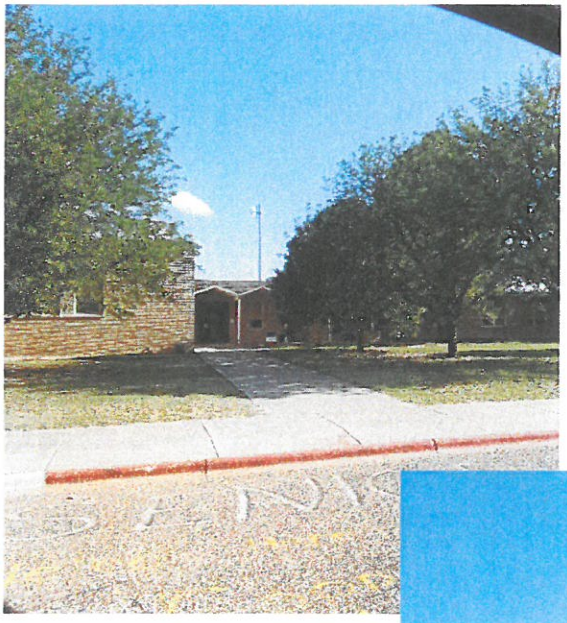
Facilities Assessment

Morton Independent School District



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PSC Project # 03889519

PARKHILLSMITH&COOPER

EXECUTIVE SUMMARY

School Facility Inventory

In June of 2019, Parkhill, Smith & Cooper, Inc. (PSC) was selected by Morton Independent School District (MISD) to perform a facility condition assessment of its instructional facilities and fieldhouse, track, and administrative office. Field work for the assessment was performed in June and July of 2019 with cooperation and support from the District's administration, facilities staff, and campus principals. Findings reported will be used to help develop a long-range facilities improvement plan for MISD.

The following facilities were observed as part of this facilities condition assessment:

Building	Bldg. Area (sf)	Original Con. Date (approx.)
Morton High School	57,412	
DAEP	1,630	
Automotive Tech	5,080	
Competition Gym	16,240	
Junior High	15,406	
Elementary	39,847	
Fieldhouse	11,135	
Administration	2,819	
Elementary Computer Lab	1,812	
Pre-K / Early Childhood	8,191	
Total	**159,572**	

Morton ISD serves approximately 400 students in pre-kindergarten through twelfth grade.

Assessment Process and Documentation

The District's facilities were observed by a team of building design professionals including a structural engineer, mechanical engineer in training, and an electrical engineer, as well as an engineering technician. The building was evaluated by comparing its construction to recognized construction industry standards and codes.

Building construction was cataloged using a life cycle database which assigned an age, condition, replacement cost, and estimate of remaining life to each component that composes a major building system. ***Deficiencies relating to worn out systems and materials are shown as current year needs along with life safety and ADA accessibility.*** Building components having remaining service life are placed in a long-term capital renewal schedule so they can be addressed either in the next five years or six to 20 years in the future.

Replacement costs are based on approximate quantities gathered primarily on a per square foot basis, but can be supplemented on a more detailed quantity basis. Unit costs for each building system are based on RS Means Construction Cost data and PSC's own K12 Cost Database of Texas projects. The Replacement Opinion of Cost represents the cost of the same size facility today on a similar site and configuration.

Life cycles for each component are based on values published by BOMA (Building Owners and Managers Association) and ASHRAE (American Society of Heating, Refrigeration and Air Conditioning Engineers). See the detailed observation logs for each campus provided in the Appendix. Costs include asbestos abatement for any area where new work is expected to disturb such materials based on the Asbestos Survey provided by the District. Costs do not include encapsulate or non-friable asbestos abatement. ***Costs shown for abatement are provided only for long-term budgeting purposes and the District should consult its asbestos consultant for more detailed cost estimates of potential abatement projects.***

School / Building Needs Summary

A summary of the conditions observed for each building is provided along with representative photographs.

