MANCHESTER
SCHOOL DISTRICT

Henry Wilson Elementary School

Educational and Facilities Master Plan

smma

Table of Contents

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.

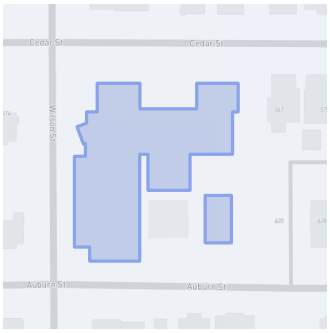
SCHOOL NAME

Henry Wilson Elementary School

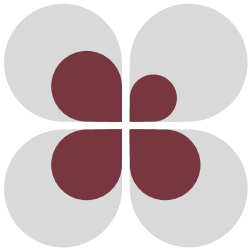
SITE VISIT

August 2023

At-a-Glance



FA: Building FA: Site



EFE: Learning EFE: Spaces

Excellent Deficient

Address
555 Cedar Street, Manchester, NH 03103

Gross Square Footage (GSF)
50,230 sf

Grades
Kindergarten–5th Grade

Site Acreage
0.92

Hours of Operation
8:25am–2:50pm

Date of Construction
1896

2022–2023 Enrollment
410

Date of Addition Construction
1917, 1996

SCHOOL NAME

Henry Wilson Elementary School

SITE VISIT

August 2023

Site Plans

SCHOOL NAME

Henry Wilson Elementary School

SITE VISIT

August 2023

SCHOOL NAME
Henry Wilson Elementary School

SITE VISIT
August 2023

Facility Evaluation Criteria

Physical Analysis	NONE / MINOR	MODERATE	MAJOR	REPLACE	N/A
Roof Membrane (Architectural)				●	
	"All roofs are nearing the end of their useful lifespan and should be replaced."				
Existing Photovoltaics					○
	"N/A"				
Space for Solar on Roof					○
	"There is space on sloped roofs for PV and some flat roof areas (requires structural analysis). Exact locations and SF size can be evaluated."				
Façade		●			
	"Some repointing and masonry cleaning required. Graffiti in several locations."				
Windows		●			
	"Windows in original portions of the building are in need of replacement. 1993 windows are nearing replacement to meet current energy efficiency standards."				
Boilers (Mechanical)	●				
	"The building has two new condensing gas-fired boilers and associated venting which were installed roughly 3 years ago. Boilers and venting are in good operational condition."				
Boilers (Plumbing)	●				
	"Domestic water heaters - two water heaters were observed. One is electric, while the second is gas fired. The electric water heater is a 40 gallon Bradford White (model RE340S6) 4.5 kw 240v single phase unit. The gas fired water heater is a 40 gallon Bradford White (model RG240S6N) 40000 Btu/hr input unit. Both water heaters and associated domestic water piping appear relatively new and in good working order."				

