Executive Summary

- 1) The total utility cost for the July 2012-June 2013 period, decreased by \$308,508 (4.3%) compared to the prior year. Electricity (4.5%), domestic (14.6%) and irrigation (5.9%) water consumption all decreased as compared to the prior year. Gas consumption increased (13.2%) as compared to the prior year. The number of cooling degree days decreased by (23.9%) and the number of heating degree days increased by 13.0%.
- 2) The utility usage for the July 2012-June 2013 period compared to the prior year is a follows:
 - a) Electric usage decreased by 4.5%
 - b) Natural gas usage <u>increased</u> by 13.0%
 - c) Domestic water usage decreased by 14.6%
 - d) Irrigation usage decreased by 5.9%
- 3) Utility rates decreased for electricity, natural gas and irrigation, but increased for domestic water resulting in an <u>increase</u> in cost of \$3,955.
 - a) Electric unit cost decreased by 0.8%.
 - b) Natural gas unit cost decreased by 3.5%.
 - c) Domestic water unit cost increased by 10.9%.
 - d) Irrigation water unit decreased by 1.3%.
- 4) Weather
 - a) There was a 23.9% decrease in the number of cooling degree days, and a 13.0% increase in the number of heating degree days.
 - b) Rainfall in this period decreased by 6.91 (27.3%) inches.

Fiscal Year – (July 2012 through June, 2013)

Utility Costs Comparison to Prior Year

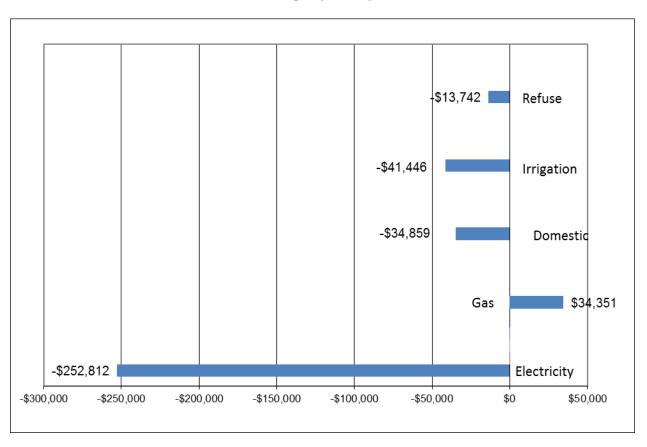
The total utility cost decreased by \$308,508. Table 1 and Figure 1 provide a cost breakdown by category.

Table 1

Category			%	Cost
	Fiscal	Fiscal	change	Change
	Year	Year		
	2011-2012	2012-2013		
Electric	\$4,844,141	\$4,591,329	-5.2%	-\$252,812
Gas	\$374,089	\$408,440	9.2%	\$34,351
Domestic Water	\$655,495	\$620,636	-5.3%	-\$34,859
Irrigation	\$580,358	\$538,912	-7.1%	-\$41,446
Refuse	\$660,811	\$647,069	-2.1%	-\$13,742
Total	\$7,114,894	\$6,806,386	-4.3%	-\$308,508

Note: The changes in the cost of utilities contributed to a decrease in cost. See tables 3 and 4 for a detailed breakdown.

Figure 1 Cost Change by Utility



Denton ISD 9/19/2013 Page 2 of 19

Utility Cost Comparison by Facility

Table 2 represents the total utility cost by facility per SqFt for FY 2012-2013 for Energy and Water.

