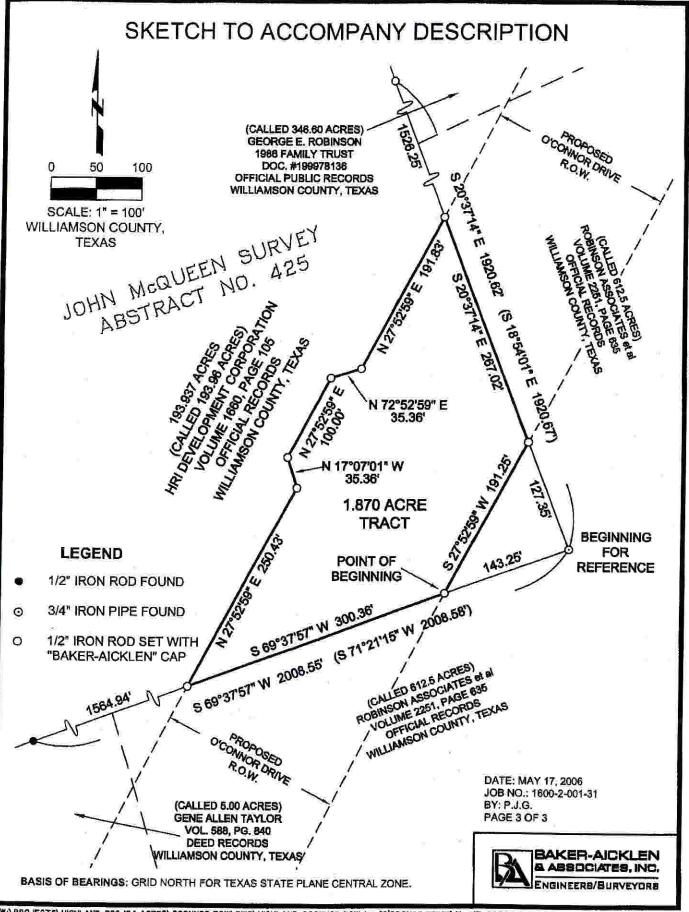
BAKER-AICKLEN & ASSOCIATES, INC.

405 Brushy Creek Road Cedar Park, Texas 78613

(512) 260-3700

Job No.: 1600-2-001-31

Filename: W:\PROJECTS\HIGHLAND-620 194 ACRES\METES-BOUNDS\O'CONNOR DRIVE.DOC



DESCRIPTION

FOR A 4.173 ACRE TRACT OF LAND SITUATED IN THE JOHN McQUEEN SURVEY, ABSTRACT 425, AND JACOB M. HARRELL SURVEY, ABSTRACT NO. 284 IN WILLIAMSON COUNTY, TEXAS, BEING A PORTION OF A CALLED 612.5 ACRE TRACT AS DESCRIBED IN THAT DEED TO ROBINSON ASSOCIATES etal OF RECORD IN VOLUME 2251, PAGE 635 OF THE OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS, SAID 4.173 ACRE TRACT, AS SHOWN ON THE ACCOMPANYING SKETCH, IS MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING FOR REFERENCE at a 3/4" iron pipe found at an interior ell corner of said 612.5 acre tract, same being the southeast corner of a called 101.298 acre tract as described in that deed to Highland 620 Land Investment, Ltd., and recorded in Document No. 2006066321 of the Official Public Records of said County, same being the Point of Termination of a Boundary Line Agreement recorded in Document No. 2007007592 of the Official Public Records of said County, same being the Point of Termination of a Boundary Line Agreement recorded in Document No. 2007007591 of the Official Public Records of said County;

THENCE with the westerly line of said 612.5 acre tract, same being the easterly line of said 101.298 acre tract, N 20° 40° 04" W for a distance of 126.96 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for the south corner and **POINT OF BEGINNING** hereof;

THENCE continuing with the westerly line of said 612.5 acre tract, same being the easterly line of said 101.298 acre tract, N 20° 40' 04" W for a distance of 267.12 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for the most westerly comer hereof, from which a ½" iron rod with "Baker-Aicklen" cap to be set for an angle point on the easterly line of said 101.298 acre tract, same being an angle point of the westerly line of a called 348.60 acre tract as described in that deed to Robinson Associates etal, and recorded in Document No. 199978136 of the Official Public Records of said County bears, N 20°40' 04" W a distance of 1525.30 feet;

THENCE departing the easterly line of said 101.298 acre tract, through the interior of said 612.5 acre tract, N 27° 52' 59" E for a distance of 691.28 feet to a ½" iron rod with "Baker-Aicklen" cap to be set on the north line of said 612.5 acre tract, same being the south line of said 348.60 acre tract for an angle point hereof;

THENCE with the north line of said 612.5 acre tract, same being the south line of said 348.60 acre tract, N 65° 35' 20" E for a distance of 327.01 feet to a 1/2" iron rod with "Baker-Aicklen" cap to be set for the northeast corner hereof;

THENCE departing the south line of said 348.60 acre tract, through the interior of said 612.5 acre tract the following two (2) courses and distances:

- 1. S 27° 52' 59" W for a distance of 1097.96 feet to a 1/2" iron rod with "Baker-Aicklen" cap to be set for a point of curvature hereof, and
- 2. with the arc of a curve to the left, having a radius of 1900.00 feet, an arc length of 28.86 feet, a central angle of 00° 52' 13", and a chord which bears S 27° 26' 53" W for a distance of 28.86 feet, to the POINT OF BEGINNING hereof and containing 4.173 acres of land.

Bearings shown hereon are referenced to Grid North for the Texas State Plane Coordinate System, Central Zone.

Surveyed under the direct supervision of the undersigned during October, 2008:

Parker J. Graham U

Registered Professional Land Surveyor No. 5556

BAKER-AICKLEN & ASSOCIATES, INC.

405 Brushy Creek Road Cedar Park, Texas 78613

(512) 260-3700

Job No.: 0711-3-029-15

Filename: W:\PROJECTS\WILLCO\OCCONOR EXTENSION\DWG-ROW TAKES\METES & BOUNDS\4.173

AC ROW.DOC

DESCRIPTION

FOR A 11.330 ACRE TRACT OF LAND SITUATED IN THE MALCOM M. HORNSBY SURVEY, ABSTRACT 281, IN WILLIAMSON COUNTY, TEXAS, BEING A PORTION OF A CALLED 612.5 ACRE TRACT AS DESCRIBED IN THAT DEED TO ROBINSON ASSOCIATES etal OF RECORD IN VOLUME 2251, PAGE 635 OF THE OFFICIAL RECORDS OF WILLIAMSON COUNTY, TEXAS, SAID 11.330 ACRE TRACT, AS SHOWN ON THE ACCOMPANYING SKETCH, IS MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING FOR REFERENCE at a 3/4" iron pipe found at an interior ell corner of said 612.5 acre tract, same being the southeast corner of a called 101.298 acre tract as described in that deed to Highland 620 Land Investment, Ltd., and recorded in Document No. 2006066321 of the Official Public Records of said County, same being the Point of Termination of a Boundary Line Agreement recorded in Document No. 2007007592 of the Official Public Records of said County, same being the Point of Termination of a Boundary Line Agreement recorded in Document No. 2007007591 of the Official Public Records of said County;

THENCE with the westerly line of said 612.5 acre tract, same being the southerly line of said 101.298 acre tract, S 69° 54' 12" W for a distance of 125.71 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for the northeast corner and **POINT OF BEGINNING** hereof;

THENCE departing the southerly line of said 101.298 acre tract, through the interior of said 612.5 acre tract the following three (3) courses and distances:

- 1. with the arc of a curve to the left, having a radius of 1900.00 feet, an arc length of 1184.40 feet, a central angle of 35° 42' 59", and a chord which bears S 03° 47' 31" W for a distance of 1165.31 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for a point of tangency hereof;
- 2. S 14° 03' 59" E for a distance of 1301.98 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for an angle point hereof, and
- 3. S 59° 03' 59" E for a distance of 55.77 feet to a point on the south line of said 612.5 acre tract, same being a point on the north right-of-way line of Williamson County State

Highway 45, Tract 1, (49.78 acres) as recorded in Document No. 2003027707 of the Official Public Records of said County for the southeast corner hereof;

THENCE with the south line of said 612.5 acre tract, same being the north right-of-way line of said S. H. 45, with the arc of a curve to the left, having a radius of 4386.39 feet, an arc length of 185.54 feet, a central angle of 02° 25' 39", and a chord which bears S 76°16' 31" W for a distance of 185.82 feet to a TXDOT Type II Brass Disc found for the most southerly southwest corner hereof;

THENCE with the south line of said 612.5 acre tract, same being the north right-of-way line of said S. H. 45, the following two (2) courses and distances:

- 1. N 17° 56' 33" W for a distance of 147.89 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for an angle point hereof, and
- 2. S 75° 10' 52" W for a distance of 43.62 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for an angle point hereof;

THENCE departing the north right-of-way line of said S. H. 45, through the interior of said 612.5 acre tract the following two (2) courses and distances:

- 1. N 14° 03' 59" W for a distance of 1193.33 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for a point of curvature hereof, and
- 2. with the arc of a curve to the right, having a radius of 2100.00 feet, an arc length of 1136.70 feet, a central angle of 31° 00° 48", and a chord which bears N 01° 26° 25" E for a distance of 1122.87 feet to a ½" iron rod with "Baker-Aicklen" cap to be set for a point on the westerly line of said 612.5 acre tract, same being the south line of said 101.298 acre tract, same being a point on the Boundary Line Agreement as recorded in Document No. 2007007591 and the Boundary Line Agreement as recorded in Document No. 2007007592 of said County for the northwest corner hereof, from which a ¾" iron pipe found for an angle point on the westerly line of said 612.5 acre tract, same being a point on the south line of a called 92.639 acre tract as described in that deed to Highland Six Twenty Residential, Ltd., and recorded in Document No. 2006066322 of the Official Public Records of said County bears, S 69° 54' 12" W a distance of 612.74 feet;

THENCE with the westerly line of said 612.5 acre tract, same being the south line of said 101.298 acre tract, same being the Boundary Line Agreement as recorded in Document No. 2007007591 and the Boundary Line Agreement as recorded in Document No. 2007007592 of said County, N 69° 54' 12" E for a distance of 258.59 feet to the POINT OF BEGINNING hereof and containing 11.330 acres of land.

Bearings shown hereon are referenced to Grid North for the Texas State Plane Coordinate System, Central Zone.

Surveyed under the direct supervision of the undersigned during October, 2008:

Parker J. Graham

Registered Professional Land Surveyor No. 5556

BAKER-AICKLEN & ASSOCIATES, INC.

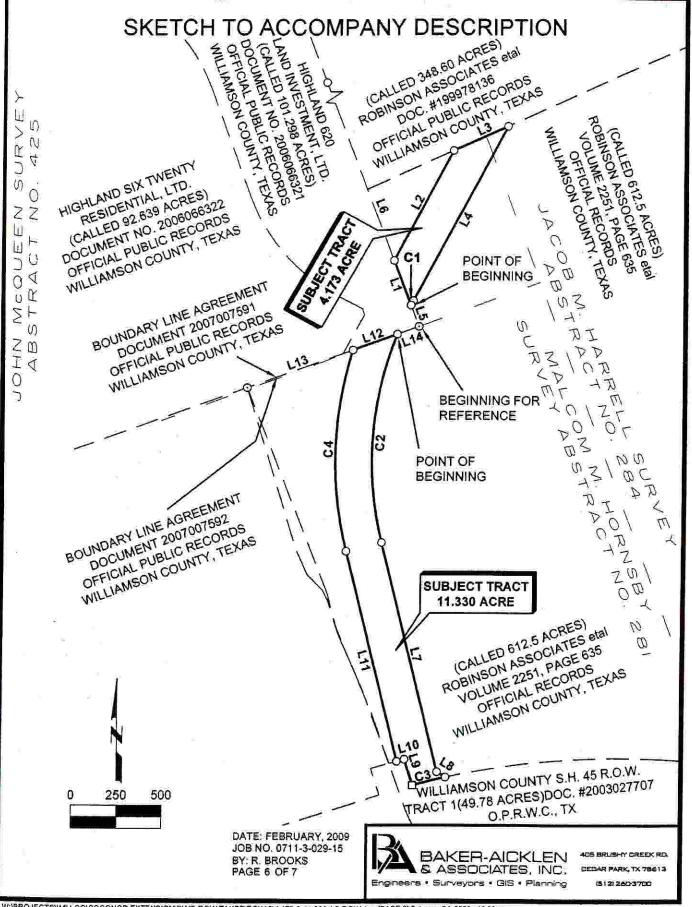
405 Brushy Creek Road

Cedar Park, Texas 78613 (512) 260-3700

Job No.: 0711-3-029-15

Filename: W:\PROJECTS\WILLCO\OCCONOR EXTENSION\DWG-ROW TAKES\METES & BOUNDS\11.330

AC ROW.DOC



SKETCH TO ACCOMPANY DESCRIPTION

NUMBER	RADIUS	ARC	CEN. ANGLE	CH. BRG.	CHORD
C1	1900.00	28.86	00°52'13"	S 27°26'53" W	28.861
C2	1900.00	1184.40	35°42'59"	\$ 03°47'31" W	1165.31
C3	4386.39	185.841	02°25'39"	S 76°16'31" W	185.82
C4	2100.00'	1136.70'	31°00'48"	N 01°26'25" E	1122.87

NUMBER	BEARING	DISTANCE
L1	N 20°40'04" W	267,12'
L2	N 27°52'59" E	691.28
L3	N 65°35'20" E	327.01'
L4	\$ 27°52'59" W	1097,96'
L5	N 20°40'04" W	126.96
L6	N 20°40'04" W	1525.30
L7	S 14°03'59" E	1301.98
L8	S 59°03'59" E	55.77'
L9	N 17°56'33" W	147.89'
L10	S 75°10'52" W	43.62'
L11	N 14°03'59" W	1193.33'
L12	N 69°54'12" E	258.59
L13	S 69°54'12" W	612.74'
L14	S 69°54'12" W	125.71'

LEGEND

- 1/2" IRON ROD WITH "BAKER-AICKLEN" CAP TO BE SET
- 3/4" IRON PIPE FOUND
- **TXDOT TYPE II BRASS** DISC FOUND

DATE: FEBRUARY, 2009 JOB NO. 0711-3-029-15 BY: R. BROOKS PAGE 7 OF 7



STATE OF TEXAS TU TRAVIS ANI

C.S.J. NO. 068 NET LENGTH OF PROJECT = P. PLAN 5

SURVEY LEGEND

- FOUND TXDOT BRONZE DISK IN CONCRETE

SET TXDOT BRONZE DISK IN CONCRETE

= SET 1/2" IRON ROD W/TXDOT ALUM. CAP

= FOUND 1/2" IRON ROD UNLESS DTHERWISE NOTED

= FOUND 4" x 4" TxDOT TYPE I CONCRETE MONUMENT

= CALCULATED POINT

= PROPOSED BASELINE

= PROPERTY LINE R.M. 620 BEGIN CSJ: 0683-06-010 END CSJ: 0683-06-009 ₽ STA. 260+00 X=3,105,993.79 SOUTHERN PACIFIC RAILROAD Y=10,147,564.76 BEGIN CSJ: 0683-06-011 END CSJ: 0683-06-010 STATION 452+96 X=3,124,605.70 Y=10,148,261,11 LOOP 1 ENDING LOOP 1 STA. B STA. 318+19.45 X=3.125.439.9430 LOOP 1 Y=10,148,089,1360

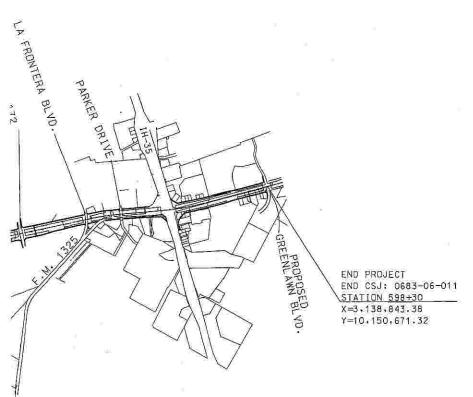
S.H. 45 B STA. 461+50.52

NOTES:

- BEARINGS AND COORDINATES BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD 83, CENTRAL ZONE AND ADJUSTED TO SURFACE USING A SURFACE ADJUSTMENT FACTOR OF 1.00012.
- THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A COMMITMENT FOR TITLE INSURANCE AND MAY NOT INCLUDE EASEMENTS AND INFORMATION PERTAINING TO THESE TRACTS. RECORD INFORMATION SHOWN ON THIS MAP ARE BASED ON PUBLIC RECORD INFORMATION. THE SURVEYOR HAS NOT ABSTRACTED THESE TRACTS.
- THE BASELINE SHOWN HEREON IS PER A DESIGN SCHEMATIC FILE PROVIDED BY TURNER, COLLIE AND BRADEN, INC.
- D.E. INDICATES DRAINAGE EASEMENT
- P.U.E. INDICATES PUBLIC UTILITY EASEMENT
- D.R.W.C.T. INDICATES OFFICIAL RECORDS OF WILLIAMSON COUNTY TEXAS
- W.C.P.R. INDICATES WILLIAMSON COUNTY PLAT RECORDS
- W.C.D.R. INDICATES WILLIAMSON COUNTY DEED RECORDS
- 9. R.P.R.T.C.T. INDICATES REAL PROPERTY RECORDS OF TRAVIS COUNTY TEXAS
- 10. T.C.P.R. INDICATES TRAVIS COUNTY PLAT RECORDS
- 11. T.C.D.R. INDICATES TRAVIS COUNTY DEED RECORDS

VPIKE AUTHORIT

VT NO. 16-010, 0683-06-011 LIMITS: ER LANE TO GREENLAWN BOULEVARD E 1"=2000'



Surveyor	Date
ROW Map and Documents in Campliance	with TTA Specifications
Review Surveyor	Date
Correct	
Design Engineer	Date
Recommended for Acquisition	5 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
TTA ROW Administrator	Date
	· · · · · · · · · · · · · · · · · · ·



SURVCON INC. PROFESSIONAL SURVEYORS 400 WEST 15TH 5T. SUITE 1030 AUSTIN, TEXAS, 78701 (512) 457-7870 FAX (512) 320-0838

FEN. MAN STATE FEDERAL AID PROJECT NO. COVER TEXAS COUNTY CONT. SEC. TRAVIS 0683 06 AUSTIN TRAVIS

S.H. 45 COVER SHEET

Williamson County Conservation Foundation

INVOICE

350 Discovery Blvd. #207 Cedar Park, Texas 78613 Phone (512) 260-4226 Fax (512) 260-4237

INVOICE #20090409 DATE: APRIL 23, 2009

TO:

Williamson County Road Bond PRogram C/O Williamson County 710 Main, Ste. 101 Georgetown, TX 78626 (512) 943-1550 FOR:

O'Connor Extension/SH 45 access - Mitigation Fee

DESCRIPTION		AMOUNT
extension of O'Connor Drivers SH 45 (project area include comprising approximately 1 (approximately 35.8 acres)	a 200-foot Right-of-way (RoW) for e from RM 620 to interchange with es a portion of SH 45 existing RoW 103.8 acres); O'Connor Drive RoW to be purchased by Williamson and Program; from landowners	\$ 80,430.00
WILLIAMSON COUNT CONSERVATION FOUNDATION		
	TOTAL	\$80,430.00





WILLIAMSON COUNTY REGIONAL HABITAT CONSERVATION PLAN

1435

PARTICIPATION AGREEMENT

This WILLIAMSON COUNTY REGIONAL HABITAT CONSERVATION PLAN PARTICIPATION AGREEMENT (this "Participation Agreement") dated April 28, 2009, is entered into by the Williamson County Road Bond Program and (the "Participant"), and the WILLIAMSON COUNTY CONSERVATION FOUNDATION, a Texas non-profit corporation (the "Foundation").

BACKGROUND

Williamson County, Texas, and the Foundation are the permittees under federal Endangered Species Act incidental take permit number TE-181840-0 dated October 21, 2008 (the "Permit"). The Permit authorizes "take" of certain listed species of wildlife occurring in Williamson County in exchange for implementation of the Williamson County Regional Habitat Conservation Plan (the "Plan"). The Foundation/Williamson County administers the Plan, which includes granting participation rights to applicants who enter into participation agreements. Through participation in the Plan, a participant receives authority for incidental "take" of listed species covered by the Permit, in accordance with the terms and conditions of the Permit and this Participation Agreement. Incidental take means take that results from, but is not the purpose of, carrying out an otherwise lawful activity. Participant is the owner of a tract or tracts of land (the "Property") located in Williamson County, Texas, and described on Exhibit "A" to this Participation Agreement.

AGREEMENT

- Foundation hereby grants to the Participant the right to participate in the Plan with respect to the Participant's proposed activities on the Property. Exhibit "B" to this Participation Agreement describes the Participant's proposed activities and the species to be covered under this Participation Agreement. The Participant represents and warrants that the activities proposed to be covered under this Participation Agreement will be carried out in full compliance with all applicable laws and regulations. This Participation Agreement covers only those activities described on Exhibit "B". The Participant shall consult with the Foundation before deviating in any material respect from the described activities. This Participation Agreement is entered into subject to all terms and conditions of the Permit, the Plan, and applicable law and regulations, and the Participant assumes and agrees to be bound by all of such terms and conditions, including without limitation those described on Exhibit "C" to this Participation Agreement.
- 2. <u>Participation Fee</u>. The Participant has paid to the Foundation the total sum of \$252,556.00 (Two hundred fifty-two thousand five hundred fifty-six hundred and no hundredths

Dollars) as the Participant's fee to participate in the Plan with respect to the Participant's proposed activities on the Property.

- 3. <u>Right To Inspect</u>. The Foundation, the County, and the U.S. Fish and Wildlife Service shall have the right to inspect the Property in order to ensure compliance with the terms of this Participation Agreement.
- 4. <u>Breach By Participant</u>. The Foundation shall provide Participant written notice specifying any breach of the terms of this Participation Agreement, and Participant shall have seven (7) days thereafter, or such other length of time the Foundation agrees in writing, to cure said breach. The Foundation, at its sole discretion and for good cause, including without limitation Participant's failure to cure any breach within the applicable timeframe, may terminate this Participation Agreement. Notification of breach and termination of participation rights shall be made by the Foundation to the Participant in writing at the address provided in Section 11.
- 5. <u>Participant's Sole Recourse</u>. In the event that this Participation Agreement is (i) ineffective or deficient with respect to the Property or Participant's proposed activities for any reason, or (ii) terminated in accordance with the terms and provisions of this Participation Agreement, Participant's sole recourse shall be to recover from the Foundation an amount not to exceed the total sum referenced in Section 2 of this Participation Agreement, upon surrender and termination of this Participation Agreement by Participant in writing to the Foundation; provided, Participant shall not be entitled to recover administrative fees from the Foundation.
- 6. <u>Covenants Run With The Land; Recordation</u>. Participant agrees that the covenants provided herein are intended to be binding upon any heirs, successors, and assigns in interest to the Property. Upon any transfer of any ownership interests to all or part of the Property, this Participation Agreement shall not terminate as to the Property, but rather shall continue in full force and effect and shall be fully binding upon any heirs, successors, and assigns in interest to the Property, or any portion thereof. Upon execution of this Participation Agreement by the Foundation and Participant, a Memorandum of Participation Agreement in form as attached hereto and incorporated herein for all purposes, shall be signed, acknowledged, and recorded by the Participant in the Official Public Records of Williamson County, Texas. The Participant shall promptly provide a copy of the recorded Memorandum of Participation Agreement to the Foundation.
- 7. <u>Venue And Choice Of Law</u>. The obligations and undertakings of each of the parties to this Participation Agreement shall be performable in Williamson County, Texas, and this Participation Agreement shall be governed by and construed in accordance with the laws of the United States and the State of Texas.
- 8. Entirety Of Agreement And Modification. This instrument constitutes the entire agreement between the parties relating to the rights herein granted and the obligations herein assumed. Any prior agreements, promises, negotiations, or representations not expressly set forth in this Participation Agreement are of no force of effect. Any oral representations or modifications concerning this Participation Agreement shall be of no force or effect, excepting a subsequent modification in writing signed by the party to be charged and expressly approved by an authorized representative of such party.
- 9. <u>Non-Assignment</u>. Participant shall not sell, transfer, or assign all or any part of this Participation Agreement to a party other than a successive owner of all or a portion of the Property without prior written consent of the Foundation.

- 10. <u>Successors And Assigns</u>. This Participation Agreement shall be binding upon and inure to the benefit of the successors and assigns of the respective parties hereto, as and where authorized pursuant to this Participation Agreement.
- 11. <u>Notice</u>. All notices under this Participation Agreement shall be in writing and shall be deemed to have been properly given, delivered and received (a) as of the date of delivery if personally delivered, or (b) as of the date of deposit in the mail system if sent by United States certified mail, return receipt requested, postage prepaid. For purposes of notices, the addresses of the parties are as follows

PARTICIPANT:

Williamson County Road Bond Program c/o Williamson County 710 Main Street, Ste. 101 Georgetown, Texas 78626

Attn: Foundation Application File No. 20090409-A

Fax: (512) 943-1662

FOUNDATION:

Williamson County Regional Habitat Conservation Plan Plan Administrator 350 Discovery Boulevard #207 Cedar Park, Texas 78613

Attn: Foundation Application File No. 20090409-A

Fax: (512) 260-4237

or to such other address as hereafter shall be designated in writing by the applicable party.

- 12. <u>Term Of Participation Agreement</u>. This Participation Agreement shall terminate upon the expiration or termination of the Permit.
- 13. <u>Headings</u>. The headings at the beginning of the various provisions of this Participation Agreement have been included only in order to make it easier to locate the subject covered by each provision and are not to be used in construing this Participation Agreement.
- 14. <u>Number And Gender Defined</u>. As used in this Participation Agreement, whenever the context so indicates, the masculine, feminine, or neuter gender and the singular or plural number shall each be deemed to include the others.

EXECUTED AS OF THE LAST DAY SET FORTH BELOW.

FOUNDATION:	PARTICIPANT;
By:	By:
Print Name:	Print Name:
Title:	Title:
Date:	Date:

Exhibit List:

Exhibit "A" – Description of Participant's Property, including GPS coordinates/points as may be available.

Exhibit "B" - Covered Species and Participant's Proposed Activities Relative to Participation Agreement

Exhibit "C" - Special Terms and Conditions in Connection with 10(a) Permit #TE - 181840

Exhibit "D" – Williamson County Regional Habitat Conservation Plan Memorandum of Participation Agreement Relative to U.S. Fish and Wildlife Service Permit

EXHIBIT "A" TO PARTICIPATION AGREEMENT

Description of Participant's Property

Interstate Highway (IH) 35 northbound frontage road improvements from 2,300 feet south fo State Highway (SH) 29 to 3.200 feet north of Westinghouse Road. All proposed improvements shall occur within property currently owned and in use by Texas Department of Transportation (TxDOT) as right-of-way for IH 35.

The attached map summarizes the subject project as per construction plans. Detailed maps covering the project area are in WCCF files, TxDOT files and files of Williamson County.

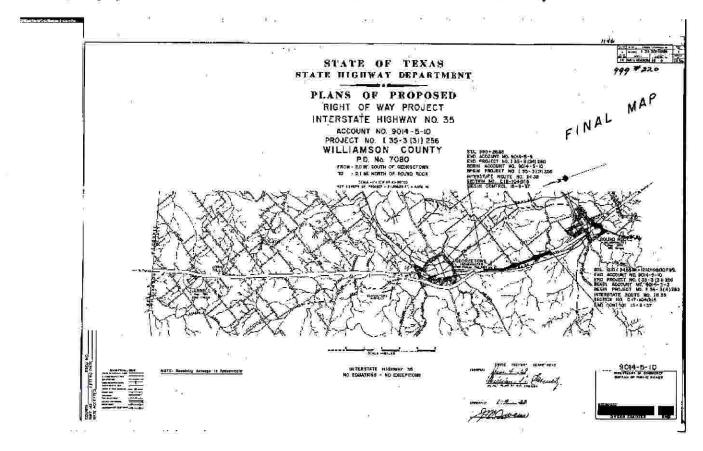
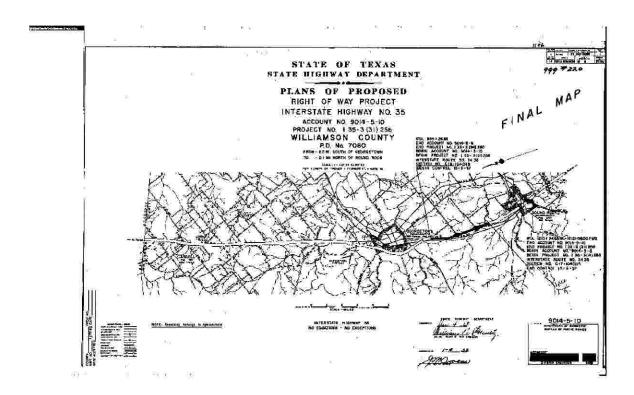


EXHIBIT "B" TO PARTICIPATION AGREEMENT

Covered Species and Participant's Proposed Activities Relative to Participation Agreement

Provide a summary describing the scope and nature of the proposed activities and uses of the Property. This summary should provide details regarding the proposed development plan, including square footage or acreage of limit of construction (limit of construction is any area within which any type of construction or land disturbance will occur, i.e., area for erosion controls, driveway, utilities). Attach conceptual plan that identifies the foregoing items.



Identify which of the following species are covered by this Participation Agreement.

Yes	No	Golden-cheeked warbler
Yes	No	Black-capped vireo
X Yes	No	Bone Cave harvestman
X Yes	No	Coffin Cave mold beetle

EXHIBIT "C" TO PARTICIPATION AGREEMENT

Special Terms and Conditions in Connection with 10(a) Permit #TE - 181840

- 1. On property covered by this Participation Agreement, vegetation clearing activities within 300 feet of habitat will be conducted outside the GCWA or BCVI breeding seasons, as applicable, unless breeding season surveys performed by an Endangered Species Act section 10(a)(1)(A)-permitted biologist indicate that no GCWA or BCVI are present within 300 feet of the desired activity, or as otherwise approved on a case-by-case basis by the Service. The breeding season for the GCWA is March 1 to August 1. The breeding season for the BCVI is March 15 to September 1.
- Construction activities within, or within 300 feet of, GCWA or BCVI habitat may be conducted year round as long as such construction follows permitted clearing, as referenced above, in a reasonably prompt and expeditious manner indicating continuous activity.
- Clearing and construction activities authorized under the Permit shall be consistent with the current practices recommended by the Texas Forest Service to prevent the spread of oak wilt.
- 4. Upon locating a dead, injured, or sick GCWA or BCVI or any other endangered or threatened species in connection with road construction and other activities conducted by Participant that are covered by the Permit, Participant is required to contact the U.S. Fish and Wildlife Service's Law Enforcement Office, in Georgetown, Texas, (512) 863-5972, for care and disposition instructions. Extreme care should be taken in handling sick or injured individuals to ensure effective and proper treatment. Care should also be taken in handling dead specimens to preserve biological materials in the best possible state for analysis of cause of death. In conjunction with the care of sick or injured endangered/threatened species, or preservation of biological materials from a dead specimen, Participant and their contractor/subcontractor have the responsibility to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.

WILLIAMSON COUNTY REGIONAL HABITAT CONSERVATION PLAN

MEMORANDUM OF PARTICIPATION AGREEMENT RELATIVE TO U.S. FISH AND WILDLIFE SERVICE PERMIT (Permit No. TE-181840-0)

STATE OF TEXAS §

§

KN

§ KNOW ALL PERSONS BY THESE PRESENTS

COUNTY OF WILLIAMSON

This WILLIAMSON COUNTY REGIONAL HABITAT CONSERVATION PLAN MEMORANDUM OF PARTICIPATION AGREEMENT RELATIVE TO U.S. FISH AND WILDLIFE SERVICE PERMIT (Permit No. TE-181840-0) (this "Memorandum") is made and executed by Williamson County Road Bond Program ("Participant"), effective as of the 28th day of April 2009.

