

# 2014 Bond Committee Recommendation



Katy Independent School District

	Project	Year to Open	Cost	
<b>New Facilities</b>				
1	Elementary #38 (LUZ 52D, Cinco Ranch Northwest)	2016	\$ 28,052,250	<a href="#">More Info</a>
2	Elementary #39 (LUZ 6B, Peek Rd/Stockdick School Rd)	2016	\$ 27,797,850	<a href="#">More Info</a>
3	Elementary #40 (LUZ 50,51A Vicinity )	2018	\$ 32,857,771	<a href="#">More Info</a>
4	Elementary #41 (LUZ 5 Vicinity) Design	2019	\$ 850,000	<a href="#">More Info</a>
5	Elementary #42 (LUZ 11B/23B Vicinity) Design	2019	\$ 850,000	<a href="#">More Info</a>
6	Elementary #43 (LUZ 73A North Vicinity) Design	2019	\$ 850,000	<a href="#">More Info</a>
7	JH 14 (LUZ 67A Hawks Landing)	2016	\$ 41,966,100	<a href="#">More Info</a>
8	JH 15 (LUZ 6B Peek Rd/Stockdick School Rd)	2017	\$ 43,375,345	<a href="#">More Info</a>
9	High School 8 (LUZ 6B Peek Rd/Stockdick School Rd)	2017	\$ 151,982,680	<a href="#">More Info</a>
10	Property Acquisition		\$ 18,200,000	<a href="#">More Info</a>
11	Infrastructure		\$ 10,000,000	<a href="#">More Info</a>
<b>Subtotal New Facilities</b>			<b>\$ 356,781,996</b>	
<b>Existing Facilities -Comprehensive Renovations</b>				
12	Memorial Parkway JH - Comprehensive Renovation (incl. MEP, restrooms, finishes and additional classroom space)	2018	\$ 23,497,233	<a href="#">More Info</a>
13	Mayde Creek HS Comprehensive Academic & Athletic Area Renovations (incl. MEP, Kitchen & finishes orig. campus)	2018	\$ 51,095,880	<a href="#">More Info</a>

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	Project	Year to Open	Cost	
14	Memorial Parkway ES - Comprehensive Renovation (incl. MEP, restrooms, finishes and additional classroom space)	2017	\$ 15,577,932	<a href="#">More Info</a>
15	Cimarron ES - Comprehensive Renovation (incl. MEP, restrooms, finishes)	2017	\$ 14,099,909	<a href="#">More Info</a>
16	Golbow ES - Comprehensive Renovation (incl. MEP, restrooms, finishes)	2018	\$ 15,534,008	<a href="#">More Info</a>
17	Pattison ES - Comprehensive Renovation (incl. MEP, restrooms, finishes)	2018	\$ 15,534,008	<a href="#">More Info</a>
<b>Subtotal Comprehensive Renovations</b>			<b>\$ 135,338,970</b>	
<b>Existing Facilities - Facility Expansion</b>				
18	Miller Career and Technology Center 2nd floor shell space build out	2017	\$ 8,036,820	<a href="#">More Info</a>
19	Beck JH - Career and Technical Education/Main Office Expansion	2017	\$ 2,459,160	<a href="#">More Info</a>
20	Cinco Ranch JH - Career and Technical Education/Main Office Expansion	2018	\$ 2,630,232	<a href="#">More Info</a>
21	Katy JH - Career and Technical Education/Main Office Expansion	2017	\$ 2,459,160	<a href="#">More Info</a>
22	McDonald JH - Career and Technical Education/Main Office Expansion	2017	\$ 2,459,160	<a href="#">More Info</a>
23	McMeans JH - Career and Technical Education/Main Office Expansion	2018	\$ 2,630,232	<a href="#">More Info</a>
24	South Transportation Phase 2 including Child Care Facility	2016	\$ 16,035,750	<a href="#">More Info</a>
<b>Subtotal Facility Expansion</b>			<b>\$ 36,710,514</b>	

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	Project	Year to Open	Cost	
<b>Safety and Security Improvements</b>				
25	Safety and Security Improvements	2016	\$ 3,040,053	<a href="#">More Info</a>
26	Security System Retrofit - CCTV Cameras / Access Control	N/A	\$ 10,000,000	<a href="#">More Info</a>
<b>Subtotal Safety and Security Improvements</b>			<b>\$ 13,040,053</b>	
<b>Existing Facilities - Component Replacement</b>				
27	Bear Creek Elementary Kitchen Renovation	2017	\$ 1,206,600	<a href="#">More Info</a>
28	Hutsell Elementary Kitchen Renovation	2017	\$ 1,204,400	<a href="#">More Info</a>
29	Clinic/Front Office Renovation Mayde Creek Elementary, Sundown Elementary	2017	\$ 1,339,648	<a href="#">More Info</a>
30	Shade Structure Installation and Playground Equipment Replacement	2018	\$ 750,000	<a href="#">More Info</a>
31	Performing Arts Centers (PAC) Retrofits - Morton Ranch HS, Seven Lakes HS	2017	\$ 3,445,200	<a href="#">More Info</a>
32	Katy HS Elevator Replacement	2015	\$ 114,672	<a href="#">More Info</a>
33	Pool Infrastructure Renovation CRHS, MRHS, SLHS	2015	\$ 1,500,000	<a href="#">More Info</a>
34	Cinco Ranch HS Renovation/Expansion: Field House and Science Upgrades	2018	\$ 5,135,724	<a href="#">More Info</a>
35	Resurface Tracks KHS, MCHS, THS, BJH,BDJH, CJH, KJH, MCJH, MDJH, WCJH	2017	\$ 2,557,449	<a href="#">More Info</a>
36	Outside Storage Buildings BJH, BDJH, CRJH, KJH, MCJH, MDJH, MMJH, MRJH	2016	\$ 475,200	<a href="#">More Info</a>
37	Roof/Building Envelope Phase 2 - Mayde Creek HS	2015	\$ 1,546,299	<a href="#">More Info</a>

# 2014 Bond Committee Recommendation



	Project	Year to Open	Cost	
38	Roof/Building Envelope Projects - Hayes ES	2015	\$ 1,287,506	<b>More Info</b>
39	Roof/Building Envelope Projects - McRoberts ES	2015	\$ 1,286,453	<b>More Info</b>
40	Roof/Building Envelope Projects - Alexander ES	2015	\$ 1,290,565	<b>More Info</b>
41	Roof/Building Envelope Projects - Williams ES	2015	\$ 1,342,897	<b>More Info</b>
42	Waterproofing OKE, RKE, RRE, SCE, SES	2015	\$ 340,260	<b>More Info</b>
43	Waterproofing Beck JH, Cinco Ranch JH, McMeans JH	2015	\$ 289,221	<b>More Info</b>
44	Waterproofing & Thru-wall Flashing Katy HS	2015	\$ 115,688	<b>More Info</b>
45	Carpets Replacement - Entire Campus			<b>More Info</b>
a	Year 1 CRHS, CRJH, HE, JWE, KE, KHS (partial), MMJH, PME, RAE, SCE	2015	\$ 4,060,742	
b	Year 2 BJH, CM, ESC, LEC, RKE, SES, WME	2016	\$ 1,672,835	
c	Year 3 KJH, MDJH, MRJH, NCE, OKE	2017	\$ 1,483,758	
46	Elementary School Gym-Cafeteria Floor Replacement			<b>More Info</b>
a	Year 1 BHE, MCE, RAE, RRE, SCE, WCE, WME	2015	\$ 628,590	
b	Year 2 JWE, MGE, RKE, SES	2016	\$ 539,663	
c	Year 3 BCE, FES, HE, NCE, OKE	2017	\$ 592,583	

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	Project	Year to Open	Cost	
47	Generator/Fire Alarm/Intercom Replacement			<b>More Info</b>
a	Year 1 Fielder ES, Hayes ES	2015	\$ 531,600	
b	Year 2 Katy JH	2016	\$ 304,354	
c	Year 3 Beck JH, McDonald JH	2017	\$ 740,000	
48	Chiller Replacement		\$ 2,125,000	<b>More Info</b>
a	Alexander Elementary (2)	2015	\$ 445,000	
b	Katy Elementary (2)	2015	\$ 445,000	
c	Katy High (1)	2015	\$ 220,000	
d	Katy Junior High (2)	2015	\$ 445,000	
d	Law Enforcement (1)	2015	\$ 125,000	
e	McRoberts Elementary (2)	2015	\$ 445,000	
49	Junior High Gym Lighting Retrofits (T-5)		\$ 750,000	<b>More Info</b>
a	Beckendorff Junior High	2016	\$ 125,000	
b	Beck Junior High	2016	\$ 125,000	
c	Cinco Ranch Junior High	2016	\$ 125,000	
d	Katy Junior High	2016	\$ 125,000	
e	McMeans Junior High	2016	\$ 125,000	
f	Morton Ranch Junior High	2016	\$ 125,000	
50	Portable Building Lighting Retrofit	2016	\$ 125,000	<b>More Info</b>

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	Project	Year to Open	Cost	
51	Softball Upgrades at KHS	2016	\$ 1,675,770	<b>More Info</b>
52	Softball Upgrades at THS	2016	\$ 1,675,770	<b>More Info</b>
<b>Subtotal Component Replacement</b>			<b>\$ 42,133,446</b>	
<b>Technology</b>				
53	Campus Retrofit	N/A	\$ 35,000,000	<b>More Info</b>
54	Copier/Printer Lifecycle Retrofit	N/A	\$ 1,000,000	<b>More Info</b>
55	Campus Standard Changes	N/A	\$ 5,130,000	<b>More Info</b>
56	Server Infrastructure Lifecycle	N/A	\$ 870,000	<b>More Info</b>
57	Server Infrastructure Growth	N/A	\$ 300,000	<b>More Info</b>
58	Core Network/Wireless Infrastructure	N/A	\$ 7,700,000	<b>More Info</b>
<b>Subtotal Technology</b>			<b>\$ 50,000,000</b>	
<b>Student Activity Facilities</b>				
59	Agriculture Science Facility Phase 2	2017	\$ 22,500,000	<b>More Info</b>
60	Concrete Stadium 12,000 seats, press box, restrooms, concessions	2017	\$ 43,670,684	<b>More Info</b>
	Field House (12,000 SF)	2017	\$ 3,270,000	
	Concrete Parking Allocation- (3:1 ratio) - 4000 parking spots	2017	\$ 11,059,316	
	<b>Total</b>		<b>\$ 58,000,000</b>	
<b>Subtotal Student Activity Facilities</b>			<b>\$ 80,500,000</b>	