High School

The High School was originally constructed in the 1960's and was built to an institutional level of quality, with durable floors and walls. It was evident from our observations that it has been well maintained. The roofing and HVAC systems are relatively new, with both having been replaced in the last seven to eight years. Furthermore, while the windows are not new, they have been replaced within the last twenty years with aluminum windows and mapes panel inserts above.

The biggest need in the building is to address plumbing and electrical infrastructure. Most of the in-wall plumbing and plumbing fixtures are of original construction, as are the electrical distribution and branch panels. While both systems are functioning adequately now, replacement will likely be needed near term. Additionally, the school has a modern fire alarm system, but no automatic fire sprinkler system. We recommend one be planned for when ceilings and lights are replaced. Under new fire codes, the building would either need a fire sprinkler or modifications to existing walls, attics and ductwork.

Interior finishes are worn in rooms with carpet, particularly in the band hall. Floor tile and terrazzo was observed in good condition. The school was making modifications to its library to provide a graphics lab at the time of our visit.

Functionally, the school building struggles to accommodate security and administrative functions, as the school does not have a secure vestibule for visitor screening and the entrance is not visible to the reception counter.

There are program needs that should be addressed, particularly the science lab equipment and utilities. Another recommendation would be to examine the need for and possibility of providing a culinary arts space in the home economics room. Finally, students leave campus to go to the elementary cafeteria for lunch, and as such, the potential for lost instruction time exists. One possibility might be to convert the small gym area to a student commons and dining area. Food could still be prepared at the elementary and brought to the students at high school.

DAEP

The DAEP program is housed in a stand-alone metal building between the Junior High and High School. The air conditioning unit was replaced in 2012 as part of the cool schools grant program. The roofing is original to the building and should be replaced as leaks are evident, particularly in areas where mechanical penetrations are made. A bathroom is provided but is not ADA accessible, although the District has made an effort to make it more accessible with grab bars. The sink station does not allow access for persons in a wheelchair. Approaches to the building from the outside are accessible. The electrical panel and interior lighting should be planned for replacement. The metal wall panels are original and should be replaced in the next ten years. A fire alarm is not provided and exit signs need to be provided.

Auto Shop

The Auto Shop program is housed in a stand-alone, 1940's era Quonset hut, west of the Junior High School. The building is in poor condition and should be considered for demolition and replacement. The furnaces and ductwork were installed in 2007 and functions well. The remainder of the building systems are well past their service lives and are in poor condition. Roof and wall panels are rusting as are the exterior doors. Paving around the building needs repair. Inside, there is not adequate exhaust in the work area. The electrical panels and lighting need to be totally replaced. The back locker area, while an addition, is also in poor condition. Plumbing is worn out and not accessible. Floor tile has asbestos containing materials. Furthermore, the exiting out of the shop and through this locker space is not adequately marked nor is there fire proper separation materials or a fire alarm tying these two areas together.

Junior High School

The Junior High was originally constructed as the high school in 1947. Since that time the building's windows have been altered but the entrance retains its Art Deco style. The building is about half occupied with 7 classrooms in use. Observations on the exterior of the building revealed significant deterioration of exterior materials. Concrete foundation elements have begun cracking as have the exterior masonry walls. Concrete window sills and roof parapet caps have cracked as well and are in more advanced stages of deterioration. Several windows and doors were also observed as damaged or worn out and should be replaced, including the auxillary entrance doors.

The roofing and HVAC systems were both replaced between 2012 and 2013 and are in good condition. While some electrical work has been done, branch wiring and circuits are original. Furthermore, plumbing in the building is original and patches in walls were evident in our walk-through observations. Both fixtures and the piping in the wall need to be replaced. Interior finishes in the classrooms were in fair condition.

Several of the rooms had relatively new broadloom carpet. Science labs need to be renovated, including the utilities serving the equipment. Because of gas leaks, gas to the lab tables has been completely shut off. The casework is worn and chipping around the edges of cabinets and should be replaced.

As an older building, the junior high also has challenges meeting current fire code and building code requirements. There is not adequate separation of building areas for fire or smoke

compartmentalization, particularly since there is a lot of wood framing utilized. A fire alarm is present but is older and does not meet requirements for new fire alarms in schools. Knob hardware and small bathroom stalls prevent ADA accessibility. Openings in corridor doors do not prevent the passage of smoke into the exit corridor and there is not an automatic fire sprinkler system.

