



Soderstrom Architects

Facilities Assessment Report
Oregon Trail School District
Clackamas County, Oregon



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EXECUTIVE SUMMARY

Introduction - Team Members

Soderstrom Architects was hired in 2023 to provide the Oregon Trail School District (District) with a Facilities Assessment Report (FAR), after being awarded a Technical Assistance Program (TAP) grant from the Oregon Department of Education (ODE). The following is a list of people and consultants contributing to the assessment process who have provided their time and effort to help everyone understand District needs and concerns.

District Administration:

Aaron Bayer, Superintendent
Timothy Belanger, Business Director
Chelsea Lincoln Lane, Facilities & Operations Administrator
Scott Coleman, Technology Director
Garth Guibord, Communications Director
Julia Monteith, Bond Campaign Consultant
Lance Brooks, Facilities Specialist & Supervisor
Ken Bucchi, Human Resources Director
Russ Knott, Nutrition Services Supervisor
Katie Schweitzer, Director of Student Services
Kim Ball, Director of Secondary Programs
Rachael George, Director of Elementary Programs
Trey Mertens, Building Support Supervisor

Architectural:

Marlene Gillis, President, Soderstrom Architects
Andy Bonesz, Associate Principal, Soderstrom Architects
Felix Lu, Designer, Soderstrom Architects

Mechanical, Electrical and Plumbing:

Stephen Ku, Mechanical Engineer, MKE Associates
Jeff Reilly, Electrical Associate, MKE Associates

Structural:

Kristofer Tønning, Associate, ZCS Engineering

Site-Based Administration:

Cassey Hopkins, Principal, Sandy Grade School
Matt Newell, Principal, Firwood Elementary
Julie Savage, Principal, Kelso Elementary
Rachel Weeks, Principal, Naas Elementary
Morgan MacGregor, Principal, Boring Middle School
Kendra Payne, Principal, Welches School
Nicole Johnston, Principal, Cedar Ridge Middle School
Sarah Dorn, Principal, Sandy High School

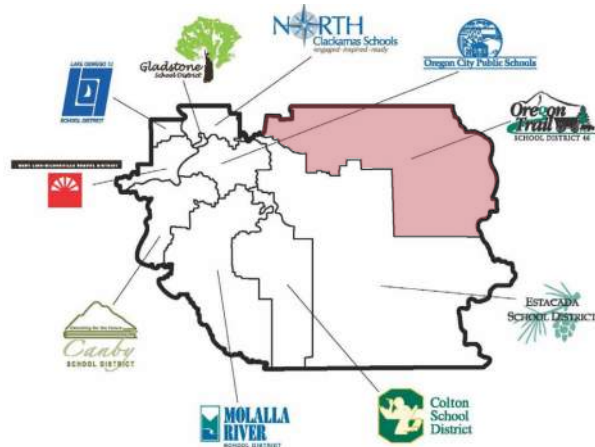


EXECUTIVE SUMMARY

Introduction

Clackamas County, Oregon

Named after the Clackamas Native Americans, Clackamas County was one of the four original Oregon districts created by Oregon's Provisional Legislature in 1843 until it was redesignated as a county in 1845. Located Southeast of Portland, in the Northwest corner of the state, it has a diverse mix of larger urban cities and smaller, more rural communities.



Introduction

Oregon Trail School District

The Oregon Trail School District (District) is a diverse community that spans over 424 square miles across several distinct communities, including the cities of Boring, Welches, and Sandy, as well as numerous smaller unincorporated areas.

The District was formed in 1997 by the merger of several previously independent districts: the Bull Run, Boring, Cottrell, Sandy Elementary, Sandy Union High, and Welches School Districts.

As of the 2022-23 school year (the most recent available), the District served nearly 4,300 students, with the following statistics:

Demographics

- (33) Languages Spoken
- 36% Free and Reduced Lunch
- 10% Mobile Students
- 14% Students with Disabilities
- 11% Ever English Learners

Academic Performance

- 87% On-Track to Graduation (84% Oregon Average)
- 84% On-Time Graduation (81% Oregon Average)
- 92% Five-Year Completion (87% Oregon Average)
- 61% Regular Attenders (62% Oregon Average)
- Ranked 11th in Oregon by SchoolDigger
- District-wide offers eight (8) CTE programs
- Includes (57) CTE courses at Sandy High School
- CTE student graduation rate of 95% - 99%

EXECUTIVE SUMMARY

Purpose

This report is an evaluation of the existing District buildings, all built at different times using a variety of construction methods. Using Oregon Department of Education (ODE)'s School Facilities Assessment Template, this report identifies the cost of deferred maintenance for each of the school buildings relative to complete replacement versus 'As New' condition.

The purpose of this report is to provide the District with a thorough evaluation of existing buildings and site conditions, including recommended remediation steps for all buildings evaluated. The assessment is a multi-disciplinary on-site inspection of the existing buildings that focuses specifically on architectural, structural, mechanical, electrical and plumbing systems.

Items evaluated include the following:

- Exterior: Walls, foundations, doors, windows, soffits.
- Interior: Partitions, floors, ceilings, doors, casework.
- Roof: Membrane, drains, downspouts, flashing.
- Structural: Rapid assessment of seismic resistance.
- MEP: HVAC, plumbing fixtures, electrical equipment.

This assessment is the first step in the Long-Range Facilities Planning (LRFP) process and is a rapid visual assessment of buildings to provide estimated costs and facility condition numbers that can then be carried forward into the master planning phase, functioning as a baseline with which to evaluate all future planning decisions.

Demographics

As part of the LRFP efforts, the District will develop a 10-year enrollment projection report. In general the area has seen significant growth over the last 15-20 years or so, but has tapered off in recent years, particularly post-COVID. This information will be used in conjunction with the capacity calculations done as part of this FAR to determine if there needs to be additional classrooms and support spaces planned for in the near future.

Sources of Funds

All school districts are incapable of leveraging general fund dollars to build schools. There is currently one primary source of funds to upgrade and / or replace aging school facilities at a larger scale, that being a 'general obligation' bond election.

The ODE also has a modest grant program, which is the Oregon School Capital Improvement Matching grant program (OSCIM). This program provides up to \$6 million in one-for-one matching grant funds but requires a bond election. While these grants are helpful, they don't provide significant support for new schools or larger projects.



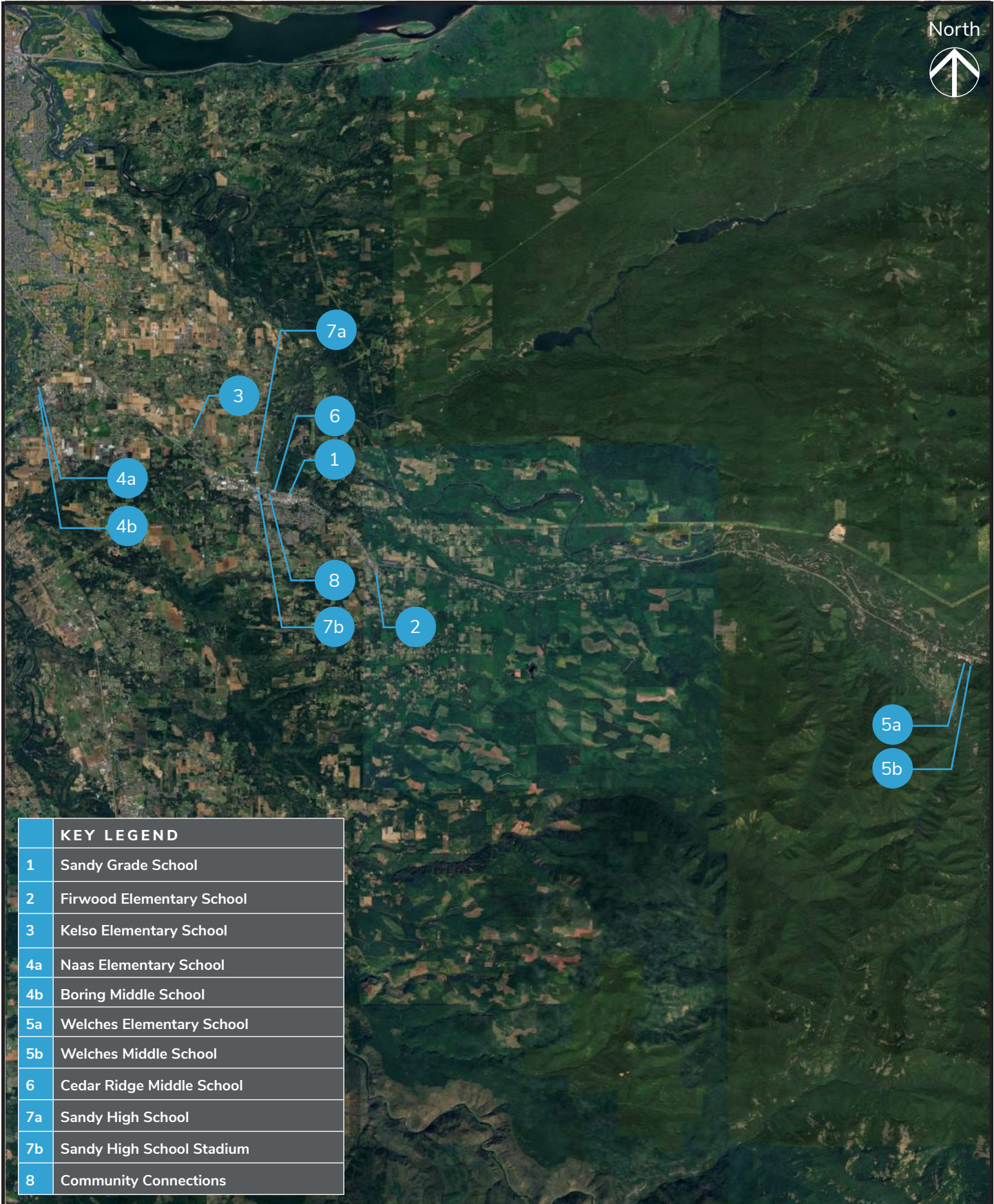
Sandy High School Exterior



Kelso Elementary Cafeteria View from Above

EXECUTIVE SUMMARY

Oregon Trail School District Map



EXECUTIVE SUMMARY

Summary - Building Data

This report represents an evaluation of all District buildings, with the goal to identify those at highest need of work overall and of maintaining and preserving District assets long-term in the most efficient and effective way.

Some entire buildings are simply very old and beyond their practical lifespan, while some have more specific concerns. Each school has a complete evaluation further in this report that provides a detailed breakdown of all identified issues and estimated costs for repairs.

The District has five (5) elementary schools:

Sandy Grade School
Firwood Elementary School
Kelso Elementary School
Naas Elementary School
Welches Elementary School

The District has one (1) high school campus:

Sandy High School and Stadium

The District has one (1) adult learning campus:

Community Connections

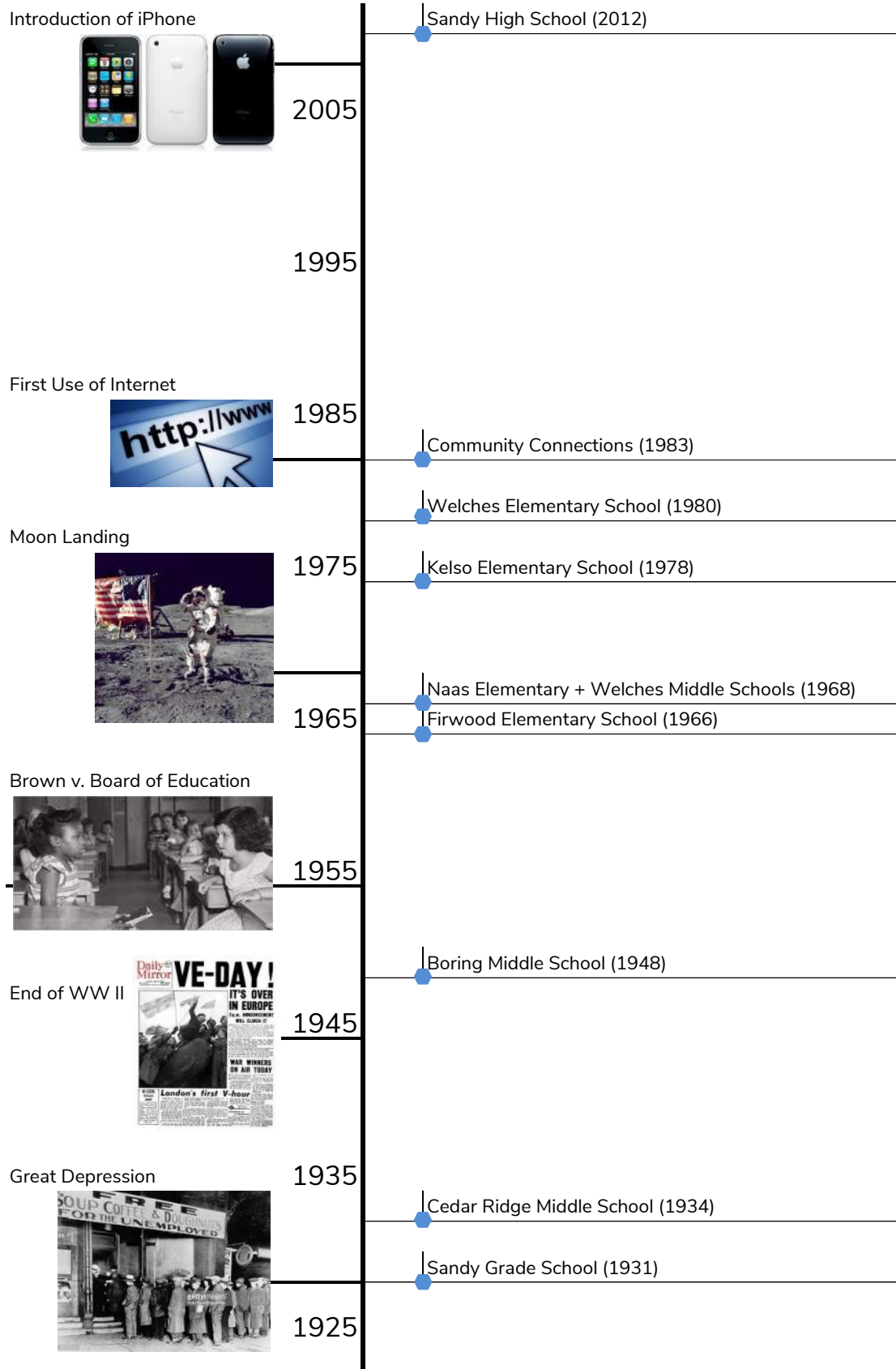
The District has three (3) middle schools:

