

Energy Management

In 2010-2011 when the "Energy Department" started, the electrical cost for the district was \$1,642,000. In 2017/2018, our electrical expense through July 2018 was \$1,698,000. This is a total electrical cost increase of \$56,000 or 3 percent over eight years despite building additions and new building construction. We added the Elementary School North, additions to the Elementary School South, High School Fine Arts wing, Middle School North Science wing, and the Multi-Purpose Building. Also during the 2017/2018 school year we started building construction at both Middle School Schools and High School. Despite construction, we continue to reduce our overall electrical consumption. The district accomplished this through the following:

- A. Reduced KWH cost
- B. Energy Efficient Equipment Upgrades
- Energy Efficient Building Improvements
- D. District Energy Management Policy implementation
- E. Lighting Retrofits
- F. Preventative Maintenance
- G. Peak Demand Control

p. 185 Board book

BHISD ENERGY MANAGEMENT PROGRAM

BOARD GOAL OF DIVERSIFING REVENUE



ELECTRICAL USAGE: COSTS PER SF SAVINGS DURING NINE YEAR ENERGY MGT. PROGRAM

YR.	ELECTRICITY \$ TOTAL	TOTAL SF	COST/SF		
2010-2011 \$	1,642,000.00	1,203,612	\$	1.36	
2017-2018 \$	1,698,000.00	1,704,746	\$	1.00	
9-YR. <i>ELECTRICA</i>	\$56,000.00	501,134 sF	\$	(0.36) SF	
COSTS INCREASE		29%		36%	
COSTS AVOIDANCE			D	ECREASE	

						US	ING 2010-2011	SAV	NGS FROM 2010
<u>YEAR</u>	TOTA	L ELECTRIC \$\$	TOTAL SQ. FT	COST	PER SF		COSTS PSF	COSTS PSF	
2017-2018	\$	1,698,000.00	1,704,746.00	\$	1.00	\$	2,325,660.54	\$	(627,660.54)
2016-2017	\$	1,676,538.00	1,476,528.00	\$	1.14	\$	2,014,319.38	\$	(337,781.38)
2015-2016	\$	1,586,007.00	1,476,528.00	\$	1.07	\$	2,014,319.38	\$	(428,312.38)
2014-2015	\$	1,648,761.00	1,466,820.00	\$	1.12	\$	2,001,075.46	\$	(352,314.46)
2013-2014	\$	1,336,091.00	1,422,862.00	\$	0.94	\$	1,941,106.77	\$	(605,015.77)
2012-2013	\$	1,250,837.00	1,252,291.00	\$	1.00	\$	1,708,409.21	\$	(457,572.21)
2011-2012	\$	1,455,466.00	1,228,930.00	\$	1.18	\$	1,676,539.50	\$	(221,073.50)
2010-2011	\$	1,642,000.00	1,203,612.00	\$	1.36	\$	1,642,000.00	\$	_
TOTAL SAVINGS FROM 2010-2011 COSTS PER SOUARE FOOT:						Ś	(3.029.730.24)		

Independent School District

ENERGY MANAGEMENT COST REDUCTION STRATEGIES:

- <u>Reduced KWH costs</u> Competitively procured energy contracts and extensions;
- Energy Efficient Equipment Upgrades Ex. Water cooled chilled water & Variable Refrigerant Flow HVAC systems, LED lighting, Variable Frequency Drives for motors, etc.
- <u>LED Lighting</u> Use of over \$1,020,210 in SEP funds for lighting retrofits, about a 66% electrical costs savings over Non-LED...
- <u>Preventative Maintenance</u> full time Maintenance Department position, optimizes equipment performance district wide;
- Peak Demand Control the other electrical costs that is paid to the line company (CenterPoint) based on maximum electrical loads to run facilities. Monitoring and reducing loads during peak times throughout the year has lowered TDSP line charges an estimated 10% during this period...



