Table 2

Table	2			
			Domestic	
		Energy	Water	Irrigation
		Cost per	Cost per	Cost per
Site	Sq Ft	Sq Ft	Sq Ft	Sq Ft
Denton High School	533,181	\$0.99	\$0.07	\$0.03
Guyer High School	426,380	\$0.98	\$0.14	\$0.09
Ryan High School	426,300	\$1.07	\$0.11	\$0.16
Calhoun Middle School	235,174	\$0.87	\$0.05	\$0.05
Strickland Middle School	194,571	\$1.02	\$0.05	\$0.08
Navo Middle School	162,095	\$1.09	\$0.10	\$0.30
Harpool Middle School	161,327	\$1.06	\$0.04	\$0.20
Crownover Middle School	161,200	\$1.15	\$0.09	\$0.19
McMath Middle School	159,136	\$1.22	\$0.06	\$0.13
Advanced Technology Center	120,700	\$1.25	\$0.09	\$0.37
Rayzor Elementary School	99,565	\$0.92	\$0.15	N/A
Wilson Elementary School	90,791	\$0.90	\$0.09	\$0.05
Ginnings Elementary School	89,099	\$1.03	\$0.13	N/A
McNair Elementary School	88,551	\$1.22	\$0.09	\$0.10
Cross Oaks Elementary	88,231	\$0.78	\$0.12	N/A
Hodge Elementary School	87,015	\$1.19	\$0.11	\$0.10
Evers Park Elementary School	85,855	\$1.20	\$0.16	\$0.06
Lee Elementary School	85,592	\$1.11	\$0.13	\$0.14
Rivera Elementary School	84,598	\$1.20	\$0.10	\$0.04
Hawk Elementary School	81,419	\$1.01	\$0.19	\$0.29
Providence Elementary School	80,485	\$0.90	\$0.10	\$0.07
Blanton Elementary School	80,344	\$1.14	\$0.06	\$0.25
L.A. Nelson Elementary	80,334	\$1.28	\$0.08	\$0.03
Olive Stephens Elementary School	80,334	\$1.18	\$0.13	\$0.08
Paloma Creek Elementary	80,334	\$1.15	\$0.07	\$0.12
Savannah Elementary School	80,334	\$0.91	\$0.06	\$0.16
Pecan Creek Elementary School	80,029	\$0.88	\$0.13	\$0.03
Borman Elementary School	78,952	\$0.99	\$0.14	N/A
Houston Elementary	78,499	\$0.98	\$0.09	\$0.12
C.H. Collins Athletic Complex	78,059	\$1.33	\$0.73	\$0.32
E.P. Rayzor Elementary School	77,725	\$0.95	\$0.08	\$0.14
W.S. Ryan Elementary School	77,725	\$1.02	\$0.09	\$0.22
Service Center Annex	63,656	\$0.84	\$0.06	\$0.05
Gonzalez School For Young Children	60,391	\$0.66	\$0.06	\$0.15
Ann Windle School for Young Children	41,200	\$1.31	\$0.14	\$0.32
Lester Davis School	32,563	\$0.67	\$0.11	N/A
Fred Moore High School	28,487	\$1.09	\$0.14	\$0.04
Central Services	22,368	\$2.94	\$5.54	\$0.10
Technology Bldg	16,173	\$4.62	\$0.10	N/A
Transportation Facility	14,336	\$1.35	\$0.24	N/A
Virginia Gallian Child Dev. Ctr.	8,218	\$1.34	\$0.27	N/A
Special Ed Services	6,528	\$1.69	\$0.12	N/A
District Totals	4,707,854	\$1.06	\$0.13	\$0.11

Utility Unit Cost Comparison

Table 3 lists the average unit cost for electricity, natural gas, water and irrigation.

Table 3
Utility Unit Cost Comparison

Utility	Fiscal Year	Fiscal Year	Change	% Change			
	2011-2012	2012-2013					
Electric, \$/kwh	\$0.093518	\$0.092805	-\$0.000713	-0.8%			
Gas, \$ per Therm	\$0.633473	\$0.611239	-\$0.022234	-3.5%			
Water-Dom,	\$8.854810	\$9.820656	\$0.965846	10.9%			
\$/CCF							
Water-Irrig,	\$3.783299	\$3.735207	-\$0.048091	-1.3%			
\$/CCF							

Table 4 details the impact of the unit cost change on the cost of electricity, natural gas and water.