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	Project	Year to Open	Cost	
<b>Other</b>				
61	Portables (25)		\$ 2,750,000	<b>More Info</b>
62	Buses		\$ 21,063,951	<b>More Info</b>
	Year 1 Replace 31, Growth 32	2015	\$ 6,502,047	
	Year 2 Replace 24, Growth 34	2016	\$ 6,168,167	
	Year 3 Replace 41, Growth 36	2017	\$ 8,393,737	
63	Preconstruction Architectural and Engineering Services-elementary, junior high, high school	N/A	\$ 9,800,000	<b>More Info</b>
<b>Subtotal Other</b>			<b>\$ 33,613,951</b>	
<b>New Facilities</b>			<b>\$ 356,781,996</b>	<b>47.7%</b>
<b>Existing Facilities - Comprehensive Renovation</b>			<b>\$ 135,338,970</b>	<b>18.1%</b>
<b>Existing Facilities - Facility Expansion</b>			<b>\$ 36,710,514</b>	<b>4.9%</b>
<b>Existing Facilities - Safety and Security</b>			<b>\$ 13,040,053</b>	<b>1.7%</b>
<b>Existing Facilities - Component Replacement</b>			<b>\$ 42,133,446</b>	<b>5.6%</b>
<b>Technology</b>			<b>\$ 50,000,000</b>	<b>6.7%</b>
<b>Student Activity Facilities</b>			<b>\$ 80,500,000</b>	<b>10.8%</b>
<b>Other</b>			<b>\$ 33,613,951</b>	<b>4.5%</b>
<b>Grand Total</b>			<b>\$ 748,118,930</b>	<b>100.0%</b>

**M01**

**Project Name:**            **Elementary in LUZ 52D Cinco Ranch Northwest**

**Total Project Cost:\***    **\$28,229,850**

**Construction Cost:**     **\$22,880,000**

**Project Description:**

New design elementary school designed for 1030 students in LUZ 52D, Westridge Creek Ln. /Cinco Trace Dr.

**Background/Justification:**

Strong growth in the southwest quadrant of the District continues on an annual basis.

The opening of this campus in 2016 will provide relief for the following campuses:

Wolman Elementary (RJWE), WoodCreek Elementary (WCE)

**Student Projections for the Southwest Quadrant of Katy ISD**

(without the construction of additional schools)

School	Capacity	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	Portables
Davidson Elementary	1,030	945	1,150	1,298	1,370	1,439	1,479	-
Wolman Elementary	1,030	1,176	1,370	1,566	1,707	1,808	1,890	5
WoodCreek Elementary	1,030	1,030	1,161	1,375	1,601	1,736	1,823	16

\*Total project cost includes not only the construction dollars but other costs associated with utilities, consultants, architects, engineers, testing, furniture, equipment & technology.



**M02**

**Project Name:** Elementary in LUZ 6B

**Total Project Cost:\*** \$28,916,250

**Construction Cost:** \$22,880,000

**Project Description:**

New design elementary school designed for 1030 students in LUZ 6B, Peek Rd./Stockdick School Rd.

**Background/Justification:**

Strong growth in the northwest quadrant of the District continues on an annual basis.

The opening of this campus in 2016 will provide relief for the following campuses:

King Elementary (RKE), Morton Ranch Elementary (MRE)

**Student Projections for the Northwest Quadrant of Katy ISD**

(without the construction of additional schools)

School	Capacity	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	Portables
King Elementary	1,030	1,369	1,559	1,783	2,137	2,596	3,112	13
Morton Ranch Elementary	1,030	920	995	1,115	1,217	1,349	1,468	1

\*Total project cost includes not only the construction dollars but other costs associated with utilities, consultants, architects, engineers, testing, furniture, equipment & technology.

**M03**

**Project Name:**        **Elementary in LUZ 50 / 51A**

**Total Project Cost:\***   **\$32,857,711**

**Construction Cost:**    **\$26,687,232**

**Project Description:**

Prototype elementary school designed for 1030 students in LUZ 50 / 51A, land to be purchased.

**Background/Justification:**

Strong growth in the southwest quadrant of the District continues on an annual basis.

The opening of this campus in 2018 will provide relief for the following campuses:

Wolman Elementary (RJWE), WoodCreek Elementary (WCE)

**Student Projections for the Southwest Quadrant of Katy ISD**

(without the construction of additional schools)

School	Capacity	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	Portables
Davidson Elementary	1,030	945	1,150	1,298	1,370	1,439	1,479	-
Wolman Elementary	1,030	1,176	1,370	1,566	1,707	1,808	1,890	5
WoodCreek Elementary	1,030	1,030	1,161	1,375	1,601	1,736	1,823	16

\*Total project cost includes not only the construction dollars but other costs associated with utilities, consultants, architects, engineers, testing, furniture, equipment & technology.

**M04 – M06**

**Project Name:** Design Fees for Architectural/Engineering Services for Elementary Nos. 41, 42 & 43

**Project Description:**

Architectural/Engineering costs for future identified elementary school projects to satisfy completion schedule requirements.

**Background & Justification:**

Elementary school nos. 41, 42 and 43 were part of the original 2014 bond project worksheet.

Elementary no. 41 is to be located in LUZ5, no. 42 in LUZ 11B/23B and no. 43 in LUZ 73A. All have a projected opening of 2019.

During the bond committee deliberations, it was recommended that since these elementary were not opening until 2019 and there would be a potential bond in 2017, the design fees for these campuses were to be included but not the costs associated with construction. By allowing for the design fees, and assuming a fall 2017 bond, our schedule to bid these elementary schools in 2018 could be met.

**M07**

**Project Name:**        **Junior High in LUZ 67A Hawks Landing**

**Total Project Cost:\***   **\$42,790,350**

**Construction Cost:**    **\$35,530,000**

**Project Description:**

Prototype junior high school designed for 1400 students in LUZ 67A, Hawks Landing. (Refined repeat of Seven Lakes Junior High)

**Background/Justification:**

The opening of this campus in 2016 will provide relief for the following campuses:

Seven Lakes Junior High (SLJH), WoodCreek Junior High (WCJH)

**Student Projections for the Southwest Quadrant of Katy ISD**

(without the construction of additional schools)

School	Capacity	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	Portables
Beckendorff Junior High	1,403	1,676	1,709	1,682	1,619	1,529	1,535	7
Cinco Ranch Junior High	1,400	1,161	1,154	1,102	1,091	1,093	1,099	4
Seven Lakes Junior High	1,403	1,729	1,962	2,104	2,254	2,363	2,459	8
WoodCreek Junior High	1,403	1,869	2,188	2,424	2,649	2,796	2,907	11

\*Total project cost includes not only the construction dollars but other costs associated with utilities, consultants, architects, engineers, testing, furniture, equipment & technology.

**M08**

**Project Name:**        **Junior High in LUZ 6B**

**Total Project Cost:\***   **\$44,806,345**

**Construction Cost:**    **\$36,465,000**

**Project Description:**

New design junior high school designed for 1400 students in LUZ 6B

**Background/Justification:**

The opening of this campus in 2017 will provide relief for the following campuses:

Katy Junior High (KJH), Morton Ranch Junior High (MRJH)

**Student Projections for the Northwest Quadrant of Katy ISD**

(without the construction of additional schools)

School	Capacity	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	Portables
Katy Junior High	1,231	1,313	1,357	1,423	1,577	1,744	2,027	13
Morton Ranch Junior High	1,403	1,250	1,266	1,343	1,393	1,460	1,505	7

\*Total project cost includes not only the construction dollars but other costs associated with utilities, consultants, architects, engineers, testing, furniture, equipment & technology.

**M09**

**Project Name:**        **High School in LUZ 6B**

**Total Project Cost:\***    **\$156,932,680**

**Construction Cost:**    **\$128,535,000**

**Project Description:**    New design high school including associated agricultural barn at Gerald D Young Agricultural Sciences Facility designed for 3,000 students in LUZ 6B

**Background/Justification:**

The opening of this campus in 2017 will provide relief for the following campuses:

Katy High (KHS), Morton Ranch High (MRHS)

**Student Projections for the Northwest Quadrant of Katy ISD**

(without the construction of additional schools)

School	Capacity	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	Portables
Katy High	3,000	3,096	3,280	3,408	3,664	3,975	4,406	2
Morton Ranch High	3,000	3,385	3,552	3,659	3,802	3,965	4,162	12

\*Total project cost includes not only the construction dollars but other costs associated with utilities, consultants, architects, engineers, testing, furniture, equipment and technology.

**M10**

**Project:**      **Property Acquisition**

**Rationale:**      Required to enable the acquisition of property necessary for future schools and support facilities including specific parcels of property currently in negotiations.

Recognizing the rapid development occurring within the District, it is important to acquire available property now in required locations for future school district facilities.

The budget identified is comparable in proportion to final allocated property acquisition budgets of previous bond authorizations.

**Budget:**      \$18,200,000

**M11**

**Project:**       **Infrastructure**

**Rationale:**     Infrastructure projects include utility work (i.e. water, sewer, drainage, electrical, communication), as well as paving and road work, driveway work, signalization, sidewalks, etc. to support the development of new school district facility sites and the safe, efficient operation of existing facility sites.

It is often necessary as part of property purchases to undertake infrastructure work as part of or independent of adjacent residential development projects well in advance of school facility construction. This is to ensure that appropriate infrastructure is in place in advance of school construction, otherwise the school facility opening may be delayed waiting on infrastructure completion.

With respect to existing school district facility sites, infrastructure funding is utilized to support the replacement of deteriorated infrastructure as well as to construct infrastructure components such as sidewalks, driveways, parking lots etc. to support safe and efficient circulation both within and to and from the site.

In addition, certain governing authorities (e.g. Harris County) have instituted new standards requiring traffic studies when portable buildings are added to a campus. Traffic studies often result in necessary road improvements within and/or adjacent to the campus property.

**Budget:**         \$10,000,000



**M12**

**Project Name: Memorial Parkway Junior High (MPJH) Renovation**

**Project Description:**

Provide a comprehensive renovation and facility expansion to meet current program needs

Components of a Comprehensive Renovation:

In the last few years, Katy ISD has developed a comprehensive renovation approach regarding older school district facilities. The first priority is the roof and building envelope (brick, windows, doors). Once we have ensured that the facility has been secured from moisture intrusion, we focus on the interior of the building.