Boring Middle School
Welches Middle School
Cedar Ridge Middle School

ODE Building ID#	School ID#	Site Name	Grades Served	Enrollment (1.31.24)	Building Address		
19260500	100	Sandy Grade School	PK - 5	334	38955 Pleasant St	Sandy, 97055	
19260600	101	Firwood Elementary School	K - 5	457	42900 SE Trubel Rd	Sandy, 97055	
19260400	99	Kelso Elementary School	K - 5	348	34651 SE Kelso Rd	Boring, 97009	
19260200	96	SHARED SITE	Naas Elementary School	K - 5	321	12240 SE School Ave	Boring, 97009
19260300	97		Boring Middle School	6 - 8	430	27801 SE Dee St	Boring, 97009
19260100	88	SHARED SITE	Welches Elementary School	K - 5	188	24901 E Salmon River Rd	Welches, 97067
19260900	2392		Welches Middle School	6 - 8	74	24903 E Salmon River Rd	Welches, 97067
19260000	102	Cedar Ridge Middle School	6-8	433	17100 SE Bluff Rd	Sandy, 97055	
19260800	141	SHARED SITE	Sandy High School	9-12	1,430	37400 Bell St	Sandy, 97055
	141		Sandy High Stadium	N/A			
19260007	1926	Community Connections	18-21 Years	12	17215 SE Bluff Rd	Sandy, 97055	
Total:				4,027			

EXECUTIVE SUMMARY

District Building Age Timeline



EXISTING FACILITY OVERVIEW

Critical Needs Summary

00 - District Wide

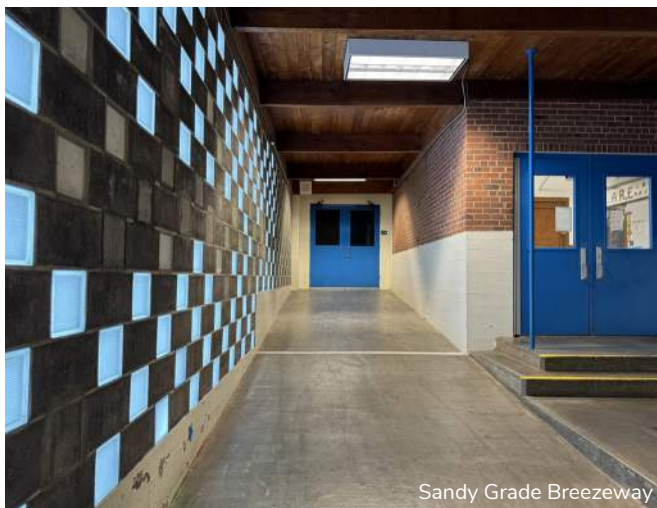
- Improve accessibility to sites and buildings
- Roofing and gutter replacement needed
- Improve / replace exterior siding, windows
- Upgrade / improve electrical service, panel(s)
- Replace aged plumbing fixtures
- Replace interior finishes, particularly flooring
- Improve site circulation, paving (asphalt, concrete)
- Upgrade low voltage wiring to WiFi devices
- Recommend that all sites, except for Sandy High School and Cedar Ridge Middle School, to have generators for resiliency and to improve emergency operations and planning
- Add support for Special Education (SPED)

01 - Sandy Grade School

- Main building entry needs to be accessible
- Sight lines poor from building entry to office
- Lacks direct connection of entry and office
- Replace roofing, gutters and downspouts
- Replace / repair siding (wood and brick veneer)
- Replace all exterior windows
- Not enough outlets or capacity throughout
- Replace aged, non-functioning heaters
- Replace domestic water supply piping

02 - Firwood Elementary School

- Replace roofing and walkway canopies
- Replace exterior windows throughout
- Replace flooring in shared program use areas
- Replace gym flooring and wall covering
- Kitchen undersized, remote from serving area
- Lacks dedicated Cafeteria space



Sandy Grade Breezeway



Boring Middle School Flooring



Welches Elementary Covered Play Structure



Firwood Elementary Canopies

EXISTING FACILITY OVERVIEW

Critical Needs Summary (cont.)

03 Kelso Elementary School

- Replace roofing
- Replace and repair siding
- Connect water service to municipal supply
- Replace surface 12x12 ceiling tiles

04a - Naas Elementary School

- Replace roofing
- Sight lines poor from building entry to office
- Lacks direct connection of entry and office
- Improve accessibility issues at corridors
- Replace / repair exterior siding, weather barrier
- Replace surface 12x12 ceiling tiles
- Gymnasium / multi-purpose space lacking



Boring Middle School Gym

04b Boring Middle School

- Replace all roofing, fascia, soffits
- Repair roof to avoid future 'ice dams'
- Replace all siding except front elevation
- Replace flooring, including main gym
- Lacks Kitchen, dedicated Cafeteria

05a Welches Elementary School

- Sight lines poor from building entry to office
- Lacks direct connection of entry and office
- Repair roofing flashing
- Repair / replace exterior siding
- Replace original exterior windows
- Replace flooring throughout

05b Welches Middle School

- Replace all exterior doors, hardware
- Replace siding and roofing
- Replace flooring
- Replace gym wood flooring, ceiling tiles

06 Cedar Ridge Middle School

- Replace soffits, parapet caps
- Replace roofing at 'Fraser Building'
- Repair older door hardware
- Correct exterior CMU wall moisture issues
- Replace all original windows, including glass block
- Replace aged supply water piping
- Replace gym roofing



Naas Elementary Main Entry



Boring Middle School 'Ball Wall'

EXISTING FACILITY OVERVIEW

Critical Needs Summary (cont.)

07b Sandy High School Stadium

- Structure is beyond it's practical lifespan
- Requires extensive maintenance consistently
- Building is due for upgrade / retrofit overall
- Locker rooms, restrooms need full renovation

08 Community Connections

- Replace siding
- Replace roofing
- Replace flooring and wall base
- Additional electrical outlets needed



Sandy High Stadium Masonry Damage



Sandy High Extended Learning Area



Sandy High Stadium Locker Room Restroom



Community Connections Entry

EXISTING FACILITY OVERVIEW

General Age and Condition

The chart below summarizes the size and age of all District owned buildings, as well as the site size in acres. With an average building age over 50 years, this tells us very quickly that even the best maintained buildings will have significant needs at that age.

Additionally, there are two summary cost columns. The first, “Repair Budget” is directly from the ODE spreadsheets and represents the direct costs to bring each building up to ‘as new’ condition from when it was built. This includes the physical building and site only, and doesn’t take into account several key factors, specifically:

- Structural Integrity and Safety
- Accessibility and ADA Compliance
- Extent of Existing Hazardous Materials

We will further evaluate these categories later on in the report, folding in both the ODE ‘As New’ criteria.

The “Replacement Costs” column represents the direct costs to fully replace each building, based on both the overall square footage and the function (elementary, middle or high school, facilities, etc.). This is a very broad, ‘cost-per-square-foot’ approach and is only used to compare directly the repair versus replacement costs.

The final “FCI” column is that direct ratio, and will be explained further on the next page.

	Site Name	Building Area	Year Built	Bldg Age	Additions + Renovations	Site Acreage		Repair Budget	Replacement Costs	FCI
						By Site	Combined			
	Sandy Grade School	42,122 SF	1931	93	1952, 1961, 1965, 1970, 1972	2.81 Acres		\$14,949,677	\$33,298,101	42.8%
	Firwood Elementary School	55,449 SF	1966	58	1973, 1978	20.00 Acres		\$12,661,878	\$43,833,304	27.5%
	Kelso Elementary School	41,060 SF	1978	46	2008, 2015, 2021	12.95 Acres		\$8,152,948	\$32,458,574	23.9%
SHARED SITE	Naas Elementary School	44,936 SF	1968	56	1972, 2019	7.42 Acres	19.98	\$12,875,509	\$35,522,613	34.5%
	Boring Middle School	51,330 SF	1948	76	1963, 1968, 1980	12.56 Acres		\$17,632,893	\$42,606,028	39.4%
SHARED SITE	Welches Elementary School	31,294 SF	1980	44	N/A	21.75 Acres	31.21	\$7,454,850	\$24,738,398	28.7%
	Welches Middle School	32,205 SF	1968	56	1978	9.46 Acres		\$8,393,253	\$26,731,485	29.9%
	Cedar Ridge Middle School*	123,766 SF	1934	90	2014	11.96 Acres		\$13,496,819	\$102,730,912	12.5%
SHARED SITE	Sandy High School	306,500 SF	2012	12	N/A	68.54 Acres		\$2,924,683	N/A	1.1%
	Sandy High Stadium	TBD	TBD		N/A	On HS Site		\$3,946,794	\$11,383,426	33.0%
	Community Connections	1,620 SF	1983	41	N/A	0.23 Acres		\$311,277	\$961,865	30.8%
Total:		730,282 SF		57.2	Average Age	Total:		\$102,800,581	\$354,264,705	

* Includes 0.46 acre parking lot across Bluff Road

EXISTING FACILITY OVERVIEW

Facilities Condition Index (FCI)

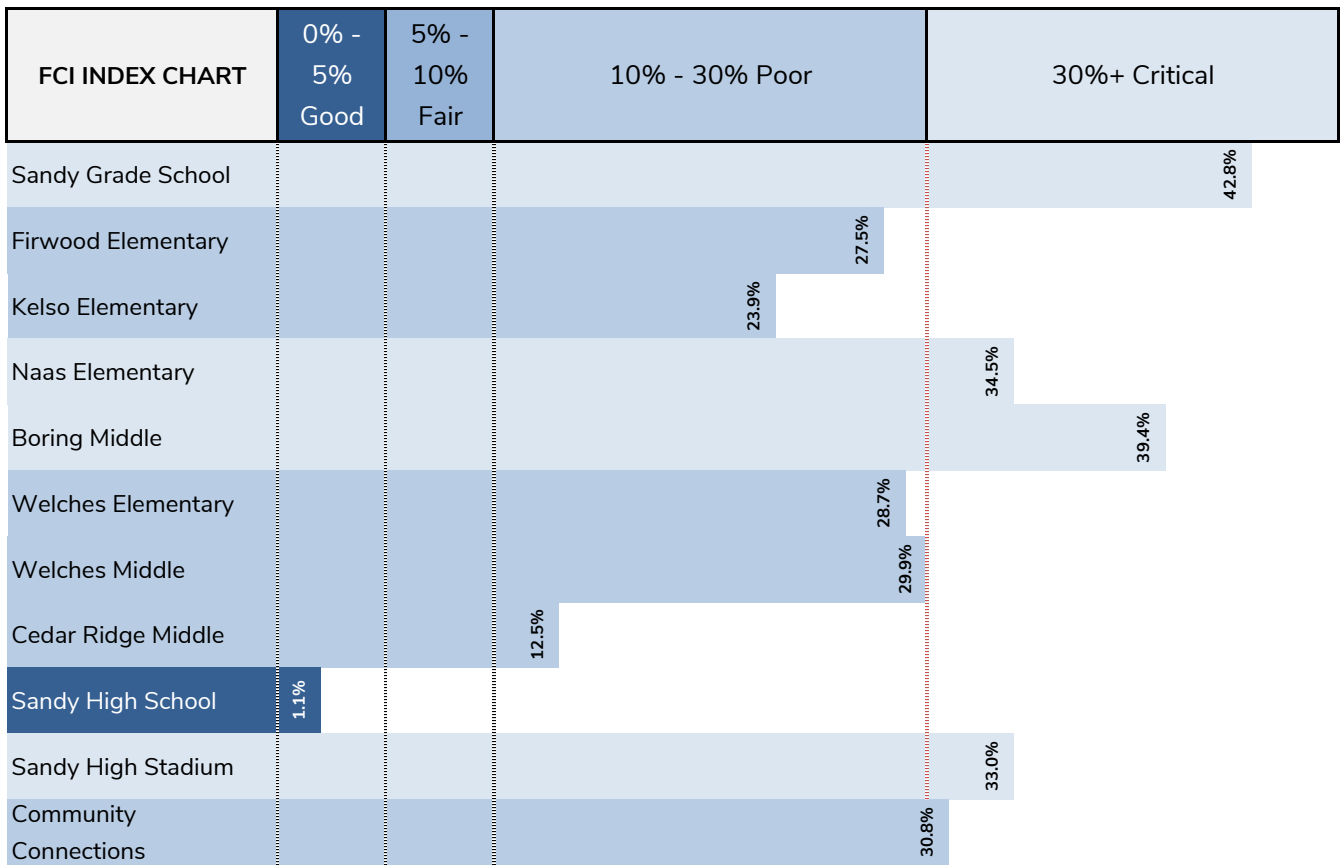
The Facilities Condition Index (FCI) is calculated from the deficiencies found in each building and the corresponding costs to address them, comparing current building condition to 'as new' the day it was opened. Specifically, the FCI outcome is the ratio of the estimated cost of renovations compared to complete building replacement, assuming the same square footage and program as the existing. The closer the renovation costs get to the full replacement cost of the building, the higher the FCI percentage, so a higher FCI indicates higher needs.

