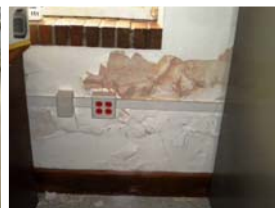
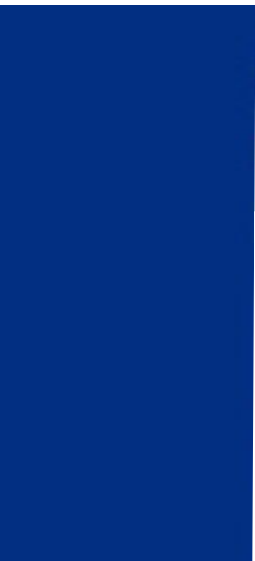


Dallas Independent School District 2013 Facilities Condition Assessment



December 2013

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Foreword

This report was prepared by Parsons Environment & Infrastructure Group Inc. (Parsons) for the Dallas Independent School District (DISD) for the purpose of determining the life-cycle status of DISD facilities. The data collected will be used to develop a long-range capital plan in support of a potential future bond initiative. The data contained within are estimates as of December 2013; the overall conditions of DISD facilities are ever-changing due to many factors including newly occurring deficiencies, new building construction, repairs, renovations, and construction market conditions in general. The following data are for use only by DISD to assess and prioritize facility capital construction needs throughout the district, review and prioritize facilities for improvements, and make recommendations to the Board of Trustees regarding appropriate allocation of financial outlays for capital renewal and deferred maintenance issues.

Dallas Independent School District Board of Trustees

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Bernadette Nutall

Introduction

Thousands of Dallas ISD students started school this past fall in new classrooms and newly renovated facilities funded by Dallas ISD's \$1.35 billion, 2008 Bond Program. As one of three program management firms currently working with DISD to manage their 2008 bond program, Parsons was assigned the task of conducting a facility condition assessment and creating a database to assist the district in its bond program planning.

The report outlines the assessment data gathered by Parsons during the period of June 2013—December 2013 and includes both on-site physical inspections and evaluations and interviews of DISD facility administrators and maintenance personnel.

The assessments required the use of specially-trained personnel and distinctive methods and approaches to the work. Parsons personnel and sub-consultants conducted the physical condition assessment of the buildings and grounds and prepared the overall findings in this report. In addition, Parsons incorporated the local knowledge and expertise of the maintenance and operations divisions of DISD and Parsons' DISD-based Bond Program Management Team to assist in development of the individual facility assessment reports and the findings in this document.

The report includes the assessment results of all designated DISD buildings located at 269 facilities encompassing approximately 26,248,469 total gross square feet throughout the district. Included in these assessments were the permanent educational and teaching buildings, site and ground features, athletic fields, athletic facilities, and other permanent administrative, maintenance, warehouse or other ancillary buildings such as storage or equipment buildings. Temporary or portable buildings were not assessed.

The findings in this report are based on Parsons' nationally recognized facility condition assessment approaches, methods and techniques, and best standards used to evaluate and assess the physical condition of educational and support facilities. The assessment includes estimates needs for two time periods, the Current Period and the Forecast Period. The Current Period is the present year plus seven forward years—in this report 2013–2020. The Forecast Period includes the five years following, 2021–2025.

Executive Summary

Purpose of the DISD Assessment

In June 2013, DISD assigned Parsons to conduct a system-level condition assessment of designated DISD buildings. DISD initiated the facility condition assessment by Parsons to:

- Perform assessment services to develop current facility condition data that can be used by DISD facility staff to support timely funding decisions to reduce deferred maintenance backlog that will lead to lower relative overall facility recapitalization program costs.
- Identify facility deficiency correction cost budgets that can be prioritized and categorized to maximize repair and replacement efficiencies.
- Establish Facility Condition Index (FCI) and other industry standard benchmarks as prioritization tools to quantify each building's current condition and future funding requirements.
- Develop facility system renewal cost forecasts for site infrastructure and building systems through facility's component life-cycle analysis and predictions for a forecast period of five years beyond the Current Period 2013-2020.

Assessment Objectives

The objectives of this assessment were to determine and report on the general status of each assessed building's current and deferred maintenance conditions based on its components' useful life and to provide recommended funding budgets for DISD's capital renewal expenditures over the Current Period of 2013-2020 (7 years) and a Forecast Period of 2021-2025 (5 years). These horizons were chosen to anticipate a May 2015 bond program of five years (2013-2020), plus a five year forecast period (2021-2025). The assessment process, software and the resultant database were initiated to enhance DISD's facility planning and management. The assessment achieved the following objectives:

- Collated relevant existing building data, including prior assessments, reports or other facility information at DISD facilities and their supporting site infrastructure.
- Updated the facility inventory and assessment of facility conditions.
- Developed a comprehensive facilities condition assessment database and Condition Management Estimation Technology (eCOMET) software that included a facility condition index ranking method.
- Demonstrated and oriented DISD facilities management personnel to access facilities assessment database using the internet web-based software.

The 2013 DISD database has been structured so that any DISD registered personnel can use the software eCOMET to inventory their facility assets, determine their deferred maintenance funding needs and plan their facility renewal requirements over the internet. In the near term, eCOMET will primarily operate as an objective prioritization and reporting tool to help DISD guide capital renewal and deferred maintenance funding requests for its facilities. The database will be available to building managers and DISD administrators through a secure internet portal, 24/7. DISD's eCOMET database users will record existing facility deficiencies and forecast future renewal funding requirements, support the development of facility master plans and provide valuable input to facility preventive maintenance programs.

Assessment Benefits

The DISD facility condition assessment process provides significant benefits to DISD facility administrators:

- Increased credibility—DISD building operators and administrators must obtain their funds from at least one, sometimes several levels of corporate governance. Parsons assessment software and process are based on experienced construction professionals using state of the art cost data from RSMeans combined with the best practices of owner associations such as BOMA, CEFPI and NACUBO. The data accurately reports conditions and facility renewal capital reinvestment requirements. The assessment software technology documents improvements through the reduction of deferred maintenance and the application of proactive capital renewal.
- Procurement savings—Facility system renewal data provides DISD with statistically derived future funding requirements to proactively plan projects. By grouping deficient conditions into a single contract, DISD receive economies of scale from the construction markets and reduced internal soft costs.
- Leveled procurement—Procurement leveling is the strategic timing of purchases. The database's project definition capability identifies horizontal procurement opportunities (grouping contracts by trade) or bundling deficiencies vertically (grouping contracts by building). Forward procurement of near term building systems that will expire is another possibility to level out work load and funding needs.
- Ranked funding needs—The database reports the relative condition of buildings using a ratio of needed repairs (Needs) over current replacement value (CRV) to develop the facility condition index (FCI). This ratio index provides a ranking of facilities into a potential list of "worst first." The Extended FCI evaluates facility condition index at any point in the future to reflect the future value of renewal and repair funding. These and other database ranking tools provide an objective determination of future funding needed across DISD's entire real estate holdings.
- Automated budget and schedule tools—The database cost data is derived directly from the most current RSMeans cost database, that can be updated each year through subscription to the national cost database. The database users assign priorities to each deficiency to determine its urgency. These features enhance the determination on when repair and renovation work should be scheduled to be done in a multi-year renovation program. Or, priorities are set to determine which projects will be done within limited funding and which projects will be deferred.

Findings Summary

This report contains the results of the Facility Condition Assessment for the owned buildings and grounds of the Dallas Independent School District. The report is a planning tool to assist the DISD Board of Trustees in making decisions needed to achieve their short and long term facility goals. It contains data and exhibits meant to objectively describe the findings and summarize the results of this study using assessment best practices and standards.

Current and Forecast Needs

Each facility was assessed for physical condition, repair, maintenance and capital renewal needs, and remaining expected life. The data was captured in Parsons' Condition Management Estimation Technology (eCOMET™) software that provides for data capture, analysis, future capital renewal expenditure projections, and reporting. Through these efforts, each facility received an FCA report detailing the deferred maintenance and capital renewal needs and a baseline inventory of selected building systems (see individual building reports).

The following table summarizes Facility estimates for Current Period condition deferred maintenance needs documented in the 2013 assessment:

Asset Class	Gross Area	Current Replacement Value	Current Needs ¹	2013 FCI ²
			(2013)	
District Wide	26,248,469	\$8,132,972,005	\$1,797,483,770	22.10%
A Elementary Schools	10,740,462	\$3,049,868,312	\$556,148,292	18.24%
B Middle Schools	5,255,651	\$1,618,356,986	\$309,520,608	19.13%
C High Schools	6,919,450	\$2,253,791,497	\$502,455,359	22.29%
D Athletic and Pool Facilities	670,511	\$295,131,700	\$81,949,141	27.77%
E Vacant Facilities	968,809	\$293,382,858	\$125,778,824	42.87%
F Administrative and Other Facilities	1,693,586	\$622,440,652	\$221,631,546	35.61%

Poor > 30%
Fair > 15% < 30%
Good < 15%

The 2013 current needs are combined with the forecasted capital renewal needs through 2020 to create the Current Period needs. This calculation assumes the 2013 assessment, 2014 bond planning, and a 2015-2020 bond program. Forecast Period capital renewal needs of 2021-2025 are included for long term planning purposes.

¹ Current Needs represent the results of the 2013 assessment and do not include any future capital renewal needs – see Current Period.

² FCI is an industry-standard measurement of a facility's condition that is the ratio of the cost to correct a facility's deficiencies to the Current Replacement Value (CRV) of the facilities. CRV represents the hypothetical total cost of rebuilding or replacing an existing facility in current dollars to its optimal condition under current codes and construction methods. FCI is typically expressed as a percent.

The results are as follows:

Asset Class	Gross Area	Current Replacement Value	2013 FCI ³	Current Period Needs ⁴	Forecast ⁵ Needs	Total Needs (2013-2025)
				(2013-20)	(2021-25)	
District Wide	26,248,469	\$8,132,972,005	22.10%	\$3,241,658,897	\$1,124,093,301	\$4,365,752,200
A Elementary Schools	10,740,462	\$3,049,868,312	18.24%	\$1,162,374,255	\$331,296,316	\$1,493,670,571
B Middle Schools	5,255,651	\$1,618,356,986	19.13%	\$583,577,344	\$204,253,456	\$787,830,800
C High Schools	6,919,450	\$2,253,791,497	22.29%	\$908,162,716	\$338,555,885	\$1,246,718,601
D Athletic and Pool Facilities	670,511	\$295,131,700	27.77%	\$119,449,475	\$66,700,120	\$186,149,595
E Vacant Facilities	968,809	\$293,382,858	42.87%	\$166,911,340	\$30,710,124	\$197,621,464
F Administrative and Other Facilities	1,693,586	\$622,440,652	35.61%	\$301,183,771	\$152,577,398	\$453,761,169

Facility Age

The average age of DISD’s 502 buildings and 275 sites average 39 years old with an average date built of about 1974. According to the National Center for Educational Statistics (NCES), DISD facilities coincide with the national average of 42 years for all educational facilities nationwide. DISD facility ages range from 1909 to 2013, with the median age of all facilities of 47 years with a median year built of 1966.

Facility Condition

The 269 school and non-school facilities used as administrative, special purpose, transportation, maintenance, support, or warehouses, and their associated buildings and grounds, are in overall “Fair” condition with a combined facility condition index (FCI) of 22.10%.

Facility Name	Overall FCI	Count	Gross Area	Good FCI 0%-15.0%		Fair FCI 15.01%-30.0%		Poor FCI 30.01 - 100%	
				Count	Gross Area	Count	Gross Area	Count	Gross Area
District Wide	22.10%	269	26,248,469	87	9,464,042	86	8,140,003	96	8,961,794
A) Elementary Schools	18.24%	146	10,740,462	57	4,633,384	54	3,668,700	35	2,280,139
B) Middle Schools	19.13%	36	5,255,651	11	2,074,704	13	1,591,961	12	1,588,986
C) High Schools	22.29%	32	6,919,450	11	2,247,632	11	2,076,935	10	2,594,883
D) Athletic and Pool Facilities	27.77%	13	670,511	2	234,699	1	12,356	10	423,456
E) Vacant Facilities	42.87%	15	968,809	-	-	2	239,899	13	721,998
F) Administrative / Other Facilities	35.61%	27	1,693,586	6	273,623	5	550,152	16	1,352,332

³ FCI is an industry-standard measurement of a facility's condition that is the ratio of the cost to correct a facility's deficiencies to the Current Replacement Value (CRV) of the facilities. CRV represents the hypothetical total cost of rebuilding or replacing an existing facility in current dollars to its optimal condition under current codes and construction methods. FCI is typically expressed as a percent.

