

# Conceptual Facility Needs Assessment

## Floydada ISD



Submitted by the Texas Association of School Administrators  
406 E. 11th Street, Austin, Texas 78701  
512-477-6361

June 4, 2014

**DRAFT**

Monte Hunter retains all intellectual property rights to methods used to develop the findings herein, including copyright, 2013.



# Introduction

In 2013 the Texas Association of School Administrators (TASA) was retained to evaluate facility needs for Floydada ISD. This report summarizes the findings of the study.

## Purpose

The intent of this study is to provide an early look at the general scope and preliminary cost of facility improvements. The recommended facility improvements would bring the district to a level **consistent with peer districts**. It is recommended the district engage licensed professionals to further develop and refine facility scope and cost.

## Methodology

The findings of this report are based on a review of the district strategic plan, conversations with district staff, site observations and comparison to peer districts. FISD facilities were compared to regional and Texas peer districts. Predictive analytics were utilized to develop enrollment projections, renovation costs and building space projections. This study provides a current benchmark to peer districts and projects facility improvement scope/cost if the district was consistent with peer districts.

## Benchmarks for planning process

The benchmarks for current conditions and projections for future needs provide a guide for future planning efforts. These guidelines can help ensure adequate space to support the educational program while maintaining space efficiency.

## Thank you

We thank the superintendent, administrators, principals and maintenance staff for their cooperation in the preparation of this report.

## Contents

	Page
Introduction	2
Summary of findings	3
Summary of facilities	4
Enrollment projections	5
Facility square feet peer benchmarks	6-7
District square feet projections	8
Facility operating cost benchmarks	9
Building condition ratings	10
Renovation cost estimates	11
Cost estimates	12-13
Recommendations & Solutions	14
Support of district strategic plan	15
Facility planning and bond schedule	16
Q&A	17

# Summary of Findings

The following summarizes the findings of this study. More details of each item are found within the report.

## Develop facility education specifications (ed specs)

Develop education program parameters that can serve as a guide to ensure facilities accommodate the education program. Ed specs should include grade alignment, summary of planned courses, class size targets, education delivery methods, use of technology and campus specific educational goals.

## Enrollment trend will likely continue

For the past 10 years district enrollment has declined an average of 3% per year. Enrollment projections indicate a similar trend will continue based on the cohort survival projection method.

## Facility square feet consistent with peers

Based on current enrollment and recent building closings, the district total square feet is consistent with regional peers and below Texas peers. Initial analysis indicates some individual spaces may be under-sized given the student occupancy. More detailed analysis is recommended for individual campus, classroom and lab space utilization.

## Consider replacing bus barn, high school & Jr high gym

General facility condition was determined using a condition rating system detailed in the report. Based on this method, the following buildings should be considered for replacement.

- Bus barn
- High school main building
- Jr High gym building

## Replace Modular Buildings

Replacement of the Jr High and other modular buildings should be considered due to student safety (storm protection, access control, fire resistance, etc.), to accommodate emerging educational trends and escalating maintenance costs typically associated with modular construction.

## Facility operating cost above peers

Facility operating cost is slightly above both regional and Texas peers.

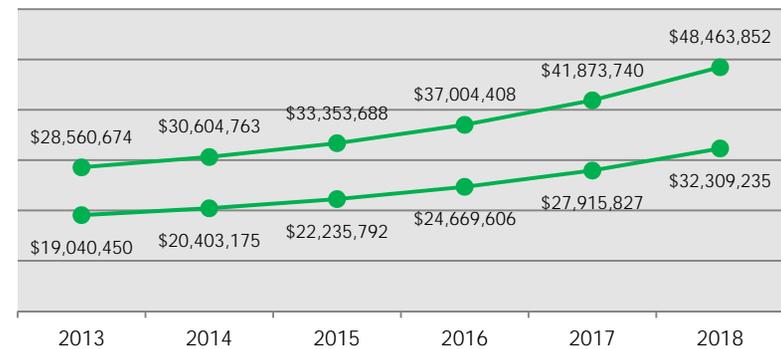
## Building renovations

The following general building renovations are recommended. A detailed system-by-system evaluation by licensed professionals is recommended to finalize renovation scope.

- Life safety improvements
- Texas school safety and security standards improvements
- Handicap accessibility improvements
- Replacement of systems and materials beyond normal life
- Technology infrastructure upgrade
- Upgrade systems to improve energy consumption

## Estimated program cost

Experience indicates that as planning evolves programs, scope, construction quality and regional construction costs change. The following range should accommodate many such changes. This range is for renovations and new construction. These ranges indicate cost if the district was consistent with Texas peers, given enrollment projections and the ages of the current buildings.