Table 4 Utility Cost Comparison

Category	Fiscal	FY 2012-	FY 2012-	Cost
	Year	2013 Cost	2013 Cost	Difference
	2012-2013	Calculated	Calculated	
		with	on FY	
		Current	2011-2012	
		Unit Cost	Unit Cost	
Electric (kWh)	49,472,913	\$4,591,329	\$4,626,617	-\$35,288
Gas (Therm)	668,217	\$408,440	\$423,297	-\$14,857
Dom Water (CCF)	63,197	\$620,636	\$559,597	\$61,039
Irrig Water (CCF)	144,279	\$538,912	\$545,851	-\$6,939
Total:		\$6,159,317	\$6,155,362	\$3,955

Energy and Water Use Comparison by Facility

Table 5 represents the total energy and water use by facility per SqFt for FY 2012-2013.

Table 5

Tal	ole 5			
			Domestic	Irrigation
		Energy	Water	Water
		kBtu per	CCF per	CCF per
Site	Sq Ft	Sq Ft	Sq Ft	Sq Ft
Advanced Technology Center	120,700	58.4	0.005	0.109
Ann Windle School for Young Children	41,200	54.1	0.020	0.091
Blanton Elementary School	80,344	49.7	0.012	0.092
Borman Elementary School	78,952	42.6	0.023	N/A
C.H. Collins Athletic Complex	78,059	36.1	0.051	0.080
Calhoun Middle School	235,174	41.3	0.005	0.012
Central Services	22,368	122.0	0.024	0.025
Cross Oaks Elementary	88,231	31.7	0.019	N/A
Crownover Middle School	161,200	56.0	0.007	0.035
Denton High School	533,181	47.3	0.009	0.007
E.P. Rayzor Elementary School	77,725	54.0	0.013	0.051
Evers Park Elementary School	85,855	64.3	0.026	0.018
Fred Moore High School	28,487	48.1	0.019	0.007
Ginnings Elementary School	89,099	47.5	0.021	N/A
Gonzalez School For Young Children	60,391	26.2	0.006	0.043
Guyer High School	426,380	46.7	0.013	0.023
Harpool Middle School	161,327	53.2	0.007	0.075
Hawk Elementary School	81,419	45.1	0.019	0.048
Hodge Elementary School	87,015	53.9	0.016	0.024
Houston Elementary	78,499	42.6	0.013	0.035
L.A. Nelson Elementary	80,334	49.2	0.026	0.002
Lee Elementary School	85,592	51.0	0.019	0.039
Lester Davis School	32,563	30.6	0.011	N/A
McMath Middle School	159,136	60.4	0.008	0.039
McNair Elementary School	88,551	53.5	0.013	0.027
Navo Middle School	162,095	62.3	0.010	0.040
Olive Stephens Elementary School	80,334	48.3	0.009	0.006
Paloma Creek Elementary	80,334	49.4	0.012	0.046
Pecan Creek Elementary School	80,029	35.3	0.019	0.006
Providence Elementary School	80,485	37.8	0.019	0.028
Rayzor Elementary School	99,565	39.1	0.024	N/A
Rivera Elementary School	84,598	64.0	0.012	0.010
Ryan High School	426,300	55.0	0.016	0.046
Savannah Elementary School	80,334	38.4	0.009	0.063
Service Center Annex	63,656	43.3	0.008	0.014
Special Ed Services	6,528	72.2	0.004	N/A
Strickland Middle School	194,571	51.9	0.008	0.023
Technology Bldg	16,173	201.0	0.012	N/A
Transportation Facility	14,336	86.6	0.035	N/A
Virginia Gallian Child Dev. Ctr.	8,218	50.7	0.017	N/A
W.S. Ryan Elementary School	77,725	36.8	0.012	0.057
Wilson Elementary School	90,791	57.2	0.015	0.012
District Totals	4,707,854	50.0	0.013	0.031

Weather Comparison to Prior Year

There was a 23.9% decrease in the number of cooling degree days, and a13.0% <u>increase</u> in the number of heating degree days. Rainfall over the period decreased 6.91 (22.3%) inches from the prior year.