The next level of upgrade is within the building in which we review the mechanical, electrical, and plumbing (MEP) systems. In regards to each discipline:

- Mechanical – air conditioning/heating. As the equipment ages the levels of performance for operation and air quality tend to diminish.
- Electrical – as our programs have evolved, so have our demands for electricity particularly in the area of technology. A review of lighting levels for student performance and energy efficiency is also evaluated.
- Plumbing – in older buildings, piping deteriorates affecting the quality and efficiency of the plumbing. A side effect could result in hidden leaks affecting the integrity of the walls including the introduction of mold.

Changes to the MEP systems affect the interior finishes – flooring, painting of walls. At that same time, we review the existing spaces in the building and determine if they support the current curriculum and legislative requirements. Areas to be considered would be the restrooms, classroom needs, clinic, and administrative.

At this same time, we review the need for a classroom addition at the campus. The MEP upgrade would take into consideration the need to support a building addition at a later date.

When determining the priority of campuses and the total building upgrades, we evaluate the campuses within the context of roof, building envelope, MEP and program. Any immediate campus needs are addressed through our work order system in order to ensure a safe facility.

**Background & Justification:**

MPJH

Opened: 1982

Square Footage: 148,627

Major Past Building Projects:

- HVAC (1999)
- Lighting Retrofit (2002)
- Music Room Addition (2003)
- Renovation of Life Skills (2005)
- Electrical Upgrades & Ceiling (2007)
- Weight Room Expansion (2008)
- Security Vestibule (2012)

Recommended Scope of Work to include:

Classroom Addition

Mechanical, Electrical & Plumbing upgrades/replacement

Renovation of spaces to meet current program needs – Science, CTE, locker rooms, Fine Arts, Library, Administration, Clinic, Kitchen/Commons

Replacement of finishes – flooring, ceiling, carpet

**M13**

**Project Name: Mayde Creek High School (MCHS) Renovation**

**Project Description:**

Provide a comprehensive renovation and facility expansion to meet current program needs

Components of a Comprehensive Renovation:

In the last few years, Katy ISD has developed a comprehensive renovation approach regarding older school district facilities. The first priority is the roof and building envelope (brick, windows, doors). Once we have ensured that the facility has been secured from moisture intrusion, we focus on the interior of the building.

The next level of upgrade is within the building in which we review the mechanical, electrical, and plumbing (MEP) systems. In regards to each discipline:

- Mechanical – air conditioning/heating. As the equipment ages the levels of performance for operation and air quality tend to diminish.
- Electrical – as our programs have evolved, so have our demands for electricity particularly in the area of technology. A review of lighting levels for student performance and energy efficiency is also evaluated.
- Plumbing – in older buildings, piping deteriorates affecting the quality and efficiency of the plumbing. A side effect could result in hidden leaks affecting the integrity of the walls including the introduction of mold.

Changes to the MEP systems affect the interior finishes – flooring, painting of walls. At that same time, we review the existing spaces in the building and determine if they support the current curriculum and legislative requirements. Areas to be considered would be the restrooms, classroom needs, clinic, and administrative.

At this same time, we review the need for a classroom addition at the campus. The MEP upgrade would take into consideration the need to support a building addition at a later date.

When determining the priority of campuses and the total building upgrades, we evaluate the campuses within the context of roof, building envelope, MEP and program. Any immediate campus needs are addressed through our work order system in order to ensure a safe facility.

**Background & Justification:**

MCHS

Opened: 1982

Square Footage: 581,821

Major Past Building Projects: Upgrade Electrical System (1999)

Renovations & Additions: Library, Athletics, Administration & Music (1999)

9<sup>th</sup> Grade Center & Performing Arts Center (PAC) (2002)

Exterior Door Replacement (2007)

Natatorium (2008)

Central Plant (2012)

Security Vestibule (2012)

Recommended Scope of Work to include:

Classroom Renovations to meet current program needs in original section of high school – including Science, Fine Arts, CTE, Administration, Library, Kitchen/Commons

Modify access to building – review construction of corridors to connect halls

Mechanical, Electrical & Plumbing upgrades/replacement

Elevator replacement

Replacement of finishes – flooring, ceiling, carpet

Renovations to Softball field to meet Title IX

Installation of Walk In Floral Cooler

Relocate Lights above Pool

Reconstruct access road around Mayde Creek complex

**M14**

**Project Name: Memorial Parkway Elementary (MPE) Renovation**

**Project Description:**

Provide a comprehensive renovation and facility expansion to meet current program needs

Components of a Comprehensive Renovation:

In the last few years, Katy ISD has developed a comprehensive renovation approach regarding older school district facilities. The first priority is the roof and building envelope (brick, windows, doors). Once we have ensured that the facility has been secured from moisture intrusion, we focus on the interior of the building.

The next level of upgrade is within the building in which we review the mechanical, electrical, and plumbing (MEP) systems. In regards to each discipline:

- Mechanical – air conditioning/heating. As the equipment ages the levels of performance for operation and air quality tend to diminish.
- Electrical – as our programs have evolved, so have our demands for electricity particularly in the area of technology. A review of lighting levels for student performance and energy efficiency is also evaluated.
- Plumbing – in older buildings, piping deteriorates affecting the quality and efficiency of the plumbing. A side effect could result in hidden leaks affecting the integrity of the walls including the introduction of mold.

Changes to the MEP systems affect the interior finishes – flooring, painting of walls. At that same time, we review the existing spaces in the building and determine if they support the current curriculum and legislative requirements. Areas to be considered would be the restrooms, classroom needs, clinic, and administrative.

At this same time, we review the need for a classroom addition at the campus. The MEP upgrade would take into consideration the need to support a building addition at a later date.

When determining the priority of campuses and the total building upgrades, we evaluate the campuses within the context of roof, building envelope, MEP and program. Any immediate campus needs are addressed through our work order system in order to ensure a safe facility.

**Background & Justification:**

MPE

Opened: 1978

Square Footage: 103,658

Major Past Building Projects: Renovation – Open to Closed Concept (1995)

Security Vestibule (2011)

Recommended Scope of Work to include:

Classroom Renovations to meet current program needs– including art, Administration, Clinic, Library, Kitchen/Commons

Building addition

Mechanical, Electrical & Plumbing upgrades/replacement

Replacement of finishes – flooring, ceiling, carpet

Parking

**M15**

**Project Name: Cimarron Elementary (CE) Renovation**

**Project Description:**

Provide a comprehensive renovation and facility expansion to meet current program needs

**Components of a Comprehensive Renovation:**

In the last few years, Katy ISD has developed a comprehensive renovation approach regarding older school district facilities. The first priority is the roof and building envelope (brick, windows, doors). Once we have ensured that the facility has been secured from moisture intrusion, we focus on the interior of the building.

The next level of upgrade is within the building in which we review the mechanical, electrical, and plumbing (MEP) systems. In regards to each discipline:

- Mechanical – air conditioning/heating. As the equipment ages the levels of performance for operation and air quality tend to diminish.
- Electrical – as our programs have evolved, so have our demands for electricity particularly in the area of technology. A review of lighting levels for student performance and energy efficiency is also evaluated.
- Plumbing – in older buildings, piping deteriorates affecting the quality and efficiency of the plumbing. A side effect could result in hidden leaks affecting the integrity of the walls including the introduction of mold.

Changes to the MEP systems affect the interior finishes – flooring, painting of walls. At that same time, we review the existing spaces in the building and determine if they support the current curriculum and legislative requirements. Areas to be considered would be the restrooms, classroom needs, clinic, and administrative.

At this same time, we review the need for a classroom addition at the campus. The MEP upgrade would take into consideration the need to support a building addition at a later date.

When determining the priority of campuses and the total building upgrades, we evaluate the campuses within the context of roof, building envelope, MEP and program. Any immediate campus needs are addressed through our work order system in order to ensure a safe facility.

**Background & Justification:**

CE

Opened: 1980

Square Footage: 93,823

Major Past Building Projects: Renovation – ReBrick and Exterior Sidewalks, Canopy (2003)

Security Vestibule (2008)

Kitchen (2012)

Recommended Scope of Work to include:

Classroom Renovations to meet current program needs– including Early Childhood, Life Skills, Administration, Library, Clinic,

Mechanical, Electrical & Plumbing upgrades/replacement

Replacement of finishes – flooring, ceiling, carpet



**M16**

**Project Name: Golbow Elementary (GE) Renovation**

**Project Description:**

Provide a comprehensive renovation and facility expansion to meet current program needs

Components of a Comprehensive Renovation:

In the last few years, Katy ISD has developed a comprehensive renovation approach regarding older school district facilities. The first priority is the roof and building envelope (brick, windows, doors). Once we have ensured that the facility has been secured from moisture intrusion, we focus on the interior of the building.

The next level of upgrade is within the building in which we review the mechanical, electrical, and plumbing (MEP) systems. In regards to each discipline:

- Mechanical – air conditioning/heating. As the equipment ages the levels of performance for operation and air quality tend to diminish.
- Electrical – as our programs have evolved, so have our demands for electricity particularly in the area of technology. A review of lighting levels for student performance and energy efficiency is also evaluated.
- Plumbing – in older buildings, piping deteriorates affecting the quality and efficiency of the plumbing. A side effect could result in hidden leaks affecting the integrity of the walls including the introduction of mold.

Changes to the MEP systems affect the interior finishes – flooring, painting of walls. At that same time, we review the existing spaces in the building and determine if they support the current curriculum and legislative requirements. Areas to be considered would be the restrooms, classroom needs, clinic, and administrative.

At this same time, we review the need for a classroom addition at the campus. The MEP upgrade would take into consideration the need to support a building addition at a later date.

When determining the priority of campuses and the total building upgrades, we evaluate the campuses within the context of roof, building envelope, MEP and program. Any immediate campus needs are addressed through our work order system in order to ensure a safe facility.

**Background & Justification:**

GE

Opened: 1989

Square Footage: 95,709

Major Past Building Projects: Security Vestibule

Recommended Scope of Work to include:

Classroom Renovations to meet current program needs– including classrooms, Life Skills, Administration, Library, Clinic, Kitchen/Cafeteria/Gym

Mechanical, Electrical & Plumbing upgrades/replacement

Replacement of finishes – flooring, ceiling, carpet

Improve exterior access for student drop off and pick up

**M17**

**Project Name: Pattison Elementary (PE) Renovation**

**Project Description:**

Provide a comprehensive renovation and facility expansion to meet current program needs

**Components of a Comprehensive Renovation:**

In the last few years, Katy ISD has developed a comprehensive renovation approach regarding older school district facilities. The first priority is the roof and building envelope (brick, windows, doors). Once we have ensured that the facility has been secured from moisture intrusion, we focus on the interior of the building.