# Summary of Major Facilities



## Elementary School

Constructed: 1967, 1985, 2008  
 Renovated: 2008  
 Square feet: 69,771



## Jr High School

Constructed: 2006 (modular)  
 Renovated: NA  
 Square feet: 12,544



## High School

Constructed: 1957  
 Renovated: 2011, minimal  
 Square feet: 67,521



## HS Gym

Constructed: 1996  
 Renovated: NA  
 Square feet: 29,969



## Jr High Gym & Cafeteria

Constructed: 1950, 1967  
 Renovated: NA  
 Square feet: 18,540



## Bus Barn & Storage Buildings

Constructed: 1960  
 Renovated: NA  
 Square feet: 6,414



## HS Field House

Constructed: 1979  
 Renovated: NA  
 Square feet: 8,500



## Old Jr High Classroom Building

Constructed: 1924  
 Renovated: NA  
 Square feet: 24,359  
 Building is inactive



## Stadium & sports venues

Constructed: 1950  
 Renovated: NA  
 Square feet: 1,020 (concession)



## High School Modular Buildings

Constructed: 1967, 1988, 2003  
 Renovated: NA  
 Square feet: 5,648

Building ages and square feet provided by FISD.

# Enrollment

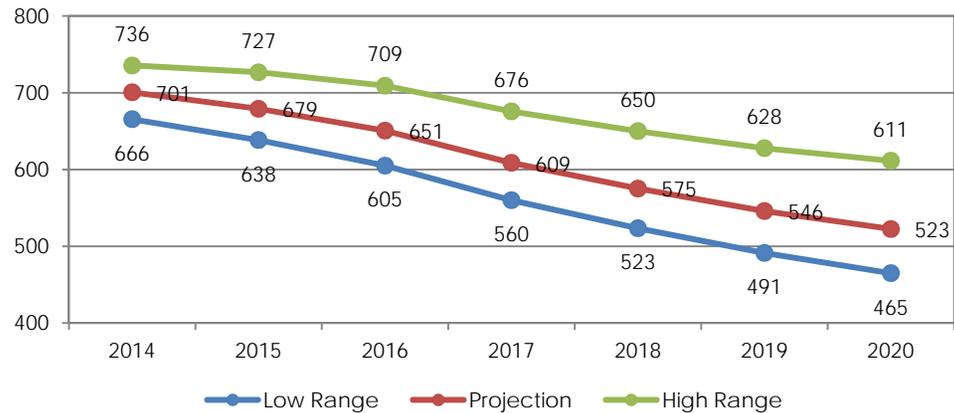
The first table indicates total district enrollment history from 2004 to 2013. As the table shows, there has been a decline in enrollment during this period. The annual historic decline over the last 10 years is 3%.

The second table indicates PK-12 enrollment projections. The green line represents the high range of projected enrollment and the blue line represents the low range of enrollment. These projections were developed using common cohort survival methods. The district should consider consulting a demographer for more detailed analysis of area industry, employment, economic, and other trends that may impact future enrollment.

## Historic Enrollment



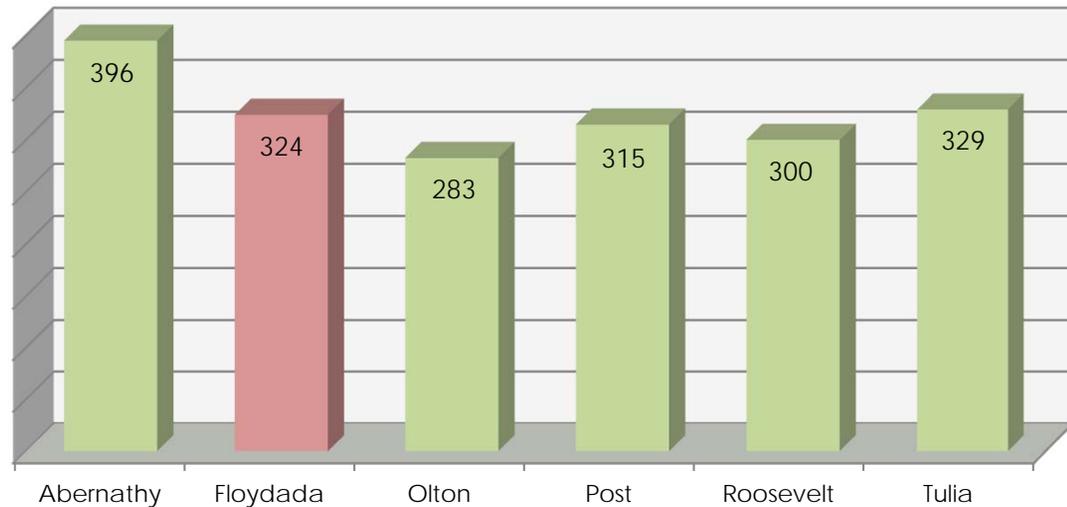
## Enrollment Projections



# Total SqFt per Student

This chart shows how FISD compares to regional peer districts for building square feet per student. It was calculated by dividing total building square feet (all active buildings) by total enrollment. This metric provides a simple comparison to other districts in the area.