Table 6 Weather Data

%Change	-23	.9%	13.	0%
Total	3,948	3,006	1,810	2,045
Q4	1195	894	41	176
Q3	103	33	922	1129
Q2	478	234	847	740
Q1	2172	1845	0	0
	2011-2012	2012-2013	2011-2012	2012-2013
	Cooling De	Cooling Degree Days		egree Days

Figure 2

Table 7
Rainfall Data

	Rair	Rainfall (in.)				
	2011-2012 2012-2013					
Q1	1.71	5.72				
Q2	3.98	3.02				
Q3	17.78 8.01					
Q4	7.48	7.29				
Total	30.95 24.04					
%Change	-22.3%					

Fiscal Year – (July 2012 through June, 2013)

Energy Cost and Use Historical Trends (Last 5 Years)

Table 8

Utility	FY 2008- 2009	FY 2009- 2010	FY 2010- 2011	FY 2011- 2012	FY 2012- 2013
Total Utility Cost	\$7,172,309	\$6,616,897	\$6,993,558	\$7,114,894	\$6,806,387
Total Energy Mbtu	218,121	245,065	237,958	235,792	235,623
Total District SqFt	4,318,052	4,499,603	4,648,225	4,660,667	4,761,856
Total Cost/SqFt	\$1.66	\$1.47	\$1.50	\$1.53	\$1.43
Energy Use Index kBtu/SF	50.5	54.5	51.2	50.6	49.5

Facilities Report

	5 YEAR SQUARE FEET TOTALS					
FACILITY	Fiscal Year	Fiscal Year	Fiscal Year	Fiscal Year	Fiscal Year	
	2008-2009	2009-2010	l	2011-2012	2012-2013	
Advanced Technology Center	120,700	120,700	120,700	120,700	120,700	
Ann Windle School for Young Children	41,200	41,200	41,200	41,200	41,200	
Blanton Elementary School	80,344	80,344	80,344	80,344	80,344	
Borman Elementary School	78,624	78,952	78,952	78,952	78,952	
Calhoun Middle School	216,363	235,174	235,174	235,174	235,174	
Central Services	22,368	22,368	22,368	22,368	22,368	
Clear Creek	16,173	16,173	16,173	16,173	16,173	
CH Collins Athletic Complex	78,059	78,059	78,059	78,059	78,059	
Community Ed Bldg	3,960	3,960	3,960	3,960	3,960	
Cross Oaks Elementary School	0	0	88,231	88,231	88,231	
Crownover Middle School	161,200	161,200	161,200	161,200	161,200	
Denton High School	451,770	486,881	486,881	486,881	533,181	
EP Rayzor Elementary School	76,093	76,093	76,093	77,725	77,725	
Evers Park Elementary School	81,655	81,655	81,655	81,655	85,855	
Fred Moore High School	28,487	28,487	28,487	28,487	28,487	
Ginnings Elementary School	80,403	80,403	80,403	80,403	89,099	
Gonzalez SFYC	00,403	00,403	60,391	60,391	60,391	
Guyer High School	426,380	426,380	426,380	426,380	426,380	
Harpool Middle School	161,327	161,327	161.327	161.327	161,327	
Hawk Elementary School						
Hodge Elementary School	81,419 71,608	81,419	81,419 87,015	81,419	81,419	
		87,015	73,631	87,015	87,015	
Houston Elementary School	73,631	73,631	.	73,631	78,499	
LA Nelson Elementary School	80,334	80,334	80,334	80,334	80,334	
Lee Elementary School	83,900	83,900	83,900	85,592	85,592	
Lester Davis School	32,563	32,563	32,563	32,563	32,563	
McMath Middle School	158,567	158,567	158,567	158,567	159,136	
McNair Elementary School	72,376	88,551	88,551	88,551	88,551	
Myers Middle School	0	0	0	0	181,474	
Navo Middle School	162,095	162,095	162,095	162,095	162,095	
Olive Stephens Elementary School	80,334	80,334	80,334	80,334	80,334	
Paloma Creek Elementary School	80,334	80,334	80,334	80,334	80,334	
PDC + Insurance Portable	28,544	28,544	28,544	28,544	28,544	
Pecan Creek Elementary School	78,397	78,397	78,397	80,029	80,029	
Providence Elementary School	78,853	78,853	78,853	80,485	80,485	
Rayzor Elementary School	93,269	99,565	99,565	99,565	99,565	
Rivera Elementary School	74,244	84,598	84,598	84,598	84,598	
Ryan High School	344,159	423,228	423,228	423,228	426,300	
Savannah Elementary School	80,334	80,334	80,334	80,334	80,334	
Norm Sisk Service Center Annex	59,048	59,048	59,048	59,048	63,656	
Special Ed Services	6,528	6,528	6,528	6,528	6,528	
Strickland Middle School	192,039	192,039	192,039	194,571	194,571	
Technology Building	16,173	16,173	16,173	16,173	16,173	
Transportation Facility	14,336	14,336	14,336	14,336	14,336	
Virginia Gallian Child Developent Center	8,218	8,218	8,218	8,218	8,218	
Wellness Center	5,325	5,325	5,325	5,325	5,325	
Wilson Elementary School	89,071	89,071	89,071	90,791	90,791	
WS Ryan Elementary School	76,093	76,093	76,093	77,725	77,725	
Total	4,346,898	4,528,449	4,677,071	4,689,543	4,943,330	

