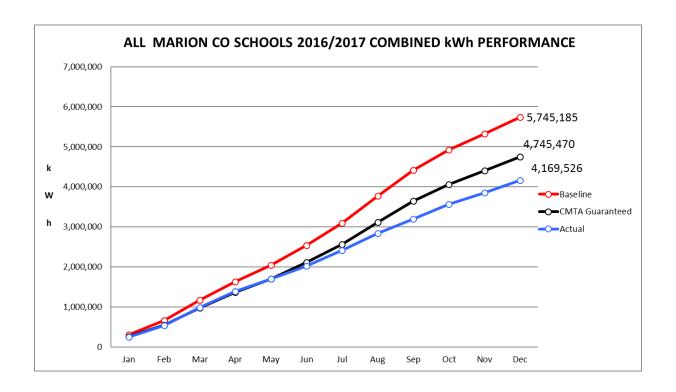
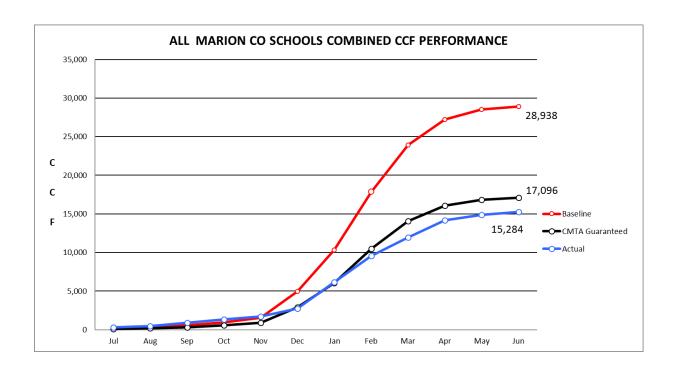
## **Overall Savings Summary**

The following table shows the district's overall savings based on the original guarantee compared to actual meter-read data. Each energy type is shown individually as well as the cost associated with each energy type. The overall expected guaranteed energy savings for this past year was \$104,242. This was exceeded by a substantial amount of \$53,250 post construction. This is a 51% excess savings above what was guaranteed. You will also see the running total of the excess savings that have accumulated beyond the guaranteed amount.

	En	ergy Savings		Cost Savings				
	Guaranteed	Actual	% to Guarantee	Guaranteed	Actual	% to Guarantee		
Electricity Consumption (kWh)	999,717	1,575,659	158%	\$94,687	\$94,687 \$145,340			
Gas (CCF)	11,841	13,654	115%	\$9,555	\$12,152	127%		
			Total Cost Savings	\$104,242	151%			

Excess Savings									
	Year		+/-						
1	2015-2016	\$	56,240						
2	2016-2017	\$	53,250						
Total		\$	109,490						





## **Lebanon Middle School (Marion Co. Knight Academy)**

## Scope of Work:

#### 1. HVAC System Geothermal Upgrade

The existing heating and cooling system in Lebanon Middle School was converted to a geothermal heating and cooling system. That was accomplished by first removing all of the existing split systems, fan coil units, chilled water pumps, and electric heaters as well as the existing air-cooled chiller. A new, ground-source heat pump system was installed as were new, dedicated outdoor air units. Additionally, the kitchen hood, make-up air unit, and exhaust fan were replaced. Lastly, the system was integrated with new, web-based DDC controls in order to allow for programmable and efficient system control.

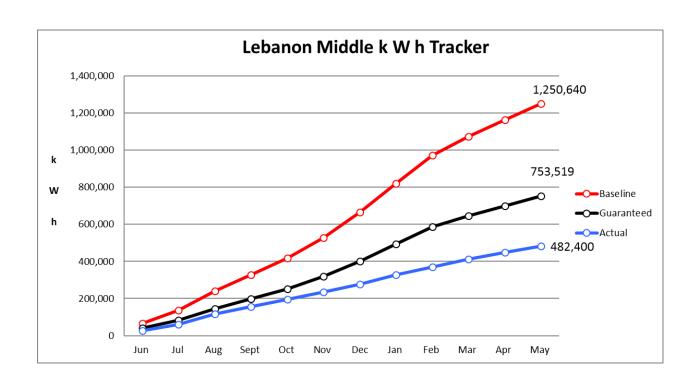
# 2. Lighting Upgrades

A number of lighting ugrades were performed to both the interior and exterior fixtures at Lebanon Middle School. Around the exterior, all of the existing metal halide pole lights and wall packs were upgraded with new LED fixtures. Inside the building, the high bay fixtures were replaced with new LED fixtures, and all of the existing T8 linear fluorescent fixtures were retrofitted with new troffers and LED lamps.