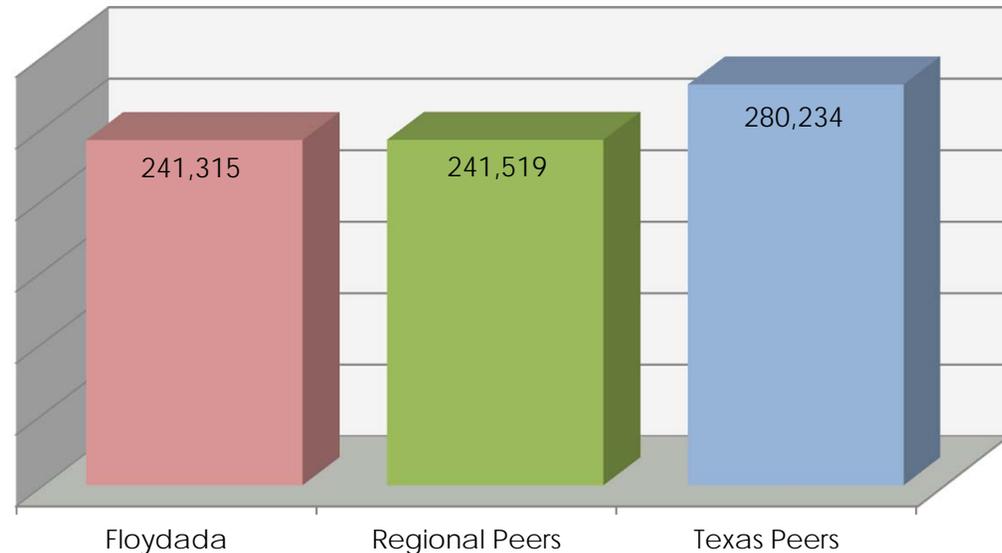
Moth-balled buildings are not included in calculations. Portable buildings are included in all calculations.



# Total District SqFt

This chart shows how FISD compares to regional peers and Texas peers for total building square feet in 2013. The green column represents how many SF the district would have if consistent with regional peers (Abernathy, Olton, Post, Roosevelt & Tulia) given current enrollment. The blue column represents how many SF the district would have if consistent with Texas peers given current enrollment. It is important to note that the **regional group is 14% below the Texas peer group.**

The total SF includes all actively used campus buildings and ancillary facilities such as administration buildings, transportation complexes, athletic buildings, etc. Ag pens are not included. Portables are included in all districts for consistency. Attempts to separate portables have been unsuccessful because many districts do not have accurate separate portable records (some separate portables out and some don't).

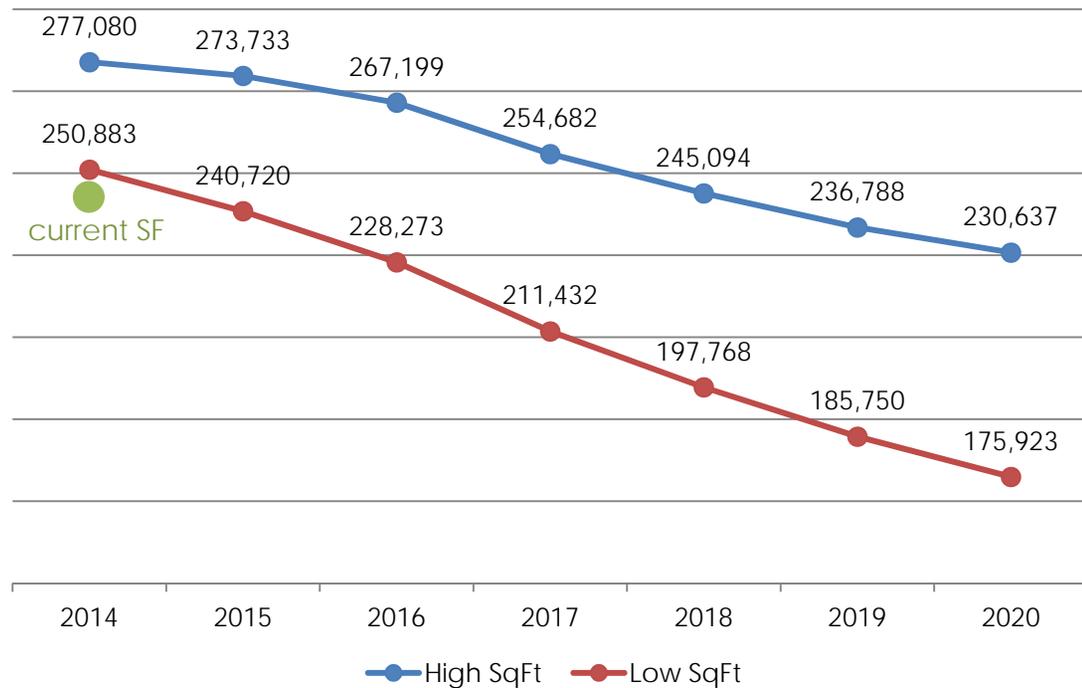


# Total District SqFt Projections

This chart shows the high and low range of **total district square feet if consistent with Texas peer districts**. The projections were calculated by applying predictive analytics to enrollment projections. The correlation of the predictive analytics is 88, which is considered strong.