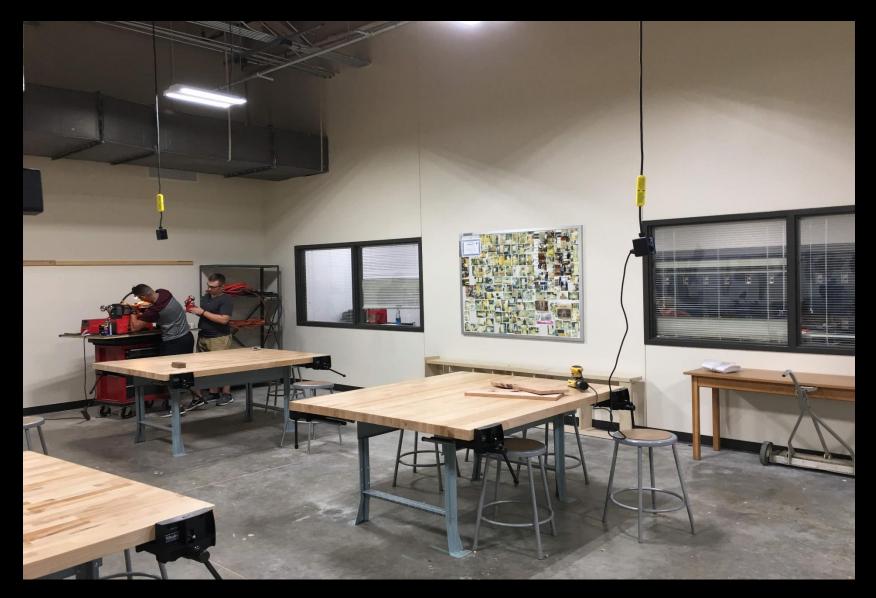






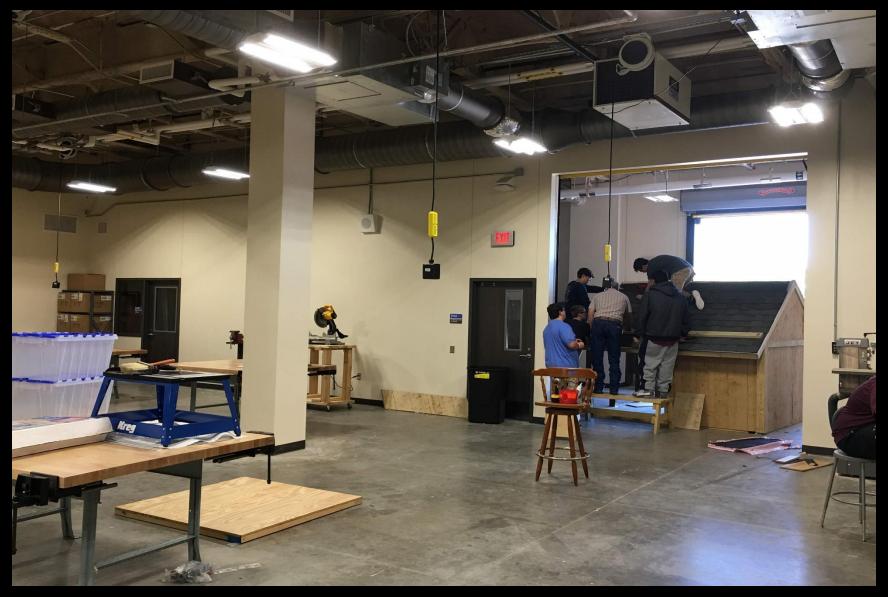






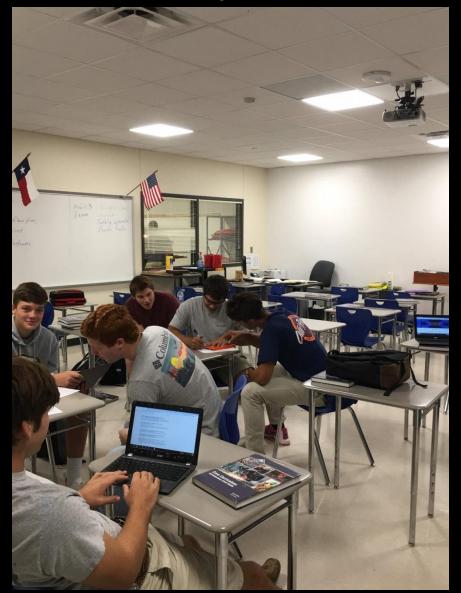


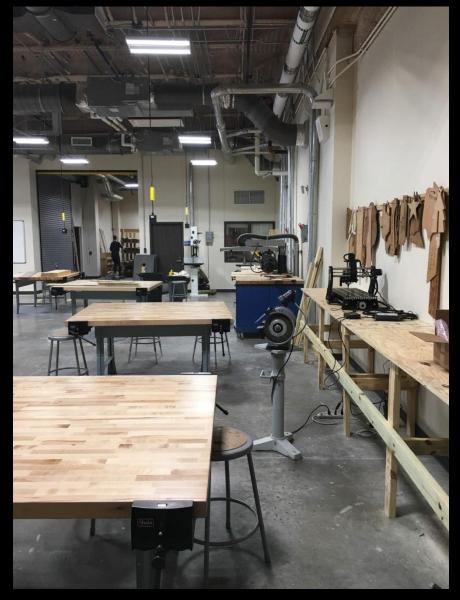














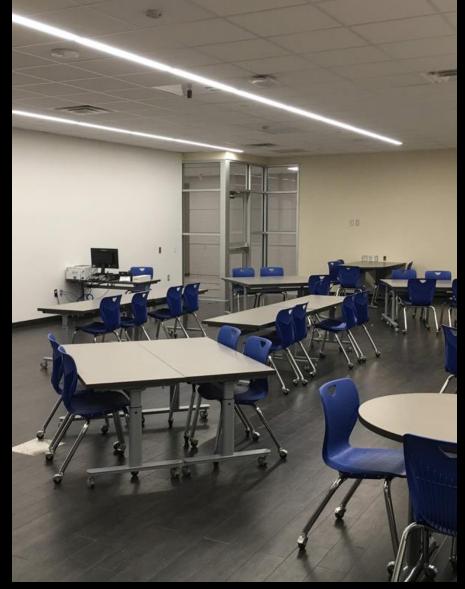






































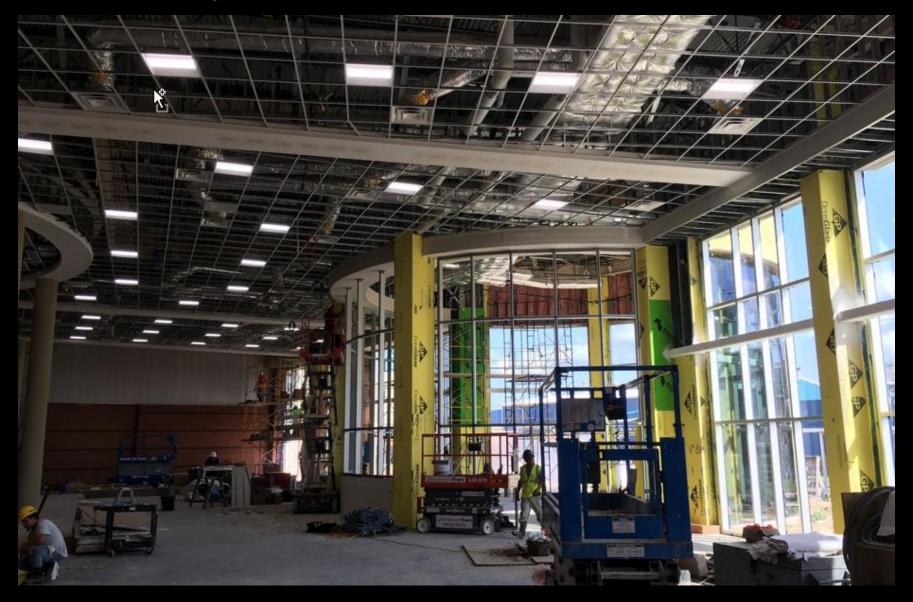






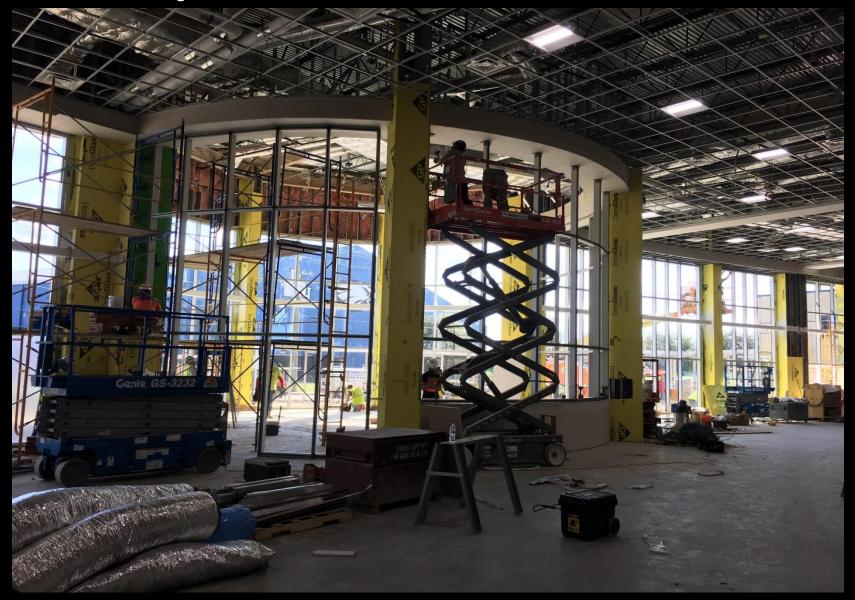






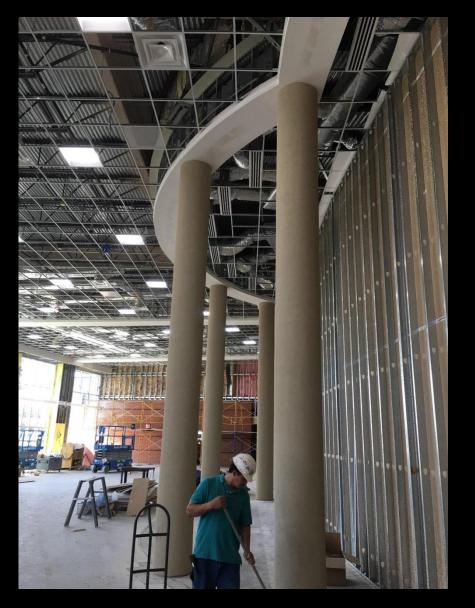














































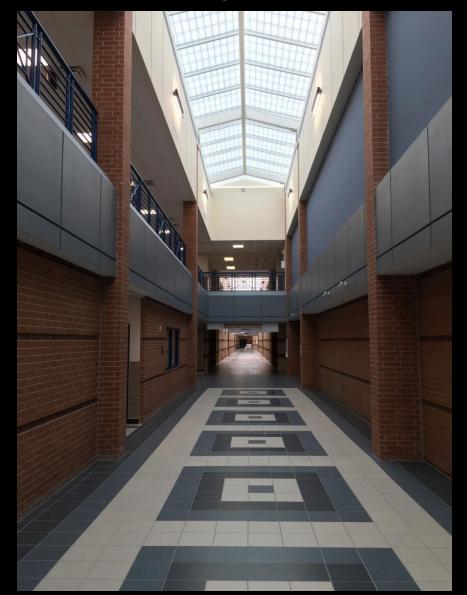


