MANCHESTER
SCHOOL DISTRICT

Bakersville Elementary School

Educational and Facilities Master Plan

smma

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Summary

Included in this report are assets that were collected during the long term facility planning process. Each school's report package contains an At-A-Glance summary report, Facility Evaluation Criteria sheets, and site plan(s). Site plans are included to illustrate the context of the building in relationship to the city, neighborhood, and other adjacent amenities and parcels. The At-A-Glance summary sheets include general information about each school building including school data, such as population and grade structure, etc., site and building data, tax assessor's information, community uses, State of NH Code of Administrative Rules, Operational Data, and Cost model information for repairs and renovations. The Facility Evaluation Criteria sheets are the facility assessment team's findings at each Tier 1 school building including building physical assets, sites, and educational facility effectiveness. On April 24, 2023, the assessment team visited all the Tier 1 school buildings.

SCHOOL NAME

Bakersville Elementary School

SITE VISIT

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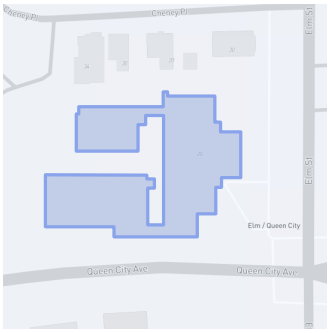
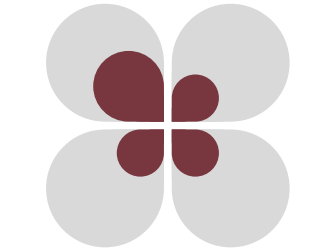
At-a-Glance



FA: Building FA: Site



EFE: Learning EFE: Spaces

Excellent Deficient

Address
20 Elm Street, Manchester, NH 03101

Gross Square Footage (GSF)
44,968 sf

Grades
Pre-K–5th Grade

Site Acreage
0.7

Hours of Operation
8:25am–2:50pm

Date of Construction
1895

2022–2023 Enrollment
358

Date of Addition Construction
1916, 1990, 2003

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Site Plans

SCHOOL NAME

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Facility Evaluation Criteria

Physical Analysis	NONE / MINOR	MODERATE	MAJOR	REPLACE	N/A
Roof Membrane (Architectural)			●		
	"The original building's roof was replaced in 2004 with black EPDM roof membrane which appears to be in fair condition. The 2003 kindergarten addition is a white roof membrane what appears to be in good condition. The 1990 addition appears to be the original black roof membrane. All roofs are beyond their useful lifespan and typical warranty period, so replacement is recommended."				
Existing Photovoltaics					○
	"N/A"				
Space for Solar on Roof					○
	"Space on the roof is available. Exact locations and size must be evaluated based on the existing structure."				
Façade	●				
	"Existing building's masonry facade was repointed and repaired in 2013. Masonry appears to be in good condition."				
Windows		●			
	"Windows in the original building were replaced in 2013. All windows are aluminum double glazed insulated units and appear to be in good condition. Window treatments appear to have been at the same time as window replacement and are manually operated roller window shades. These appear to be in good working order. Windows and skylights in the 1990 and 2003 additions are original to their construction and are double glazed aluminum window systems. These windows are nearing the end of their useful lifespan."				
Boilers (Mechanical)			●		
	"The boilers appear to be well-maintained but are not condensing type (less efficient) and are reaching the end of their useful life."				

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REPORT TYPE

Facility Evaluation

Physical Analysis

	NONE / MINOR	MODERATE	MAJOR	REPLACE	N/A
Boilers (Plumbing)	●				
"We were not able to observe the domestic boilers in this building."					
Heating Distribution Systems		●			
"Throughout the school, the piping and insulation appeared to be in good condition as did the heating elements (unit heaters, cabinet unit heaters, fin tube radiation, and fan coil units). The rooms in the newer pre-K wing have underfloor heating with zone control and appear in good condition."					
Building Envelope Thermal Performance			●		
"Original building and additions date from 1918. Insulation and air/vapor barriers in walls, roofs and slabs was most likely not provided. 1990 addition included minimal insulation in exterior walls and roofs (1-1/2?). Windows were replaced in 2013 with double paned insulated aluminum windows; however, thermal performance is not as efficient as current fenestration products. Not all building entrances have vestibules."					
Interior Finishes	●				
"Interior finishes are generally in good condition. Most of the finishes in the original building have been updated and are in good condition with the exception of several localized areas that require floor and wall patching. Some original casework and trim remain in the original 1918 building, but appear to be in generally good condition."					
Rooftop HVAC Equipment	●				
"The rooftop units have recently been replaced and are in good working condition. The classroom units have both heating and cooling to condition the ventilation air. The administrative offices have a VRF system that provides full heating/cooling."					
HVAC Controls			●		
"The building uses JCI Metasys controls (district standard). The building uses a variety of thermostats, some of which are approaching useful life."					
Technology Infrastructure				●	
"Bandwidth of fiber optic and copper network cabling is inadequate for School Communications. Telecom Rooms are not adequately secured allowing staff to use them for storage."					
Technology Systems				●	
"Telephone and WiFi systems are at the end of useful life. Network switches have been recently replaced. Not all Telecom Rooms are air conditioned, leaving equipment vulnerable to overheating."					

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REPORT TYPE

Facility Evaluation

Physical Analysis

	NONE / MINOR	MODERATE	MAJOR	REPLACE	N/A
Security Systems		●			
"The City is working with a Security Systems Vendor to deploy 500 CCTV cameras throughout the District's Schools. Adequate bandwidth is a concernfor transmitting video. Notification and Lock Down systems are not present. Indoor cellular signal booster system is desired."					
Kitchen Equipment and Systems (Electrical)	●				
"A few kitchen receptacles were observed to be non-GFCI type. All kitchen receptacles shall have GFCI protection to comply with the Code."					
Kitchen Equipment and Systems (Plumbing)		●			
"The kitchen plumbing fixtures and equipment appeared maintained and in fair condition. The piping below the sinks is mostly exposed copper. Chrome painted/ coated is recommended. The equipment/fixtures include a prerinse pot sink, vitreous china hand sink, range, flat top, dishwasher and 3 pot sink. Natural gas is piped to the range, and includes an automatic gas shut off valve (solenoid)."					
Natural Gas Distribution System	●				
"Gas piping observations were limited to exterior piping/meter assemblies and the kitchen. The boiler room was not accessible. Two gas fired roof top units are installed (gymnasium unit and kitchen make up unit). No issues reported."					
Current Fuel Source		●			
"-The building has 3 natural gas services. A low-pressure meter is along the exterior of the gym. The main runs into the building (gym) and also has an underground feed that rises up and into the addition. -There is also an intermediate pressure (based on regulator and meter assembly configuration) The gas rises up and runs above ground into the original building. -The low-pressure system has rusted piping and fittings."					
Generator					○
"N/A"					
Elevator	●				
"Elevator was installed in 2011 and appears to be in good working order."					