## **Savings Summary:**

At Lebanon Middle School, nearly 770,000 kWh were saved resulting in a savings of \$72,752.33 over the course of the past year.

Month	Baseline kWh	Guaranteed	kWh	kWh Saved	kV	Vh Savings
Jun 2016	66,720	40,199	26,640	40,080	\$	3,795.58
Jul 2016	70,320	42,368	35,280	35,040	\$	3,318.29
Aug 2016	103,920	62,612	54,000	49,920	\$	4,727.42
Sep 2016	86,640	52,201	41,040	45,600	\$	4,318.32
Oct 2016	91,440	55,093	38,880	52,560	\$	4,977.43
Nov 2016	108,720	65,505	40,320	68,400	\$	6,477.48
Dec 2016	136,560	82,278	41,760	94,800	\$	8,977.56
Jan 2017	154,560	93,123	51,120	103,440	\$	9,795.77
Feb 2017	152,640	91,967	41,760	110,880	\$	10,500.34
Mar 2017	102,480	61,745	40,320	62,160	\$	5,886.55
Arp 2017	88,560	53,358 37,440 51,120	37,440	51,120	\$	4,841.06
May 2017	88,080	53,069	33,840	54,240	\$	5,136.53
			Total Savings	768,240	\$	72,752.33



#### **Marion County High School**

# Scope of Work:

# 1. HVAC Controls Upgrade and Commissioning

The existing controls system was reviewed and adjusted to optimize facility operation and energy conservation. This included making the appropriate modifications to temperature set points and occupancy schedules. Additionally, the controls were updated to a web-based system to allow for remote access and adjustment.

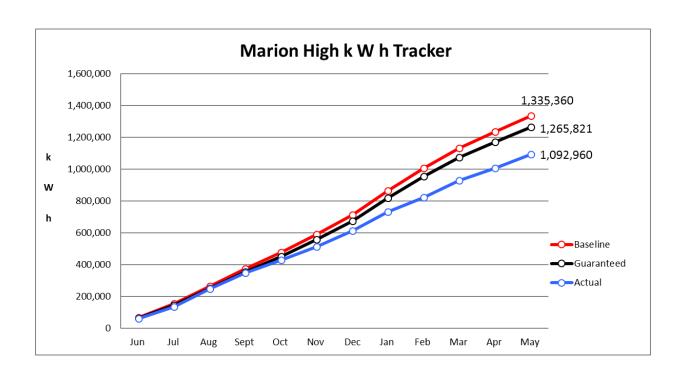
# 2. Lighting Upgrades

All of the existing metal halide pole lights and wall packs around the exterior of the high school were upgraded with new LED fixtures. Inside the building, the high bay fixtures were also replaced with new LED fixtures.

## **Savings Summary:**

At Marion County High School, the improvements made at the school also outperformed the kWh guarantee as can be seen in the chart below. Exceeding the guarantee for the last year resulted in an energy savings of \$22,955.28 at the high school.

Month	Baseline kWh	Guaranteed	kWh	kWh Saved	kV	h Savings
Jun 2016	68,400	64,838	61,920	6,480	\$	613.66
Jul 2016	85,440	80,991	74,160	11,280	\$	1,068.22
Aug 2016	112,080	106,243	112,320	-240	\$	(22.73)
Sep 2016	109,440	103,741	98,640	10,800	\$	1,022.76
Oct 2016	102,960	97,598	82,800	20,160	\$	1,909.15
Nov 2016	111,360	105,561	84,240	27,120	\$	2,568.26
Dec 2016	122,400	116,026	100,080	22,320	\$	2,113.70
Jan 2017	151,200	143,326	117,360	33,840	\$	3,204.65
Feb 2017	143,040	135,591	92,880	50,160	\$	4,750.15
Mar 2017	125,760	119,211	103,680	22,080	\$	2,090.98
Arp 2017	104,640	99,191	77,760	26,880	\$	2,545.54
May 2017	98,640	93,503	87,120	11,520	\$	1,090.94
	•		Total Savings	242400	\$	22.955.28



## St. Charles Middle School (Marion Co. Middle School)

## Scope of Work:

# 1. HVAC Controls Upgrade and Commissioning

The existing controls system was reviewed and adjusted to optimize facility operation and energy conservation. This included making the appropriate modifications to temperature set points and occupancy schedules. Additionally, the controls were updated to a web-based system to allow for remote access and adjustment.