⁴ The Current Period is the present year plus seven forward years—in this report 2013–2020. This period is derived by anticipating a 2015 2nd quarter bond sale and resulting 5 year program through 2020, added to the current year 2013 and planning year 2014.

⁵ The Forecast Period includes five years following the Current Period—in this report 2021–2025.

Current Deficiencies

General or ordinary maintenance of the facilities is good. However, deferred maintenance in the form of expired building systems and unfunded capital repairs represent 2013 budgeted deficiency⁶ needs of about \$1,797,483,770:

Systems	Current Deficiencies 2013	Current Period Needs (2013-20)	Forecast Period Needs (2021-25)	Total Needs
Total	\$1,797,483,770	\$3,241,658,897	\$1,124,093,303	\$4,365,752,200
Substructure	\$3,139,718	\$3,139,718	\$0	\$3,139,718
Foundations	\$2,885,187	\$2,885,187	\$0	\$2,885,187
Basement Construction	\$254,532	\$254,532	\$0	\$254,532
Shell	\$322,346,446	\$469,319,243	\$141,979,696	\$501,022,061
Superstructure	\$5,952,651	\$5,999,563	\$201,314	\$5,999,563
Exterior Enclosure	\$144,634,978	\$175,544,371	\$17,330,272	\$179,432,314
Roofing	\$171,758,817	\$287,775,311	\$124,448,111	\$315,590,184
Interiors	\$430,112,306	\$672,640,550	\$342,621,720	\$806,868,033
Interior Construction	\$94,589,770	\$120,097,832	\$17,115,644	\$123,651,333
Stairs	\$252,478	\$252,478	\$0	\$252,478
Interior Finishes	\$335,270,058	\$552,290,240	\$325,506,072	\$682,964,222
Services	\$655,739,104	\$1,202,078,979	\$512,149,326	\$1,432,217,821
Conveying	\$5,899,908	\$23,389,620	\$9,317,326	\$27,762,765
Plumbing	\$130,827,581	\$166,762,147	\$24,540,012	\$169,416,218
HVAC	\$194,866,532	\$554,555,824	\$338,642,152	\$748,873,163
Fire Protection	\$23,203,266	\$48,599,441	\$24,864,434	\$61,816,848
Electrical	\$300,941,817	\$408,771,947	\$114,785,404	\$424,348,827
Equipment & Furnishings	\$111,304,660	\$148,254,769	\$31,868,052	\$150,312,802
Equipment	\$32,437,761	\$55,331,538	\$11,015,355	\$56,152,756
Furnishings	\$78,866,900	\$92,923,232	\$20,852,697	\$94,160,045
Special Construction	\$1,540,333	\$1,714,269	\$3,094,476	\$4,808,745
Special Construction	\$1,364,710	\$1,538,646	\$3,094,476	\$4,633,122
Demolition	\$175,623	\$175,623	\$0	\$175,623
Building Sitework	\$273,301,203	\$441,532,162	\$55,897,430	\$458,883,402
Site Preparation	\$52,892	\$52,892	\$0	\$52,892
Site Improvements	\$145,924,006	\$227,979,708	\$31,570,977	\$240,795,057
Site Mechanical Utilities	\$41,194,651	\$54,499,047	\$2,185,317	\$55,119,346
Site Electrical Utilities	\$86,071,899	\$158,942,760	\$22,141,137	\$162,858,353
Other Site Construction	\$57,755	\$57,755	\$0	\$57,755

Prioritization of Needs

As a result of conducting the facility condition assessment the Current Needs were recorded by their priority, or urgency of need for repair as judged by the assessor. Priority 1 and 2 deficiencies have created, or will soon create, conditions that are potential safety hazards, are in extreme or accelerated deterioration, or are in failing and interrupted operations. Examples of these deficiencies include severely damaged or failing roof systems, branch wiring systems, cooling/heating distribution systems, structural supports, building exteriors, and fire alarm systems. Deficiencies in these priority categories should be addressed immediately (Priority 1) or within the next one to two years (Priority 2) as funding is available.

The majority of remaining current needed repairs that are not yet critical (Priority 3 and Priority 4) require attention in the next three to five years (Priority 3) and six to ten years (Priority 4) to avoid eventual deterioration, operational downtime, or eventual damage if not addressed. Priority 5 issues are so-called “grandfathered” code issues and are triggered by renovation of facilities.

⁶ A deficiency is the state of being damaged, missing, inadequate or insufficient for an intended purpose.

These needs have been prioritized and are summarized below:

Current Deficiencies (2013)	Priority for Repair
\$1,797,483,770	Totals
\$4,469,133	Priority 1 – Currently Critical (Immediate) Conditions require immediate action to correct a potential safety hazard, stop accelerated deterioration, or return a facility to operation.
\$35,456,921	Priority 2 – Potentially Critical (Years 1-2) Conditions, if not corrected expeditiously, could become critical within a year resulting in intermittent operations, rapid deterioration, potential life safety hazards, etc.
\$1,747,842,317	Priority 3 – Necessary/Not Yet Critical (Years 3-5) Conditions require appropriate attention to avoid predictable deterioration, potential downtime, or associated damage or higher costs if deferred further.
\$8,225,753	Priority 4 – Recommended (Years 6-10) Conditions include items that represent sensible improvement to existing conditions but are not required for the basic function of the facility, overall usability improvements, or long-term maintenance cost reduction.
\$1,489,646	Priority 5 – Does Not Meet Current Codes but is "Grandfathered" by the jurisdictions responsible for enforcing the codes. No action is required at this time; however, renovation work performed in the future may trigger correction.

Categorization of Needs

Category - Deficiencies recorded in 2013 were broadly grouped by category, or type of deficiency. As expected, deferred maintenance, also known as backlog renewal, represents the majority type of the deficiencies:

Current Deficiencies (2013)	Category
\$1,797,483,770	Totals
\$1,671,157,838	Deferred Maintenance - Includes major preventive maintenance, building system repairs and upgrades, and deferred maintenance activities that have been postponed due to funding priorities.
\$108,633,426	Environmental - Includes items that have been identified as potential non-conforming environmental health risk items, but have not yet been formally tested and determined to be a Compliance item. Includes the highest priority repairs to building systems where exposure to occupants may be imminent. These projects include repair and/or replacement of possible hazardous materials such as asbestos, lead paint, radon, mold and other volatile organic materials.
\$7,015,792	Facility Integrity - Includes items that have been identified as potential non-conforming items, but have not yet been formally tested and determined to be a Compliance item. Includes the highest priority repairs to building systems where failure may be imminent. These projects include repair and/or replacement of critical systems such as structure, roof, elevator, power, plumbing, heating, ventilation and air conditioning. If not funded, these projects may ultimately be performed under emergency conditions with possible consequential liabilities resulting from property damage and lost productivity.
\$4,108,463	Mission Integrity - Includes items that have been identified as potential items that could

Current Deficiencies (2013)	Category
	adversely affect the facility's business operations.
\$3,414,750	Compliance - Includes items associated with federal and state compliance laws, such as the Americans with Disabilities Act (ADA), chlorofluorocarbon (CFC) elimination and disposal, asbestos abatement, indoor air quality (IAQ) initiatives, and other life-safety mandated initiatives. Includes items associated with jurisdictional fire, life-safety and building code issues.
\$2,725,514	Safety - Includes items that have been identified as potentially unsafe conditions.
\$140,554	Modernization - Includes items that have been identified as obsolete or non-conforming to current best practices or technologies.

Distress – Deficiencies were identified by their possible root cause. In the 2013 assessment the predominant root cause found was system age that indicated wear out and run to failure beyond the systems' expected life:

Current Deficiencies (2013)	Distress
\$1,797,483,770	Totals
\$1,760,435,393	Beyond Expected Life – System or component that has exceeded its planned or designed state of usefulness or utility for an intended purpose.
\$16,813,140	Failing - System or component that is sporadically or intermittently unable to function for its intended purpose.
\$6,443,268	Missing - System or component that is needed for the facility to function for its intended purpose is not in place or was not found.
\$6,284,426	Inadequate - System or component that is insufficient to function for its intended purpose.
\$6,196,657	Damaged - System or component that is broken or impaired in its ability to function for its intended purpose.
\$1,059,813	Abandoned - System or component that is district owned that is no longer maintained or has ceased to function for whatever reason, and has not been removed or replaced.
\$251,075	Non Compliant - System or component that fails to meet district standards, policies or is non-compliant with jurisdictional codes or requirements.

2013-2025 Capital Funding Scenarios

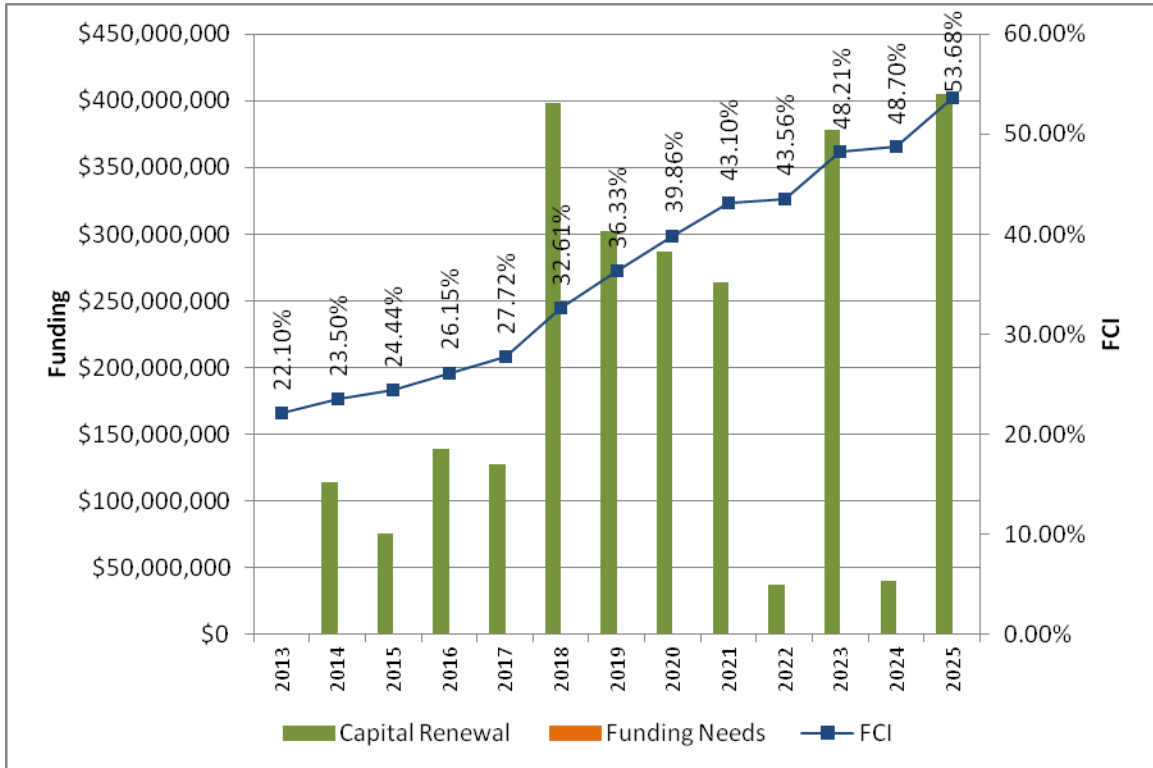
With requirements prioritized and the assessment data in place, Parsons identified both short- and long-term budget requirements by developing the impact of different funding levels on the condition of the designated DISD real estate portfolio.