Maintaining current total SF appears to meet future 7 year needs. However, reconfiguration within this total SF will likely be necessary to accommodate district and emerging educational programs.

These projections should be revised if enrollment trends vary from the enrollment projections in this report.

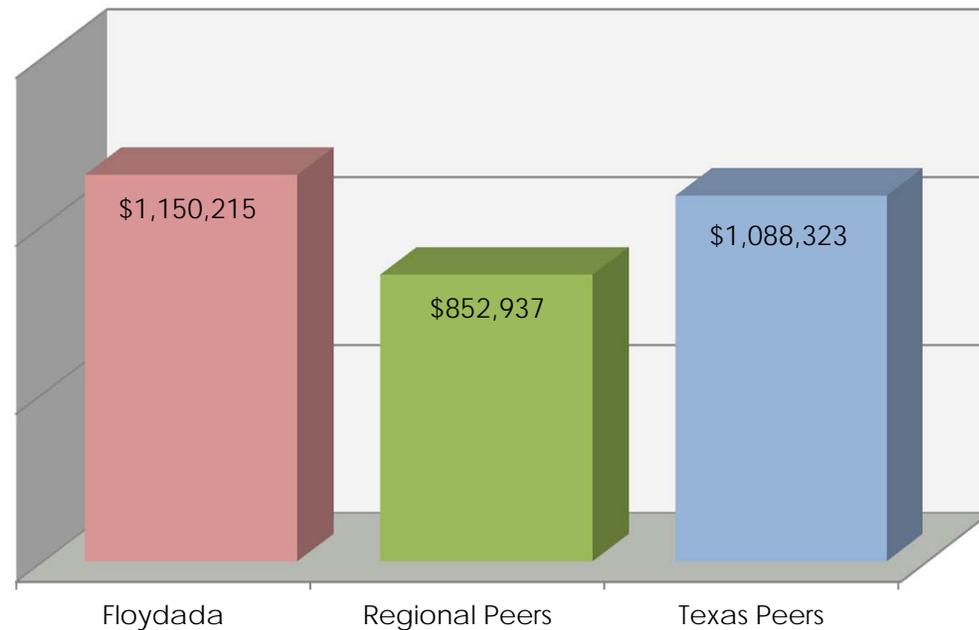


# Facility Operating Cost

This chart shows how FISD compares to regional peers and Texas peers for total facility operating cost in 2013. This chart shows current facility expenditures (function 51) compared to peer groups. **The peer amounts indicate how much FISD would have spent, given current enrollment, if the district was consistent with peer groups.**

The regional peer metric was calculated in a similar method but using regional peers. Regional peers include Abernathy, Olton, Post, Roosevelt & Tulia. The Texas peer metric was developed from the statistical analysis of 100+ Texas districts.

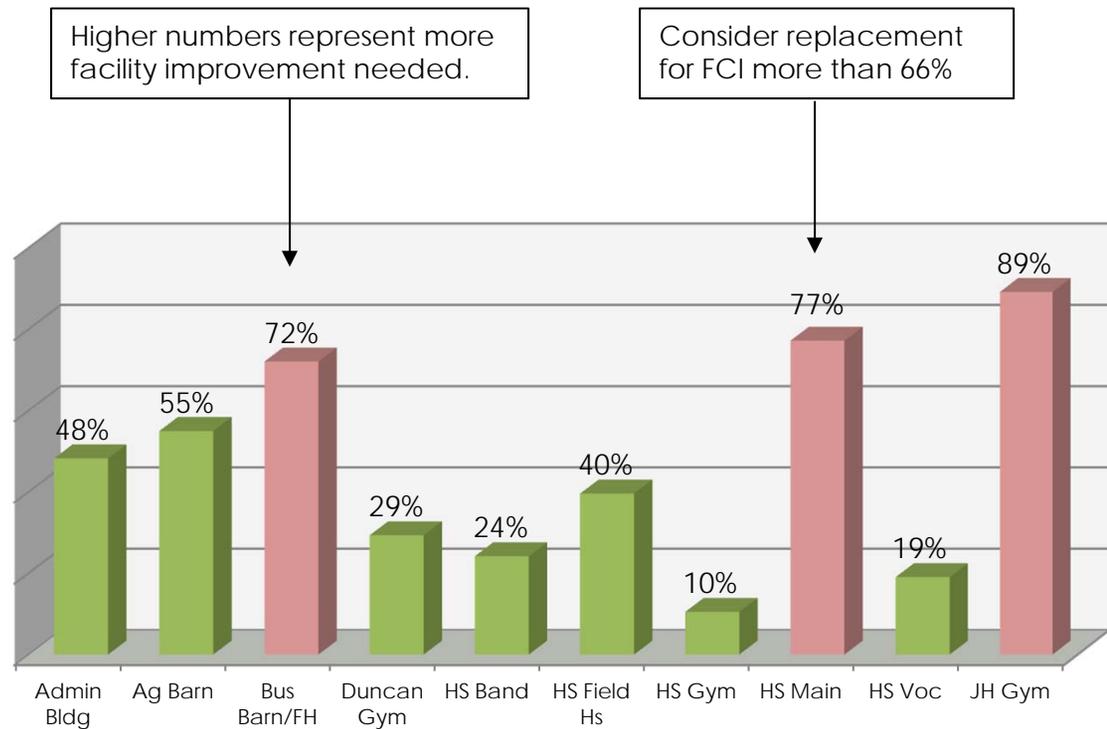
The district is above both regional and Texas peers in operating cost. Some of this may be due to maintenance costs associated with moth-balled facilities. The district should consider more detailed analysis of operating costs including energy consumption, supplies/materials costs and staffing ratios.