Buildings with a FCI score of 30% or higher generally recommends replacement, since the cost to repair is a significant portion of the entire building's value.

This FCI number is only used to measure the relative costs of repair versus replacement, and takes into account the following factors relative to the 'As New' condition of the building:

- Building Structural Integrity
- Exterior Envelope / Building Shell
- Interior Finishes
- Mechanical Systems
- Electrical Systems
- Plumbing Systems
- Furniture and Equipment
- Site Improvements

This shows several buildings over the 30% threshold, including some with very high scores indicating significant work.



EXECUTIVE SUMMARY

Summary Building Grades Overall

While all of the district's buildings are well-maintained, many have identified a long list of needs, particularly the older elementary schools. With an average building age of 57.2 years, there are several buildings well beyond their practical lifespan.

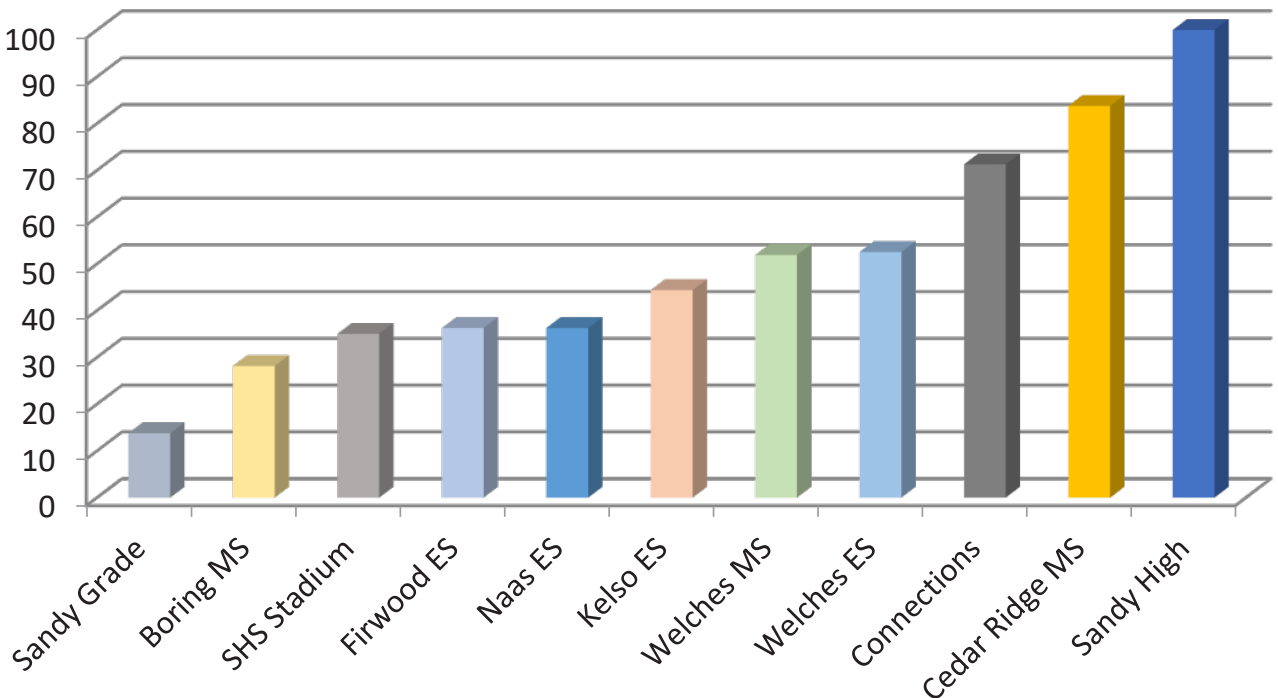
The following pages provide summary analysis on the specific aspects of each building's overall condition. Refer to the school specific pages further in the report for more detailed site-specific information. On the charts below, zero is the lowest performing score, while a score of 100 means the building is performing 'Perfectly', or exactly as needed.

This overall evaluation combines both the 'As New' ODE FCI evaluation and the broader look at factors not considered with that method. Below are the additional aspects of the buildings that we included in this evaluation:

- Structural Integrity
- Site and Building Accessibility
- Extent of Hazardous Materials

Excellent	90 - 100
Satisfactory	70 - 90
Minor Modernization Needed	50 - 70
Modernization Needed	30 - 50
Major Modernization Needed	0 - 30

Summary - All Buildings: Average

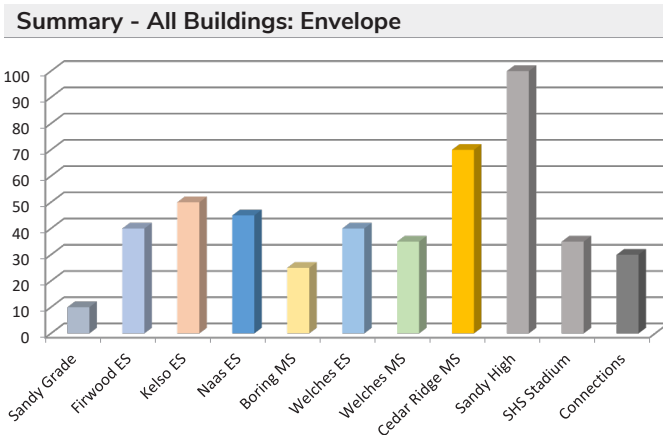


EXECUTIVE SUMMARY

Summary Building Grades by Category

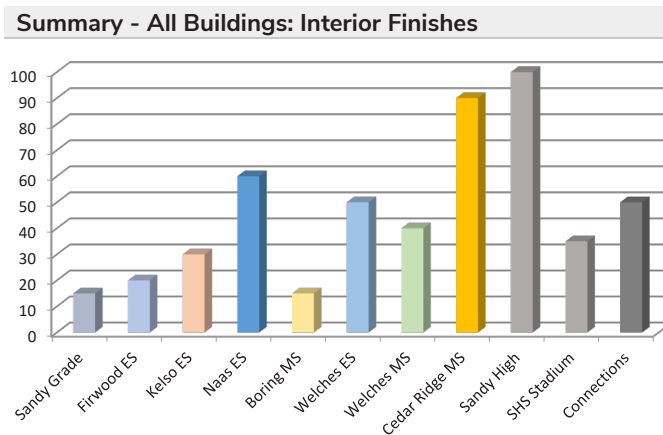
Exterior Envelope

The primary envelope concern District-wide is roofing, with several buildings well beyond their practical life span. Some have active leaks, and some have recent leaks that have been repaired. This is critical to maintain the building stock, and several are recommended for complete replacement, primarily the elementary and middle schools, with only a portion of Cedar Ridge recommended for work. Windows and siding are also indicated at some sites, as well as exterior door hardware upgrades.



Interior Finishes

Nearly all older schools have significant flooring needs, with a handful recommended for complete flooring replacement throughout. There are ceiling systems that have proven problematic for access and those have been recommended for complete replacement as well. Most older restrooms require complete finishes and fixture upgrades, while the District has completed partition replacement in several to date.



Excellent	90 - 100
Satisfactory	70 - 90
Minor Modernization Needed	50 - 70
Modernization Needed	30 - 50
Major Modernization Needed	0 - 30

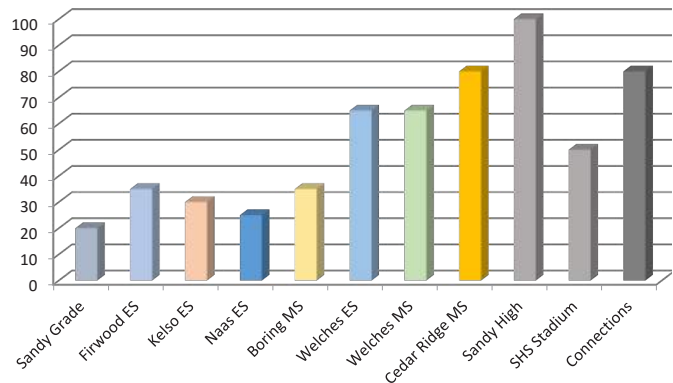
EXECUTIVE SUMMARY

Summary Building Grades by Category

HVAC / Mechanical

As would be expected, the older buildings have the longer list of needs. All elementary and middle schools have some work recommended for replacing indoor heating units, with Sandy Grade having the most immediate need. All sites other than the high school are also recommended for adding controls, as well as testing and balancing of the existing systems. MKE and Associates performed walkthroughs at each of the District's buildings and their full report is included as an appendix to this document.

Summary - All Buildings: Mechanical

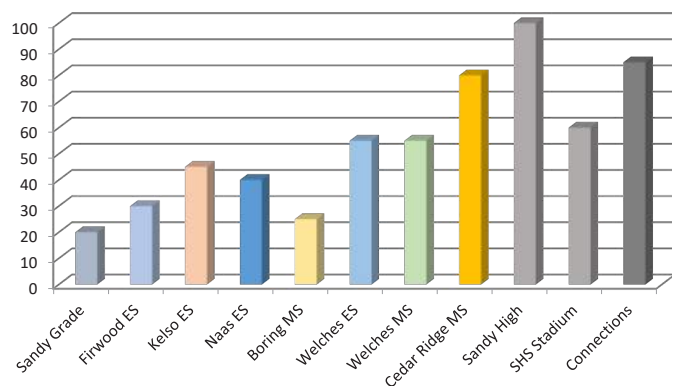


Electrical

Every District building requires some electrical work, most commonly upgrades to the emergency egress lighting systems. Several older schools have outdated and undersized electrical service to the entire building and subpanels. Lighting upgrades, including added controls, are also recommended for all buildings.

Several communications systems require work, including fire alarm, intercom / paging, and clocks systems. Most elementary and middle schools (excluding Cedar Ridge) are recommended for site lighting improvements.

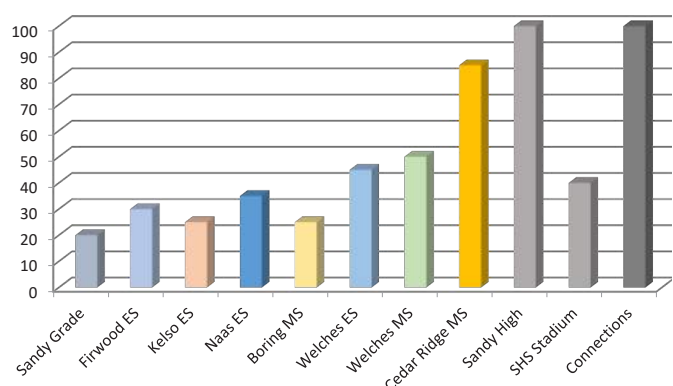
Summary - All Buildings: Electrical



Plumbing

Nearly every District site, with the exception of the high school and Community Connections have significant replacement work needed on the existing site water distribution piping. Many of these buildings have original galvanized piping still, which will likely be corroded due to age. There are also issues with the plumbing fixtures, from a lack of drinking fountains, to the need for replacing outdated large washbasins in the restrooms, to floor-mounted urinals whose repair parts are soon becoming obsolete and difficult to find.

Summary - All Buildings: Plumbing



Excellent	90 - 100
Satisfactory	70 - 90
Minor Modernization Needed	50 - 70
Modernization Needed	30 - 50
Major Modernization Needed	0 - 30

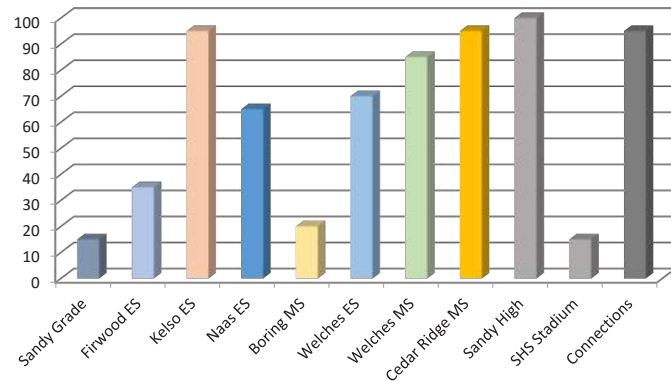
EXECUTIVE SUMMARY

Summary Building Grades by Category

Structural

There are several structures that are categorized as 'High' risk. These are typically the older buildings built under outdated building codes. Sandy Grade School is the only site where the entire campus is designated as 'High' risk. ZCS Engineering and Architecture performed walkthroughs at each of the District's buildings and their full report is included as an appendix to this document.

Summary - All Buildings: Structural

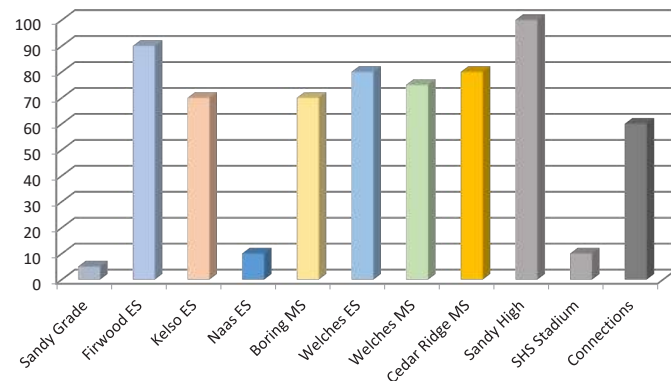


Accessibility

Sandy Grade and Naas are the two schools with the most significant accessibility issues. Sandy Grade's main building entry doesn't currently have a direct accessible path, and Naas has multiple interior levels accessed only by cross-corridor stairs. The other accessibility issues are centered primarily around restrooms, providing adequate facilities that fully meet current ADA code, both for staff and students.