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Facility Evaluation

Physical Analysis

	NONE / MINOR	MODERATE	MAJOR	REPLACE	N/A
Ventilation Distribution Systems		●			

"Various ventilation distribution systems are utilized in this school. Generally, the ductwork in many spaces is exposed, and the distribution appears to be in good working condition. The classrooms generally use central HVAC systems with distribution from the ceiling. The gym uses a high supply and low return ventilation system with additional ceiling fans for air movement. The library also has high supply ductwork with zone duct reheat coils for temperature control. The kitchen uses a CaptiveAire grease exhaust system with exhaust fans, a makeup air system, and associated controls. The offices/administrative areas use ductless mini-splits tied to a VRF system."

	NONE / MINOR	MODERATE	MAJOR	REPLACE	N/A
Electrical Services	●				

"Two incoming utility services were observed. The first one originates at street utility pole, extends via overhead wiring with associated exterior wall-mounted meter, and enters to building into the Electric room 69. The second utility service originates from pole-mounted transformers at another street utility pole. It also extends overhead towards the school building and terminates in the Main Electric room 80, located on the lower roof, at the Main Distribution panel MDP rated 800 Amp 120/208v 3ph. The MDP was installed during the kindergarten addition project around the year 2003. Power is distributed through the building via recessed- and surface-mounted panels, observed in good operational condition."

	NONE / MINOR	MODERATE	MAJOR	REPLACE	N/A
Life Safety: Means of Egress (Architectural)		●			

"Size and quantity of egress components appear to be adequate. Not all egress doors are handicapped accessible as they exit at landings. Several of the stairs in the original building do not have code compliant handrails."

	NONE / MINOR	MODERATE	MAJOR	REPLACE	N/A
Life Safety: Means of Egress (Electrical)	●				

"Self-contained internally lighted LED exit signs and battery units with remote lights heads are provided along egress pathways. Emergency lighting throughout is observed in adequate operational condition."

	NONE / MINOR	MODERATE	MAJOR	REPLACE	N/A
Life Safety: Fire Protection (sprinklers)		●			

"The building is currently protected by an automatic sprinkler system. A combination 6-inch fire/water service enters the building and reduces to a 4-inch vertical double check valve assembly. header that supplies the system control valves. Floor control assemblies are also exposed within stairs. The city water supply can accommodate the sprinkler system demands (Pump not required). The system includes a wall post indicator valve on the service, a water motor gong and related drain (not in use), electric bell, 2-inch main drain, and a two way fire department connection at the exterior wall. Sprinklers are a mix between older soldered sprinklers and newer glass bulb quick response sprinklers. Standard response sprinklers require replacement (or representative testing) at 50 years. The newer quick response sprinklers require replacement or representative testing at 20 years."

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Facility Evaluation

Physical Analysis

	NONE / MINOR	MODERATE	MAJOR	REPLACE	N/A
Life Safety: Fire Alarms		●			

"The Fire Alarm (FA) system is manufactured by Notifier. It consists of addressable smoke and heat detectors, double action pull stations, speaker/strobes and strobe only unit, and connections to fire protection equipment. The Fire Alarm Control Panel (FACP), graphic map and radio master box are in lobby 63, in front of the entrance to Gym. All classrooms and similar educational spaces, corridors, bathrooms, gym/cafeteria, library, etc. are equipped with FA signaling devices - ceiling- and wall-mounted types. Two spaces are in concern - library has only one ceiling-mounted speaker/strobe and Gym/multi-purpose room has two speaker/strobes but located in the very corners - the concern is the visual distribution/coverage from strobe portion of devices˜- suggested to revisit layout/coverage and upgrade if found insufficient. The FA equipment was observed in good operational condition."

Security: Entry Sequence		●			

"The main entrance along Elm Street has controlled card access and an intercom system. There is no direct visual access to the exterior from the main office. The main office is located on the first floor level- a half level above the main entrance doors."

Lighting Quantity / Control		●			

"Lighting throughout the building consists of various types of lights, including pendant linear decorative fluorescent lights, surface-mounted fluorescent wraparounds, pendant fluorescent wraparounds, 2'x4' and 2'x2' recessed lensed fluorescent troffers, LED linear pendants, fluorescent wall brackets, etc. Classrooms with suspended ceilings, corridors and kitchen have 2'x4' recessed lensed and 2'x2' recessed lensed fluorescent troffers, in good operational condition. Classrooms with hard ceilings have continuous rows of surface-mounted fluorescent wraparounds, in "aged" fair operational condition. Many lights appear in need for repairs, re-lamping and/or replacements. The Gym/multi-purpose room have "newer" LED pendant lights with integral occupancy sensors, in good operational condition. Library has suspended fluorescent wraparounds. Hallways in front of the Gym/multi-purpose room have suspended linear "box up-light" design fluorescent fixtures, in good operational condition. The stairway and elevator lobbies have pendant linear decorative fluorescent lights, in good operational condition. Bathrooms have wall-mounted fluorescent brackets, some signs of wear. Overall, lighting appears in fair-to-good operational condition throughout the building, although lighting fixtures not energy-efficient and occupancy sensor controls were not observed (except for Gym/multi-purpose room). Suggested adding occupancy sensors throughout, to comply with Energy Code, and repairing/re-lamping/replacing fixtures that are not in good condition now."

Toilets and Fixtures			●		

"Fixtures are outdated. Recommendations include replacing fixtures with new low flow fixtures."

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Facility Evaluation

Physical Analysis

	NONE / MINOR	MODERATE	MAJOR	REPLACE	N/A
Plumbing Distribution Systems	●				
"A 2-inch domestic water service splits off from the combined fire/water service. The cold water flows through a 2-inch meter with a 2-inch bypass. A 2-inch reduced pressure backflow preventer is located on the downstream side of the meter. The age of the copper piping throughout the building varies. The existing piping was renovated/modified from the 1980, 2005, 2020 additions/renovations. Piping greater than 40 years old (lifespan 40-50 years) should be evaluated (sample destructive testing, water quality testing) to determine the condition and help estimate the longevity left in the piping. Original valves and pipe solder pre-date current lead free regulations and requirements. Exposed sanitary and storm piping within the looks ok. The condition of the interior of the piping is not known. The expected lifespan of cast iron piping is 50 years. Therefore, original cast iron piping should be scoped/tested to confirm the expectancy left in the piping."					
Accessibility (Architectural)		●			
"Most of the immediate accessibility issues from the existing building have been addressed over the past 10 years. An elevator was installed in 2011 making the entire building accessible. Minor renovations is 2006 and 2007 provided an accessible toilet room for staff. Most other student toilet rooms still do not meet current accessibility codes. Most classroom door entrances in the original building do not meet door clearance requirements."					
Accessibility (Plumbing)		●			
"Most student toilet room fixtures do not meet ADA requirements."					

Structural Systems: Signs of Deterioration Observed?

	YES	NO
Roof		✕
"Cannot identify roof framing at original. Gym is long span bar joist. Roof framing appears to be in sound condition."		
Floor		✕
"Upper level floor appears to be wood framed. All floor framing appears to be in good condition. No structural defects noted."		
Walls / Columns		✕
"Walls and columns are in good condition."		
Foundations		✕
"Foundation walls appear to be in good condition despite the age of the building."		

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Facility Evaluation

Structural Systems: Signs of Deterioration Observed?

	YES	NO
Façade		✕
	"Exterior masonry appears to be in good shape. There appears to have been some major re-pointing done in the recent past."	
Is Lateral System Identifiable?	✓	
	"Masonry bearing and shearwalls throughout."	