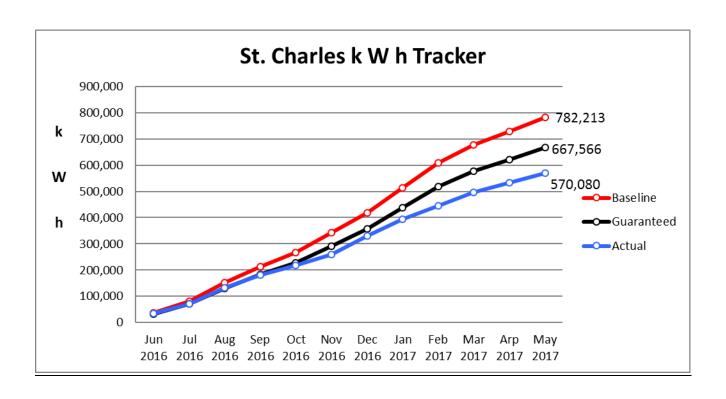
# 2. Lighting Upgrades

All of the existing metal halide pole lights and wall packs around the exterior of the school were upgraded with new LED fixtures. Inside the building, the high bay fixtures were also replaced with new LED fixtures.

## **Savings Summary:**

The results at St. Charles Middle School also performed better than what was guaranteed. The total savings realized from the kWh reduction was \$17,170.01.

	Bas	seline		•	•	-		
Month	kWh 7108	kwh 0927	Guaranteed	kWh1	kWh2	kWh Saved	k۱	Vh Savings
Jun 2016	24,085	13,968	32,476	17,680	16,080	4,293	\$	347.50
Jul 2016	27,951	16,209	37,688	21,280	16,560	6,320	\$	511.54
Aug 2016	43,985	25,508	59,308	31,680	28,080	9,733	\$	787.81
Sep 2016	39,495	22,905	53,254	24,960	24,480	12,960	\$	1,048.98
Oct 2016	32,997	19,136	44,492	19,440	16,800	15,893	\$	1,286.40
Nov 2016	47,529	27,564	64,087	25,600	17,280	32,213	\$	2,607.34
Dec 2016	49,268	28,572	66,431	47,120	22,320	8,400	\$	679.89
Jan 2017	60,155	34,885	81,110	43,040	22,320	29,680	\$	2,402.29
Feb 2017	59,429	34,464	80,132	30,640	20,400	42,853	\$	3,468.54
Mar 2017	43,175	25,038	58,215	32,480	19,440	16,293	\$	1,318.78
Arp 2017	32,963	19,116	44,447	20,720	14,160	17,200	\$	1,392.16
May 2017	34,061	19,753	45,926	22,880	14,640	16,293	\$	1,318.78
		Total	Savings	337,520	232,560	\$ 212,132.55	\$	17,170.01



# **Glasscock Elementary School**

## Scope of Work:

## 1. HVAC Controls Upgrade and Commissioning

The existing controls system was reviewed and adjusted to optimize facility operation and energy conservation. This included making the appropriate modifications to temperature set points and occupancy schedules. Additionally, the controls were updated to a web-based system to allow for remote access and adjustment.

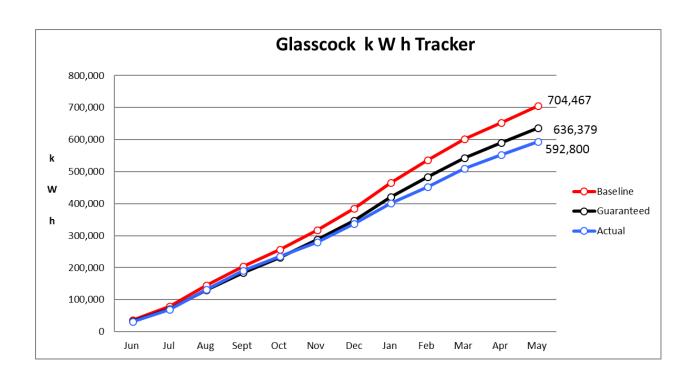
## 2. Lighting Upgrades

All of the existing metal halide pole lights and wall packs around the exterior of the school were upgraded with new LED fixtures. Inside the building, the high bay fixtures were also replaced with new LED fixtures.

# **Savings Summary:**

At Glasscock Elementary, there was a similar degree of savings to that of St. Charles Middle School. As can be seen in the chart below, the total savings for Glasscock Elementary School was \$10,574.83 during the past year.