The next level of upgrade is within the building in which we review the mechanical, electrical, and plumbing (MEP) systems. In regards to each discipline:

- Mechanical – air conditioning/heating. As the equipment ages the levels of performance for operation and air quality tend to diminish.
- Electrical – as our programs have evolved, so have our demands for electricity particularly in the area of technology. A review of lighting levels for student performance and energy efficiency is also evaluated.
- Plumbing – in older buildings, piping deteriorates affecting the quality and efficiency of the plumbing. A side effect could result in hidden leaks affecting the integrity of the walls including the introduction of mold.

Changes to the MEP systems affect the interior finishes – flooring, painting of walls. At that same time, we review the existing spaces in the building and determine if they support the current curriculum and legislative requirements. Areas to be considered would be the restrooms, classroom needs, clinic, and administrative.

At this same time, we review the need for a classroom addition at the campus. The MEP upgrade would take into consideration the need to support a building addition at a later date.

When determining the priority of campuses and the total building upgrades, we evaluate the campuses within the context of roof, building envelope, MEP and program. Any immediate campus needs are addressed through our work order system in order to ensure a safe facility.

**Background & Justification:**

PE

Opened: 1989

Square Footage: 112,156

Design Capacity: 1052

Major Past Building Projects: Mechanical equipment (2003)

Ten (10) Classroom Addition (2004)

Recommended Scope of Work to include:

Classroom Renovations to meet current program needs– including classrooms, Life Skills, Administration, Clinic

Mechanical, Electrical & Plumbing upgrades/replacement

Replacement of finishes – flooring, ceiling, carpet

Improve exterior access for student drop off and pick up

**M18**

**Project Name: Miller Career and Technology Center (MCTC) Second floor build out**

**Project Description:**

MCTC Shell Space Build-out (40,000 SF) to Support Career and Technical Education (CTE) Program Sequences.

**Background and Justification:**

This mission of Katy ISD Career and Technical Education is to provide students with the knowledge and skills necessary to succeed in a global economy; aligned with the school district's mission to provide unparalleled learning experiences designed to prepare and inspire.

In partnership with Miller Career & Technology Center, our goal is to provide every graduating senior an opportunity to earn rigorous workplace certifications that will enhance their career success with the technical skills, knowledge and training necessary to succeed in higher education as well as an undefined global workplace. Career and technical education offers programs and courses that align with the post-secondary education and to national and industry standards to prepare students to be college and career ready.

The Miller Career and Technology Center build out will include four program areas: Oil and Natural Gas; Manufacturing Engineering; Allied Health; and Computer Programming – Software/Game Development and Mobile App Development.

- The proposed CTE programs support the requirements of House Bill 5 in that the program areas provide a sequence of courses within one of the five endorsement areas; specifically the STEM, Business and Industry, and Public Services endorsement areas.
- The proposed CTE programs support the needs of the Katy workforce. The top four Katy Area industries are Service, 12%; Construction, 12%, Manufacturing, 25%; and Retail 25%. Supporting companies such as BP North America, Conoco/Phillips, Wood Group-Mustang Engineering, Shell Oil, Igloo Products, Weatherford, and Memorial Hermann just to name a few.
- The design of the second floor design allows for a flexible learning environment conducive for student and teacher collaboration and problem-solving.
- All lab spaces will enhance the student learning experience by providing hands-on learning, putting theory in practice on equipment that mirror that found in industry.
- The proposed CTE programs will provide students the opportunity for work-based learning experiences within our community as well as the opportunity to sit for an industry credential that is directly aligned with industry. The aligned credentials serve as a validation of the students' knowledge and skill set as they exit the program, providing them a higher entry point into the industry.

Career and Technical Education’s curriculum reinforces academic content; integrating science, technology, engineering and mathematics (STEM) concepts. Activities and resources are embedded with workplace competencies that are essential in all 21<sup>st</sup> century career pathways. CTE students are offered opportunities to apply their learning and transfer their core knowledge and skills across the curriculum through problem- and project-based learning activities. Skill sets are validated through the use of industry credentialing to provide authentic applications. CTE students participate in their learning through a variety of methods such as contextual teaching and learning and applied academics, adding relevancy to rigorous coursework. The Katy ISD CTE curriculum answers the age-old question, “Why do I have to learn this?”

**M19 – M23**

**Project Name: Modified Renovations/Expansions: Career and Technology Education (CTE) Labs and Front Office Consolidation**

**Project Description:**

Renovate and expand the CTE labs and provide for front office consolidation for synergy and flow at Katy Junior High (KJH), McDonald Junior High (MDJH), Beck Junior High (BJH), Cinco Ranch Junior High (CRJH), and McMeans Junior High (MMJH). Renovations to the front office to better serve students and parents as well as staff efficiency.

**Background and Justification:**

CTE programs:

Principles of Health Science (PHS):

- KJH, MDJH, BJH, MMJH, and CRJH offer high school credit course Principles of Health Science (PHS) to 8<sup>th</sup> grade students.
- PHS is an introductory course to the different area/courses offered in the KISD Human Services career cluster. PHS is the first course in the Education and Training and Family Consumer Science endorsement strands as compliance with House Bill 5.
- The PHS curriculum contains units of basic sewing, nutrition and food prep skills, financial management, career goal setting, child development skills, interpersonal relationships, housing, interior design, and personal development. PHS is a lab-based course where resources, hands-on student projects, flexible learning areas, work space, and storage are essential for student safety and to meet the needs of the curriculum.
- Student safety, especially during the kitchen labs and sewing labs, are a major concern at KJH, MDJH, BJH, MMJH, and CRJH. The 2013-2014 PHS at KJH, MDJH, BJH, and CRJH enrollment is 425 students. For safety reasons, KISD CTE Department recommends four (4) students per kitchen lab.

KJH

- Opened in 1965.
- One teacher in 2013-14.
- Kitchen lab (one stove and one sink) shares the same room as a sewing/classroom lab.
- Renovations or Expansions:
  - Six kitchens with flexible learning space for sewing/classroom lab.
  - Additional sewing/classroom lab with flexible learning space to allow for increase in enrollment and additional teacher.
  - Storage for sewing machines, kitchen tools, and additional resources.

MDJH

- Opened in 1991.
- One teacher in 2013-14.
- Kitchen lab (two stoves and two sinks) shares the same room as a sewing/classroom lab.
- Renovations or Expansions:
  - Six kitchens with flexible learning space for sewing/classroom lab.
  - Additional sewing/classroom lab with flexible learning space to allow for increase in enrollment and additional teacher.
  - Storage for sewing machines, kitchen tools, and additional resources.

BJH

- Opened in 1996.
- Two teachers in 2013-14.
- Kitchen lab (four stoves and four sinks) shares the same room as a sewing/classroom lab.
- A portable building is the second sewing/classroom lab.
- Renovations or Expansions:
  - Six kitchens with flexible learning space for sewing/classroom lab.
  - Additional sewing/classroom lab with flexible learning space to allow for increase in enrollment and additional teacher.
  - Storage for sewing machines, kitchen tools, and additional resources.

MMJH

- Opened in 2000.
- Two teachers in 2013-2014.
- Kitchen lab (five stoves, one oven with separate cooktop and 6sinks).
- A classroom is the second sewing/classroom lab.
- Renovations or Expansions:
  - Six kitchens with flexible learning space for sewing/classroom lab.
  - Storage for sewing machines, kitchen tools, and additional resources.

CRJH

- Opened in 2001.
- Two teachers in 2013-14.
- Kitchen lab (six stoves and six sinks) shares the same room as a sewing/classroom lab.
- A science room is the second sewing/classroom lab.
- Renovations or Expansions:
  - Additional sewing/classroom lab with flexible learning space to allow for increase in enrollment.
  - Storage for sewing machines, kitchen tools, and additional resources.



Technical Education:

- KJH, CJH, BJH, MDJH, MMJH offer high school credit course Concepts of Engineering to 8<sup>th</sup> grade students.
- Concepts of Engineering is an introductory course to Intro to Engineering or Architect Engineering at the high schools. Students may take this pathway to complete their endorsement required by House Bill 5.
- Concepts of Engineering is a lab-based course with resources, hands-on students projects, that covers many designs to include design of bridges, CO2 cars, projects designed and then made with 3-d printers.
- Work space and storage are essential for student safety and to meet the curriculum requirements.
- Student safety is a major concern during the lab environment which the students are building their projects they have designed. The 2013-2014 Concepts of Engineering at KJH, CJH, BJH, MMJH, MDJH enrollment is 573 students.

KISD CTE recommends the following renovations for the following schools to help promote student safety and enhance student lab learning:

MMJH

- Opened in 2000.
- One teacher in 2013-14.
- Lack of space is a major concern from our risk management team.
- Add flexible learning space for students to perform task safely.
- Renovations or Expansions:
  - Expand shop area from 1000 Square feet to 3400 square feet.
  - Add sink and eye wash station.
  - Add project and storage area.
  - Add drop cords.
  - Emergency shut off.

KJH

- Lack of shop space is a major concern for our risk management team.
- Safe working area around equipment.
- Storage for materials and projects.
- Renovations or expansions:
  - Double the size of learning space to make for safer working environment.
  - Add material and project storage area.
  - Add electrical outlets for equipment. Drop cords.
  - Emergency shut off.

#### MDJH

- Safety – Lack of space is a major concern from our risk management team.
- Storage of material and students projects is zero.
- Additional learning space for increased enrollment and use of machines in a safe working environment.
- Renovations or expansions:
  - Additional lab space.
  - Storage of materials and projects.
  - Increased electric capacity.
  - Add drop cords.
  - Emergency shut off.

#### BJH

- Safety - Lack of learning space.
- Lack of dust collection system.
- Renovations or expansions:
  - Add space to make for safer working environment.
  - Install new workable dust collection.
  - Add space for storage of materials and projects.

#### CRJH

- Lack of space to accommodate students in safe working environment.
- Not enough electricity to carry machines.
- Renovations or expansions:
  - Add bigger sink.
  - Put in 220 outlets for equipment.
  - Air filtration system.
  - Expand learning area to provide safe working area for students.
  - Add storage for material and projects.