Community

	YES	NO
Emergency Shelter	✓	
	"Short Term Shelter only."	
Are there Separate Community / Non-School Spaces on Site?		✕
	"N/A"	

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Site Evaluation Criteria

Physical Analysis	NONE / MINOR	MODERATE	MAJOR	REPLACE	N/A
Parking Capacity	●				
	"10 parking spaces in small parking lot at front entrance off of Elm St. 40 parking spaces in lot at rear of building, with entrance/exit off Cheney Pl. 51 staff per district website."				
Parking Quality	●				
	"Parking lot pavement in OK condition."				
Ground Cover	●				
	"Some trees and landscaping around the site. Grass in decent condition."				
Fields	●				
	"Multi-purpose grass field in fenced in area at rear of site."				
Neighborhood Streets		●			
	"Sidewalks and crosswalks connecting site to neighborhood streets. Heavy traffic and multiple lanes on Elm St and Queen City Ave limit pedestrian connectivity."				
Drop-off / Pick-up Routes		●			
	"No signage discouraging cars from loading/unloading in rear parking lot. Bus stop along Queen City Ave. Bus stop location in high traffic area, may pose safety concerns."				
Walkways / Curbs / Sidewalks	●				
	"Primarily bituminous walkways around the site. Pavement in varying condition."				
ADA Accessibility	●				
	"Accessible entrances on 3 sides of the building (no entrances on fourth side). ADA parking spaces at front and rear of building."				

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Site Evaluation

Physical Analysis

	NONE / MINOR	MODERATE	MAJOR	REPLACE	N/A
Site Lighting (Civil)	●				
"Some building mounted lights and lights on utility poles for adjacent streets. Otherwise minimal site lighting."					
Site Lighting (Electrical)	●				
"The exterior lighting consists of various types of building-mounted lights - the "newer" LED wall packs along the building perimeter walls in good operational condition and the "older" non-energy efficient lights at entrance door. The "older" lights are suggested for replacement with energy-efficient LED models."					
Fencing	●				
"Chain link fence around site perimeter, in decent condition. Fence enclosure around dumpsters. Fences with gates around courtyard spaces."					
Drainage	●				
"Some catch basins in bituminous areas. No curb around play area to allow sheet flows directly to field. Some minor erosion and catch basins in need of cleanout/maintenance."					
Play Areas	●				
"Two small play structures, bituminous play lot, multi-purpose field, and basketball courts at rear of site."					
Monuments and Memorials	●				
"None observed at this site."					
Walls / Slopes	●				
"Concrete retaining wall for ramps to building egresses at different elevations. Wall slightly damaged in places. Overall site relatively flat."					

Physical Analysis

	YES	NO
Are there any Wetlands on Site?		✕
"No wetlands per GIS, or evidence of potential wetlands per site visit."		
Are there any Easements on Site?		✕
"No easements per GIS."		
Are Play Structures Age-Appropriate?	✓	
"Play structures are both small, but age-appropriate."		

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REPORT TYPE

Site Evaluation

Physical Analysis

	YES	NO
Is there an Outdoor-Learning Area?	✓	
"Fenced in area at rear of site currently being used for storage, may be used for outdoor learning during the school year."		
Should there be a Question on Environmental Justice Populations / Vulnerable Populations?	✓	
"NH GIS designates site as "Medium High" Social Vulnerability Index, based on census analysis."		
Is the Building Expandable on the Current Site?	✓	
"Building could be expanded into paved area at rear of site. Building expansion would result in loss of parking, play areas, site amenities, etc."		
Is the Site Expandable?		✕
"Site bound by public streets and residential parcels, limiting expansion potential."		

Community Analysis

	YES	NO
Historical Commission Status: Inventory of Archaeological Assets (Site Review)		✕
"The site is not listed on the National Register of Historic Places (per the National Park Service website)ÿor the New Hampshire State Register of Historic Places (per the New Hampshire Division of Historical Resources website). The site is also not within the Manchester Historic District or listed as a locally-designated historic site, per Manchester GIS."		
Are there School Buses?	✓	
"1 MTA and 1 SPED bus, per bus counts provided by the district. Bus counts lower than most other elementary schools in the district."		
Bikeable?		✕
"Bike lane along Elm St. Heavy traffic along Queen City Ave and Elm St may pose safety concerns for biking for elementary age students."		

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Site Evaluation

Community Analysis

	YES	NO
Walkable?	✓	

"Site connects to sidewalks along all adjacent roads. Heavy traffic along Queen City Ave and Elm St may pose safety concerns for walkability for elementary age students."

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REPORT TYPE

Site Evaluation

Traffic Analysis

	NONE / MINOR	MODERATE	MAJOR	REPLACE	N/A
Bike Facilities **Elm St**		●			
"Bike lanes on both sides are located between travel lane and on-street parking or right-turn lane, which can be stressful on this higher-speed roadway."					
Bus Stops **SB - Elm St & Queen City**		●			
"Sidewalk extension for this stop, located in front of school, is in poor condition."					
Parking **West School Parking Lot**		●			
"An accessible parking space is signed in middle of lot, but does not appear to be ADA-compliant as it does not have an access aisle. Driveway entrance is not indicated as "Do Not Enter" or "One-Way" from inside lot (one-way signs near street blocked by trees)."					
Sidewalks **Cheney Place**	●				
"Some vegetation encroaching both horizontally and vertically on north sidewalk between school parking lot exit and Elm Street."					
Sidewalks **Cheney Place**			●		
"North sidewalk loses connectivity crossing driveway opposite school parking lot exit."					
Sidewalks **Cheney Place**		●			
"South sidewalk has a pinch point east of 20 Cheney Place due to a utility pole. Other utility poles within south sidewalk should be evaluated for ADA compliancy."					
Sidewalks **Elm St**	●				
"Sidewalks at driveways slope toward roadway and may have poor pavement. An overgrown hedge is slightly encroaching on sidewalk in front of 30 Elm Street, reducing effective width."					
Signalized Intersections **Elm St at Queen City Ave**	●				
"NBL and SBL arrow pavement markings are faded. EBL lane does not have arrow pavement markings."					

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Site Evaluation

Traffic Analysis

	NONE / MINOR	MODERATE	MAJOR	REPLACE	N/A
Signalized Intersections **Elm St at Queen City Ave**		●			
"Pedestrian push buttons and signage are inconsistent and should be evaluated for ADA compliancy. Pedestrian indications in northeast corner different than other corners (northeast has filled in walk and wait symbols, while others are just outlines). All push buttons work, but pedestrians sometimes have to wait a long time, which lowers compliance."					
Signalized Intersections **Elm St at Queen City Ave**				●	
"Southeast corner ramp is missing detectable warning panel (resulting in shallow hole in ramp)."					
Signalized Intersections **Elm St at Queen City Ave**		●			
"Signs of pooled water in all corners of intersection, but especially northwest corner next to school, which may indicate drainage issues."					
Signalized Intersections **Elm St at Queen City Ave**		●			
"Sidewalk has a curb in northwest corner due to separate grades that is currently marked by a barrier. A more permanent solution may need to be considered."					
Unsignalized Intersections **Elm St at Cheney Place**	●				
"Southwest corner ramp is not level with sidewalk/curb."					
Unsignalized Intersections **Elm St at Cheney Place**	●				
"School Crossing signs are posted at Elm Street crosswalk, but this crossing distance should be evaluated to determine if a pedestrian refuge area should be provided in middle of crossing."					