SCHOOL NAME

Henry Wilson Elementary School

SITE VISIT

August 2023

REPORT TYPE

Facility Evaluation

Physical Analysis

	NONE / MINOR	MODERATE	MAJOR	REPLACE	N/A
Heating Distribution Systems	●				
	"Heating distribution system is operational. HW pumps in the main mechanical room are in good condition and operational. The piping and appurtenances appear to be in a good working condition. A newer building addition has dedicated HW pumps which were installed several years ago and are in a good operational condition. Finned tube radiation, unit heaters and cabinet unit heaters are in operational condition."				
Building Envelope Thermal Performance			●		
	"Original building and additions date from 1896-1915. Insulation and air/vapor barriers in walls, roofs and slabs was most likely not provided. 1993 addition included minimal insulation in exterior walls and roofs (1-1/2?). Asphalt roof replacement in 1998 did not include adding roof insulation. Windows in original building appear to be double paned but nearing the end of their useful life. Double paned windows in the 1993 addition appear to be in fair condition, however, thermal performance is not as efficient as current fenestration products. Not all building entrances have vestibules."				
Interior Finishes			●		
	"Interior finishes have been well maintained but flooring in several areas in the original buildings where wood structure has settled are in need of replacement. There are also isolated areas/ spaces where walls are in need of patching and repainting. 2x4 ceiling tiles are prone to warping and bowing. Ceiling heights in the basement are too low- they do not meet current code required minimum heights. Original classroom casework is in need of replacement."				
Rooftop HVAC Equipment				●	
	"HRU-1 (in mechanical room) with associated ductwork were replaced several years ago. HRU-1 is in a good operational condition. The indoor unit in the attic mechanical space is 30 years old and is beyond useful life. RTU-1 on roof appears beyond useful life and ductwork connections to the unit are failing."				
HVAC Controls	●				
	"Building Management System is Johnson Controls, Metasys (district standard). Building BMS is part of a city-wide network (by Jonson Controls, Metasys). BMS is operational."				
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."				

SCHOOL NAME

Henry Wilson Elementary School

SITE VISIT

August 2023

REPORT TYPE

Facility Evaluation

Physical Analysis

	NONE / MINOR	MODERATE	MAJOR	REPLACE	N/A
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."				
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 (Architectural)		●			
	"Kitchen equipment appears in fair condition. Servery line does not have sneeze guards, and tray holder is wood."				
Kitchen Equipment and Systems (Electrical)	●				
	"Kitchen duplex receptacles must be GFCI protected per Code, but a few were observed as non-GFCI type."				
Kitchen Equipment and Systems (Plumbing)		●			
	"The building has a small kitchen. See photos for triple pot sink, floor access panel (grease interceptor), hand sink, and piping below the sinks. Fixtures and equipment appears to be in fair condition. Piping below sinks are chrome painted/coated in accordance with common practice. No gas fired equipment observed."				
Natural Gas Distribution System	●				
	"The building has 2 natural gas services. One intermediate pressure and one low pressure. The gas feeds the boilers, one domestic water heater, and a gas fired make up air unit. Concealed piping could not be observed. The exposed gas piping in the mechanical rooms appears to be in good working order."				
Current Fuel Source	●				
	"The building has two natural gas services. Based on the meter/regulator types, one appears to be low pressure while the other is elevated pressure (assumed to be intermediate). The low pressure service does show signs of rusting fittings, while the intermediate pressure service looks relatively new without rusting. Both meter sets/services appear in good working order."				
Generator					○
	"N/A"				

SCHOOL NAME

Henry Wilson Elementary School

SITE VISIT

August 2023

REPORT TYPE

Facility Evaluation

Physical Analysis

	NONE / MINOR	MODERATE	MAJOR	REPLACE	N/A
Elevator		●			
	"Due to age of elevator, controls replacement may be required and cab finishes need to be updated."				
Ventilation Distribution Systems	●				
	"The ventilation distribution systems are operational. Diffusers and ductwork appear in good working condition."				
Electrical Services	●				
	"Existing school building has (2) active utility services. Service 1 accommodates the Older Building areas (built in years 1896 and 1915). This service wiring initiates from the utility pole, extends via exterior wall-mounted conduits along the school building wall, enters the building, extends via a CT cabinet/utility meter and terminates at the power distribution panel "MDP" located in electrical room 010 in basement (Ground level). The MDP is rated 600 Amp 120/208v 3ph 4w. It's manufactured by Eaton Cutler-Hammer, dated 2005. This panel and other panels installed during the 2004/2006 building renovation appears in good operational condition. Service 2 accommodates the year 1993 Building Addition areas. It initiates at the existing street utility pole, extends overhead towards the school building wall, enters through the exterior wall and terminates via a CT cabinet/ exterior utility meter in the Distribution panel MDP located in mechanical room on the 2nd floor. This MDP is also rated 600 Amp 120/208v 3ph 4w. It's manufactured by Siemens. This panel and other panels installed during 1993 building addition are found to be in fair operational condition."				
Life Safety: Means of Egress (Architectural)		●			
	"Several basement exits do not have code required panic hardware. Stair guardrails in original portions of the building do not meet code required heights. Egress stairs in original portions of the building do not have continuous handrails on the inner side. Quantity and locations of egress stairs and doors appear to be adequate."				
Life Safety: Means of Egress (Electrical)	●				
	"Self-contained internally-lighted LED exit signs and battery units are provided along egress pathways. Observed in adequate, operational condition, however, a few exit signs look old and need to be replaced."				