WITNESSETH:

- 1. Permit. Williamson County, Texas, and the Foundation are the permittees under federal Endangered Species Act incidental take permit number TE-181840-0 dated October 21, 2008 (the "Permit"). The Permit authorizes "take" of certain listed species of wildlife occurring in Williamson County in exchange for implementation of the Williamson County Regional Habitat Conservation Plan (the "Plan"). The Foundation/Williamson County administers the Plan, which includes granting participation rights to applicants who enter into participation agreements. Through participation in the Plan, a participant receives authority for incidental "take" of listed species covered by the Permit, in accordance with the terms and conditions of the Permit and the participation agreement entered into by the participant.
- 2. Participation Agreement; Grant of Participation Rights and Obligations of Participant. Participant is the owner of a tract or tracts of land (the "Property") located in Williamson County, Texas, and described on Exhibit "A" to this Memorandum. Participant and the Foundation entered into the Williamson County Regional Habitat Conservation Plan Participation Agreement dated April 28, 2009 ("Participation Agreement," Foundation Application File No. 20090409-A). Under the Participation Agreement, the Foundation granted to the Participant the right to participate in the Plan with respect to the Participant's proposed activities on the Property. The Participation Agreement describes the Participant's proposed activities and the species to be covered under the Participation Agreement. The Participant also agreed under the Participation Agreement to assume and agree to be bound by all terms and conditions of the Permit, the Plan, and all applicable laws and regulations, including without limitation those terms and conditions specifically set forth as an exhibit to the Participation Agreement.

3. <u>Notice.</u> Participant desires to execute this Memorandum and to have it filed of record in the Official Public Records of Williamson County, Texas, providing public and record notice to all persons as to the existence of the Participation Agreement. Further information regarding the Participation Agreement may be obtained by contacting the following:

PARTICIPANT:	

Attn: Foundation Application File No. 20090409-A

Phone: (512) 943-1550

FOUNDATION:

Williamson County Regional Habitat Conservation Plan Plan Administrator 350 Discovery Boulevard #207 Cedar Park, Texas 78613

Attn: Foundation Application File No. 20090409-A

Phone: (512) 260-4226

[Remainder of page intentionally blank]

EXECUTED as of the effec	tive date first wri	tten above.	
PARTICIPANT:			
By:			
Print Name:			
Title:			
	ACKNOWLEI	DGEMENT	
THE STATE OF TEXAS	§		
COUNTY OF	& &		
This instrument was acknow	wledged before m	e on	, 20, by
This instrument was acknow, on behalf	of_		,a
, on ochan	OI Said		e.
		NOTARY PUB	LIC, State of Texas
		Print Name:	
My Commission Expires:			
<u></u>			
The billion			
Exhibits: "A" U.S. Fish and Wildlife Service "B" Description of Participant's I		-181840-0	
After Recording, Return To:			
Williamson County Regional Habita Plan Administrator 350 Discovery Boulevard #207 Cedar Park, Texas 78613	at Conservation F	Plan	

EXHIBIT A TO MEMORANDUM OF PARTICIPATION AGREEMENT

U.S. Fish and Wildlife Service Permit No. TE-181840-0

(Four pages following)



DEPARTMENT OF THE INTERIOR U.S. FISH AND WILDLIFE SERVICE

FEDERAL FISH AND WILDLIFE PERMIT

PERMITTEE

The County of Williamson

301 SE Inner Loop

Georgetown, Texas 78626

Phone: 512/943-1550

e-mail: dgattis@wilco.org

Williamson County Conservation Foundation

350 Discovery Boulevard Cedar Park, Texas 78613

Email: lbirkman@wilco.org

Phone: 512/733-5380

9. TYPE OF PERMIT:

Endangered Species - Incidental Take

8. NAME AND TITLE OF PRINCIPAL OFFICER: (if #1 is a business) Mr. Daniel A. Gattis, County Judge (County) or successor. Lisa Birkman, President, Williamson County Conservation Foundation, Williamson County Commissioner (Foundation) or successor.

10. LOCATION WHERE AUTHORIZED ACTIVITY MAY BE CONDUCTED: Williamson County, Texas.

11. CONDITIONS AND AUTHORIZATIONS:

- A. GENERAL CONDITIONS SET OUT IN SUBPART D OF 50 CFR 13, AND SPECIFIC CONDITIONS CONTAINED IN FEDERAL REGULATIONS CITED IN BLOCK #2, ABOVE, ARE HEREBY MADE A PART OF THIS PERMIT. ALL ACTIVITIES AUTHORIZED HEREIN MUST BE CARRIED OUT IN ACCORDANCE WITH AND FOR THE PURPOSES DESCRIBED IN THE APPLICATION SUBMITTED. CONTINUED VALIDITY, OR RENEWAL, OF THIS PERMIT IS SUBJECT TO COMPLETE AND TIMELY COMPLIANCE WITH ALL APPLICABLE CONDITIONS, INCLUDING THE FILING OF ALL REQUIRED INFORMATION AND REPORTS.
- B. THE VALIDITY OF THIS PERMIT IS ALSO CONDITIONED UPON STRICT OBSERVANCE OF ALL APPLICABLE FOREIGN, STATE, LOCAL OR OTHER FEDERAL LAW. THIS PERMIT DOES NOT WAIVE THE OBLIGATION TO ABIDE BY OTHER APPLICABLE FOREIGN, STATE, LOCAL OR FEDERAL LAW IN CARRYING OUT AUTHORIZED ACTIVITIES.
- C. VALID FOR USE BY PERMITTEES NAMED ABOVE.
- D. ACCEPTANCE OF THIS PERMIT SERVES AS EVIDENCE THAT THE PERMITTEE UNDERSTANDS AND AGREES TO ABIDE BY THE "GENERAL CONDITIONS FOR NATIVE ENDANGERED AND THREATENED WILDLIFE SPECIES PERMITS" (copy enclosed).

12. REPORTING REQUIREMENTS

Annual report due each January 1 throughout the life of the permit.

ISSUED BY Mills

Deputy Regional Director

3-201 (1/97)

2. AUTHORITY-STATUTES 16 USC 1539(a)(1)(B)

REGULATIONS (Attached) 50 CFR §§ 13 & 17

3. NUMBER

TE-181840-0

4. RENEWABLE 5. MAY COPY YES X [X] YES [] NO [] NO

6. EFFECTIVE 10/16/2008

7.EXPIRES 10/16/2038

- E. Permittee(s) are authorized to "Take" the following species: Bone Cave harvestman, Coffin Cave mold beetle, golden-cheeked warbler (GCWA), and black-capped vireo (BCVI) in Williamson County, Texas incidental to activities including, but not limited to, road construction, maintenance, and improvement projects; utility construction and maintenance; school development and construction; public or private construction and development; and land clearing.
- F. For GCWA, the loss of up to 6,000 acres of potential GCWA habitat is authorized over the life of the Permit. These impacts will be mitigated by a combination of purchasing mitigation credits from Hickory Pass Conservation Bank and/or other nearby conservation banks or by creating GCWA preserves.
- G. For BCVI, the loss of up to 4,267 acres of potential BCVI habitat is authorized over the life of the Permit. These impacts are mitigated primarily through habitat restoration, habitat management, enhancement of existing protected BCVI habitat, or an alternate, Service-approved mitigation program.
- H. On parcels covered by Participation Agreements, vegetation clearing activities within, or within 300 feet of, habitat will be conducted outside the GCWA or BCVI breeding seasons, as applicable, unless breeding season surveys performed by an Endangered Species Act section 10(a)(1)(A)-permitted biologist indicate that no GCWA or BCVI are present within, or within 300 feet of, the desired activity, or as otherwise approved on a case-by-case basis by the Service. The breeding season for the GCWA is March 1 to August 1. The breeding season for the BCVI is March 15 to September 1.
- I. Construction activities within, or within 300 feet of, GCWA or BCVI habitat may be conducted year round as long as such construction follows permitted clearing, as referenced above, in a reasonably prompt and expeditious manner indicating continuous activity.
- J. For Bone Cave harvestman and Coffin Cave mold beetle, up to 210 caves occupied by one or both species are authorized to be impacted. These impacts will be mitigated by acquiring and managing 9 to 15 karst fauna areas (KFAs), a minimum of three KFAs in each of the karst fauna regions occupied by the covered species.
- K. Clearing and construction activities authorized under this Permit shall be consistent with the current practices recommended by the Texas Forest Service to prevent the spread of oak wilt.
- L. The Service agrees that Williamson County or the Foundation may enter into "Participation Agreements" covering land within the Permit area. Participation

Agreements will stipulate that the Participant will be bound by and comply with those terms and conditions of this Permit applicable to the Participant's land and the Participant shall benefit from the authorization granted in this Permit. So long as this Permit remains in effect and a Participant is in compliance with the Participation Agreement, that Participant shall be deemed, with respect to that Participant's property covered by the Participation Agreement, to have the full benefits and authorities of this Permit with respect to that Participant's property. The Service agrees that a breach by a Participant of its obligations under a Participation Agreement will not be considered a violation by the Permittee, or any other Participant, of this Permit. In the event a Participant has materially breached its Participation Agreement then the Service, Williamson County, or the Foundation may terminate that Participation Agreement.

- M. Upon locating a dead, injured, or sick GCWA or BCVI or any other endangered or threatened species in connection with road construction and other activities conducted by Williamson County that are covered by this Permit, Permittees and/or Participant, as applicable, shall contact the U.S. Fish and Wildlife Service's Law Enforcement Office, in Georgetown, Texas, (512) 863-5972, for care and disposition instructions. Extreme care should be taken in handling sick or injured individuals to ensure effective and proper treatment. Care should also be taken in handling dead specimens to preserve biological materials in the best possible state for analysis of cause of death. In conjunction with the care of sick or injured endangered/threatened species, or preservation of biological materials from a dead specimen, Williamson County, the Foundation, and their contractor/subcontractor have the responsibility to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.
- N. Conditions of this Permit shall be binding on, and for the benefit of Williamson County and the Foundation.
- O. If during the tenure of this Permit authorized impacts are exceeded such that there may be an increase in the anticipated take of any covered species, Williamson County or the Foundation shall contact the Service and obtain authorization and/or amendment of the Permit before entering into participation agreements or commencing any other activities which might result in unauthorized impacts.
- P. Williamson County or the Foundation shall submit on January 1 of each year the Permit is in effect an Annual Report describing participation agreements entered into and conservation and management actions undertaken. The report will summarize the results of the biological monitoring and adaptive management process and findings. The Annual Report must include the locations of surveys, a description of any deviations from required survey protocols, personnel used, and documentation of all survey results as required in the protocols for the particular endangered species. In addition, the annual

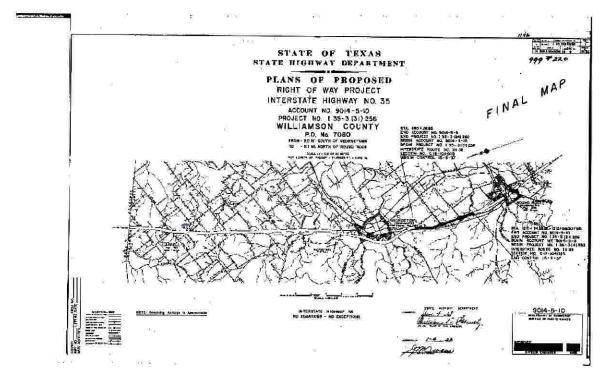
report will review existing management and highlight areas where change in management approach may be needed and where prioritized research needs are reviewed. A copy of the annual report shall be submitted to the U.S. Fish and Wildlife Service Field Office 10711 Burnet, Suite 200, Austin, Texas 78758; and to the U.S. Fish and Wildlife Service, P.O. Box 1306, Room 4102, Albuquerque, New Mexico 87103.

- Q. The No Surprises Rule, found at 50 C.F.R. 17.22(b)(8) and 17.32(b)(8), is applicable to this Permit. Pursuant to the No Surprises Rule, the Service has determined that the RHCP adequately addresses the GCWA, BCVI, Bone Cave Harvestman, and Coffin Cave mold beetle.
- R. Acceptance of the Permit serves as evidence that Williamson County and the Foundation understand and agree to abide by the terms of the Permit and all applicable sections of Title 50 CFR Parts 13 and 17 pertinent to issued permits.

----END OF PERMIT # TE-181840-0----

EXHIBIT B TO MEMORANDUM OF PARTICIPATION AGREEMENT

Legal Description of Participant's Property



Detailed construction plans for this project are in the WCCF files and are hled by TxDOT and the Williamson County Road Bond Program files.

The project area may be further described as follows: Interstate Highway (IH) 35 northbound frontage road improvements from 2,300 feet south of State Highway (SH) 29 to 3.200 feet north of Westinghouse Road. All proposed improvements will occur within property currently owned and in use by TxDOT as right-of-way for IH 35.

Williamson County Conservation Foundation

INVOICE

350 Discovery Blvd. #207 Cedar Park, Texas 78613 Phone (512) 260-4226 Fax (512) 260-4237

INVOICE #20090409-A DATE: APRIL 23, 2009

TO:

Williamson County Road Bond PRogram C/O Williamson County 710 Main, Ste. 101 Georgetown, TX 78626 (512) 943-1550 FOR:

IH 35 Northbound Access Road - Mitigation Fee

DESCRIPTION	AMOUNT
Mitigation Fees under the County's Regional Habitat Conservation Plan covering Interstate Highway (IH) 35 northbound frontage road Improvements from 2,300 feet south of State Highway (SH) 29 to 3.200 feet north of Westinghouse Road. All proposed improvements will occur within property currently owned and in use by TxDOT as a of-way for IH 35.	\$ 252,556.00 ir
Funds to be transferred to Williamson Co Conservation Foundation Funds to be transferred to Williamson Co Conservation Foundation	punty
	TOTAL \$ 252,556.00





WILLIAMSON COUNTY REGIONAL HABITAT CONSERVATION PLAN

PARTICIPATION AGREEMENT

This WILLIAMSON COUNTY REGIONAL HABITAT CONSERVATION PLAN PARTICIPATION AGREEMENT (this "Participation Agreement") dated April 28, 2009 is entered into by Round Rock Independent School District (the "Participant"), and the WILLIAMSON COUNTY CONSERVATION FOUNDATION, a Texas non-profit corporation (the "Foundation").

BACKGROUND

Williamson County, Texas, and the Foundation are the permittees under federal Endangered Species Act incidental take permit number TE-181840-0 dated October 21, 2008 (the "Permit"). The Permit authorizes "take" of certain listed species of wildlife occurring in Williamson County in exchange for implementation of the Williamson County Regional Habitat Conservation Plan (the "Plan"). The Foundation/Williamson County administers the Plan, which includes granting participation rights to applicants who enter into participation agreements. Through participation in the Plan, a participant receives authority for incidental "take" of listed species covered by the Permit, in accordance with the terms and conditions of the Permit and this Participation Agreement. Incidental take means take that results from, but is not the purpose of, carrying out an otherwise lawful activity. Participant is the owner of a tract or tracts of land (the "Property") located in Williamson County, Texas, and described on Exhibit "A" to this Participation Agreement.

AGREEMENT

- 1. Grant Of Participation Rights And Obligations Of Participant. The Foundation hereby grants to the Participant the right to participate in the Plan with respect to the Participant's proposed activities on the Property. Exhibit "B" to this Participation Agreement describes the Participant's proposed activities and the species to be covered under this Participation Agreement. The Participant represents and warrants that the activities proposed to be covered under this Participation Agreement will be carried out in full compliance with all applicable laws and regulations. This Participation Agreement covers only those activities described on Exhibit "B". The Participant shall consult with the Foundation before deviating in any material respect from the described activities. This Participation Agreement is entered into subject to all terms and conditions of the Permit, the Plan, and applicable law and regulations, and the Participant assumes and agrees to be bound by all of such terms and conditions, including without limitation those described on Exhibit "C" to this Participation Agreement.
- 2. <u>Participation Fee.</u> The Participant has paid to the Foundation the total sum of \$681.00 (Six hundred eighty-one and no hundredths Dollars) as the Participant's fee to participate in the Plan with respect to the Participant's proposed activities on the Property.

- 3. <u>Right To Inspect</u>. The Foundation, the County, and the U.S. Fish and Wildlife Service shall have the right to inspect the Property in order to ensure compliance with the terms of this Participation Agreement.
- 4. <u>Breach By Participant</u>. The Foundation shall provide Participant written notice specifying any breach of the terms of this Participation Agreement, and Participant shall have seven (7) days thereafter, or such other length of time the Foundation agrees in writing, to cure said breach. The Foundation, at its sole discretion and for good cause, including without limitation Participant's failure to cure any breach within the applicable timeframe, may terminate this Participation Agreement. Notification of breach and termination of participation rights shall be made by the Foundation to the Participant in writing at the address provided in Section 11.
- 5. Participant's Sole Recourse. In the event that this Participation Agreement is (i) ineffective or deficient with respect to the Property or Participant's proposed activities for any reason, or (ii) terminated in accordance with the terms and provisions of this Participation Agreement, Participant's sole recourse shall be to recover from the Foundation an amount not to exceed the total sum referenced in Section 2 of this Participation Agreement, upon surrender and termination of this Participation Agreement by Participant in writing to the Foundation; provided, Participant shall not be entitled to recover administrative fees from the Foundation.
- 6. <u>Covenants Run With The Land; Recordation</u>. Participant agrees that the covenants provided herein are intended to be binding upon any heirs, successors, and assigns in interest to the Property. Upon any transfer of any ownership interests to all or part of the Property, this Participation Agreement shall not terminate as to the Property, but rather shall continue in full force and effect and shall be fully binding upon any heirs, successors, and assigns in interest to the Property, or any portion thereof. Upon execution of this Participation Agreement by the Foundation and Participant, a Memorandum of Participation Agreement in form substantially the same as <u>Exhibit "D"</u> attached hereto and incorporated herein for all purposes, shall be signed, acknowledged, and recorded by the Participant in the Official Public Records of Williamson County, Texas. The Participant shall promptly provide a copy of the recorded Memorandum of Participation Agreement to the Foundation.
- 7. <u>Venue And Choice Of Law</u>. The obligations and undertakings of each of the parties to this Participation Agreement shall be performable in Williamson County, Texas, and this Participation Agreement shall be governed by and construed in accordance with the laws of the United States and the State of Texas.
- 8. Entirety Of Agreement And Modification. This instrument constitutes the entire agreement between the parties relating to the rights herein granted and the obligations herein assumed. Any prior agreements, promises, negotiations, or representations not expressly set forth in this Participation Agreement are of no force of effect. Any oral representations or modifications concerning this Participation Agreement shall be of no force or effect, excepting a subsequent modification in writing signed by the party to be charged and expressly approved by an authorized representative of such party.
- 9. <u>Non-Assignment</u>. Participant shall not sell, transfer, or assign all or any part of this Participation Agreement to a party other than a successive owner of all or a portion of the Property without prior written consent of the Foundation.

- 10. <u>Successors And Assigns</u>. This Participation Agreement shall be binding upon and inure to the benefit of the successors and assigns of the respective parties hereto, as and where authorized pursuant to this Participation Agreement.
- 11. <u>Notice</u>. All notices under this Participation Agreement shall be in writing and shall be deemed to have been properly given, delivered and received (a) as of the date of delivery if personally delivered, or (b) as of the date of deposit in the mail system if sent by United States certified mail, return receipt requested, postage prepaid. For purposes of notices, the addresses of the parties are as follows

PARTICIPANT:

Williamson County Road Bond Program c/o Williamson County 710 Main, Ste. 101 Georgetown, Texas 78626

Attn: Foundation Application File No. 20090416

Fax: (512) 943-1662

FOUNDATION:

Williamson County Regional Habitat Conservation Plan Plan Administrator 350 Discovery Boulevard #207 Cedar Park, Texas 78613

Attn: Foundation Application File No. 20090416

Fax: (512) 260-4237

or to such other address as hereafter shall be designated in writing by the applicable party.

- 12. <u>Term Of Participation Agreement</u>. This Participation Agreement shall terminate upon the expiration or termination of the Permit.
- 13. <u>Headings</u>. The headings at the beginning of the various provisions of this Participation Agreement have been included only in order to make it easier to locate the subject covered by each provision and are not to be used in construing this Participation Agreement.
- 14. <u>Number And Gender Defined</u>. As used in this Participation Agreement, whenever the context so indicates, the masculine, feminine, or neuter gender and the singular or plural number shall each be deemed to include the others.

EXECUTED AS OF THE LAST DAY SET FORTH BELOW.

FOUNDATION:	PARTICIPANT:
By:	By:
Print Name:	Print Name:
Title:	Title:
Date:	Date:

Exhibit List:

Exhibit "A" - Description of Participant's Property, including GPS coordinates/points

Exhibit "B" - Covered Species and Participant's Proposed Activities Relative to Participation Agreement

Exhibit "C" - Special Terms and Conditions in Connection with 10(a) Permit #TE - 181840

Exhibit "D" – Williamson County Regional Habitat Conservation Plan Memorandum of Participation Agreement Relative to U.S. Fish and Wildlife Service Permit

EXHIBIT "A" TO PARTICIPATION AGREEMENT

Legal Description of Participant's Property, including GPS coordinates/points

(See 9 pages following, hereinafter described as Exhibit A-1, attached hereto.)

Manuel & Marivel Reyes 497-07-02 293 Square Foot Tract

EXHIBIT 'A' METES AND BOUNDS DESCRIPTION

OF A 293 SQUARE FOOT TRACT OF LAND OUT OF THE ANASTASIA CARR SURVEY, ABSTRACT NO. 122, SITUATED IN WILLIAMSON COUNTY, TEXAS, AND BEING A PORTION OF THAT CERTAIN 3.00 ACRE TRACT OF LAND CONVEYED TO MANUEL & MARIVEL REYES BY DEED OF RECORD IN DOCUMENT 2003075308 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at an iron rod with Haynie cap set for the southeast corner of said 3.00 acre tract and hereof, being the northeast corner of that certain 5.997 acre tract of land conveyed to Lucksinger, Inc. by Deed of Record in Document 2000050176 of said Public Records, and being a point in the westerly right-of-way (R.O.W.) of County Road 175 as prescribed for use;

THENCE, S69° 25' 18"W, leaving said County Road 175 westerly R.O.W and along the common line of said 3.00 acre tract and said 5.997 acre tract, a distance of 0.95 feet to an iron rod found for the southwest corner hereof:

THENCE, leaving the common line of said 3.00 acre tract and said 5.997 acre tract, over and across said 3.00 acre tract the following two (2) courses and distances;

1) N28° 24' 56"W, a distance of 103.03 feet, to an Iron rod with Haynie cap set for the point

of curvature of a curve to the left;

2) Along said curve to the left having a radius of 655.00 feet, a central angle of 07°06'40", an arc length of 81.29 feet and a chord which bears N31°58'16"W, a distance of 81.24 feet to an iron rod with Haynie cap set in the northerly line of said 3.00 acre tract, being the southerly line of that certain 3.00 acre tract of land conveyed to Luis & Maria Reyes by Deed of Record in Document 2003075307 of said Public Records, for the northwest corner hereof.

THENCE, N69° 25' 18"E, a distance of 5.88 feet to an iron rod with Haynie cap set for the common easterly corner of said 3.00 acre Manuel & Marivel Reyes tract and said 3.00 acre Luis & Maria Reyes Tract, for the northeast corner hereof,

THENCE, S28° 27' 39"E, along the easterly line of said 3.00 acre Manuel & Marivel Reyes tract, a distance of 183.44 feet to the POINT OF BEGINNING, and containing 293 square feet of land, more or less, within these metes and bounds. A sketch has been prepared to accompany this description.

BEARING BASIS OF THE SURVEY DESCRIBED HEREIN IS PROVIDED BY LOWER COLORADO RIVER AUTHORITY (LCRA) GPS SUB-HARN DATA AND IS REFERENCED TO THE NAD 83 CONTROL DATUM, TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, AND NAVD 88 VERTICAL CONTROL DATUM. ALL COORDINATES AND DISTANCES SHOWN/LISTED ARE RELATIVE TO TEXAS CENTRAL ZONE GRID.

I, TIMOTHY E. HAYNIE, A REGISTERED PROFESSIONAL LAND SURVEYOR, DO HEREBY CERTIFY THAT THE PROPERTY DESCRIBED HEREIN WAS DETERMINED BY A SURVEY MADE ON THE GROUND AND THAT ALL CORNERS ARE MARKED AS DESCRIBED.

DATE: 3-17-07

HAYNIE CONSULTING, IN (TIMOTHY ENGINEERS - SURVEYOR 1010 PROVIDENT LANE

ROUND ROCK, TEXAS 7866

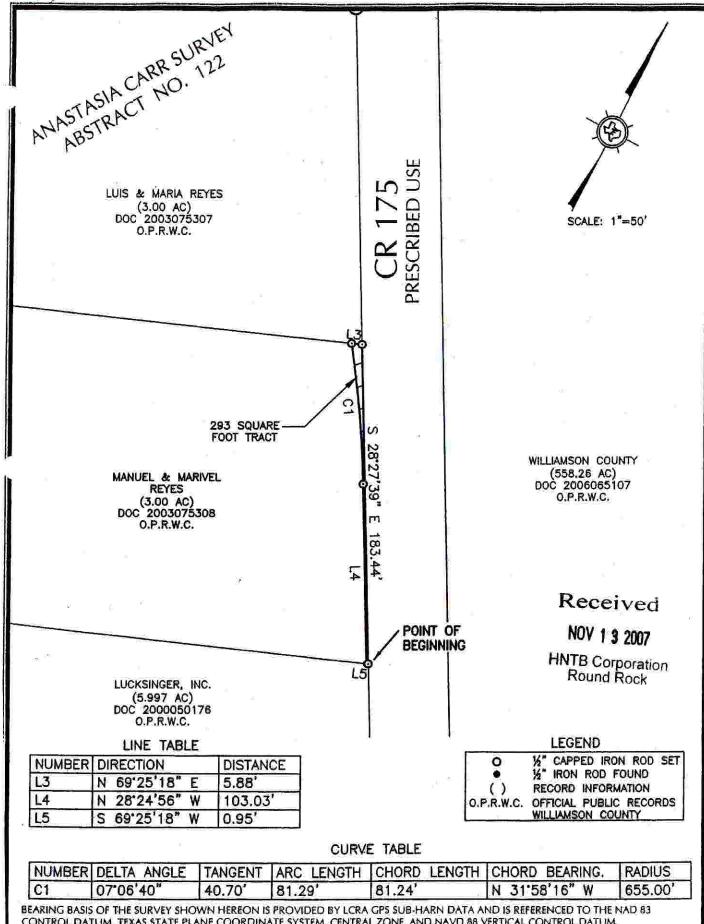
THAOTHY E. HAYNIE R.P.L.S. NO. 2380

STATE OF TEXAS

Received

NOV 1 3 2007

HNTB Corporation Round Rock



CONTROL DATUM, TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, AND NAVD 88 VERTICAL CONTROL DATUM.

SKETCH TO ACCOMPANY FIELD NOTES FN07008 OF A 293 SQUARE FOOT TRACT OF LAND OUT OF THE ANASTASIA CARR SURVEY, ABSTRACT NO. 122, SITUATED IN WILLIAMSON COUNTY, TEXAS

EXHIBIT 'A'

METES AND BOUNDS DESCRIPTION

OF A 4,684 SQUARE FOOT TRACT OF LAND OUT OF THE ANASTASIA CARR SURVEY, ABSTRACT NO. 122, SITUATED IN WILLIAMSON COUNTY, TEXAS, AND BEING A PORTION OF THAT CERTAIN 3.00 ACRE TRACT OF LAND CONVEYED TO LUIS & MARIA REYES BY DEED OF RECORD IN DOCUMENT 2003075307 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at an iron rod with Haynie cap set for the southeast corner of said 3.00 acre tract and hereof, being the northeast corner of that certain 3.00 acre tract of land conveyed to Manuel & Marivel Reyes by Deed of Record in Document 2003075308 of said Public Records, and being a point in the westerly right-of-way (R.O.W.) of County Road 175 as prescribed for use;

THENCE, S69° 25' 18"W, along the common line of said 3.00 acre Manuel & Marivel Reyes tract and said 3.00 acre Luis & Maria Reyes tract, a distance of 5.88 feet to an iron rod with Haynie cap set for the southwest corner hereof,

THENCE, leaving the common line of said 3.00 acre Manuel & Marivel Reyes tract and said 3.00 acre Luis & Maria Reyes tract, over and across said 3.00 acre Luis & Maria Reyes tract the following two (2) courses and distances;

 Along a curve to the left having a radius of 655.00 feet, a central angle of 05°14'15", an arc length of 59.88 feet and a chord which bears N38°08'43"W, a distance of 59.85 feet

to an iron rod with Haynie cap set for the point of tangency;

2) N40° 45′ 51″W, a distance of 139.96 feet, to an iron rod with Haynie cap set in the common line of said 3.00 acre Luis & Maria Reyes tract and that certain 5.325 acre tract conveyed to Evelyn T. Lambert by Deed of Record in Document 2003089600 of said Public Records, for the northwest corner hereof;

THENCE, N69° 25' 18"E, a distance of 46.16 feet to an iron rod with Haynie cap set for the common easterly corner of said 3.00 acre Luis & Maria Reyes tract and said 5.325 acre tract, being a point in the westerly R.O.W of said County Road 175, for the northeast corner hereof,

THENCE, \$28° 27' 39"E, along the easterly line of said 3.00 acre Luis & Maria Reyes tract, a distance of 190.23 feet to the **POINT OF BEGINNING**, and containing 4,684 square feet of land, more or less, within these metes and bounds. A sketch has been prepared to accompany this description.

BEARING BASIS OF THE SURVEY DESCRIBED HEREIN IS PROVIDED BY LOWER COLORADO RIVER AUTHORITY (LCRA) GPS SUB-HARN DATA AND IS REFERENCED TO THE NAD 83 CONTROL DATUM, TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, AND NAVD 88 VERTICAL CONTROL DATUM. ALL COORDINATES AND DISTANCES SHOWN/LISTED ARE RELATIVE TO TEXAS CENTRAL ZONE GRID.

I, TIMOTHY E. HAYNIE, A REGISTERED PROFESSIONAL LAND SURVEYOR, DO HEREBY CERTIFY THAT THE PROPERTY DESCRIBED HEREIN WAS DETERMINED BY A SURVEY MADE ON THE GROUND AND THAT ALL CORNERS ARE MARKED AS DESCRIBED.