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Educational Facility Effectiveness: Learning Environments (EFE: LE)

Grade Levels

Building Originally Designed as:	1st Grade–8th Grade
Which Educational Program are you Assessing?	Pre-K–5th Grade
	"Pk is at the Bishop O'Neill a block away."
The Grade Configuration this School is Best Suited to:	Kindergarten–4th Grade

Educational Building Analysis

	GOOD	FAIR	POOR	DEFICIENT	FAILING
Acoustical		●			
Adjacencies of Learning Environments			●		
	"Kindergarten is separated (some in new wing, some in old building separated by long corridor). Gym/Cafeteria seems detached from rest of building."				
Environment (Inviting / Stimulating / Comfortable)			●		
Finishes			●		
	"Finishes are old and tired. VCT flooring, painted plaster, CMU walls. Fissured ACT."				
Furniture			●		
	"While some pieces of furniture are ergonomic, most furniture in school is not lightweight nor ergonomic."				

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REPORT TYPE

EFE: LE Evaluation

Educational Building Analysis

	GOOD	FAIR	POOR	DEFICIENT	FAILING
Lighting Quality			●		
	"Glare from fluorescent lighting fixtures is harsh."				
Natural Daylighting		●			
	"Some classrooms have decently sized windows, some have less windows. But other spaces have little to no access to daylight, such as with some staff offices and resource rooms."				
Technology: Power	●				
Technology: Wireless			●		
	"Need to stagger testing because of past issues."				
Ventilation	●				
	"New ventilation but gym is still warm."				

This Site Includes:

	YES	NO
Accessible		✕
Play Fields	✓	
Playgrounds / Areas	✓	

Building Assessment

	YES	NO
Can the Building Change Typology Easily?		✕
Can the Building be Transformed Educationally to Serve 21st Century Needs?	✓	
	"With significant renovations."	
Can the Building Serve as Swing Space?	✓	
Is the Building between 85%—115% Utilization Rate?	✓	

Educational Facility Effectiveness: Spaces (EFE)

Space Assessment	QUANTITY	ACTUAL AREA (SF)	MORE INFO
Administration and Guidance (Quantity Varies)	Varies	1170	
	"Main office is not on same floor as main entrance."		
Art Classroom (Min Area 900 sf or 36 sf / Student)	1	560	
	"Shared with Music and STEM."		
Cafeteria (Min Area 12-15 sf / Student for Max Number of Diners per Lunch Period)	1	4600	LUNCH PERIODS: 3
	"Shared with Gymnasium."		
Classroom: General Education (Min Area 900 sf or 36 sf / Student)	13	640, 650, 660, 680, 690, 785, 800	
	"No sinks in classrooms."		
Faculty Lounge	0	0	
Gymnasium (Min Area 6000 sf)	1	(see Cafeteria)	STAGE: No
	"Shared with Cafeteria."		
Kindergarten (Min Area 1000 sf or 50 sf / Student)	3	655, 1250	TOILET ROOM: Yes
	"Newer Kindergartens have toilet rooms."		
Media Center (Min Area 1800 sf or 4 sf / Student x Design Capacity)	1	2225	

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REPORT TYPE
EFE: Space Evaluation

Space Assessment

	QUANTITY	ACTUAL AREA (SF)	MORE INFO
Music Classroom (Area 1200 sf)	1	(see Art Classrooom)	
"Shared with Art."			
Pre-K0/K1 (Min Area 1000 sf or 50 sf / Student)	0	0	
Special Education: Resource of Small Group (Area 500 sf)	2	270, 290	
Special Education: Self Contained (Area 950 sf)	0	0	TOILET ROOM: No
Stage (Area 1000 sf)	0	0	
Teacher Planning	1	275	

Adequacy of Rooms

	GOOD	FAIR	POOR	DEFICIENT	FAILING
Administration and Guidance					●
"Not adjacent to main entrance, is on a different floor."					
Art Classroom					●
"Shared with Music and STEM. No sink."					
Cafeteria		●			
Classroom: General Education		●			
Faculty Lounge			●		
Gymnasium			●		
"Space is smaller than recommended 6000 sf for Gymnasiums."					
Kindergarten (K2)		●			
"Newer Kindergartens are in good condition, have sinks in classrooms, and have dedicated toilet rooms. Older Kindergarten classroom is small and capped smaller than other Kindergartens."					

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REPORT TYPE

EFE: Space Evaluation

Adequacy of Rooms

	GOOD	FAIR	POOR	DEFICIENT	FAILING
Media Center			●		
"Parts of library for staff office space, separated by bookshelves or low movable partitions. No differentiated learning or seating areas in tall space."					
Medical			●		
"No separate exam area or dedicated bathroom."					
Music Classroom					●
"Shared with Art and STEM. Not acoustically appropriate."					
Pre-K0/K1					
"PK is off-site at another location."					
Special Education: Resource of Small Group			●		
"Not enough - small group or intervention takes place in narrow hallways."					
Special Education: Self Contained					●
"No self-contained Special Education classrooms at Bakersville."					
Stage					●
"No stage."					
Teacher Planning					●
"None observed."					

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REPORT TYPE

EFE: Space Evaluation

Special Education Assessment	YES	NO	
18+		✕	
Autism Spectrum		✕	
Cognitively Impaired		✕	
Deaf and Hard of Hearing		✕	
Emotional Disturbance		✕	
English Learners	✓		
	"Integrated. 30% of population. Most Push-In. Some Pull-out. 3 teachers but allotted 4. Significant newcomer population."		
Intellectual Disability		✕	
Life Skills		✕	
Medically Fragile		✕	
PT/OT/Speech	✓		
	"Speech and Occupational Therapy."		
Reset Program		✕	
Social Emotional		✕	
Title 1	✓		

Assessment Team Scoring Rubric

Educational and Facilities Assessment Approach

Assessment Criteria

Educational and Facilities Assessment (E+FA) Approach - Led by architects, engineers, and educational planners from SMMA and its consultants, and in partnership with each school principal, the team conducted both a facility assessment (to take inventory of the building layout and condition) and an educational assessment (to determine the adequacy of spaces for the educational programs offered) in each building. The following report outlines the team organization, methodology and approach taken to assess the Manchester Public School portfolio over the Spring and Summer of 2023.

Overall Assessment

Categories and criteria were strategically selected for assessment based on stated objectives, past experience, and nature of the Manchester School District portfolio of buildings. Ultimately, the E+FA team created a customized "Manchester School District methodology" which encompassed approximately 75 areas of criteria, organized either facility or site categories that examined physical components, as well as community components.