**M24**

**Project Name: South Transportation Phase 2**

**Project Description:**

Final phase of the South Transportation site. Scope of work includes:

- Daycare Facility
- Satellite South Maintenance
- Satellite Police Substation

**Background & Justification:**

Katy ISD currently has two transportation centers serving the district- the East Center, north of Mayde Creek High School, and the West Center, north of Hutsell Elementary off of Franz Road in the City of Katy. The West Center is at parking capacity; the East Center is nearly at parking capacity. In recent years, it has been necessary to relocate bus runs previously served out of the West Center to the East Center due to the lack of parking.

The need for a third transportation center in the southwest sector of the District was identified both in the 2002 Long Range Facilities Plan and in the 2006 bond planning discussions to address the growth needs of the District and the operational efficiencies a center in that area can provide because of the time and distance required to service that area. The site was identified on property owned by the District adjacent to Rylander Elementary. However, funding for the construction of the South Center was withdrawn from consideration by the 2006 Bond Planning Committee in its final deliberations.

From savings in other construction projects, construction of Phase I of the South Center was approved in 2009. Parking for approximately 70 buses was provided as well as fueling bays, and a bus wash structure, now being used as two maintenance bays, when the facility opened in 2011. In addition to establishing a transportation center presence in the southwest part of the District, Phase I provided some routing efficiencies for this very high-growth area. It is of significant benefit to coaches in the secondary schools in that area who presently spend a great deal of time traveling to/from the West Center to pickup/return an activity trip bus, frequently during the instructional day.

Because of the capacity needs that are expected to continue and the routing efficiencies and operational cost savings that can be created, the need still exists to fully build-out the South Transportation site.

This final phase would include vehicle maintenance bays, bus wash installation, administration, parking, daycare, and a satellite Maintenance/Police Substation.

**M25**

**Project Name: Safety and Security Improvements**

**Project Description:**

District wide safety and security improvements.

**Background & Justification:**

Best practices recommends the use of multiple layers for safety and security. KISD is looking to meet this goal by the following components across our facilities:

- Exterior emergency call and public address systems (talk-a-phone or similar).
- Connect temporary buildings to burglar alarm systems.
- Install outdoor cameras for loss prevention - consider motion activated flash photo, motion activated light/camera integration or low light systems.
- Upgrade PA systems so that all are accessible by telephone and so that all are audible outdoors.
- Install doors to isolate the classrooms or pods (wings) within the school from the core circulation to reduce the risk in a possible active shooter incident.
- Reinforce front entry way glass and install video monitoring system for building approach.

**M26**

**Project Name:** Security System Retrofit

**Project Description:**

District-wide security system retrofit of CCTV Cameras and access control.

**Background & Justification:**

Best practices recommends the use of multiple layers for safety and security. KISD is looking to meet this goal by the following components across our facilities:

- Installation of additional security cameras for increased coverage.
- Installation of access control at specified exterior doors.
- Integrate alarms and camera systems create accurate maps of fire alarm systems, HVAC, burglar alarms and camera locations.

**M27**

**Project Name:** Bear Creek Elementary (BCE) Kitchen Renovation

**Project Description:**

Provide for the renovation of the kitchen including serving lines.

**Background & Justification:**

The kitchen at Bear Creek Elementary has not had a major upgrade since the school was built in 1978. A majority of the kitchen equipment is original to the school. Only drainage concerns were addressed in the 2006 Bond.

Scope of work includes:

- An additional serving line and reconfigure existing so that there is better flow and layout. Campuses with an enrollment over 500 have two serving lines available.
- Additional steamer needed.
- Larger freezer/cooler.
- New dish machine.
- New steam table.
- Pass through warmer.
- Restroom renovation to include provisions for Americans with Disabilities Act (ADA).
- Flooring and lighting.

**M28**

**Project Name: Hutsell Elementary (HE) Kitchen Renovation**

**Project Description:**

Provide for the renovation of the kitchen.

**Background & Justification:**

The kitchen at Hutsell Elementary has not had a major upgrade since the school was built in 1978. A majority of the kitchen equipment is original to the school. Only drainage concerns were addressed in the 2002 Bond.

Scope of work includes:

- Area between serving line and wall not wide enough to safely maneuver a wheelchair to be in compliance with the Americans with Disabilities Act (ADA).
- Larger cooler and freezer to accommodate enrollment.
- Restroom renovation to include provisions for Americans with Disabilities Act (ADA).
- Address flooring, walls, electrical, and lighting (interior & exterior).
- New dish machine.
- Provide for digital clock on serving lines and in the kitchen to be synchronized with campus.
- Additional steamer.
- Two (2) additional reach in coolers.

**M29**

**Project Name: Clinic/Front Office Renovation at Sundown Elementary (SE) and Mayde Creek Elementary (MCE)**

**Project Description:**

SE opened in 1982 and MCE in 1983. There have been renovations to these campuses, but none that addressed the front office situation, particularly the clinics.

**Background & Justification:**

The current orientation of these clinics is a one room space much smaller than the clinics of our current prototype. There is not adequate space for separation of cots, lack of privacy for nurse to address personal issues, and inadequate infrastructure – sinks, hot water, emergency backup power, etc.

In order to increase the space for the clinic, it is being recommended to renovate and repurpose the administration space. As well as providing the additional space for the clinic, efficiencies of the front office operation can be achieved.



**M30**

**Project Name: Shade Structure Installation & Playground Equipment Replacement**

**Project Description:**

Recommend an allowance of \$750,000 to provide for shade structure installation and playground equipment replacement.

**Background & Justification:**

Historically, KISD has had shade structure installation at our playgrounds as a PTA/PTO fundraiser as well as any additional playground equipment subsequent to original installation.

It has come to our attention that there are some campuses that cannot raise the funds required leaving the students at a disadvantage – during the hot days of fall, playground equipment not benefitting from a shade structure can be too hot to play on. There are also older campuses that have aged equipment that may not be functional.

KISD is requesting an allowance of \$750,000 to fund campuses that cannot afford shade structures or replacement equipment.

**M31**

**Project Name: Proposed Upgrades/Retrofit Recommendations to the Performing Arts Centers (PAC)**

**Project Description:**

Retrofit to the PACs at Morton Ranch High School (MRHS) and Seven Lakes High School (SLHS)

**Background/Justification:**

Subsequent to our PAC renovations from the 2010 Bond, it has been identified that retrofits are needed to meet program at MRHS and SLHS. These two PACs will be 11 and 10 years old, respectively, and have been used constantly by school groups as well as experiencing "heavy" use by community groups. The retrofit was planned to occur on a 10-year cycle to maintain pace with technology upgrades in equipment, etc. The majority of expense with this project is in the replacement and repositioning of technology components which are not covered through the Technology Department scope of work. Additional components are addressed in accordance with safety and student/user risk of injury or application.

**A. Performance Lighting:**

- Purchase of new lighting control console and additional performance lighting fixtures including new LED fixtures.
  1. Current console is out dated, no longer manufactured with limited support/parts from manufacturer.
  2. Current console technology is 10 years old. It does not provide students with skills required by higher education and professional work environments, therefore limiting their preparation in this field.
  3. Current fixture inventory shared between 2-3 performance spaces, limiting lighting design quality by student designers when all spaces used simultaneously. Students are spending more time removing/ re-hanging fixtures from space to space, taking away other instructional opportunities. This requires students to work later/longer hours, after class time, relocating and re-hanging fixtures for different events that run consecutively in different spaces during the week. Longer hours are limited due to State Law and UIL extracurricular restrictions, therefore work is limited, or programs will be in violation and subject to penalty.
  4. Installation of identified LED fixtures will reduce amount of heat generated on stage, providing healthier student/performer space as well as reducing potential fire hazard.

5. Installation of identified LED fixtures would provide more energy efficient and effective performance lighting, lowering energy consumption (compliant contributor to Texas law of reducing energy consumption).
6. Installation: 96-144 additional dimming units (1-2 dimming racks), 96-144 additional circuits to provide greater range of use for all users (internal and external).
7. Limited dimmers/circuits restricts use of spaces for users requiring more lighting needs and limits creative design/execution of student lighting design application.
8. Frequent school and/or district events and productions in PAC require additional funding due to necessary rental of extra lighting equipment to fulfill event/performance requirements.

**B. Performance Audio/Video:**

- Purchase: New Digital Live Audio Mixer ( Venue SC48 with Computer) additional wireless/wired microphones and wireless Intercom System for reasons noted below:
  1. Age, availability of parts and limited service of current components.
  2. Provide current audio technology standards to students for study and practical application.
  3. Provide greater application of student creativity in audio design, recording and playback for accurate assessment of skills and knowledge (TEKS-based) experiences, knowledge of equipment, applications, and problem solving.
  4. Expand the audio functionality of all PAC events; lessen the amount of audio processing hardware needed to run events.
  5. Fulfill expanded audio requirements from both campus based and community based end users.
  6. Eliminate frequent movement, and positioning problems encountered with wire based intercom and audio systems.
- Replacement of video projectors and video screens. Repositioning of new video projectors and video screens.
  1. Correct the low image quality from current projectors due to 100' projector to screen distance, and wiring infrastructure.
  2. Projector maintenance/repair difficult, dangerous, and expensive at current location.
  3. Current screen positions prevent simultaneous usage of video images and stage action, therefore limiting event capabilities.

4. Larger screens, closer high image quality projectors will increase usage of video projection system by PAC end users, raise image quality standard required by PAC end users and simplify maintenance and repair of systems by PAC managers and student technicians.
5. Savings to campus programs and district by use and repositioning of newer more efficient projectors, due to elimination of expensive long throw projector lenses and bulbs.
6. Retrofit/updating of video hardware (cameras, digital video mixing).
7. Reinstallation of current video mixing equipment to practical user-demand location. (Video equipment in the identified PACS is located in areas with no accessible views of the stage.)
8. Reinstallation of equipment to control booth location provides greater visibility of operator and proximity to other systems operators.
9. More students actively engaged in the learning and application of knowledge pertinent to effective and efficient equipment functionality.
10. Will be able to meet the varied requirements of campus and community based end users.

**C. Performance Rigging and Draperies:**

- Replace existing border/leg curtains with units of extended height and width
  1. Current draperies do not mask the back stage or the fly space effectively.
  2. Present border/leg curtains limit the height of scenery, increases the view of backstage during a show, and provides limited functionality for productions.
  3. Have other existing stage drapes cleaned and recoated with flame retardant.
  4. Reduces fire hazard potential, and provides for a cleaner stage environment.
  5. Need is met to comply with federal, state and local fire code requirements
- Replacement of existing purchase line rigging locks with “JR Clancy Sure Locks”
  1. Increases safety factor by indicating “Out of Balance Loads” and the ability to padlock closed any line set that is being repaired, or adjusted.
  2. Prevent accidental operation of line set by unauthorized individuals.
  3. Reduces risk of student injury and performer (in-district or outside user) injury.
- Replacement of any time specific rigging hardware as determined by outside rigging inspectors.