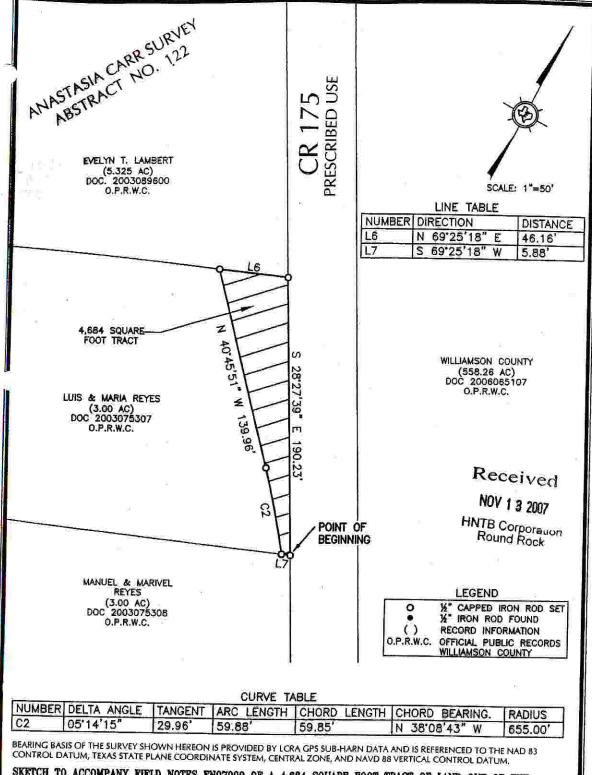
DATE: 3 - 17-07

HAYNIE CONSULTING, INC. ENGINEERS – SURVEYORS 1010 PROVIDENT LANE ROUND ROCK, TEXAS 78664 TIMOTHY E. HAYNIE R.P.L.S. NO. 2380 STATE OF TEXAS

Received

NOV 1 3 2007

HNTB Corporation



SKETCH TO ACCOMPANY FIELD NOTES FN07009 OF A 4,684 SQUARE FOOT TRACT OF LAND OUT OF THE ANASTASIA CARR SURVEY, ABSTRACT NO. 122, SITUATED IN WILLIAMSON COUNTY, TEXAS

SHEET 2 OF 2



Civil Engineers and Land Surveyors 1010 Provident Lane Round Rock, Texas 78664-3276 Ph. 512-837-2446 Fax 512-837-9463

DRAWN BY : CAA DATE: 3/15/2007 JOB NO.: 497-07-02 SP07009



I, TIMOTHY E. HAYNIE, A REGISTERED PROFESSIONAL LAND SURVEYOR, DO HEREBY CERTIFY THAT THE PROPERTY SHOWN HEREON WAS DETERMINED BY A SURVEY MADE ON THE GROUND UNDER MY DIRECTION AND SUPERVISION, AND THAT ALL CORNERS ARE MA

THMOTHY E. HAYNIE R

3-17-07 R.P.L.S. NO. 2380

EXHIBIT 'A'

METES AND BOUNDS DESCRIPTION

OF A 0.6495 ACRE TRACT OF LAND OUT OF THE ANASTASIA CARR SURVEY, ABSTRACT NO. 122, SITUATED IN WILLIAMSON COUNTY, TEXAS, AND BEING A PORTION OF THAT CERTAIN 5.325 ACRE TRACT OF LAND CONVEYED TO EVELYN T. LAMBERT BY DEED OF RECORD IN DOCUMENT 2003089600 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at an iron rod with Haynie cap set for the southeast corner of said 5.325 acre tract and hereof, being the northeast corner of that certain 3.00 acre tract of land conveyed to Luis & Maria Reyes by Deed of Record in Document 2003075307 of said Public Records, and being a point in the westerly right-of-way (R.O.W.) of County Road 175 as prescribed for use;

THENCE, S69° 25' 18"W, along the common line of said 3.00 acre tract and said 5.325 acre tract, a distance of 46.16 feet to an iron rod with Haynie cap set for the southwest corner hereof,

THENCE, leaving the common line of said 3.00 acre tract and said 5.325 acre tract, over and across said 5.325 acre tract the following three (3) courses and distances;

 N40° 45' 51"W, a distance of 144.50 feet, to an iron rod with Haynie cap set for the point of curvature of a curve to the right;

 Along said curve to the right having a radius of 795.00 feet, a central angle of 10°48'43", an arc length of 150.02 feet and a chord which bears N35°21'30"W, a distance of 149.80 feet to an iron rod with Haynie cap set for the point of tangency;

3) N29° 57' 08"W, a distance of 74.53 feet, to an iron rod with Haynie cap set in the common line of said 5.325 acre tract and that certain 68.177 acre tract conveyed to Peggy Simpson by Deed of Record in Volume 2542, Page 834 of the Deed Records of Williamson County, for the northwest corner hereof;

THENCE, N69° 41′ 01″E, a distance of 97.42 feet to an iron rod found for the common easterly corner of said 5.325 acre tract and said 68.177 acre tract, being a point in the westerly R.O.W of said County Road 175, for the northeast corner hereof,

THENCE, \$28° 27' 39"E, along the easterly line of said 5.325 acre tract, a distance of 356.93 feet to the **POINT OF BEGINNING**, and containing 0.6495 acres of land, more or less, within these metes and bounds. A sketch has been prepared to accompany this description.

BEARING BASIS OF THE SURVEY DESCRIBED HEREIN IS PROVIDED BY LOWER COLORADO RIVER AUTHORITY (LCRA) GPS SUB-HARN DATA AND IS REFERENCED TO THE NAD 83 CONTROL DATUM, TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, AND NAVD 88 VERTICAL CONTROL DATUM. ALL COORDINATES AND DISTANCES SHOWN/LISTED ARE RELATIVE TO TEXAS CENTRAL ZONE GRID.

I, TIMOTHY E. HAYNIE, A REGISTERED PROFESSIONAL LAND SURVEYOR, DO HEREBY CERTIFY THAT THE PROPERTY DESCRIBED HEREIN WAS DETERMINED BY A SURVEY MADE ON THE GROUND AND THAT ALLCORNERS ARE MARKED AS DESCRIBED.

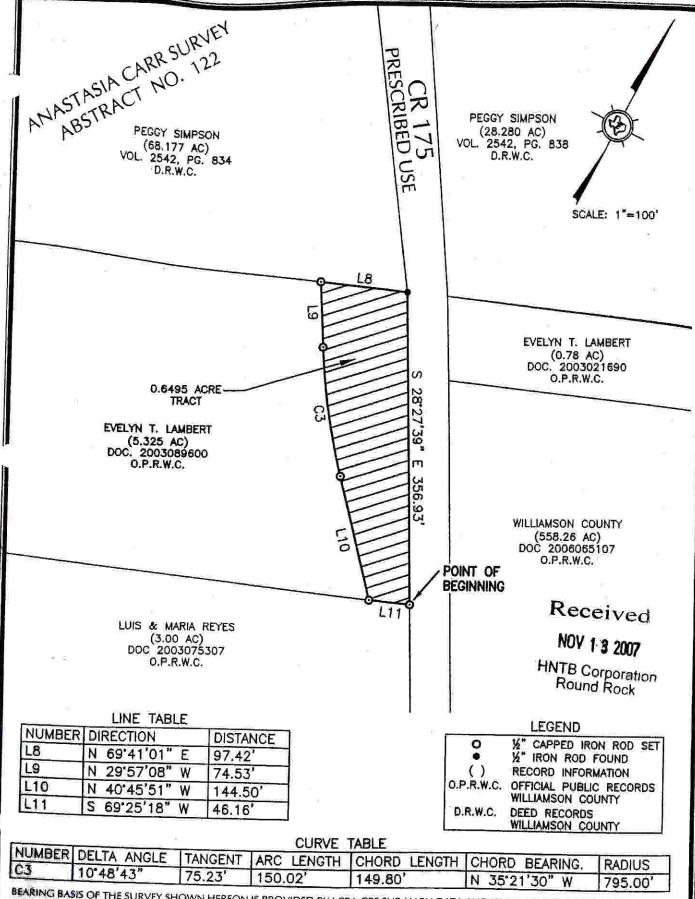
DATE: 3-17-07

HAYNIE CONSULTING, INC. ENGINEERS – SURVEYORS 1010 PROVIDENT LANE ROUND ROCK, TEXAS 78664 TIMOTHY E. HAYNIE R.P.L.S. NO. 2380 STATE OF TEXAS

Received

NOV 1 3 2007

HNTB Corporation Round Rock



BEARING BASIS OF THE SURVEY SHOWN HEREON IS PROVIDED BY LCRA GPS SUB-HARN DATA AND IS REFERENCED TO THE NAD 83 CONTROL DATUM, TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, AND NAVD 88 VERTICAL CONTROL DATUM.

SKETCH TO ACCOMPANY FIELD NOTES FN07010 OF A 0.6495 ACRE TRACT OF LAND OUT OF THE ANASTASIA CARR SURVEY, ABSTRACT NO. 122, SITUATED IN WILLIAMSON COUNTY, TEXAS

EXHIBIT 'A'

METES AND BOUNDS DESCRIPTION

OF A 3.2918 ACRE TRACT OF LAND OUT OF THE ANASTASIA CARR SURVEY, ABSTRACT NO. 122, SITUATED IN WILLIAMSON COUNTY, TEXAS, AND BEING A PORTION OF THAT CERTAIN 68.177 ACRE TRACT OF LAND CONVEYED TO PEGGY SIMPSON BY DEED OF RECORD IN VOLUME 2542, PAGE 834 OF THE DEED RECORDS OF WILLIAMSON COUNTY AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at an iron rod found for the southeast corner of said 68.177 acre tract and hereof, being the northeast corner of that certain 5.325 acre tract of land conveyed to Evelyn T. Lambert by Deed of Record in Document 2003089600 of the Official Public Records of Williamson County, and being a point in the westerly right-of-way (R.O.W.) of County Road 175 as prescribed for use;

THENCE, S69°41'01"W, along the common line of said 68.177 acre tract and said 5.325 acre tract, a distance of 97.42 feet to an iron rod with Haynie cap set for the southwest corner hereof;

THENCE, leaving the common line of said 68.177 acre tract and said 5.325 acre tract, over and across said 68.177 acre tract, the following seven (7) courses and distances;

1) N29°57'08"W, a distance of 431.42 feet, to an iron rod with Haynie cap set for the point of curvature of a curve to the left;

2) Along said curve to the left having a radius of 5930.00 feet, a central angle of 07°16'19", an arc length of 752.64 feet and a chord which bears N33°35'18"W, a distance of 752.14 feet to an iron rod with Haynie cap set for the point of tangency;

3) N37°13'27"W, a distance of 393.58 feet, to an iron rod with Haynie cap set for an angle

4) N41°23'02"W, a distance of 187.23 feet to an iron rod with Haynie cap set for an angle point hereof:

5) N41°51'58"W, a distance of 87.22 feet, to an iron rod with Haynie cap set for an angle point hereof:

6) N38°44'44"W, a distance of 139.99 feet, to an iron rod with Haynie cap set for an angle

7) N39°25'27"W, a distance of 294.17 feet, to an iron rod with Haynie cap set in the northerly line of said 68.177 acre tract, being in the southerly R.O.W. of County Road 179 as prescribed for use, for the northwest corner hereof;

THENCE, N70°09'12"E, a distance of 104.30 feet to an iron rod with Haynie cap set for the northeast corner of said 68.177 acre tract and hereof, and being a point in the westerly R.O.W. of said County Road 175;

Received

NOV 1 3 2007

HNTB Corporation Round Rock

THENCE, leaving the southerly R.O.W. of said County Road 179, along the easterly line of said 68.177 acre tract, being the westerly R.O.W. of said County Road 175, the following two (2) courses and distances:

 S36°04'09"E, a distance of 1496.72 feet, to an iron rod with Haynie cap set for the northeast corner of a 30 foot in width access easement conveyed to Peggy Sue Ferrales in Volume 2343, Page 654 of said Deed Records;

 S34°05'04"E, a distance of 781.66 feet to the POINT OF BEGINNING, and containing 3.2918 acres of land, more or less, within these metes and bounds. A sketch has been

prepared to accompany this description.

BEARING BASIS OF THE SURVEY DESCRIBED HEREIN IS PROVIDED BY LOWER COLORADO RIVER AUTHORITY (LCRA) GPS SUB-HARN DATA AND IS REFERENCED TO THE NAD 83 CONTROL DATUM, TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, AND NAVD 88 VERTICAL CONTROL DATUM. ALL COORDINATES AND DISTANCES SHOWN/LISTED ARE RELATIVE TO TEXAS CENTRAL ZONE GRID.

I, TIMOTHY E. HAYNIE, A REGISTERED PROFESSIONAL LAND SURVEYOR, DO HEREBY CERTIFY THAT THE PROPERTY DESCRIBED HEREIN WAS DETERMINED BY A SURVEY MADE ON THE GROUND AND THAT ALL CORNERS ARE MARKED AS DESCRIBED.

DATE: 11.12-07

HAYNIE CONSULTING, INC. ENGINEERS - SURVEYORS 1010 PROVIDENT LANE ROUND ROCK, TEXAS 78664

TIMOTHY E. HAYNIE R.P.L.S. NO. 2380

R.P.L.S. NO. 2380 STATE OF TEXAS

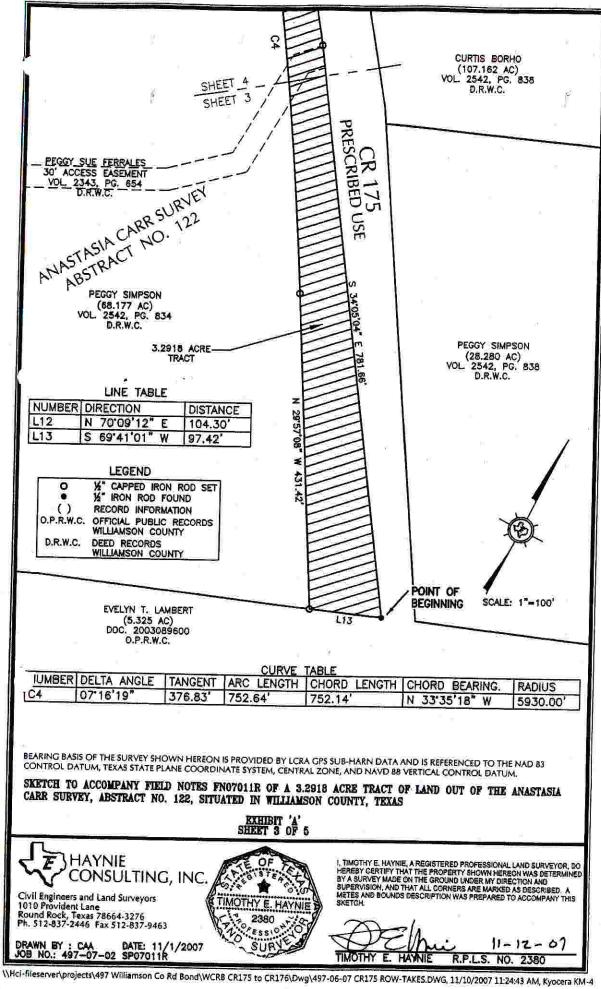


EXHIBIT "B" TO PARTICIPATION AGREEMENT

Covered Species and Participant's Proposed Activities Relative to Participation Agreement

Provide a summary describing the scope and nature of the proposed activities and uses of the Property. This summary should provide details regarding the proposed development plan, including square footage or acreage of limit of construction (limit of construction is any area within which any type of construction or land disturbance will occur, i.e., area for erosion controls, driveway, utilities). Attach conceptual plan that identifies the foregoing items.

Dedicated Right-of-Way for County Road 175 (CR 175), beginning approximately 1.36 miles north of its intersection with Whitestone Boulevard (otherwise known as RR 1431) which is approximately 400 feet north of the CR 175 intersection with Perry Mayfield Boulevard; thence north encompassing the right-of-way of CR 175 to its intersection with County Road 176 and County Road 177, a distance of approximately 1.3 miles.

Identify which	of the following	g species are covered by this Participation Agreement.
Yes	No	Golden-cheeked warbler
Yes	No	Black-capped vireo
<u>X</u> Yes	No	Bone Cave harvestman
X Yes	No	Coffin Cave mold beetle

EXHIBIT "C" TO PARTICIPATION AGREEMENT

Special Terms and Conditions in Connection with 10(a) Permit #TE - 181840

- 1. On property covered by this Participation Agreement, vegetation clearing activities within 300 feet of habitat will be conducted outside the GCWA or BCVI breeding seasons, as applicable, unless breeding season surveys performed by an Endangered Species Act section 10(a)(1)(A)-permitted biologist indicate that no GCWA or BCVI are present within 300 feet of the desired activity, or as otherwise approved on a case-by-case basis by the Service. The breeding season for the GCWA is March 1 to August 1. The breeding season for the BCVI is March 15 to September 1.
- Construction activities within, or within 300 feet of, GCWA or BCVI habitat may
 be conducted year round as long as such construction follows permitted clearing,
 as referenced above, in a reasonably prompt and expeditious manner indicating
 continuous activity.
- Clearing and construction activities authorized under the Permit shall be consistent with the current practices recommended by the Texas Forest Service to prevent the spread of oak wilt.
- 4. Upon locating a dead, injured, or sick GCWA or BCVI or any other endangered or threatened species in connection with road construction and other activities conducted by Participant that are covered by the Permit, Participant is required to contact the U.S. Fish and Wildlife Service's Law Enforcement Office, in Georgetown, Texas, (512) 863-5972, for care and disposition instructions. Extreme care should be taken in handling sick or injured individuals to ensure effective and proper treatment. Care should also be taken in handling dead specimens to preserve biological materials in the best possible state for analysis of cause of death. In conjunction with the care of sick or injured endangered/threatened species, or preservation of biological materials from a dead specimen, Participant and their contractor/subcontractor have the responsibility to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.

WILLIAMSON COUNTY REGIONAL HABITAT CONSERVATION PLAN

MEMORANDUM OF PARTICIPATION AGREEMENT RELATIVE TO U.S. FISH AND WILDLIFE SERVICE PERMIT (Permit No. TE-181840-0)

This WILLIAMSON COUNTY REGIONAL HABITAT CONSERVATION PLAN MEMORANDUM OF PARTICIPATION AGREEMENT RELATIVE TO U.S. FISH AND WILDLIFE SERVICE PERMIT (Permit No. TE-181840-0) (this "Memorandum") is made and executed by Williamson County Road Bond Program ("Participant"), effective as of the 28th day of April 2009.

WITNESSETH:

- 1. Permit. Williamson County, Texas, and the Foundation are the permittees under federal Endangered Species Act incidental take permit number TE-181840-0 dated October 21, 2008 (the "Permit"). The Permit authorizes "take" of certain listed species of wildlife occurring in Williamson County in exchange for implementation of the Williamson County Regional Habitat Conservation Plan (the "Plan"). The Foundation/Williamson County administers the Plan, which includes granting participation rights to applicants who enter into participation agreements. Through participation in the Plan, a participant receives authority for incidental "take" of listed species covered by the Permit, in accordance with the terms and conditions of the Permit and the participation agreement entered into by the participant.
- 2. Participation Agreement; Grant of Participation Rights and Obligations of Participant. Participant is the owner of a tract or tracts of land (the "Property") located in Williamson County, Texas, and described on Exhibit "A" to this Memorandum. Participant and the Foundation entered into the Williamson County Regional Habitat Conservation Plan Participation Agreement dated January 20, 2009 ("Participation Agreement," Foundation Application File No. 20090416). Under the Participation Agreement, the Foundation granted to the Participant the right to participate in the Plan with respect to the Participant's proposed activities on the Property. The Participation Agreement describes the Participant's proposed activities and the species to be covered under the Participation Agreement. The Participant also agreed under the Participation Agreement to assume and agree to be bound by all terms and conditions of the Permit, the Plan, and all applicable laws and regulations, including without limitation those terms and conditions specifically set forth as an exhibit to the Participation Agreement.

3. <u>Notice</u>. Participant desires to execute this Memorandum and to have it filed of record in the Official Public Records of Williamson County, Texas, providing public and record notice to all persons as to the existence of the Participation Agreement. Further information regarding the Participation Agreement may be obtained by contacting the following:

ARTICIPA		

Attn: Foundation Application File No. 20090416

Phone: (512) 943-1550

FOUNDATION:

Williamson County Regional Habitat Conservation Plan Plan Administrator 350 Discovery Boulevard #207 Cedar Park, Texas 78613 Attn: Foundation Application File No. 200904016

Phone: (512) 260-4226

[Remainder of page intentionally blank]

EXECUTED as of the e	ffective date first v	written above.	
PARTICIPANT:			
By:			
Print Name:			
Title:			
	ACKNOWL	EDGEMENT	
THE STATE OF TEXAS	& & &		
COUNTY OF	\$ §		
This instrument was ack	nowledged before	me on	, 20, by
on beh	16 6 11	of	, a
			BLIC, State of Texas
My Commission Expires:			
	,		
Exhibits: 'A" U.S. Fish and Wildlife Se 'B" Description of Participant	ervice Permit No. T 2's Property	ГЕ-181840-0	
After Recording, Return To:			
Williamson County Regional Ha Plan Administrator 350 Discovery Boulevard #207 Cedar Park, Texas 78613	ibitat Conservation	n Plan	



DEPARTMENT OF THE INTERIOR U.S. FISH AND WILDLIFE SERVICE

FEDERAL FISH AND WILDLIFE PERMIT

PERMITTEE

The County of Williamson

301 SE Inner Loop

Georgetown, Texas 78626

Phone: 512/943-1550 e-mail: dgattis@wilco.org

Williamson County Conservation Foundation

350 Discovery Boulevard Cedar Park, Texas 78613 Phone: 512/733-5380

Email: lbirkman@wilco.org

2. AUTHORITY-STATUTES 16 USC 1539(a)(1)(B)

REGULATIONS (Attached) 50 CFR §§ 13 & 17

3. NUMBER

TE-181840-0

4. RENEWABLE 5. MAY COPY YES [X] X YES []NO NO

6. EFFECTIVE 10/16/2008 7.EXPIRES 10/16/2038

8. NAME AND TITLE OF PRINCIPAL OFFICER: (if #1 is a business) Mr. Daniel A. Gattis, County Judge (County) or successor. Lisa Birkman, President, Williamson County Conservation Foundation, Williamson County Commissioner (Foundation) or successor.

9. TYPE OF PERMIT:

Endangered Species - Incidental Take

10. LOCATION WHERE AUTHORIZED ACTIVITY MAY BE CONDUCTED: Williamson County, Texas.

11. CONDITIONS AND AUTHORIZATIONS:

- A. GENERAL CONDITIONS SET OUT IN SUBPART D OF 50 CFR 13, AND SPECIFIC CONDITIONS CONTAINED IN FEDERAL REGULATIONS CITED IN BLOCK #2, ABOVE, ARE HEREBY MADE A PART OF THIS PERMIT. ALL ACTIVITIES AUTHORIZED HEREIN MUST BE CARRIED OUT IN ACCORDANCE WITH AND FOR THE PURPOSES DESCRIBED IN THE APPLICATION SUBMITTED. CONTINUED VALIDITY. OR RENEWAL, OF THIS PERMIT IS SUBJECT TO COMPLETE AND TIMELY COMPLIANCE WITH ALL APPLICABLE CONDITIONS, INCLUDING THE FILING OF ALL REQUIRED INFORMATION AND REPORTS.
- B. THE VALIDITY OF THIS PERMIT IS ALSO CONDITIONED UPON STRICT OBSERVANCE OF ALL APPLICABLE FOREIGN, STATE, LOCAL OR OTHER FEDERAL LAW. THIS PERMIT DOES NOT WAIVE THE OBLIGATION TO ABIDE BY OTHER APPLICABLE FOREIGN, STATE, LOCAL OR FEDERAL LAW IN CARRYING OUT AUTHORIZED ACTIVITIES.
- C. VALID FOR USE BY PERMITTEES NAMED ABOVE.
- D. ACCEPTANCE OF THIS PERMIT SERVES AS EVIDENCE THAT THE PERMITTEE UNDERSTANDS AND AGREES TO ABIDE BY THE "GENERAL CONDITIONS FOR NATIVE ENDANGERED AND THREATENED WILDLIFE SPECIES PERMITS" (COPY enclosed).

12. REPORTING REQUIREMENTS

Annual report due each January 1 throughout the life of the permit.

ISSUED BY Ally

Deputy Regional Director

- E. Permittee(s) are authorized to "Take" the following species: Bone Cave harvestman, Coffin Cave mold beetle, golden-cheeked warbler (GCWA), and black-capped vireo (BCVI) in Williamson County, Texas incidental to activities including, but not limited to, road construction, maintenance, and improvement projects; utility construction and maintenance; school development and construction; public or private construction and development; and land clearing.
- F. For GCWA, the loss of up to 6,000 acres of potential GCWA habitat is authorized over the life of the Permit. These impacts will be mitigated by a combination of purchasing mitigation credits from Hickory Pass Conservation Bank and/or other nearby conservation banks or by creating GCWA preserves.
- G. For BCVI, the loss of up to 4,267 acres of potential BCVI habitat is authorized over the life of the Permit. These impacts are mitigated primarily through habitat restoration, habitat management, enhancement of existing protected BCVI habitat, or an alternate, Service-approved mitigation program.
- H. On parcels covered by Participation Agreements, vegetation clearing activities within, or within 300 feet of, habitat will be conducted outside the GCWA or BCVI breeding seasons, as applicable, unless breeding season surveys performed by an Endangered Species Act section 10(a)(1)(A)-permitted biologist indicate that no GCWA or BCVI are present within, or within 300 feet of, the desired activity, or as otherwise approved on a case-by-case basis by the Service. The breeding season for the GCWA is March 1 to August 1. The breeding season for the BCVI is March 15 to September 1.
- I. Construction activities within, or within 300 feet of, GCWA or BCVI habitat may be conducted year round as long as such construction follows permitted clearing, as referenced above, in a reasonably prompt and expeditious manner indicating continuous activity.
- J. For Bone Cave harvestman and Coffin Cave mold beetle, up to 210 caves occupied by one or both species are authorized to be impacted. These impacts will be mitigated by acquiring and managing 9 to 15 karst fauna areas (KFAs), a minimum of three KFAs in each of the karst fauna regions occupied by the covered species.
- K. Clearing and construction activities authorized under this Permit shall be consistent with the current practices recommended by the Texas Forest Service to prevent the spread of oak wilt.
- L. The Service agrees that Williamson County or the Foundation may enter into "Participation Agreements" covering land within the Permit area. Participation

Agreements will stipulate that the Participant will be bound by and comply with those terms and conditions of this Permit applicable to the Participant's land and the Participant shall benefit from the authorization granted in this Permit. So long as this Permit remains in effect and a Participant is in compliance with the Participation Agreement, that Participant shall be deemed, with respect to that Participant's property covered by the Participation Agreement, to have the full benefits and authorities of this Permit with respect to that Participant's property. The Service agrees that a breach by a Participant of its obligations under a Participation Agreement will not be considered a violation by the Permittee, or any other Participant, of this Permit. In the event a Participant has materially breached its Participation Agreement then the Service, Williamson County, or the Foundation may terminate that Participation Agreement.

- M. Upon locating a dead, injured, or sick GCWA or BCVI or any other endangered or threatened species in connection with road construction and other activities conducted by Williamson County that are covered by this Permit, Permittees and/or Participant, as applicable, shall contact the U.S. Fish and Wildlife Service's Law Enforcement Office, in Georgetown, Texas, (512) 863-5972, for care and disposition instructions. Extreme care should be taken in handling sick or injured individuals to ensure effective and proper treatment. Care should also be taken in handling dead specimens to preserve biological materials in the best possible state for analysis of cause of death. In conjunction with the care of sick or injured endangered/threatened species, or preservation of biological materials from a dead specimen, Williamson County, the Foundation, and their contractor/subcontractor have the responsibility to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.
- N. Conditions of this Permit shall be binding on, and for the benefit of Williamson County and the Foundation.
- O. If during the tenure of this Permit authorized impacts are exceeded such that there may be an increase in the anticipated take of any covered species, Williamson County or the Foundation shall contact the Service and obtain authorization and/or amendment of the Permit before entering into participation agreements or commencing any other activities which might result in unauthorized impacts.
- P. Williamson County or the Foundation shall submit on January 1 of each year the Permit is in effect an Annual Report describing participation agreements entered into and conservation and management actions undertaken. The report will summarize the results of the biological monitoring and adaptive management process and findings. The Annual Report must include the locations of surveys, a description of any deviations from required survey protocols, personnel used, and documentation of all survey results as required in the protocols for the particular endangered species. In addition, the annual

Williamson County Regional Habitat Conservation Plan 4 of 4 Williamson County TE-181840-0

report will review existing management and highlight areas where change in management approach may be needed and where prioritized research needs are reviewed. A copy of the annual report shall be submitted to the U.S. Fish and Wildlife Service Field Office 10711 Burnet, Suite 200, Austin, Texas 78758; and to the U.S. Fish and Wildlife Service, P.O. Box 1306, Room 4102, Albuquerque, New Mexico 87103.

- Q. The No Surprises Rule, found at 50 C.F.R. 17.22(b)(8) and 17.32(b)(8), is applicable to this Permit. Pursuant to the No Surprises Rule, the Service has determined that the RHCP adequately addresses the GCWA, BCVI, Bone Cave Harvestman, and Coffin Cave mold beetle.
- R. Acceptance of the Permit serves as evidence that Williamson County and the Foundation understand and agree to abide by the terms of the Permit and all applicable sections of Title 50 CFR Parts 13 and 17 pertinent to issued permits.

----END OF PERMIT # TE-181840-0----

EXHIBIT B TO MEMORANDUM OF PARTICIPATION AGREEMENT

Legal Description of Participant's Property

Dedicated Right-of-Way for County Road 175 (CR 175), beginning approximately 1.36 miles north of its intersection with Whitestone Boulevard (otherwise known as RR 1431) which is approximately 400 feet north of the CR 175 intersection with Perry Mayfield Boulevard; thence north encompassing the right-of-way of CR 175 to its intersection with County Road 176 and County Road 177, a distance of approximately 1.3 miles.

(See 9 pages following, hereinafter described as Exhibit B-1, attached hereto.)

EXHIBIT 'A' METES AND BOUNDS DESCRIPTION

OF A 293 SQUARE FOOT TRACT OF LAND OUT OF THE ANASTASIA CARR SURVEY, ABSTRACT NO. 122, SITUATED IN WILLIAMSON COUNTY, TEXAS, AND BEING A PORTION OF THAT CERTAIN 3.00 ACRE TRACT OF LAND CONVEYED TO MANUEL & MARIVEL REYES BY DEED OF RECORD IN DOCUMENT 2003075308 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at an iron rod with Haynie cap set for the southeast corner of said 3.00 acre tract and hereof, being the northeast corner of that certain 5.997 acre tract of land conveyed to Lucksinger, Inc. by Deed of Record in Document 2000050176 of said Public Records, and being a point in the westerly right-of-way (R.O.W.) of County Road 175 as prescribed for use;

THENCE, S69° 25' 18"W, leaving said County Road 175 westerly R.O.W and along the common line of said 3.00 acre tract and said 5.997 acre tract, a distance of 0.95 feet to an iron rod found for the southwest corner hereof:

THENCE, leaving the common line of said 3.00 acre tract and said 5.997 acre tract, over and across said 3.00 acre tract the following two (2) courses and distances;

1) N28° 24' 56"W, a distance of 103.03 feet, to an iron rod with Haynie cap set for the point of curvature of a curve to the left;

Along said curve to the left having a radius of 655.00 feet, a central angle of 07°06'40". an arc length of 81.29 feet and a chord which bears N31°58'16"W, a distance of 81.24 feet to an iron rod with Haynie cap set in the northerly line of said 3.00 acre tract, being the southerly line of that certain 3.00 acre tract of land conveyed to Luis & Maria Reyes by Deed of Record in Document 2003075307 of said Public Records, for the northwest corner hereof.

THENCE, N69° 25' 18"E, a distance of 5.88 feet to an iron rod with Haynie cap set for the common easterly corner of said 3.00 acre Manuel & Marivel Reyes tract and said 3.00 acre Luis & Maria Reyes Tract, for the northeast corner hereof,

THENCE, S28° 27' 39"E, along the easterly line of said 3.00 acre Manuel & Marivel Reyes tract, a distance of 183.44 feet to the POINT OF BEGINNING, and containing 293 square feet of land, more or less, within these metes and bounds. A sketch has been prepared to accompany this description.