Competition Gymnasium

The gymnasium was built in the 1960s and is a nice venue for fans. The lobby is spacious and the District recently renovated the toilets in the lobby. The playing surface is in good condition and is well-maintained. The biggest needs for repairs or replacements include electrical distribution and branch panels. The locker areas need a comprehensive renovation that includes replacing piping and old fixtures, particularly in the girls locker room.

New air-conditioning is provided at the gym, served from a unit that sits on the ground that ducts air externally into the gym. The split systems serving the concessions and commons however, are worn out and both units should be replaced.

The bleachers are not ADA accessible and there is an underfloor wooden structure supporting the elevated seating. If the District chooses to sprinkler the spectator seating area, the underside of the structure should get fire protection as well.

Elementary School

The elementary school has been well maintained over the years and received an addition of classrooms and a gymnasium in the early 1980's. The classrooms in the older portion of the building will need some improvements for flooring, paint and ceilings in the next ten years, but the maintenance staff and teachers have done a good job with upkeep. Windows on the school are aluminum and have been replaced since the original construction. Exteriors were found to be in fair condition overall. We do recommend that the utility pole in front of the school be replaced as the current one is leaning to the east.

Roofing and HVAC units are approximately nine years old and still in good condition. Plumbing and electrical are the biggest needs for the campus in the older wing, as most of that infrastructure is original to the building. We also recommend some additional minor improvements to the entry, although the campus does have a better entry system for visitor screening than the other campuses. Lastly, we recommend replacement of the playground equipment and surfacing, to ensure an adequate fall surface is provided and so that opportunities are available for children with disabilities.

Fieldhouse

The fieldhouse is located immediately east of the football stadium and adjacent to the bus barn and administration building. The building is in poor condition overall. Unit heaters, evaporative coolers and exhaust fans are in poor condition. The entire electrical system should be replaced. Interior spaces should be considered for renovation as well, particularly dressing areas where carpet is curling up at the corners. Locker spaces are not ADA compliant. Coaches offices should

be renovated as well. There is also a major drainage problem on the west side of the building that needs to be corrected. Asphalt slopes back to the exit door and has created moisture problems in the building. Additional grading and asphalt replacement is needed to convey storm-water to the street on the north side.

The track itself is in need of replacement and it appears this work may need to involve base replacement, hot mix asphalt replacement and the track surface.

Movement of the hot mix was observed on the northeast and south ends of the track, where cracking was particularly bad. There are cracks in the surface longitudinally and transverse to the direction of running. Replacement should be a priority work item or more investigation conducted to discover the adequacy of the base material.

Administration

The administration area is the northeast corner of the building it shares with the fieldhouse and the bus barn. The entry area is small and there is not visitor screening to access the staff. The split system air-conditioning is functioning and is in better condition than the systems in the fieldhouse, but with only one unit, there are hot and cold spots. The plumbing fixtures in the restroom and the room itself does not allow ADA accessibility.

Facility Ratings and Performance Measures

Facility ratings and building performance measures are used to compare an inventory of facilities to each other and to industry recommended standards. While there are several popular measurement techniques, they all begin with a repair cost to address deficiencies and a building replacement cost, also known as plant replacement value (PRV). In our practice, we have found three performance measures particularly valuable in evaluating K12 school facilities:

FCI: Facility Condition Index
FCNI: Facility Condition Needs Index
MRM: Modified Recapitalization Metric

These performance measures evaluate the condition of buildings based on different criteria that are important to support the educational program and operations of a school. The following are brief definitions of each performance indicator.