As expected, the newer and newly renovated buildings are designed to current code. Also, with most building sites relatively flat, the site access is generally good for most all buildings.

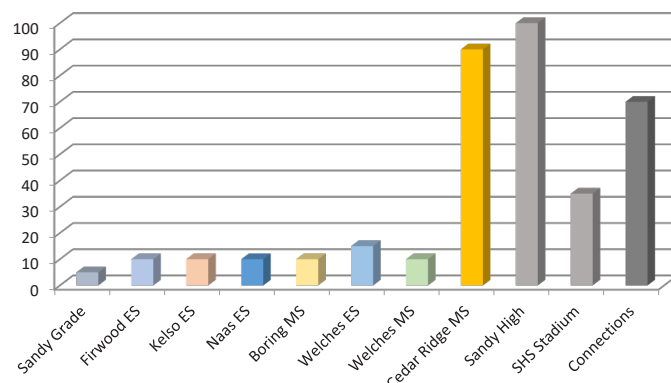
Summary - All Buildings: Accessibility



Hazardous Materials

There are no known risks currently relative to any existing hazardous materials in these buildings, as all have been encapsulated and are static. However, there is a significant amount of asbestos-containing flooring in many older District buildings. If renovated, the added costs and time to abate this material should be taken into consideration.

Summary - All Buildings: Lack of Hazardous Materials



Excellent	90 - 100
Satisfactory	70 - 90
Minor Modernization Needed	50 - 70
Modernization Needed	30 - 50
Major Modernization Needed	0 - 30

EXISTING FACILITY OVERVIEW

Summary - Structural

The table below is an excerpt from the full structural report, prepared by ZCS, that identifies that there are several buildings at the highest risk of collapse in a seismic event.

As you would expect, the older buildings generally score lower. Refer to the full evaluation, included at the back of this report, for complete details.

Risk	Score	Probability
LOW	>2.0	Less than 1 in 100 chance of collapse
MODERATE (MOD)	>1 AND < or = 2.00	Between 1 in 10 & 1 in 100 chance of collapse
HIGH	>0.0 AND < or =1.0	Between 100% & 1 in 10 chance of collapse
VERY HIGH	0.0 OR LESS	100% chance of collapse

Facility Name	Risk
Sandy Grade School	
Original Building (A)	0.6 - High
Classroom Wing (B)	0.8 - High
Firwood Elementary School	
Front Entrance (A)	1.5 - Moderate
North-West Classrooms (B)	0.8 - High
North-East Classrooms (C)	0.8 - High
Covered Play Area (D)	0.6 - High
Library (E)	5.5 - Low
Arts Room (F)	4.4 - Low
Multi-Purpose Room (G)	5.5 - Low
Kelso Elementary School	
Original Building (A)	3.1 - Low
Gymnasium (C)	5.5 - Low
Naas Elementary School	
Naas Elementary School (A)	1.2 - Moderate
Boring Middle School	
Original Classroom Building (A)	0.5 - High
Multi-Purpose Room (B)	0.6 - High
CTE Room (C)	4.4 - Low
Welches Elementary School	
North Classroom Wing (A)	4.4 - Low
Gymnasium (B)	1.1 - Moderate
South Classroom Wing (C)	4.4 - Low
Welches Middle School	
Original Building (A)	2.3 - Low
Cedar Ridge Middle School	
Gymnasium (A)	1.4 - Moderate
Original Classrooms (B)	0.6 - High
Cafeteria, Kitchen, and Band Room (C)	0.6 - High
Covered Entrance (D)	0.6 - High
Library Addition (E)	2.3 - Low
South Classroom Wing (F)	2.3 - Low
Classroom Addition (G)	5.5 - Low
Blended Learning Building (H)	4.2 - Low
Sandy High School	
Original Building (A)	3.9 - Low
Sandy High School Stadium	
Original Building (A)	1.3 - Moderate
Community Connections	
Original Building (A)	5.5 - Low

EXISTING FACILITY OVERVIEW

Summary - Mechanical and Plumbing Systems

The table below is an excerpt from the full mechanical, electrical and plumbing report, prepared by MKE & Associates. This identifies the specific scope items on each campus with the highest needs and anticipated approximate costs to repair or replace items indicated. In general, all sites have domestic water distribution as a high priority.

Heating equipment replacement is severe and required at Sandy Grade, Kelso Elementary and Naas Elementary. The high school has issues with the design of the boiler venting that requires correction, but that scope is relatively minor in cost.

Most all schools have some mechanical equipment that is recommended for replacement, and all but the high school are recommended to add controls, testing and balancing of the existing.

Please refer to the complete mechanical, electrical and plumbing systems report at the back of this document for additional detail.

School Site	Mechanical						Plumbing	Total (by Site)
	D3020 / D3030 / D3050				D3060	D3070	D2010	
	Replace Indoor HV/AHU	Replace RTU / Split System	Replace Condensing Unit	Replace UV/UH	Controls & Instrumen- tation	Systems Testing & Balancing	Domestic Water Distribution, Replace Plumbing Fixtures	
Sandy Grade	\$60,000	\$0	\$0	\$360,000	\$126,366	\$75,820	\$168,488	\$790,674
Firwood Elementary	\$300,000	\$0	\$0	\$0	\$166,347	\$99,808	\$221,796	\$787,951
Kelso Elementary	\$150,000	\$0	\$180,000	\$0	\$123,180	\$73,908	\$164,240	\$691,328
Nass Elementary	\$150,000	\$0	\$225,000	\$0	\$134,808	\$80,885	\$179,744	\$770,437
Boring Middle	\$60,000	\$0	\$0	\$0	\$153,990	\$92,394	\$205,320	\$511,704
Welches Elementary	\$60,000	\$0	\$0	\$288,000	\$93,882	\$56,329	\$125,176	\$623,387
Welches Middle	\$60,000	\$0	\$0	\$288,000	\$96,615	\$57,969	\$128,820	\$631,404
Cedar Ridge Middle	\$30,000	\$0	\$0	\$432,000	\$371,298	\$222,779	\$495,064	\$1,551,141
Sandy High	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Community Connections	\$0	\$20,800	\$0	\$0	\$3,000	\$1,800	\$0	\$25,600
Total (by Category)	\$ 870,000	\$ 20,800	\$ 405,000	\$ 1,368,000	\$ 1,269,486	\$ 761,692	\$ 1,688,648	\$ 6,383,626
Summary Totals	Legend							
\$3,575,528 Priority	AHU: Air Handling Unit				HV: Heating / Ventilating			
\$2,808,098 Recommended	UV / UH: Unit Ventilator / Unit Heat				RTU: Rooftop Unit			

EXISTING FACILITY OVERVIEW

Summary - Electrical Systems

The table below is an excerpt from the complete engineering report prepared by MKE & Associates. In general, all sites require an emergency egress lighting upgrade as soon as possible, listed as a 'Priority' item.

Nearly all schools are recommended for communications upgrades to fire alarm, intercom/paging, and clock systems, as well as general low voltage infrastructure improvements.

Sandy Grade has the most critical electrical issues, with the main service and all sub-panels requiring immediate replacement. All other schools do have recommended scope as well, most broadly with lighting and lighting controls work at every site. Exterior site lighting is recommended at several schools, and there are wiring improvements suggested for most older school buildings.

Please refer to the complete mechanical, electrical and plumbing systems report at the back of this document for additional detail.

School Site	Electrical											Total
	D5010 Elec. Serv. & Dist		D5020 Lighting & Branch Wiring			D5030 Communication & Security					G4020 Site	
	Main Electrical Service	Branch Circuit Panels	Lighting*	Building Branch Circuit Wiring	Emergency Egress Lighting***	Tele/Data Upgrade**	Fire Alarm Upgrade	Intercom / Paging Upgrade	Security System Upgrade	Lighting Control*	Site Lighting	
Sandy Grade	\$ 294,854	\$ 105,305	\$ 189,549	\$ 147,427	\$ 21,061	\$ 8,424	\$ 50,546	\$ 42,122	\$ 21,061	\$ 54,759	\$ -	\$ 935,108
Firwood Elementary	\$ 332,694	\$ 138,623	\$ 249,521	\$ 194,072	\$ 41,587	\$ 11,090	\$ 66,539	\$ 55,449	\$ -	\$ 72,084	\$ 22,180	\$ 1,183,839
Kelso Elementary	\$ 205,300	\$ 102,650	\$ 184,770	\$ 143,710	\$ 20,530	\$ 8,212	\$ 49,272	\$ 41,060	\$ -	\$ 53,378	\$ 20,530	\$ 829,412
Nass Elementary	\$ 179,744	\$ 78,638	\$ 202,212	\$ 157,276	\$ 33,702	\$ 8,987	\$ 53,923	\$ 44,936	\$ -	\$ 58,417	\$ 22,468	\$ 840,303
Boring Middle	\$ 256,650	\$ 128,325	\$ 230,985	\$ 179,655	\$ 38,498	\$ 10,266	\$ 61,596	\$ 51,330	\$ -	\$ 66,729	\$ 25,665	\$ 1,049,699
Welches Elementary	\$ 156,470	\$ 78,235	\$ 140,823	\$ 109,529	\$ 23,471	\$ 6,259	\$ 37,553	\$ 31,294	\$ -	\$ 40,682	\$ 15,647	\$ 639,963
Welches Middle	\$ 161,025	\$ 80,513	\$ 144,923	\$ 112,718	\$ 24,154	\$ 6,441	\$ 38,646	\$ 32,205	\$ -	\$ 41,867	\$ 16,103	\$ 658,595
Cedar Ridge Middle	\$ 30,942	\$ 309,415	\$ 495,064	\$ 61,883	\$ 92,825	\$ 18,565	\$ 148,519	\$ 123,766	\$ -	\$ 123,766	\$ -	\$ 1,404,745
Sandy High	\$ -	\$ -	\$ 1,164,700	\$ -	\$ 4,598	\$ -	\$ 346,345	\$ -	\$ -	\$ 10,000	\$ -	\$ 1,525,643
Sandy HS Stadium	\$ 30,650	\$ 15,325	\$ 61,300	\$ -	\$ 11,494	\$ -	\$ 19,923	\$ -	\$ 61,300	\$ 15,325	\$ -	\$ 215,317
Community Connections	\$ -	\$ -	\$ 3,600	\$ -	\$ 2,400	\$ -	\$ -	\$ -	\$ -	\$ 1,560	\$ -	\$ 7,560
	\$ 1,648,329	\$ 1,037,029	\$ 3,067,447	\$ 1,106,270	\$ 314,320	\$ 78,244	\$ 872,862	\$ 422,162	\$ 82,361	\$ 538,567	\$ 122,593	\$ 9,290,184

Summary Totals

\$ 714,479 Priority
\$ 8,575,705 Recommended

Legend

* Note: If lighting control is upgraded, majority of lighting may need to be replaced in order to be compatible w/ new controls.

** Note: Investigation and removal of abandoned low voltage cabling.

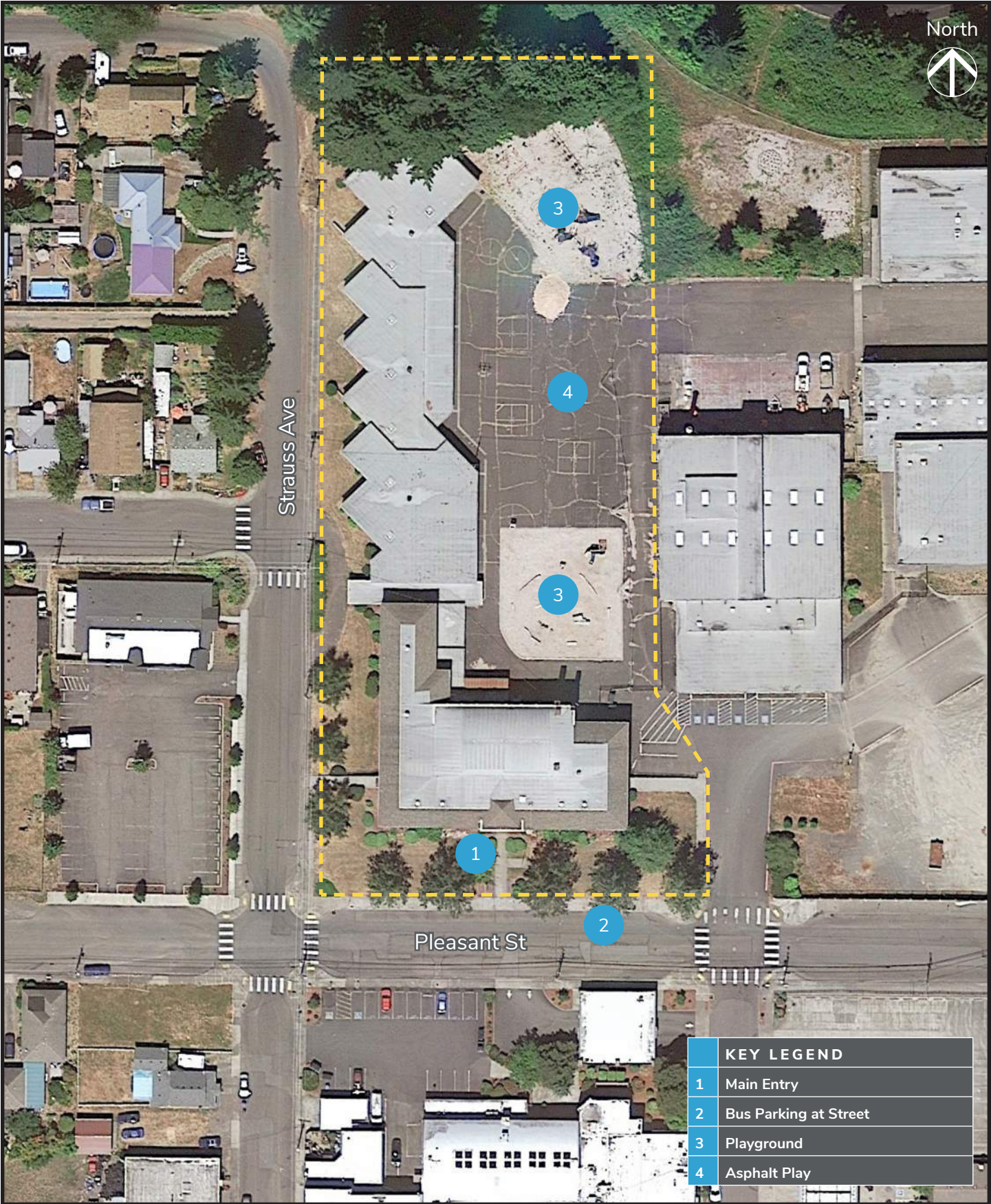
*** Note: Investigation and replacement / new fixtures.