Facility Assessment Criteria

Facility Assessment: Building Evaluation

Facilities varying in terms of age, design, construction methods, and materials were reviewed to determine the condition of the district's portfolio. Building assessments were performed to determine existing components and/or systems' conditions at a specific point in time. The resulting information was then used to guide recommendations regarding maintenance, renovation, and/or replacement. The assessment team conducted visual inspections to observe signs of deterioration. No exploratory demolition, removing finishes, or viewing above ceilings was conducted. Areas that were hard to reach, off limits, or obscured by other systems that prohibited view of the some building components were not assessed. Systems and categories that were assessed included:

- Building Envelope
  - Roof Membrane
  - Facade
  - Windows
  - Thermal Performance
- Boilers
- Heating Distribution
- Interior Finishes
- Rooftop HVAC Equipment
- HVAC Controls
- Kitchen Equipment and Systems
- Natural Gas Distribution
- Generator
- Elevator
- Ventilation Distribution Systems
- Electrical Service
- Life Safety:
  - Means of Egress
  - Fire Alarm
  - Fire Protection: Sprinklers
- Security: Entry Sequence
- Lighting Quantity/ Control
- Toilets and Fixtures
- Plumbing Distribution Systems
- ADA/Accessibility
- Structural Systems (consisting of the following components):
  - Roof framing: This is the horizontal framing consisting of decking, slabs, joists, beams, trusses, etc.
  - Floor framing: This is the horizontal framing consisting of decking, slabs, joists, beams, trusses, etc.
  - Walls and columns: These are the vertical elements that hold up the floors and roof structures.
  - Foundations: Foundations occur at the base of the building and transfer the weight of the building onto the underlying soils.
  - Facades: These are the outside walls of the building including many non-structural elements (doors, windows, insulation, vapor barriers, etc.) that are part of the weather enclosure for the building.
- Lateral System: The lateral system in a building is the structural system that keeps the building from falling over when it is subjected to horizontal loads such as wind and earthquake forces.

Building Evaluation: Criteria Rating Hierarchy

The facility assessment building evaluations used a quintile classification hierarchy as defined below:

- None / Minor: System or element functioning reliably; routine maintenance and repair is needed.
- Moderate: System or element functioning minimally. Repair or replacement of some components is needed.
- Major: System or element is barely functioning. Repair or replacement of most components is needed.
- Replace: System or element is non-functioning, not functioning as designed, or is unreliable. Total replacement all components is needed.
- Not Present: System or element is non-existent, non-functioning, not functioning as designed, or is unreliable. Replacement is needed.

Building Evaluation: Physical Analysis Definitions

Roof
Roof Membrane: Apparent condition status noted for the roofing material and flashings. Note any obvious deterioration.

Existing Photovoltaics
Yes / No: Criteria noted. However, presence or absence of photovoltaic did not impact overall building condition.

Space for Solar
Yes / No: Comments, if applicable. Evaluation of whether roof space exists for solar (if there are relatively flat areas for possible future solar panels). Note that the roof structure was not evaluated for structural capacity of future PV panels. Criteria noted; however, presence or absence of photovoltaic panels did not impact overall building condition.

Façade
Description of apparent condition and materials of the exterior walls. Observations of any spalling or disintegration of brick or concrete masonry unit (CMU) walls and the condition of the mortar. Notes if there is any obvious movement or structural cracking, and if there is failure, the percentage of failure. With prefabricated panel system facades, notes the types and apparent conditions of attachment systems, panel material, and whether there is deterioration of the surface or caulking or movement in the panels.

Windows
Description of types and apparent conditions of exterior windows. Considers whether most windows appear to be in good working condition, if windows are transparent or translucent, and if they are single or double-paned.

Boilers (Mechanical)
Review of fuel sources and apparent conditions of boilers.

Boilers (Plumbing)
Observation of heating media (e.g. water or steam) of boilers.

Heating Distribution Systems
Evaluation of type and apparent conditions of piping, type, and apparent corrosion.

Building Envelope Thermal Performance
Review of the existing drawings of envelope elements (exterior walls, roof, foundations and slabs). Notes presence of vestibules at building entrances for temperature control.

Interior Finishes
Evaluation of types and conditions of interior wall, flooring, and ceiling finishes.

Rooftop HVAC Equipment
Review of type and apparent condition of roof top units (RTUs), exhaust fans, and air conditioning equipment, if present.

HVAC Controls
Review of types of thermostats and type and apparent condition of Building Management System (BMS) if present.

Kitchen Equipment and Systems (Architectural)
Evaluation of adequacy and apparent condition of kitchen equipment.

Kitchen Equipment and Systems (Electrical)
Observation of electrical kitchen appliances.

Kitchen Equipment and Systems (Plumbing)
Observation of gas kitchen appliances. Observation of apparent condition of kitchen plumbing fixtures, and whether there are separate sinks for handwashing and dishwashing, per health and plumbing codes. Notes if proper fire suppression system exists where required.

Natural Gas Distribution System
Review of apparent condition of the natural gas system, how it enters the building and is distributed, and of shut-off valves.

Generator
Review of type of generator, type of fuel source, and apparent condition if one is present.

Elevator
Evaluation of apparent condition of elevator if present.

Ventilation Distribution Systems
Review of locations and apparent condition of fans, ductwork, duct grilles, and other ventilation components.

Electrical Services
Apparent condition status noted. Review of available capacity, location and appearance of electrical service and meter age.

Life Safety

- Means of Egress:
  - (Architectural): Evaluation of apparent existence of proper smoke and/or fire doors, and if mechanical hold-open devices appear in good working condition. Notes if egress paths are direct and unencumbered, and whether there are enough exits relative to the facility population.
  - (Electrical): Review of illuminated exit signs and whether they are in the proper locations and appear to be in good condition.
- Fire Protection (Sprinklers): Observation of type and age of system and components. Review of maintenance records and certifications, if available.
- Fire Alarms: Observation of type, age, and appearance of systems. Review of available testing records.

Security

Entry Sequence: Observes if schools have only a camera/buzzer system at their main entrance or whether the main building entrance is adjacent or near the main office. (Adjacency/proximity of main office to main entrance allows for direct observation of the entire person, as well as control of their movements)

Lighting Quality/Control

Observed (not measured) light levels at the working surface, type of light fixtures and whether they provide an even dispersion and control of light for general academic tasks as well as for use of technology. Apparent condition, locations, and lighting uniformity are noted.

Toilets and Fixtures

Review of locations and apparent conditions of fixtures. Notes the maintenance and cleanliness of fixtures and flow of fixtures.

Plumbing Distribution Systems

Review of piping type, apparent corrosion, and equipment, including presence or absence of water heater & back-flow preventer.

ADA / Accessibility

- (Architecture): Observes whether the facility is compliant with the Americans with Disabilities Act (ADA) of 1990 standards. Evaluates adequacy and conditions of ramps, lifts, and elevators and whether every occupiable space in the facility can be accessed by anyone with a disability. Other considerations include compliancy of building elements such as clearances and door hardware.
- (Plumbing): Evaluation of whether toilet facilities and plumbing fixtures are ADA-compliant.

Structural Systems

The assessment team conducted visual inspections to observe signs of deterioration. No exploratory demolition, removing finishes, or viewing above ceilings was conducted. Areas that were hard to reach, off limits, or obscured by other systems that prohibited view of the structure were not assessed. Each of the criteria listed below is considered as it relates to the structural elements of the building.

A “Yes” comment in the assessment indicates that we observed signs of deterioration. A “Not Observed” comment in the assessment indicates that we either did not observe any distress in the structural element or were not able to observe the element due to the aforementioned limitations, and this does preclude an unobserved area from distress.