Facility Condition Index: *Ratio of current year maintenance, repair, and replacement cost to the replacement cost of a building. This measure deals only with the physical condition of existing building components. Improvements for Life/Fire Safety Code, accessibility, and program needs are not included. According to the Building Owner's and Manager's Association (BOMA), the following ranges are tied to a rating which we have expanded for K12 schools:*

0 - 10%	*Good*
11 - 30%	*Fair to Poor*
31 - 50%	*Poor, Consider Replacement or Major Renovation*
>50%	*Replace*

Facility Condition Needs Index: *Ratio of current year physical deficiencies plus Life/Fire Safety Code, Accessibility, and program requirements to the replacement cost of a building. The American Physical Plant Association (APPA) recommends replacement when this value exceeds 67%.*

Many school districts in Texas are faced with the difficult challenges of operating school buildings that were built over 50 years ago. The decision to invest renovation funds in an older building versus replacing it altogether involves more than just dollars. Many times a building has historical value or exists in a community where the public will not support funding for new facilities. For these reasons, we report the performance measures so that economic and life cycle data can be factored into the decision making process. Because many public schools fund their facilities improvements through bond issues, we also examine the life cycle costs of an existing building over a 20 year period. This information is provided to help avoid those cases in which a large investment is made to correct current deficiencies only to discover 15 years later that another large investment is required to keep a building operating before the first bond is even paid off.

Discussion of Performance Measure Results

Performance measurement results for the Morton ISD facilities studied are shown on the **reinvestment projections that follow the individual building reports.** The bottom of each table rates the building according to two different performance measures and compares it to industry accepted standards for building ratings. A summary table of these building performance measurements is shown below:

Summary of Performance Measurements				
	FCI	*Rating*	**FCNI**	*Rating*
High School	8%	Excellent - Good	13%	Excellent
DAEP	26%	Adequate - Marginal	31%	Marginal
Auto Shop	51%	Replacement Needed	57%	Poor - Very Poor
Competition Gym	24%	Adequate - Marginal	30%	Marginal
Junior High	34%	Poor - Very Poor	40%	Marginal
Administration	21%	Adequate - Marginal	24%	Good
Field House & Track	70%	Replacement Needed	76%	Replacement Needed
Elementary	12%	Adequate - Marginal	19%	Good

One of the first impressions to gather from the performance measurements is that the District has an older inventory of buildings and many physical needs. The first measurement, FCI, basically tracks the amount of resources needed to fix or replace building components or systems that were part of the building when it was originally constructed. From our observations, it was clear that these older District facilities have infrastructure that is just worn out – systems like plumbing and electrical. The District's facilities staff has done a good job of utilizing available funding sources like grants and insurance proceeds to replace most of its HVAC units, roofs and to renovate its headstart areas.

From a brief review of the table, it is evident that the Junior High School construction scored much lower on the metrics than the other instructional buildings, even with the roofing, HVAC and

electrical investments made ten years ago. This difference is due to the original building systems wearing out, particularly those systems like windows, concrete foundations, brick masonry and concrete parapet caps.

The automotive shop and fieldhouse scored low on every metric. There are many challenges like ADA accessibility and sitework costs that drive up repair costs beyond that needed for exteriors, roofing, electrical, HVAC, and plumbing.

It is important to remember that a score of "poor" in this case does not indicate anything about the instruction being delivered. In the case of the original building at the junior high school, the score is driven by worn out materials and a need for additional modernization, not the quality of instruction.

In the tables and charts that follow, we have summarized the costs at a district level to address current needs, but also those needed five, and six to 20 years in the future. We have summarized the costs by campus and ***the costs shown are escalated dollars and include the costs for general contractor markups, design fees, contingency, testing, and other soft costs associated with delivering large construction projects***. The intent is that a conservative, rough order of magnitude of the financial picture can be established. A pie chart for quick reference provides a way to graphically compare the relative magnitude of current year campus needs.