BEARING BASIS OF THE SURVEY DESCRIBED HEREIN IS PROVIDED BY LOWER COLORADO RIVER AUTHORITY (LCRA) GPS SUB-HARN DATA AND IS REFERENCED TO THE NAD 83 CONTROL DATUM, TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, AND NAVD 88 VERTICAL CONTROL DATUM. ALL COORDINATES AND DISTANCES SHOWN/LISTED ARE RELATIVE TO TEXAS CENTRAL ZONE GRID.

I, TIMOTHY E. HAYNIE, A REGISTERED PROFESSIONAL LAND SURVEYOR, DO HEREBY CERTIFY THAT THE PROPERTY DESCRIBED HEREIN WAS DETERMINED BY A SURVEY MADE ON THE GROUND AND THAT ALL CORNERS ARE MARKED AS DESCRIBED.

3-17-07

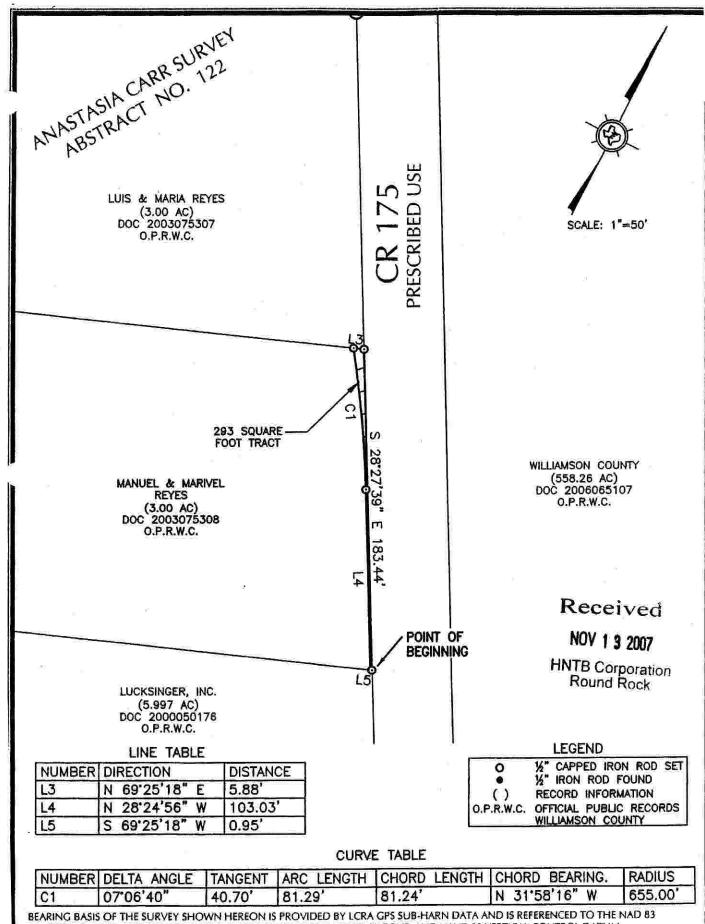
HAYNIE CONSULTING, IN ENGINEERS - SURVEYOR 1010 PROVIDENT LANE **ROUND ROCK, TEXAS 7866** THAOTHY E. HAYNIE R.P.L.S. NO. 2380

STATE OF TEXAS

Received

NOV 1 8 2007

HNTB Corporation Round Rock



CONTROL DATUM, TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, AND NAVD 88 VERTICAL CONTROL DATUM.

SKETCH TO ACCOMPANY FIELD NOTES FN07008 OF A 293 SQUARE FOOT TRACT OF LAND OUT OF THE ANASTASIA CARR SURVEY, ABSTRACT NO. 122, SITUATED IN WILLIAMSON COUNTY, TEXAS

EXHIBIT 'A'

METES AND BOUNDS DESCRIPTION

OF A 4,684 SQUARE FOOT TRACT OF LAND OUT OF THE ANASTASIA CARR SURVEY, ABSTRACT NO. 122, SITUATED IN WILLIAMSON COUNTY, TEXAS, AND BEING A PORTION OF THAT CERTAIN 3.00 ACRE TRACT OF LAND CONVEYED TO LUIS & MARIA REYES BY DEED OF RECORD IN DOCUMENT 2003075307 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at an iron rod with Haynie cap set for the southeast corner of said 3.00 acre tract and hereof, being the northeast corner of that certain 3.00 acre tract of land conveyed to Manuel & Marivel Reyes by Deed of Record in Document 2003075308 of said Public Records, and being a point in the westerly right-of-way (R.O.W.) of County Road 175 as prescribed for use;

THENCE, S69° 25' 18"W, along the common line of said 3.00 acre Manuel & Marivel Reyes tract and said 3.00 acre Luis & Maria Reyes tract, a distance of 5.88 feet to an iron rod with Haynie cap set for the southwest corner hereof,

THENCE, leaving the common line of said 3.00 acre Manuel & Marivel Reyes tract and said 3.00 acre Luis & Maria Reyes tract, over and across said 3.00 acre Luis & Maria Reyes tract the following two (2) courses and distances;

 Along a curve to the left having a radius of 655.00 feet, a central angle of 05°14'15", an arc length of 59.88 feet and a chord which bears N38°08'43"W, a distance of 59.85 feet

to an iron rod with Haynie cap set for the point of tangency;

2) N40° 45′ 51″W, a distance of 139.96 feet, to an iron rod with Haynie cap set in the common line of said 3.00 acre Luis & Maria Reyes tract and that certain 5.325 acre tract conveyed to Evelyn T. Lambert by Deed of Record in Document 2003089600 of said Public Records, for the northwest corner hereof;

THENCE, N69° 25′ 18″E, a distance of 46.16 feet to an iron rod with Haynie cap set for the common easterly corner of said 3.00 acre Luis & Maria Reyes tract and said 5.325 acre tract, being a point in the westerly R.O.W of said County Road 175, for the northeast corner hereof,

THENCE, S28° 27' 39"E, along the easterly line of said 3.00 acre Luis & Maria Reyes tract, a distance of 190.23 feet to the **POINT OF BEGINNING**, and containing 4,684 square feet of land, more or less, within these metes and bounds. A sketch has been prepared to accompany this description.

BEARING BASIS OF THE SURVEY DESCRIBED HEREIN IS PROVIDED BY LOWER COLORADO RIVER AUTHORITY (LCRA) GPS SUB-HARN DATA AND IS REFERENCED TO THE NAD 83 CONTROL DATUM, TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, AND NAVD 88 VERTICAL CONTROL DATUM. ALL COORDINATES AND DISTANCES SHOWN/LISTED ARE RELATIVE TO TEXAS CENTRAL ZONE GRID.

I, TIMOTHY E. HAYNIE, A REGISTERED PROFESSIONAL LAND SURVEYOR, DO HEREBY CERTIFY THAT THE PROPERTY DESCRIBED HEREIN WAS DETERMINED BY A SURVEY MADE ON THE GROUND AND THAT ALL CORNERS ARE MARKED AS DESCRIBED.

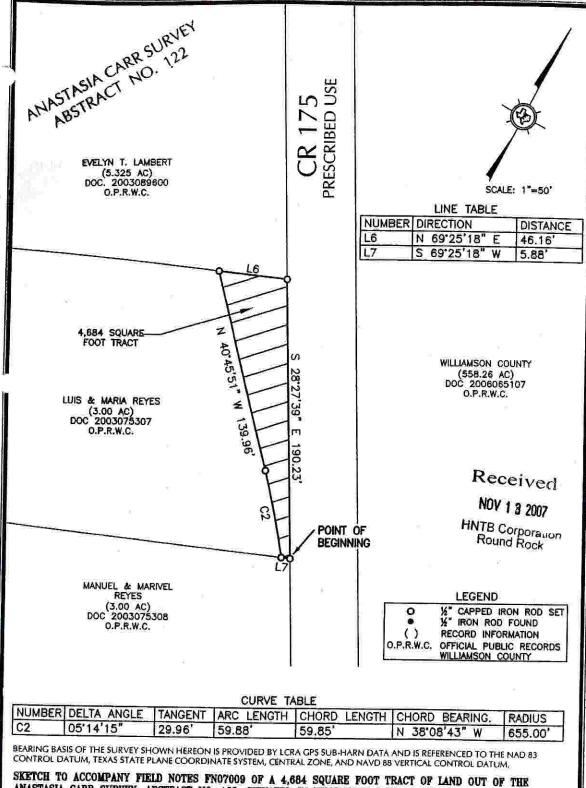
DATE: 3 - 17 - 07

HAYNIE CONSULTING, INC. ENGINEERS – SURVEYORS 1010 PROVIDENT LANE ROUND ROCK, TEXAS 78664 TIMOTHY E. HAYNIE

R.P.L.S. NO. 2380 STATE OF TEXAS Received

NOV 1 3 2007

HNTB Corporation



SKETCH TO ACCOMPANY FIELD NOTES FN07009 OF A 4,684 SQUARE FOOT TRACT OF LAND OUT OF THE ANASTASIA CARR SURVEY, ABSTRACT NO. 122, SITUATED IN WILLIAMSON COUNTY, TEXAS

EXHIBIT 'A' SHEET 2 OF 2



Civil Engineers and Land Surveyors 1010 Provident Lane Round Rock, Texas 78664-3276 Ph. 512-837-2446 Fax 512-837-9463

DRAWN BY : CAA DATE: 3/15/2007 JOB NO.: 497-07-02 SP07009



I, TIMOTHY E, HAYNIE, A REGISTERED PROFESSIONAL LAND SURVEYOR, DO HEREBY CERTIFY THAT THE PROPERTY SHOWN HEREON WAS DETERMINED BY A SURVEY MADE ON THE GROUND UNDORR MY DIRECTION AND SUPERVISION, AND THAT ALL CORNERS ARE MARKED AS DESCRIBED. A METES AND BOUNDS DESCRIPTION WAS PREPARED TO ACCOMPANY THIS

TIMOTHY E. HAYNIE

3-17-07

R.P.L.S. NO. 2380

EXHIBIT 'A'

METES AND BOUNDS DESCRIPTION

OF A 0.6495 ACRE TRACT OF LAND OUT OF THE ANASTASIA CARR SURVEY, ABSTRACT NO. 122, SITUATED IN WILLIAMSON COUNTY, TEXAS, AND BEING A PORTION OF THAT CERTAIN 5.325 ACRE TRACT OF LAND CONVEYED TO EVELYN T. LAMBERT BY DEED OF RECORD IN DOCUMENT 2003089600 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at an iron rod with Haynie cap set for the southeast corner of said 5.325 acre tract and hereof, being the northeast corner of that certain 3.00 acre tract of land conveyed to Luis & Maria Reyes by Deed of Record in Document 2003075307 of said Public Records, and being a point in the westerly right-of-way (R.O.W.) of County Road 175 as prescribed for use;

THENCE, S69° 25' 18"W, along the common line of said 3.00 acre tract and said 5.325 acre tract, a distance of 46.16 feet to an iron rod with Haynie cap set for the southwest corner hereof.

THENCE, leaving the common line of said 3.00 acre tract and said 5.325 acre tract, over and across said 5.325 acre tract the following three (3) courses and distances;

 N40° 45' 51"W, a distance of 144.50 feet, to an iron rod with Haynie cap set for the point of curvature of a curve to the right:

2) Along said curve to the right having a radius of 795.00 feet, a central angle of 10°48'43", an arc length of 150.02 feet and a chord which bears N35°21'30"W, a distance of 149.80 feet to an iron rod with Haynie cap set for the point of tangency;

3) N29° 57' 08"W, a distance of 74.53 feet, to an iron rod with Haynie cap set in the common line of said 5.325 acre tract and that certain 68.177 acre tract conveyed to Peggy Simpson by Deed of Record in Volume 2542, Page 834 of the Deed Records of Williamson County, for the northwest corner hereof;

THENCE, N69° 41' 01"E, a distance of 97.42 feet to an iron rod found for the common easterly corner of said 5.325 acre tract and said 68.177 acre tract, being a point in the westerly R.O.W of said County Road 175, for the northeast corner hereof,

THENCE, S28° 27' 39"E, along the easterly line of said 5.325 acre tract, a distance of 356.93 feet to the **POINT OF BEGINNING**, and containing 0.6495 acres of land, more or less, within these metes and bounds. A sketch has been prepared to accompany this description.

BEARING BASIS OF THE SURVEY DESCRIBED HEREIN IS PROVIDED BY LOWER COLORADO RIVER AUTHORITY (LCRA) GPS SUB-HARN DATA AND IS REFERENCED TO THE NAD 83 CONTROL DATUM, TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, AND NAVD 88 VERTICAL CONTROL DATUM. ALL COORDINATES AND DISTANCES SHOWN/LISTED ARE RELATIVE TO TEXAS CENTRAL ZONE GRID.

I, TIMOTHY E. HAYNIE, A REGISTERED PROFESSIONAL LAND SURVEYOR, DO HEREBY CERTIFY THAT THE PROPERTY DESCRIBED HEREIN WAS DETERMINED BY A SURVEY MADE ON THE GROUND AND THAT ALL CORNERS ARE MARKED AS DESCRIBED.

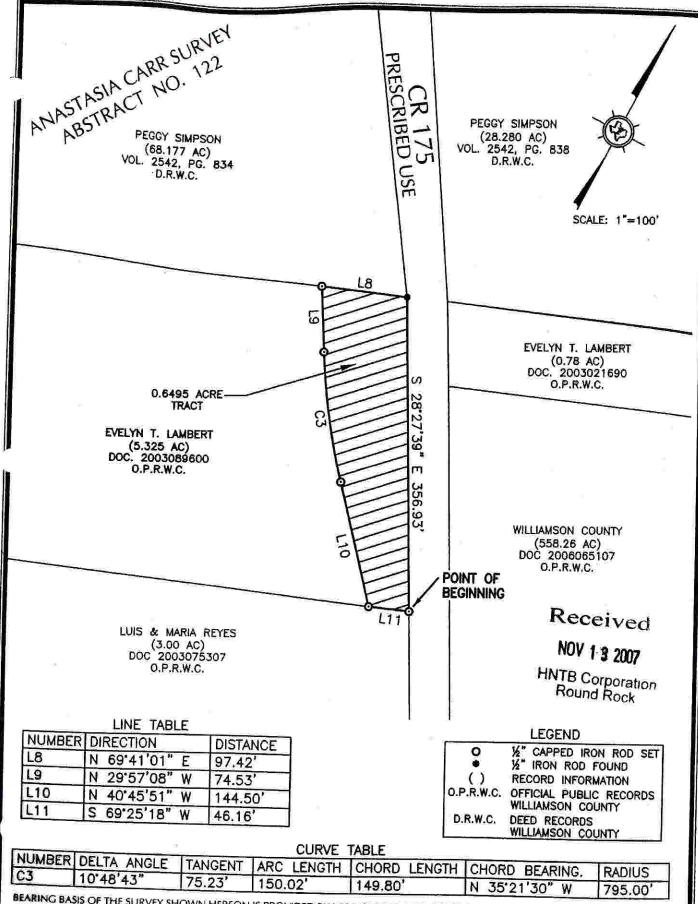
DATE: 3-17-07

HAYNIE CONSULTING, INC. ENGINEERS – SURVEYORS 1010 PROVIDENT LANE ROUND ROCK, TEXAS 78664 TIMOTHY E. HAYNIE R.P.L.S. NO. 2380 STATE OF TEXAS

Received

NOV 1 3 2007

HNTB Corporation Round Rock



BEARING BASIS OF THE SURVEY SHOWN HEREON IS PROVIDED BY LCRA GPS SUB-HARN DATA AND IS REFERENCED TO THE NAD 83 CONTROL DATUM, TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, AND NAVD 88 VERTICAL CONTROL DATUM.

SKETCH TO ACCOMPANY FIELD NOTES FN07010 OF A 0.6495 ACRE TRACT OF LAND OUT OF THE ANASTASIA CARR SURVEY, ABSTRACT NO. 122, SITUATED IN WILLIAMSON COUNTY, TEXAS

EXHIBIT 'A'

METES AND BOUNDS DESCRIPTION

OF A 3.2918 ACRE TRACT OF LAND OUT OF THE ANASTASIA CARR SURVEY, ABSTRACT NO. 122, SITUATED IN WILLIAMSON COUNTY, TEXAS, AND BEING A PORTION OF THAT CERTAIN 68.177 ACRE TRACT OF LAND CONVEYED TO PEGGY SIMPSON BY DEED OF RECORD IN VOLUME 2542, PAGE 834 OF THE DEED RECORDS OF WILLIAMSON COUNTY AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at an iron rod found for the southeast corner of said 68.177 acre tract and hereof, being the northeast corner of that certain 5.325 acre tract of land conveyed to Evelyn T. Lambert by Deed of Record in Document 2003089600 of the Official Public Records of Williamson County, and being a point in the westerly right-of-way (R.O.W.) of County Road 175 as prescribed for use;

THENCE, S69°41'01"W, along the common line of said 68.177 acre tract and said 5.325 acre tract, a distance of 97.42 feet to an iron rod with Haynie cap set for the southwest corner hereof;

THENCE, leaving the common line of said 68.177 acre tract and said 5.325 acre tract, over and across said 68.177 acre tract, the following seven (7) courses and distances;

- N29°57'08"W, a distance of 431.42 feet, to an iron rod with Haynie cap set for the point of curvature of a curve to the left;
- 2) Along said curve to the left having a radius of 5930.00 feet, a central angle of 07°16'19", an arc length of 752.64 feet and a chord which bears N33°35'18"W, a distance of 752.14 feet to an iron rod with Haynie cap set for the point of tangency:
- N37°13'27"W, a distance of 393.58 feet, to an iron rod with Haynie cap set for an angle point hereof;
- N41°23'02"W, a distance of 187.23 feet to an iron rod with Haynie cap set for an angle point hereof;
- 5) N41°51'58"W, a distance of 87.22 feet, to an iron rod with Haynie cap set for an angle
- N38°44'44"W, a distance of 139.99 feet, to an iron rod with Haynie cap set for an angle point hereof;
- 7) N39°25'27"W, a distance of 294.17 feet, to an iron rod with Haynie cap set in the northerly line of said 68.177 acre tract, being in the southerly R.O.W. of County Road 179 as prescribed for use, for the northwest corner hereof;

THENCE, N70°09'12"E, a distance of 104.30 feet to an iron rod with Haynie cap set for the northeast corner of said 68.177 acre tract and hereof, and being a point in the westerly R.O.W. of said County Road 175;

Received

NOV 1 3 2007

HNTB Corporation Round Rock THENCE, leaving the southerly R.O.W. of said County Road 179, along the easterly line of said 68.177 acre tract, being the westerly R.O.W. of said County Road 175, the following two (2) courses and distances;

 S36°04'09"E, a distance of 1496.72 feet, to an iron rod with Haynie cap set for the northeast corner of a 30 foot in width access easement conveyed to Peggy Sue Ferrales in Volume 2343, Page 654 of said Deed Records:

 S34°05'04"E, a distance of 781.66 feet to the POINT OF BEGINNING, and containing 3.2918 acres of land, more or less, within these metes and bounds. A sketch has been

prepared to accompany this description.

BEARING BASIS OF THE SURVEY DESCRIBED HEREIN IS PROVIDED BY LOWER COLORADO RIVER AUTHORITY (LCRA) GPS SUB-HARN DATA AND IS REFERENCED TO THE NAD 83 CONTROL DATUM, TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, AND NAVD 88 VERTICAL CONTROL DATUM. ALL COORDINATES AND DISTANCES SHOWN/LISTED ARE RELATIVE TO TEXAS CENTRAL ZONE GRID.

I, TIMOTHY E. HAYNIE, A REGISTERED PROFESSIONAL LAND SURVEYOR, DO HEREBY CERTIFY THAT THE PROPERTY DESCRIBED HEREIN WAS DETERMINED BY A SURVEY MADE ON THE GROUND AND THAT ALL CORNERS ARE MARKED AS DESCRIBED.

DATE 11.12- 07

HAYNIE CONSULTING, INC. ENGINEERS – SURVEYORS 1010 PROVIDENT LANE ROUND ROCK, TEXAS 78664 TIMOTHY E. HAYNIE

R.P.L.S. NO. 2380 STATE OF TEXAS

380 STATE OF TEXA

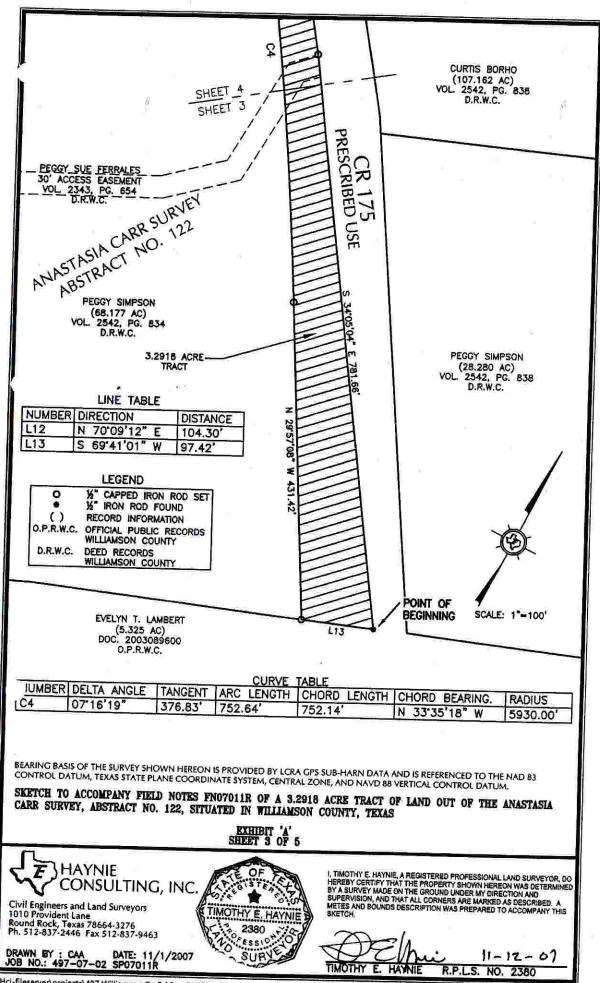


EXHIBIT A TO MEMORANDUM OF PARTICIPATION AGREEMENT

U.S. Fish and Wildlife Service Permit No. TE-181840-0

(Four pages following.)





WILLIAMSON COUNTY REGIONAL HABITAT CONSERVATION PLAN

PARTICIPATION AGREEMENT

This WILLIAMSON COUNTY REGIONAL HABITAT CONSERVATION PLAN PARTICIPATION AGREEMENT (this "Participation Agreement") dated April 28, 2009 is entered into by Williamson County Road Bond PRogram (the "Participant"), and the WILLIAMSON COUNTY CONSERVATION FOUNDATION, a Texas non-profit corporation (the "Foundation").

BACKGROUND

Williamson County, Texas, and the Foundation are the permittees under federal Endangered Species Act incidental take permit number TE-181840-0 dated October 21, 2008 (the "Permit"). The Permit authorizes "take" of certain listed species of wildlife occurring in Williamson County in exchange for implementation of the Williamson County Regional Habitat Conservation Plan (the "Plan"). The Foundation/Williamson County administers the Plan, which includes granting participation rights to applicants who enter into participation agreements. Through participation in the Plan, a participant receives authority for incidental "take" of listed species covered by the Permit, in accordance with the terms and conditions of the Permit and this Participation Agreement. Incidental take means take that results from, but is not the purpose of, carrying out an otherwise lawful activity. Participant is the owner of a tract or tracts of land (the "Property") located in Williamson County, Texas, and described on Exhibit "A" to this Participation Agreement.

AGREEMENT

- 1. Grant Of Participation Rights And Obligations Of Participant. The Foundation hereby grants to the Participant the right to participate in the Plan with respect to the Participant's proposed activities on the Property. Exhibit "B" to this Participation Agreement describes the Participant's proposed activities and the species to be covered under this Participation Agreement. The Participant represents and warrants that the activities proposed to be covered under this Participation Agreement will be carried out in full compliance with all applicable laws and regulations. This Participation Agreement covers only those activities described on Exhibit "B". The Participant shall consult with the Foundation before deviating in any material respect from the described activities. This Participation Agreement is entered into subject to all terms and conditions of the Permit, the Plan, and applicable law and regulations, and the Participant assumes and agrees to be bound by all of such terms and conditions, including without limitation those described on Exhibit "C" to this Participation Agreement.
- 2. <u>Participation Fee</u>. The Participant has paid to the Foundation the total sum of \$681.00 (Six hundred eighty-one and no hundredths Dollars) as the Participant's fee to participate in the Plan with respect to the Participant's proposed activities on the Property.

{004.00046512.6}

Williamson County Conservation Foundation

INVOICE

350 Discovery Blvd. #207 Cedar Park, Texas 78613 Phone (512) 260-4226 Fax (512) 260-4237

INVOICE #20090416 DATE: APRIL 23, 2009

TO:

Williamson County Road Bond PRogram C/O Williamson County 710 Main, Ste. 101 Georgetown, TX 78626 (512) 943-1550 FOR:

CR 175 Improvements - Mitigation Fee

DES	CRIPTION	AMOUNT
Road 175 (CR 175), beginning of its intersection with White known as RR 1431) which is the CR 175 intersection with north encompassing the right	edicated Right-of-Way for County g approximately 1.36 miles north stone Boulevard (otherwise approximately 400 feet north of Perry Mayfield Boulevard; thence t-of-way of CR 175 to its d 176 and County Road 177, a	\$681.00
WILLIAMSON COUNTY CONSERVATION FOUNDATION	Funds to be transferred to Williamson County Conservation Foundation	
	TOTAL	\$681.00

Bartlett VFD Agreement

Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Peggy Vasquez, County Judge

By:

Department: County Judge

Agenda Category:

Regular Agenda Items

Information

Agenda Item

Discuss and take appropriate action regarding Agreement between Bartlett Volunteer Fire Department and Williamson County.

Background

Fiscal Impact

From/To Acct No. Description Amount Sort Seq

Attachments

Link: Bartlett VFD Agreement

Form Routing/Status

Form Started By: Peggy Vasquez Started On: 04/17/2009 04:45

PM

Final Approval Date: 04/20/2009

THE STATE OF TEXAS

*

* KNOW ALL MEN BY THESE PRESENTS

COUNTY OF WILLIAMSON

THAT Williamson County, Texas, a political subdivision of the State of Texas (hereinafter referred to as the "County"); and the Bartlett Volunteer Fire Department, an incorporated volunteer fire department as described under Texas Local Government Code, §352.001(c) (hereinafter referred to as the "Department"), have entered into the following:

AGREEMENT

- 1. Pursuant to its power to provide financial assistance for fire protection in and for Williamson County, and its duty to protect the public health and welfare, the County agrees to pay to the Department the sum of \$18,000.00 in two separate (2) payments. The first payment being made when the County has received a signed agreement accompanied by a detailed accounting of the prior year's expenditures of the County allotment. The second payment will be disbursed on or before September 30, 2009. All funds are to be used to defray the cost of equipment and labor required to provide the services described in Paragraph 2.
- 2. The Department agrees to provide fire protection services in any area in the County when requested by any other fire company or emergency service district, or when dispatched by the County, and shall expend all of the amount set forth in Paragraph 1 for only these purposes during the calendar year 2009.
- It is understood by the Department that the County cannot commit funds for any future fiscal
 year, and that this Agreement does not, and cannot, commit the County to renew or repeat
 this Agreement unless approved by future action of the Williamson County Commissioners'
 Court.
- 4. It is understood and agreed that the County has no power to control or supervise the manner and means chosen by the Department to carry out the services specified in Paragraph 2, and that the County shall have no liability for any intentional acts of the Department which are not related to the provision of said services.

Bartlett V.F.D.

By: Williamson County, Texas

By: Dan A. Gattis,

Williamson County Judge

Title: FIRE CHIEF

Executed on this the 13 day of APRIC, 2009.



BARTLETT VOLUNTEER FIRE DEPARTMENT

P.O. Box 676 • Bartlett, Texas, U.S.A. • 76511 Office: (254) 527-4133 • Fax: (254) 527-4131

April 14, 2008

Dan A. Gattis County Judge Williamson County, Texas 710 Main Street, Suite 101 Georgetown, TX 78626

Dear Judge Gattis;

The Bartlett Volunteer Fire Department would like to take this opportunity to thank you for your continued support of all of the fire departments in Williamson County, and also for your support of the Chiefs Association. Your forethought continues to keep our departments operating in times when others are not able to. The following is an accounting of the funds received by Williamson County for FY2008.

Bartlett Volunteer Fire Department purchased a 2006 American LaFrance Pumper-Tanker in 2006, with funds from FEMA. As part of this purchase, we financed approximately \$65,000 dollars to pay for the apparatus. Towards the balance owed on this equipment, we spent \$14,165.15 of our 2008 Williamson County funding, in monthly payments, on this very essential piece of equipment. This truck responds to almost every rural call we make, as it is basically our mobile rural water supply. In 2008 we received two grants from the Texas Forest Service for a total of \$9600. With these grant funds, we purchased a portable deck gun (water monitor) for our pumper/tanker apparatus, and several sets of structural turnout gear for our members. These grants came with a minimum 25% copayment, depending on specific item types. The actual cost for the equipment we purchased with for these two grants totaled \$12, 525.00, of which our co-payment totaled \$5892.00. The balance of this expense was made up by our annual fundraiser. If you look back over the years, you will find that we use all of the funds that we receive from Williamson County to upgrade our rural firefighting and rescue capabilities.

We hope that you and the County Commissioners Court all decide continue to provide this vital funding to the rural fire departments in Williamson County, like us, that do not have an Emergency Services Taxing District (ESD). As you know, Bartlett is on the northeastern edge of the county, and our fire district is primarily agricultural land with a low population density. With our city being so far from any large municipality, and having no other industry, an ESD will not generate a sustainable level of funds for us to operate on at this time, because of the low population and property values. The funding that we receive from Williamson County, although it seems like a small amount compared to what all of the other departments receive, is a large part of our annual

operating budget, and it would be devastating to our department if you were to cut off those funds. We humbly request that you to continue this funding for our department to support our operations in rural Williamson County.

We appreciate the support we receive from Williamson County and from your office. If you require any other information from me, please contact me at 512-658-9096.

Sincerely;

Duane Kurtin

Fire Chief

Bartlett Volunteer Fire Department

Agreement between Emergency Service District #6, Weir and Williamson County Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Peggy Vasquez, County Judge

By:

Department: County Judge

Agenda Category:

Regular Agenda Items

Information

Agenda Item

Discuss and take appropriate action regarding Agreement between Emergency Service District #6, Weir and Williamson County.

Background

Fiscal Impact

From/To Acct No. Description Amount Sort Seq

Attachments

Link: Agreement between Emergency Service District #6 and Williamson County

Form Routing/Status

Form Started By: Peggy Vasquez Started On: 04/22/2009 04:40

P

Final Approval Date: 04/23/2009

THE STATE OF TEXAS

* KNOW ALL MEN BY THESE PRESENTS

COUNTY OF WILLIAMSON

THAT Williamson County, Texas, a political subdivision of the State of Texas (hereinafter referred to as the "County"); and the Williamson County Emergency Service District #6 an emergency service district created and described under Chapter 775 of the Texas Health and Safety Code (both being collectively referred to herein as the "ESD"), have entered into the following:

AGREEMENT

- 1. Pursuant to its power to provide financial assistance for fire protection in and for Williamson County, and its duty to protect the public health and welfare, the County agrees to pay to the ESD the sum of \$19,000.00 in two separate (2) payments. The first payment being made when the County has received a signed agreement accompanied by a detailed accounting of the prior year's expenditures of the County allotment. The second payment will be disbursed on or before September 30, 2009. All funds are to be used to defray the cost of equipment and labor required to provide the services described in Paragraph 2.
- 2. The ESD agrees to provide fire protection services within the ESD's district boundaries and in any area in the County when requested by any other fire company or emergency service district, or when dispatched by the County, and shall expend all of the amount set forth in Paragraph 1 for only these purposes during the calendar year 2009.
- It is understood by the ESD that the County cannot commit funds for any future fiscal year, and that this Agreement does not, and cannot, commit the County to renew or repeat this Agreement unless approved by future action of the Williamson County Commissioners' Court.
- 4. It is understood and agreed that the County has no power to control or supervise the manner and means chosen by the ESD to carry out the services specified in Paragraph 2, and that the County shall have no liability for any intentional acts of the ESD which are not related to the provision of said services.