FACILITY ASSESSMENTS BY BUILDING

01	Sandy Grade School	22
02	Firwood Elementary School	28
03	Kelso Elementary School	34
04a	Naas Elementary School	40
04b	Boring Middle School	46
05a	Welches Elementary School	52
05b	Welches Middle School	58
06	Cedar Ridge Middle School	64
07a	Sandy High School	70
07b	Sandy High School Stadium	78
08	Community Connections	82

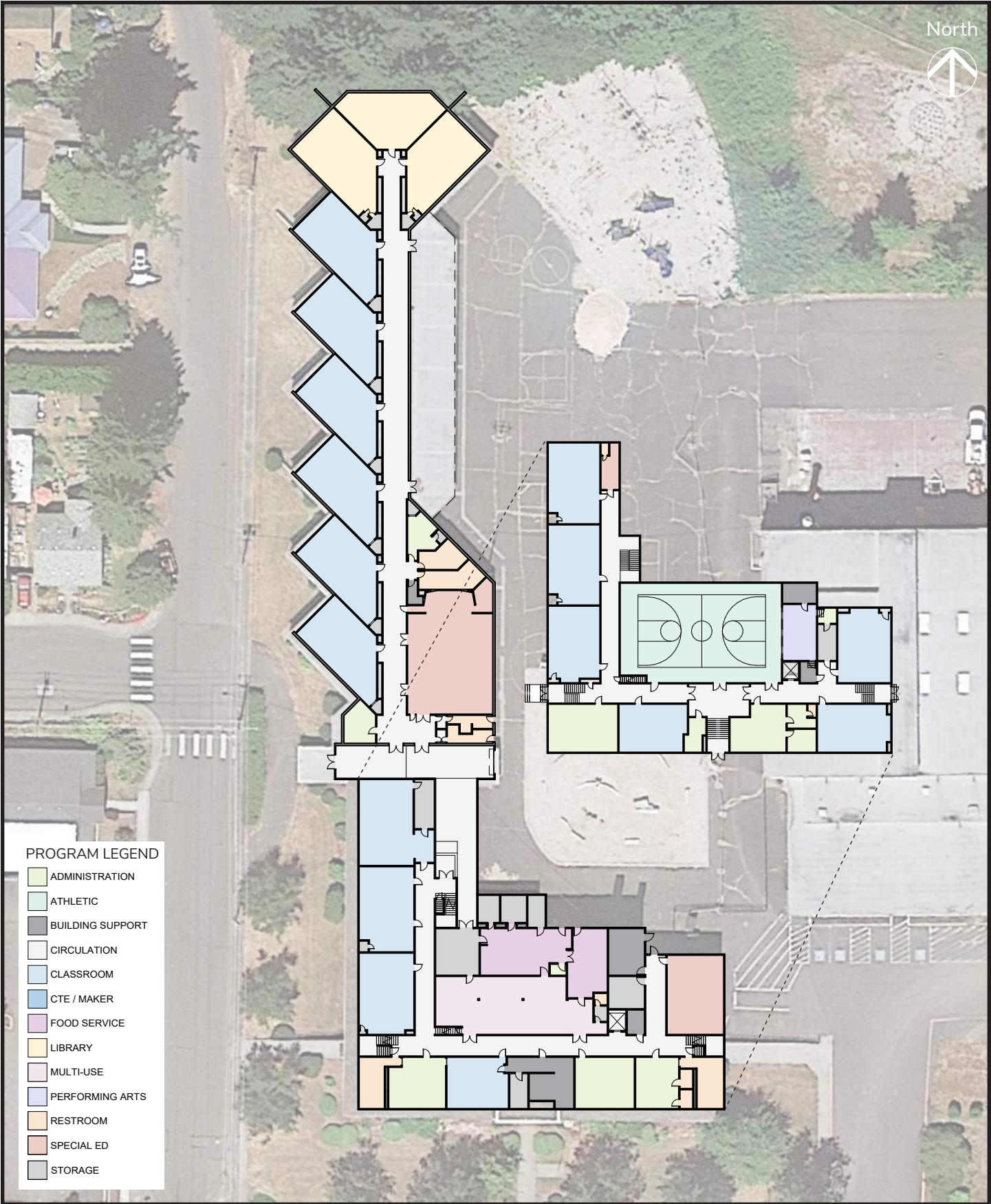
01 - SANDY GRADE SCHOOL

SITE PLAN



01 - SANDY GRADE SCHOOL

FLOOR PLAN



01 - SANDY GRADE SCHOOL



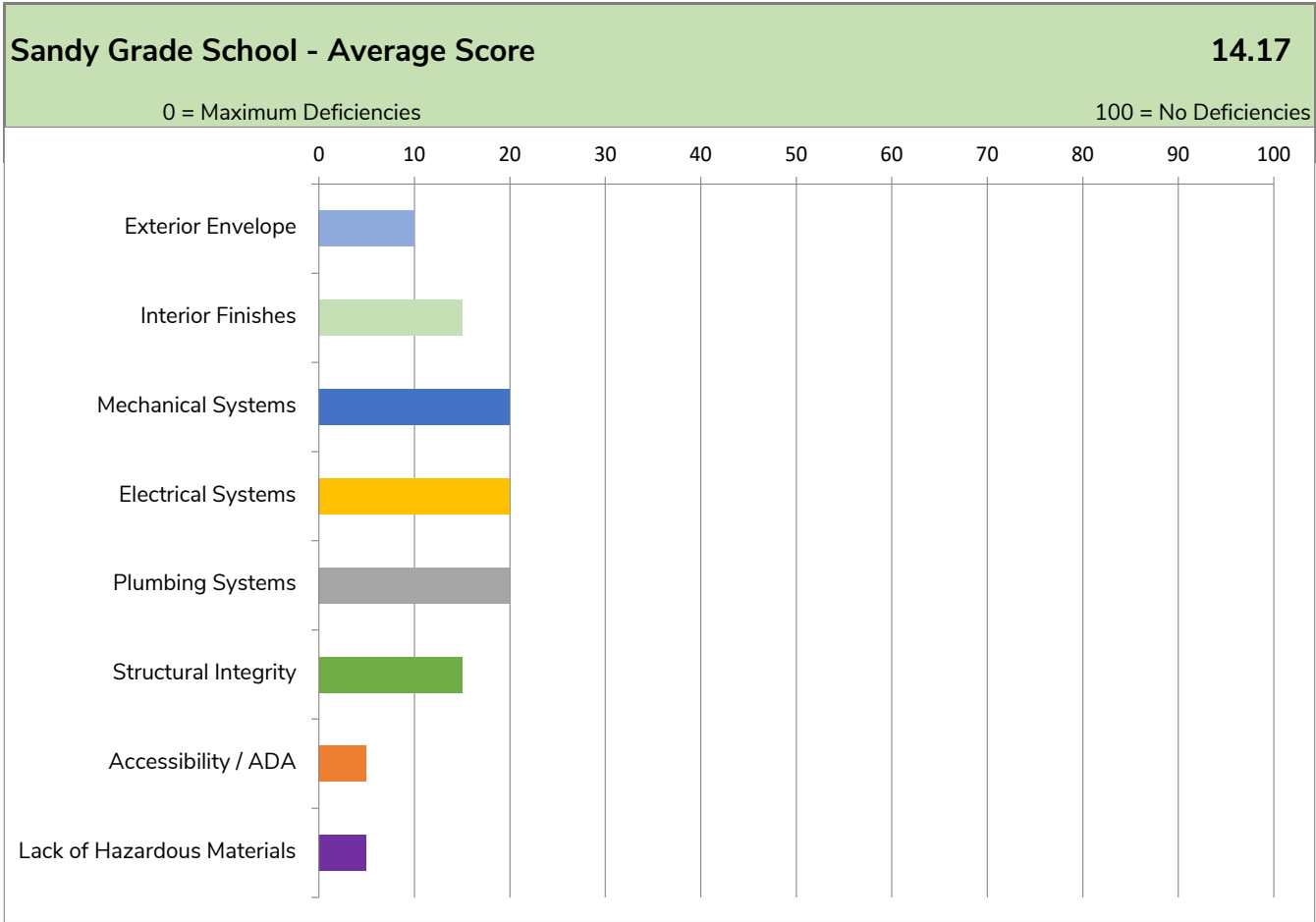
Facility Summary

Sandy Grade School is a true ‘urban’ school, located on a tight site very near the center of downtown Sandy. As the oldest building in the District, it holds significant sentimental value to the community, but also has the longest list of needs. Nearly the entire exterior envelope and interior finishes are in need of replacement, and there are significant access issues at the building entry and restrooms. The overall sloped site also creates challenges.

Teaching was very different in 1931 when the school was originally built, and the building does not function as needed for current modern educational practices. The classrooms are very small to meet current class size needs, and there is little to no support space for small groups and collaboration activities. The angled walls of the addition make it difficult to best utilize the space available.

Site Name:	Sandy Grade School
Building Name:	Main
ODE Building ID:	19260500
Building Type:	Elementary School
Students:	333
Building Address:	38955 Pleasant Street Sandy, OR 97055
County:	Clackamas
Gross Square Footage:	42,122 SF
Site Acreage:	2.81 Acres
Year Built:	1931
Additions/Renovations:	1952, 1961, 1965, 1970, 1972
Number of Floors:	Two (2)
Primary Structure:	Wood Framing
Roof Type:	Asphalt Shingle, Built-Up, Metal
Replacement Budget:	\$33,298,101

01 - SANDY GRADE SCHOOL



Excellent	90 - 100
Satisfactory	70 - 90
Minor Modernization Needed	50 - 70
Modernization Needed	30 - 50
Major Modernization Needed	0 - 30



Gym from Storage Mezzanine



Front Entry Lobby

01 - SANDY GRADE SCHOOL

Architectural

- Cafeteria is undersized for current capacity.
- Significant lack of small group space / educational support space currently.
- Replace roofing, gutters and downspouts.
- Replace / repair siding (wood and brick veneer).
- Replace all exterior windows, correct flashing to drain properly.
- Moisture intrusion issue in several places needs repair.
- Slope at concrete slab North end of site needs evaluation.
- Replace existing flooring throughout entire campus.
- Repair significant damage to wood flooring in some classrooms.
- Corridors and gym wood flooring cannot be refinished again, must be fully replaced.
- Most casework is beyond it's practical lifespan.
- Upgrade kitchen equipment, replace walk-ins.

Site Safety and Security Analysis

- Front entry has secure doors across corridors currently, but no good sight lines to visitors entering the building.
- Replace existing access controls (wiring is obsolete), look to add new devices also where appropriate.
- Tight urban site allows it to be fully fenced, but access for receiving is still required.
- The site has issues with drainage and gets very 'soggy' frequently.
- Upgrade exterior door hardware to District standard.

Accessibility

- Front entry has a half flight of stairs that makes it inaccessible, needs elevator or platform lift.
- Ramp between main building and addition is steep.
- Gym mezzanine stairs very narrow / tight access, guardrail does not meet current code due to age.
- Stage area lacks accessible path.

Hazardous Materials / Indoor Air Quality

- Some flooring has been replaced throughout or simply removed to expose the concrete below, and asbestos-containing material was abated then.
- There is likely still asbestos-containing materials within the building, but currently static and encapsulated (no risk of exposure).
- Due to the age of the building, it is assumed there would be lead paint encapsulated below newer paint.

No hazardous materials testing has been performed as part of this evaluation. All information on the presence and performance of these materials has been provided by the District.



01 - SANDY GRADE SCHOOL

Building Systems

Fire Protection:

- The main grade school building has a sprinkler system that receives routine testing and inspection.

Plumbing:

- Replace plumbing fixtures (floor-mounted urinals, curved washbasins).
- Replace domestic water supply piping throughout.
- Upgrade existing drinking fountains.

Mechanical:

- The unit ventilators are approximately 50 years old and beyond their expected lifespan, recommend replacement.
- The two (2) gym heating and ventilating units are non-functional (original), recommended for immediate replacement.