SCHOOL NAME

Henry Wilson Elementary School

SITE VISIT

August 2023

REPORT TYPE

Facility Evaluation

Physical Analysis

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

"The building is provided with an automatic sprinkler system. There is a 6-inch service through a double check and a riser out to the building. The system also contains a 4-inch fire department connection. The sprinklers are a mix between fusible link and standard response (larger glass bulb) types. NFPA testing requirements state to replace sprinklers greater than 50 years old, or provide representative testing to confirm the adequacy of the existing sprinklers. A few areas lacked full sprinkler protection. This includes the corridors in the original building. Sprinklers in the gymnasium did not include sprinkler guards."

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

"The Fire Alarm system was recently replaced as it's needed due to its damage by the lightning strike. The new FACP, initiation, and notification devices, manufactured by Notifier, were installed throughout all school building areas. The current Fire Alarm system consists of the smoke and heat detectors, speaker/ strobes and strobe only units, pull stations, and connections to fire protection system equipment. The FACP and radio master box are located in Lobby 023. All equipment is observed in good operational condition. As for the fire alarm system wiring - it's assumed that the existing wiring was reused where it was not damaged and was feasible and appropriate for reusing in all areas of the building - "original" (built in 1896/1915, last renovated in 2004) and the 1993 building addition."

	NONE / MINOR	MODERATE	MAJOR	REPLACE	N/A
Security: Entry Sequence			●		

"Main entrance has controlled card access. Although office is adjacent to main entrance, there is no visual access to the exterior or into the main vestibule."

	NONE / MINOR	MODERATE	MAJOR	REPLACE	N/A
Lighting Quantity / Control		●			

"Interior lighting fixtures in Older Building area (built in years 1896 and 1915) were observed to be dated, not energy-efficient and mostly in fair-to-poor condition. Interior lighting fixtures in 1993 Building Addition, except for the multi-purpose room, were also observed dated and not energy-efficient, in fair operational condition. The multi-purpose room lights were recently replaced with 2'x2' LED pendants with integral occupancy sensors. Illumination levels throughout the building are mostly adequate, although some bathrooms require additional lights to improve lighting levels. Self-contained internally-lighted LED exit signs and battery units are provided along egress pathways. Observed in adequate, operational condition, however, a few exit signs look old and need to be replaced. Other than in the multi-purpose room, there are no occupancy sensors, no time-controls, and no daylight controls, which is not compliant with the current Energy Conservation Code."