Fiscal Year – (July 2012 through June, 2013)

FY 2012-2013 Facilities Rental Table

		En	ergy Cost (\$/H	lour)	•	CURRENT	ADJUSTED
Facility List	2010	2012 Cooling	2012 Heating	2012 MAX	INCREASE OR DECREASE	UTILITY STATUS C RENTAL FEE \$/HR	UTILITY STATUS C RENTAL FEE \$/HR
Cafeteria						Ψ,	₩// III C
High Schools	\$5.00	\$4.48	\$4.46	\$4.48	-10%	\$125	\$124.48
Middle Schools	\$4.51	\$4.72	\$3.59	\$4.72	5%	\$100	\$100.21
Elementary Schools	\$5.00	\$3.73	\$4.46	\$4.46	-11%	\$50	\$49.46
Gymnasium							
Ryan High School	\$14.30	\$14.97	\$13.08	\$14.97	5%	\$150	\$150.67
Denton High School	\$7.47	\$7.80	\$4.97	\$7.80	4%	\$125	\$125.33
Middle Schools	\$8.65	\$9.14	\$5.48	\$9.14	6%	\$100	\$100.49
Elementary Schools	\$3.82	\$4.05	\$2.92	\$4.05	6%	\$50	\$50.23
Auditorium							
Ryan High School	\$6.42	\$6.78	\$3.68	\$6.78	6%	\$100	\$100.36
Denton High School	\$6.33	\$6.61	\$3.91	\$6.61	4%	\$125	\$125.28
Middle Schools	\$4.97	\$5.12	\$3.08	\$5.12	3%	\$75	\$75.15
Lecture Hall/Dance Studio							
Ryan High School	\$8.75	\$9.24	\$1.84	\$9.24	6%	\$50	\$50.49
Classrooms							
Ryan High School	\$5.39	\$5.70	\$0.44	\$5.70	6%	N/A	N/A
Denton High School	\$0.54	\$0.54	\$0.46	\$0.54	-1%	N/A	N/A
Middle Schools	\$0.57	\$0.00	\$0.47	\$0.47	-18%	N/A	N/A
Elementary Schools	\$0.59	\$0.00	\$0.47	\$0.47	-21%	N/A	N/A
Notes							

Notes

^{1.) 2012} Gas cost based on FY2011-2012 average cost

^{2.) 2012} Electric Cost based on FY 2011-2012 average cost

FY 2012-2013 Water Utilities Rates

Denton ISD Typical Water Rates							
Utility	Schools	Domestic \$/kGal	Irrigation \$/kGal				
Lake Cities	Myers, Olive Stephens	\$14.13	\$9.66				
City of Corinth	Hawk, Crownover	\$12.73	\$7.02				
Mustang SUD	Navo, Cross Oaks	\$10.10	\$9.53				
Denton Municipal	All Others	\$8.89	\$5.04				
Denton County FWSD #7	Blanton, EP Rayzor, Harpool	\$7.48	\$3.83				
Denton County FWSD #8A	Paloma	\$4.85	\$2.88				
Denton County FWSD #9	Providence	\$4.85	\$2.88				
Denton County FWSD #10 Savannah \$4.85 \$							
Domestic based on 100 kGallons and includes water and sewer rates							
Irrigtion based on 300 kGallons	and includes water rates only						

Diary

2005-2006

- Calhoun Middle School Added 15, 150 square feet in January 2006.
- McNair Elementary School Added DDC Temperature controls and replaced chiller.
- Hodge Elementary School Added DDC Temperature controls and replaced chiller.