- Roof structural framing: As the framing is covered by roofing, observations are usually made from below. Water leaks are a common cause of damage to roof framing and part of the visual assessment is to look for signs of water damage. In wood framed structures, visual signs include mold or rotting wood. In structures with metal deck, visual signs include rusting of the deck and in concrete structures it can be cracks with rust stains or spalled concrete, indicated where a section of concrete has broken off (typically caused by water penetrating concrete through small cracks causing the steel reinforcing to rust and expand putting outward pressure on the concrete and causing it to break off).
- Floor structural framing: Common signs of deterioration in floors can be cracks in floors finishes (such as terrazzo), cracks in the bottom of concrete slabs or beams, water damage like that in roofs and longitudinal cracks (or checks) in wood framing. Cracks in floor finishes while cosmetically objectionable is not necessarily an indication of a structural failure. There are several causes for cracks in wood framing members (joists or beams) which does not necessarily mean the member is structurally inadequate.
- Walls/columns: Walls are typically framed with masonry, concrete, or wood or light gage metal studs with varying finishes. Columns typically consist of steel, concrete, or wood posts and can also be masonry piers. Common signs of deterioration in concrete and masonry walls are cracks in the walls. Cracks typically run vertically (bottom to top), although in masonry walls the cracks often follow the mortar joints. Cracks in walls can be caused by many factors: shrinkage in the wall due to changes moisture or temperature, movement of the supporting structure, or stresses in the wall caused by other loads. Concrete columns can have spalled concrete, wood posts can have longitudinal cracks (similar to floor members), and masonry piers can have cracks similar to walls.
- Foundations: Notes the type of foundation. Some types include shallow spread footings (concrete pads) and deep foundations such as caissons and piles that extend deep into the ground. Foundations generally include concrete components and are located below ground – making the system difficult to observe without performing some excavation. Some common signs of deterioration are cracks in foundation walls and areas where there has been vertical movement, indicating some settlement of the structure over time, which can be common. The causes of the cracks are like those described for walls.
- Facades: The structural components of the façade are typically the wall structure (see “Walls” above) but can also include the structural framing for overhangs or other horizontal elements that are part of the walls. Like in roof framing, moisture is a common cause for distress in facades. Common signs of distress are spalled concrete, cracks in concrete or masonry walls, and rusting steel members such as angle lintels over window and door openings in masonry walls. Note that some of these signs of deterioration do not necessarily indicate a structural deficiency and may only require maintenance.
- Identifiable Lateral System: Notes the presence and type of lateral load-resisting system, such as steel braced frames or shear walls consisting of concrete or masonry walls. Often, steel braced frames are imbedded within walls, making them difficult to identify. With masonry walls, it can be difficult to determine if a wall is a shear wall or just a partition wall. It is not possible to determine the structural adequacy of shear walls or braced frames without an in-depth investigation and it should be noted that many masonry walls in older buildings have little or no reinforcing. Common signs of distress in concrete and masonry shear walls are like those described for walls above.

Community Assessment: Building Evaluation

The Community – Building assessment included several categories including historical value, emergency shelter status, and use of community and school within/without the buildings. Historical value reviewed the historic inventory and register status of the building. Because schools are often the largest structure in a neighborhood, the City has designated certain facilities as emergency shelters. Additionally, several schools are directly connected to community centers or utilize adjacent neighborhood facilities for athletics and enrichment. Whether the community utilized the building after hours or on weekends was also considered.

New Hampshire Division of Historical Resources (DHR) Status
Yes/No; Comment, if applicable. Criteria will inform opportunities and constraints for modifying the existing building to meet changing physical demands for a 21st century learning environment.

Inventory of Historic Assets
Yes/No; Comment, if applicable. Notes whether the building is listed on any inventory of historic assets. Criteria will inform opportunities and constraints for modifying the existing building to meet changing physical demands for a 21st century learning environment.

State Register of Historic Places
Yes/No; Comment, if applicable. Notes whether the building is listed on a state Register of Historic Places. Criteria will inform opportunities and constraints for modifying the existing building to meet changing physical demands for a 21st century learning environment.

Locally Designated Historic District
Yes/No; Comment, if applicable. Notes whether the building is within a local historic district. Criteria will inform opportunities and constraints for modifying the existing building to meet changing physical demands for a 21st century learning environment.

Emergency Shelter
Yes/No; Comment, if applicable. Criteria noted and considered as part of the overall community building score. A designation by the city does not certify compliance for all state and federal requirements for the designation.

Community-Use Spaces
Yes/No; Comment, if applicable. These were determined after speaking with school administration during site visits. Community spaces attached to schools were also considered. Criteria noted and considered as part of the overall community building score.

Building Suitability for School Use
Yes/No; Comment, if applicable. Considered any major life-safety concerns for suitability. Criteria will inform opportunities and constraints for modifying the existing building.

Overall Community Building Rating
This is a judgment on the part of the reviewer(s) that considers all aforementioned factors, as well as amenities located in proximity to school sites and access to public transportation.

Facility Assessment: Site Evaluation

The site assessment team performed evaluations at each school facility in the district's portfolio. These evaluations considered the quality, condition, and capacity of the various exterior spaces of the facility. These spaces included: landscaped, educational, recreational, vehicular and pedestrian areas. This field effort was complimented by a study and research of the sites from web-based resources. The resulting information was then used to guide recommendations regarding maintenance, renovation, and/or replacement.

The diverse scope of site elements for schools varies in their relative impact to education and school operations. Priorities include elements that have large impacts to education and/or incur substantial impact to improve or repair.

- ADA Accessibility
- Walkways/Curbs/Sidewalks
- Play Areas
- Drainage
- Parking Quality
- Drop-Off/Pick-Up Routes
- Walls & Slopes
- Site Lighting
- Fencing
- Neighborhood Streets
- Evaluation Criteria

Site Evaluation: Criteria Rating Hierarchy

The site evaluations were judged on a scale as defined below:

- None / Minor: Element is functioning reliably and requires a little repair and routine maintenance.
- Moderate: Element is functioning minimally and requires some repair by a specialist.
- Major: Element is barely functioning and requires substantial repair by a specialist.
- Replace: Element is not functioning correctly and requires total replacement.
- Not Present: Element does not exist or completely failed. This element should be replaced and/or provided. In some instances (parking, walls/slopes and fencing) this element is not required.

Site Evalutation: Physical Analysis Definitions

Parking & Vehicular Circulation
Quality of vehicular area paving and quantity of parking spaces considered. This element may not be required if "Not Present".

Ground Cover
Presence and condition of landscaping, lawn areas, and any other non-hardscape areas. Ground cover evaluated for aesthetic value, shading, and functionality for outdoor gathering

Fields
Presence and apparent condition of athletic or play fields on the property.

Neighborhood Streets
Connectivity to residential areas surrounding the site. Condition of adjacent/ off-site roadways, sidewalks, and accessible elements considered.

Drop-Off/Pick-Up Routes
Segregation of buses, private vehicles, parking, and neighborhood traffic considered. Both on-site and off-site routes considered. This element may not be required if “Not Present”.

On-Site Walkways/Curbs/Sidewalks
Quality of all pedestrian spaces considered.