SCHOOL NAME
Henry Wilson Elementary School

SITE VISIT
August 2023

REPORT TYPE
Facility Evaluation

Physical Analysis

	NONE / MINOR	MODERATE	MAJOR	REPLACE	N/A
Toilets and Fixtures		●			
"Based on the existing drawings, many fixtures were replaced during 1993 revisions. Drinking fountains have been replaced with bottle filling stations in many locations. The fixtures are a little dated and could use a re-fresh, but appear to be in decent working order. The flow rates of the fixtures could not be confirmed, but it is assumed that the fixtures do not meet current low flow sustainability requirements."					
Plumbing Distribution Systems			●		
"Distribution observations were limited to exposed piping within mechanical rooms, basement, and under kitchen equipment. The piping near the water heaters looks newer with no visible concerns. The extent of original piping within walls is not known. Original piping is past its useful life expectancy and should be replaced. Copper piping from the 1993 renovation is approximately 30 years old (25-40 year old life expectancy). Water quality and destructive selective testing is recommended to confirm the remaining lifespan."					
Accessibility (Architectural)				●	
"Main entrance and exits at original buildings are not accessible. Several doors do not have accessible hardware. Handrails do not meet accessibility codes. Toilet rooms in the original building are not accessible. Several interior doors do not meet the required door clearances. Classroom sinks in the original building are not accessible. Accessible sinks in the new addition are being blocked by storage boxes and are not readily usable. Signage does not have the required braille markings. Toilet and wall mounted accessories and equipment encroach more than 4? into accessible routes and corridor widths."					
Accessibility (Plumbing)			●		
"Toilet room fixtures in the original building are not accessible. Classroom sinks in the original building are not accessible. Accessible sinks in the new addition are being blocked by storage boxes and are not readily usable."					

Structural Systems: Signs of Deterioration Observed?

	YES	NO
Roof		✕
No comment		
Floor		✕
"Floor framing assumedto be wood joists on masonry walls. Level 3 structural floor issue. Most likely settlement."		

SCHOOL NAME

Henry Wilson Elementary School

SITE VISIT

August 2023

REPORT TYPE

Facility Evaluation

Structural Systems: Signs of Deterioration Observed?

	YES	NO	
Walls / Columns		✕	
	No comment		
Foundations		✕	
	"Interior brick bearing walls. Exterior stone with concrete water table."		
Façade		✕	
	"Some masonry repoint required."		
Is Lateral System Identifiable?	✓		
	"Lateral most likely masonry walls throughout the wood framed original bldg."		

Community

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

SCHOOL NAME
Henry Wilson Elementary School

SITE VISIT
August 2023

Site Evaluation Criteria

Physical Analysis	NONE / MINOR	MODERATE	MAJOR	REPLACE	N/A
Parking Capacity			●		
	"15-minute public/street parking only. Paved drive at northeast corner for possible maintenance access/ maintenance vehicle parking? No curb cut/ mountable curb for this driveway."				
Parking Quality					○
	"No on-site parking."				
Ground Cover	●				
	"Decent landscaping at front of building (north side). What appear to be student garden beds by modular classroom in play area. Otherwise predominantly paved site. Relatively barren tree wells along south side of property."				
Fields			●		
	"No fields on property. Nearest park (with lawn and athletic fields) is Sheehan-Basquil Park, ~2 blocks away."				
Neighborhood Streets	●				
	"School abuts residential areas on all 4 sides."				
Drop-off / Pick-up Routes	●				
	"School is surrounded by neighborhood streets with on-street 15 minute parking for pickup/drop off. There is a curb ramp for drop off at accessible side entrance. No dedicated drive/drop off loop for school. No access from East side."				
Walkways / Curbs / Sidewalks	●				
	"Bituminous walkway along north, west, south sides. North side: 6" VGC along street, ~8" VGC up from walkway along front of building. Bituminous ramp up to concrete stairs with metal handrails at main entrance. West side: 6" VGC along street. Transition to flush at accessible entrance. Stone bollards/ reinforced slope at community center entrance. South side: 3-6" VGC along street. Sidewalk slopes up to fence and paved play area with intermittent dirt areas/ tree wells. Overall - some damaged curbs and uneven pavement."				