Month	Baseline kWh	Guaranteed	kWh	kWh Saved	kWh
Jun 2016	36,800	33,243	30,600	6,200	\$ 587.14
Jul 2016	41,667	37,640	38,600	3,067	\$ 290.41
Aug 2016	66,267	59,862	62,200	4,067	\$ 385.11
Sep 2016	59,867	54,080	58,600	1,267	\$ 119.95
Oct 2016	52,133	47,095	44,800	7,333	\$ 694.47
Nov 2016	61,067	55,164	44,400	16,667	\$ 1,578.33
Dec 2016	66,933	60,464	58,600	8,333	\$ 789.17
Jan 2017	81,000	73,171	63,400	17,600	\$ 1,666.72
Feb 2017	70,067	63,295	50,800	19,267	\$ 1,824.55
Mar 2017	65,267	58,959	57,600	7,667	\$ 726.03
Arp 2017	51,400	46,432	43,000	8,400	\$ 795.48
May 2017	52,000	46,974	40,200	11,800	\$ 1,117.46
			Total Savings	111,667	\$ 10,574.83



## **Lebanon Elementary School**

## Scope of Work:

# 1. HVAC Controls Upgrade and Commissioning

The existing controls system was reviewed and adjusted to optimize facility operation and energy conservation. This included making the appropriate modifications to temperature set points and occupancy schedules. Additionally, the controls were updated to a web-based system to allow for remote access and adjustment.

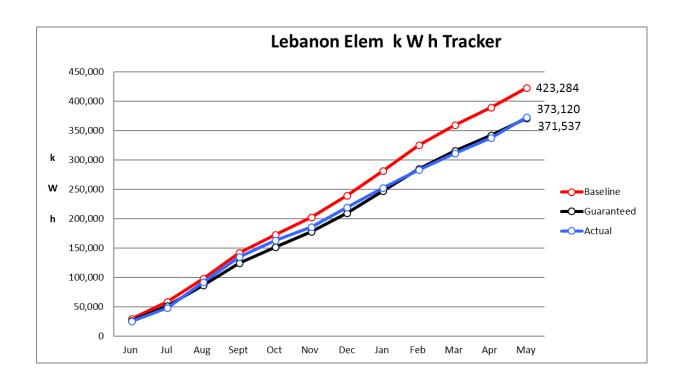
# 2. Lighting Upgrades

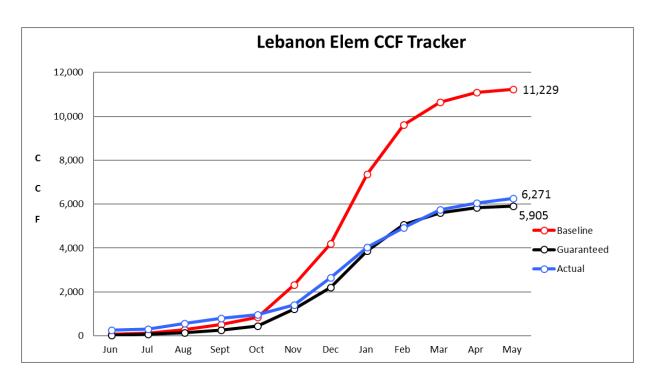
All of the existing metal halide pole lights and wall packs around the exterior of the school were upgraded with new LED fixtures. Inside the building, the high bay fixtures were also replaced with new LED fixtures.

# **Savings Summary:**

At Lebanon Elementary, the savings for both the kWh and ccf (natural gas) exceeded the guaranteed amounts. For the past year, there was a combined savings of \$9,163.18.

Month	Baseline kWh	Guaranteed	kWh	ccf	kWh Saved	ccf Saved	kWh Savings	С	cf Savings
Jun 2016	29,472	25,633	24,800	250	4,672	-185	\$ 442.41	\$	(164.65)
Jul 2016	29,028	25,247	22,880	44	6,148	12	\$ 582.25	\$	10.68
Aug 2016	39,767	34,588	44,640	264	-4,873	-108	\$ (461.44)	\$	(95.82)
Sep 2016	43,929	38,208	42,880	248	1,049	-18	\$ 99.37	\$	(16.02)
Oct 2016	30,161	26,232	27,520	155	2,641	182	\$ 250.07	\$	161.98
Nov 2016	30,536	26,558	23,040	453	7,496	1,017	\$ 709.84	\$	904.83
Dec 2016	36,244	31,523	33,120	1,226	3,124	656	\$ 295.84	\$	584.14
Jan 2017	42,204	36,707	33,440	1,385	8,764	1,788	\$ 829.98	\$	1,591.02
Feb 2017	43,869	38,155	31,040	898	12,829	1,357	\$ 1,214.87	\$	1,207.73
Mar 2017	34,377	29,900	27,840	832	6,537	181	\$ 619.09	\$	160.79
Apr 2017	30,117	26,195	26,560	288	3,557	162	\$ 336.88	\$	144.48
May 2017	33,580	29,206	35,360	228	-1,780	-86	\$ (168.60)	\$	(76.54)
			Total	Savings	50,164	4,958	\$ 4,750.56	\$	4,412.62
	•				Grand Tot	al Savings	\$	9,163.18	