Electrical:

- Entire building service and branch circuit panels are beyond their practical life span and under capacity, recommend complete replacement.
- Not enough outlets throughout currently.
- Re-label breaker panel for new room numbers.
- Add voice amplification to all classrooms.
- Recommend to add generator to this site for resiliency, to improve emergency operations and planning.

Lighting:

- Existing lighting already upgraded to LED generally.
- Upgrade to add / replace egress emergency lighting throughout entire campus.
- Add lighting controls for energy efficiency.

Fire Alarm:

- Upgrade of existing system recommended.

Communication and Security:

- Upgrade intercom / paging to District standard.
- Upgrade existing security system.
- Upgrade low voltage wiring infrastructure.
- Relocate existing Intermediate Distribution Frame(s) (IDF).

Refer to full report from MKE & Associates for more detail.

Structural

- Both buildings are rated as a 'High' seismic risk.
- Outdated gym basketball goals need replacement (potentially unsafe seismically).

Refer to full report from ZCS Engineering and Architecture for more detail.



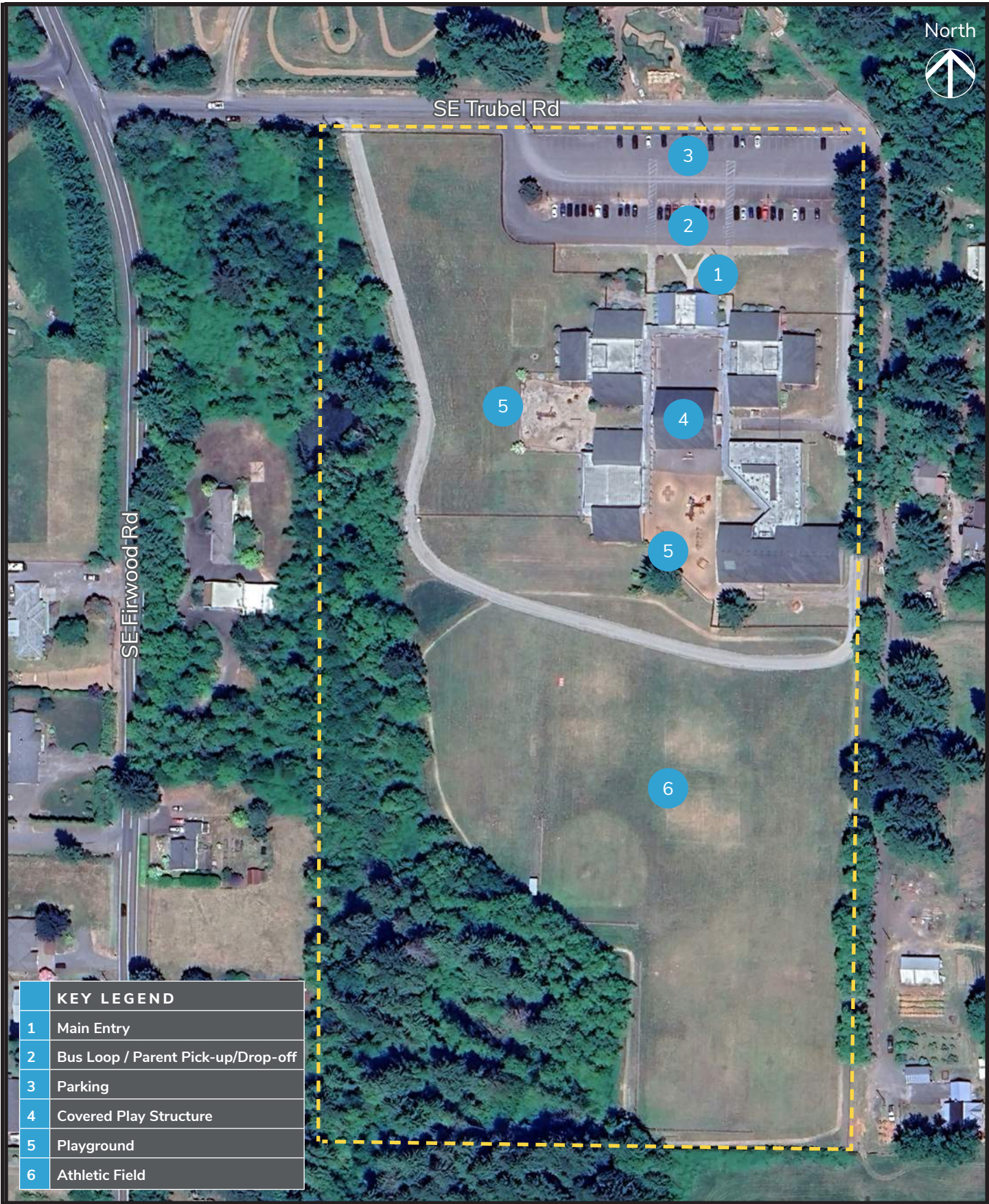
Addition Corridor



Addition Exterior Masonry and Gutter

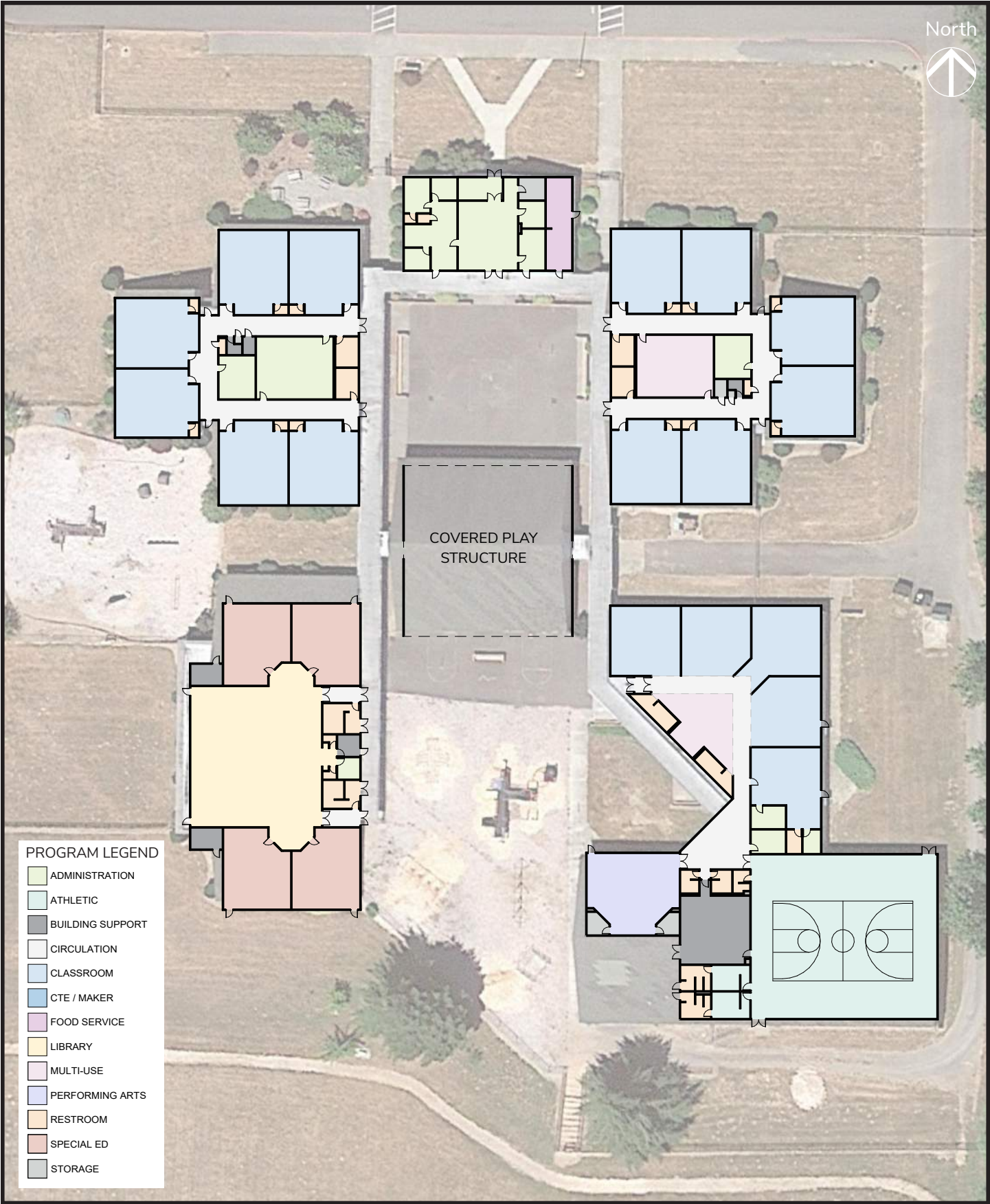
02 - FIRWOOD ELEMENTARY SCHOOL

SITE PLAN



02 - FIRWOOD ELEMENTARY SCHOOL

FLOOR PLAN



02 - FIRWOOD ELEMENTARY SCHOOL



Facility Summary

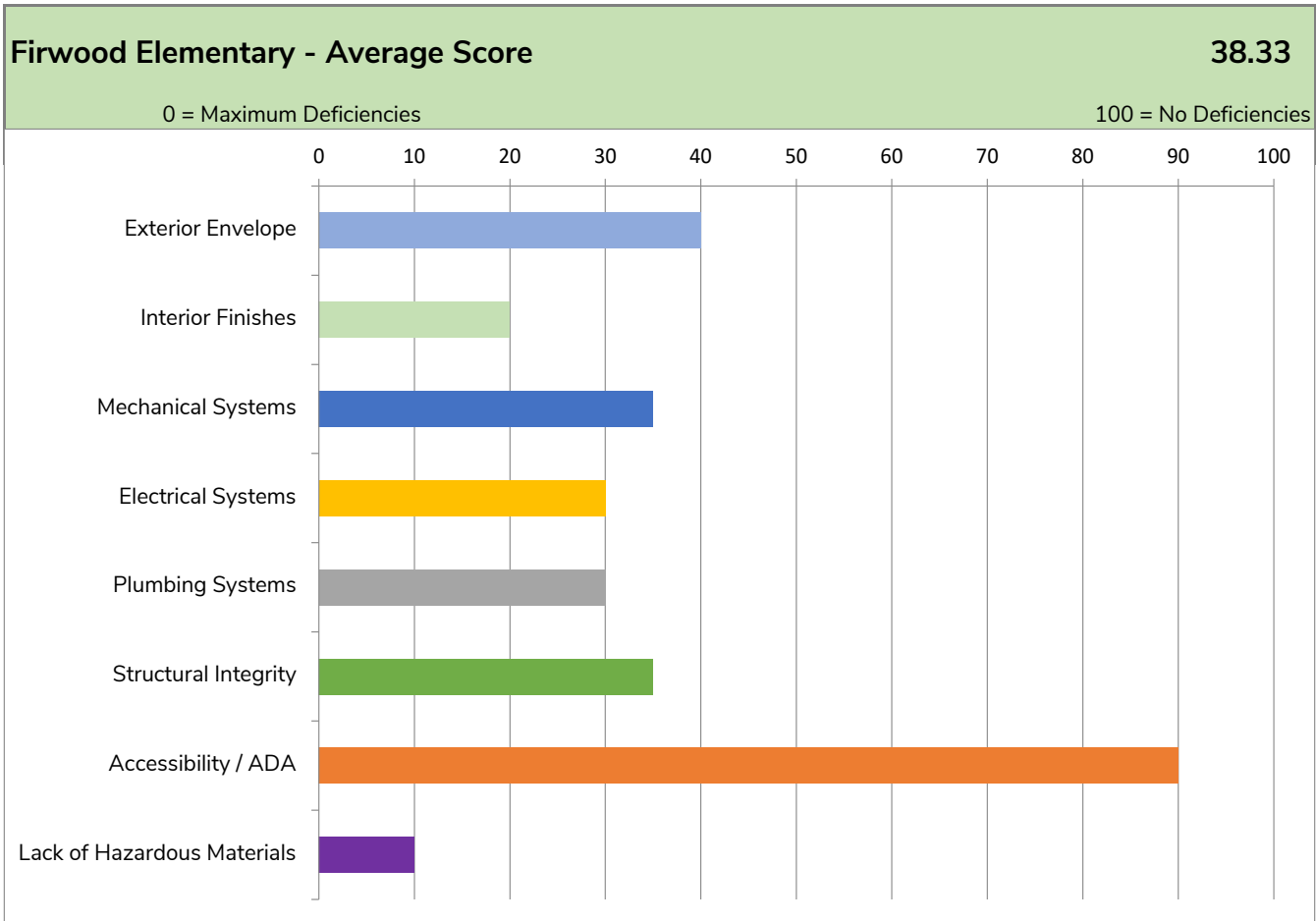
Firwood Elementary School has a unique physical configuration, with five (5) distinct but separate buildings on the campus, centered around the covered play structure.

The building and walkway roofing need replacing, and the brick veneer needs repair. The metal siding needs repair, and the existing aluminum windows need replacement. Many of the building systems are beyond their practical lifespan and require replacement or upgrade.

Another significant challenge is lunch service. Currently the gym is used for lunch seating, with the kitchen very far away at the front entry building. The kitchen is also significantly undersized and difficult to make work.