SCHOOL NAME

Henry Wilson Elementary School

SITE VISIT

August 2023

REPORT TYPE

Site Evaluation

Physical Analysis

	NONE / MINOR	MODERATE	MAJOR	REPLACE	N/A
ADA Accessibility		●			
	"Accessible entrance only from west side of building to lower level. Front entrance to main level requires bituminous ramp + concrete stairs from sidewalk. ADA ramps/curb cuts to crosswalks at northwest and southwest corners of property. Ramps prettty broken up (particularly northwest corner), in need of repair. ADA ramp/ curb cut at southeast corner totally blown out by pot hole, in need of repair."				
Site Lighting (Civil)		●			
	"Wall-mounted lights over doors, lights on nearby utility poles. No dedicated lighting for play area (south/east). One light pole at front/ north side of building (and one across the street, also north side of building)."				
Site Lighting (Electrical)	●				
	"Exterior building-mounted lights are dated, not energy-efficient and have no automatic controls measures. They are suggested for replacement with added automatic controls."				
Fencing	●				
	"There is an 8' - 16' (+/-) fence separating play area from surrounding neighborhood, with gates from sidewalk. Gate was locked with chain at time of assessment. Otherwise area is only accessible from the school."				
Drainage		●			
	"Site drains to catch basins in street, many of which appear clogged/ in need of maintenance. No visible on site drainage infrastructure; however, minimal ponding on site (likely due to raised topography of the site). Some ponding in pothole/ low point at southeast corner."				
Play Areas	●				
	"Play structure in decent shape, although wood chips scattered all the way out to the street. Painted bituminous track, basketball court, hop scotch and other sidewalk games within fenced in play area."				
Monuments and Memorials	●				
	"None observed at this site."				
Walls / Slopes	●				
	"Steep, graded slope along north side of building with granite curb along sidewalk. Curb is tilted/ uneven, indicating it may not fully support the weight of the slope."				

SCHOOL NAME

Henry Wilson Elementary School

SITE VISIT

August 2023

REPORT TYPE

Site Evaluation

Physical Analysis

	YES	NO
Are there any Wetlands on Site?		✕
"School is in urban/ residential area, with no natural areas on the site."		
Are there any Easements on Site?		✕
"No easements shown on GIS."		
Are Play Structures Age-Appropriate?	✓	
"Play structure is age-appropriate."		
Is there an Outdoor-Learning Area?		✕
"May have picnic tables in fenced play area. No designated outdoor-learning area."		
Should there be a Question on Environmental Justice Populations / Vulnerable Populations?	✓	
"NH GIS indicates the site is within a "Medium High" Social Vulnerability Index Area."		
Is the Building Expandable on the Current Site?		✕
"No Comment"		
Is the Site Expandable?		✕
"Building fills parcel, is surrounded by residential parcels."		

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?		✕
"No comment"		

SCHOOL NAME

Henry Wilson Elementary School

SITE VISIT

August 2023

REPORT TYPE

Site Evaluation

Community Analysis

	YES	NO
Bikeable?		✕
	"Surrounded by lower-traffic residential streets, but no bike lanes/ shoulder. No bike racks observed on site."	
Walkable?	✓	
	"Surrounded by residential streets with sidewalks (in varying condition)."	

SCHOOL NAME

Henry Wilson Elementary School

SITE VISIT

August 2023

REPORT TYPE

Site Evaluation

Traffic Analysis

	NONE / MINOR	MODERATE	MAJOR	REPLACE	N/A
Parking **Auburn St**	●				
	"Some accessible parking is signed in front of accessible school entrance, but no access aisle is provided."				
Parking **Wilson St**	●				
	"Some accessible parking is signed in front of accessible school entrance, but no access aisle is provided."				
Roadway Characteristics **Cedar St**		●			
	"Poor pavement condition in study area (adjacent to school)."				
Roadway Characteristics **Wilson St**	●				
	"Poor pavement condition in study area (between Cedar Street and Auburn Street)."				
Sidewalks **Auburn St**	●				
	"Street trees are missing on north sidewalk next to playground. Ramp for school accessible entrance should be evaluated for ADA compliancy."				
Sidewalks **Cedar St**		●			
	"Vegetation encroachment creates a pinch point along south sidewalk near northeast corner of school. North sidewalk is in poor condition with some vegetation growing out of sidewalk."				
Sidewalks **Wilson St**	●				
	"West sidewalk south of intersection with Cedar Street is very degraded, has no curb, and has vegetation overgrowth. East sidewalk outside of school entrance has a steep drop-off toward road. East sidewalk is also in poor condition south of Auburn Street."				
Sidewalks **Wilson St East Back**	●				
	"Sidewalk is narrower, but generally in fair condition. It should be evaluated for ADA compliancy."				