2006-2007

- Ryan HS Added 10,000 square feet of classroom space.
 - o Includes 5 PRTU E/G.
- New sites opened this year:
 - Savannah ES
 - o Navo MS
 - Advanced Technical Center
- Three utility accounts were closed in the second quarter:
 - o Rayzor ES Denton Municipal Utilities Acct #4240617-00
 - Served a ball field that is no longer in use.
 - o Guyer HS Denton Municipal Utilities Acct #5570526-02
 - Only billed solid waste. Solid waste now billed on Acct #4290608-01 with rest of utilities.
 - o Savannah ES IESI Acct #004036438
 - 30 yard roll off container no longer on campus.
- Six utility accounts were opened in the fourth quarter:
 - o Paloma Creek ES:
 - CoServ Acct #0000276200 Electricity and Natural Gas
 - IESI Acct #004040591 Refuse
 - Mustang Acct #010420 000 Water
 - Mustang Acct #010421 000 Water
 - Mustang Acct #010422 000 Water
 - Mustang Acct #010423 000 Water

Fiscal Year – (July 2012 through June, 2013)

2007-2008

- Summer School was held at the following schools in 2007:
 - Strickland JH
 - o Borman ES
 - o Hodge ES
 - o Lee ES
 - o Davis School
- 3 utility accounts were opened in the first quarter:
 - o LA Nelson ES:
 - Denton Municipal Utilities Acct #4350025-01 Electricity, Water, and Refuse
 - Denton Municipal Utilities Acct #5580203-00 Refuse
 - Atmos Energy Acct #80-000201127-1750192-0 Gas
- 2 utility accounts were closed in the second quarter:
 - Strickland MS
 - Denton Municipal Utilities Acct #4240619-00 Electricity
 - o WS Ryan ES
 - Denton Municipal Utilities Acct #5580109-00 Refuse
- The unoccupied section of Fred Moore High School has been occupied by Special Education.
- Hawk Elementary School a lighting control panel was commissioned in July 2007.
- 2 utility accounts were closed in the fourth quarter:
 - o Hodge ES:
 - Denton Municipal Utilities Acct #4240633-00 Electricity
 - o WS Ryan ES:
 - Denton Municipal Utilities Acct #5560938-00 Refuse
- 1 utility account was changed during the fourth quarter:
 - o Lee ES
 - Denton Municipal Utilities Acct #4100967-01 Electric Service Retired

- 2 electric accounts were switched from TXU to Direct Energy in the fourth quarter:
 - o Crownover MS:
 - Closed: TXU Energy Acct #893-3178-98-3 Electricity
 - Opened: Direct Energy Acct #995882921987-RCMS Electricity
 - o Hawk ES:
 - Closed: TXU Energy Acct #972-1384-98-1 Electricity
 - Opened: Direct Energy Acct #995882921978-Hawk Electricity

2008-2009

- 20 utility accounts were opened in the first quarter:
 - o Blanton ES
 - CoServe Acct #0000312515 Electricity, Gas
 - Denton County FWSD#7 Acct #417 Water
 - Denton County FWSD#7 Acct #421 Water
 - Denton County FWSD#7 Acct #428 Water
 - Denton County FWSD#7 Acct #429 Water
 - Denton Municipal Utilities Acct #5580385-00 Refuse
 - Harpool MS
 - CoServe Acct #0000314585 Electricity, Gas
 - Denton County FWSD#7 Acct #422 Water
 - Denton County FWSD#7 Acct #423 Water
 - Denton County FWSD#7 Acct #430 Water
 - Denton County FWSD#7 Acct #431 Water
 - Denton Municipal Utilities Acct #5580387-00 Refuse
 - Olive Stephens ES
 - Lake Cities Municipal Utility Authority Acct #4747-00 Water
 - Lake Cities Municipal Utility Authority Acct #4791-00 Water
 - Lake Cities Municipal Utility Authority Acct #4792-00 Water
 - Lake Cities Municipal Utility Authority Acct #4793-00 Water
 - Lake Cities Municipal Utility Authority Acct #4794-00 Water
 - Denton Municipal Utilities Acct #5580388-00 Refuse
 - Atmos Acct #80-000201127-1797665-2 Gas
 - TXU Energy Acct #801-7228-98-5 Electricity