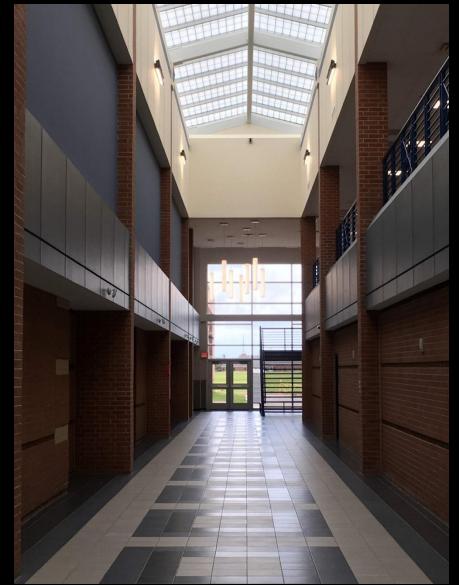
































































































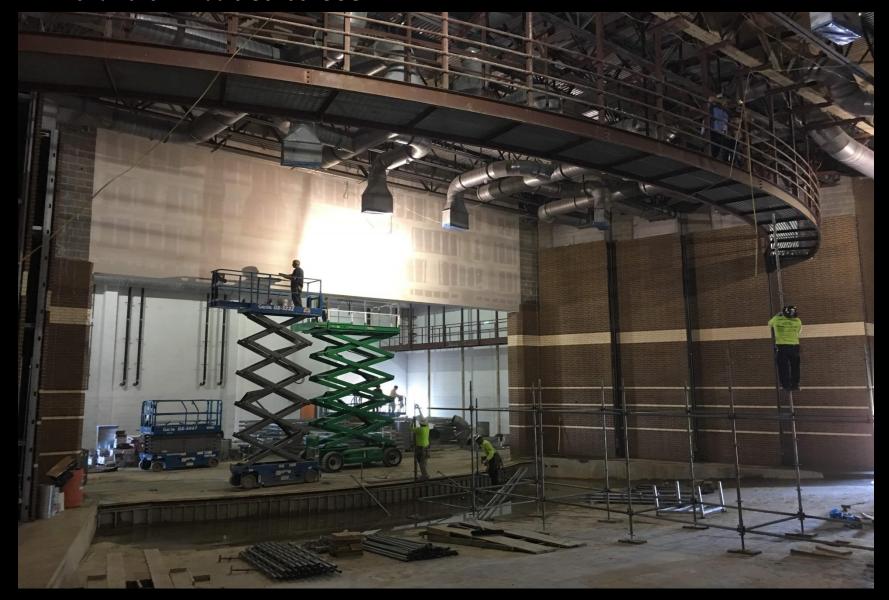






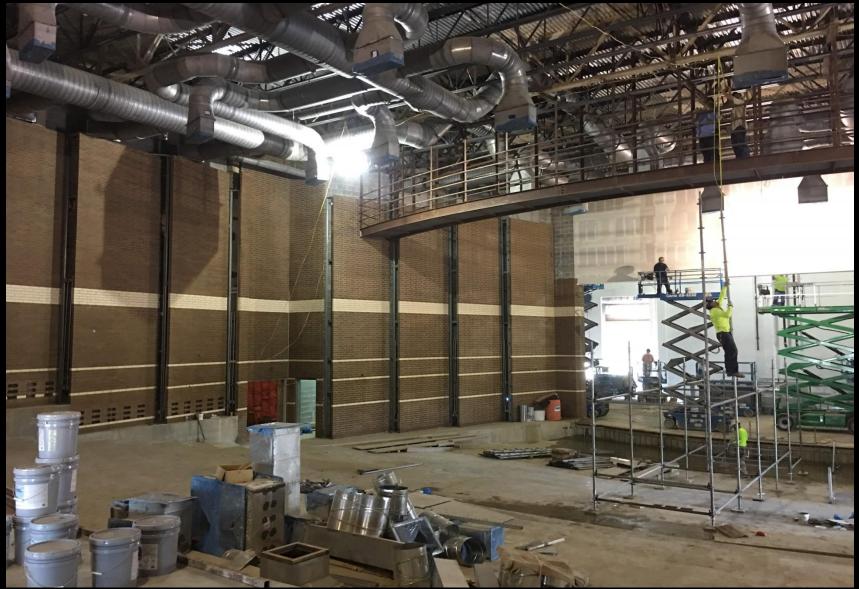














































































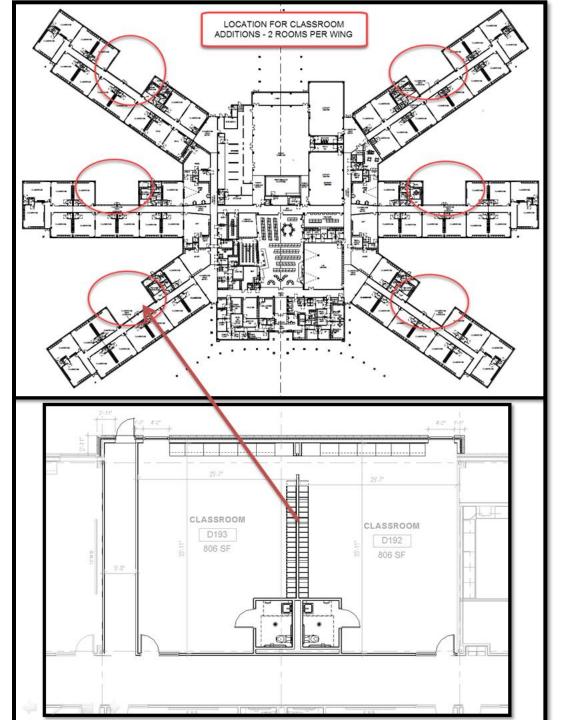








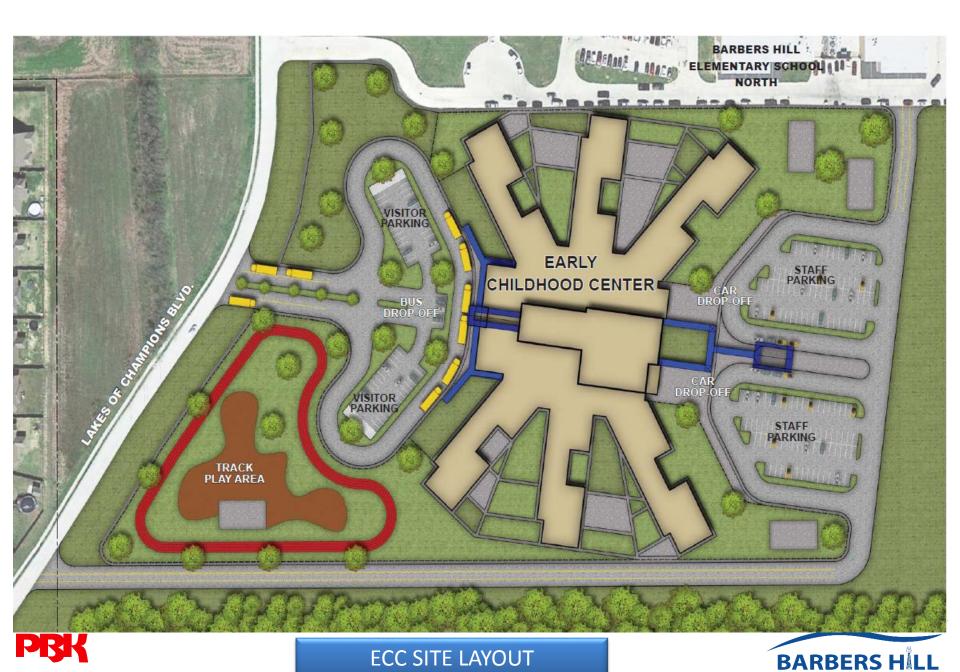




ACTION ITEM:

ECC 12 NEW CLASSROOM IN THE PREVIOUSLY PROVIDED SPACE IN EACH WING





Independent School District