# Building Condition Ratings

This chart shows the Facility Condition Index (FCI) for each major building. The FCI is the ratio of renovation costs to replacement building cost. This method is a rating of the relative condition of buildings was developed by the Association of Physical Plant Administrators and has been in use by educational facility planners for decades.

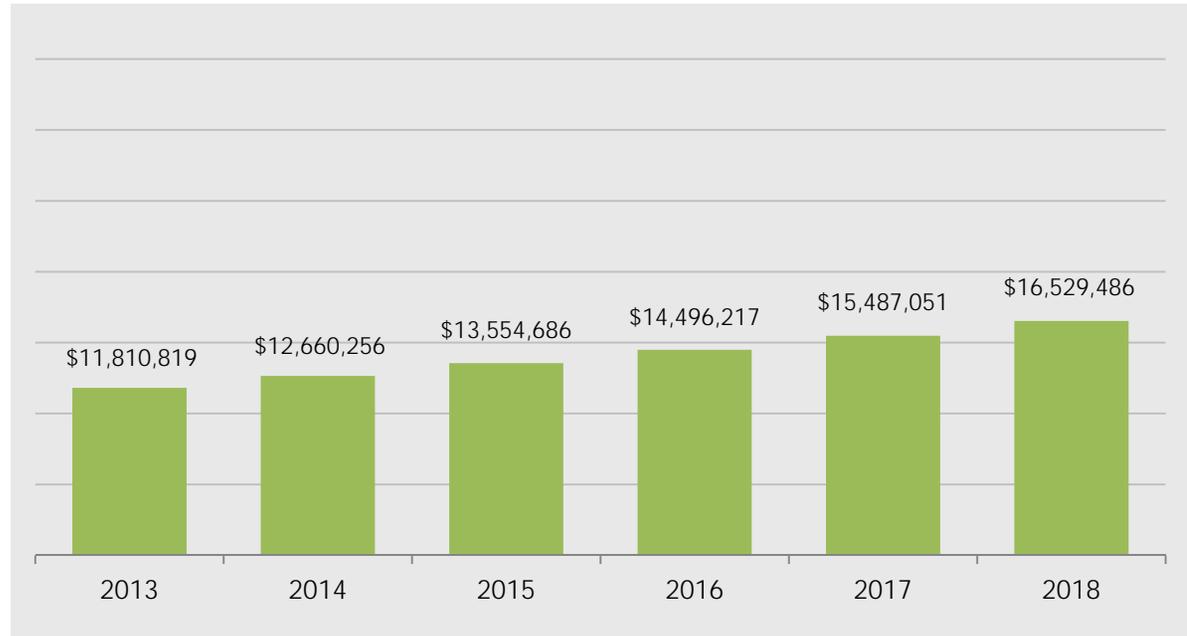
Lower ratings indicate a building is in better condition. A renovation should be considered for buildings with more than 20% FCI. Many planners recommend, if the FCI exceeds 66%, a replacement building be considered. This is due to declining functionality and the economics of maintaining aging building systems.



# Renovation Cost Estimates

This chart shows the estimated renovation costs for all actively used buildings. Renovation costs were estimated using predictive analytics, which was based on statistical analysis of multiple renovation assessments, by multiple consultants, in multiple districts. The correlation of the renovation estimates is 86. Costs are adjusted for regional costs and 3.5% annual inflation rate.

Renovations included in estimate are replacement of systems beyond normal life, finishes, life safety code compliance, accessibility improvement and safety improvements. Site work and space reconfiguration is not included.