## **Calvary Elementary School**

## Scope of Work:

#### 1. HVAC Controls Upgrade and Commissioning

The existing controls system was reviewed and adjusted to optimize facility operation and energy conservation. This included making the appropriate modifications to temperature set points and occupancy schedules. Additionally, the controls were updated to a web-based system to allow for remote access and adjustment.

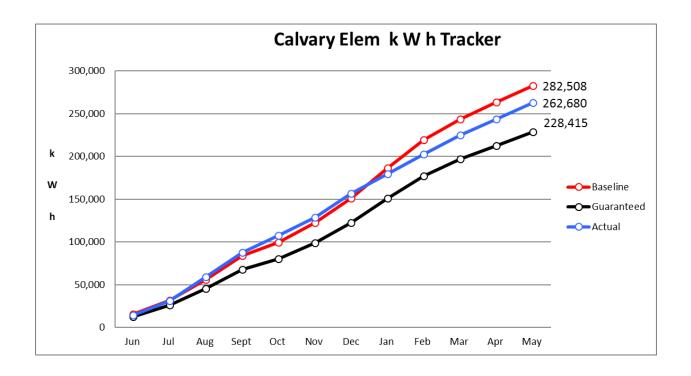
# 2. Lighting Upgrades

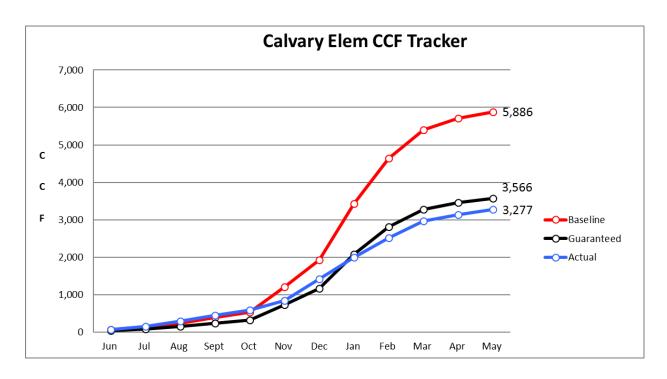
All of the existing metal halide pole lights and wall packs around the exterior of the school were upgraded with new LED fixtures. Inside the building, the high bay fixtures were also replaced with new LED fixtures.

## **Savings Summary:**

At Calvary Elementary, the savings for kWh did not meet the guaranteed amount. However, the ccf (natural gas) savings exceeded the guaranteed amount. As a result, despite the kWh savings not reaching the guaranteed amount, the school still realized a total of \$4,199.99 in savings.

Month	Baseline kWh	Guaranteed	kWh	ccf	kWh Saved	ccf Saved	kW	h Savings	С	cf Savings
Jun 2016	15,639	12,644	14,520	68	1,119	-4	\$	105.94	\$	(3.86)
Jul 2016	16,445	13,296	16,920	83	-475	-14	\$	(44.98)	\$	(12.76)
Aug 2016	24,133	19,512	27,480	146	-3,347	-36	\$	(316.93)	\$	(32.34)
Sep 2016	27,547	22,273	29,040	152	-1,493	-4	\$	(141.36)	\$	(3.26)
Oct 2016	15,643	12,648	19,800	146	-4,157	-2	\$	(393.67)	\$	(1.48)
Nov 2016	23,166	18,730	20,880	250	2,286	418	\$	216.45	\$	372.02
Dec 2016	28,692	23,198	28,200	579	492	144	\$	46.56	\$	128.46
Jan 2017	35,448	28,661	22,560	567	12,888	941	\$	1,220.53	\$	837.19
Feb 2017	32,503	26,280	23,280	519	9,223	688	\$	873.42	\$	612.62
Mar 2017	24,504	19,812	21,960	450	2,544	307	\$	240.89	\$	272.93
Arp 2017	19,410	15,694	18,720	181	690	126	\$	65.37	\$	112.44
May 2017	19,378	15,667	19,320	136	58	45	\$	5.46	\$	40.35
			Total	Savings	19,828	2,609	\$	1,877.68	\$	2,322.31
					Grand To	tal S	avings	\$	4.199.99	





## **West Marion Elementary School**

## Scope of Work:

# 1. HVAC Controls Upgrade and Commissioning

The existing controls system was reviewed and adjusted to optimize facility operation and energy conservation. This included making the appropriate modifications to temperature set points and occupancy schedules. Additionally, the controls were updated to a web-based system to allow for remote access and adjustment.