Referring to the facility assessment summary, the total Current Period (2013-2020) and 5-Year Forecast Period (2021-2025) funding needs are about \$4,365,752,200. In the analyses shown below, the facility condition data developed during the DISD assessment were used to produce four funding scenarios:

- **Scenario 1:** Do nothing. Under this scenario, none of the current deferred maintenance and forecasted system renewal needs are funded.
- **Scenario 2:** Maintain the current facility condition index of FCI = 22.10 percent, a level considered to be “fair” condition, by paying down only the annual forecasted capital renewal needs in level funding escalated 3.5 percent per year of about \$195 million per year with total funding needs in the amount of \$2,568,268,430. Under this scenario, none of the current deferred maintenance amount is paid down.
- **Scenario 3:** Funding to improve the DISD facilities’ condition from FCI=22.10 percent to FCI = 15.0 percent, a level considered to be “good” condition, to address both on-going capital renewal needs plus partially pay down existing deferred maintenance needs in level funding escalated 3.5 percent per year of about \$239 million per year with total funding needs in the amount of \$3,145,806,399.
- **Scenario 4:** Target improving the condition under an increased funding program to achieve a 100 percent FCI improvement across the total portfolio, from FCI=22.10 percent to 0 percent FCI in level funding escalated 3.5 percent per year of about \$332 million per year with total funding needs in the amount of \$4,365,752,200.

Scenario 1—Do Nothing

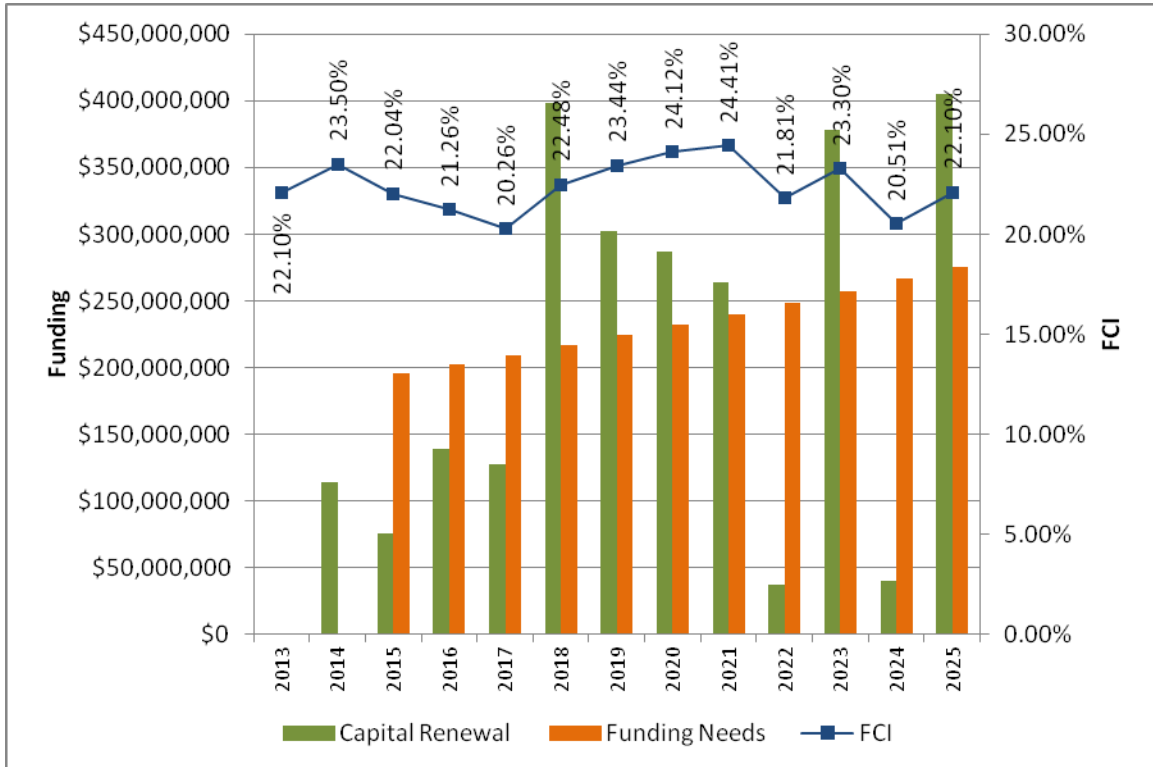
Funding needed to address the current facility condition deficiencies and system renewals over the forecast period 2014-2025 plan is unavailable. The blue curve indicates the annual FCI over the funding cycle based on the funding provided each year. The green columns represent system renewal costs for each year, while the orange columns represent the zero payments that would offset the accumulating system renewal needs.



Year	Capital Renewal	Funding Needs	FCI
2013	\$0	\$0	22.10%
2014	\$114,079,987	\$0	23.50%
2015	\$76,130,189	\$0	24.44%
2016	\$138,784,333	\$0	26.15%
2017	\$127,995,928	\$0	27.72%
2018	\$397,861,743	\$0	32.61%
2019	\$302,231,858	\$0	36.33%
2020	\$287,091,089	\$0	39.86%
Subtotal	\$1,444,175,127	\$0	
2021	\$263,919,153	\$0	43.10%
2022	\$37,184,284	\$0	43.56%
2023	\$378,113,015	\$0	48.21%
2024	\$39,832,736	\$0	48.70%
2025	\$405,044,115	\$0	53.68%
Total	\$2,568,268,430	\$0	

Scenario 2—Maintain the Current FCI (FCI=22.10%)

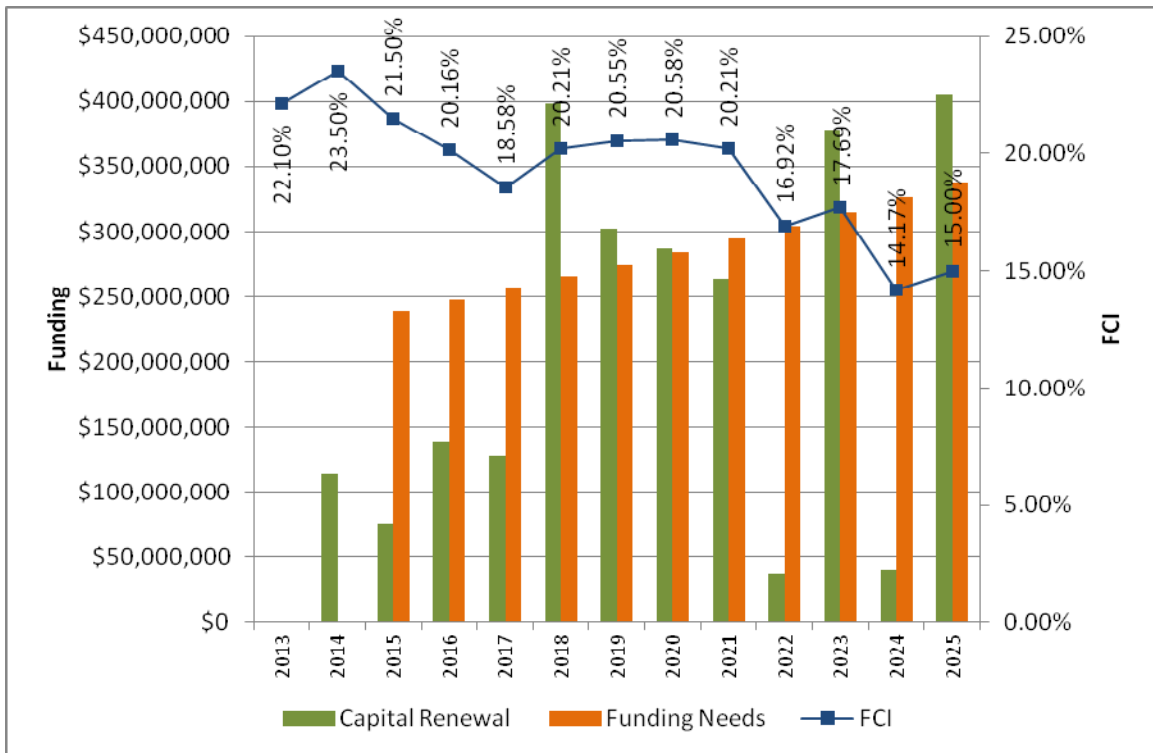
Funding needed to maintain the current facility condition over the current and forecast period plan at the current facility condition index (FCI) of 22.10 percent, a level considered by many references to be “fair” condition. The blue curve indicates the annual FCI over the funding cycle based on the funding provided each year. The green columns represent system renewal costs for each year, while the orange columns represent the level payments of about \$195 million escalated each year by 3.5 percent needed to offset the recurring system renewals.



Year	Capital Renewal	Funding Needs	FCI
2013	\$0	\$0	22.10%
2014	\$114,079,987	\$0	23.50%
2015	\$76,130,189	\$195,424,594	22.04%
2016	\$138,784,333	\$202,264,454	21.26%
2017	\$127,995,928	\$209,343,710	20.26%
2018	\$397,861,743	\$216,670,740	22.48%
2019	\$302,231,858	\$224,254,216	23.44%
2020	\$287,091,089	\$232,103,114	24.12%
Subtotal	\$1,444,175,127	\$1,280,060,828	
2021	\$263,919,153	\$240,226,723	24.41%
2022	\$37,184,284	\$248,634,658	21.81%
2023	\$378,113,015	\$257,336,871	23.30%
2024	\$39,832,736	\$266,343,661	20.51%
2025	\$405,044,115	\$275,665,689	22.10%
Total	\$2,568,268,430	\$2,568,268,430	

Scenario 3—Improve the FCI to Good Condition (FCI=15.0%)

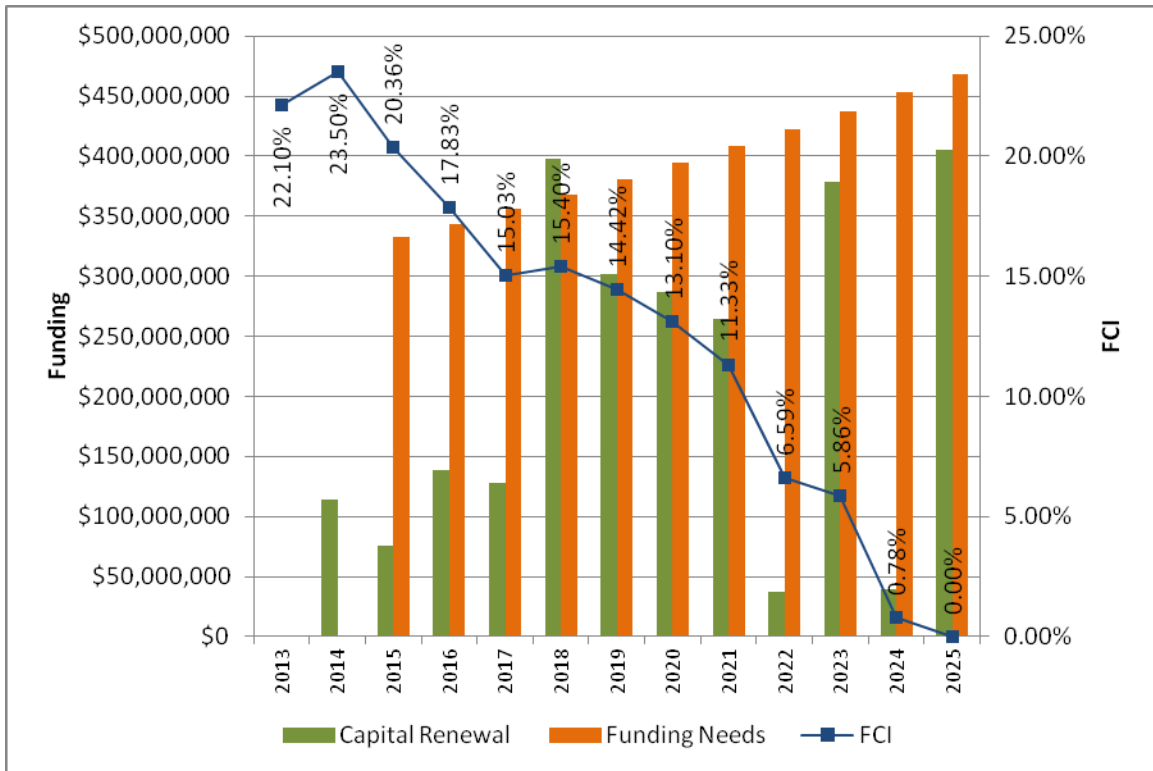
Target improving the condition under an increased funding program to achieve about 15 percent FCI improvement across the total portfolio, from 22.10 percent to 15.0 percent FCI, a level considered by many references to be good condition. . The blue curve indicates the annual FCI over the funding cycle based on the funding provided each year. The green columns represent system renewal costs for each year, while the orange columns represent the level payments of about \$239 million escalated each year by 3.5 percent needed to offset the recurring system renewals plus partially pay down existing deferred maintenance.