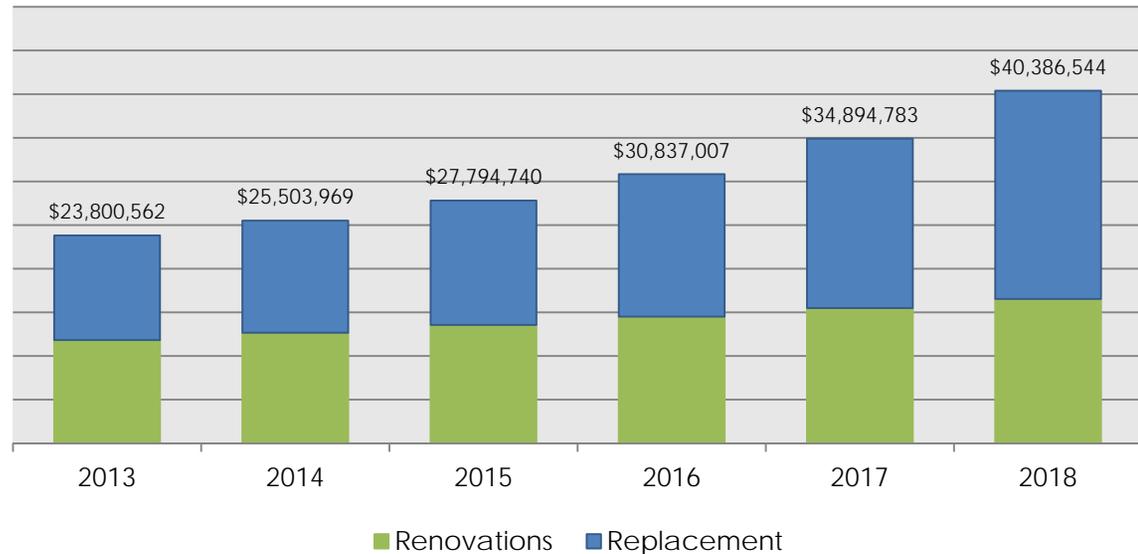
# Renovation & Replacement Cost Estimates

This chart shows the estimated renovation costs of each building (in green) and the estimate cost of new buildings (in blue).

**This projection assumes the buildings with a FCI over 66% are replaced.** This would be replacing the bus barn, high school and junior high gym. This estimate also includes the replacement of the modular Jr. High academic building.

New construction costs are based on average construction quality at regional costs. Annual inflation rate is 3.5%.

For replacement buildings, the renovation cost of the old building is credited to the cost of the new building in the chart.

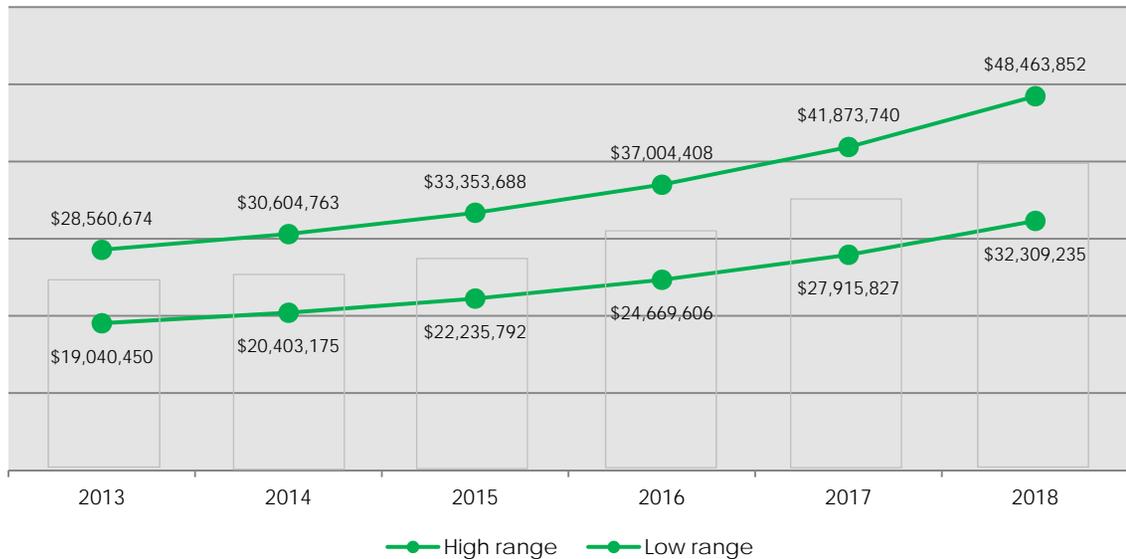


- This estimate includes:**
- Replacement Jr high modulars
  - Replacement Jr high gym & cafeteria
  - Replacement high school
  - Replacement bus barn
  - Ag barn renovation
  - Duncan gym renovation
  - HS band hall renovation
  - HS gym renovation
  - HS field house renovation
  - HS vocational building renovation

# Recommended Cost Range for Planning

This chart shows the recommended planning range for the program. Experience indicates that as planning evolves . . . programs, scope, construction quality and regional construction costs change. The range in this chart makes an allowance for many such changes. **The cost for the anticipated year that construction will begin should be used.**

It is recommended licensed professionals be engaged to further refine the conceptual scope and construction quality.