ADA Accessibility
Availability, location, and condition of accessible routes considered. The accessible routes connect building entrances, handicap parking, public streets, and site facilities. Accessibility is considered “Not Present” if there is no accessible building entrance.

Site Lighting
Condition, location, and quantity of lighting considered.

Fencing
Condition of fencing and gates of various types considered. This element may not be required if “Not Present”.

Drainage
Surface ponding, water quality structures, and condition of visible infrastructure considered.

Play Structures
Evaluation of apparent condition of play structures and if they are appropriate for range of ages of students at a school, if present.

Walls and slopes
Condition of retaining walls and stabilized slopes considered. This element may not be required if “Not Present”.

Wetlands on site
Yes/no; proximity of wetlands or natural resources to the site, which – if present – may add restrictions or regulatory challenges to site renovations or expansion.

Play Areas
Presence, suitability, and physical condition of casual recreation and play for students. Play structures, surfacing, and courts considered. This element may not be required if “Not Present”.

Outdoor Classrooms
Evaluation of apparent condition of outdoor classrooms or learning areas if present.

Environmental Justice Populations
Review of designation of site and adjacent neighborhoods on the Social Vulnerability Index, per state GIS.

Feasibility of Building Expansion on the Current Site
Evaluation of whether building is capable of appropriately expanding on its current site. Expansion can be horizontal, vertical, or infill, depending on the building's configuration. Feasibility of expansion based on size of property, existing coverage, regulatory restrictions, and physical constraints such as topography and proximity to natural resources.

Feasibility of Site Expansion
Evaluation of whether site expansion is possible, based on adjacent properties, and physical constraints, such as roads, proximity to protected lands, and easements.

Community Assessment: Site Evaluation

The Community – Site assessment included the broad categories of transportation access and neighborhood elements. Transportation access considered the condition of the adjacent streets, the ability of students and adults to bicycle and walk to the school, and the accessibility of public transportation. Neighborhood elements considered the school's proximity to community, civic, educational, commercial, and athletic facilities.

New Hampshire Division of Historical Resources (DHR) Status
Inventory of Archeological Assets (Site Review)
Comment, if applicable. Criteria will inform opportunities and constraints for modifying the existing building. In some cases, data may not be available.

School Buses
Review of types and numbers of school buses and bus queuing.

Accessible to Transit
Building is located within 2 blocks (1000 feet) of at least 2 stops on bus lines of regular frequency (at least every 10 minutes, during rush hour and mid-afternoon). Criteria noted and considered as part of the overall community building score.

Bikeable
Facility is considered bikeable if within 2 miles of multiple residential neighborhoods, without riding on busy streets that lack dedicated bike areas. Criteria noted and considered as part of the overall community building score.

- Wide sidewalks and/or low-traffic streets
- Adjacent to or within a residential neighborhood, without crossing busy & wide (4+ lanes) streets
- Not located on a steep street
- Bike racks are present at the school and are safely accessed from site entry points

Walkable
Facility is considered walkable if within 1.4 miles of residential neighborhoods, with consistent sidewalks, and walking route does not require students to cross busy or dangerous streets (per district eligibility criteria).

- Consistent, accessible sidewalks with crosswalks
- Adjacent to or within a residential neighborhood, without crossing wide (4+ lanes) streets

Site suitability for school use?
Yes/No, Comment if applicable. Considers overall site conditions, overall community rating, and size of site.

Overall Building – Community Condition:
This is the professional judgment on the part of the reviewer(s), considering all aforementioned factors and with consideration of nearby neighborhood, community, educational, and athletic facilities. Criteria noted and considered as part of the overall community building score.

Educational Assessment Criteria

Educational Facility Effectiveness Evaluation

Educational Facility Effectiveness of Learning Environments (EFE-LE)

The quality of physical environments has direct impacts on educational outcomes. The EFE analysis considers both inherent building characteristics of physical appearance and condition, and introduced equipment (e.g., furniture and technology). These qualitative factors have a large impact on overall student performance, as they influence students' comfort and ability to concentrate on tasks; teacher and student health and wellness; as well as absenteeism and retention.

Building environments also affect the overall educational effectiveness rating. Fixed elements, such as walls and windows, are components that are not easily remedied and may require extensive or invasive renovation. Other elements, such as furniture or finishes, can be more easily updated, replaced, or supplemented.

Fixed Building Elements include:

- Ventilation
- Natural Daylighting
- Lighting Quality
- Acoustical
- Environment (Inviting/Stimulating/Comfortable)
- Power and Technology Infrastructure
- Access to water for student projects
- Access to toilet facilities

Repairing these fixed elements may require buildings to be unencumbered of students (i.e., vacant) for the duration of the work, depending on the upgrades required.

- Adaptable elements
- Technology: ubiquitous wireless access for teachers and students and classroom technology
- Furniture: light weight, ergonomic and supportive of collaboration
- Finishes
- Adjacencies of Learning Environments
- Access to outdoor learning (classrooms or other)

These considerations often consist of singular systems and can be repaired or replaced independent of other systems. They may change frequently with the evolving landscape of educational pedagogy and should support a building that can adapt flexibly at relatively low costs. These upgrades can be executed internally, by facilities personnel or with arranged contracts.

Educational Facility Effectiveness Evaluation: Criteria Rating Hierarchy

The EFE-LE uses the following classification system:

- Excellent: Elements meet needs for 21st century (Next Generation) teaching and learning
- Good: Elements contribute to teaching and learning
- Fair: Elements somewhat interfere with teaching and learning
- Poor: Elements detract from or interfere with teaching and learning
- Deficient: Non-existent or inoperable systems or elements

Educational Facility Effectiveness Evaluation: Analysis Definitions

Evaluation Criteria

Building Originally Designed As: Over time, a school building may have modified the range of grades served. Knowing their original use quickly provides some insight into space types and building appointments.

Best Grade Configuration for this School Building

A school building may be best suited for a different range of grades or use depending on the types, quantities, and sizes of spaces, as well as the existing site attributes, including:

- Heights of casework, markerboards and other elements the students use
- Configuration and heights of toilet room fixtures

Ventilation

Fresh air is a critical component for health, wellness, and overall student performance. An even distribution of ventilated air is also important. Different ventilation systems (unit ventilators, central air ventilation, no mechanical ventilation) provide varying levels of outdoor air percentages and filtration. Observe whether mechanical ventilation is provided and what the apparent quality of the ventilation system is. Qualitative measurements are not taken, however visual, olfactory, and thermal observations are made.

Natural Daylighting

Considered to be a better quality of light than artificial lighting. Evaluates the general quantity/quality of the natural light and note if most spaces have access to daylight.

Artificial Lighting Quality

Observed (not measured) light level at the working surface. Type of light fixture and whether it provides an even dispersion of light for general academic tasks, and whether the fixture is dimmable, to accommodate use of technology.

Acoustical
The proper balance between voice reinforcement and sound absorption impacts “speech intelligibility.” This includes both sound performance within the space, as well as sound coming from outside the space. Observe whether the space appears to have appropriate acoustical properties for teaching and learning.

Technology (Power):
There are enough electrical outlets to support a future technology-rich classroom/school and they are properly distributed throughout the space.

Technology (Wireless):
There are sufficient access points throughout the school to support a 1:1 technology environment and fiber optic wiring exists within the building The main distribution room (server room) is air-conditioned, to ensure system reliability.