Year	Capital Renewal	Funding Needs	FCI
2013	\$0	\$0	22.10%
2014	\$114,079,987	\$0	23.50%
2015	\$76,130,189	\$239,370,593	21.50%
2016	\$138,784,333	\$247,748,564	20.16%
2017	\$127,995,928	\$256,419,763	18.58%
2018	\$397,861,743	\$265,394,455	20.21%
2019	\$302,231,858	\$274,683,261	20.55%
2020	\$287,091,089	\$284,297,175	20.58%
Subtotal	\$1,444,175,127	\$1,567,913,812	
2021	\$263,919,153	\$294,247,576	20.21%
2022	\$37,184,284	\$304,546,242	16.92%
2023	\$378,113,015	\$315,205,360	17.69%
2024	\$39,832,736	\$326,237,548	14.17%
2025	\$405,044,115	\$337,655,862	15.00%
Total	\$2,568,268,430	\$3,145,806,399	

Scenario 4—Improve the FCI to Zero Deficiencies (FCI=0.0%)

Target improving the condition under an increased funding program to achieve a total 100 percent FCI improvement across the total portfolio, from FCI=22.10 percent to 0.00 percent FCI, a level considered to be excellent (like new) condition. The blue curve indicates the annual FCI over the funding cycle based on the funding provided each year. The green columns represent system renewal costs for each year, while the orange columns represent the level payments of about \$332 million escalated each year by 3.5 percent needed to offset the recurring system renewals plus fully pay down existing deferred maintenance.



Year	Capital Renewal	Funding Needs	FCI
2013	\$0	\$0	22.10%
2014	\$114,079,987	\$0	23.50%
2015	\$76,130,189	\$332,198,667	20.36%
2016	\$138,784,333	\$343,825,621	17.83%
2017	\$127,995,928	\$355,859,517	15.03%
2018	\$397,861,743	\$368,314,600	15.40%
2019	\$302,231,858	\$381,205,611	14.42%
2020	\$287,091,089	\$394,547,808	13.10%
Subtotal	\$1,444,175,127	\$2,175,951,824	
2021	\$263,919,153	\$408,356,981	11.33%
2022	\$37,184,284	\$422,649,475	6.59%
2023	\$378,113,015	\$437,442,207	5.86%
2024	\$39,832,736	\$452,752,684	0.78%
2025	\$405,044,115	\$468,599,028	0.00%
Total	\$2,568,268,430	\$4,365,752,200	

Assessment Approach

DISD Database Development and Analysis

The DISD assessment team completed the following tasks to develop the database for the assignment:

Task 1 – Project Mobilization

- Coordinated the assessment process with the DISD staff.
- Reviewed goals and objectives and developed questionnaire to define proper classification of data elements.
- Defined standards and set expectations for the assignment
- Discussed existing data relevant to the project
- Set milestone schedule for completion

Task 2 – Review of Existing Documentation

- Reviewed the existing facility drawings and records prior to data collection that will also be referenced for call-up within the database.

Task 3 – Physical Survey

- Physically surveyed the facilities and infrastructure assets defined within the scope of the project. The DISD assessment team conducted a visual inspection of distinct building systems and components.
- Developed budgets to help identify corrective scope of work budgets for identified facility deficiencies using RSMMeans cost database that included Owner soft costs.
- Provided digital photographs of each building to record its general condition and the visual condition of any found deficiency. Photographs were included in the final report and linked to the database records.

Task 4 –Data Management System

- Initiated assimilation assessment data with existing DISD facility documents, reports and drawings.

Task 5 – Facility Condition Index

- Developed a Facility Condition Index (FCI) and for each building in the assessment to quantify the deficiencies in each building.

Task 6 – Capital Renewal Budgets

- Developed forecasts for the renewal of building systems through life-cycle analysis.

Task 7 – Deferred Maintenance Deficiency Management

- Set up priority and category filter combinations for deficiency sorting and management.

Task 8 –FCA Reports

- Provided final written reports of assigned DISD facility condition assessment that quantified capital renewal and deferred maintenance issues.

Definitions, Assumptions and Budget Models

The following terms and definitions are used throughout this report and are included below for clarification. Key database setup options and variables that affect the outcome of prioritization, ranking and costing are identified for review and consideration for further adjustment.

Assessment Level

The DISD 2013 Facility Condition Assessment was a comprehensive Level 1 general assessment of building systems and their life cycles combined with an on-site physical assessment conducted by architectural, engineering and construction management experts to verify existing building systems condition and their major system component deficiencies, to determine DISD facility capital renewal and deferred maintenance needs.

Database Facility Cost Variables

Database cost variables used in the Pilot assessment include the following:

Cost Variables	2013 Assessment
RSMeans cost data Database building current replacement value cost models and deficiency costs use current RSMeans cost data classifications and current city cost indexes. RSMeans cost data in the database can be updated annually by subscription.	2013 data used
Escalation Factor Database cost escalation factor are set to reflect predicted annual per year cost escalation that is included in all forecast cost reports and capital renewal predications.	+3.5% annual
Priority Weighting Factors Deficiency Priority weighting factors are used to enhance the relative importance of individual deficiencies in the FCI calculations and report rankings	Level weighting used
Additional or Soft Costs Owner's additional costs over and above general contractor's "hard costs" are included to calculate repair budget total costs to owner (See Additional Cost Table)	+53.91% add-on multiplier of estimated General Contract labor and material cost used
Facility Condition Index (FCI) FCI can be calculated and used to rank relative building renewal and correction needs. An Extended FCI (EFCI) can be calculated at a given year in the future using the accumulated deficiency cost over replacement value.	$\frac{\text{Cost of Repairs}}{\text{Current Replacement Value}}$

Facility Condition Index (FCI)

The facility condition index (FCI) is a measure widely used in the building industry to represent the physical condition of a facility compared to its replacement value. The term FCI was originally used by

the US Navy to aid in prioritizing repair funds. It has been adopted and refined by numerous national facility maintenance, trade and facility administrator associations and is generally used as a means of comparing relative facility conditions. The FCI measures the estimated cost of the current year repair and replacement deficiencies, including recommended modernization improvements and grandfathered code issues, divided by the projected replacement cost of the facility replaced to contemporary construction standards and design best practices. The result of this division is an index, generally expressed as a percentage, which is the FCI. The higher the FCI, the poorer the relative condition of the facility.

$$FCI = \frac{\text{Repair and Renewal Needs}}{\text{Current Replacement Value}}$$

Although current industry “guidelines” developed by the college and university organization NACUBO consider a building with an FCI of 0 to 5% good; 6 to 10% fair and 10% and above poor, in practice few if any, inventories of public buildings ever achieve an overall rating of 10% or below. These FCI guidelines are general guidelines that are under almost constant debate within the building ownership communities because they do not take into account either modernization improvements, or expired systems’ capital renewal costs; they only address ordinary maintenance items that have been deferred through a normal funding cycle. Parsons has routinely found existing average building conditions throughout the United States to fall within the range of 25%-35% FCI, and Parsons recommended the following guides used in this report

Rating	NACUBO Guidelines	Report Guidelines
Good	0.0—5.0%	0.0—15.0%
Fair	5.1—10.0%	15.1—30.0%
Poor	10.1—100%	30.1—100%

Deficiency priority definitions

Each deficiency was assigned a preliminary priority number of 1 through 5, to reflect that deficiency’s priority status as determined by the assessment team. (NOTE: These deficiency priority settings are internal to the database and do not reflect the project priority setting assigned to proposed repairs or improvements as determined by DISD in their capital plan funding requests).

The following list provides a brief summary of each data priority in the database:

Deficiency Priority #	Description
1	<p>Critical—Immediate Need</p> <p>Used only for critical issues that may pose immediate threats to the life, health or safety of persons within the facility. Examples include:</p> <ul style="list-style-type: none"> • Obvious or suspected asbestos containing materials; potential release into the

⁷ Sean C. Rush (1991). Managing the Facilities Portfolio, National Association of College and University Business Officers (NACUBO)

Deficiency Priority #	Description
	air <ul style="list-style-type: none"> • Unprotected exit corridors • Serious code violations such as blocked egress, improper fire detection/warning, electrical hazards, structural failures, emergency lighting, etc.
2	Trending Critical – 1-2 Years Assigned to systems or deficiencies that are mission critical and beyond useful life. Examples include: <ul style="list-style-type: none"> • A system that is in serious disrepair or where failure is imminent • Severely damaged systems
3	Necessary – Years 3-5 Assigned to systems or deficiencies that should be repaired to mitigate additional damage, and systems that are beyond expected life. Examples include: <ul style="list-style-type: none"> • Roofs that are leaking • Exterior walls, doors, window systems that chronically leak. • Inadequate ventilation systems that could result in moisture damage or mold creation.
4	Recommended – Years 6-10 Assigned to systems or deficiencies that are beyond expected BOMA life cycles, however, exhibit no signs of immediate repair requirements. Examples include: <ul style="list-style-type: none"> • Electrical service equipment that is beyond the expected BOMA life yet is functioning well. • Most interior finishes not severely damaged, torn, etc.
5	“Grandfathered” – Project triggered Assigned to systems or deficiencies that are code issues that are “grand fathered” or standards specific to the local agency or jurisdiction. Examples include: <ul style="list-style-type: none"> • Fire sprinkler systems • ADA improvements, life safety code updates, etc. • Finishes, flooring type, architectural standards, etc. • Non-compliant issues to client standards, or jurisdictional codes

Deficiency Categories

The assessment adopted the following deficiency categories to reflect typical assessment industry nomenclature:

Category	Description
Appearance	Includes items that have been identified as non-contributing to the client's branding or presentation to its employees or to its customers.
Compliance	Includes items associated with federal and state compliance laws, such as the Americans with Disabilities Act (ADA), chlorofluorocarbon (CFC) elimination and disposal, asbestos abatement, indoor air quality (IAQ) initiatives, and other life-safety mandated initiatives. Includes items associated with jurisdictional fire, life-

Category	Description
	safety and building code issues.
Deferred Maintenance	Includes major preventive maintenance, building system repairs and upgrades, and deferred maintenance activities that have been postponed due to funding priorities.
Environmental	Includes items that have been identified as potential non-conforming environmental health risk items, but have not yet been formally tested and determined to be a Compliance item. Includes the highest priority repairs to building systems where exposure to occupants may be imminent. These projects include repair and/or replacement of possible hazardous materials such as asbestos, lead paint, radon, mold and other volatile organic materials.
Facility Integrity	Includes items that have been identified as potential non-conforming items, but have not yet been formally tested and determined to be a Compliance item. Includes the highest priority repairs to building systems where failure may be imminent. These projects include repair and/or replacement of critical systems such as structure, roof, elevator, power, plumbing, heating, ventilation and air conditioning. If not funded, these projects may ultimately be performed under emergency conditions with possible consequential liabilities resulting from property damage and lost productivity.
Mission Integrity	Includes items that have been identified as potential items that could adversely affect the facility's business operations.
Modernization	Includes items that have been identified as obsolete or non-conforming to current best practices or technologies.
Safety	Includes items that have been identified as potentially unsafe conditions.

Cost models

The database incorporates RSMean derived current replacement value (CRV) cost models to assign life cycle costs to the various systems within a building. Cost models are detailed to Uniformat II – Level 3 building systems and assigned costs-per-square-foot replacement values. Models are designed to represent a client specific facility that meets local standards and cost trends.

Current replacement value (CRV)

Replacement value represents the hypothetical cost of rebuilding or replacing an existing facility under today's codes and construction standards, using its current configuration. For example, an existing building that currently does not have a fire sprinkler, but requires one under today's codes, would include costs for this system as part of its replacement value. It is determined by multiplying the gross area of the facility by a square foot cost developed in that facility's schedule of values cost model. Replacement cost includes construction costs and owner's additional or "soft" costs for fees, permits and other expenses to reflect a total project cost.