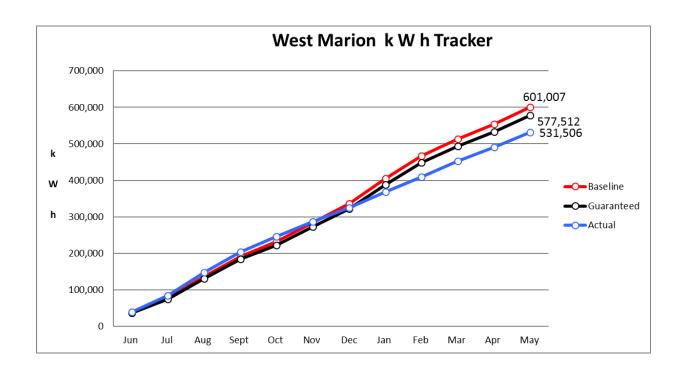
# 2. Lighting Upgrades

The existing metal halide pole lights and wall packs around the exterior of the school were upgraded with new LED fixtures. Inside the building, the high bay fixtures were also replaced with new LED fixtures.

## **Savings Summary:**

The kWh use at West Marion Elementary was below the guaranteed amount by a substantial amount as can be seen in the graph below. Due to this, the school experienced a total savings of \$5,625.41.

Month	Baseline kWh	Guaranteed	kWh	kWh Saved	kW	h Savings
Jun 2016	37,258	35,801	39,936	-2,678	\$	(216.76)
Jul 2016	40,612	39,024	44,928	-4,316	\$	(349.34)
Aug 2016	58,700	56,405	62,976	-4,276	\$	(346.13)
Sep 2016	54,740	52,600	55,680	-940	\$	(76.06)
Oct 2016	40,548	38,963	42,624	-2,076	\$	(168.03)
Nov 2016	52,387	50,339	41,088	11,299	\$	914.51
Dec 2016	51,130	49,131	37,632	13,498	\$	1,092.53
Jan 2017	69,014	66,316	43,392	25,622	\$	2,073.84
Feb 2017	62,080	59,653	41,088	20,992	\$	1,699.12
Mar 2017	47,233	45,387	43,776	3,457	\$	279.81
Arp 2017	40,407	38,827	38,016	2,391	\$	193.53
May 2017	46,898	45,065	40,370	6,528	\$	528.38
			Total Savings	69501	\$	5,625.41



## **Central Office**

## Scope of Work:

# 1. HVAC Controls Upgrade and Commissioning

The existing controls system was reviewed and adjusted to optimize facility operation and energy conservation. This included making the appropriate modifications to temperature set points and occupancy schedules. Additionally, the controls were updated to a web-based system to allow for remote access and adjustment.