SCHOOL NAME

Henry Wilson Elementary School

SITE VISIT

August 2023

REPORT TYPE

Site Evaluation

Traffic Analysis

	NONE / MINOR	MODERATE	MAJOR	REPLACE	N/A
Unsignalized Intersections **Auburn St at Wilson St East Back**	●				
	"No crosswalk or detectable warning panels provided at Wilson St East Back crossing. Pedestrian crossing should be evaluated for ADA compliancy. Big pothole in northwest corner of intersection."				
Unsignalized Intersections **Wilson St at Auburn St**		●			
	"South ramps have detectable warning panels, but north ramps do not. Poor pavement conditions across intersection and signs of water pooling at all corners of intersection, which could indicate drainage issues. Pedestrian crossings should be evaluated for ADA compliancy."				
Unsignalized Intersections **Wilson St at Cedar St**	●				
	"Tree slightly obscuring WB approach STOP sign. SW ramp does not have detectable warning panel and should be evaluated for ADA compliancy. SW corner also has poor sidewalk on Wilson and Cedar. SE ramp missing half of metal warning panel. Poor pavement conditions across intersection and signs of water pooling at all corners of intersection, which could indicate drainage issues."				

SCHOOL NAME
Henry Wilson Elementary School

SITE VISIT
August 2023

Educational Facility Effectiveness: Learning Environments (EFE: LE)

Grade Levels

Building Originally Designed as:	Kindergarten–3rd Grade
Which Educational Program are you Assessing?	Kindergarten–5th Grade
The Grade Configuration this School is Best Suited to:	Pre-K–4th Grade

Educational Building Analysis

	GOOD	FAIR	POOR	DEFICIENT	FAILING
Acoustical			●		
	"Walls are thin. Some spaces in hallways with low movable partitions. Significant Sound transmission between rooms and floors, particularly in basement."				
Adjacencies of Learning Environments			●		
	"Music and art are in portables. PE in remote location. Media center in basement. Specialists in former closets or hallway with low movable partitions."				
Environment (Inviting / Stimulating / Comfortable)				●	
	"Corridors are cluttered and narrow, ceilings are low in basement, some classrooms are windowless, bathroom odors are noticeable throughout corridors."				
Finishes			●		
	"VCT, ACT in bad condition."				

SCHOOL NAME

Henry Wilson Elementary School

SITE VISIT

August 2023

REPORT TYPE

EFE: LE Evaluation

Educational Building Analysis

	GOOD	FAIR	POOR	DEFICIENT	FAILING
Furniture			●		
"Cubbies are small. Furniture is outdated. Furniture does not support future learning."					
Lighting Quality			●		
"Old fluorescent fixtures. Many rooms have fabric covering the fixtures due to glare and intensity."					
Natural Daylighting			●		
"Good day lighting in some classrooms while some spaces have no windows and basements have small clerestories."					
Outdoor Classrooms					●
"None observed."					
Technology: Power			●		
"Not enough power in room. Many extension cords throughout spaces."					
Technology: Wireless		●			
"Good for chrome books but not as much for laptops and admin."					
Ventilation			●		
"Stuffy. Rooms get hot even with fans in open windows on 65 deg day. Bad odors in hallways near bathrooms."					

This Site Includes:

	YES	NO
Accessible		✕
Play Fields		✕
Playgrounds / Areas	✓	
"No shade. Play structure not accessible. Wood chips and asphalt."		