Rough order of magnitude repair budgets

These are the budgeted costs to make partial or full replacement of expired systems, costs for out of cycle repair adjustments and costs for condition, suitability and sufficiency deficiencies. Because budgeted

repair costs typically include budget elements in addition to condition repair costs of a current facility, i.e., modernization upgrade items, area sufficiency items, etc., the total order of magnitude repair costs can exceed the current replacement cost.

Order of magnitude repair costs are budget numbers, not actual project costs. The facility condition assessment data should not be considered specific scope of work descriptions for individual buildings; rather it is a repair-program budgeting tool that offers reference data for the repair planning process.

Within a construction project program, substantial cost differences may be recognized from the estimated cost figures provided in the database, depending on the method of repair procurement, the construction market at the time and the actual scope of work anticipated. Detailed engineering studies may also be required to fully determine costs associated with individual component failures that were beyond the scope of the assessment.

The scope of the assessment findings and the figures contained in the database do not include additional renovation costs and mark-ups that may be recommended as part of the project analysis or within the business units’ proposed comprehensive repair program, of which the facility assessment is one input component. The assessment also does not include information regarding the affordability of any potential repairs or replacements, nor does it prioritize the business units’ objectives that will become a major component of any facility repair plan.

Additional Costs—Soft Costs

Additional costs or “soft” costs are costs that are necessary to accomplish the corrective work but are not directly attributable to the deficient system’s direct trade construction cost, nor are included in a general contractor estimate or bid number, often referred to as “hard cost”. Soft costs vary by owner but typically include architect and contractor fees, contingencies and other owner incurred costs necessary to fully develop and build a facility. Soft costs used in the database include the following budget items:

Description
Escalated CCL - Construction Estimate w/GC OH&P
Offsite Development
Temporary Buildings
Project Contingency
Project Construction Budget (PCB)
FF&E for Campus
FF&E Contingency
Base Design Fee - AE
Add Services for Design AE
AE Reimbursable
Haz-Mat Abatement
Haz-Mat Contingency
Haz-Mat Sample/Monitoring & Hazmat Design Fee
Land Survey for Existing Campus
GeoTech
Material Testing, Text & Bal, Roof Insp, TAC, Comm.
Test & Balance
Roof Inspection
Energy Mgt Design, Energy Audit Permit Review
Energy Mgt Contracted Work
Energy Mgt Contracted Work Contingency
Printing / Miscellaneous Costs
Bid Advertisements
Permits & Fees
Moving Expenses

Description
Overtime-Custodial Support
Total Project Cost (Sum of F thru X2)
Program Manager Fee
Program Manager Reimbursable
DISD Program Costs
Program Contingency

Life cycles

Parsons assigned expected life cycles to all the building systems based on Building Operators and Managers of America (BOMA) recommended cycles, manufacturer’s suggested life, and with RSMeans recommended component and material life based on their historical records. BOMA standards are a nationally recognized source of life cycle data (based on its member’s historical data) for various components and/or systems associated with facilities. RSMeans is a national company specializing in construction estimating and costs.

Renewal factors

Renewal factors represent the difference in cost of renovating or replacing an existing system, rather than new construction of a building system. For example, installing a new built-up roof on an existing building would include the effort of removing and disposing of the old roof, a cost not associated with new construction. Typical renewal premiums assigned to account for demolition and other replacement preparation costs are about 110% of the system or component raw budget cost.

System generated deficiencies

The database software automatically develops system deficiencies based on system life cycles using the systems’ installation dates as the base year. By adjusting the Next Renewal date ahead or behind the predicted or stated life cycle date, a system cost will come due earlier or later than the originally installed life cycle date. This utility accounts for good maintenance conditions and a longer life, or early expiration of a system life due to any number of adverse factors such as poor installation, acts of god, material defects, poor design applications and other factors that may shorten the life of a material or system.

Building systems

The database incorporates Uniformat II to organize building data into replacement cost models. Uniformat II was originally developed by the federal General Services Administration to delineate building costs by systems rather than by materials. Uniformat II was formalized in an NIST standard, NISTIR 6389 in 1999. It has been further quantified and updated by ASTM standard 2005, E1557-05. The Construction Specifications Institute, CSI, has taken over the standard as part of their MasterFormat / MasterSpec system. The database cost models include Level 3 Uniformat systems.

Reference organizations

Several organizations are referenced throughout the document and include:

Acronym	Organization
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Acronym	Organization
ASTM	ASTM INTERNATIONAL: International standards organization that develops and publishes voluntary consensus technical standards for a wide range of materials, products, systems, and services.
BOMA	BUILDING OWNERS AND MANAGERS ASSOCIATION: National organization of public and private facilities focused on building management tools and maintenance techniques. Comet reference: building and component system effective economic life expectancies
RSMeans	RSMEANS: Primary national company specializing in construction cost data. Comet reference: cost models and deficiency pricing
CSI	CONSTRUCTION SPECIFICATIONS INSTITUTE: Primary national organization specializing in construction materials data and data location in construction documents. Comet reference: Unifomat II materials classification
NIST	NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY: Agency in the US federal technology administration that makes measurements and sets standards as needed by industry or government programs
CEFPI	COUNCIL OF EDUCATIONAL FACILITY PLANNERS INTERNATIONAL: Worldwide professional 501 (c)(3) non-profit association whose mission is improving the places where children learn.
NACUBO	NATIONAL ASSOCIATION OF COLLEGE AND UNIVERSITY BUSINESS OFFICERS: Non-profit organization focusing on higher education facilities management best practices.
NCES	NATIONAL CENTER FOR EDUCATIONAL STATISTICS: Non-profit organization focusing on public education facilities and management best practices.

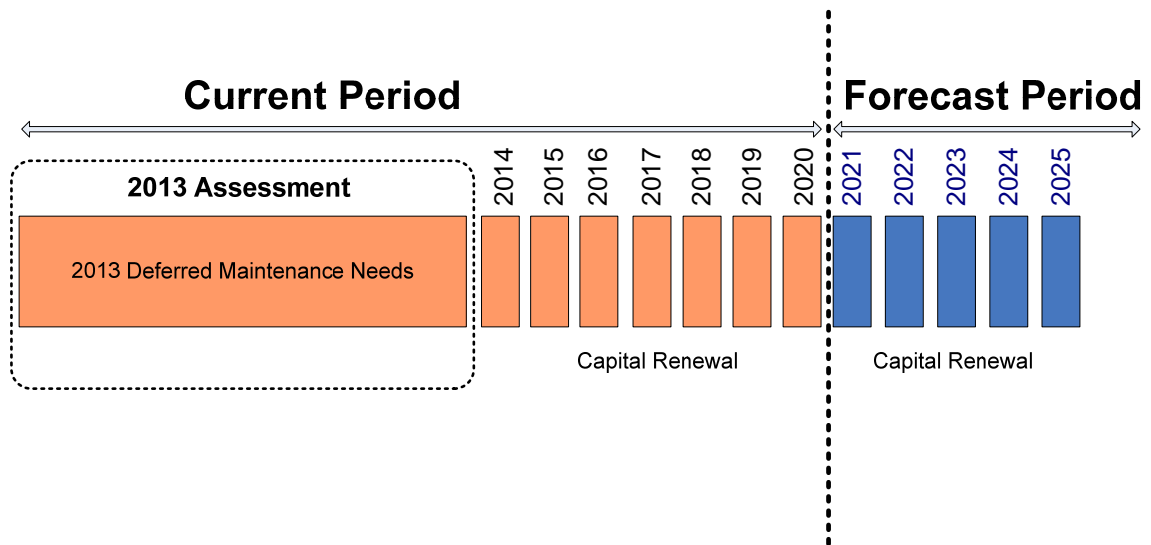
Assessment Interpretation

The assessment and DISD database provide a foundation for continued assessment and evaluation—works in progress that will change as the DISD design and construction guidelines, facility programmatic requirements, and construction best practices evolve.

It is important to understand that an assessment is a snapshot of conditions found at a building on the day it is inspected. Building conditions change subtly over time. For example: The day after an inspection is conducted, a building system or component may break or be repaired; that break or repair will not be reflected in the assessment findings. Schools removed from service after a scheduled field assessment will not be represented accurately. Schools under construction and placed in service after December 31, 2013, were not included in the DISD database. For these and other reasons, the assessment and DISD database should be viewed as ever-changing tools.

In addition, there are other important considerations in the interpretation of the assessment report data and findings:

1. Extended Facility Condition Index (EFCI)⁸: This report and the DISD database include condition deferred maintenance needs noted as current deficiency needs, and the condition capital renewal needs for the Current Period (2013–2020). This allows for advance notification and a resultant EFCI to aid in the prioritization of capital outlays in time to complete funding, design, and construction cycles prior to the theoretical end of useful life of a facility system or element.



This seven-year capital renewal window helps to mitigate district expiring system renewal funding spikes by reporting facility system renewal needs forward of the current year as current deferred maintenance. For example, a boiler with a 30-year expected useful life installed in 1985 represents a significant capital renewal need in 2015. Using a rolling 7-year window forward of the current year, capital renewal needs are identified in time to initiate the funding process and to proactively plan, design and construct capital renewal items.

2. Repair estimates: The order-of-magnitude⁹ estimates in this report are order-of-magnitude repair estimates for partial or full replacement of expired systems or elements, out-of-cycle repairs, and suitability modifications. The total of these estimates may exceed a facility’s Current Replacement Value—an indicator that it may be more economical to replace a facility than to repair it.
3. Project costs: Order-of-magnitude repair estimates may not reflect overall project costs. The Assessment data is a first-step budgeting tool that provides reference data for subsequent repair planning, scoping, and pricing considerations. In actual project pricing there may be related or peripheral systems or elements that could be packaged efficiently with the needed repairs.

⁸ Extended Facility Condition Index (EFCI) is calculated as the condition needs for the current year, plus facility system renewal seven years in advance, divided by Current Replacement Value (CRV).

⁹ Order of Magnitude is a rough approximation, made with a degree of knowledge and confidence that the estimated figure falls within a reasonable range of cost values.

4. Project procurement costs: Substantial cost differences from the estimates provided in the Assessment can result from the selected type of contract procurement, the construction market at the time and place of repair, and the actual scope of work being procured.
5. Project prioritization: The Assessment uses benchmarking indices and scoring to establish a hierarchy of facility needs as a guide for the DISD in its determination of financial priority assistance. Priorities do not reflect the *affordability* of needed repairs within a district, nor do they reconcile facility needs to a district's master plan priorities or educational program objectives.

Table of Findings

DISD, as are most of America's large urban school districts, is coping with aging facilities¹⁰, increasing or decreasing numbers of students in its school clusters, and changing educational programs. Some are experiencing growth in all or some of their schools due to new student in-flow and demographic migration from one area to another. New technologies and initiatives that envision the evolving relationship between school facilities and student performance and behavior are profoundly impacting school facilities and curriculums. Addressing condition needs is critical to meet a DISD strategic plan.

Finding 1: Facility Distribution by Facility Type

A typical school campus includes academic facilities: school grounds, classrooms, libraries, and other teaching-learning spaces, and may also include ancillary facilities such as storage, temporary modular classrooms, and other support facilities. In addition to school campuses, DISD facilities also include Athletic complexes and Administration and Operation Support facilities. The following table indicates distribution by gross square feet (GSF) and FCI condition.

Facility Name	Overall FCI	Count	Gross Area	Good FCI 0%-15.0%		Fair FCI 15.01%-30.0%		Poor FCI 30.01 - 100%	
				Count	Gross Area	Count	Gross Area	Count	Gross Area
District Wide	22.10%	269	26,248,469	87	9,464,042	86	8,140,003	96	8,961,794
A Elementary Schools	18.24%	146	10,740,462	57	4,633,384	54	3,668,700	35	2,280,139
B Middle Schools	19.13%	36	5,255,651	11	2,074,704	13	1,591,961	12	1,588,986
C High Schools	22.29%	32	6,919,450	11	2,247,632	11	2,076,935	10	2,594,883
D Athletic and Pool Facilities	27.77%	13	670,511	2	234,699	1	12,356	10	423,456
E Vacant Facilities	42.87%	15	968,809	-	-	2	239,899	13	721,998
F Administrative / Other Facilities	35.61%	27	1,693,586	6	273,623	5	550,152	16	1,352,332

Poor > 30%
Fair > 15% < 30%
< 15%

¹⁰ A facility refers to site(s), building(s), or building addition(s), or combinations thereof that provide a particular service or support of an educational purpose.