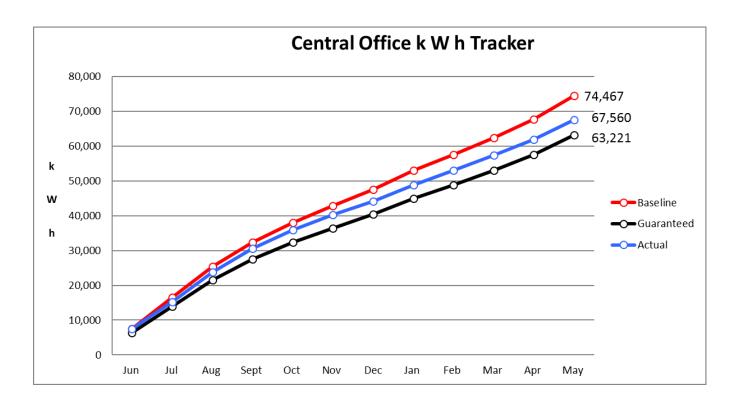
# 2. Lighting Upgrades

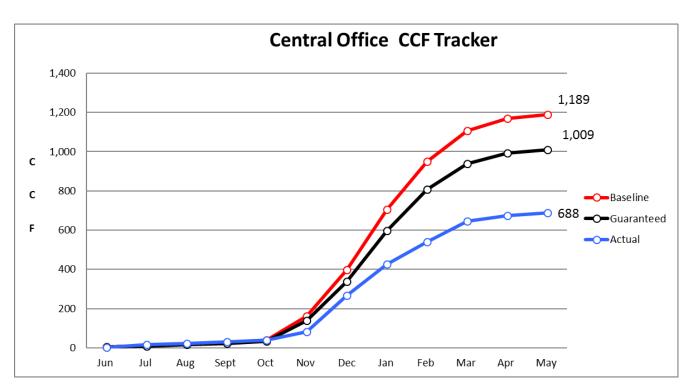
All of the existing metal halide pole lights and wall packs around the exterior of the building were upgraded with new LED fixtures.

# **Savings Summary:**

At the Central Office, there was a similar scenario to Cavalry Elementary School in that the savings for kWh did not meet the guaranteed amount. However, the Central Office also had ccf (natural gas) savings that exceeded the guaranteed amount. Therefore, despite the kWh savings not reaching the guaranteed amount, the school still realized a total savings of \$1,099.65.

Month	Baseline kWh	Guaranteed	kWh	ccf	kWh Saved	ccf Saved	kW	h Savings	ccf Savings
Jun 2016	7,547	6,407	7,440	3	107	3	\$	10.10	\$ 2.67
Jul 2016	8,973	7,618	7,840	13	1,133	-8	\$	107.33	\$ (7.12)
Aug 2016	8,840	7,505	8,440	6	400	2	\$	37.88	\$ 1.78
Sep 2016	6,973	5,920	6,920	8	53	-1	\$	5.05	\$ (1.19)
Oct 2016	5,733	4,867	5,320	10	413	4	\$	39.14	\$ 3.26
Nov 2016	4,733	4,019	4,280	41	453	82	\$	42.93	\$ 72.98
Dec 2016	4,773	4,052	3,920	187	853	48	\$	80.81	\$ 43.02
Jan 2017	5,360	4,551	4,600	157	760	150	\$	71.97	\$ 133.50
Feb 2017	4,653	3,951	4,240	116	413	130	\$	39.14	\$ 115.70
Mar 2017	4,840	4,109	4,400	104	440	53	\$	41.67	\$ 46.87
Arp 2017	5,320	4,517	4,520	28	800	35	\$	75.76	\$ 30.85
May 2017	6,720	5,705	5,640	15	1,080	4	\$	102.28	\$ 3.26
	_		Total	Savings	6,907	501	\$	654.06	\$ 445.59
		•	Grand Total Savings		\$ 1,099.65				





## **Bus Garage**

## Scope of Work:

# 1. HVAC Controls Upgrade and Commissioning

The existing controls system was reviewed and adjusted to optimize facility operation and energy conservation. This included making the appropriate modifications to temperature set points and occupancy schedules. Additionally, the controls were updated to a web-based system to allow for remote access and adjustment.

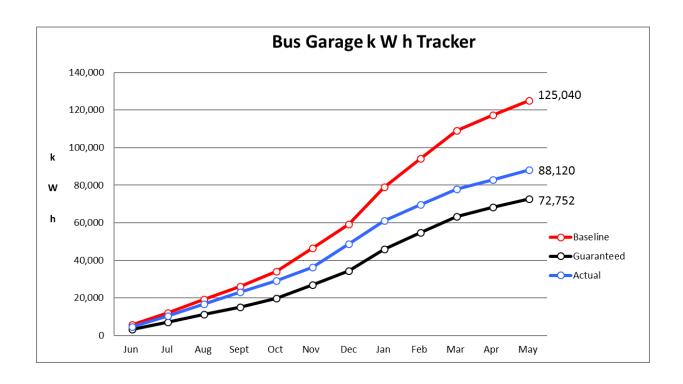
# 2. Lighting Upgrades

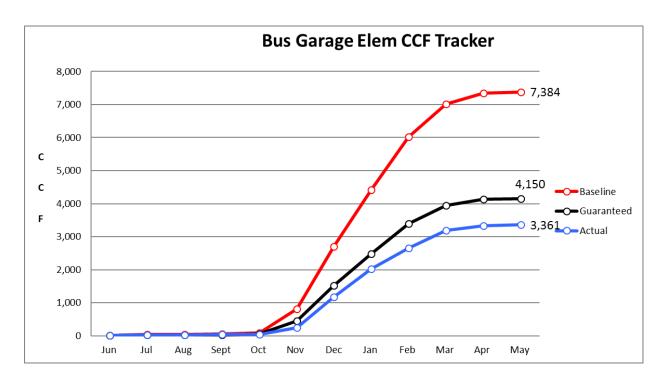
All of the existing metal halide pole lights and wall packs around the exterior of the building were upgraded with new LED fixtures. Additionally, the interior metal halide high-bay fixtures were replaced with new LED fixtures.