1. Identified rigging components need replacement due to general wear, and usage
2. Prevention of unnecessary wear and damage to other components.
3. Increase safety of rigging system by eliminating possible component failures.

**D. House Lights:**

- Replacement of house light with new LED lights.

**M32**

**Project Name:** KHS Elevator Replacement

**Project Description:**

Replacement of elevator at KHS due to it being past its life cycle.

**Background & Justification:**

The elevator in this section of KHS was part of the 1975 addition. Due to its age, there are constant breakdowns and times when it is out of service inconveniencing students who need this for access.

The replacement elevator will also result in changes to the mechanical/equipment rooms to meet current code requiring renovation of these rooms on both the first and second floors.

**M33**

**Project Name: Pool Infrastructure Renovation**

**Project Description:**

Renovation of the existing pool and natatorium space at Cinco Ranch HS (CRHS), Morton Ranch HS (MRHS) and Seven Lakes HS (SLHS) as listed below in regards to safety and deteriorated physical plant components.

**Background & Justification:**

CRHS opened in 1999. There was renovation to some of the major components to improve air quality in 2013. Remaining work includes replacement of deck coatings, upgrade of starting blocks, resurface of pool locker room floors, and pool transition line.

MRHS opened in 2004. No work to the pool has been done since the facility opening. Work proposed includes duct sock, exhaust for indoor air quality, plaster, and pump.

SLHS opened in 2005. No work to the pool has been done since the facility opening. Work proposed includes duct sock, exhaust for indoor air quality, plaster, and pump.

**M34**

**Project Name: Cinco Ranch High School (CRHS) Expansion & Renovation: Field House and Science**

**Project Description:**

Expansion and renovations at CRHS for science and athletics.

**Background & Justification:**

CRHS opened in 1999. Since that time, there has been growth on the campus in not only student enrollment, but an expansion in sports programs offered.

There are four existing science labs at CRHS that do not have fume hoods to support the curriculum. This scope of work would add the fume hoods to these classrooms.

A building expansion (to the north and west of the field house) is recommended to support both the growth and program expansion. This is very similar to the locker room expansion that was part of the Katy High School (KHS) west project.



**M35**

**Project Name: Resurface Junior High and High School Tracks**

**Project Description:**

Replacement of tracks at KHS, MCHS, THS, BJH, BDJH, CJH, KJH, MCJH, MDJH, WCJH by 2017 to insure a safe surface for our students.

**Background & Justification:**

Just as our mechanical equipment has recommended replacement cycles, so do our athletic tracks. Please see below campus name and last time the track was replaced:

KHS	2008
MCHS	2007
THS	2007
BJH	2008
BDJH	2004
CJH	2008
KJH	2007
MCJH	2007
MDJH	2007
WCJH	2008

**M36**

**Project Name: Outside Athletic Storage Buildings**

**Project Description:**

Provide for outside athletic storage buildings at BJH, BDJH, KJH, MCJH, MDJH, MRJH, KHS, THS, CRHS, MRHS, SLHS.

**Background & Justification:**

In 2008 KISD began a program of installing outside athletic storage buildings at the secondary campuses (beginning with CJH & WCJH). These buildings are used for onsite storage of athletic/track equipment. Currently, campuses store these materials at our central warehouse on Franz Road. The provision for onsite storage will result in a cost savings for the District. Premature wear and tear on equipment by stacking and the cost of transporting the material to and from the campuses can be alleviated by on-site storage.

**M37**

**Project Name:** Phase II Re-roof– Mayde Creek High School

**Project Description:**

Replacement of roof.

The built up roof with gravel surface was installed in 1984. The anticipated date of replacement was 2008. No material warranty was indicated on this roof system. Numerous leaks have occurred on the perimeter edges, drains, flashings, and curbs. The roof has areas with ponding and is in general poor condition. Interior repairs have been made multiple times in multiple locations.

**Phase 1 2010 Bond:**

Remove and replace the roof areas B1-B18, remove and replace the translucent wall panels around the gyms at area C4-C5 and the translucent skylight panels at area C3. This included exterior waterproofing, replacement of through wall flashings and A/E fees. A roof plan with the referenced area designations has been attached.

**Phase 2:**

Remove and replace the roof areas C1-C15 and D1. This included exterior waterproofing, replacement of through wall flashings and A/E fees. The above information is not only supported by District staff but an outside roofing consultant.

This information has been confirmed by district roofers and an outside roofing consultant.

**M38**

**Project Name: Roof/Building Envelope – Hayes Elementary**

**Project Description:**

Replacement of roof.

The built up roof with gravel surface was installed in 1995. The material warranty ended in 2007. The 10 entry areas are pre-finished standing metal seam. Numerous leaks have been addressed around the metal entries, expansion joints, thru-wall and penetration. Interior repairs have been made multiple times in multiple locations.

This information has been confirmed by district roofers and an outside roofing consultant.

**M39**

**Project Name: Roof/Building Envelope – McRoberts Elementary**

**Project Description:**

Replacement of Roof.

The built up roof system with gravel surface was installed in 1997. The material warranty ended 2007. Ten entry areas are pre-finished standing seam metal. Numerous leaks have been addressed around the metal entries, expansion joints, thru-wall and penetrations. The roof edge and gutters are in poor condition. Caulk joints around the building envelope have deteriorated. Several areas on the field of the roof are exposed felt only. Interior repairs have been on-going.

This information has been confirmed by district roofers and an outside roofing consultant.

**M40**

**Project Name: Roof/Building Envelope – Alexander Elementary**

**Project Description:**

Replacement of roof and water proofing.

The built up roof system with gravel surface was installed in 1998. The material warranty ended 2008. Ten entry areas are pre-finished standing seam metal. Numerous leaks have been addressed around the metal entries, expansion joints, thru-wall and penetrations. The roof edge and gutters are in poor condition. Caulk joints around the building envelope have deteriorated. Several areas on the field of the roof are exposed felt only; possibly due to weather conditions. Interior repairs have been on-going.

This information has been confirmed by district roofers and an outside roofing consultant.

**M41**

**Project Name: Roof/Building Envelope – Williams Elementary**

**Project Description:**

Replacement of roof and water proofing.

The built up roof system with gravel surface was installed in 2000. The material warranty ended 2010. Ten entry areas are pre-finished standing seam metal. Numerous leaks have been addressed around the metal entries, expansion joints, thru-wall and penetrations. The roof curb is in poor condition. Caulk joints around the building envelope have deteriorated. Roof repairs have been made in the open field of the roof where metal decking deteriorated. Interior repairs have been on-going.

This information has been confirmed by district roofers and an outside roofing consultant.

**M42**

**Project Name: Water-proofing Building Envelope - Creech, Schmalz, King, Kilpatrick, and Rylander**

**Project Description:**

Water-proofing of Building envelope.

These schools were built in 2000, 2001, 2001, 2003 and 2004 respectively. The life expectancy for water-tightness is 10 years. Caulk joints are in poor and deteriorating condition.

This information has been confirmed by district roofers and an outside roofing consultant.



**M43**

**Project Name: Water-proofing Building Envelope**

**Beck Junior High, McMeans Junior High, Cinco Ranch Junior High**

**Project Description:**

Water-proofing of Building Envelope.

These schools were built in 1996, 2000, and 2001 respectively. The life expectancy for water-tightness is 10 years. Caulk joints are in poor and deteriorating condition.

This information has been confirmed by district roofers and an outside roofing consultant.

**M44**

**Project Name: Thru-wall and Water Proofing – Katy High School**

**Project Description:**

Building envelope thru-wall and water proofing.

The thru-wall is original to the building. Exterior waterproofing caulk joints are hard and deteriorated. Numerous leaks associated with thru-wall have been address along walls and stairwells. Repairs have been made by contractors in leaking areas.

This information has been confirmed by district roofers and an outside roofing consultant.

**M45**

**Project Name:** Carpet Replacement at Specific Campuses

**Project Description:**

Provide for the replacement of carpet at specific campuses as noted below.

**Background & Justification:**

These carpets are being replaced as part of the 15 year life cycle.

**Elementary:**

Alexander, Hutsell, Williams, Katy, McRoberts, Creech, King, Schmalz, West Memorial, Nottingham Country, Kilpatrick

**Junior High:**

Cinco Ranch, McMeans, Beck, Katy, McDonald, Morton Ranch

**High School:**

Cinco Ranch, Katy (partial)

**Support Facilities:**

Central Maintenance, Education Support Complex, Law Enforcement Center,

**M46**

**Project Name:** Replacement of Elementary Cafeteria Floors

**Project Description:**

Flooring replacement has been identified at the following campuses:

BHE, MCE, RAE, RRE, SCE, WCE, WME

JWE, MGE, RKE, SES

BCE, FES, HE, NCE, OKE

**Background & Justification:**

The floors would be replaced with vinyl synthetic flooring (currently installed at elementary prototypes) which saves maintenance hours and dollars, as no finish is necessary. Vinyl synthetic flooring also prevents and reduces injuries due to slipping.

**M47**

**Project Name:** Replacement of fire alarms, intercoms, and generators

**Project Description:**

Provide for replacement of fire alarms, intercoms, and generators as noted below.

**Background & Justification:**

**The components listed below are related to life safety functions at each campus. These components need to be reliable and meet current standards and codes.**

**Elementary schools:**

Fielder	Generator, fire alarm, intercom, clocks
Hayes	Generator, fire alarm, intercom, clocks

**Junior high schools:**

Katy	Fire alarm, intercom, clocks
Beck	Generator, fire alarm, intercom, clocks
McDonald	Generator, fire alarm, intercom, clocks

**M48**

**Project Name: Replacement Chillers**

**Project Description:**

Replacement of mechanical equipment - Chiller.

**Background & Justification:**

**KJH Replacement of R-22 chillers (2)**

- Replacement of (Trane) chillers will provide adequate air conditioning for the students, staff, and community.
- The units are 19 years old and have several issues that make them unreliable and prone to nuisance trips.
- R-22 refrigerant is being phased out.

**KHS Replacement of R-22 chiller (1)**

- Replacement of (Trane) chillers will provide adequate air conditioning for the students, staff, and community.
- The units are 17 years old and have several issues that make it unreliable and prone to nuisance trips.
- R-22 refrigerant is being phased out.