District Renewal Schedules

Morton ISD
District Summary
SYSTEMS

9-Oct-2019
Reinvestment Projection

5-year Inflation Rate: 4.00%
Long Term Inflation Rate: 3.00%

Existing Gross Square Footage: 159,572

Class	Current Year (CY) 2019	5-Year Projection 2020 - 2024	6-20 Year Projection 2025 - 2039	Total Projection
Site Paving & Drainage	$ 272,000	$ 240,000	$ -	$ 512,000
Site Utilities	$ 96,000	$ -	$ 9,000	$ 105,000
Structural & Foundations	$ 119,000	$ 44,000	$ 103,000	$ 266,000
Exteriors	$ 679,000	$ 12,000	$ 1,137,000	$ 1,828,000
Roofing	$ 181,000	$ 61,000	$ 2,331,000	$ 2,573,000
Architectural - Interiors	$ 1,181,000	$ 806,000	$ 472,000	$ 2,459,000
Elevators / Lifts	$ -	$ -	$ -	$ -
Heating & Cooling	$ 450,000	$ 274,000	$ 4,879,000	$ 5,603,000
Plumbing	$ 1,122,000	$ -	$ 207,000	$ 1,329,000
Electrical	$ 1,114,000	$ 2,170,000	$ 338,000	$ 3,622,000
Fire Safety	$ 874,000	$ -	$ -	$ 874,000
ADA Accessibility	$ 768,000	$ -	$ -	$ 768,000
Total Reinvestment for Period	**$ 6,856,000**	**$ 3,607,000**	**$ 9,476,000**	**$ 19,939,000**

Total Projected Reinvestment current thru 2024 $ 10,463,000
Total Projected Reinvestment thru 2039 $ 19,939,000