Executed on this the 20 day of April	, 2009
Williamson County ESD #6	Williamson County, Texas
By: Dese M. Bride	By:
Printed Name: Lisa McBride	Dan A. Gattis, Williamson County Judge

Title: President, Williamson County ESD #6

d Syland Variation resident.				10/1/2007	unough 9/30/2	000		
4/8/2009								Page 1
	A STREET OF STREET	AMERICAN PARTICIPATION OF THE	404 500	remarks the control		1-1950 - 15		i ago i

Date	Account	Num	Description	Memo	Category	Tag	Clr	Amount
BALANCE 9/30	/2007							56,928.90
10/1/2007	WEIR V.F.D	3253	JONAH WA	service	Utilities:Water	***	R	-33.60
10/3/2007	WEIR V.F.D	3254	B&L	PORT A P	STREET DA		R	-200.00
10/5/2007	WEIR V.F.D				County pay		R	9,582.82
10/8/2007	WEIR V.F.D	3255	DOUG HOG	CONFERE			R	-219.98
10/9/2007	WEIR V.F.D	3256	TXU ENERGY	•	Utilities:Gas		R	-222.1
10/9/2007	WEIR V.F.D			WEIR STO	STREET DA		R	300.00
10/10/2007	WEIR V.F.D			LOAN FEE	LOAN		R	33.00
10/17/2007	WEIR V.F.D	3257	Valero Mark	shamrock g	.Fuel		R	-400.18
10/22/2007	WEIR V.F.D	3258	ECPI	wireless	COMMUNIC		R	-99.00
10/23/2007	WEIR V.F.D	3259	COCKY-T'S	T-SHIRTS	PERSONAL		R	-519.00
10/23/2007	WEIR V.F.D	3260	CAPITAL-ONE	EACCELE	Office		R	-99.00
				YAHOO	COMMUNIC		R	-11.98
				MURPHY	Fuel		R	-39.0
				DAYLIGHT	training		R	-16.50
				DAYLIGHT	1-25-4-36-1-25-1-35-1		R	-11.92
				WEIR STO			R	-31.89
				HEB	Rehab		R	-33.79
				WEIR STO	Groceries		R	-65.84
				MURPHY	Fuel		R	-11.00
				EACCELE	Re-imburse		R	99.00
10/23/2007	WEIR V.F.D	3261	FUEGO	GLOVES	PERSONAL		R	-560.00
10/29/2007	WEIR V.F.D	3262	WILLIAMSO		training		R	-83.50
10/29/2007	WEIR V.F.D	3263	PHILPOTT	2008 CAB	TRUCK PUR		R	-32,743.00
10/30/2007	WEIR V.F.D	3264	JONAH WA		Utilities:Water		R	-31.62
10/30/2007	WEIR V.F.D	3265	FOX AUTO	APR. state	TRUCK MAI		R	-47.47
10/30/2007	WEIR V.F.D	Print			COMMUNIC		R	-49.63
11/5/2007	WEIR V.F.D	3266	TXU ENERGY		Utilities:Gas		R	-171.98
11/16/2007	WEIR V.F.D		And the second s	refund CPR	.Re-imburse		R	42.00
11/16/2007	WEIR V.F.D	3267	CASH		.FUND RAIS		R	-400.00
11/18/2007	WEIR V.F.D		MARY SUE	The Reserve of Contract Contract	FUND RAIS		R	-50.00
11/20/2007	WEIR V.F.D			1/2 FILE C			R	430.00
11/20/2007	WEIR V.F.D			START-UP			R	400.00
11/26/2007	WEIR V.F.D			Partial gran	S (78) 75 (77)		R	29,468.70
11/26/2007	WEIR V.F.D	3269	L M MILLER				R	-440.00
11/26/2007	WEIR V.F.D		CAPITAL-ONE				R	-295.50
				EXXON M			R	-45.75
				YAHOO	COMMUNIC		R	-11.95
				LABSAFE	BUILDING		R	-620.28
				HOME DEP			R	-14.67
				and the second s	Office supplies		R	-14.00
				HOME DEP	200 100 100 100 100		R	-12.87
					PERSONAL		R	-1,164.89
				TEXACO	Fuel		R	-1,104,89
				DENNY'S	Travel		R	
				FLOWER P			R	-23,15 -47.85
					TRUCK MAI			
				OFFICE D			R	-14.50
							R	-859.99
				MAIL FAST	TRUCK MAI		R	-27.81
							R	-28.75
				SAFEGUA	DUILDING		R	-53.00

4/8/2009 Date Account Num Description Memo Category Tag Clr Amount RADIO SH... COMMUNIC... R -28,12 HEB FUND RAIS... R -12.9911/26/2007 WEIR V.F.D ... 3271 JONAH WA... service Utilities:Water R -30.7811/26/2007 WEIR V.F.D ... 3272 ECP! wireless COMMUNIC... R -99.00 11/26/2007 WEIR V.F.D ... 3273 Valero Mark... shamrock g... Fuel R -296.31 11/27/2007 WEIR V.F.D ... 3274 **FEUGO** PPE REPAIR EQUIPMENT R -80.9511/30/2007 WEIR V.F.D ... PHONE SE... COMMUNIC... R -51.06 11/30/2007 WEIR V.F.D ... 3275 **FEUGO** PPE REPAIR EQUIPMENT R -315.3512/3/2007 WEIR V.F.D ... 3276 POLICE & S... BADGES **EQUIPMENT** R -305.75WEIR V.F.D ... 3277 12/12/2007 TXU ENERGY R Utilities:Gas ... -185.5712/15/2007 WEIR V.F.D ... 3278 State Fireme... registration training R -595.00 12/19/2007 WEIR V.F.D ... 3279 **ECPI** wireless COMMUNIC... R -99.0012/19/2007 WEIR V.F.D ... 3280 Valero Mark... shamrock g... Fuel R -301,63 12/21/2007 WEIR V.F.D ... 3281 Postmaster **BOX RENT** Office R -52.0012/24/2007 WEIR V.F.D ... 3282 ...CAPITAL-ONEYAHOO COMMUNIC... R -11.95murphys Fuel R -50.00**DENNY'S** Travel R -23.81AUSTIN TR...TRUCK MAI... R -167.26**TEXACO** Fuel R -50.01 WALMART COMMUNIC... R -26.95MURPHY Fuel R -26.2012/24/2007 WEIR V.F.D ... 3283 JONAH WA... service R Utilities:Water -31.62 12/31/2007 WEIR V.F.D ... Print VERIZON S... PHONE BILL COMMUNIC ... R -49.35 1/7/2008 WEIR V.F.D ... 3284 **FOX AUTO** APR. state... TRUCK MAI ... R -1.271/7/2008 WEIR V.F.D ... 3285 TXU ENERGY Utilities:Gas ... R -172.541/7/2008 WEIR V.F.D ... SAFE DEP... Bank Chrg R -20.001/8/2008 WEIR V.F.D ... DONATION R 160.00 1/11/2008 WEIR V.F.D ... 3286 CASH BAY LIGHT ... BUILDING R -500.001/18/2008 WEIR V.F.D ... i st installm... ESD INCOME R 74,300.00 1/19/2008 **ECPI** WEIR V.F.D ... 3287 wireless COMMUNIC... R -99.00 1/19/2008 WEIR V.F.D ... 3288 Valero Mark... shamrock g... Fuel R -446.751/24/2008 WEIR V.F.D ... 3289 ...CAPITAL-ONEYAHOO COMMUNIC... R -11.95 murphys Fuel R -50.00**DENNY'S** Travel R -23.81AUSTIN TR...TRUCK MAI... R -167.26**TEXACO** Fuel R -50.01WALMART COMMUNIC... R -26.95MURPHY Fuel R -26.20 BUILDING R -387.38 1/24/2008 WEIR V.F.D ... 3290 MY-LOR accountabil... EQUIPMENT R -88.041/25/2008 WEIR V.F.D ... insurance r... REBATE R 1,786.00 1/29/2008 WEIR V.F.D ... 3292 **FOX AUTO** APR, state... TRUCK MAI ... R -13.241/29/2008 WEIR V.F.D ... 3291 JONAH WA... service Utilities:Water R -30.211/30/2008 WEIR V.F.D ... VERIZON S... PHONE BILL COMMUNIC ... R -49.612/7/2008 WEIR V.F.D ... 3293 PASP I D BADGES EQUIPMENT R -94.48 2/7/2008 WEIR V.F.D ... 3294 HEIMAN FIR... ADAPTERS truck equipm... R -57.502/7/2008 WEIR V.F.D ... 3295 R Z COMMU... PROGRAM... COMMUNIC... R -20.002/7/2008 WEIR V.F.D ... 3296 BATTERYZ... batteries COMMUNIC... R -126,44 2/8/2008 WEIR V.F.D ... 3297 VOID R 0.00 2/8/2008 WEIR V.F.D ... 3298 TXU ENERGY Utilities:Gas ... R -168.38

WESTEX W... SQUAD 2

wireless

ECPI

TRUCK PUR...

COMMUNIC...

R

R

-64,751.00

-99.00

2/14/2008

2/18/2008

WEIR V.F.D ... 3300

WEIR V.F.D ... 3301

Page 2

4/8/2009 10/1/2007 through 9/30/2008

2009	Date	Account	Num	Description	Memo	Category	Tag	Clr	Paş Amount
-	2/18/2008	WEIR V.F.D	THE RESIDENCE			COMMUNIC	ay	R	-158.30
	2/18/2008	WEIR V.F.D		Valero Mark				R	-658.95
	2/19/2008	WEIR V.F.D				TRUCK MAI		R	-545.74
	2/24/2008	WEIR V.F.D				Utilities:Gas		R	-435.75
	2/25/2008	WEIR V.F.D			FINAL PAY			R	29,531.30
	2/25/2008	WEIR V.F.D			PEC & DO			R	1,515.00
	2/25/2008	WEIR V.F.D		WCEMS	CPR MATE			R	-73.50
	2/25/2008	WEIR V.F.D		TEXTAG	TOLL	Travel		R	-1.60
	2/25/2008	WEIR V.F.D		110-640-1202-171-171-171-171-171-171-171-171-171-17		COMMUNIC		R	-103,00
à	2/25/2008	WEIR V.F.D		Hull Supply		BUILDING		R	-457.00
5	2/26/2008	WEIR V.F.D	3309	Contractor of the Contractor o	Control land and control	TRUCK MAI		R	-1,085.00
2	2/27/2008	WEIR V.F.D	3310	JONAH WA		Utilities:Water		R	-31.34
	2/27/2008	WEIR V.F.D	3311		The state of the s	TRUCK MAI		R	-133.57
3	2/27/2008	WEIR V.F.D	3312	CAPITAL-ONE		Fuel		R	-50.00
					murphys	Fuel		R	-50.00
					IHOP	Travel		R	-23.93
					PAGER RE	DISPOSAL		R	-57.28
					HOME DEP			R	-17.94
					IHOP	Travel		R	-21.23
					TRACTOR	BUILDING		R	-51,00
					USPS	postage		R	-7.05
					USPS	postage		R	-13.50
						MEDICAL S		R	-244.33
					BATTERY			R	-46.12
					McCOYS	BUILDING		R	-155.55
					HOME DEP			R	-62.99
					HOME DEP	The second secon		R	-54.48
					A M ROYAL			R	-388.95
2	2/27/2008	WEIR V.F.D			MEMORIAL			R	295.00
Ş	3/3/2008	WEIR V.F.D	3313	HEIMAN FIR	HOSE S-2	truck equipm		R	-966.33
3	3/3/2008	WEIR V.F.D	3314	PERKINS E		3 5		R	-500.00
3	3/3/2008	WEIR V.F.D	Print	VERIZON S	PHONE BILL	COMMUNIC		R	-49.15
3	3/4/2008	WEIR V.F.D	3315	But the same and the same and the		LOAN PAYM		R	-41,613,89
3	3/10/2008	WEIR V.F.D			coop memo	DONATION		R	730.00
3	3/11/2008	WEIR V.F.D	3316	TXU ENERGY		Utilities:Gas		R	-154.23
3	3/13/2008	WEIR V.F.D	3317	ALL POINTS		COMMUNIC		R	-17.25
3	3/14/2008	WEIR V.F.D	3318	HEIMAN FIR		truck equipm		R	-431.80
3	3/14/2008	WEIR V.F.D	3319	Valero Mark	shamrock g	Fuel		R	-491.00
5	3/18/2008	WEIR V.F.D	3320	R Z COMMU	RADIO INS	COMMUNIC		R	-169.43
3	3/18/2008	WEIR V.F.D	3321	MIDLAND T	repair pagers	COMMUNIC		R	-103.00
3	3/21/2008	WEIR V.F.D	3322	D & L Printing	POSTERS	FUND RAIS		R	-39.29
3	3/25/2008	WEIR V.F.D	3323	ECPI	wireless	COMMUNIC		R	-99.00
3	3/27/2008	WEIR V.F.D	3324	AUSTIN AC	BUILDING	BUILDING		R	-418.02
3	3/27/2008	WEIR V.F.D	3325	JONAH WA	service	Utilities:Water		R	-29.95
3	3/28/2008	WEIR V.F.D	Print	VERIZON S	PHONE BILL	COMMUNIC		R	-49.14
3	3/28/2008	WEIR V.F.D			memorial	DONATION		R	375.00
.3	3/28/2008	WEIR V.F.D	3326	CAPITAL-ONE	I-HOP	Travel		R	-19.04
					murphys	Fuel		R	-70.00
					I-HOP	Travel		R	-23.85
					MURPHYS	Fuel		R	-93.15
					MURPHYS	Fuel		R	-100.00
					FLYING J	Travel		R	-23.37

age 3

/2009			10/1/2007 thr	ough 9/30/200)8				Dono 4
Date	Account	Num	Description	Memo	Category	Tag	Çlr	Amount	Page 4
				WILLIAMS	TRUCK REG		R	-34.00	W
				WEIR STO	. BUILDING		R	-17.36	
				USPS	postage		R	-82.00	
				INTERSTA	TRUCK MAI		R	-14.50	
				WORLDSO	OFFICE EQ		R	-221.15	
				FERGUSON	TRUCK MAI		R	-13.23	
				MURPHY	Fuel		R	-50.00	
				WAL-MART	BUILDING		R	-8.25	
				McCOYS	BUILDING		R	-27.95	
				TRACTOR	. BUILDING		R	-47.21	
4/4/2008	WEIR V.F.D		CASH	REMODEL	.BUILDING		R	-500.00	
4/9/2008	WEIR V.F.D	3328	ALL POINTS	.RADIO RE	COMMUNIC		R	-103.15	
4/9/2008	WEIR V.F.D	3329	TXU ENERGY		Utilities:Gas		R	-163.80	
4/10/2008	WEIR V.F.D	3330	BILL FRYMI	BUILDING	BUILDING		R	-108.98	
4/15/2008	WEIR V.F.D			church & blai	rDONATION		R	300.00	
4/18/2008	WEIR V.F.D	3331	CASH	START UP	.FUND RAIS		R	-500.00	
4/18/2008	WEIR V.F.D	3332	BEN E KEITH	food stuffs	FUND RAIS		R	-452.48	
4/18/2008	WEIR V.F.D	3335	MEYERS SA	SAUSAGE	FUND RAIS		R	-208.71	
4/21/2008	WEIR V.F.D			BBQ	FUNDRAISER		R	3,074.00	
4/21/2008	WEIR V.F.D				DONATION		R	195.00	
4/25/2008	WEIR V.F.D:	3333	Hull Supply	DOOR	BUILDING		R	-214.00	
4/26/2008	WEIR V.F.D	3334	ECPI	wireless	COMMUNIC		R	-99.00	
4/26/2008	WEIR V.F.D:		TEXTAG	TOLL	Travel		R	-1.60	
4/26/2008	WEIR V.F.D:		JONAH WA		Utilities:Water		R	-31.95	
4/26/2008	WEIR V.F.D:	3338 .	CAPITAL-ONE	SPILLAR C	truck equipm		R	-275.00	
				SHELL OIL	Fuel		R	-43.19	
				RADIO SH	COMMUNIC		R	-10.81	
				OFFICE D	Office supplies		R	-27.99	
				VALERO	Fuel		R	-24.71	
				INNERSTA	TRUCK MAI		R	-81.17	
				HOME DEP	.BUILDING		R	-8.41	
				McCOYS	BUILDING		R	-199.90	
				McCOYS	BUILDING		R	-22.49	
				McCOYS	BUILDING		R	-50.96	
				WEIR STO	MISCELLAN		R	-17.29	
				HOME DEP			R	-151.61	
				OFFICE D	Office supplies		R	-33.99	
				HOME DEP			R	-98.54	
				HOME DEP			R	-11.57	
				HOME DEP			R	-506.68	
				TRACTOR			R	-59.53	
				HOME DEP	BUILDING		R	-25.65	
				WEIR STO	MISCELLAN		R	-18.68	
				MURPHY	Fuel		R	-50.00	
				HOME DEP			R	-41.83	
					FUND RAIS		R	-113.93	
				HOME DEP			R	-49.88	
					FUND RAIS		R	-20.36	
				HOME DEP			R	-136.31	
4/00/00-	Of a lighter and the light of the light			HOME DEP			R	-24.97	
4/28/2008	WEIR V.F.D				County pay		R	9,525.00	
4/30/2008	WEIR V.F.D		VERIZON S	phone bill	COMMUNIC		R	-55.06	

4/8/2009				10/1/2007 thre	ough 9/30/200	8				-
4/0/2009	Date	Account	Num	Description	Memo	Category	Tag	Clr	Amount	Pa
	4/30/2008	WEIR V.F.D.	3339	Valero Mark	shamrock g	.Fuel		R	-246.4	0
	5/2/2008	WEIR V.F.D.	3340	David Box	hats	PERSONAL		R	-191.6	5
	5/5/2008	WEIR V.F.D.	3341	HEIMAN FIR	adapters &	truck equipm		R	+121.5	4
	5/5/2008	WEIR V.F.D.	3342	MIDLAND T	repair pagers	COMMUNIC		R	-251,9	5
	5/6/2008	WEIR V.F.D.	3343	Weir Store	MEAT	FUND RAIS		R	-593.0	0
	5/7/2008	WEIR V.F.D.	3344	VOID					0.0	0
	5/7/2008	WEIR V.F.D.	3345	BILL FRYMI	OIL	TRUCK MAI		R	-219.5	2
	5/7/2008	WEIR V.F.D.	3346	TXU ENERGY		Utilities:Gas		R	-132.5	2
	5/15/2008	WEIR V.F.D.	3347	Valero Mark	shamrock g	.Fuel		R	~518.5	8
	5/16/2008	WEIR V.F.D.	3348	Steve King	DOORS	BUILDING		R	-165.0	0
	5/19/2008	WEIR V.F.D.	3349	GALL'S INC	LIGHT BAR	truck equipm		R	-625.9	4
	5/19/2008	WEIR V.F.D.	3350	ECPI	wireless	COMMUNIC		R	-99.00	0
	5/20/2008	WEIR V.F.D.			anderegg	DONATION		R	30.00	0
	5/21/2008	WEIR V.F.D.	3351	LOU HARPER	SOC PRIN	training		R	-53.04	
	5/23/2008	WEIR V.F.D.	3352	CASH	SLEEPING	BUILDING		R	-1,000.00	
	5/24/2008	WEIR V.F.D.	3353	SAMS CLUB	MATRESS	BUILDING		R	-1,283.94	
	5/24/2008	WEIR V.F.D.	3354	BEDS, BED	6 BEDS &	BUILDING		R	-5,349.82	
	5/26/2008	WEIR V.F.D.	3355		The second secon	.COMMUNIC		R	-1,575.00	
	5/27/2008	WEIR V.F.D.	3356	HOME DEPOT	REFRIGER	BUILDING		R	-968.9	
	5/27/2008	WEIR V.F.D.	3357	HOME DEPOT		A STATE OF THE PARTY OF THE PAR		R	-2,154.24	
)	5/27/2008	WEIR V.F.D.	3358		BATHROO			R	-500.00	
) k	5/30/2008	WEIR V.F.D.	Print	VERIZON S		100		R	-52.10	
3	5/30/2008	WEIR V.F.D.	3359	.CAPITAL-ONE				R	-43.1	
					eterne s	training		R	-1,458.13	
					WAL-MART			R	-49.86	
						Office supplies		R	-5.56	
						Office		R	-15.5	
						MEDICAL S		R	-176,00	
					HOME DEP			R	-23.77	
					HOME DEP			R	-34.15	
						BUILDING		R	-89.97	
					200 000	BUILDING		R	-29.99	
						BUILDING		R	-89.97	
					HOME DEP			R	46.52	
						truck equipm		R	-52.90	
					HOME DEP			R	-38.67	
						BUILDING		R	-198.00	
						PERSONAL		R	-384.72	
						BUILDING		R	-27.90	
					HOME DEP			R	46.52	
					HOME DEP			R	24.97	
	5/30/2008	WEIR V.F.D	.3360	JONAH WA		Utilities:Water		R	-35,12	
	5/30/2008	WEIR V.F.D				TRUCK MAI		R	-42.74	
	6/1/2008	WEIR V.F.D		BILL FRYMI	Page 19 Court September 19 Court			R	-83.63	
	6/2/2008	WEIR V.F.D		SAFEGUAR				R	-139.00	
	6/6/2008	WEIR V.F.D		CASH	Commence of the Commence of th	BUILDING		R	-500.00	
	6/6/2008	WEIR V.F.D		HEIMAN FIR				R	-55.45	
	6/10/2008	WEIR V.F.D		WILCO EMS		training		R	-75.00	
	6/11/2008	WEIR V.F.D		CASH		BUILDING		R	-1,000.00	
	6/13/2008	WEIR V.F.D		TRAVIS CO				R	-5,700.00	
	6/16/2008	WEIR V.F.D		TXU ENERGY		Utilities:Gas		R	-200,33	
	3/16/2008	WEIR V.F.D	SOUTH THE COUNTY	Valero Mark				R	-305.29	
7.5			. 20, 0	, aloro Ivial K	onannock y	i udi		EX	-503.28	,

age 5

10/1/2007 through 9/30/2008 4/8/2009 Page 6

2009							F
Date		Num Description		Category	Tag	Clr	Amount
6/16/2008	WEIR V.F.D 337			Supplies		R	-580.92
6/16/2008	WEIR V.F.D 337	2 ECPI	wireless	COMMUNIC		R	-99.00
6/19/2008	WEIR V.F.D		SALAZAR	DONATION		R	50.00
6/19/2008	WEIR V.F.D 337			BUILDING		R	-500.00
6/23/2008	WEIR V.F.D 337	The Control of the Co	TV	BUILDING		R	-1,769.97
6/23/2008	WEIR V.F.D 337		. BASE MOU.			R	0.00
6/23/2008	WEIR V.F.D 337		. BURN BAN.	MISCELLAN		R	-184.00
6/27/2008	WEIR V.F.D 337			TRUCK MAI		R	-200.00
6/27/2008	WEIR V.F.D 337		LIGHT KIT	truck equipm		R	-110.97
6/27/2008	WEIR V.F.D 337	ALL THE PROPERTY OF THE PROPER		truck equipm		R	-109.10
6/27/2008	WEIR V.F.D 338			Utilities:Water		R	-29.66
6/27/2008	WEIR V.F.D 338	Carlot Season Service Control of the	the same of the sa	TTRUCK MAI		R	-25.20
6/27/2008	WEIR V.F.D 338	2CAPITAL-ON				R	-499.05
			HOME DEP.	The state of the s		R	-701.48
			HOME DEP.			R	-2.14
			HOME DEP.			R	-15.09
			HOME DEP.			R	-20.90
			HOME DEP.			R	-96.07
			HOME DEP.			R	-93.42
			HOME DEP.	BUILDING		R	-133.41
			HOME DEP.	BUILDING		R	-43.61
			HOME DEP.			R	-329.95
			HOME DEP.	BUILDING		R	-19,92
			HOME DEP.			R	-4.68
			HOME DEP.			R	-26.80
			HOME DEP.			R	-34.96
				TRUCK MAI		R	-62.00
			MURPHY	Fuel		R	-50.01
			TRACTOR			R	-6.49
				. TRUCK MAI		R	-83,83
				. TRUCK MAI		R	-76.92
			HEB	EQUIPMENT		R	-313.87
			MURPHY	Fuel		R	-12.26
			HEB	Groceries		R	-26.07
			MURPHY	Fuel		R	-53.25
			WALMART	EQUIPMENT		R	-569.11
			CLKBANK	COMMUNIC		R	-59.85
			MURPHY	Fuel		R	-50.00
			TARGET	EQUIPMENT		R	-114.98
			HEB	EQUIPMENT		R	-7.57
0/00/0000	WEIDUED DI	. Western a		TRUCK MAI		R	-43.89
6/30/2008	WEIR V.F.D Prin			COMMUNIC		R	-49.37
7/1/2008	WEIR V.F.D338			BUILDING		R	-283.46
7/3/2008	WEIR V.F.D338			truck equipm		R	-882.02
7/3/2008	WEIR V.F.D338			EQUIPMENT		R	-104.42
7/3/2008	WEIR V.F.D 338		SATELITE	ENTERTAIN		R	-104.07
7/8/2008	WEIR V.F.D	CASH		training		R	-30.00
7/8/2008	WEIR V.F.D	7 #N/O/BH66	65068	DONATION		R	200.00
7/9/2008	WEIR V.F.D338	5.55 5.550		training		R	0.00
7/9/2008	WEIR V.F.D338			DI GO T		R	-216.45
7/11/2008	WEIR V.F.D338		and the same of th	training		R	0,00
7/11/2008	WEIR V.F.D 339	TEXAS FOR	SCHOOL	training		R	-180.00

4/0/0000			10/1/2007 thre	ough 9/30/200	08			
4/8/2009	Date	Account Num	Description	Memo	Category	Tag	Clr	Amount P
	7/14/2008	WEIR V.F.D 3391	HEIMAN FIR	.SWITCH P	truck equipm		R	-59,05
	7/14/2008	WEIR V.F.D 3392	TXU ENERGY	0	Utilities:Gas		R	-363.06
	7/14/2008	WEIR V.F.D 3393	CASH	TRAINING	training		R	-150.00
	7/15/2008	WEIR V.F.D3395	DOUG HOG	BRACKET	BUILDING		R	-154.48
	7/16/2008	WEIR V.F.D 3394	Weir Store	PAPER TO			R	-123.27
	7/16/2008	WEIR V.F.D 3396	Valero Mark	shamrock g.,	.Fuel		R	-1,206.31
	7/17/2008	WEIR V.F.D 3397	PASP	I D BADGES	EQUIPMENT		R	-97.00
	7/18/2008	WEIR V.F.D			ESD INCOME		R	40,000.00
	7/18/2008	WEIR V.F.D3398	TEXTAG	TOLL	Travel		R	-2.80
	7/18/2008	WEIR V.F.D 3399	ECPI	wireless	COMMUNIC		R	-99.00
	7/18/2008	WEIR V.F.D3400	FUEGO	PPE	PERSONAL		R	-2,814.75
	7/18/2008	WEIR V.F.D 3401	RESIDENTS	FOOD SUP			R	-100.00
	7/22/2008	WEIR V.F.D 3402			DRIVERS LI		R	-44.00
	7/25/2008	WEIR V.F.D 3403	CAPITAL-ONE				R	-14.04
				HOME DEP	AND THE RESERVE OF THE PARTY OF		R	-24.25
				HOME DEP.	The state of the s		R	-23.53
				HOME DEP			R	-4.17
				HOME DEP			R	-14,10
				HOME DEP	.BUILDING		R	-1.80
				HOLT CO.	TRUCK MAI		R	-236.92
				WALMART	BUILDING		R	-158.33
				DIRECTV	BUILDING		R	-26.76
					TRUCK MAI		R	-310.18
				GADGET S			R	-393,84
					COMMUNIC		R	-36.00
					and the second s		R	-122.51
				McCOYS	BUILDING		R	-39.64
				WEIR STO			R	-120.00
				USPS	COMMUNIC		R	-15.65
				WEIR STO			R	-9.12
					BUILDING		R	-54.35
					Fuel		R	-50.07
	7/00/0000	CASE-LEGACIO DE CASE-LEGACIO		TRACTOR			R	-31.48
	7/28/2008	WEIR V.F.D3404	JONAH WA		Utilities:Water		R	-34.83
	7/29/2008	WEIR V.F.D 3405		BACK GRO			R	-44.20
	7/30/2008	WEIR V.F.D Print			COMMUNIC		R	-52.75
	7/31/2008	WEIR V.F.D3406			COMMUNIC		R	-39.00
	8/4/2008 8/4/2008	WEIR V.F.D 3407 WEIR V.F.D 3408			PERSONAL		R	-193.00
	8/4/2008	WEIR V.F.D 3409		4	ENTERTAIN		R	-74.34
	8/4/2008	WEIR V.F.D 3410	FOX AUTO HEIMAN FIR		TRUCK MAI		R	-25.40
	8/9/2008	WEIR V.F.D3411	emple and the state of the state of		truck equipm		R	-763.30
	8/9/2008	WEIR V.F.D3412	DOUG HOG LOU HARPER				R	-77.05
	8/9/2008	WEIR V.F.D 3413			training COMMUNIC		R	-301.77
	8/11/2008	WEIR V.F.D			DONATION		R R	-787,50
	8/13/2008	WEIR V.F.D 3414		GROCERIES				100.00
	8/14/2008	WEIR V.F.D3415	Valero Mark				R R	-100.00 -1,333.34
	8/19/2008	WEIR V.F.D3417			PERSONAL		R	-1,067,12
	8/19/2008	WEIR V.F.D3418	200000000		COMMUNIC		R	-1,007,12
	8/19/2008	WEIR V.F.D3419	LOU HARPER		BUILDING		R	-99.00
	8/19/2008	WEIR V.F.D 3420	DOUG HOG				R	-195.33
	8/20/2008	WEIR V.F.D 3421			PERSONAL		R	-1,442.50
		orani in Carry 161	1 2-22		. LINCONVIL		J-X	-1,442.00

Page 7

4/0/0000				10/1/2007 thre	ough 9/30/200	08			
4/8/2009	Date	Account	Num	Description	Memo	Category	Tag	Clr	Pa Amount
	8/20/2008	WEIR V.F.D3	3422	GALL'S INC	LIGHT KIT	truck equipm		R	-3.49
	8/20/2008	WEIR V.F.D	3423	PERKINS E	SERVICE	EQUIPMEN		R	-500.00
	8/30/2008	WEIR V.F.D				COMMUNIC		R	-51.84
	8/30/2008	WEIR V.F.D3	3424	of the same of the		.COMMUNIC		R	-595.00
	8/30/2008	WEIR V.F.D3		HOLT CAT		TRUCK MAI		R	-194.20
	8/30/2008	WEIR V.F.D 3			2 . 4 . 50	COMMUNIC		R	-196.00
	8/30/2008	WEIR V.F.D3		JONAH WA		Utilities:Water		R	-52.65
	9/1/2008	WEIR V.F.D3	The state of the s	FOX AUTO		TRUCK MAI		R	-52.66
	9/3/2008	WEIR V.F.D3		DIREC TV	SATELITE	ENTERTAIN		R	-74.34
	9/3/2008	WEIR V.F.D3		HEIMAN FIR		truck equipm		R	-192.25
	9/5/2008	WEIR V.F.D3	3431 .	CAPITAL-ONE				R	-121.48
					HOME DEP	and the second second		R	-20.56
					HOME DEP			R	-10.79
					HOME DEP			R	-140.40
					HOME DEP			R	-41.50
					HOME DEP			R	-1.24
						TRUCK MAI		R	-116.87
					HOME DEP			R	-78.97
					RUSSELL	CONTRACTOR OF THE PROPERTY OF		R	-39.83
						TRUCK MAI		R	-1,256.78
					POSITIVE			R	-90.40
					The second of th	COMMUNIC		R	-17.44
					SHELL OIL			R	-171.70
						BUILDING		R	-43.29
						Fuel		R	-56,65
						TRUCK MAI		R	-34.95
						TRUCK MAI		R	-590.88
						TRUCK MAI		R	-49,91
						Fuel		R	-90,06
					teroporate anuncializate e	COMMUNIC		R	-244.53
						Fuel		R	-50.01
						Groceries		R	-37.90
						TRUCK MAI		R	-131,14
					The second secon	TRUCK MAI		R	-1,196.88
					SECURIO LIGARITA III	TRUCK MAI		R	-59.50
					WALMART			R	-113.53
	0/5/0009	WEIDVED	400		WEIR STO			R	-20.15
	9/5/2008	WEIR V.F.D3		D & L Printing		FUND RAIS		R	-14.60
	9/8/2008	WEIR V.F.D3		TXU ENERGY		Utilities:Gas		R	-1,703.83
	9/8/2008 9/16/2008	WEIR V.F.D3				Utilities:Gas		R	-136.68
		WEIR V.F.D3		VALero Mark				R	-467.55
	9/16/2008 9/19/2008	WEIR V.F.D3		6-7-10-WTV-1		PERSONAL		R	-180.00
	9/20/2008	WEIR V.F.D3			GROCERIES			R	-100.00
		WEIR V.F.D3		WEIR COUN		FUND RAIS		R	-300.00
	9/22/2008	WEIR V.F.D3	408	ECPI		COMMUNIC		R	-99.00
	9/22/2008	WEIR V.F.D	440	EUECO		County pay		R	9,500.00
	9/29/2008	WEIR V.F.D3				PERSONAL		R	-232.00
	9/29/2008	WEIR V.F.D 3		JONAH WA		Utilities:Water		R	-58.11
	9/29/2008	WEIR V.F.D3				TRUCK MAI		R	-36.47
	9/29/2008	WEIR V.F.D3		BILL FRYMI		5		R	-142.57
	9/30/2008	WEIR V.F.D3		MidLAND TE	A			R	-68.00
£	9/30/2008	WEIR V.F.D3	440	B&L	PUKTAP	STREET DA		R	-200.00

age 8

2009	9			10/1/2007 1111	ough orderzor	00			F
	Date	Account	Num	Description	Memo	Category	Tag	Clr	Amount
	9/30/2008	WEIR V.F.D		VERIZON S	PHONE BILL	L COMMUNIC		R	-51.28
	10/1/2007 - 9	/30/2008				0			-13,700.03
E	BALANCE 9/30	/2008		<u> </u>				-	43,228.87
						TOTAL INFLO	ows		212,093.31
						TOTAL OUTF	LOWS		-225,793.34
						NET TOTAL			-13,700.03

Authorize the County Judge to execute an Interloocal Cooperation Agreement with the Williamson County conservation Foundation, Inc.

Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Terri Countess, Commissioner Pct. #3

By:

Submitted

Valerie Covey For:

Department: Commissioner Pct. #3 Agenda

Category:

Regular Agenda Items

Information

Agenda Item

Authorize the County Judge to execute an Interloocal Cooperation Agreement with the Williamson County conservation Foundation, Inc.

Background

Fiscal Impact

From/To Acct No. Description Amount Sort Seq

Attachments

Link: ILA WCCF

Form Routing/Status

Started On: 11/12/2008 04:47 Form Started By: Terri Countess

PM

Final Approval Date: 11/13/2008

INTERLOCAL COOPERATION AGREEMENT BETWEEN WILLIAMSON COUNTY AND THE WILLIAMSONCOUNTY CONSERVATION FOUNDATION

THE STATE OF TEXAS	§	
COUNTY OF WILLIAMSON	§ §	
This Interlocal Agreement (the	"Agreement") is entered into as of this	3
day of,	2008, by and between Williamson (County, a
political subdivision of the state of T	exas (the "County") and the Williamso	n County
Conservation Foundation, a 501(c)(3)	Texas non-profit corporation (the "Fou	ındation'')
(collectively, the "Parties").		ŕ

RECITALS

WHEREAS, Williamson County, Texas contains habitat occupied by three karst invertebrates and two bird species that the U.S. Fish and Wildlife Service (the "Service") has listed as endangered under the Endangered Species Act of 1973, as amended (the "Act"). The County also contains habitat for other rare species, including at least four species of salamanders and other karst invertebrate species that may be in need of conservation efforts to preclude the need for listing for future; and

WHEREAS, presence of endangered species habitat has significantly affected the public and private development within Williamson County; and

WHEREAS, the County and the Service have recently approved a Regional Habitat Conservation Plan (the "RHCP") that will support an incidental take permit (the "Permit") allowing limited impacts to four of the listed species, provided certain conservation and management conditions are satisfied; and

WHEREAS, the administration agency that will manage the RHCP will be the Foundation; and

WHEREAS, the Foundation and the County, by this Agreement, wish to delineate the duties and responsibilities of the Foundation and the County with respect to the management and administration of the RHCP;

NOW THEREFORE, the COUNTY AND THE FOUNDATION hereby agree to the following terms and conditions.

PURPOSE OF AGREEMENT AND GOALS OF RHCP.

A. Purpose of Agreement

The Interlocal Cooperation Agreement (the "Agreement") is entered into pursuant to the Interlocal Cooperation Act, Tex. Government Code, Chapter 79 to allow the Foundation to manage and administer the RHCP pursuant to the terms and conditions stated herein.

B. RHCP Goals

The goals of the locally approved RHCP are as follows:

- (a) to ensure protection of the habitat of the species of concern in Williamson county by acquiring and setting aside public preserves the best remaining habitat,
- (b) to manage the habitat preserve system so as to continue to support viable populations of the species of concern,
- (c) to obtain and hold a permit under Section 10(a) of the Act,
- (d) to provide adequate revenue to ensure the goals of the RHCP are met,
- (e) to provide a mechanism for public and private entities to proceed with capital improvements, project in compliance with the Act.

II.

MANAGEMENT OF RHCP

A. RHCP Program Administration

The County, through the adoption of the RHCP, is now committed to the long-term avoidance, minimization and mitigation of RHCP impacts. Many elements of the RHCP will require consistent and thorough administrative procedures and assurances that the RHCP will be sufficiently funded and staffed to administer the RJCP in all aspects of the commitments detailed in the RHCP documents. Program implementation includes not just a 30-year commitment over the life of section the Permit, but a commitment to manage the endangered species preserves in perpetuity.

B. Foundation Responsibility

Pursuant to Section 5.2 of the RHCP, the Management of the RHCP will be the responsibility of the County through the Foundation with advisement and consent of the Service. As such, by signing this agreement, the County hereby designates the Foundation as the Management entity for RHCP. The duties listed in Section 5.2 are in part, as follows:

- (a) Administer RHCP budget and finances, including development of annual operating/financial plan.
- (b) Enter into formal agreements (Participation Agreements) with the plan participants to ensure compliance with RHCP permit conditions.
- (c) Identify and acquire laws for new karst and bird preserves with the County and for enhancement of existing conservations.
- (d) Prepare management monitoring plans for preserves.
- (e) Establish and manage mitigation programs.
- (f) Maintain an active and functional Adaptive Management System and implement new management actions.
- (g) Report to the Service on a timely basis on the acquisition and management of preserve levels, development approvals and participant involvement.
- (h) Administer a research program, including creation and maintenance of computerized database to manage information gathered through research and monitoring programs.
- (i) Report to the County on a quarterly basis of all Foundation activities.

III.

COUNTY RESPONSIBILITIES

The Service has issued a section 10(a)(1)(B) incidental take permit to Williamson County through the RHCP. As the permit holder, the County acknowledges the ultimate responsibility for achieving all of the goals listed on the RHCP. To accomplish these goals, the County will ensure that the Foundation will hire plan administrators and appropriate staff and ensure that these positions will be funded and equipped to a level that is sufficient to meet plan needs. The County, through the Foundation, may outsource biological and other science-related services needed for plan administration on an asneeded basis.

PARTICIPATION PROCESS

A. **Eligibility Standards**

- Any party within Williamson County desiring to undertake activities (a) included within the RHCP may be eligible for participation.
- (b) All participation is voluntary. Those choosing not to participate can either seek individual permits from the Service or develop independent strategies for compliance that may or may not adhere to RHCP methodologies.
- (c) While participation in the RHCP is encouraged, the County, through the Foundation, reserves the right to decided to allow participation in the RHCP when that participant, in the judgment of the County and the Foundation, would not be consistent with the goals and objectives of the Plan, or might cause there to be insufficient mitigation available for anticipated County infrastructure needs.

В. **Participation Procedures**

The procedures for participation within the RHCP are outlined in Section 6.2 of the RHCP. The Foundation agrees to comply with all of the provisions of Section 6.2, which are attached hereto as Exhibit "A".

IN WITNESS WHEREOF, the Parties hereto have caused this instrument to be signed, sealed and attested in duplicate by their duly authorized officers, as of the Effective Date.

WILLIAMSON COUNTY	
By: Honorable Dan A. Gattis, County Judge	Date:
WILLIAMSON COUNTY CONSERVATION FOUNDATION	
By:	Date:

CHAPTER 6 – PARTICIPATION PROCESS

6.1 ELIGIBILITY STANDARDS

Any party within Williamson County desiring to undertake activities covered by this RHCP within an area that contains potential habitat for endangered karst invertebrates, golden-cheeked warblers, or black-capped vireos may be eligible for participation. Potential habitat areas are defined as follows: 78

- Karst invertebrates: Karst Zone designated in Figure 3-1.
- Golden-cheeked warbler: Woodlands determined to be potential warbler habitat by a Service-permitted biologist during an on-site habitat assessment per TPWD (2006) standards.
- Black-capped vireo: Early successional mixed forest-shrub land determined to be potential vireo habitat by a Service-permitted biologist during an on-site habitat assessment per TPWD (1987) standards.

Participation in the RHCP will be voluntary. Those choosing not to participate can either seek individual permits from the Service or develop independent strategies for compliance that may or may not adhere to the methodologies developed in this plan. The purpose of this RHCP is to offer landowners and the regulated community an option for compliance with the Endangered Species Act that requires less time and money and provides greater certainty for both landowners and species recovery than obtaining Service approval or compliance on an individual basis. While participation in the plan will be encouraged as a rule, the County reserves the right to decline to allow participation in the plan when that participation, in the judgment of the County, would not be consistent with the biological goals and objectives of the plan or might cause there to be insufficient mitigation available for anticipated County infrastructure needs.

Participation in the RHCP does not alleviate the need for applicants to secure other local, State, or Federal approvals and authorizations. For instance, applicants with projects occurring over the Edwards Aquifer Recharge Zone, Transition Zone, or Contributing Zone, must obtain approval for their activities from the TCEQ under 30 TAC 213 in addition to complying with the terms and conditions of the RHCP.

6.2 PARTICIPATION PROCEDURES

All entities, whether public or private, desiring to participate in the RHCP for take coverage will be subject to participation procedures detailed in this section. Those wishing to participate in the

Unlike most karst habitat, songbird habitat is likely to undergo successional changes over the 30-year life of the RHCP. Every five years, the woodland habitats having the potential to support golden-cheeked warblers and/or black-capped vireos will be recalculated on the basis of updated aerial photographs.



While HCPs typically apply to projects that lack a Federal nexus, RHCP participation will be available for projects (including those of non-federal governmental entities) that have other federal nexi (e.g., Clean Water Act section 404 permit application).

RHCP must submit a completed participation application⁷⁹ to the Foundation, along with an application fee,⁸⁰ and any additional materials required by Sections 6.2.1–6.2.3 below. Once the required form, materials, and fee have been submitted to the Foundation, and the Foundation has completed any necessary assessments and evaluations,⁸¹ the Foundation will issue a "Determination Letter" that describes the amount of authorized take. In addition, the Determination Letter will state the applicant's cost of participation in the RHCP and the period within which the Determination Letter will remain effective.

Applicants who elect to participate in the RHCP will enter into a Participation Agreement with Williamson County (the Permittee). By entering into the Participation Agreement, the applicant agrees to be bound by and comply with the applicable terms of the Permit, and in return, benefits from the authorizations granted by the Permit. In each Participation Agreement, the Service shall be named as a third-party beneficiary with the right to enforce all terms of the Participation Agreement. Once the applicant has signed the Participation Agreement, the applicant must return it to the appropriate Foundation personnel for the Foundation's signature. The Permittee will submit a copy of each fully executed Participation Agreement to the Service promptly after all signatures have been obtained.

Once all required signatures have been obtained, the Foundation will issue to the applicant, now a "participant," a Certificate of Inclusion. Certificates of Inclusion will only cover take of species covered by the RHCP, and no mitigation credit for development or Certificates of Inclusion may be provided for property located outside the jurisdictional boundaries of Williamson County; provided, however, that the County will be entitled, at its discretion, to resell any Hickory Pass Ranch conservation credits it may own to third parties for use under separate Service authorizations outside of Williamson County. As a condition of participating in the RHCP, each participant will be required to record its Certificate of Inclusion in the Real Property Records of Williamson County and to designate the specific tracts of land to which they apply. A copy of the recorded Certificate of Inclusion must be posted at the relevant property site during any activities affecting the habitat of species addressed in the Certificate of Inclusion. For example, for a participant whose Certificate of Inclusion covers impacts to golden-cheeked warbler or black-capped vireo habitat, the Certificate of Inclusion must be posted from the time vegetation clearing begins until the construction is completed. For residential development, "completed construction" means that all roads and utilities are completed to the extent they meet all applicable legal or other requirements and have obtained all requisite approval-For commercial, industrial, and multi-family developments, governmental or otherwise. completed construction means that buildings are suitable for occupancy. It is not anticipated that Certificates of Inclusion are transferable except to subsequent owners of the property to which the Certificates of Inclusion apply.

⁷⁹ The participation application form will be available on the Foundation's Web site, and hard copies will be available at the RHCP office.

⁸⁰ The application fee may be adjusted from time to time and will take into consideration the cost of any assessments or evaluations necessary for participation.

⁸¹ Appendix C provides an example of the an analysis of impacts and mitigation that was completed for a 5-mile-long extension of Ronald Reagan Boulevard between FM 2338 and State Highway 195 in the North Williamson County KFR.

So long as the Permit remains in effect and a participant is in compliance with its Participation Agreement, that participant shall be deemed to have with respect to the participant's property covered by the Participation Agreement, the full benefits and authorities of this Permit. In the event that the Service may seek to suspend, terminate, or revoke the Permit for reasons not the fault of a participant, and that participant is in compliance with the terms of its Participation Agreement, the Service shall seek to craft a remedy that does not affect that participant's rights, benefits, and responsibilities under the Permit prior to suspending, terminating, or revoking the Permit. If it is not practicable to craft such a remedy and the Service suspends, terminates, or revokes the Permit, the Service will process for issuance to any such participant a permit conferring the same rights, benefits, and responsibilities with respect to the participant's property as provided under the Permit, without additional requirements or conditions beyond those applicable to the participant under its Participation Agreement. Additionally, the Service agrees that a breach by a participant of its obligations under a Participation Agreement will not be considered a violation by the Permittee or any other participant of this Permit. In the event a participant has materially breached its Participation Agreement and, after reasonable notice and opportunity to cure, such participant fails to cure, remedy, rectify, or adequately mitigate the effects of such breach, then the County, Foundation, or Service may terminate that participant's Participation Agreement.

The Foundation will provide to the Service the Participation Agreement form and the Certificate of Inclusion form for its review and approval prior to issuance of any participation.

The following sections summarizing participation procedures present separate scenarios for potential take of the covered karst invertebrates (Bone Cave harvestman and Coffin Cave mold beetle), golden-cheeked warbler, and black-capped vireo. It is possible that during the development of certain properties more than one of the covered species could be involved.

6.2.1 Karst Invertebrates

The RHCP will provide coverage for incidental take by plan participants of two of the covered karst invertebrate species (Bone Cave harvestman and Coffin Cave mold beetle) for any project occurring within the following three KFRs: North Williamson County, Georgetown, and McNeil Round Rock. As stated earlier, no take is anticipated for Tooth Cave ground beetle, nor will take be permitted through this RHCP within the Cedar Park KFR, the only KFR in Williamson County where the Tooth Cave ground beetle is currently known to occur. Any person or persons planning to engage in activities that will lead to land disturbances within the three aforementioned KFRs may elect to enroll in the RHCP and will participate by paying a per-acre fee for the amount of Karst Zone habitat disturbed and additional fees for potential impacts to caves occupied by covered species (or, in special cases, land in lieu of cash payments; see below).

Pursuant to this RHCP, an individual or entity planning an activity that may potentially disturb karst habitat in the North Williamson, Georgetown, or McNeil/Round Rock KFRs can mitigate for take of Bone Cave harvestman and Coffin Cave mold beetle that could result from the activity as follows. First, the plan participant will have a Geologic Assessment prepared in accordance with TCEQ standards (TCEQ 2004). If that assessment discloses the presence of

caves with potential habitat for listed species, a presence/absence karst survey must also be prepared to Service standards (USFWS 2006; see also Appendix D, or as subsequently amended). At least three cave surveys must be conducted, each separated by one week. Unless otherwise authorized by the Service, surveys may not occur during February and August because these months are typically low-activity periods for the cave fauna (USFWS 2006). If either the Bone Cave harvestman or the Coffin Cave mold beetle is detected during the surveys, the cave will be mapped to the extent possible to delineate its footprint. Knowledge of the cave's footprint is needed for project planning purposes and for determining potential project impacts to the cave.

The plan participant will then submit a conceptual development plan, ⁸² along with the results of the Geologic Assessment and presence/absence karst survey, to the Foundation for review, verification of findings, ⁸³ and assessment of potential take. The Foundation review will be performed by a Service-permitted karst invertebrate scientist at the expense of the participant, costs of which will be determined in advance based on the number of caves found on the property. After a timely review (30 days) of the participant's proposal and supporting documents, the Foundation will provide the participant with an assessment of the participation (mitigation) fee required to be covered by the terms of the Permit. The fee will be based on the total number of acres of karst present and the assessed project potential to impact listed karst species.

In some cases a participant may satisfy mitigation requirements by providing land in lieu of cash payments, but only if acquisition of that land by the County contributes to fulfillment of RHCP objectives. In such cases, land values will be verified by appraisals acceptable to the County.

6.2.1.1 Mitigation Fees for Impacts to Karst Habitat

A \$100/acre participation fee will be charged for all land disturbed by participants in the Williamson County Karst Zone as delineated in Figure 3-1,84 and verified with each participant's conceptual development plan. The \$100/acre fee provides mitigation for any and all incidental impacts to the Bone Cave Harvestman and Coffin Cave mold beetle that may occur on a participant's property other than those in the immediate vicinity of a known species-occupied cave as described below in Section 6.2.1.2.

One of the fundamental principles of Endangered Species Act section 10(a)(1)(B) is that the incidental take permit is supposed to allow a landowner *certainty* about the kinds of activities that can be legally conducted on his or her land now and in the future. The primary reason for the RHCP fee assessment of \$100/acre for impacts to karst habitat is to provide compensation for

⁸² The conceptual development plan will at a minimum include property boundary, spine infrastructure and development envelope, and recharge features identified during the Geologic Assessment. The plan submittal will be in Auto CADD or Microstation format.

⁸³ Due to the technical nature of karst presence/absence surveys, the Foundation will have on-staff or under contract Service-approved and -permitted karst biologists to implement and/or verify the presence/absence surveys. Verification of findings may require cave site visits.

⁸⁴ The \$100/acre Karst Zone fee will not be charged in addition to the higher cave-specific fees described in Section 6.2.1.2 for the specific impacts covered by those fees.

the previously undetected voids containing the listed species that are discovered and impacted during construction and to provide participants with certainty on how to proceed in the event previously undetected voids and/or mesocaverns are encountered during the land disturbance/construction process. Many karst features, such as solution cavities and caves, are not identified during the Geologic Assessment because they exhibit little or no surface expression, but are discovered by excavation during the construction phase of a project. This plan anticipates that up to one species-occupied cave per year will be discovered by an RHCP participant and impacted during the construction phase of development. The RHCP participation fee provides certainty that if and when listed karst species are found in the previously undetected void, under most circumstances that void may be closed according to TCEQ guidelines (see following paragraph) and development may proceed, with listed species take if any, being covered by the RHCP. No additional fees would be assessed.

Discovering previously undetected voids is especially common during utility trenching (TCEQ 2004). TCEQ guidelines provide instructions as to how the various types of features must be treated (TCEQ 2004) to ensure that water quality and the stability of the utility installation are protected. The guidelines describe two strategies for dealing with unanticipated features, depending on the feature's extent and significance. Small, isolated solution cavities may be filled with concrete according to the guidelines. If more extensive voids are exposed, TCEQ must be contacted. Currently, such voids are usually isolated from construction while certain precautions are taken, such as double wrapping electrical conduit or hanging pipes from the void's ceiling, before the feature is covered over and construction at the feature's location proceeds.

In addition to providing mitigation for impacts to previously undetected voids that may be occupied by listed species, the Karst Zone fee will mitigate for potential impacts to known species-occupied caves resulting from disturbance more than 345 feet from the cave's footprint.

6.2.1.2 Participation Fees for Impacts to Species-Occupied Caves

Additional fees will be paid based on two levels of disturbance to caves containing listed karst species as presented in Figure 4-2 and explained in Chapter 4, Section 4.2.3.1. For those projects with unusually low impervious cover, or for caves that have especially large and extensive footprints, or caves that have suffered previous encroachment, so impacts and fees will be assessed on a case-by-case basis. If the cave or caves do not contain listed species as determined by the karst survey, the additional fees will not apply. Participation fees for impacts to listed species are based on a charge for assumed impact and/or take that increases with increased proximity of disturbance to the cave. The two levels of disturbance and associated fee structure are summarized below.

⁸⁵ The possibility exists that a previously undetected void discovered during project construction could be of sufficient size and extent that it is impossible to effectively close per TCEQ standards such that the planned development would no longer be possible.

⁸⁶For example, Inner Space Caverns, an important cave for the Coffin Cave mold beetle as well as other troglobites,, already has Interstate 35 over the cave footprint. Additional impacts to the cave by encroaching development may not be held to the same standards as would be applied to a cave that had no previous impacts, but would be assessed based on the level of additional disturbance to the cave ecosystem.

Chapter 6
Participation Process

Impact Zone A. Take is assessed for any disturbance that occurs within a band of surface habitat extending from a radial projection 50–345 feet⁸⁷ from the cave footprint based on the cave map (see Section 4.2.3.1 in Chapter 4 and Section 6.2.1, above). This band is identified as "Impact Zone A" on Figure 6-1. Proposed disturbance within this impact zone will be assessed a participation fee of \$10,000/disturbed acre. This fee does not apply when impacts also occur within Impact Zone B; i.e., within 50 feet of a species-occupied cave footprint (see below).

Impact Zone B. Disturbance within 50 feet of the cave footprint is assumed to have destroyed the long-term viability of the cave ecosystem (see Chapter 4, Section 4.2.3.1). This area is identified as "Impact Zone B" on Figure 6-1. Because the potential for loss of endangered species is highest in this zone, impacts in the zone are assessed the highest participation fee. A flat fee of \$400,000 will be assessed for any incursion within 50 feet of a species-occupied cave footprint. This fee covers all impacts within 345 feet of the cave footprint; no additional fees are charged to mitigate for impacts to that area.

Figure 6-1 illustrates the total participant fee levies for a representative situation. The landowner in this example is developing property that includes 179 acres of Karst Zone and two species-occupied caves. The landowner will be assessed a fee of \$100/acre to mitigate for potential impacts to covered species in the Karst Zone. Because landowners will not be charged both the Karst Zone mitigation fee and a cave-specific fee for the same affected area, the landowner in this example will be assessed a Karst Zone fee for approximately 155 acres, or \$15,500 (155 acres equals the 179 acres in the Karst Zone minus approximately 24 acres for impacts associated with Impact Zones A and B around Caves #1 and #2). For impacts to Cave #1, the landowner will be assessed a flat fee of \$400,000 because residential lots and a road will encroach into Impact Zone B. For impacts to Cave #2, a portion of Impact Zone A will be developed but Impact Zone B will be avoided. Assessed fees for impacts to Cave #2 will be \$10,000/acre for the 2.3 acres disturbed in Impact Zone A, or \$23,000. All mitigation fees together will total \$438,500.

Note that a portion of Impact Zone A of Cave #1 is located on adjacent property. In this example, Cave #1 is now considered destroyed; thus, the adjacent landowner would not be responsible for any future impacts to the portions of Impact Zone A on his property. Assume, however, an alternative scenario in which the depicted development plan called for some encroachment into Impact Zone A of Cave #1, but no impacts within 50 feet of the cave footprint (i.e., no effects to Impact Zone B). If that were the case, and the adjacent property were to be developed by a participant in the RHCP, that participant would be required to mitigate for any impacts to the cave as stipulated in the plan. To assist with identification of cases where impact zones cross property boundaries, the Foundation will maintain a GIS database of compliance projects covered by the RHCP that will be made available to the Service.

⁸⁷ The distance of 345 feet represents 100 percent of the cricket foraging area per findings of Taylor et al. (2005).

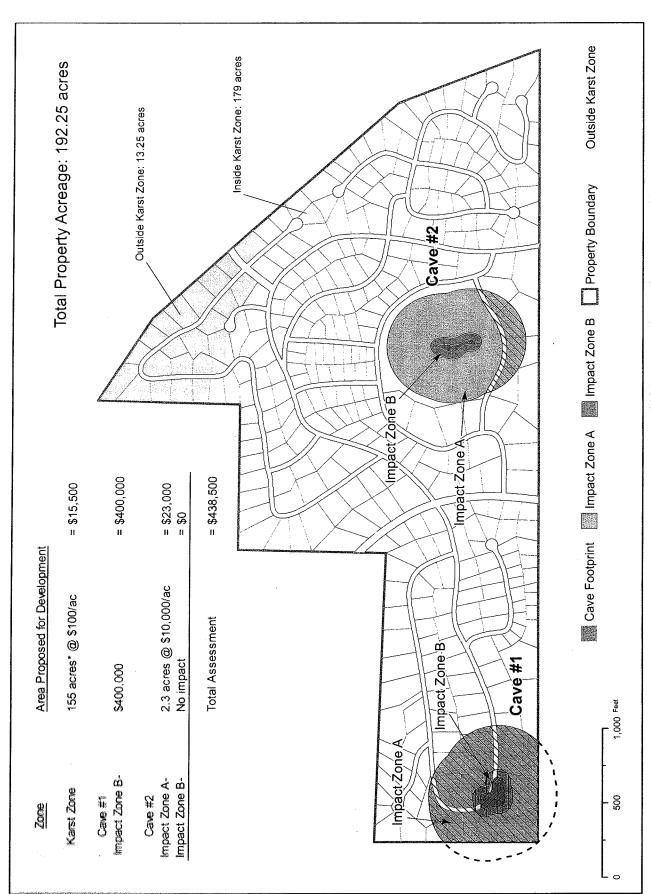


Figure 6-1. Kasrt participation diagram scenario.

*155 acres = 179 acres less 24 acres of impact around Caves #1 and #2.

6.2.2 Golden-cheeked Warbler

Pursuant to this RHCP, an individual or entity planning an activity that may potentially disturb golden-cheeked warbler habitat in Williamson County can mitigate for take of this species. The Foundation will establish the level of expected take after a review of the proposed development activities and the habitat assessment, or the presence/absence survey if one has been performed. If the RHCP participant chooses not to conduct a presence/absence survey, the level of take and mitigation will be based on the amount and quality of potential warbler habitat affected by development activities. If a presence/absence survey is conducted (one year) and no warblers are detected, no mitigation will be required. If warblers are detected during the presence/absence survey, mitigation for the affected occupied habitat will be required, normally at a 1:1 ratio (see Section 5.4.1.3 for an explanation of exceptions). Costs for the habitat assessment will be at the participant's expense and will normally not exceed one person per day for each 40 acres (16 hectares) of habitat. This assessment will be done in a timely (30 days) fashion.

Plan participants whose activities will affect potential golden-cheeked warbler habitat will pay a per-acre fee based on the amount of potential golden-cheeked warbler habitat present and impacted by development. The RHCP defines direct impacts as those areas where potential or occupied habitat is actually destroyed or significantly modified. For this RHCP, mitigation for direct impacts will normally be valued on a 1 to 1 ratio, where for every acre of habitat destroyed one acre of mitigation will be required (see Section 5.4.1.3 for an explanation of exceptions). Indirect impacts are those impacts that occur in warbler habitat adjacent to destroyed or modified habitat; these impacts will be assessed at 50 percent of the value of direct impacts for a distance of 250 feet (76.2 meters) from the edge of the direct impacts. As with karst impacts, on a caseby-case basis, the Foundation may allow a participant to set aside potential or occupied warbler habitat in lieu of mitigation fees when the set-aside habitat contributes to RHCP objectives. All land-in-lieu-of-fee transactions will be at the discretion of the Foundation. The Foundation will provide the plan participant an assessment of the participation fee required in order for the participant to be covered by the terms of the Permit. The participation fee⁸⁹ for take of goldencheeked warbler habitat is \$7,000/acre in the first year fees are charged and increasing by an estimated \$500/acre each year for as long as the mitigation credits last (see Figure 6-2 for an example from Year 2 of the plan). 90

⁸⁸ Generally, all contiguous woodlands having the characteristics of potential habitat will be considered occupied if any portion of such woodlands are found to be occupied by warblers during a survey.

⁸⁹ These fees are based on the current going rate of Hickory Pass Ranch Conservation Bank credits and a small handling fee to accommodate Foundation costs.

⁹⁰ For specific County projects requiring golden-cheeked warbler mitigation, the County will reserve the right to utilize Hickory Pass Ranch credits already purchased from the Hickory Pass Ranch Conservation Bank on a first come, first served basis until such credits are exhausted.

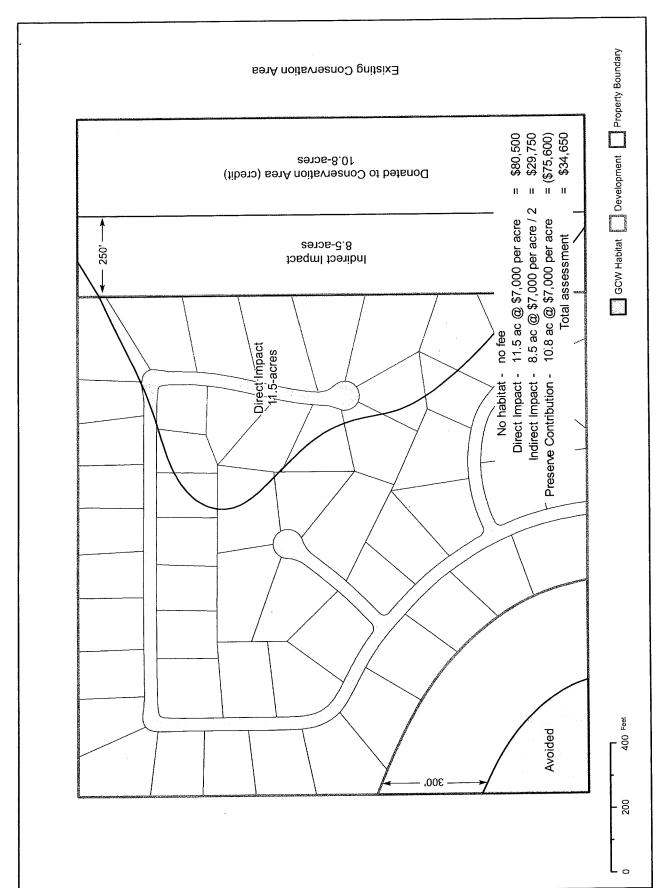


Figure 6-2. Example of golden-cheeked warbler RHCP participation fees.