**RAE Replacement of R-22 chillers (2)**

- Replacement of (Trane) chillers will provide adequate air conditioning for the students, staff, and community.
- The units are 16 years old and have several issues that make them unreliable and prone to nuisance trips.
- R-22 refrigerant is being phased out.

**PME 2015 Replacement of R-22 chillers (2) \$445,000**

- Replacement of (Trane) chillers will provide adequate air conditioning for the students, staff, and community.
- The units are 17 years old and have several issues that make them unreliable and prone to nuisance trips.
- R-22 refrigerant is being phased out.

**KE Replacement of R-22 chillers (2)**

- Replacement of (Trane) chillers will provide adequate air conditioning for the students, staff, and community.
- The units are 18 years old and have several issues that make them unreliable and prone to nuisance trips.
- R-22 refrigerant is being phased out.

**M49**

**Project Name: T5 Lighting Retrofit at Junior High School Campus Gyms**

**Project Description:**

Provide for change out of existing metal halide lighting to T5 lighting at six (6) Junior High campus gymnasiums:

**BDJH BJH CRJH KJH MMJH MRJH**

This group of work will update all remaining Junior High Gyms to current Standard.

- Upgrading these systems will save “Energy”.
- The replacement/ upgrade of the lighting will Increase the quality of the lighting exponentially.

**Background & Justification:**

The District has made the T-5 the new lighting standard for all gymnasiums in new facilities. The T-5 fixtures increase the lighting level to meet U.I.L. Guidelines and provide a quality environment as well as energy savings. 400 watt metal halide light fixtures typically are turned on in the early morning and not shut off until the day is over, due to the re-strike time of approximately 15-20 minutes. T-5 lights do not have the re-strike time disadvantage and are occupancy sensor friendly.

We are currently using the following method controlling the T-5 fixtures in the gymnasiums retrofitted with (6) lamp fixtures.

1. Occupancy sensors operate the light only when occupied.
2. During practice the fixture can operate at 33% of capacity.
3. During game conditions the fixture is switched to 100% capacity.

Note: Each step reduces energy consumption.



**Metal Halide to T-5 energy comparison**

**Watt Metal Halide (455 Watts)**

**T-5HO {6 Lamps} (351 Watts)**

**Example:** Assuming an estimated 19 gyms @ 40 fixtures per gym needing this upgrade and running 4000 hours total per year (2000 hours a year at a reduction of 104 watts per fixture at 100% capacity), (1500 hours a year at a reduction of 339 watts at 33% capacity) and (500 hours per year of additional off time for occupancy control) at a reduction of 455 watts per fixture.

**Energy Savings Equals Dollars**

<b><u>Annual Operating hours 100%</u></b>	<b>2,000</b>
<b><u>Utility Rate (\$/Kwh)</u></b>	<b>x.11</b>
<b><u>Energy Savings per Fixture (Watts)</u></b>	<b>x 104</b>
<b><u>Conversion from Watts to Kilo Watts</u></b>	<b>÷ 1000</b>
<b><u>Annual Cost Savings per Fixture (Sub –Total)</u></b>	<b>\$ 22.88</b>

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<b><u>Annual Operating hours 33%</u></b>	<b>1,500</b>
<b><u>Utility Rate (\$/Kwh)</u></b>	<b>x.11</b>
<b><u>Energy Savings per Fixture (Watts)</u></b>	<b>x 339</b>
<b><u>Conversion from Watts to Kilo Watts</u></b>	<b>÷ 1000</b>
<b><u>Annual Cost Savings per Fixture (Sub –Total)</u></b>	<b>\$55.94</b>

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<b><u>Occupancy Sensor 500 hours Extra (Off)</u></b>	<b>500</b>
<b><u>Utility Rate (\$/Kwh)</u></b>	<b>x.11</b>
<b><u>Energy Savings per Fixture (Watts)</u></b>	<b>x 455</b>
<b><u>Conversion from Watts to Kilo Watts</u></b>	<b>÷ 1000</b>
<b><u>Annual Cost Savings per Fixture (Sub –Total)</u></b>	<b>\$25.03</b>

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<b><u>Annual Cost Savings per Fixture (Total)</u></b>	<b>\$103.85</b>
<b><u>Annual Cost Savings per Gym (40 Fixtures)</u></b>	<b>\$4,154.00</b>
<b><u>Annual Energy Savings (19 Gyms)</u></b>	<b>\$78,926.00</b>

**M50**

**Project Name: Replacement of T12 Lighting in Portable Buildings**

**Project Description:**

Provide for district-wide change out of T12 lighting in all portable classroom buildings.

**Background & Justification:**

T-12 bulbs were no longer be produced after July 2010. In addition, replacing them will reduce energy consumption. Applying an estimated 132 portables with 18 fixtures that operate an estimated 4000 hours a year, at a cost of .11 per kWh and at a reduction of 64 watts per fixture, we could save \$66,908 a year.

**T-12 {4 lamp} (148 Watts) vs. T-8 {3 lamp} W/ 28 Watt Bulbs (84 Watts)**

<b><u>Energy Savings Equals Dollars</u></b>	
<b><u>Annual Operating hours</u></b>	<b>4,000</b>
<b><u>Utility Rate (\$/Kwh)</u></b>	
<b>x.11</b>	
<b><u>Energy Savings per Fixture (Watts)</u></b>	
<b>x64</b>	
<b><u>Conversion from Watts to Kilo Watts</u></b>	<b>÷</b>
<b>1000</b>	
<b><u>Annual Cost Savings per Fixture</u></b>	<b>\$28.16</b>
<b><u>Annual Savings per Portable (18) Fixtures</u></b>	
<b>\$506.88</b>	
<b><u>Annual Savings (132) portables</u></b>	<b>\$66,908.16</b>

**M51**

**Project Name: Softball Upgrades at KHS**

**Project Description:**

To bring the KHS softball complex in line with other complexes within KISD and to comply with Title IX Law.

**Katy High School**

The softball field at KHS was constructed in 1998. No major renovations have been done since then.

The softball park at KHS, along with the concession stand, press box, and bleachers, needs to be updated to Title IX standards. The original facility was established without the growth of softball or the number of participants being taken into account. The restroom facilities are not big enough for the crowds. In summary please note the renovations listed below.

1. Bleachers to accommodate fans
2. Press box
3. Restrooms
4. Concession stands
5. Brick dugouts
6. New irrigation/drainage
7. Refurbish batting cages
8. Storage facility
9. Bull pens

**M52**

**Project Name: Softball Upgrades at Taylor High School (THS)**

**Project Description:**

To bring the softball complexes in line with other complexes within KISD.

**Background & Justification:**

The softball field at THS was constructed in 1997. No major renovations have been done since then.

Renovations needed to bring the THS softball complex in line with other district softball complexes and to ensure equity amongst THS baseball and softball programs (Title IX Law) include the following.

1. Bleachers to accommodate fans
2. Press box
3. Restrooms
4. Concession stands
5. Brick dugouts
6. New scoreboard
7. Refurbish batting cages
8. Storage facility
9. Backstop
10. Drainage
11. Bull pens

These renovations will bring the THS softball complex up to the standards of other facilities in the district.

Furthermore, our softball complex and tennis complex share common restrooms, concessions, coach's offices, and locker areas. The offices are outdated and the locker rooms are too small to accommodate both tennis and softball. Summer recreation programs use these facilities all summer and we need separate locker rooms to house both softball girls and tennis girls along with tennis boys. Offices with phone and internet capabilities need to be included.

**M53**

**Project Name:** Campus Retrofit

**Project Description:**

Refresh and upgrade campus technology

**Background & Justification:**

This includes upgrading instructional technology in our schools and office technology in administrative areas in schools and throughout the district. All equipment reaching end-of-life in classrooms, labs and administrative areas which includes projection systems, desktops, laptops, tablets, document cameras, sound systems and printers will be upgraded with similar or emergent new technology.

**Cost Breakdown:**

<b>Description</b>	<b>Quantity</b>	<b>3-year Lifecycle Cost</b>
Classrooms	2892	\$31,612,901
Technology Applications Labs	43	\$2,012,099
Educational Support Services: Maintenance, Transportation, Print shop, Teaching and Learning, Food Services, Business Office, Human Resources, Risk Management, Technology, etc...	1	\$1,375,000
<b>Total</b>		<b>\$35,000,000</b>

**M54**

**Project Name:** Copier/Printer Lifecycle Retrofit

**Project Description:**

Provide for replacement for an aging fleet of copiers throughout the District. This will allow District control over power settings, print settings such as duplex printing and detailed reporting which will allow for just in time printing needs of our users at campuses and departments.

**Background & Justification:**

There are copiers placed in shared work areas throughout the district (fleet copiers.) These copiers or multi-function printers (MFP) generate approximately 14.5 million impressions per month. As the MFP reaches its term of life it becomes more costly to maintain optimum functionality and must be replaced. However, age of unit is not the only factor considered at time of replacement. Our replacement criteria includes, install dates, total counter clicks, CBCs (Clicks between Calls for service), number of service calls, location of unit (i.e. heavy traffic area or only unit for department) and service technicians' recommendations, as they know the units and how well or poorly they are functioning.

**Cost Breakdown:**

<b>Description</b>	<b>Quantity</b>	<b>Total</b>
<b>Copier Retrofit</b> - This is a 3-year upgrade for copiers of various types depending on usage. Some front-office and department copiers are less expensive than shared, higher capacity copiers.	As needed	\$1,000,000
<b>Total</b>		<b>\$1,000,000</b>

**M55**

**Project Name:** Campus Standard Changes

**Project Description:**

Students and teachers across the District need the opportunity to access a technology device. Students in need of a device would be allowed to check-out a device from the Library Media Center just as they do a book. Devices would be checked out for long-term use.

Technology is constantly changing and evolving. This fund allows the district to adapt technology standards in the classrooms and the district to keep up with evolving technology.

**Background & Justification:**

Students for many reasons do not have or cannot bring a device to use either in the classroom or at home. Therefore in the Technology/Information – Age, the District must ensure each student has an opportunity to access the numerous digital resources that Katy ISD provides. Students would simply go to their campus library media center and check-out the device as they would a book. The student would be allowed to check out the device for a 2-week period. Providing these devices to students ensures equal access to digital content and extends learning outside the classroom.