Mechanical and Control Work completed April through October 2008:

• DDC controls were installed on all portable classrooms

Denton ISD

Utilities Cost and Usage Report

Fiscal Year – (July 2012 through June, 2013)

• Calhoun Middle School

- Replace built-up chilled and hot water VAV system serving the Jones / McAllister building with new package rooftop units.
- o Replaced (4) Roof-top package units on the east side of the main building.
- Replaced (8) Roof-top package units on the west side of the main building.
- Replaced (13) Roof-top package units on the East building.
- o Replaced the heating boiler in the Main Building.
- Replaced the domestic hot water heating system in the Jones / McAllister building.

Central Services

- o Replaced all (14) new split systems.
- o Converted the controls for R-lead to DDC

Clear Creek

- o Replace eight (8) new rooftop units and added one (1) additional unit.
- Converted the controls for R-lead to DDC

Denton High School

- Replaced (36) Roof-top package units serving the spaces which have been historically called the vocational education area, excluding the cosmetology area.
- Replaced (1) Roof-top package unit to replace serving the main office area.
- o Replaced the air handlers serving the main space of the auditorium.
- o Replaced the domestic hot water heating system serving the kitchen.
- o Replaced pneumatic controls on all fan-powered VAV boxes with DDC.

Fred Moore High School

- o Replaced eleven (11) rooftop units.
- o Replaced thirteen (13) split heating and cooling units.
- Converted the controls for R-lead to DDC

Rivera Elementary School

- o Replaced four (4) rooftop units.
- Replaced all fan powered VAV boxes and pneumatic controls with new boxes having DDC controls.

• Ryan High School

- o Replaced the cooling tower.
- o Replaced the domestic hot water heating system.
- Strickland Middle School

Denton ISD Utilities Cost and Usage Report Figaal Voor (July 2012 through June 2013

Fiscal Year – (July 2012 through June, 2013)

- Replaced the air handling units serving the library and west classroom addition.
- o Replaced the domestic hot water heating system.
- o Replaced RTU #21 with a new RTU unit.

Lighting Efficiency Retrofit completed June through August 2008:

- Denton High School Entire Campus was refit with all T8 lamps and electronic ballasts
- Ryan High School Entire Campus was refit with all T8 lamps and electronic ballasts
- Elementary Schools Gyms: Replaced HID fixtures with linear fluorescent T8 high bay fixtures.
 - o Borman Elementary School
 - o EP Rayzor Elementary School
 - Evers Park Elementary School
 - o Ginnings Elementary School
 - o Hawk Elementary School
 - o Houston Elementary School
 - Lee Elementary School
 - o Newton Rayzor Elementary School
 - o Pecan Creek Elementary School
 - o Providence Elementary School
 - o Rivera Elementary School
 - o Savannah Elementary School
 - Wilson Elementary School
 - WS Ryan Elementary School
- 1 electric account was switched from TXU to Direct Energy in the second quarter:
 - Olive Stephens MS:
 - Closed: TXU Energy Acct #801-7228-98-5 Electricity
 - Opened: Direct Energy Acct #995882925531 Electricity
- The Energy Cost Adjustment (ECA) was reduced in February from \$0.050 to \$0.042 per kWh.
- Lake Cities Municipal Authority increased their minimum bill from \$25.63 to \$34.26 as of June 15, 2009.
- Irrigation Line found broken and fixed at McNair ES on August 9, 2009.
- Internal bill audits found overbilling at Advanced Technology Center. Credit of \$6,400.43 was applied.

- Job office for new Pre-K center added to Advanced Technology meter as of June 17, 2009.
- Summer School was held at the following schools in 2008:
 - Strickland JH
 - o Guyer HS
 - o Ginnings ES
 - o Lee ES
 - o Newton Rayzor ES

2009-2010

Mechanical and Control Work completed in 2009:

Borman

- Controls for (4) RTU with CO2, temperature and humidity control.
- Controls for (3) Cooling only RTU's
- Controls for (7) Exhaust Fans.