Finding 2: Facility Age

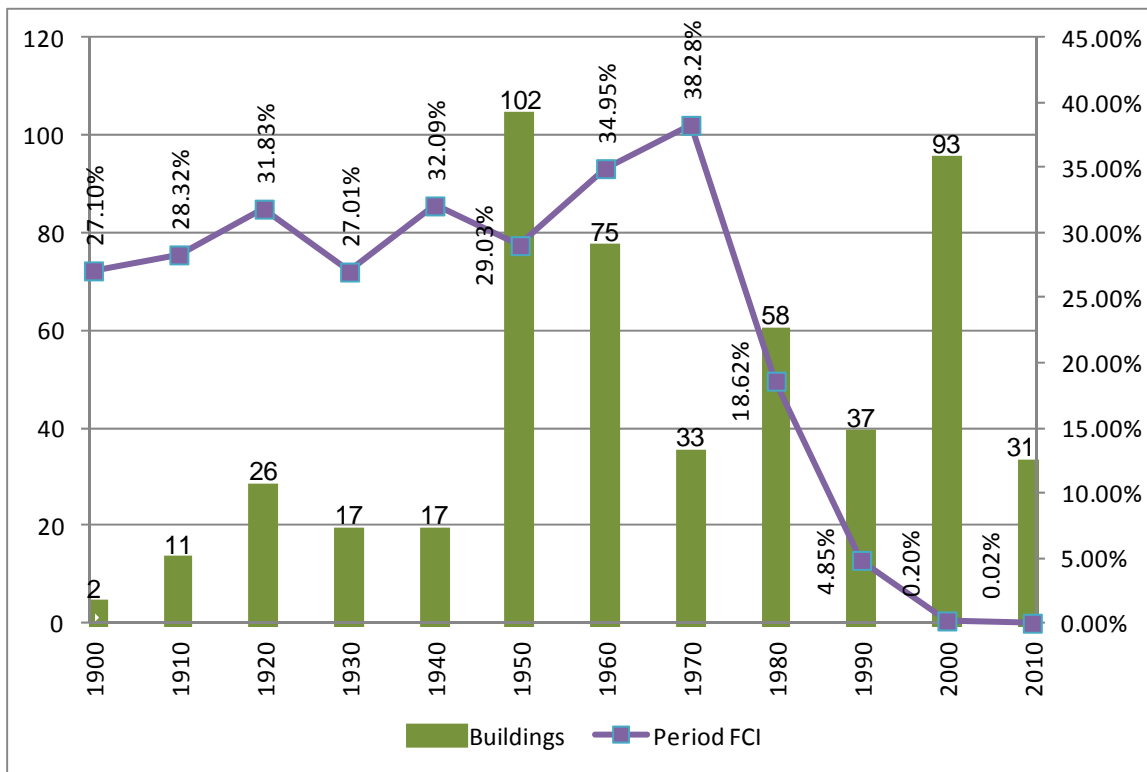
According to the National Center for Education Statistics (NCES), in the average public school building in the United States is 42 years old. The mean age ranged from 46 years in the Northeast and Central states to 37 years in the Southeast.

The following table compares DISD to NCES statistics.

School Characteristics	DISD	NCES
Average Age in years	39	42
Median Date Built	1966	NA
Built before 1950	15.80%	28.00%
Built between 1950 and 1969	44.73%	45.00%
Built between 1970 and 1984	5.75%	17.00%
Built after 1985	37.88%	10.00%

Facilities by Decade Built and Corresponding FCI

The following chart illustrates the number of facilities built per decade and the calculated FCI per decade.



Finding 3: Condition Needs by Asset Class

The following table summarizes Facility estimates for Current Period condition deferred maintenance needs documented in the 2013 assessment:

Asset Class	Gross Area	Current Replacement Value	Current Needs ¹¹	2013 FCI ¹²
			(2013)	
District Wide	26,248,469	\$8,132,972,005	\$1,797,483,770	22.10%
A Elementary Schools	10,740,462	\$3,049,868,312	\$556,148,292	18.24%
B Middle Schools	5,255,651	\$1,618,356,986	\$309,520,608	19.13%
C High Schools	6,919,450	\$2,253,791,497	\$502,455,359	22.29%
D Athletic and Pool Facilities	670,511	\$295,131,700	\$81,949,141	27.77%
E Vacant Facilities	968,809	\$293,382,858	\$125,778,824	42.87%
F Administrative and Other Facilities	1,693,586	\$622,440,652	\$221,631,546	35.61%

Poor > 30%
Fair > 15% < 30%
< 15%

The 2013 current needs are combined with the forecasted capital renewal needs through 2020 to create the Current Period needs. This calculation assumes the 2013 assessment, 2014 bond planning, and a 2015-2020 bond program. Forecast Period capital renewal needs of 2021-2025 are included for long term planning purposes. The results are as follows:

Asset Class	Gross Area	Current Replacement Value	2013 FCI ¹³	Current Period Needs ¹⁴	Forecast ¹⁵ Needs	Total Needs (2013-2025)
				(2013-20)	(2021-25)	
District Wide	26,248,469	\$8,132,972,005	22.10%	\$3,241,658,897	\$1,124,093,301	\$4,365,752,200
A Elementary Schools	10,740,462	\$3,049,868,312	18.24%	\$1,162,374,255	\$331,296,316	\$1,493,670,571
B Middle Schools	5,255,651	\$1,618,356,986	19.13%	\$583,577,344	\$204,253,456	\$787,830,800
C High Schools	6,919,450	\$2,253,791,497	22.29%	\$908,162,716	\$338,555,885	\$1,246,718,601
D Athletic and Pool Facilities	670,511	\$295,131,700	27.77%	\$119,449,475	\$66,700,120	\$186,149,595
E Vacant Facilities	968,809	\$293,382,858	42.87%	\$166,911,340	\$30,710,124	\$197,621,464
F Administrative and Other Facilities	1,693,586	\$622,440,652	35.61%	\$301,183,771	\$152,577,398	\$453,761,169

¹¹ Current Needs represent the results of the 2013 assessment and do not include any future capital renewal needs – see Current Period.

¹² FCI is an industry-standard measurement of a facility's condition that is the ratio of the cost to correct a facility's deficiencies to the Current Replacement Value (CRV) of the facilities. CRV represents the hypothetical total cost of rebuilding or replacing an existing facility in current dollars to its optimal condition under current codes and construction methods. FCI is typically expressed as a percent.

¹³ FCI is an industry-standard measurement of a facility's condition that is the ratio of the cost to correct a facility's deficiencies to the Current Replacement Value (CRV) of the facilities. CRV represents the hypothetical total cost of rebuilding or replacing an existing facility in current dollars to its optimal condition under current codes and construction methods. FCI is typically expressed as a percent.

¹⁴ The Current Period is the present year plus seven forward years—in this report 2013–2020. This period is derived by anticipating a 2015 2nd quarter bond sale and resulting 5 year program through 2020, added to the current year 2013 and planning year 2014.

¹⁵ The Forecast Period includes five years following the Current Period—in this report 2021–2025.

Finding 4: Condition Needs by Trustee District

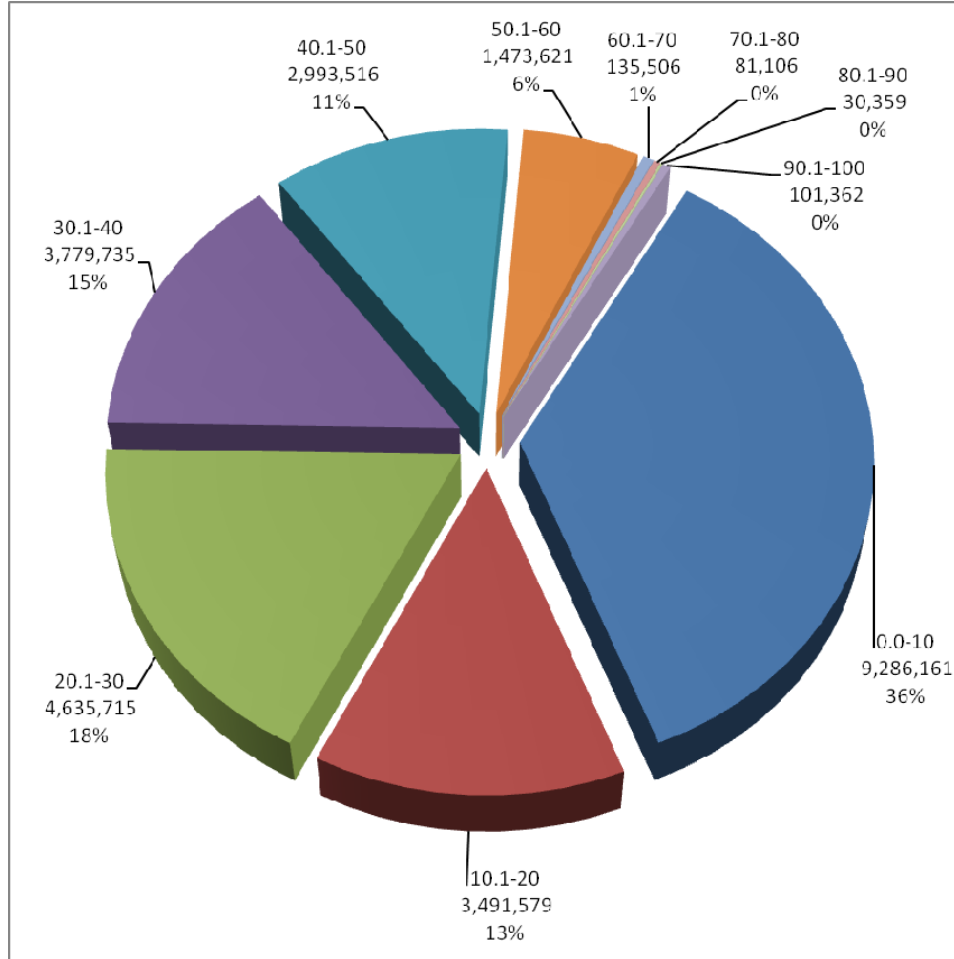
The following table summarizes Facility estimates for Current Period and Forecast Period condition deferred maintenance needs and capital renewal needs 2013-2025, by Trustee District:

Asset Class	Gross Area	Current Replacement Value	2013 Needs	2013 FCI	Current Period Needs (2013-20)	Forecast Needs (2021-25)	Total Needs (2013-2025)
District Wide	26,248,469	\$8,132,972,005	\$1,797,483,770	22.10%	\$3,241,658,897	\$1,124,093,303	\$4,365,752,200
District 1	2,052,439	\$645,620,613	\$188,468,012	29.19%	\$273,727,603	\$72,011,198	\$345,738,801
District 2	1,507,067	\$472,438,244	\$127,258,182	26.94%	\$229,702,220	\$32,077,857	\$261,780,077
District 3	2,175,606	\$657,967,515	\$79,956,304	12.15%	\$244,834,859	\$32,441,029	\$277,275,888
District 4	2,428,953	\$760,808,425	\$177,277,741	23.30%	\$300,427,062	\$107,193,565	\$407,620,627
District 5	3,631,745	\$1,128,676,664	\$252,487,950	22.37%	\$424,150,832	\$247,531,453	\$671,682,285
District 6	3,371,605	\$1,044,838,961	\$205,100,310	19.63%	\$363,274,383	\$144,295,833	\$507,570,216
District 7	3,289,870	\$993,963,917	\$151,314,713	15.22%	\$401,333,827	\$96,156,165	\$497,489,992
District 8	2,158,280	\$649,399,743	\$107,933,485	16.62%	\$245,043,237	\$95,166,328	\$340,209,565
District 9	5,724,553	\$1,850,156,443	\$510,425,276	27.59%	\$764,680,594	\$326,060,935	\$1,090,741,529

Poor > 30%
Fair > 15% < 30%
< 15%

Finding 5: Facility FCI per GSF

The following chart and table indicate facility FCI per GSF.