**This estimate includes:**

- Replacement Jr high modulars
- Replacement Jr high gym & cafeteria
- Replacement high school
- Replacement bus barn
- Ag barn renovation
- Duncan gym renovation
- HS band hall renovation
- HS gym renovation
- HS field house renovation
- HS vocational building renovation

# Recommendations & Possible Solutions

1. Develop educational specifications to serve as a guide for the facility planning & design. Ed specs should include grade alignment, summary of planned courses, class size targets, class scheduling, education delivery methods, use of technology, campus specific educational goals and preferred facility systems/materials.
2. Consider implementation and facility accommodation of emerging educational programs, such as STEM, career & technical education, House Bill 5, 21<sup>st</sup> century learning, project based learning, etc.
3. Consider a visioning consultant to assist the district with developing long range educational program aspects that will impact facilities.
4. Engage licensed professionals for more detailed facility assessment, planning and bond consulting.
5. Develop long range facility improvement plan, and update the plan every 5 years.
6. Engage licensed professional to assess needs for non-building facilities such as stadiums, parking lots, traffic patterns, athletic fields, etc.
7. Replace modular (portable) buildings with permanent buildings. This includes the Jr high, special needs programs and alternative ed programs.
8. Consider a new 7-12 secondary campus. This would improve access to specialized learning spaces and improve facility efficiency.
9. Consider demolition of moth-balled campuses if not appropriate for re-purposing. Maintaining moth-balled buildings may be elevating operating cost.
10. Design facilities for community use of schools such as meetings, distance learning, non-school youth activities, adult activities, senior citizen activities, etc.
11. Plan and implement a building program to execute renovations and space modifications summarized in this report.
12. Consider adding 10%-20% contingency to estimates for scope adjustment and construction cost contingency.
13. Consider bond program every 7-10 years to ensure a quality built learning environment, avoid accumulation of needed improvements and minimize facility-related costs in general operating fund.
13. Monitor square feet per student and facility operating cost. Excessive space can increase operating cost. The elevated operating cost comes from the same general fund that funds educational programs and teacher salaries.

# Support of District Strategic Plan

## **Strengthen student achievement and academic success**

Facility improvement can support this goal by providing facility space and equipment appropriate for the district curriculum. Related improvements are:

- Appropriate classroom size
- Appropriate lab size & equipment
- Appropriate career education labs & equipment
- Technology infrastructure & equipment
- Indoor environmental quality improvements
- Configure space for emerging educational program spaces

## **Safe and secure schools**

The facility improvement program can support this goal with multiple safety and security improvements.

- Life safety code compliance
- Texas school safety and security standards compliance
- Lab safety systems
- Video security system
- Access control system
- Storm safe structures and safe rooms

## **Technology**

The facility improvement program can support this goal by upgrading technology infrastructure and equipment integral to the building.

- Wiring systems
- Central equipment
- Wireless systems
- Educational program delivery systems & equipment

## **School-Business-Community-Parent partnerships**

Both the planning process and facility design can enhance district-stakeholders partnerships. Strategies for enhancing partnerships are:

- Include community stakeholders in facility planning process
- Provide meeting space for community, volunteers and parents
- Community use of facilities for community events & activities
- Distance learning facilities for citizens

## **Facilities**

The facility improvement program will provide a plan to improve and maintain facilities to accommodate district goals.

