

Section 1

Executive Summary

Acknowledgments

Symmes Maini & McKee Associates (SMMA) would like to acknowledge the participation and guidance provided by the district administration, facilities department, school principals and the teachers and staff of the District.

ADMINISTRATION EXECUTIVE TEAM

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Introduction

This report summarizes the findings of the Master Plan for the Worcester Schools Study and Master Plan. The scope includes review of 28 schools including: 24 elementary schools; 2 middle schools and 2 high schools.

STUDY TASKS INCLUDED:

Educational Assessments

Physical Condition Assessment

Master Plan Options Discussion

Cost projections for issues identified

A demographic report was provided for review. It was prepared by the New England School Development Council (NESDEC), dated 11/28/2016. The report includes city wide historical enrollment by grade levels and grade combinations, dating back from 2006-2007 school year to present. Enrollment projections are provided in a similar format through the 2026-2027 school year.

The K-12 total population projections are generally flat, ranging from a current 24,910 students to 24,781 in 2026 with a high point of 25,194 in 2022, a range of less than 300 students.

Educational Facilities Assessment: Quality of Learning Environments and Space Needs

The following information is provided for each of the schools:

- School specific data
- Floor Plans showing current use
- MSBA Comparison Plans - These floor plans graphically (by color) compare the existing room sizes with those from the MSBA Guidelines. The breakdown of spaces indicate:
 - Rooms with net square footage (NSF) 10% or more, larger than the MSBA Guidelines
 - Rooms that are close in size to MSBA Guidelines (from 10% larger to 19% smaller than guidelines)
 - Rooms that are more 20% or more, smaller than MSBA Guidelines

- Summary of Spaces - A Summary of Spaces has been developed for each school. These follow the MSBA format but are abbreviated to show the current building information and the MSBA Guidelines for a school building of similar population. Note the MSBA Guidelines are for new construction. These guidelines show the types, number and sizes of spaces desired for contemporary education. This is intended to be a quick reference for comparing existing individual Worcester schools with a theoretical model for the same number of students.
- The Rubric developed for the educational review
- A spread sheet showing items reviewed and their condition
- A narrative identifying key characteristics and issues developed from an interview with each principal along with space needs to improve educational delivery

Physical Assessment

Identification of building systems and or components for improvement or replacement; including but not limited to:

- Building Envelope; structure and systems including roofing, insulation, windows, exterior doors and cladding
- Mechanical/HVAC; present use, condition, needs & controls.
- Electrical: existing systems and distribution within each building, including, but not limited to, code violations, present lighting layout and fixtures
- Plumbing: overall condition, non-compliance with DEP regulations.
- Fire Protection: fire suppression systems including sprinklers, fuel alarms and all fire detection equipment.
- Accessibility: compliance per 521 CMR
- Site Assessment: including: landscape; educational, recreational and vehicular and pedestrian areas.

Master Plan Options

SMMA's master planning scope included 28 of the city's 45 schools. Ultimately the District Master Plan needs to take into account all schools in the school system. The schools observed by SMMA range in era - from 1879 to 1977, including 16 pre-WWII schools (18 buildings), 5 buildings of which are from the 19th Century.

Buildings were observed for: condition; size, responsiveness to contemporary educational needs and many other metrics. All buildings reviewed require, to varying levels, renovations, replacement or consolidation.

Recommendations are made by era constructed:

- Schools designed and constructed in the late 1960's - 70's with open plans: (4)
- Steel framed buildings constructed in the 1950's and 1960's: (8)
- Note: 1940's: no buildings date from the 1940's (0)
- Pre WWII schools: (16)

(see Section 3 of this report for Masterplan recommendations)

Costs

An independent cost estimator has developed costs for line items for repair or replacement of building components or systems for the "Physical Assessments". The costs are categorized by the Urgent Repair Summery, Replacement Cost and Repair Cost.

Urgent Repair summery identifies the cost for categories that were identified as inoperative in the Facility Condition Assessment. These issues should be reviewed and addressed immediately since they concern the welfare and life safety of the facilities occupants.

Replacement cost assumes a 2018 construction cost of \$435.00 per gross square foot to replace the facility with the same amount of occupied space as that individual school currently uses. It does not include demolition or relocation cost nor does it include furniture, fixtures, or other equipment that have no permanent connection to the structure of a building or its utilities. It assumes the cost of a moderate amount of site work to coincide with the limits of the field surveys.

Repair cost are based on the independent cost estimators 'Historic Unit Pricing and practical experience'. Unit cost vary from gross cost per square foot (based on building floor area) to be specific cost for specific trades or functions. Unit cost combines material, labor and equipment. Total repair cost are presented in construction cost only and excludes furniture, fixtures, or other equipment that have no permanent connection to the structure of a building or its utilities. A cost has been included for general Asbestos Abatement.

All costs in the estimate are in 2018 dollars. Prior to the execution of any work, the estimates should be escalated to the proposed mid-point of construction.

The cost estimate was developed for "Construction Costs". As projects are proposed, they need to reflect "Project Costs" to account for: design fees; testing and monitoring and other soft costs related to execution of the work. These costs can range significantly based on the nature of the work.

Examples:

1. A new or replacement school might have a 25% to 30% project cost multiplier on top of construction costs to reflect the need for furnishings and equipment; technology; survey; investigation and testing and other necessary work.
2. A technical project such as a mechanical repair or roof replacement might require a more modest multiplier.