FCI	GSF	%
0.0-10	9,286,161	35.38%
10.1-20	3,491,579	13.30%
20.1-30	4,635,715	17.66%
30.1-40	3,779,735	14.40%
40.1-50	2,993,516	11.40%
50.1-60	1,473,621	5.61%
60.1-70	135,506	0.52%
70.1-80	81,106	0.31%
80.1-90	30,359	0.12%
90.1-100	101,362	0.39%

Finding 6: Facility Condition Needs by Facility System

The following chart and table indicate facility condition needs by facility system¹⁶ in the 2013 assessment, ordered by repair estimate cost.

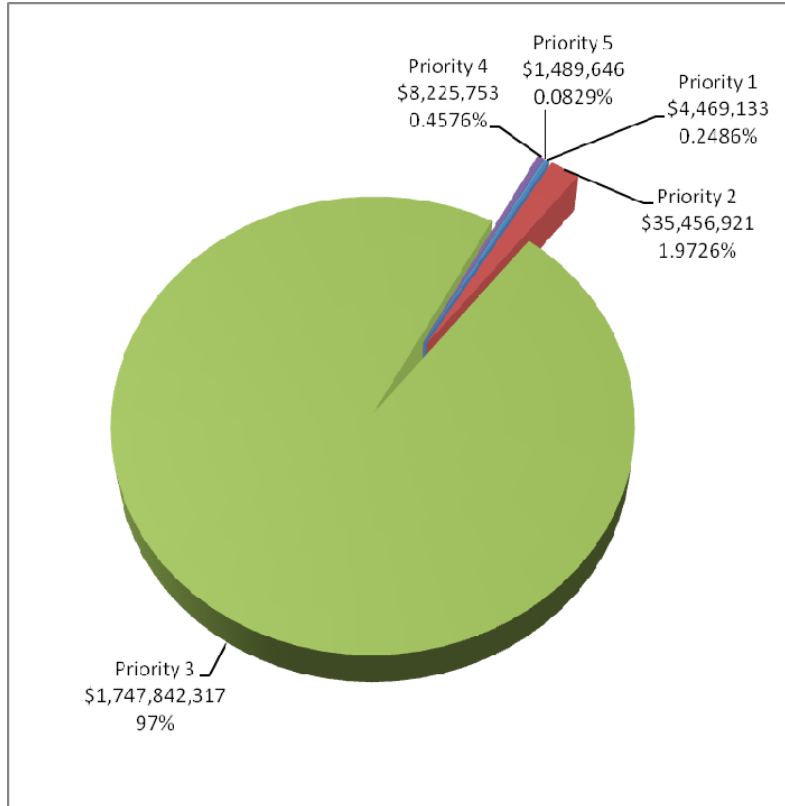
System	2013 Total Amt
Totals	\$1,797,483,770
Lighting and Branch Wiring	\$233,689,387
Floor Finishes	\$189,541,106
Roof Coverings	\$167,240,405
Exterior Windows	\$130,212,840
Distribution Systems	\$114,398,268
Ceiling Finishes	\$104,138,543
Fixed Furnishings	\$78,866,900
Parking Lots	\$54,038,060
Sanitary Waste	\$51,691,182
Terminal & Package Units	\$50,229,598
Site Lighting	\$44,862,812
Fittings	\$41,912,216
Wall Finishes	\$41,590,409
Plumbing Fixtures	\$41,438,723
Partitions	\$39,492,157
Electrical Distribution	\$39,387,163
Electrical Service/Distribution	\$36,726,203
Site Development	\$22,796,523
Sanitary Sewer	\$21,277,553
Pedestrian Paving	\$21,095,967
Domestic Water Distribution	\$18,688,091
Roadways	\$17,804,547
Heat Generating Systems	\$16,022,752
Communications and Security	\$15,971,113
Other Equipment	\$15,951,308
Institutional Equipment	\$15,672,762
Sprinklers	\$14,930,579
Interior Doors	\$13,185,397
Lighting & Branch Wiring	\$12,597,250
Fence	\$11,017,510
Other Plumbing Systems-Nat Gas	\$10,638,968
Storm Sewer	\$10,158,735

¹⁶ System refers to building and related site work elements or components as described by ASTM Uniformat II, Classification for Building Elements (E1557-97), a format for classifying major facility elements common to most buildings. Elements usually perform a given function, regardless of the design specification, construction method, or materials used. See Appendix 3: Uniformat II Building Systems

System	2013 Total Amt
Landscaping	\$8,560,381
Water Supply	\$8,502,291
Controls & Instrumentation	\$8,377,293
Exterior Doors	\$8,360,101
Rain Water Drainage	\$7,090,170
Other Fire Protection Systems	\$6,990,585
Exterior Walls	\$5,954,404
Elevators and Lifts	\$5,889,787
Roof Openings	\$4,370,199
Grandstands	\$4,103,375
Cooling Generating Systems	\$3,579,699
Roof Construction	\$3,423,021
Bleachers	\$3,161,184
Floor Construction	\$2,529,630
Systems Testing & Balance	\$2,051,968
Special Foundations	\$1,920,621
Other Electrical Systems	\$1,851,022
Site Communications and Security	\$1,821,924
Running Track	\$1,729,483
Fencing and Guardrails	\$1,498,312
Special Facilities - Football Field - Artificial Turf	\$1,364,710
Other Plumbing Systems	\$1,280,447
Standpipes	\$1,013,714
Fuel Distribution	\$874,147
Standard Foundations	\$636,061
Gym Seating	\$412,456
Water Supply - Water Service	\$381,925
Vehicular Equipment	\$350,236
Slab on Grade	\$328,506
Fire Protection Specialties	\$268,388
Basement Walls	\$254,532
Stair Construction	\$252,478
Building Elements Demolition	\$175,623
Roof Coverings - metal roof panels	\$148,213
Energy Supply	\$138,511
Scoreboard/Goalposts	\$118,664
Overhead Doors	\$107,633
Other Electrical Systems - Lightning Protection	\$106,841
Other HVAC Systems/Equip	\$68,443
Other Site Systems & Equipment - Diesel Fuelling	\$57,755
Site Earthwork	\$52,892
Commercial Equipment	\$50,999
Conveying	\$10,121

Finding 7: Facility Condition Needs by Deficiency Priority

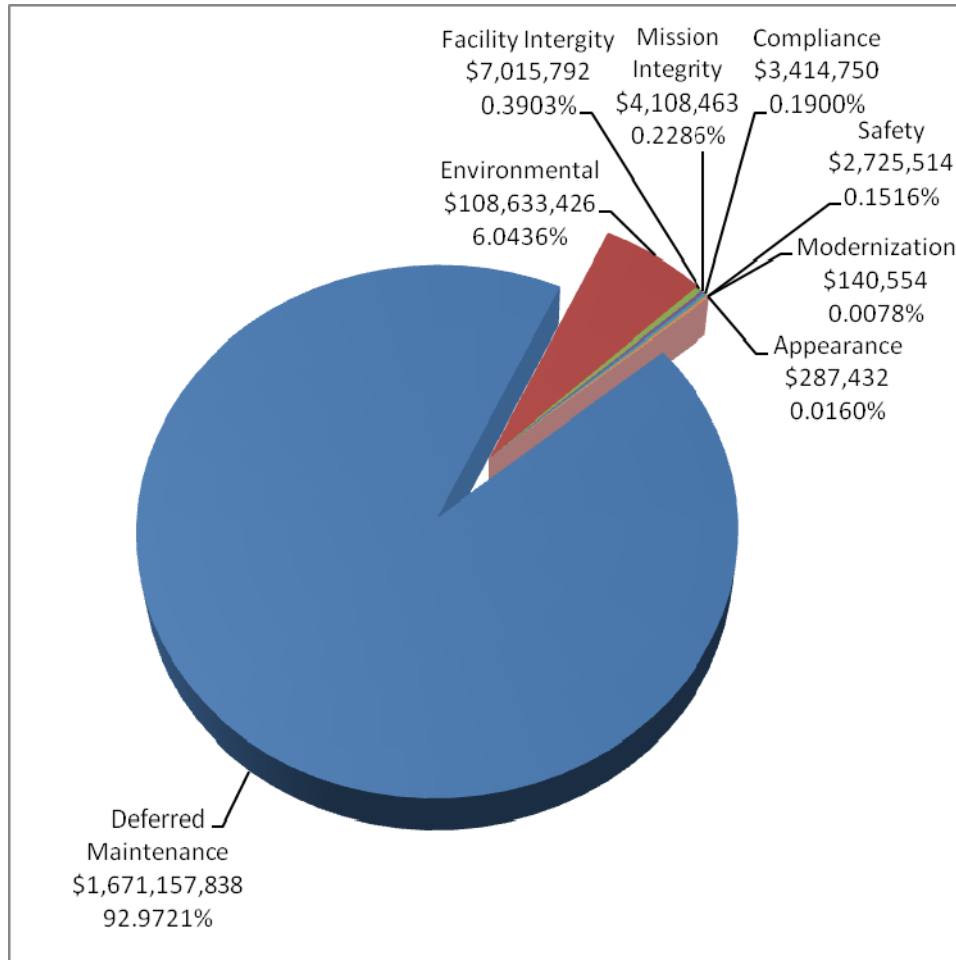
The following chart and table indicate facility condition needs by deficiency priority found in the 2013 assessment. Priority was determined by assessor and school staff observations. Priorities do not reflect the *affordability* of needed repairs within a district, nor do they reconcile facility needs with a district’s master plan priorities or educational program objectives.



Priority	Description	Repair Estimate
1	Critical—Immediate need	\$4,469,133
2	Trending Critical, 1-year need	\$35,456,921
3	Necessary—years 2–5 need	\$1,747,842,317
4	Recommended—years 6–10 need	\$8,225,753
5	Grandfathered—Code required in the instance of renovation or modernization	\$1,489,646
	Total	\$1,797,483,770

Finding 8: Facility Condition Needs by Deficiency Category

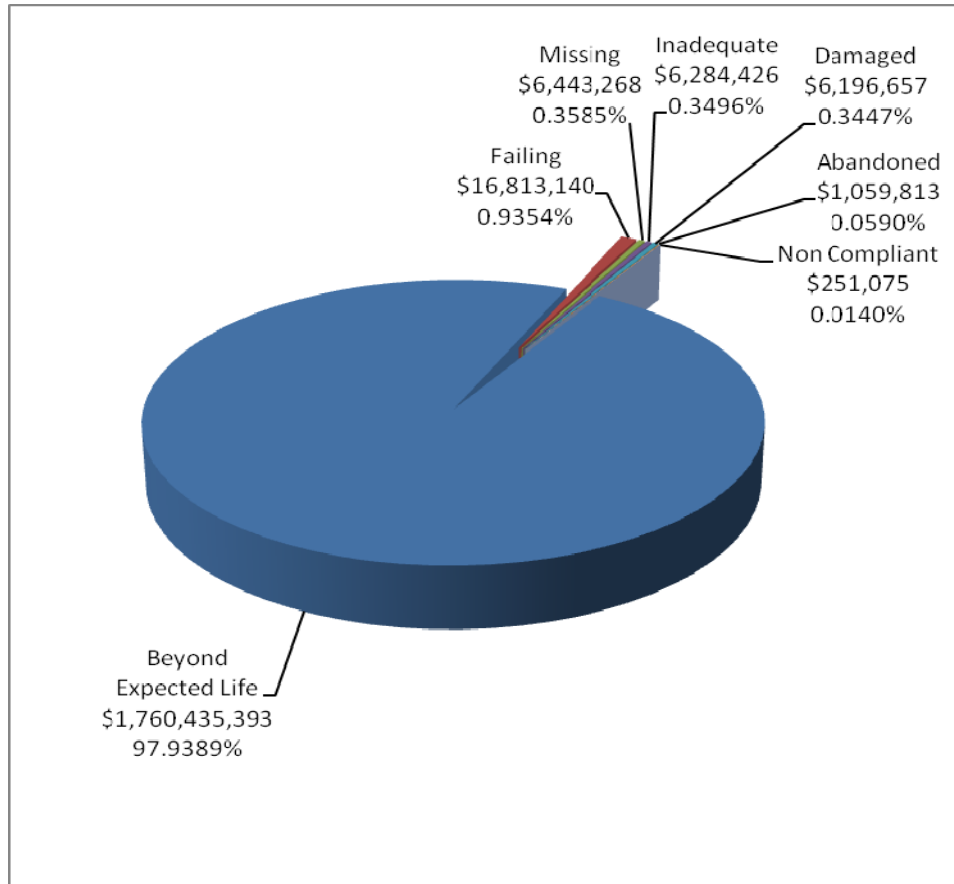
The following chart and table indicate 2013 facility condition need by deficiency category. Categories do not reflect the *affordability* of needed repairs within a district, nor do they reconcile facility needs with the district’s master plan priorities or educational program objectives.