## **Savings Summary:**

Like the Central Office, the savings for kWh at the Bus Garage did not meet the guaranteed amount as can be seen in the graph below. However, the actual performance in terms of ccf (natural gas) was much better than that which was guaranteed. This resulted in an overall savings of \$7,076.79.

Month	Baseline kWh	Guaranteed	kWh	ccf	kWh Saved	ccf Saved	kW	h Savings	C	cf Savings
Jun 2016	5,680	3,305	4,680	14	1,000	-1	\$	94.70	\$	(0.89)
Jul 2016	6,520	3,794	5,720	4	800	19	\$	75.76	\$	16.91
Aug 2016	7,000	4,073	6,240	8	760	1	\$	71.97	\$	0.89
Sep 2016	6,960	4,050	6,440	9	520	-2	\$	49.24	\$	(1.78)
Oct 2016	8,000	4,655	5,960	9	2,040	31	\$	193.19	\$	27.59
Nov 2016	12,280	7,145	7,160	206	5,120	516	\$	484.86	\$	459.24
Dec 2016	12,640	7,354	12,560	926	80	962	\$	7.58	\$	856.18
Jan 2017	20,000	11,637	12,320	844	7,680	875	\$	727.30	\$	778.75
Feb 2017	15,000	8,727	8,440	629	6,560	979	\$	621.23	\$	871.31
Mar 2017	14,840	8,634	8,400	541	6,440	446	\$	609.87	\$	396.94
Arp 2017	8,520	4,957	5,080	139	3,440	189	\$	325.77	\$	168.21
May 2017	7,600	4,422	5,120	32	2,480	8	\$	234.86	\$	7.12
			Total	Savings	36,920	4,023	\$	3,496.32	\$	3,580.47
	•				Grand To	tal S	avings	\$	7.076.79	





# **Fitness Center**

## Scope of Work:

# 1. HVAC Controls Upgrade and Commissioning

The existing controls system was reviewed and adjusted to optimize facility operation and energy conservation. This included making the appropriate modifications to temperature set points and occupancy schedules. Additionally, the controls were updated to a web-based system to allow for remote access and adjustment.

# 2. Lighting Upgrades

All of the existing metal halide pole lights and wall packs around the exterior of the building were upgraded with new LED fixtures.

## **Savings Summary:**

The Fitness Center performed well with both the kWh and ccf usages below the guaranteed amount. As a result, the county realized a total savings of \$6,874.20 at the Fitness Center over the past year.

Month	Baseline kWh	Guaranteed	kWh	ccf	kWh Saved	ccf Saved	kWh Savings	C	cf Savings
Jun 2016	8,100	5,300	6,300	0	1,800	0	\$ 170.46	\$	-
Jul 2016	8,700	5,693	7,800	0	900	0	\$ 85.23	\$	-
Aug 2016	12,900	8,441	11,400	0	1,500	0	\$ 142.05	\$	-
Sep 2016	12,000	7,852	12,300	2	-300	-2	\$ (28.41)	\$	(1.78)
Oct 2016	8,700	5,693	9,000	89	-300	-54	\$ (28.41)	\$	(48.06)
Nov 2016	15,300	10,011	6,600	48	8,700	370	\$ 823.89	\$	329.30
Dec 2016	18,300	11,974	12,900	530	5,400	119	\$ 511.38	\$	105.91
Jan 2017	25,800	16,882	11,700	419	14,100	419	\$ 1,335.27	\$	372.91
Feb 2017	22,500	14,722	8,700	249	13,800	473	\$ 1,306.86	\$	420.97
Mar 2017	18,600	12,170	9,600	304	9,000	106	\$ 852.30	\$	94.34
Arp 2017	7,800	5,104	5,700	40	2,100	87	\$ 198.87	\$	77.43
May 2017	7,500	4,907	6,300	6	1,200	45	\$ 113.64	\$	40.05
			Total	Savings	57,900	1,563	\$ 5,483.13	\$	1,391.07
						Grand To	tal Savings	\$	6,874.20