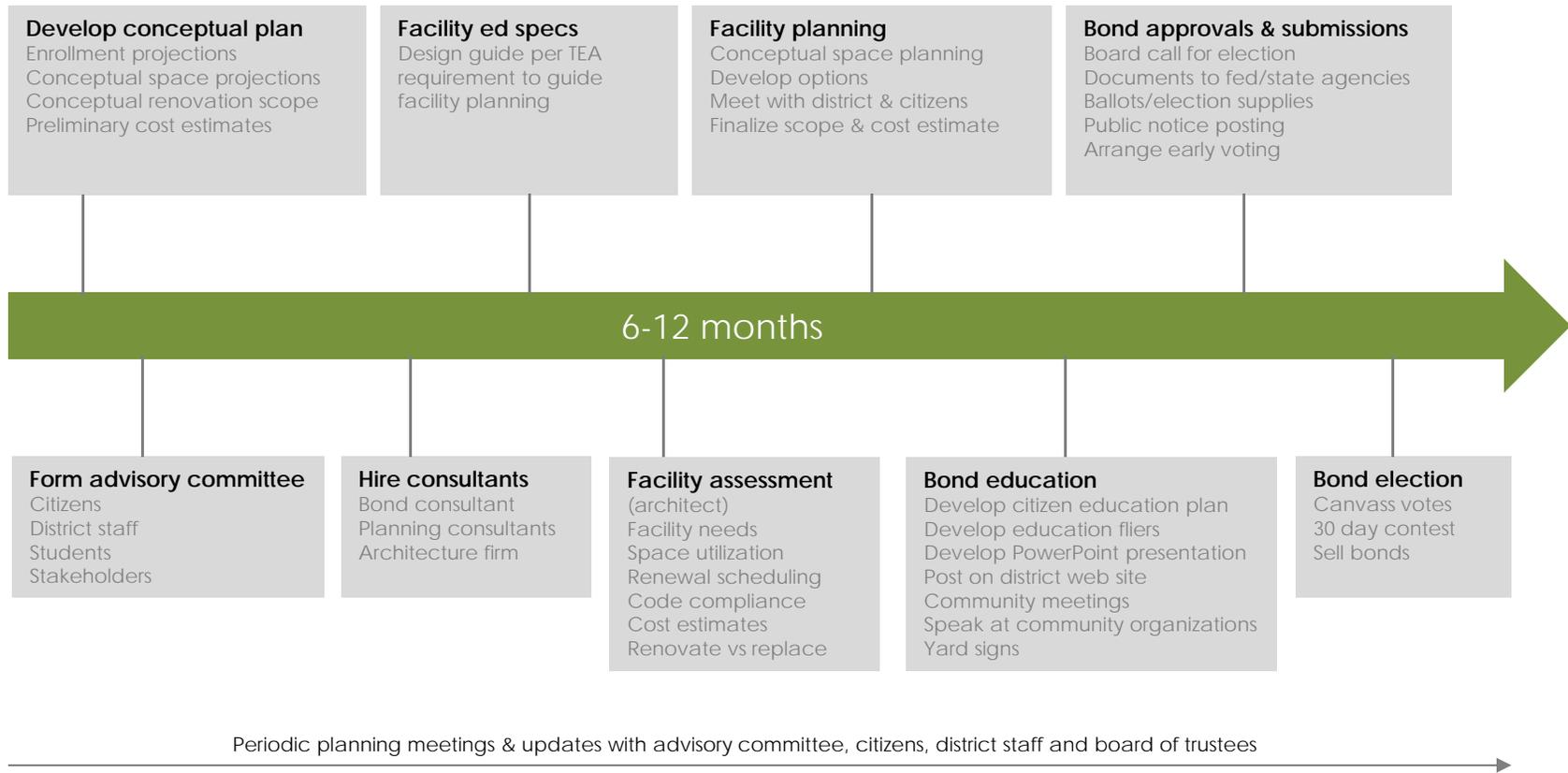
- Facility improvements listed in this report
- Replacement of buildings beyond useful life
- Replacement of building systems beyond normal life
- Regulatory compliance (life safety, code, accessibility, etc.)
- Sustainability and energy consumption

## **Budget and finance**

Inefficient facilities, whether by energy use or excess space, can result in unnecessary expenditure of district funds. The use of facility benchmarks can help the district meet this goal.

- Benchmarks for space efficiency
- Benchmarks for energy consumption
- Benchmarks for facility operating cost
- Demonstrates fiscal responsibility

# Common Planning and Bond Steps



# Q & A

## **How was the facility improvement scope developed?**

The scope was developed by applying predictive analytics to your district facility size, type and age.

## **What is predictive analytics?**

Predictive analytics is a planning tool based on the statistical analysis of similar data; in this case, facility information from more than 100 Texas school districts. The result is a series of predictive formulas that project square feet and cost.

## **What are other uses of predictive analytics?**

Other uses of predictive analytics include agriculture, aviation, census, economics, investing, retailing, research and more. A few entities that use predictive analytics include Apple, Blue Cross Blue Shield, Coca-Cola, Fidelity Investments, Ford Motors, General Electric, Google, Harvard University, Target, Texas Retirement System, Texas A&M, Texas Tech, University of Texas and the United States Census Bureau.

## **What are data sources?**

Facility data was collected from 100+ Texas school districts over a two year period, and is updated monthly. The cost estimating data was collected from multiple districts and multiple consulting firms across Texas.

## **How accurate are the predictive analytics?**

The correlation of the predictive analysis is greater than 80, which is considered strong. Multiple back-tests of the cost estimating methodology indicated this predictive analysis was within an average of 12% of comprehensive assessments.

## **Was the statistical model peer reviewed?**

Methodologies and models were validated by a PhD with the Division of Statistics & Data Science staff at the University of Texas in Austin.

## **How is metric integrity enhanced?**

Two metrics were used in key areas. For instance, district space was compared to regional peer districts and to a statewide scalable benchmark.

## **Why are scalable metrics important?**

Scalable metrics provide more accurate benchmarks. Space efficiency and operating costs vary with the size of the district. The use of predictive analytics results in a specific metric for each district size, instead of a one-size-fits-all-benchmark.

## **What do renovation cost estimates include?**

The cost estimates are based on predictive analytics developed from comprehensive facility assessments across the state. The assessments in the database were performed by multiple consulting firms for multiple districts. These assessments included systems renewal, deferred maintenance, life safety, accessibility, and facility modifications for changing educational programs. Site work, furniture and loose equipment is not included.

## **How many other districts have used these benchmarks?**

24 districts have used this benchmarking and projection process. 95.5% of school bond programs based on these benchmarks have passed.

## **What additional planning will be needed?**

The intent of this service is to provide an early look at the general scope and cost of facility improvements. The next recommended step is to engage a consulting firm, such as an architectural firm, for detailed facility assessment and space planning.



Districts from which data was collected