In the example illustrated in Figure 6-2, the participant's property contains golden-cheeked warbler habitat and abuts an established conservation area⁹¹ for the warbler. As shown in the figure, the participant has decided to develop a portion of the habitat on his property, avoid a portion of the habitat, and dedicate a portion of the habitat to the neighboring conservation area.

Also in this example, the participant opted not to have bird surveys done (bird surveys may result in lower participation fees but may also significantly delay project construction). A fee was assessed for the warbler habitat to be destroyed (direct impact) and for the habitat to be left intact within 250 feet of the destroyed habitat (indirect impact). No fee was assessed for the avoided habitat because no development will take place within 300 feet of that habitat. For the habitat dedicated to the conservation area, the participant received a per-acre credit equal to the per-acre participation fee.

As discussed previously in Chapter 5, Section 5.4.1.3, during the first several years of the RHCP, the mitigation for the disturbance of warbler habitat in Williamson County will occur by the Foundation's purchase of mitigation credits from the Service-approved Hickory Pass Ranch Conservation Bank in adjacent Burnet County, as well as credits available due to the acquisition of in-county preserves such as the Whitney Tract. The RHCP proposes a mitigation ratio normally of 1 acre preserved for every 1 acre of impact to occupied and/or suitable golden-cheeked warbler habitat throughout the Williamson County RHCP plan area (see Section 5.4.1.3 for an explanation of exceptions to the 1:1 ratio).

6.2.3 Black-capped Vireo

Pursuant to this RHCP, an individual or entity planning an activity that may potentially disturb black-capped vireo habitat in Williamson County as delineated in Chapter 3, Figure 3-6 can mitigate for take of this species by paying a per acre fee for direct impacts to vireo habitat. The Foundation will establish the level of expected take on a project-by-project basis after a review of the development activities proposed and the status of the vireo habitat on the subject property. The Foundation biologists will review the preliminary plat or conceptual development plan, compare this with the habitat maps, and visit the site for verification of the amount of habitat expected to be impacted. Costs for this assessment will be at each participant's expense and will normally not exceed one person per day for each 40 acres (16 hectares) of habitat. This assessment will be done in a timely (30 days) fashion.

Plan participants whose activities will affect black-capped vireo habitat will pay a per-acre fee based on the amount of black-capped vireo habitat potentially impacted (occupied habitat if presence/absence surveys confirm the presence of vireos; potential habitat if surveys are not conducted). The Foundation will provide the RHCP participant an assessment of the participation fee required in order for the participant to be covered by the terms of the Permit. The participation fee for take of black-capped vireo habitat will normally be calculated on a

⁹¹ For the purposes of this RHCP a golden-cheeked warbler conservation area is defined as a block of protected potential or occupied warbler habitat at least 250 acres (101 hectares) in size that is under Service-approved, long-term management for the benefit of the warbler. This minimum size is based on findings of Coldren (1998) (see the discussion of habitat quality and patch size in Section 3.2.2.1.1).

1:1 ratio and will start at \$5,000/acre, subject to change as costs change (see Section 5.5.1.3 for an explanation of exceptions to the 1:1 ratio).

TechShare Resource Sharing Addendum Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Jay Schade, Information Technology

By:

Department: Information Technology

Agenda Category:

Regular Agenda Items

Information

Agenda Item

Discuss and take appropriate action on Amendment No. 1 to the TechShare Resource Sharing Addendum for the Common Integrated Justice System (CIJS) Court Administration System.

Background

The TechShare Resource Sharing Addendum requires an annual renewal, generally along the timeframe of our fiscal year. This amendment simply extends the agreement from September 30, 2008 to September 30,2009 and states the anticipated payments for this fiscal year. These payments remain unchanged from the original agreement. The Enterprise Mods and CUC Oversight were funded as part of the project and the Annual Maintenance is part of our department budget each year.

This is the agreement through which we purchased the Odyssey Justice System. By remaining in the TechShare project we receive the pricing negotiated by the participants which also includes a rebate of a portion of our investment when we meet our enrollment quota. We would only receive that rebate if we are still participating in the TechShare agreement when the rebate is awarded.

No additional funds are being requested.

Fiscal Impact

From/To Acct No. Description Amount Sort Seq

Attachments

Link: TechShare

Form Routing/Status

Form Started By: Jay Started On: 04/20/2009 10:02

Schade AM Final Approval Date: 04/20/2009

AMENDMENT NO. 1 ("Amendment 1") TO TECHSHARE RESOURCE SHARING ADDENDUM COMMON INTEGRATED JUSTICE SYSTEM (CIJS) COURT ADMINSTRATION SYSTEM

The Parties hereby amend the TECHSHARE RESOURCE SHARING ADDENDUM ("Addendum") for the Common Integrated Justice System ("CIJS") Court Administration System that was approved by the County of Williamson, Texas ("Williamson County") and became effective on July 11, 2006 and executed by all parties by July 14, 2006.

- 1) The effective date of the Addendum is extended to September 30, 2009.
- 2) Attachment A of the Addendum is amended by replacing "Anticipated Payments to Texas Conference of Urban Counties in Fiscal Year 2008" with the attached "Anticipated Payments to Texas Conference of Urban Counties in Fiscal Year 2009."
- 3) All provisions of the Addendum and any written amendment thereto, not inconsistent herewith, shall be in full force and effect.

Executed this	day of	, 20
COUNTY OF WILL	JIAMSON	
By: County Judge		
Approved as to form	:	
Name:		
Title:		
Date:		

TEXAS CONFERENCE OF URBAN COUNTIES

By: Executive Director 4/15/09

Attachment A - Financial Plan

Anticipated Payments to Texas Conference of Urban Counties in Fiscal Year 2009:

The following schedules show the estimated dates for payments to the Texas Conference of Urban Counties for CIJS Software, Enterprise Modifications and Oversight for Fiscal Year 09. The schedules will be updated at the beginning of each Fiscal Year and presented to the Williamson County Commissioners Court for approval.

Maintenance and support payments are included in accordance with the Master License Agreement (Attachment E) and Maintenance and Support Services Agreement (Attachment C).

Payments to Tyler Technologies for Implementation Services will continue to be made directly to Tyler Technologies by Williamson County in accordance with the License Participation Agreement (Attachment B), the Implementation Budget (included with the License Participation Agreement), and the Implementation Plan.

Fiscal Year 2009	A	mount	Estimated Payment Date
Common Integrated Justice Software			
Annual Maintenance			
Court Administration	\$	140,000	May 2009
Texas County Enterprise System Mods			
Williamson County Investment	\$	25,000	May 2009
CUC Oversight	[
Contract Administration	\$	30,600	May 2009
Fiscal Year 2009	\$	195,600	

Lease Agreement

Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Jim Gilger, County Auditor

By:

Department: County Auditor

Agenda Category:

Regular Agenda Items

Information

Agenda Item

Discuss and take appropraite action on a proposed lease agreement with Electronic Corporate Pages, Inc. to install and operate radio communication equipment and building on private property in Florence, Texas.

Background

Fiscal Impact

From/To Acct No. Description Amount Sort Seq

Attachments

Link: Tower Lease

Form Routing/Status

Form Started By: Jim Started On: 04/22/2009 09:37

Gilger AM Final Approval Date: 04/23/2009

Tower Lease Agreement

In the State of Texas and County of Williamson

In consideration of the covenants herein contained between Electronic Corporate Pages, Inc., herein referred to as "Landlord" and, Williamson County, Texas, a political subdivision of the state of Texas, herein referred to as "Tenant," and the rentals agreed to be paid, the parties mutually agree to enter into this Tower Lease Agreement ("Lease") as follows:

I.

AGREEMENT TO LEASE; INSTALLATION, OPERATION AND MAINTENANCE OF EQUIPMENT AND BUILDING

Landlord hereby grants Tenant permission to install and operate the following described radio communications equipment and building on or in Landlord's radio tower facility and property described as:

Being 1.00 acre of land, more or less, out of the James Miller Survey, Abstract No. 414 (record deeds recite out Edward Lang Survey, Abstract No. 7), in Williamson County, Texas, being the same property described as Tract 1 and conveyed to Dabney/Strawn, LLC, a Texas limited liability company, d/b/a Cybertel, a Texas Corporation, by Warranty Deed dated May 23, 2008, recorded under Document No. 2008042742 of the Real Property Records of Williamson County, Texas (collectively the "Premises").

Subject to any existing leases, easements, or rights-of-way, Tenant may install, maintain, remove, replace and operate upon the Premises, subject to the terms and conditions set forth herein, the following (collectively the "Tenant's Property"):

- A. The antennas with built-in electronics and other communications equipment, which are depicted and described in Exhibit "A", which is attached hereto and incorporated herein for all purposes.
- B. A weather resistant power supply cable between antennas and power supply equipment, shall be anchored firmly to the tower.
- C. Radio communications equipment consisting of a transmitter, receiver and control equipment to be installed in Tenant's equipment house near base of the tower.
- D. Construct and maintain a building upon the Property not to exceed 450 square feet. The concrete pad upon which the building shall be constructed shall be centered upon a point located upon the Property at 30:52:45.2N Lat. and 97:43:27.3W Long.

 $\tilde{T}_{A_{1},\ldots,A_{n-1}}$

II. ACCESS TO PREMISES

- A. Access to Premises. Landlord agrees that, during the Initial Term of this Lease and any extension thereafter, Tenant shall have reasonable ingress and egress to the Premises for the purpose of maintenance and repairs to Tenant's Property. For purposes of such ingress and egress during the Initial Term of this Lease and any renewal term thereafter, Tenant shall be allowed to use the easement designated as Tract 2 in a Warranty Deed dated November 20, 2008, recorded under Document No. 2008087441 of the Real Property Records of Williamson County, Texas. It is further agreed, however, that only qualified contractors approved by the Landlord, or persons under Landlord's direct supervision will be permitted to install or remove antenna or coax cable or to enter or climb the tower structure itself. Coax must be permanently identified at the top and bottom of line.
- B. Access to Tenant's Building. Only Tenant shall have access to the Tenant's building, which is described under Article I above. If Landlord wishes to access Tenant's building, Landlord shall request permission from Tenant for such access and Tenant shall accompany Landlord during its access to the building.

III. TENANT'S COVENANTS

Tenant covenants and agrees that Tenant's equipment, its installation, operation and maintenance will:

- A. In no way damage the building or tower structure and accessories thereto.
- B. Only use the frequencies listed in Exhibit "A" and will not interfere with the operation of existing tenants operational radio transmitting and receiving equipment, as specified in their respective leases. In the event there is interference, Tenant will promptly take all steps necessary to correct and eliminate such interference. If said interference cannot be eliminated within a reasonable period of time, tenant agrees to remove their respective equipment from Landlord's property and this Lease shall therefore be terminated.
- C. Not interfere with the maintenance of Landlord's tower and the tower lighting system.
- D. Comply with all applicable rules and regulations of the Federal Communications Commission, and electrical codes of the state and county concerned.
- E. Under this Lease, the Landlord assumes no responsibility for licensing, operation and or maintenance of Tenants radio equipment. Landlord has the responsibility of observing tower lights and maintaining records including notification to Federal Aviation Agency of any failure and repairs and correction of same.

F. Special conditions: **Tenant will be responsible for all applicable FAA and FCC rules on tenant's equipment**. Tenant will also be responsible for any taxes on tenant's equipment if assessed by county or other applicable taxing authority.

IV. RENT; PAYMENT OF RENT AND RENT ADJUSTMENT

- A. Rent. During the first year of the Initial Term, Tenant shall pay to Landlord the sum of \$1,500.00 per month ("Initial Base Rent") for the use of Landlord's radio tower facility and Premises, as set forth herein, Said Rent shall be paid on the first day of each and every calendar month during the Initial Term, beginning on _______ 1, 20____ and continuing regularly and monthly on the first day of each and every calendar month thereafter.
- B. Payment of Rent. Payments shall be made in advance without notice or demand and without deduction or offset. A late charge of five percent (5%) of the past due payment amount shall be due if Landlord has not received the entire monthly Rent amount by the fifteenth (15th) day after the due date for such payment. Rent shall be paid to Landlord at 12113 Roxie Dr, Suite 200. Austin, Tx-78729 or such other location as Landlord may hereafter designate in writing. Rent and any other sums payable hereunder to Landlord, which is received after the due date is delinquent and Tenant shall be in default under this Lease.
- C. Base Rent Adjustment. Beginning one year from the Commencement Date, the Base Rent will be adjusted on each anniversary of the Commencement Date (the "Adjustment Date") by an increase of 2% and each subsequent year's rent shall be the prior year's rent plus an increase of 2% of the rent due for the year prior to said increase.

V. TERM OF LEASE AND RENEWAL OF LEASE

VI. INTERFERENCE

During the Initial Term of this Lease and any renewal term thereafter, Landlord will not grant a similar radio tower rental, license or lease agreement or any rights and/or interests of any kind to another party, if such a grant would in any way affect, or interfere with Tenant's use of Landlord's radio tower facility and Premises, as set forth herein. Tenant shall not assign or sublet its lease hereunder, nor change the transmitting frequency, power, or character of its equipment, as stated in Exhibit "A," without first obtaining the written consent of the Landlord.

VII. DISASTER AND CASUALTY PROVISION

The parties hereto agree that Landlord shall in no way be liable of loss of use or other damages of any nature arising out of the loss, destruction or damage to the Premises, the tower, equipment, building or to tenant's equipment located thereon, by fire explosion, windstorm, water, or any other casualty or acts of third parties. In the event the tower or other portions of the Premises are destroyed or so damaged as to be unusable, the Landlord shall be entitled to elect to cancel and terminate this Lease, or in the alternative, may elect to restore the Premises, in which case the tenant shall remain bound hereby, but shall be entitled to an abatement of rentals during the loss of use.

VIII. DEFAULT AND REMEDIES

- A. The Landlord shall consider the following items as events of default:
 - 1. The failure to pay rentals required hereunder when due.
 - 2. The failure to cure, within thirty (30) days after written notice thereof, any breach of these promises, undertakings and terms and conditions in this Lease.
 - 3. The filing of a voluntary petition under the bankruptcy laws, a composition or arrangement of creditors, an assignment for the benefit of creditors, or any other act reasonably indicating equitable or legal insolvency.
 - 4. Abandonment of the Premises.

marketika kuralika di salah salah salah salah salah salah salah salah salah salah salah salah salah salah salah

- B. The Landlord shall be deemed to have committed an event of default if Landlord fails to cure, within thirty (30) days after written notice, any breach of the promises, undertakings and terms and conditions in this Lease.
- C. If Tenant commits an event of default, or in the event the Tenant shall otherwise breach or fail any of its undertakings or obligations hereunder, Landlord shall be entitled, at Landlord's option, to remove all property and equipment of Tenant which may be

situated upon the Premises, without notice and without being guilty or liable in any manner for trespass, thereby terminating this Lease, or the Landlord shall be entitled to enforce all other remedies provided at law or in equity. To secure the performance of its undertakings hereunder, tenant hereby grants to Landlord a Landlord's lien and security interest in and to Tenant's property and equipment situated upon the Premises and agrees that in the event of default and foreclosure of such lien and security interest, such property may be disposed of in a commercially reasonable manner and the proceeds distributed in accordance with Chapter Nine (9) of the Uniform Commercial Code.

D. If Landlord shall be deemed to have committed an event of default, Tenant shall be entitled to avail itself of all remedies provided at law or in equity. Landlord's liability under this section is limited to the lesser of Tenant's actual damages or one year's rent under the terms of this Lease Agreement. Landlord shall further not be liable for any consequential or incidental damages incurred or suffered by Tenant.

IX. **TAXES**

The parties hereto stipulate that the rental rights herein granted relate to real property. In the event any sales or use tax should ever be payable on account of the lease agreement or the rental payment herein granted reserved, the tenant hereby agrees to pay same as additional rental, or to furnish such documentation as is necessary or appropriate to establish that such rental payments are exempt from sales or use tax.

g the straight words

X. **INSURANCE**

Insurance: Tenant certifies that it is a political subdivision of the State of Texas and, as such, claims against Tenant are subject to the liability and damage limitations of the Texas Tort Claims Act. Due to such fact, Tenant has chosen to self-insure rather than to obtain insurance coverage for its residual liability, if any. The full faith and credit of Williamson County, Texas, therefore, stands behind any lawful claims against it, its officials, employees, or agents.

Tenant shall, however, require that its contractors obtain and maintain commercial general liability insurance in an aggregate amount of not less than \$2,000,000.00 and name Landlord as an additional insured on the policy or policies. During the Initial Term and any renewal term, the policy (and all renewals or replacements) shall be in the form and content with such endorsements and modifications, if any, as Landlord shall reasonably require from time to time. Each policy shall contain a provision that it shall not be cancelled without 30 days prior notice to Landlord. Tenant shall require that its contractors provide Landlord with certificates of Insurance evidencing coverage required (and renewals of such insurance) not later than 10 days prior to the expiration date thereof. Tenant is advised that any insurance carried by or on behalf of Landlord does not cover Tenant, Tenant's Property, Tenant's business operation or any interest of Tenant. Tenant's contractors shall be responsible for providing, at such contractor's cost, all

insurance required herein to be maintained by Tenant's contractors, in addition to any and all other insurance of whatever nature or kind which Tenant, at Tenant's option, shall maintain. Tenant's use and operations on the Premises shall not cause an increase in or termination of any and all insurance upon or with respect to the Premises. Tenant shall take all necessary actions to comply with all requirements of such coverage.

XI. UTILITIES

It is understood and agreed that the Tenant will be responsible for installing all electrical transmission lines and equipment necessary for Tenant's electrical service needs upon the Premises and that Tenant shall pay for all utility services received by Tenant upon the Premises. Furthermore, Tenant shall have its own separate metering in relation to the electricity that is being used by Tenant on the Premises. It is also understood that no air conditioning system exists at this site and that Tenant must provide such air conditioning for Tenant's equipment and improvements should Tenant need same.

XII. NOTICE

All notices and other communications required or permitted hereunder and tender of payment of rentals due hereunder shall be considered properly given or made when deposited with the U.S. Postal Service, properly addressed and bearing sufficient postage, but shall only be considered to be effective when actually received. Alternative carriers such as Airborne, DHL, United Parcel Service, Federal Express, or Lonestar Overnight shall also be considered acceptable under this Lease. The addresses of the parties for all purposes here of shall be as follows:

Landlord:

Electronic Corporate Pages, Inc.

12113 Roxie Dr

Suite 200

Austin, Tx, 78729

Tenant:

Williamson County Judge Dan A. Gattis (or successor) 710 Main Street, Suite 101 Georgetown, Texas 78626

With a Copy to:

Ron Winch

Wireless Communications Manager Williamson County Department of Emergency Communications

508 Holly Street

Georgetown, Texas 78626

XIII. OWNERSHIP OF PREMISES AND TENANT'S PROPERTY

- A. Ownership of Premises. Landlord hereby represents to Tenant that it owns the radio tower facility and Premises in fee simple and that no other party has any other rights, title or interest in the Premises as of the date of the last party's execution hereof; SAVE and EXCEPT a leasehold interest which allows for a use of the Premises that will not interfere with Tenant's intended use of the Premises hereunder. Landlord hereby acknowledges that Tenant relies upon Landlord's representations regarding its ownership of the radio tower facility and Premises.
- B. Ownership of Tenant's Property. Landlord agrees and acknowledges that, at all time during this Lease, all of Tenant's Property shall remain the property of Tenant. In the event of any termination of this Lease, regardless of the reason for such termination, Tenant agrees to remove, at Tenant's sole cost and within ninety (90) days of such termination, all of Tenant's Property from the Premises; and Landlord acknowledges that Tenant shall have such right to remove Tenant's Property in such manner.

XIV. INABILITY TO OCCUPY

If after execution of this Lease, Tenant is unable to occupy and use Landlord's radio tower facility and Premises due to action of the FCC or for any other reason which is beyond Tenant's control (i.e. tower load capacity does not allow for the installation of all of Tenant's Property), this Lease may be terminated by either party without further obligation on the part of either party.

XV. AGREEMENT TO HOLD HARMLESS

- A. Landlord shall not be liable for any loss, damage or injury of any kind or character to any person or property arising from or caused by any of Tenant's Property; or caused by or arising from any act or omission of Tenant and/or Tenant's agents, invitees, employees, contractors, officers, or occasioned by the failure of Tenant to maintain Tenant's Property in safe condition; and Tenant hereby agrees to hold Landlord entirely free and harmless from all liability for any such loss, damage, or injury of other persons, and from all costs and expenses arising there from. The terms of this indemnity provision shall survive any termination of this Lease.
- B. Tenant shall not be liable for any loss, damage or injury of any kind or character to any person or property arising from or caused by any defect in any building, structure or other improvement on the Premises that is not owned by Tenant; or in any equipment or other facility to which Tenant does not own; or caused by or arising from any act or omission of Landlord and/or Landlord's agents, invitees, employees, contractors, officers, lessees, licensees or anyone else in privity with Landlord or occasioned by the failure of Landlord to maintain the Premises in safe condition; and

Landlord hereby agrees to hold Tenant entirely free and harmless from all liability for any such loss, damage, or injury of other persons, and from all costs and expenses arising there from. The terms of this indemnity provision shall survive any termination of this Lease.

XVI. RIGHT OF FIRST REFUSAL

During the Initial Term of this Lease and any extension thereafter, if Landlord should desire to sell the Premises pursuant to any bona fide offer which it shall have received, it shall offer to sell the Premises to Tenant at the same price as that contained in such bona fide offer. Tenant shall have thirty (30) days from and after receipt thereof to decide whether or not to purchase the Premises at such price. If Tenant shall give notice of intent not to purchase or shall give no notice within the time herein limited, Landlord may accept such offer and proceed with the sale thereunder. If Tenant notifies Landlord that it elects to purchase the Premises at such price, the parties shall enter into a contract of purchase and sale forthwith. Such contract shall provide, among other things, for prorating taxes to date of closing and for the conveyance of good and marketable title by general warranty deed, conveying title which is insurable at the usual title insurance rates with only the customary title insurance exceptions.

The above right of first refusal shall not apply in any case wherein the Landlord is selling the Premises along with all other assets of Electronic Corporate Pages, Inc. or its successor. The Tenant's right of first refusal shall only apply if Landlord is selling only the Premises and the improvements thereon.

XVII. ENVIRONMENTAL

ENVIRONMENTAL. Tenant represents, warrants and agrees that it will conduct its' activities on the Premises in compliance with all applicable Environmental Laws as follows:

Tenant agrees not to use or possess any "Hazardous Substance" on the Premises. Tenant shall be responsible for, and shall promptly conduct any investigation and remediation as required by any "Environmental Laws" for all spills or other releases of Hazardous Substances on the Premises caused by Tenant.

A. "Environmental Laws" means all federal, state and local environmental laws, rules, regulations, ordinances, judicial or administrative decrees, orders, decisions, authorizations, permits and common law (collectively "Laws") pertaining to the protection of human health and/or the environment, including, but not limited to, the Resource Conservation and Recovery Act, 42 U. S. C. §§ 6901, et seq., the Clean Air Act, 42 U. S. C. §§ 7401, et seq., the Federal Water Pollution Control Act, 33 U.S. C. §§ 1251, et seq., the Emergency Planning and Community Right to Know Act, 42 U.S.C. §§ 1101, et seq., the Comprehensive Environmental Response, Compensation

and Liability Act, 42 U.S.C. §§ 9601, et seq., the Toxic Substances Control Act, 15 U.S. C. §§ 2601 et seq., the Oil Pollution Control Act, 33 U.S.C. §§ 2701, et seq., and Texas Laws, and all other comparable local, state or federal Laws pertaining to the environment, natural resources, environmental sensitivity including, but not limited to, aquifers, critical or sensitive areas and areas of historical or archeological significance.

- B. "Hazardous Substance" means any hazardous or toxic substances as defined by the Comprehensive Environmental Response, Compensation and Liability Act, as amended from time to time; any hazardous waste as defined by the Resource Conservation and Recovery Act of 1976, as amended from time to time; any and all material waste or substance defined as hazardous pursuant to any federal, state or local Laws; and any substance which is or becomes regulated by any federal, state or local governmental authority; any oil, petroleum products and their by-products.
- C. "Radiation" Tenant shall at all times comply with the radiation regulations under the Telecommunications Act and specifically the RF Safety section including but not limited to 47 CFR 1.1307. User shall obtain and pay for any radiation study required for Tenant's operation, equipment, or Landlord's equipment used by Tenant.

XVIII. MISCELLANEOUS

- A. Force Majeure. If the party obligated to perform is prevented from performance by an act of war, order of legal authority, act of God, or other unavoidable cause not attributable to the fault or negligence of said party, the other party shall grant such party relief from the performance of this Lease. The burden of proof for the need of such relief shall rest upon the party obligated to perform. To obtain release based on force majeure, the party obligated to perform shall file a written request with the other party.
- B. Severability. If any provision of this Lease shall be held invalid or unenforceable by any court of competent jurisdiction, such holding shall not invalidate or render unenforceable any other provision hereof, but rather this entire Agreement will be construed as if not containing the particular invalid or unenforceable provision or provisions, and the rights and obligation of the parties shall be construed and enforced in accordance therewith. The parties acknowledge that if any provision of this Lease is determined to be invalid or unenforceable, it is the desire and intention of each that such provision be reformed and construed in such a manner that it will, to the maximum extent practicable, give effect to the intent of this Lease and be deemed to be validated and enforceable.
- C. Venue and Governing Law. Each party to this Lease hereby agrees and acknowledges that venue and jurisdiction of any suit, right, or cause of action arising out of or in connection with this Lease shall lie exclusively in either Williamson County, Texas or in the Austin Division of the Western Federal District of Texas, and the parties

hereto expressly consent and submit to such jurisdiction. Furthermore, except to the extent that this Lease is governed by the laws of the United States, this Lease shall be governed by and construed in accordance with the laws of the State of Texas, excluding, however, its choice of law rules.

- D. Successors and Assigns. This Lease shall be binding upon and inure to the benefit of parties hereto and their respective successors, executors, administrators, and assigns.
- E. Assignment. Landlord may not assign, sublet, or transfer its interest in or obligations under this Lease without the prior notice to all parties to this Lease.
- F. No Third Party Beneficiaries. This Lease is for the sole and exclusive benefit of the parties hereto, and nothing in this Lease, express or implied, is intended to confer or shall be construed as conferring upon any other person or entity any rights, remedies or any other type or types of benefits.
- G. Compliance with Laws. Each party to this Lease shall comply with all federal, state, and local laws, statutes, ordinances, rules and regulations, and the orders and decrees of any courts or administrative bodies or tribunals in any matter affecting the performance of this Lease. When required, either party may be required to furnish the other party with certification of compliance with said laws, statutes, ordinances, rules, regulations, orders, and decrees above specified.
- H. Relationship of the Parties. Each party to this Lease, in the performance of this Lease, shall act in an individual capacity and not as agents, employees, partners, joint ventures or associates of one another. The employees or agents of one party shall not be deemed or construed to be the employees or agents of the other party for any purposes whatsoever.
- I. No Waiver of Immunities. Nothing in this Lease shall be deemed to waive, modify or amend any legal defense available at law or in equity to Tenant, its past or present officers, employees, or agents, nor to create any legal rights or claim on behalf of any third party. Tenant does not waive, modify, or alter to any extent whatsoever the availability of the defense of governmental immunity under the laws of the State of Texas and of the United States.
- J. No Waiver. The failure or delay of any party to enforce at any time or any period of time any of the provisions of this Lease shall not constitute a present or future waiver of such provisions nor the right of either party to enforce each and every provision. Furthermore, no term or provision hereof shall be deemed waived and no breach excused unless such waiver or consent shall be in writing and signed by the party claimed to have waived or consented. Any consent by any party to, or waiver of, a breach by the other, whether expressed or implied, shall not constitute consent to, waiver of or excuse for any other, different or subsequent breach.

- K. Authority to Enter Into Agreement. The parties to this Lease each represent and warrant to the other party that the warranting party possesses the legal authority to enter into this Lease and that it has taken all actions necessary to exercise that authority and to lawfully authorize its undersigned signatory to execute this Lease and to bind such party to its terms. Each person executing this Lease on behalf of a party warrants that he or she is duly authorized to enter into this Lease on behalf of such party and to bind it to the terms hereof.
- L. Execution in Counterparts. This Lease may be executed in counterparts, each of which, when executed and delivered, shall be deemed to be an original and all of which together shall constitute one and the same document.
- M. Entire Agreement. This Lease represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either oral or written. This Lease may be amended only by written instrument signed by each party to this Lease. NO OFFICIAL, EMPLOYEE, AGENT, OR REPRESENTATIVE OF THE TENANT HAS ANY AUTHORITY, EITHER EXPRESS OR IMPLIED, TO AMEND THIS LEASE, EXCEPT PURSUANT TO SUCH EXPRESS AUTHORITY AS MAY BE GRANTED BY THE WILLIAMSON COUNTY COMMISSIONERS COURT.

LANDLORD:
Electronic Corporate Pages, Inc.
By: let Alt
Title: CEO

promise and the effective was a month of the contract of

M. Martin, R. M. Martin, Phys. Rev. Lett. 6, 120 (1997);
 M. Martin, R. M. Martin, Phys. Rev. Lett. 7, 120 (1997);
 M. Martin, R. M. Martin, Phys. Rev. Lett. 7, 120 (1997);
 M. Martin, R. M. Martin, Phys. Rev. Lett. 7, 120 (1997);
 M. Martin, R. M. Martin, Phys. Rev. Lett. 7, 120 (1997);
 M. Martin, R. M. Martin, Phys. Rev. Lett. 7, 120 (1997);
 M. Martin, R. M. Martin, Phys. Rev. Lett. 7, 120 (1997);
 M. Martin, R. M. Martin, Phys. Rev. Lett. 7, 120 (1997);
 M. Martin, R. M. Martin, Phys. Rev. Lett. 7, 120 (1997);
 M. Martin, R. M. Martin, Phys. Rev. Lett. 7, 120 (1997);
 M. Martin, Phys. Rev. Rev. 120 (1997);
 M. Martin, Phys. Rev. 120 (1997);
 M. Martin, P

Execute this Zo day of April 2009

TENANT:	
WILLIAMSON COUNTY, TEXAS	
By:	

Dan A. Gattis, Williamson County Judge

Exhibit "A"

Transmit frequencies 854.9625 1 2 854.9875 3 855.2125 4 855.7125 5 855.9875 6 856.6875 7 856.9625 8 856.9875 9 857.9625 10 857.9875 11 858.9625 12 858.9875 13 859.5875 14 859.9625 15 859.9875 16 860.9625 17 860.9875

- (2) Transmit Antenna Systems
 - (2) RFS BCR12 Antennas
 - (2) 11/4" Coaxial Main Line Cables
 - (2) 1/2" Coaxial Antenna Jumpers
- (1) Receive Antenna System
 - (1) RFS BMR12 Antenna
 - (1) Tower Top Amplifier (TTA)
 - (1) ⁷/₈" Coaxial Main Line
 - (1) ½" Coaxial Test Line
 - (1) ½" Coaxial Antenna Jumper
 - (1) ½" Coaxial TTA Jumper
 - (3) 6 ft. standoff brackets

All transmit and receive antenna systems to be installed at top of tower.