Technology (Interactive):
Classrooms and other teaching spaces have working interactive technology, such as interactive marker boards and document cameras.

Furniture
Different educational-delivery models can be reinforced by furniture type and flexibility. Ideal furniture is light and mobile enough to be easily re-arranged in multiple configurations. Furniture is ergonomic, comfortable, in good condition and promotes student collaboration.

Finishes
Materials and conditions of the walls, floors and ceilings. Both physical and aesthetic conditions are considered.

Environment (Inviting/Stimulating/Comfortable)
Evaluates whether building is aesthetically pleasing and if it is a place where students and teachers feel comfortable and want to spend time in each day.

Adjacencies of Learning Environments
Classrooms and other learning environments have a relationship to each other which promotes collaboration, communication, and other aspects of 21st century teaching and learning. Spaces promote interdisciplinary learning.

Outdoor Classrooms
Students have access to outdoor classrooms or other outdoor learning opportunities to learn in different ways, sometimes involving nature and hands-on activities.

Site Components

Playgrounds/Play Areas
Description of play surface materials (hard or soft). Evaluates condition of on-site play structures and whether structures are age-appropriate to the school's student population.

Accessibility
Evaluates conditions of play areas, including the ground surface/material, and whether areas are accessible to children of various disabilities.

Play Fields
Describes conditions of play fields, if present, and whether fields natural grass or synthetic turf.

Flexibility in Building Typology
Evaluates whether the building can serve alternative grade levels or support a special needs-focused curriculum.

Educational Transformation to Support 21st Century Needs
Evaluates if the building's construction easily allows for renovations that may change room sizes, replace or upgrade mechanical and electrical systems, and accommodate alternative educational-delivery methods (e.g., project-based learning [PBL]). This can often be the largest difference between a modern steel-frame building and interior masonry-bearing wall construction.

Building as Swing Space
Assuming the building is otherwise unoccupied, the ability to use the building for educational purposes for the temporary relocation of a school population during a period of renovation or construction.

Utilization Rate
Description of the utilizations rate and if it is 85% or higher. For high schools, classroom utilization of 85% are considered at capacity. Rates higher than 85% show levels of overcapacity and overcrowding. Middle schools generally work to a utilization of 90% and elementary schools at near 100%.

Educational Facility Spaces Effectiveness Evaluation

The Educational Facility Effectiveness – Spaces (EFE-S) metric compares the sizes of educational spaces to the New Hampshire Code of Administrative Rules, Section Ed. 321 guidelines for 21st century teaching and learning in new capital projects. This quantitative analysis is important for establishing the level of adequacy of the existing spaces for educational delivery. It also indicates whether a facility is deficient/missing dedicated educational spaces normally found in buildings of its grade level and typology.

Primary considerations often affect core curriculum and include:

- Classrooms (Depending on typology, these may include Pre-K and Kindergarten)
- Teacher Planning
- Small Group
- Science
- Art
- Music
- Vocations and Technology
- Media Center
- Cafeteria

Secondary considerations may allow for district flexibility in programming and community resources outside the traditional building environment, and include:

- Gymnasium (This program space is sometimes served by local community spaces)
- Gymnasium Options
- Auditorium
- Stage
- Medical
- Administration & Guidance
- Air Conditioned Technology Network Room
- Other considerations
- Special Education: Self-Contained
- Special Education: Resource or Small Group

Note: If a school has a special education program, its quantity of spaces will vary. Also, some substantially separate programs do not require full-size classrooms to be effective. For this reason, special education was considered differently than typical classroom spaces.

Educational Facility Spaces Effectiveness Evaluation: Criteria Rating Hierarchy

The educational facility effectiveness assessment for spaces used a quintile classification hierarchy as defined below:

- Excellent: Exceeds New Hampshire Code of Administrative Rules, Section Ed. 321 guidelines (+10% or greater)
- Good: School facilities are appropriate to house current enrollment and educational program. NSF meets New Hampshire Code of Administrative Rules, Section Ed. 321 guidelines (-10% to +10%)
- Fair: School facilities appear to be adequately sized for current enrollment and educational program. NSF somewhat less than New Hampshire Code of Administrative Rules, Section Ed. 321 (-10% to -20%)
- Poor: School facilities may not be adequately sized for current enrollment and educational program. Net square footage (NSF) at least 20% less than New Hampshire Code of Administrative Rules, Section Ed. 321 guidelines
- Deficient: Dedicated space does not exist.

Educational Facility Spaces Effectiveness Evaluation: Analysis Definitions

Narratives

The team considered the long-term goals relative to each building's capability of supporting Manchester School District's educational vision for 21st century (next generation) learning and teaching.

Engaged Learning

Engaging with the curriculum, applying it to an authentic context. Making connections between content areas and values/curiosity and interest. Finding connections to the community and making a difference. Public and tangible products. There is selective and intentional engagement, and agency in how one keeps focused and takes breaks.

- The following were criteria used for evaluating the levels of Engaged Learning at each school:
- The building (is/is not) comfortable to learn in.
- The building (has/lacks) appropriate temperature control and ventilation.
- The building (has/lacks) a space that can be used as a flexible learning commons for collaborative learning and presentations.
- The building (makes use/does not make use) of public space for teaching and learning.
- The building (provides/lacks) display space for student work to reinforce student accomplishments.
- The building (provides/lacks) space for teacher collaboration and planning.

Differentiated Learning

Acknowledging different learning styles. Encouraging how to understand one's self (self-knowledge). Flexibility that occurs within instruction, which also promotes flexibility in how students demonstrate learning. The following were criteria used for evaluating the levels of Differentiated Learning at each school:

- Classrooms (are/are not) large enough to support Universal Design for Learning (UDL), including the ability to create learning zones.
- The building (has/lacks) breakout spaces for differentiated/personalized learning and special education.
- The furniture in the building (can be/has difficulty being) flexibly arranged.

Cognitively Demanding Tasks/Programs

- The classroom environment (is/is not) sufficiently flexible to allow for different teaching and learning styles.
- Building (supports/lacks) learning environments that support music.
- Building (supports/lacks) learning environments that support art.
- Building (supports/lacks) learning environments that support physical activity/education.
- The building environment (supports/does not support) STEM adequately.
- The building (provides/lacks) space to experiment, create and collaborate.
- The building (has/lacks) performance/presentation space.
- Based on location and proximity to community resources and public transportation, teachers and students (can/have difficulty) access(ing) the City as a learning tool.

Overall EFE Rating

NH Code of Administrative Rules, Section Ed. 321 areas are based on current enrollment within school. Actual areas were determined by measuring CADD plans provided by Manchester School District. SMMA did not field-measure the buildings but verified general conformity with existing conditions by measuring spot values to determine the rough accuracy of CADD drawings. The design team reviewed the 2018 CMK Long-Range Facilities Plan, which informed some of the educational effectiveness ratings.

The following outlines the rating system used for evaluating the Overall Educational Facility Effectiveness:

- Excellent: Elements meet needs for current AND future teaching and learning.
- Good: Elements contribute to teaching and learning.
- Fair: Elements somewhat interfere with teaching and learning.
- Poor: Elements detract from or interfere with teaching and learning.
- Deficient: Non-existent or inoperable systems or elements.