Site Name:	Firwood Elementary
Building Name:	Main
ODE Building ID:	19260600
Building Type:	Elementary School
Students:	473
Building Address:	42900 SE Trubel Road Sandy, OR 97055
County:	Clackamas
Gross Square Footage:	55,449 SF
Site Acreage:	20.00 Acres
Year Built:	1966
Additions/Renovations:	1973, 1978
Number of Floors:	One (1)
Primary Structure:	Wood Framing
Roof Type:	Asphalt Shingle, Built-Up, Single Ply, Metal
Replacement Budget:	\$43,833,304

02 - FIRWOOD ELEMENTARY SCHOOL



Excellent	90 - 100
Satisfactory	70 - 90
Minor Modernization Needed	50 - 70
Modernization Needed	30 - 50
Major Modernization Needed	0 - 30



02 - FIRWOOD ELEMENTARY SCHOOL

Architectural

- Replace roofing (asphalt shingle, built-up, membrane).
- Replace exterior windows and window coverings.
- Repair exterior brick and metal siding.
- Kitchen is undersized, located far from Commons.
- Replace gym flooring, wall covering.
- Replace flooring in Corridors, shared program areas.
- Resilient sheet flooring needs replacement.
- Replace 12x12 ceiling tile system.
- Music building classrooms need doors, acoustic separation.
- Replace wall protection at Music Room.

Site Safety and Security Analysis

- Entry vestibule works well currently, site supervision could be improved.
- Replace existing access controls (wiring is obsolete), look to add new devices also where appropriate.
- Upgrade exterior door hardware to district standard.

Accessibility

- Generally the site overall is flat and the building is accessible otherwise.

Hazardous Materials / Indoor Air Quality

- There is likely still asbestos-containing materials within the building, but currently static and encapsulated (no risk of exposure).

No hazardous materials testing has been performed as part of this evaluation. All information on the presence and performance of these materials has been provided by the District.



Restroom Fixtures and Flooring



Building D Classroom Entry

02 - FIRWOOD ELEMENTARY SCHOOL

Building Systems

Fire Protection:

- Building C has a sprinkler system that receives routine testing and inspection.

Plumbing:

- Replace plumbing fixtures (floor-mounted urinals, curved washbasins).
- Replace domestic water supply piping throughout.
- Add drinking fountains throughout school.

Mechanical:

- The indoor mechanical units are well over 50 years old and recommended for replacement, ideally with units that are installed overhead.

Electrical:

- Recommend main electrical service and sub-panel replacement in (5-10) years, fair condition currently.
- Add voice amplification to all classrooms.
- Recommend to add generator to this site for resiliency, to improve emergency operations and planning.

Lighting:

- Existing lighting mostly upgraded to LED.
- Upgrade to add / replace egress emergency lighting throughout entire campus.
- Add lighting controls for energy efficiency.

Fire Alarm:

- Upgrade of existing system recommended.

Communication and Security:

- Relocate existing IDF(s).
- Upgrade intercom / paging to District standard.
- Upgrade low voltage wiring infrastructure.
- Remove existing abandoned low voltage cabling.

Refer to full report from MKE & Associates for more detail.

Structural

- Buildings A and B and the Covered Play Structure are classified as 'High' seismic risk structures.
- All other building areas are designated either 'Moderate' or 'Low' risk.

Refer to full report from ZCS Engineering and Architecture for more detail.



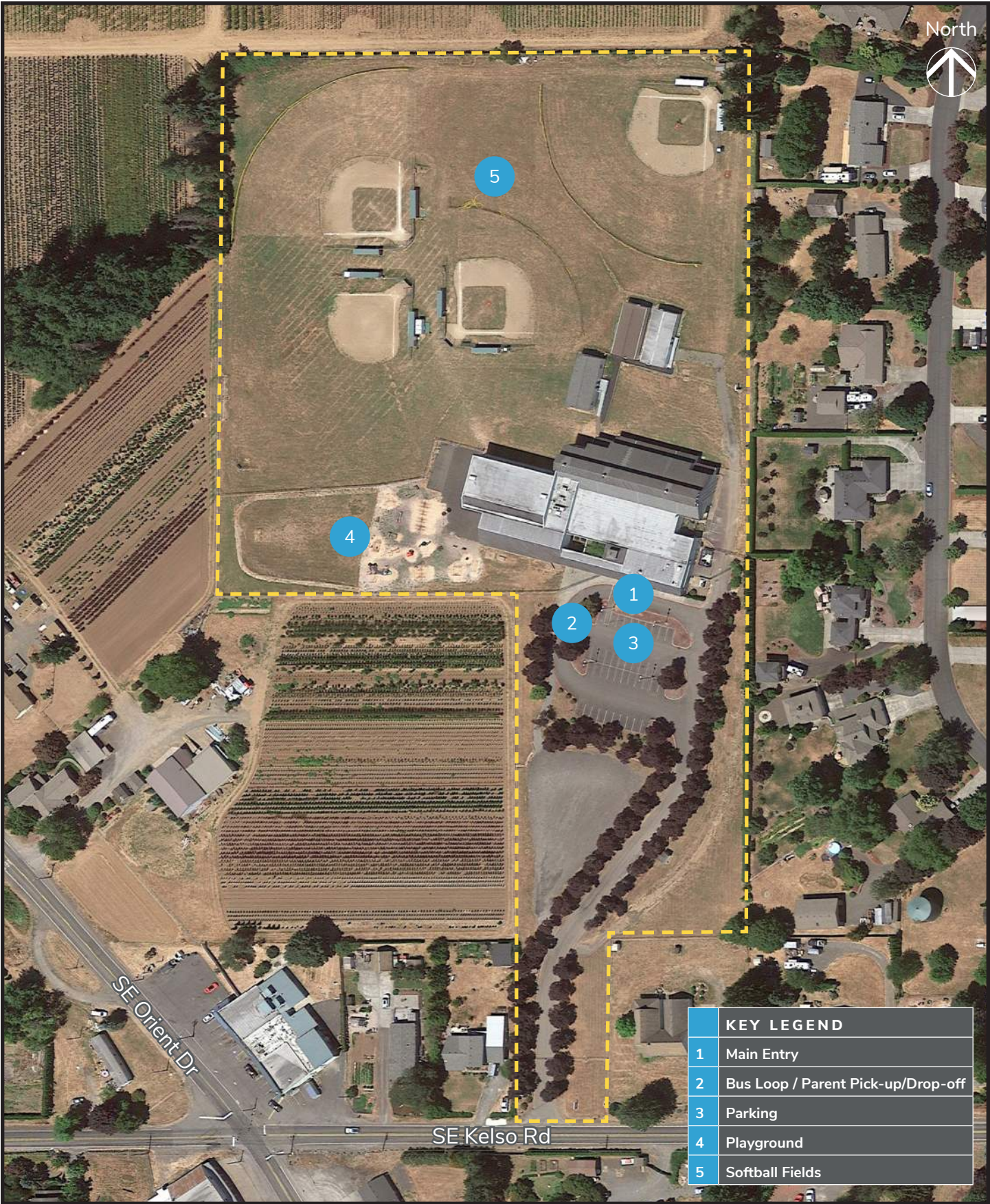
Music Room



Exterior Metal Siding and Masonry

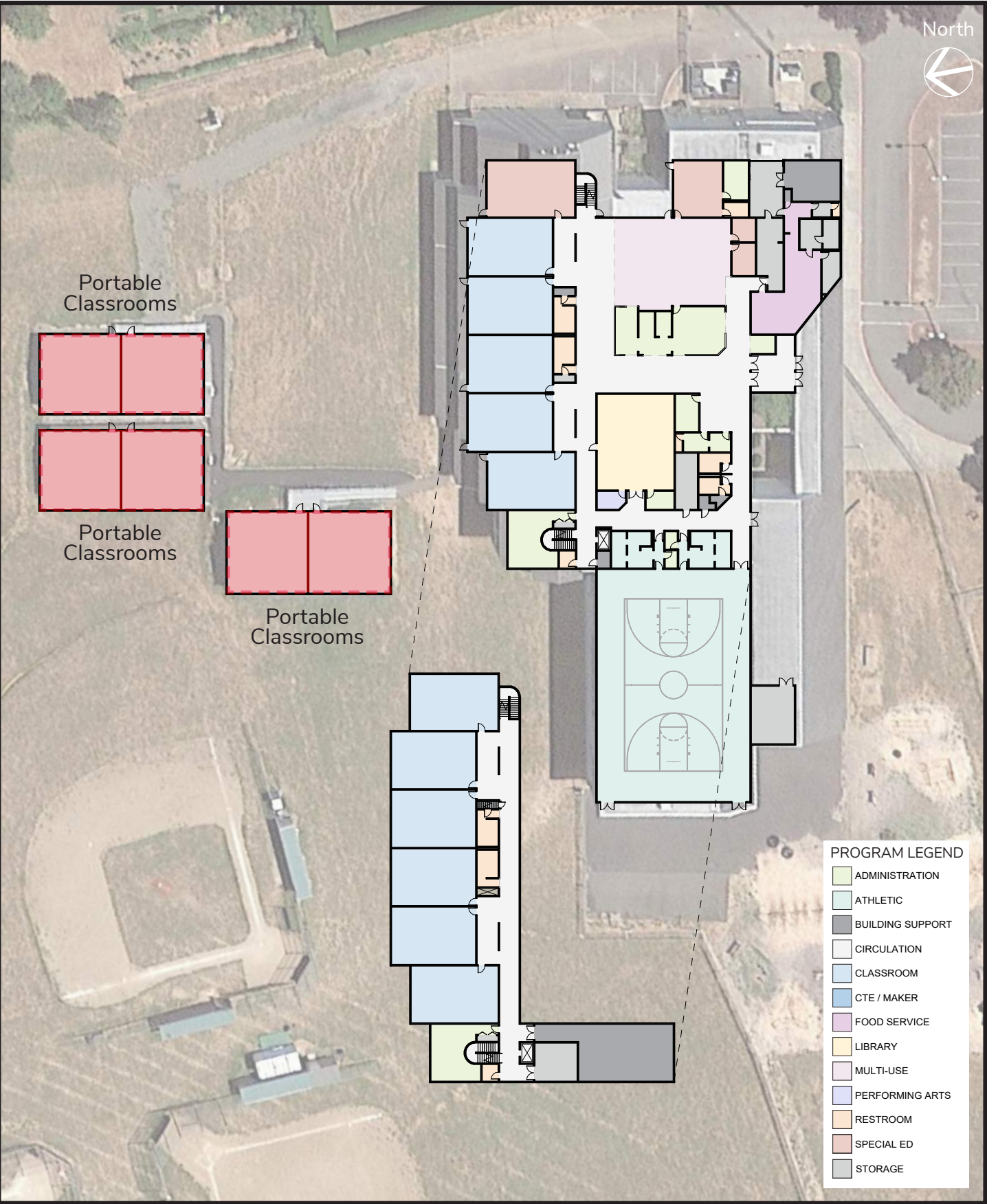
03 - KELSO ELEMENTARY SCHOOL

SITE PLAN



03 - KELSO ELEMENTARY SCHOOL

FLOOR PLAN



03 - KELSO ELEMENTARY SCHOOL



Facility Summary

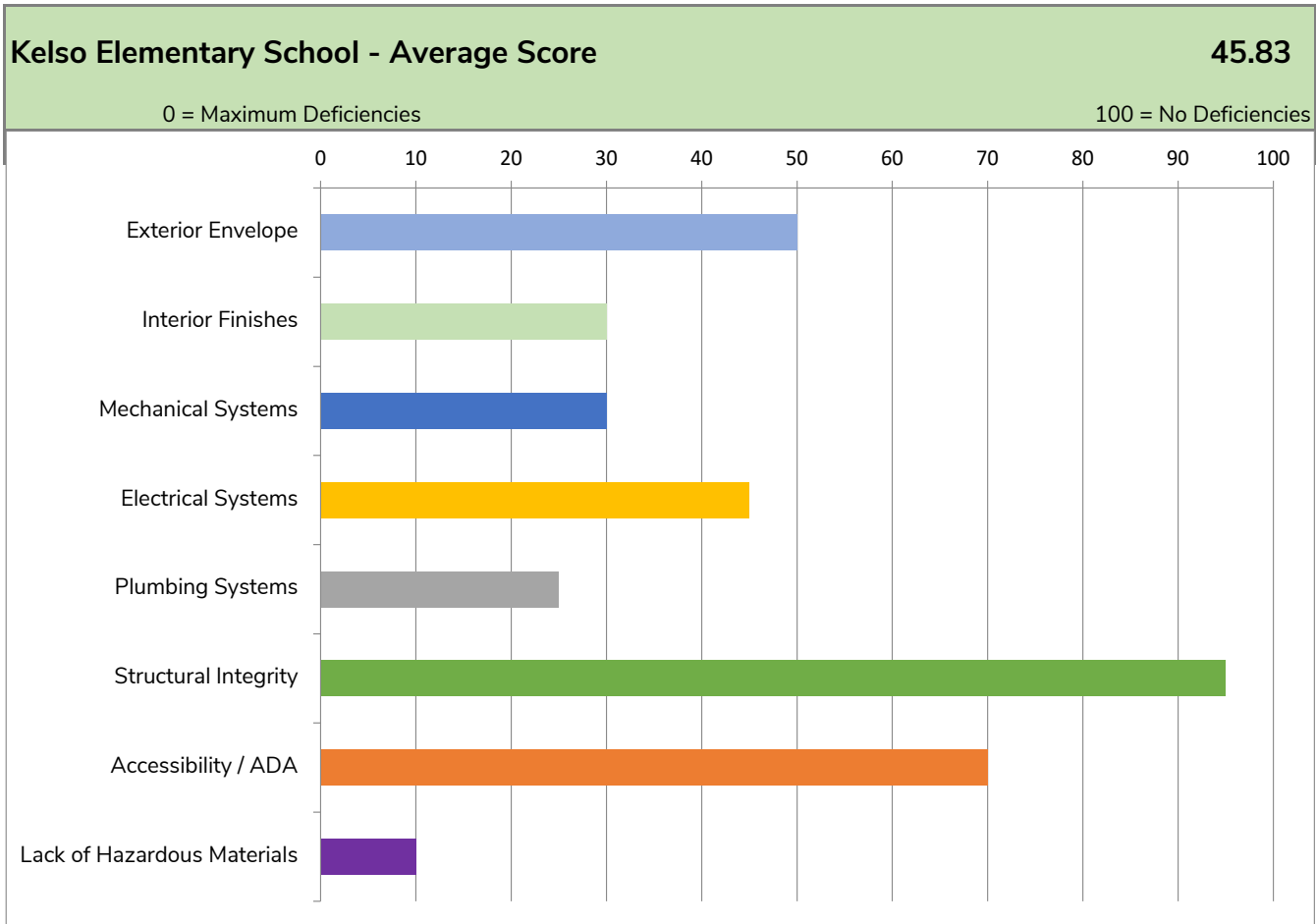
Originally built in 1978, Kelso Elementary has been renovated a handful of times, most recently to relocate the cafeteria closer to the kitchen to improve flow.