(1) Radio Waves SPD3-5.2NS 3 ft. PTP dish and associated equipment mounted at 200 ft. operating at a 4.9 Ghz licensed frequency.

Consolidated Plan Priorities

Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Sally Bardwell, HUD Grants

By:

Submitted Sally Bardwell

For:

Department: HUD Grants

Agenda Category:

Regular Agenda Items

Information

Agenda Item

Discuss and take appropriate action on the proposed Community Development Block Grant program priorities for FY2009-2013.

Background

These priorities will be used in the selection of projects to be funded by CDBG over the next five years. The priorities were determined by using input collected during stakeholder meetings and meetings with the Commissioners' Court on the County's current needs and potential future needs. They are set up to allow the County the opportunity to fund many different types of projects over the next five years.

Fiscal Impact

From/To Acct No. Description Amount Sort Seq

Attachments

Link: CDBG Priorities

Form Routing/Status

Form Started By: Sally Started On: 04/23/2009 10:28

Bardwell AM

Final Approval Date: 04/23/2009

Williamson County Five-Year Consolidated Plan

Proposed Priorities for FY 2009 through FY 2013

Overview

In light of the limited amount of CDBG funds available to Williamson County, not all of the County's housing and community development needs can be addressed over the next five years. Therefore, priorities must be established to ensure that scarce resources are directed to the most pressing housing and community development needs in the County.

A multi-step process was used to establish the priorities for the County. First, data relative to each need was collected and grouped into one of four major categories: housing needs, homeless needs, non-homeless special needs, and non-housing community development needs. (The data describing the need within each category will be provided in its corresponding narrative section of the Five-Year CP document.)

Second, the County consulted with a diverse group of public agencies, nonprofit organizations and community development entities to determine the needs as perceived by the consumers of these groups. (A complete listing of the entities consulted and the responses received will be included in the Five-Year CP document.)

During the public outreach process, six underlying themes were repetitively voiced by the participants in the interviews and focus group sessions. These themes included the following:

- Public infrastructure improvements such as public water and sewer service and roads continue to be needed in residential areas, especially in the rural and unincorporated areas of the County.
- The recession has substantially impacted contributions to local nonprofit organizations. Resources are at an all-time low. The ability of these organizations to provide supportive services to their clientele is substantially impaired. However, consumers are dependent upon these public services as a safety net now more than ever.
- There is a diverse and highly motivated nonprofit community in Williamson County that collectively possesses the organizational capacity to provide housing, services and facilities to lower income households and persons. However, adequate funding to fully finance their programs and initiatives is lacking.
- There is a need for affordable housing for lower income households and persons. This need has increased recently due to employment layoffs, cutback in hours, and rising fuel and food prices.
- The needs of homeless persons and families in Williamson County are not being adequately served.
- The relative absence of public transportation throughout Williamson County impedes the movement of people to employment centers.

Finally, the data were analyzed and priorities were established by the County using the following definitions:

- High priorities are those activities that will be considered for funding with CDBG funds during the five-year period of 2009 through 2013 prior to medium and low priorities.
- Medium priorities are those activities that will be considered for funding with CDBG funds during the five-year period of 2009 through 2013 following the consideration of high priorities.
- Low priorities are those activities that will NOT be funded with CDBG funds by the County during the five-year period of 2009 through 2013; however, the County will consider providing certifications of consistency and supporting applications submitted by other entities for non-County funds.

Medium and low priority activities are not unimportant and are not to be understood as being unnecessary in Williamson County. Rather, it is perceived that those needs may have other, more appropriate funding sources. For example, housing rehabilitation funds could conceivably be secured through the State's HOME Program.

Williamson County has identified a limited number of priorities to provide a focus for activities that will be funded. If a high priority proposal is not received during the local CDBG application process, a medium priority project may be funded. There are a sufficient number of medium priority needs to ensure that funds can be spent in a timely manner.

The CP ensures that an adequate performance evaluation system is in place to monitor progress toward accomplishing each priority. The County is committed to tracking its progress in addressing each of the high priority needs. The complete CP will include established goals and benchmarks for each identified priority need.

Funding Guidelines

Williamson County will utilize the following guidelines to prioritize the use of CDBG funds over the next five years:

- Fund non-housing community development proposals that eliminate a threat to public health and safety. An example of this type of activity might involve the extension of a water line to an area served by lower income households whose private wells have been contaminated.
- Fund activities that expand the supply and/or improve the condition of housing affordable to lower income households, especially when these projects are undertaken in conjunction with public infrastructure improvements. Housing production allows for units to be added to the market under the assumption that they will provide long-term assistance. Carrying out infrastructure improvements (such as sidewalk, curb, drainage, water, sewer and/or street improvements) in the immediate vicinity of new housing production will capitalize on the housing investment and add value to a larger residential area.

- Fund public facility proposals that benefit lower income households and persons, and persons with special needs.
- Fund projects that provide housing and supportive public services to lower income households and persons, as well as persons with special needs. (15% of the County's non-administrative CDBG budget can be used for public services).
- Fund activities that revitalize residential neighborhoods and stabilize business districts that are located within walking distance of residential neighborhoods.
- Fund projects that leverage other public and private resources.

The following charts reflect the County's priorities for CDBG funding over the next five years.

	HOUSING	G NEEDS
	Extremely Low Income	e (0% up to 30% of MFI)
		2009-2013 Funding Priority
	Elderly	Low
ers	Small Related	Low
Renters	Large Related	Low
œ	All Other	Low
	Elderly	High
Owners	Small Related	High
Μ	Large Related	High
O	All Other	High
	•	-
	Very Low Income (30	0% up to 50% of MFI)
		2009-2013 Funding Priority
"	Elderly	Low
Renters	Small Related	Low
Ren	Large Related	Low
ш.	All Other	Low
(O	Elderly	High
Owners	Small Related	High
Ž	Large Related	High
	All Other	High
	Low Income (50%	up to 80% of MFI)
		2009-2013 Funding Priority
S	Elderly	Low
Renters	Small Related	Low
Ren	Large Related	Low
ш.	All Other	Low
S	Elderly	High
ner	Small Related	High
Owners	Large Related	High
0	All Other	High

	HOMELESS NE	EDS
	Housing Type	2009-2013 Funding Priority
⁻ amilies	Emergency Shelters	High
	Transitional Housing	Medium
IL.	Permanent Supportive Housing	Medium
sla	Housing Type	2009-2013 Funding Priority
ndividuals	Emergency Shelters	Medium
<u>₹</u>	Transitional Housing	Low
<u>=</u>	Permanent Supportive Housing	Low

NON-HOMELESS SPECIAL NEEDS								
	Special Needs Population	2009-2013 Funding Priority						
	Frail Elderly	Low						
spe	Persons w/ Mental Illness	Medium						
Ş	Developmentally Disabled	Medium						
l gr	Physically Disabled	Medium						
Housing Needs	Alcohol/Other Addiction	Medium						
Ą	Persons w/ HIV/AIDS	Low						
_	Public Housing Residents	Low						
(0	Special Needs Population	2009-2013 Funding Priority						
Ö	Frail Elderly	High						
20	Persons w/ Mental Illness	High						
rtive Se Needs	Developmentally Disabled	High						
Tive Vee	Physically Disabled	High						
Supportive Services Needs	Alcohol/Other Addiction	High						
dno	Persons w/ HIV/AIDS	Low						
U)	Public Housing Residents	High						

Public Facilities and Improvements	2009-2013 Funding Priority
Handicapped Centers	Low
Homeless Facilities	Medium
Youth Centers	Medium
Neighborhood Facilities	High
Parks, Recreational Facilities	Low
Parking Facilities	Low
Solid Waste Disposal Improvements	High
Flood Drain Improvements	High
Water/Sewer Improvements	High
Street Improvements	High
Sidewalks	High
Child Care Centers	Medium
Tree Planting	Low
Fire Stations/Equipment	Low
Health Facilities	Medium
Abused and Neglected Children Facilities	Medium
Asbestos Removal	Low
Facilities for AIDS Patients	Low
Operating Costs of Homeless/AIDS Patients Programs	Low
Economic Development	2009-2013 Funding Priority
Commercial/Industrial Rehabilitation	Medium
Commercial/Industrial New Construction	Low

Mental Health Transformation Grant Renewal Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Grimes Kathy, Commissioner Pct. #2

By:

Submitted

Mental Health

For:

Department: Commissioner Pct. #2

Agenda

Regular Agenda Items

Information

Category:

Agenda Item

Discuss and take appropriate action on renewal of agreement with the Texas Health Institute to participate in the Texas Mental Health Transformation Initiative grant program with the Texas Department of State Health Services.

Background

Williamson County was one of seven counties that was selected to participate in a mental health transformation grant with the State of Texas. The renewal agreement is for the third year of the five year mental health grant that allows Williamson County to spend up to \$50,000 per year on mental health initiatives, including the Project Emerson technology advancements. Other targets to achieve in the grant are to hold a regional mental health conference, design and create a website that is user-friendly for the public, and to continue to collaborate with other entities and organizations.

Fiscal Impact

From/To Acct No. Description Amount Sort Seq

Attachments

Link: MH Grant Renewal Agreement

Link: MH Agreement Goals

Form Routing/Status

Form Started By: Grimes Kathy Started On: 04/23/2009 11:35

AM

Final Approval Date: 04/23/2009

AGREEMENT EXTENSION ADDENDUM

On July 25, 2007, Texas Health Institute ("THI") and the Williamson County Mental Health Task Force ("Provider") entered into an Agreement ("Original Contract") for the provision of services by Provider to THI under a Department of State Health Services ("DSHS") Texas Mental Health Transformation Initiative ("DSHS Contract) between DSHS and THI. The DSHS contract has been extended until September 30, 2009. As such, THI and Contractor would like to extend the Original Contract until that date. All of the terms and conditions in the Original Contract shall remain in effect, except where superseded by this Agreement Extension Addendum. The areas which are superseded include the term, which shall extend from October 1, 2008 until September 30, 2009 ("Extension Term"), the total compensation for the Extension Term, which shall be fifty thousand dollars (\$50,000), and the deliverables for the Extension Term, which are listed below. This Agreement Extension Addendum and Attachment A, shall be fully incorporated into the Original Contract between the parties.

- Submit invoices along with General Ledger on a monthly basis. If you do not have on-going monthly expenses, at a minimum submit a quarterly invoice. If you do not have any expenses for the quarter, submit invoice that shows 0 dollars spent.
- Invoices must be submitted prior to the 25th of the month to be included in that month's billing. If submitted after the 25th, they will be submitted in the next month billing cycle.
- See attached Attachment A.

SIGNED:

TEXAS HEALTH INSTITUTE (THI)

By: Sherry Wilkie-Conway – C.O.O.

Date: ______

WILLIAMSON COUNTY MENTAL HEALTH TASK FORCE (PROVIDER)

By: ______
Dan A. Gattis – Williamson County Judge

Date:

Williamson County and Texas Health Institute Subcontractor Agreement

Objectives / Strategies	Timeline / Target Completion Date	Performance Measures	Cost Explanation	Budget		Local Contribution	Status
Mental Health Conference	ental Health Conference to increase collaboration and knowledge base among local mental health providers						
to increase collaboration and knowledge base among local mental health providers	7/31/2009	completion of conference; number of attendees	facility use fees	to be d	determined	collaboration with Health District	
to increase collaboration and knowledge base among local mental health providers	7/31/2009	completion of conference; number of attendees	food / catering	to be d	determined	collaboration with Health District	
to increase collaboration and knowledge base among local mental health providers	7/31/2009	completion of conference; number of attendees	supplies	to be d	determined	collaboration with Health District	
to increase collaboration and knowledge base among local mental health providers	7/31/2009	completion of conference; number of attendees	handouts / materials	to be d	determined	collaboration with Health District	
to increase collaboration and knowledge base among local mental health providers	7/31/2009	completion of conference; number of attendees	CEU fees	to be d	determined	collaboration with Health District	
Conference Total				\$	7,000.00		
Project Emerson	to develop and n	naintain electronic emergency health recor	rds				
create general e-mail account for faxing	4/30/2009	create general e-mail account for faxing	IT internal	\$	-	Williamson County IT department - creating and hosting additional e-mail accounts	
Emerson Phase II	4/30/2009	HarrisLogic will revise and improve data entry system	software development costs	\$	9,000.00	Williamson County employee time	
increase number of Emerson users	5/31/2009	Open system to 11 CIT officers in a view only format	password/user fees for Crisis Intervention Team	\$	1,320.00	Williamson County employee time	
increase billing efficiency for mobile units	5/31/2009	Generate HUD and Bluebonnet MHMR reports from Emerson	to be determined	\$	-	Williamson County employee time	
increase number of Emerson users	6/30/2009	Open system to Bluebonnet MHMR select staff in a view only format	password/user fees; to be billed to Bluebonnet Trails MHMR	\$	-	Williamson County employee time	
add one desktop computer to facilitate mobile mental health unit dispatching and record keeping	8/31/2009	received and installed	desktop computer purchase	\$	1,300.00	Williamson County employee time	
add two laptops with a docking stations for mobile mental health units	8/31/2009	received and installed	purchase of two laptop computers and docking stations	\$	13,000.00	installation costs	
increase ability to communicate with community partners from mobile units in the field	8/31/2009	mobile units are able to fax from vehicles	monthly internet fax service fees	\$	3,550.00		
continue Emerson use for Mobile Outreach Team	8/31/2009	monthly service fees	password/user fees for Mobile Outreach Team	\$	5,680.00		
Emerson Total				\$	33,850.00		

Williamson County and Texas Health Institute Subcontractor Agreement

Objectives / Strategies	Timeline / Target Completion Date	Performance Measures	Cost Explanation Budget		Local Contribution	Status
Website	project partners members, and p	will design and launch a user-friendly web roviders				
monthly committee meeting	4/6/2009	meeting held; list of attendees	will not be billed to grant	.	Williamson County employee time	meeting held as planned; attendees = Kathy Grimes, Connie Watson, Annie Burwell, Commissioner Birkman, and David Luna; name chosen: WilcoMentalHealth.org
select website name	4/30/2009	name selected	will not be billed to grant	-	Williamson County employee time	complete: WilcoMentalHealth.org
create general e-mail account for website	4/30/2009	create general e-mail account for website	will not be billed to grant		Williamson County employee time	
initial content	5/25/2009	content given to IT department	intern stipend	\$ 2,000.00	MOT intern stipend	
monthly committee meeting	5/31/2009	meeting held	will not be billed to grant	-	Williamson County employee time	
basic design of website	5/31/2009	the IT department will create general mock up of site	staff time devoted to project	\$ 3,500.00	Williamson County employee time	
gather feedback from Mental Health Task Force	6/30/2009	demonstrate site for Mental Health Task Force and gather feedback; make necessary adjustments	will not be billed to grant	-	personnel time - partner agencies	
monthly committee meeting	6/30/2009	meeting held	will not be billed to grant	-	Williamson County employee time	
monthly committee meeting	7/30/2009	meeting held	will not be billed to grant	-	Williamson County employee time	
create consumer friendly website with helpful content	7/31/2009	focus group meeting held and adjustments made according to feedback	food / catering	\$ 100.00	Williamson County employee and intern time; food for meeting	
consumer testing	8/15/2009	consumer testing complete	intern stipend	see above	Williamson County intern and personnel time	
monthly committee meeting	8/30/2009	meeting held	will not be billed to grant	-	Williamson County employee time	
advertising and promotions for site launch	8/30/2009	advertisements in local newspapers; promotional items	advertising costs	\$ 3,500.00	Williamson County Public Information Officer time	
Website Total				\$ 9,100.00		

Williamson County and Texas Health Institute Subcontractor Agreement

Objectives / Strategies	Timeline / Target Completion Date	Performance Measures	Cost Explanation	Budge	t	Local Contribution	Status
Mental Health Task Force Meetings	to maintain, con	tinue, and expand local collaboration and	partnership activities				
monthly Mental Health Task Force Meeting	4/30/2009	Monthly meeting held; number of attendees	will not billed to grant	\$	-	personnel time - approximately \$3000	
monthly Mental Health Task Force Meeting	5/30/2009	Monthly meeting held; number of attendees	will not billed to grant	\$	-	personnel time - approximately \$3000	
monthly Mental Health Task Force Meeting	6/30/2009	Monthly meeting held; number of attendees	will not billed to grant	\$	-	personnel time - approximately \$3000	
monthly Mental Health Task Force Meeting	7/30/2009	Monthly meeting held; number of attendees	will not billed to grant	\$	-	personnel time - approximately \$3000	
monthly Mental Health Task Force Meeting	8/30/2009	Monthly meeting held; number of attendees	will not billed to grant	\$	-	personnel time - approximately \$3000	
Regional Networking	to facilitate the e	xchange of information with regional parts	ners (successes and cha	allenges)			
collaboration with other organizations and counties	4/30/2009	collaboration with Lakes Regional MHMR	will not billed to grant	\$	-	personnel time; copies and printed materials	
collaboration with other organizations and counties	4/30/2009	collaboration with Brazoria County	will not billed to grant	\$	-	personnel time; copies and printed materials	
collaboration with other organizations and counties	4/30/2009	collaboration with Fort Bend County	will not billed to grant	\$	-	personnel time; copies and printed materials	
participate in Williamson County School Nurse Conference	8/30/2009	conference participation	copies / handouts	\$ 5	0.00	personnel time; copies and printed materials	
Networking				\$!	50.00		
Grand Total				\$50,000	.00		

Round Rock Annex

Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Mary Clark, Commissioner Pct. #1

By:

Submitted Mary Clark

For:

Department: Commissioner Pct. #1

Agenda Category:

Regular Agenda Items

Information

Agenda Item

Discuss and take action regarding the Jester Williamson County Annex in Round Rock

Background

Fiscal Impact

From/To Acct No. Description Amount Sort Seq

Attachments

No file(s) attached.

Form Routing/Status

Started On: 04/22/2009 09:34 Form Started By: Mary Clark

Final Approval Date: 04/23/2009

Tire Collection Event

Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Nancy Heath, Commissioner Pct. #4

By:

Submitted Ron Morrison

For:

Department: Commissioner Pct. #4

Agenda Category:

Regular Agenda Items

Information

Agenda Item

Discuss and consider approving payment for a tire collection event.

Background

Fiscal Impact

From/To Acct No. Description Amount Sort Seq

Attachments

Link: Invoice

Link: Event Flyer

Form Routing/Status

Form Started By: Nancy Heath Started On: 04/22/2009 11:37

 AM

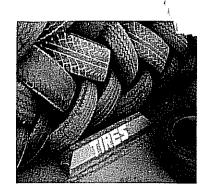
Final Approval Date: 04/23/2009

516385

Talley Tire Transporter 1110 CR 410 Taylor, TX 76574

INVOICE

Home: 512-352-9515 Cell: 512-913-7657 SOLD TO William SON County ADDRESS CITY, STATE, ZIP CITY, STATE, ZIP CUSTOMER ORDER NO. SOLD BY TERMS F.O.B. DATE SHIPPED DESCRIPTION PRICE UNIT **AMOUNT ORDERED** Eastern Williamson County tire Cleanup. 3-15-08 ocations St. Gox trailer Estimated Tires 900 or more





WILLIAMSON COUNTY TIRE COLLECTION EVENT

When:

March 15, 2008

8:00 am to 5:00 pm (or when trailers are full)

Where:

16350 FM 971 (Granger CO. Barn) & 9005 S. Main (Taylor CO. Barn)

What will not be accepted?

- 1.) No tires from business or commercial activities.
- 2.) No tires with rims.
- 3.) No solid or foam-filled tires.
- 4.) No tires over 38" rim diameter.

What will be accepted?

- 1.) Car/pickup tires up to semi-truck.
- 2.) Tractor up to 38" rim diameter.

How many? 10 per family (\$1.00 charge per tire for quantities over 10)

For information call:

Central TX RC & D

(512) 352-1318

Paperless Ticket-Writer Systems for Williamson County Sheriff's Office Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Patrick Strittmatter, Purchasing

By:

Submitted

Jonathan Harris

For:

Department: Purchasing

Agenda Category:

Regular Agenda Items

Information

Agenda Item

Consider awarding bids received to purchase a quantity of 37 Paperless Ticket-Writer Systems for

Williamson County Sheriff's Office to the lowest and best bid meeting specifications-Brazos Technology Corp.

Background

Fiscal Impact

From/To Acct No. Description Amount Sort Seq

Attachments

Link: SO Recommendation

Form Routing/Status

Form Started By: Patrick Strittmatter Started On: 11/17/2008 10:04

AM

Final Approval Date: 11/18/2008

From: Mike Gleason

Sent: Friday, October 31, 2008 11:53 AM

To: Jonathan Harris

Cc: Shawn Newsom; Robert Chapman

Subject: Bid Award

Jonathan, per our meeting with Bob and Patrick, I have gone over the reports again. As you noted, Barcodes Inc. only bid for the software, and no hardware. Thus removing them from the bid process, due to the criteria asked for in the bid process. Also the second bid, Copsync Inc. stated that they would provide a laptop computer, instead of the handheld device asked for in the bid process. A laptop is not practical in the application in which we intend to use the device. Therefore they also did not meet the criteria as set forth in the bid process. The third bidder was Brazos Technology who does meet the criteria as set forth in the bid process, The Williamson County Sheriff's Office recommends the bid be awarded to Brazos Technology.

Award bid contracts 09WC714 Asphalt Mixes, 09WC715 Asphalt Cement and Cut Back Asphalt and 09WC716 Asphalt Emulsions

Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Kerstin Hancock, Purchasing

Department: Purchasing

Agenda Category:

By:

Regular Agenda Items

Information

Agenda Item

Consider awarding bids received for Asphalt Mixes, Asphalt Cement & Cut Back Asphalt and Asphalt Emulsions to the lowest bid meeting specifications - complete list attached

Background

Asphalt Mixes 09WC714 - Recommended Award: RTI: Primary – Item # 1, 6

Secondary - Item # 2, 4, 5

Tertiary - Item #3

Iron Horse: Primary - Item # 4, 5

Secondary - Item # 3, 6

Tertiary – Item # 1, 2

Austin Asphalt: Primary - Item # 2, 3

Secondary – Item # 1

Vulcan Primary – Item # 7, 8

Asphalt Cement and Cut Back Asphalt 09WC715 - Recommended Award: Martin Asphalt: Primary – Item # 1, 2

Secondary - Item #3,4

Cleveland Asphalt:

Primary – Item # 3, 4

Secondary - Item # 1, 2

Performance Grade

Asphalt: Tertiary - Item # 1, 2 & 4

Asphalt Emulsions 09WC716 - Recommended Award: Ergon: Primary – Item # 1, 2, 3, 4, 5

Secondary - Item # 7, 8

P2 Emulsion: Primary – Item # 7, 8

Cleveland: Secondary – Item # 1, 3, 4

Tertiary – Item # 2, 5

Martin Asphalt: Secondary – Item # 2, 5 Tertiary - Item # 4

Fiscal Impact

From/To Acct No. Description Amount Sort Seq

Attachments

Link: Bid Tab Asphalt Mixes 09WC714

Link: Bid Tab Asphalt Emulsion 09WC716

Link: Bid Tab Asphalt Cement and Cut Back Asphalt 09WC715

Form Routing/Status

Route Seg Inbox Approved By Date Status

1 Purchasing Bob Space 04/23/2009 09:54 AM APRV

2 County Judge Exec Asst. Wendy Coco 04/23/2009 11:01 AM APRV

Form Started By: Kerstin Hancock Started On: 04/22/2009 03:57

PM

Final Approval Date: 04/23/2009

WILLIAMSON COUNTY BID TABULATION FOR UNIFIED ROAD AND BRIDGE SYSTEM ANNUAL CONTRACT **ASPHALT MIXES BID NUMBER: 09WC714**

Recommended Award: RTI:

Primary – Item # 1, 6

| Secondary – Item # 2, 4, 5
| Tertiary – Item # 3
| Iron Horse: Primary – Item # 4, 5
| Secondary – Item # 4, 5
| Secondary – Item # 3, 6
| Tertiary – Item # 1, 2
| Austin Asphalt: Primary – Item # 2, 3
| Secondary – Item # 1
| Vulcan | Primary – Item # 7, 8

ITEM #	DESCRIPTION	Austin Asphalt	Ironhorse	Lindsey	R.T.I.	Vulcan
1	Black Base, Type A TxDot Item 340 To reach 95% lab density	36.00	43.00	NO BID	35.11	NO BID
2	Asphalt Concrete, Type C TxDot Item 340 To reach 95% Lab density	38.75	43.00	52.00	42.51	NO BID
3	Hot Mix Concrete, Type D TxDot Item 340 To reach 95% Lab density	41.00	43.00	50.00	43.84	NO BID
4	Hot Mix Concrete, Type F TxDot Item 340 To reach 95% Lab density	NO BID	46.00	NO BID	49.58	NO BID
5	Hot Mix Cold Lay Black Base Type D – TxDot Item 334 To reach 95% Lab density	NO BID	46.00	NO BID	49.75	NO BID
6	Hot Mix Cold Lay Black Base Type A – TxDot Item 334 To reach 95% Lab density	NO BID	45.00	NO BID	42.38	NO BID
7	TxDot Item 330 Limestone rock asphaltsee bid Type AA Type A Type B Type C Type CC Type D	NO BID	NO BID	NO BID	NO BID	Granger 58.20 Florence 58.20 Lib Hill 57.00 Taylor 56.40 Gtown 55.20
8	TxDot Item 332 Limestone Rock Asphalt (trap Mix) Type BS Type CS Type DS Type FS	NO BID	NO BID	NO BID	NO BID	Granger 60.20 Florence 68.20 Lib Hill 59.00 Taylor 58.40 Gtown 57.20

WILLIAMSON COUNTY BID TABULATION FOR UNIFIED ROAD AND BRIDGE SYSTEM **ANNUAL CONTRACT**

ASPHALT EMULSIONS BID NUMBER: 09WC716

Recommended Award: Ergon:

Primary – Item # 1, 2, 3, 4, 5 Secondary – Item # 7, 8 Primary – Item # 7, 8 Secondary – Item # 1, 3, 4 P2 Emulsion: Cleveland: Tertiary – Item # 2, 5

Martin Asphalt: Secondary – Item # 2, 5 Tertiary - Item # 4

ITEM #	DESCRIPTION	CLEVI	ELAND	ERO	GON		RTIN HALT		2 SION
		FOB Site	Unit Price	FOB Site	Unit Price	FOB Site	Unit Price	FOB Site	Unit Price
1	HFRS-2 TxDot Item 300.2, Table 7 & 8	2.1591	1.95	1.8803	1.75	NO BID		NO BID	
2	CRS-2, TxDot Item 300.2, Table 7 & 8	2.0091	1.80	*1.8803	1.75	1.88	1.70	2.62	2.52
3	HFRS-2P TxDot Item 300.2, Table 9	2.8091	2.60	2.4803	2.35	NO BID		NO BID	
4	CRS-2P TxDot Item 300.2, Table 9	2.7091	2.50	2.4803	2.35	2.93	2.75	NO	BID
5	SS-1 Emulsion	1.9591	1.75	*1.8803	1.75	1.88	1.70	NO	BID
6	RS-1P Emulsion	NO BID		NO BID		NO BID		NO BID	
7	Asphalt Rejuvenation Agent	NO BID		3.3803	3.25	NO	BID	2.57	2.47
8	Asphalt Emulsion Stabilizer	NO	BID	2.4803	2.35	NO	BID	2.53	2.43
9	Pump Charge	HOURS 80	TTWO SFREE .00 EAFTER	80.00 PE	R LOAD	0.01 PE	ER GAL	HOURS 70	TWO S FREE .00 AFTER

^{*}Award based on delivered price and overall low bid for item # 1-5

WILLIAMSON COUNTY BID TABULATION FOR UNIFIED ROAD AND BRIDGE SYSTEM ANNUAL CONTRACT

ASPHALT CEMENT & CUT BACK BID NUMBER: 09WC715

Recommended Award: Martin Asphalt: Primary – Item # 1, 2

Secondary - Item # 3, 4

Cleveland Asphalt: Primary – Item # 3, 4

Secondary – Item # 1, 2,

Performance Grade Asphalt: Tertiary – Item # 1, 2 & 4

ITEM #	DESCRIPTION	UNIT	CLEVELAND ASPHALT		MARTIN ASPHALT		PERFORMANCE GRADE	
			F.O.B. SITE	UNIT	F.O.B. SITE	UNIT	F.O.B. SITE	UNIT
1	AC-5 TxDot Item 300.2, Table 1	Gal	2.3091	2.10	1.98	1.80		*2.85
2	AC-10 TxDot Item 300.2, Table 1	Gal	2.3091	2.10	1.98	1.80		*2.85
3	RC-250 TxDot Item 300.2, Table 4	Gal	2.9091	2.70	2.93	2.75		
4	MC-30 TxDot Item 300.2, Table 5	Gal	3.0591	2.85	3.13	2.95		*2.95

^{*} Delivery charges included in unit price

Month to Month extension of Aramark Correctional Services Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Barry Becker, Purchasing

By:

Department: Purchasing

Agenda Category:

Regular Agenda Items

Information

Agenda Item

Consider approving extending contract between Williamson County Jail and Aramark Correctional Food Services on a month to month basis to allow for proposed price increase to be reviewed for annual renewal.

Background

Additional time is needed to review the price adjustment options before the contract is submitted to Commissioners Court for approval on a twelve (12) month extension.

Fiscal Impact

From/To Acct No. Description Amount Sort Seq

Attachments

No file(s) attached.

Form Routing/Status

Route Seq Inbox Approved By Date Status

1 Purchasing (Originator) Bob Space 04/23/2009 11:32 AM APRV

2 County Judge Exec Asst. Wendy Coco 04/23/2009 02:34 PM APRV

Form Started By: Barry Becker Started On: 04/23/2009 09:58

AM

Final Approval Date: 04/23/2009

VA Garage Sales Donation, B/A, 4/28/09 Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Lisa Moore, County Auditor

By:

Submitted Melanie Denny For:

Department: County Auditor

Agenda Category:

Regular Agenda Items

Information

Agenda Item

Discuss and consider approval of an order declaring an emergency and a grave necessity due to unforeseeable circumstances and approve a budget amendment for Victim's Assistance Garage Sale Donations:

Background

Recognize the expenditures of garage sale donations.

Fiscal Impact

From/To	Acct No.	Description	Amount	Sort Seq
	0100.0560.003671	V. A. Donations	\$1,441.00	01

Attachments

No file(s) attached.

Form Routing/Status

Form Started By: Lisa Started On: 04/22/2009 11:37

Moore AM Final Approval Date: 04/23/2009

VA Garage Sales Donation, B/A, 4/28/09 Commissioners Court - Regular Session

Date: 04/28/2009

Submitted

Lisa Moore, County Auditor

Submitted

By:

For:

Melanie Denny

Department: County Auditor

Agenda Category:

Regular Agenda Items

Information

Agenda Item

Discuss and consider approval of an order declaring an emergency and a grave necessity due to unforeseeable circumstances and approve a budget amendment for Victim's Assistance Garage Sale Donations:

Background

To recognize the garage sale revenue collected for the donation approved on the April 21st agenda, item #15.

Fiscal Impact

From/To	Acct No.	Description	Amount	Sort Seq
	0100.0000.367400	Donations	\$1,441.00	01

Attachments

No file(s) attached.

Form Routing/Status

Form Started By: Lisa Started On: 04/22/2009 11:40

Moore AM Final Approval Date: 04/23/2009