Morton ISD
District Summary
Selected Buildings

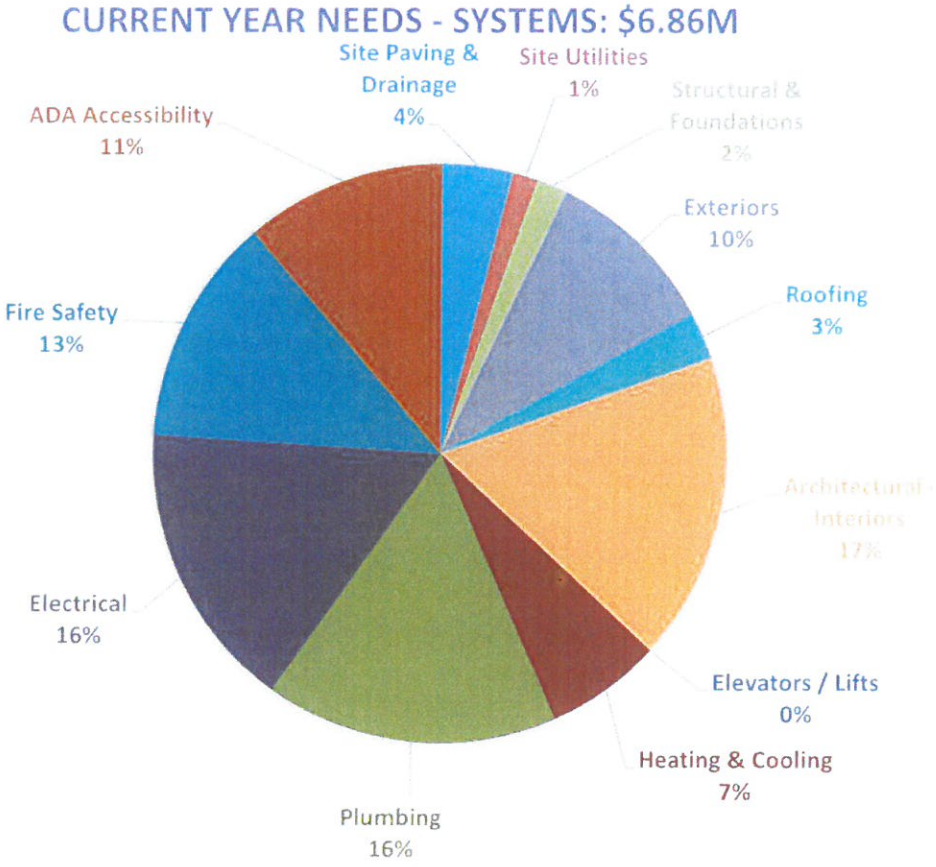
9-Oct-2019
Reinvestment Projection

5-year Inflation Rate: 4.00%
Long Term Inflation Rate: 3.00%

Existing Gross Square Footage: 159,572

Class	2019	5-Year Projection 2020 - 2024	6-20 Year Projection 2025 - 2039	Total Projection
High School	$ 2,471,000	$ 3,038,000	$ 5,797,000	$ 11,306,000
DAEP	$ 120,000	$ 16,000	$ 160,000	$ 296,000
Auto Shop	$ 906,000	$ -	$ 157,000	$ 1,063,000
Competition Gym	$ 1,158,000	$ 258,000	$ 1,181,000	$ 2,597,000
Junior High	$ 2,024,000	$ 180,000	$ 2,145,000	$ 4,349,000
Administration	$ 177,000	$ 115,000	$ 36,000	$ 328,000
Field House & Track	$ 3,115,000	$ 21,000	$ 742,000	$ 3,878,000
Elementary	$ 2,408,000	$ 2,025,000	$ 4,629,000	$ 9,062,000
Elem Computer Lab (Spec Ed)	$ 86,000	$ 110,000	$ 111,000	$ 307,000
Headstart Pre-K	$ 173,000	$ 287,000	$ 864,000	$ 1,324,000
Total Reinvestment for Period	**$ 6,856,000**	**$ 3,607,000**	**$ 9,476,000**	**$ 19,939,000**

Total Projected Reinvestment current thru 2024 $ 10,463,000
Total Projected Reinvestment thru 2039 $ 19,939,000


CURRENT YEAR NEEDS - SYSTEMS: $6.86M
Site Paving & Drainage 4%
Site Utilities 1%
Structural & Foundations 2%
ADA Accessibility 11%
Exteriors 10%
Roofing 3%
Fire Safety 13%
Architectural - Interiors 17%
Electrical 16%
Elevators / Lifts 0%
Heating & Cooling 7%
Plumbing 16%

Some Important Notes about the Reinvestment Projections

1) Replacement Costs shown include an estimate of soft costs like design and testing fees and construction contingency. It is important to know that many factors affect construction cost and the replacement costs shown are calculated as if no other construction on a different school facility is ongoing at the same time. Smaller buildings that are procured by themselves are more expensive per square foot than if they are constructed as part of a larger project. The construction delivery method can also account for a difference of up to 15%, according to research conducted by the Dallas Chapter of A4LE, the Association for Learning Environments.
2) The costs for additional security equipment and technology are not included in the cost projections. Typically, in capital planning for school districts, funds for these purposes are pulled out and communicated as a standalone item to the community.

Recommendations

Based on the observations made of the Morton ISD Facilities and the analysis of the repair and replacement costs gathered, we make the following recommendations to the Board of Trustees as they consider the long-term facility needs of the district.

1) Consider replacement of facilities where more than one building performance measurement indicated a strong economic justification for replacement. These buildings include the automotive shop, junior high and fieldhouse. We would also recommend you take action to address resurfacing and reconstruction of the high school track. This work would be complimentary to drainage modifications needed at the high school fieldhouse.

2) Consider ways to help the buildings function better in delivering the educational and athletics programs through comprehensive renovations and some new construction. As an example, could junior high students be consolidated into the high school building, if adequate and age appropriate areas are established? Would new construction at the high school be a better solution for career and technology programs, autotech and the seven junior high classrooms, rather than renovating the older buildings serving these programs now?

3) Consider a long-term capital improvements plan to address facility needs beyond the current year repair costs noted for each building. This report contains projections for renewal of major building components for the next 20 years (refer to reinvestment projections provided at the end of each report). Ideally, Morton ISD would fully fund the maintenance at every facility as indicated. Realistically, the current state of public funding of schools in Texas makes it very difficult to fund facility needs at this level outside bond elections because most districts use the majority of their maintenance and operations funds for educationally critical recurring costs such as salaries for teachers and staff.

4) Begin master-planning potential solutions to address physical needs, functional and educational adequacy, safety and security, and capital renewal. The information contained in this report will help guide this process to understand what things must be done at a campus and what things are coming up in the near future.