Currently the teachers and students have access to a stationary desktop computer connected to a projection system within their classroom. Providing a mobile device ensures mobility within the campus or classroom as well as the opportunity to take the mobile device home if they so choose.

**Campuses:** [All campuses based on enrollment and SES.](#)

**Cost Breakdown:**

Description	Quantity	Unit Cost	Total
Student Devices - Provide short-term check out devices through library for students.	2 years	Varies	\$1,000,000
Supporting new technology standards to stay current with evolving technology.			\$4,130,000
Total			\$5,130,000

**M56**

**Project Name:** Server Infrastructure Lifecycle

**Project Description:**

Server Lifecycle

**Background & Justification:**

Server Lifecycle and Growth - The District has a (5) year replacement cycle on all server equipment that is no longer covered under HP warranty/support, as well as equipment that is no longer supporting the workload demands. This current cycle will address email gateway servers, web load balancers, network time servers, replacement servers for blade centers, database servers, storage servers, file servers and backup storage.

**Cost Breakdown:**

Description	Quantity	Unit Cost	Total
Server upgrades and replacement. We have over 100 servers. The cost ranges from \$5k to \$50k depending on technology and requirements for storage, performance and new technology.	1	\$870,000	\$870,000



**M57**

**Project Name:** Server Infrastructure Growth

**Project Description:**

Server Growth

**Background & Justification:**

Every year the student and staff requirements for storage, file, web and email services grow with the District. Storage capacity is closely related to the amount of new staff and students we acquire each year. In recent years our storage needs have accelerated due to student and staff created content, virtualization, rich media, and database growth. The introduction of Dashboards and data warehousing projects required by the state also has a direct impact. This line item allows us to be responsive to these growing needs by expanding the capabilities of the current server infrastructure as well as purchasing new units. We will be virtualizing the majority of the remaining standalone servers during this bond cycle. This strategy allows us to provide more reliable services and reducing operating costs such as power, AC and maintenance.

**Cost Breakdown:**

Description	Quantity	Unit Cost	Total
Data storage, VM (virtual machine) system, SAN system, data center hardware growth and replacement	1	\$300,000	\$300,000

**M58**

**Project Name:** Core Network/Wireless Infrastructure

**Project Description:**

1. Network Switch Retrofit
2. WiFi Expansion for Elementary Schools
3. Telephony System Upgrade
4. Enterprise Systems

**Background & Justification:**

1. Network Switch Retrofit – The district access switches need to be retrofitted to maintain operability. We will replace the oldest switches 1<sup>st</sup>, then use those as spares for the rest of the district. At end of life, the vendors stop making security updates that leave the devices open to new exploits as they are discovered. The requirements continue to grow as well. These switches will now power the phones, wireless access points, security cameras and door access control. Due to the critical nature of some of services, the switches need to have the technology to be resilient and continue operating with a power supply failure as well as redundant upstream connectivity. A Core router will be installed at a secondary data center site to allow for more resiliency in the core network and speed to recover services at another location if needed.
2. WiFi Expansion for Elementary Schools - The main objective of this initiative is to design a robust WiFi environment that is built around the classroom rather than the building layout. This means that more access points need to be added to cover the student digital learning experience in each classroom. The added access points will allow Katy ISD to build on the current infrastructure to ensure a robust WiFi connection from the classroom for both District and student-owned devices. This reliable and high speed access will provide for the increasing demand of connectivity for students to access digital resources such as online assessment, multi-media content, animations, multiple languages, webinars, and collaboration.
3. Telephony System Upgrade – To stay current with software updates both security and feature, KISD will be upgrading the telephony system to the current version. This is to ensure that our voice communication system for the district is reliable. This will include retrofit of the Voice Gateway routers and IP Phones that are end of life.
4. Enterprise Systems-Payroll clocks upgrades - Due to the age, condition and specifications of the District time clocks, it is necessary for us to replace the devices that are not performing to current standards. Replacing time clocks will allow us to remotely administer and service this equipment.

[Return to Matrix](#)

**Cost Breakdown:**

Description	Quantity	Unit Cost	Total
Replacing network access switches. Price of a switch ranges from \$5k for normal cisco switch to \$85K cisco core switch.	As needed		\$3,000,000
Wi-Fi (Wireless Access Points) expansion for all elementary schools. High school expansion will be completed this July. This is the second phase of the expansion. This includes cabling and additional switches.	3675	\$1,224	\$4,500,000
Central Cisco CallManager Upgrade (phone system manager)	1	\$120,000	\$120,000
Payroll Clocks - Kronos: Time Clocks upgrade	As needed		\$80,000
<b>Total</b>			<b>\$7,700,000</b>

**M59 Project Name: Agricultural Sciences Center**

**Project Description:**

Expansion of the Gerald D. Young Agricultural Sciences Center to support growth and curriculum.

**Background and Justification:**

The Gerald D. Young Agricultural Sciences Center opened in 2002 with four (4) barns and site development. Two (2) additional barns were opened in 2004 and one (1) in 2013.

Why Expand the Gerald D. Young Agricultural Facility?

- Student safety and convenience
- Animal safety
- Ease impact on Katy High School and Merrell Center
- Investment in long-term solution

The agricultural sciences curriculum continues to grow and thrive at KISD and has outgrown the L D Robinson Pavilion adjacent to the Merrell Center. There is a concern for both student and animal safety since the number of students who participate in the FFA has grown from 208 in 2004 to 444 this past spring, 2014. The space constraints in the L.D. Robinson pavilion raise safety concerns for our students, animals, parents, visitors, during the livestock show and for our hundreds of buyers on the day of the auction.

In November 2013, the Agricultural Sciences Center was part of our \$99 million bond referendum. A committee including community members and staff formulated a plan to provide for an expanded facility at the existing site. Components include:

Outdoor Pavilion – holding and staging area for shows

Multi-Purpose Show Area – area for students to show their animals during the show. To provide an area for the auction on sale day. Provides for arena seating, concessions, flexible classrooms and a lobby that would serve as a history lounge.

Project Center Building – four (4) flexible classroom spaces will support space for advanced learning of Animal Science and Horticultural Science classes. In this space, students and teachers can take advantage of growing crops from seed to table. A Farmers Market will allow students to sell their products to the community.

Multi-Purpose Covered Outdoor Arena – 5,000 seats. This will be used for the rodeo and to host judging contests sponsored by our district high schools and Texas based colleges.

Eco-Pond/Detention Pond – There are many classes and state contest that involve judging and identifying landscapes, wildlife, soil, etc. The area surrounding the Eco-Pond/Detention Pond will provide students with a hands on opportunity in a natural environment to learn and prepare for these classes and contests.

Parking and Roadways.

## M60

### Concrete Stadium

- Seating, Press Box, Restrooms, Concessions and Field House

Seating for 12,000 with appropriate restroom and concession spaces. A two story press box is planned to accommodate our District program to support coaches, media, Live Action Media Broadcast System (LAMBS) II and District staff.

The field house provides a space for the athletes and officials to change and prepare for the game.

The current Rhodes Stadium field house is approximately 9800 SF and consists of two (2) locker rooms, restrooms and support space. The proposal for 12,000 SF will include additional space for coed training rooms, police office, EMT room, and meeting area for coaches.

A second floor shell space is planned for above the field house for future build out for multipurpose space and the Athletic Department.

- Parking

Hard surface parking is required by City of Katy. The number of spaces is determined by the number of seats per City of Katy Ordinance, Ordinance 1141, Section 18 Minimum Off-Street Parking, and Article 18.4. Concrete parking is preferred due to its durability and only has a slight increase in cost per square foot over asphalt.

- LAMBS II

The Live Action Media Broadcast System (LAMBS) II is not just a TV and scoreboard. Students enrolled in the Audio Engineering and Film courses at the Katy ISD Miller Career and Technology Center have the opportunity to train, and if successful, to work as a member of the LAMBS crew which operates the video board at the stadiums. Students apply to be part of the crew for each football game to run the five live-action cameras and control functions such as instant replay, commercials, splash video graphics, or serve as Technical Director. Skills prepare students for professional employment in such areas as television production, live action sports, commercials, studio production and work on both independent and professional films.

**M61**

**Project Name: Additional Portable Buildings**

**Project Description:**

25 additional portable classroom buildings to manage growth and provide additional program space for existing facilities until new schools are built.

The total cost per new portable classroom building is \$93,000 if all work is done by Katy ISD employees. This includes the building cost, delivery/set-up, furniture, equipment, technology, electrical, porches, covered lit walkways, fire alarm and intercom.

If the porches, covered lit walkways, and electrical work are done by an outside contractor the price per building increases by \$10,000 – \$17,000 depending on the scope of work. For example: if additional electrical service must be added to accommodate the portable classroom buildings at a facility, the price per building increases significantly.

**M62**

**Project Name: Buses**

**Project Description:**

102 buses for growth and 96 replacement buses

**Background/Justification:**

Over the 3-year bond planning period, additional buses are being requested to accommodate student growth. It is expected to add approximately 11 regular education routes and approximately 23 special needs routes annually. This equates to approximately 102 buses with 70 of these identified as being for special needs. With student growth in special needs and the addition of new schools, special needs routes are added depending on where the programs are located and in the case of secondary schools, Work Based Learning requires buses to take students to on-site job training programs. This could average 4—6 buses per school for special needs. New schools alone typically do not result in increased regular education routes however, 8-10 regular education buses are expected to be added for increased activity trip needs related to each year of athletic program growth within a secondary school. Regular education route growth comes from the increased student growth in areas newly constructed and that are eligible for transportation. A total of 102 buses are requested to meet student growth and new school needs.

The District has identified a targeted replacement cycle beginning with the 2002 authorization. The intent is, over time, that no bus be older than 16 years old. Currently, there are 31 buses in use that are 16-19 years old. In addition, there are 82 buses 12-14 years old. To continue the cycle, replacement of all buses 16 years of age and older is recommended—a total of 96 buses.

**M63**

**Project Name:** Required Pre-Construction Architectural/Engineering Services

**Project Description:**

Architectural/Engineering costs for various future projects to satisfy completion schedule requirements.

**Background & Justification:**

Within the current assumption of a future bond election in November 2018, and based upon current demographic data which includes the required opening of High School #9 in 2021 and Junior High #16 in 2020, it is required that funding be provided within this authorization to complete pre-construction architectural and engineering services including completion of construction documents in advance of the bond authorization in order that construction can commence on these anticipated 2018 authorization projects to meet required completion and school opening dates. This type of funding was also included in the 2010 Bond Authorization to meet accelerated 2014 authorization completion dates.