Calhoun

- Controls for (2) RTU's with CO2, temperature and humidity control.
- Controls for (1) VAV/RTU with all associated points per specs.
- Controls for (2) DX Split systems.
- Controls for (29) Fan Powered VAV boxes.
- Controls for (11) Exhaust Fans.
- Controls for (6) Emergency Exhaust Fans.

DHS

- Controls for (32) RTU's with Combination sensors.
- Controls for (1) VAV/RTU with all associated points per specs.
- Controls for (6) DX Split systems.
- Controls for (12) Fan Powered VAV boxes.
- Controls for (52) Exhaust Fans.

Hodge

- Controls for (12) RTU with CO2, temperature and humidity control.
- Controls for (1) DX Split systems.
- Controls for (7) Fan Powered VAV boxes.
- Controls for (3) VAV boxes.
- Controls for (7) Exhaust Fans.

Fiscal Year – (July 2012 through June, 2013)

McNair

- Controls for (12) RTU with CO2, temperature and humidity control.
- Controls for (1) DX Split systems.
- Controls for (7) Fan Powered VAV boxes.
- Controls for (3) VAV boxes.
- Controls for (7) Exhaust Fans.

Rayzor

- Controls for (11) RTU with CO2, temperature and humidity control.
- Controls for (3) Cooling only RTU's
- Controls for (7) Exhaust Fans.

RHS

- Controls for (7) RTU's with CO2 and temperature control.
- Controls for (10) RTU's without CO2 control.
- Controls for (2) VAV/RTU with all associated points per specs.
- Controls for (3) DX Split systems.
- Controls for (33) Fan Powered VAV boxes.
- Controls for (15) Exhaust Fans. The rest of them are wired by Div 16 to a wall switch
- or hood switch
- Controls for (3) Emergency Exhaust Fans.

Rivera

- Controls for (9) RTU with CO2, temperature and humidity control.
- Controls for (2) DX Split systems.
- Controls for (7) Fan Powered VAV boxes.
- Controls for (8) Exhaust Fans.
- Summer School is planned to be as held at the following schools in 2010:
 - Strickland JH
 - o Denton HS
 - o Ginnings ES
 - o Lee ES
 - o Fred Moore HS

2010-2011

Mechanical and Control Work completed in 2010:

HVAC Controls Upgrade

• Denton High School

• Guyer High School

Intelligent Irrigation Control

• Guyer High School

Lighting Retrofit and/or Occupancy Sensors and/or Hawkeye Fixtures

- Ann Windle
- Borman
- Calhoun
- Crownover
- EP Rayzor
- Evers Park
- Fred Moore
- Ginnings
- Hodge
- McMath
- McNair
- Navo
- Pecan Creek
- Rayzor
- Rivera
- Ryan Elementary
- Service Center
- Strickland
- Wilson

SF Added Total 187,695:

- Borman 328 SF
- Calhoun 22,651 SF
- Denton HS 32,807 SF
- Hodge 16,175 SF
- McNair 16,175 SF
- Rayzor 8,600 SF
- Rivera 11,890 SF
- Ryan HS 79,069 SF

Other Activities

- Submitted for SECO grant for Strickland Middle School
- Submitted for SECO Cool Schools grant for boiler and chiller replacements at McNair ES, McMath MS, Hodge ES, Guyer HS and Ryan HS

July 2012-June 2013 Activities

- Evaluated and reported the economic and technical viability of retrofitting existing campuses to geothermal HVAC systems
- Continuing discussions with DME to host solar PV projects on District property
- Implemented boiler efficiency program at several schools
- Implemented more energy conserving control strategies for below freezing weather operations
- Included smart irrigation controllers and efficient outdoor lighting retrofits in the current bond package
- Continuing to explore other energy conservation opportunities to present to the Board, some of which are Thermal Storage, Demand Response, Building Performance Management

Denton ISD 9/19/2013 Page 19 of 19