ACTION ITEM: P. 372 BOARD BOOK – ECC 12 CLASSROOMS

Date of Board Meeting: September 24, 2018

Subject: Consideration and approval of Early Childhood Center Change Order No. 01

Guaranteed Maximum Price (GMP) and total costs as part of Bond 2017 for the buildout of

12 additional classrooms in the previously provided site space.

Presented by: Stan Frazier, Assistant Superintendent of Planning & Operations

Purpose of Agenda Item

□ Consent Agenda □ Information Only □ Action Needed □ Report

Additional Information and/or Back-Up:

GMP and total costs, as well as PBK's Letter of Recommendation, will be presented as handouts at the September 24^{th} board meeting.

RECOMMENDED ACTION:

I move to accept the proposed Change Order No. 01 Guaranteed Maximum Price (GMP) and total costs for the 12 additional classrooms at the Early Childhood Center as part of Bond 2017.





- This is in accordance with the 2017 Board Goal of Land Identification and Acquisition for strategic school purposes.
- Due to congestion on and near campuses as well as approaching capacity of the current Transportation Center, here is an update on the proposed site for an enlarged Transportation Facility with room for growth.



We currently have 46 route buses and 49 covered parking spaces, in addition to spares which we temporarily park on the north end. We have 19 check-out fleet vehicles, mostly Suburbans, with no available covered parking and limited secured non-covered parking due to required bus turn and back out radius needed.