SCHOOL NAME

Henry Wilson Elementary School

SITE VISIT

August 2023

REPORT TYPE

EFE: LE Evaluation

Building Assessment

	YES	NO	
Can the Building Change Typology Easily?		✕	
Can the Building be Transformed Educationally to Serve 21st Century Needs?		✕	
Can the Building Serve as Swing Space?		✕	
	"School is small and in poor condition. School is not accessible to students in wheelchairs."		
Is the Building between 85%—115% Utilization Rate?	✓		
	"Portables on site for art and music, overcrowding and storage rooms have been converted into specialists' rooms and offices."		

Educational Facility Effectiveness: Spaces (EFE)

Space Assessment	QUANTITY	ACTUAL AREA (SF)	MORE INFO
Administration and Guidance (Quantity Varies)	Varies	1030	
Art Classroom (Min Area 900 sf or 36 sf / Student)	1	700	
	"Portable, with access to sink."		
Cafeteria (Min Area 12-15 sf / Student for Max Number of Diners per Lunch Period)	1	5086	LUNCH PERIODS: 4
	"Shared with Gymnasium. Lunch periouds 4 overlapping sessions. Food sent from Beech street school."		
Classroom: General Education (Min Area 900 sf or 36 sf / Student)	15	750, 810, 900, 920, 930, 1040	
Gymnasium (Min Area 6000 sf)	1	(see Cafeteria)	STAGE: No
	"Shared with Cafeteria."		
Kindergarten (Min Area 1000 sf or 50 sf / Student)	3	791	TOILET ROOM: No
Media Center (Min Area 1800 sf or 4 sf / Student x Design Capacity)	1	1152	
	"Basement. No windows."		
Music Classroom (Area 1200 sf)	1	700	
	"Portable"		

SCHOOL NAME
Henry Wilson Elementary School

SITE VISIT
August 2023

REPORT TYPE
EFE: Space Evaluation

Space Assessment

	QUANTITY	ACTUAL AREA (SF)	MORE INFO
Pre-K0/K1 (Min Area 1000 sf or 50 sf / Student)	0	0	
Special Education: Resource of Small Group (Area 500 sf)	2	501, 84	
Special Education: Self Contained (Area 950 sf)	2	900	TOILET ROOM: No
	"EL, Title 1"		
Stage (Area 1000 sf)	0	0	
	"No Stage."		
Teacher Planning	0	0	
	"None observed."		

Adequacy of Rooms

	GOOD	FAIR	POOR	DEFICIENT	FAILING
Administration and Guidance			●		
	"No windows, not adjacent to main entrance."				
Art Classroom			●		
	"In portable."				
Cafeteria			●		
Classroom: General Education			●		
Faculty Lounge				●	
Gymnasium			●		
Kindergarten (K2)			●		
	"Classrooms in basement. No adjoining toilets. Non ADA-compliant sinks."				
Media Center			●		
	"In basement."				

SCHOOL NAME

Henry Wilson Elementary School

SITE VISIT

August 2023

REPORT TYPE

EFE: Space Evaluation

Adequacy of Rooms

	GOOD	FAIR	POOR	DEFICIENT	FAILING
Medical		●			
	"No natural daylight."				
Music Classroom			●		
	"In portable."				
Special Education: Resource of Small Group			●		
Special Education: Self Contained			●		
Stage					●
	"No Stage."				
Teacher Planning				●	
	"None observed."				

Special Education Assessment

	YES	NO
18+		✕
Autism Spectrum	✓	
	"No program but case managers."	
Cognitively Impaired		✕
Deaf and Hard of Hearing		✕
Emotional Disturbance		✕
English Learners	✓	
Intellectual Disability		✕
Life Skills		✕
Medically Fragile		✕
PT/OT/Speech	✓	
	"Physical and Occupational Therapy"	

SCHOOL NAME

Henry Wilson Elementary School

SITE VISIT

August 2023

REPORT TYPE

EFE: Space Evaluation

Special Education Assessment	YES	NO	
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.