Category	Total Amt	%
Deferred Maintenance	\$1,671,157,838	92.97%
Environmental	\$108,633,426	6.04%
Facility Integrity	\$7,015,792	0.39%
Mission Integrity	\$4,108,463	0.23%
Compliance	\$3,414,750	0.19%
Safety	\$2,725,514	0.15%
Appearance	\$287,432	0.02%
Modernization	\$140,554	0.01%

Finding 9: Facility Condition Needs by Deficiency Distress

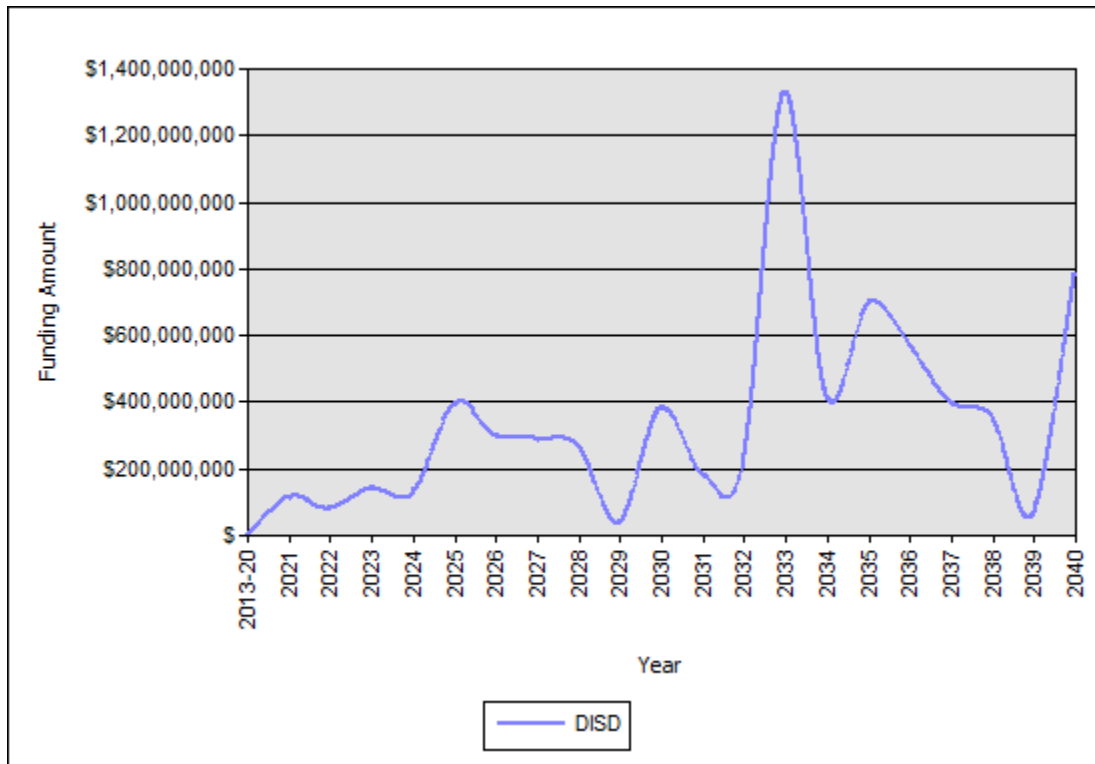
The following chart and table indicate 2013 facility condition needs by deficiency distress. Distress does not reflect the *affordability* of needed repairs within a district, nor does it reconcile facility needs with the district’s master plan priorities or educational program objectives.



Distress	Description	Repair Estimate
Beyond Expected Life	Use or function has exceeded a predicted period of usefulness	\$1,760,435,393
Failing	Use or function is sporadic or intermittent	\$16,813,140
Missing	System or component is absent	\$6,443,268
Inadequate	Use or function is insufficient for intended purpose	\$6,284,426
Damaged	Use or function is impaired or broken	\$6,196,657
Abandoned	Asset is no longer maintained	\$1,059,813
Non Compliant	Facility component is not compliant with code	\$251,075
Total		\$1,797,483,770

Finding 10: Facility Condition Capital Renewal Forecast Spike

Looking 30 years beyond the assessment, the chart below plots future capital renewal needs based on the current facility inventory's installed or built dates and their systems' projected expected lives. About 60% of DISD schools were built before 1969. Because of this, significant capital renewal needs will occur as their systems expire, with a major spike around 2033 of about \$1.3 billion. The spike can be partially mitigated through renewal programs in earlier and later years.



Assessment Glossary

Abandoned

A facility owned by a district that is not occupied and not maintained.

Building

An enclosed and roofed structure that can be traversed without exiting to the exterior.

Building addition

An area, space or component of a building added to a building after the original building's year built date.

Calculated next renewal

The year a system or element would be expected to expire based solely on the date it was installed and the expected useful lifetime for that kind of system.

Campus

The site grounds and buildings of a grouping of buildings for a school, support facility, administrative facility or vacant facility.

Capital renewal

Capital renewal is condition work (excluding suitability and energy audit work) that includes the replacement of building systems or elements (as they become obsolete or beyond their useful life) not normally included in an annual operating budget.

Condition

Condition refers to the state of physical fitness or readiness of a facility, system, or system element for its intended use.

Current Period

The Current Period is the present year plus user selected forward years.

Current replacement value (CRV)

Current Replacement Value (CRV) represents the hypothetical total cost of rebuilding or replacing an existing facility in current dollars to its optimal condition (excluding auxiliary facilities) under current codes and construction standards.

Deferred maintenance

Deferred maintenance is condition work (excluding suitability and energy audit needs) deferred on a planned or unplanned basis to a future budget cycle or postponed until funds are available.

Deficiency

A deficiency is a repair item that is damaged, missing, inadequate or insufficient for an intended purpose.

Element

Elements are the major components that comprise building systems.

Extended Facility Condition Index (EFCI)

Extended Facility Condition Index (EFCI) is calculated as the condition needs for the current year, plus facility system renewal for a user defined number of years in advance (the Current Period), divided by Current Replacement Value.

Facility

A facility refers to site(s), building(s), building addition(s), or combinations thereof that provide a particular service or support of a mission or purpose.

Facility Condition Index (FCI)

FCI is an industry-standard measurement of a facility's condition that is the ratio of the cost to correct a facility's deficiencies to the Current Replacement Value of the facilities. The higher the FCI, the poorer the condition of a facility. After an FCI is established for all buildings within a portfolio, a building's condition can be ranked relative to other buildings. The FCI may also represent the condition of a portfolio based on the cumulative FCIs of the portfolio's facilities.

Forecast Period

The Forecast Period includes plan years following the Current Period.

Gross square feet (GSF)

The size of the enclosed floor space of a building in square feet, measured to the outside face of the enclosing wall.

Install year

The year a building or system was built or the most recent major renovation date (where a minimum of 50% of the system's Current Replacement Value (CRV) was replaced).

Life cycle

The period of time that a building or site system or element can be expected to adequately serve its intended function.

Next renewal

The calculated or assessor adjusted renewal date of a system or element based on the on-site inspection. Next renewal dates reflect the expiration date that will trigger a system or assessor initiated deficiency.

Order of magnitude

Rough approximation, made with a degree of knowledge and confidence that the estimated figure falls within a reasonable range of cost values.

Remaining Service Life (RSL)

RSL is the number of years service remaining for a "renewable" system or equipment item. It is automatically calculated based on the difference between the current year and the "Calculated Next Renewal" date or the "Next Renewal" date whichever one is the later date.

Remaining Service Life Index (RSLI)

RSLI is defined as a percentage ratio of the remaining service life of a renewable system to its system life, expressed as a percent.

Site

An improved land parcel's or facility's grounds and its utilities, roadways, landscaping, fencing and other typical land improvements needed to support the facility.

Suitability

Suitability indicates how well a facility supports the programs that it houses.

System

System refers to building and related site work elements as described by *ASTM Uniformat II, Classification for Building Elements (E1557-97)*, a format for classifying major facility elements common to most buildings. Elements usually perform a given function, regardless of the design specification, construction method, or materials used. See also, Uniformat II.

Uniformat II

Uniformat II is *ASTM Uniformat II, Classification for Building Elements (E1557-97)*, a format for classifying major facility components common to most buildings.

Vacant

A facility that is not occupied but is maintained by a district.

Year built

The year that a building or addition was originally built based on substantial completion or occupancy.



Facility Renewal Details

Current Period (2013-2020) and Forecast Period (2021-2025)
Renewal Needs by Asset Type



Facility Asset Classes Ranked by FCI

Table with columns: Line, District, Asset, Gross Area, Replacement Value, 2013 FCI, 2013 Deficiency Needs, 2014 Capital Renewal, 2015 Capital Renewal, 2016 Capital Renewal, 2017 Capital Renewal, 2018 Capital Renewal, 2019 Capital Renewal, 2020 Capital Renewal, Current Period Needs 2013-2020, Current Period Extended FCI (EFCI), 2021 Capital Renewal, 2022 Capital Renewal, 2023 Capital Renewal, 2024 Capital Renewal, 2025 Capital Renewal, Forecast Period Needs 2021-2025, Total Needs 2013-2025. Rows include assets like ADAMSON HS, CONRAD HS, D Athletic and Pool Facilities, HERSHEL FORESTER ATHLETIC COMPLEX, SPRAGUE ATHLETIC COMPLEX, NATATORIUM at Sprague Athletic Complex, FRANKLIN STADIUM, PLEASANT GROVE ATHLETIC COMPLEX, COBB ATHLETIC COMPLEX, ALFRED J. LOOS ATHLETIC COMPLEX, WHITE ROCK POOL, LISBON POOL, ALAMO POOL, SEAGOVILLE STADIUM, WILMER-HUTCHINS FOOTBALL STADIUM, JESSE OWENS MEMORIAL COMPLEX, E Vacant Facilities, OTTO M. FRIDIA, JR Alternative, SEAGOVILLE ALTERNATIVE, ANDERSON, PEARL C., MS LEARNING CENTER, THOMPSON, H.S., LEARNING CENTER, ARLINGTON PARK COMMUNITY LEARNING CENTER, AEP SOUTH / LACEY HS, FANNIE C. HARRIS, DADE, BILLY EARL LEARNING CENTER, WHEATLEY, PHILLIS, RISK MANAGEMENT (Former), FRAZIER, JULIA C., HULCY, D.A., HARLLEE, N. W., ADAMSON, W.H. Original Building, CITY PARK, F Administrative and Other Facilities, A06 PORTABLES DEMOLITION/STORAGE (Former Edison Pool Site), ARCADIA PARK, GROUNDS SE, GROUNDS NW, TITCHE ANNEX, KIEST WAREHOUSE, HEAVY EQUIPMENT (ROT/ Bldg. D), MAINTENANCE BARN NW, FLEET MAINTENANCE/ENVIRONMENTAL SERVICES, DR. H.B. BELL SCHOOL SUPPORT SERVICE CENTER, FANNIN, JAMES W, WILLIAM H. COTTON SERVICE CENTER I/MAINTENANCE BARN SE, GROUNDS/MAINTENANCE BARN SW (Part of South Oak Cliff HS), PEGASUS COMPLEX, ADMINISTRATION, FOREST E. BALLEW SERVICE CENTER 1, DR. MARVIN H. BERKELEY HUMAN RESOURCES, BONHAM, JAMES B, GROUNDS/MAINTENANCE BARN NE (Part of Reinhart ES Campus), PURCHASING DEPARTMENT, SHOOK BUILDING (Bldg. E), WILLIAM MCDUFF SAFETY AND SECURITY BUILDING, STEPHEN J. HAY BUILDING (Construction Services), SEAGOVILLE ENVIRONMENTAL CENTER, HASKELL BUILDING, MARIA LUNA FOOD SERVICE FACILITY.



Facility Details by Trustee District



Facility Reports

Individual facility reports are available online and on the enclosed flash drive.

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