Overall the building functions well for the District needs. The entire roof requires replacement immediately, as there are some active leaks. The exterior siding requires repair / replacement, particularly around the windows.

The flooring requires replacement, as well as the 12x12 ceiling tile system that is problematic. New window coverings are also needed for all exterior and interior windows.

Site Name:	Kelso Elementary
Building Name:	Main
ODE Building ID:	19260400
Building Type:	Elementary School
Students:	347
Building Address:	34651 SE Kelso Road Boring, OR 97009
County:	Clackamas
Gross Square Footage:	41,060 SF
Site Acreage:	12.95 Acres
Year Built:	1978
Additions/Renovations:	2008, 2015, 2021
Number of Floors:	Two (2)
Primary Structure:	Wood Framing
Roof Type:	Asphalt Shingle, Built-Up
Replacement Budget:	\$32,458,574

03 - KELSO ELEMENTARY SCHOOL



Excellent	90 - 100
Satisfactory	70 - 90
Minor Modernization Needed	50 - 70
Modernization Needed	30 - 50
Major Modernization Needed	0 - 30



03 - KELSO ELEMENTARY SCHOOL

Architectural

- Replace roofing.
- Replace / repair siding where damaged (near windows, typically).
- Replace flooring throughout. Replace all carpet with resilient tile.
- Replace surface 12x12 ceiling tiles throughout.
- Replace window coverings throughout.
- Relocate kitchen equipment controls to more accessible location.
- Add voice amplification at main level classrooms.

Site Safety and Security Analysis

- Upgrade exterior door hardware to district standard.
- Replace wiring for access controls throughout, consider adding more devices.

Accessibility

- No issues identified.

Hazardous Materials / Indoor Air Quality

- There is likely still asbestos-containing materials within the building, but currently static and encapsulated (no risk of exposure).

No hazardous materials testing has been performed as part of this evaluation. All information on the presence and performance of these materials has been provided by the District.



Portable Classrooms



Corridor

03 - KELSO ELEMENTARY SCHOOL

Building Systems

Plumbing:

- Site aquifer is failing, needs tie-in to Boring Water.
- Replace galvanized water supply piping (ideally overhead).

Mechanical:

- Replace rooftop condensing units (45+ years old).
- Replace associated indoor fan units.

Electrical:

- Main electrical service and subpanels recommended for replacement.
- Recommend to add generator to this site for resiliency, to improve emergency operations and planning.

Lighting:

- Priority to upgrade all emergency egress lighting.
- Add lighting controls, radio-controlled (phased approach):
 - Shared Commons spaces first.
 - Hallways next.
 - Classrooms last.
- Replace exterior site lighting.
- Most lighting has already been retrofit to LED.

Fire Alarm:

- Upgrade of existing system recommended.

Communication and Security:

- Upgrade intercom / paging to District standard.
- Upgrade low voltage wiring infrastructure.
- Remove existing abandoned low voltage cabling.

Refer to full report from MKE & Associates for more detail.

Structural

- All building areas are listed as 'Low' risk category.

Refer to full report from ZCS Engineering and Architecture for more detail.



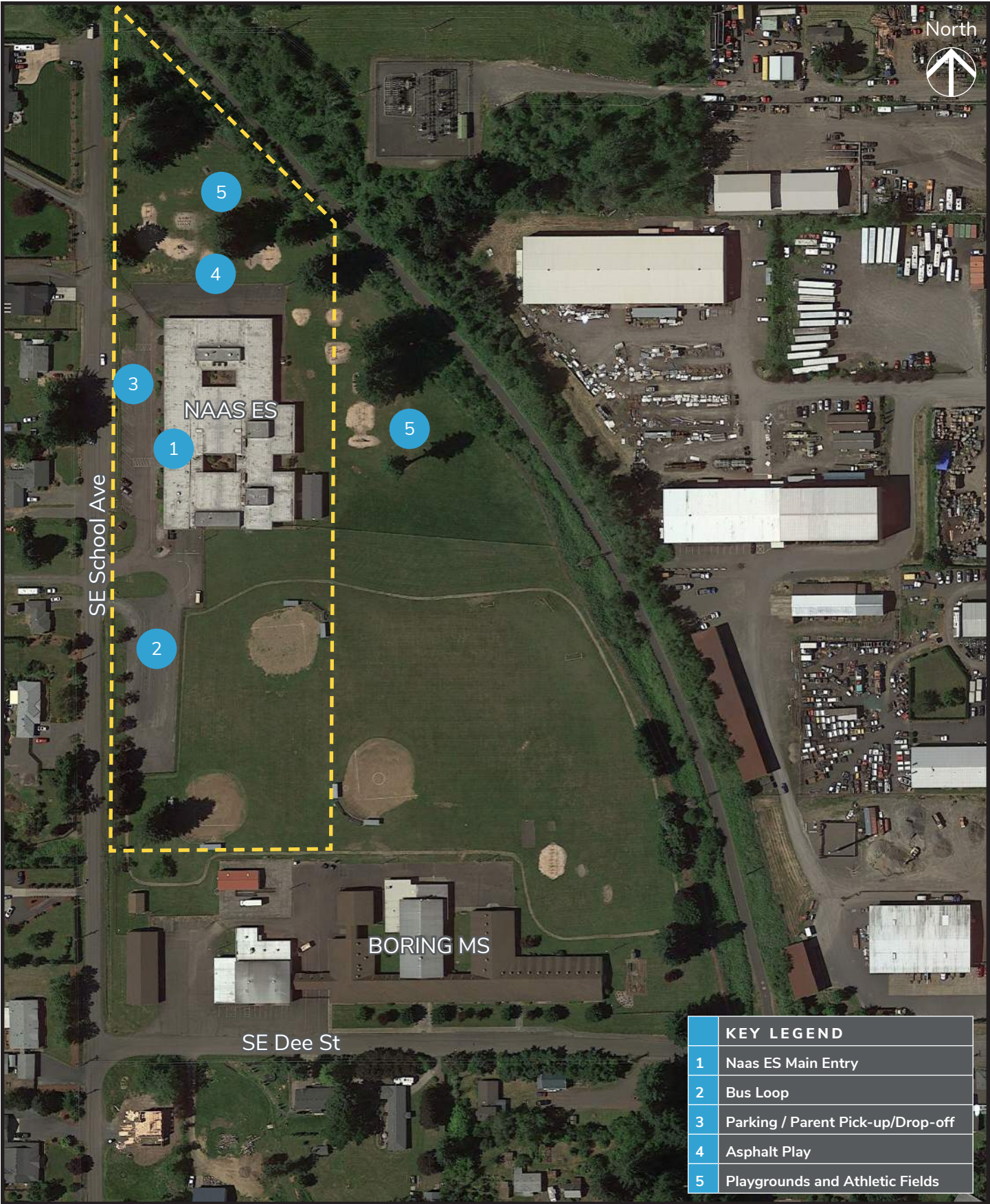
Typical Classroom



Covered Walkway

4A - NAAS ELEMENTARY SCHOOL

SITE PLAN



4A - NAAS ELEMENTARY SCHOOL

FLOOR PLAN



4A - NAAS ELEMENTARY SCHOOL



Facility Summary

Naas Elementary is one of several schools on shared sites within the District, with Boring Middle School directly adjacent. One of the largest issues with this building is accessibility, as there are several interior levels and situations with stairs across several corridors.

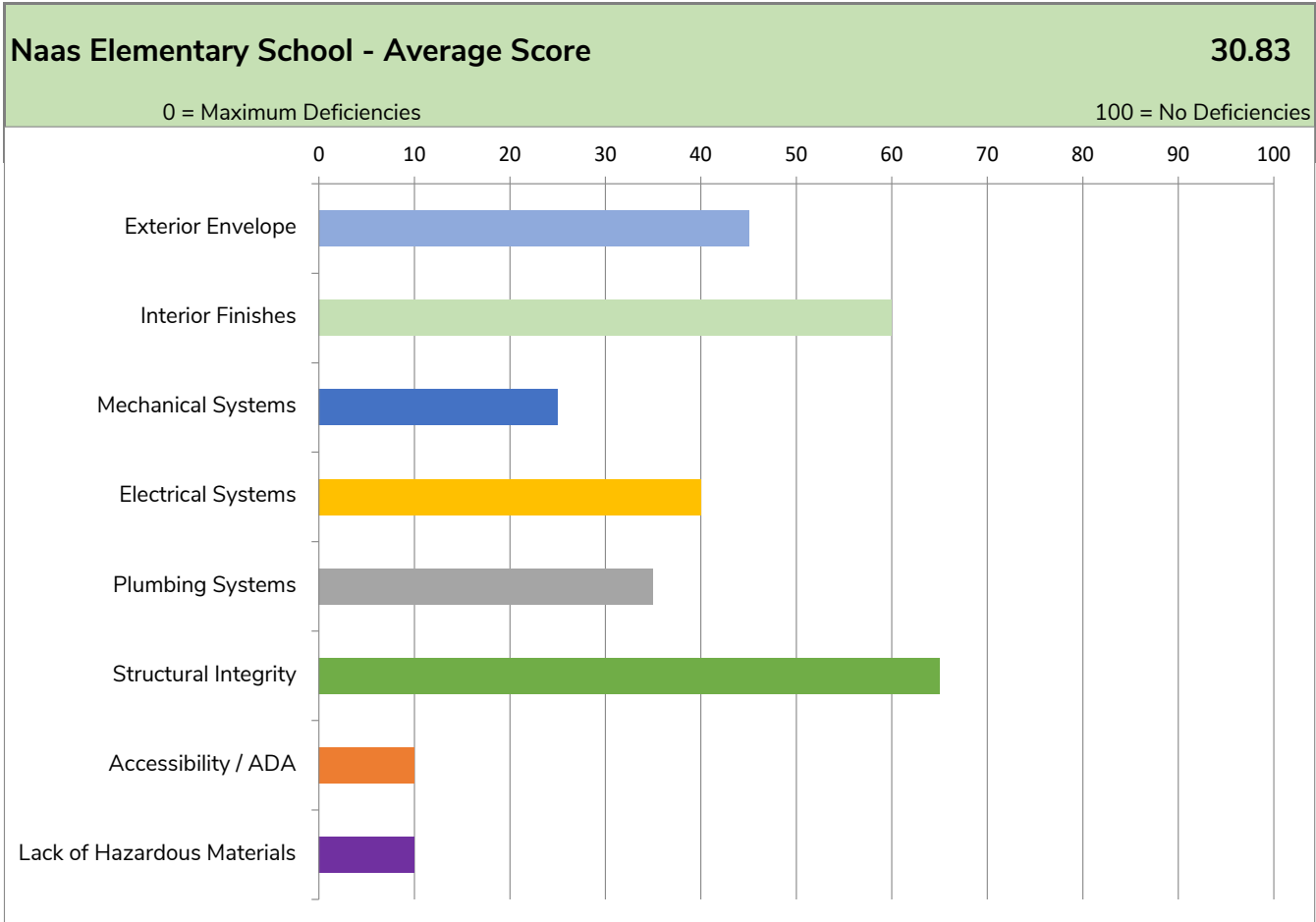
There is also one shared space for both the gym and cafeteria, which creates a scheduling and logistical issue with access for multiple groups. There is a shared area outside the classrooms adjacent to the gym that has been converted for athletic use, but the carpeted flooring and acoustic issues make it very difficult to use.

There are site issues with aged playground equipment, as well as building envelope issues with roofing and siding. The paving requires replacement as well, as it's in poor condition overall.

In an attempt to meet the educational adequacy needs of the students, the District has added aged modular buildings that will soon outlive their practical lifespan.

Site Name:	Naas Elementary
Building Name:	Main
ODE Building ID:	19260200
Building Type:	Elementary School
Students:	346
Building Address:	12240 SE School Avenue Boring, OR 97009
County:	Clackamas
Gross Square Footage:	44,936 SF
Site Acreage:	7.42 Acres
Year Built:	1968
Additions/Renovations:	1972, 2019
Number of Floors:	One (1)
Primary Structure:	Wood Framing
Roof Type:	Built-Up
Replacement Budget:	\$35,522,613

4A - NAAS ELEMENTARY SCHOOL



Excellent	90 - 100
Satisfactory	70 - 90
Minor Modernization Needed	50 - 70
Modernization Needed	30 - 50
Major Modernization Needed	0 - 30



4A - NAAS ELEMENTARY SCHOOL

Architectural

- Replace roofing.
- Replace or repair exterior siding, weather barrier.
- Lacking gymnasium space, now shared cafeteria.
- Replace surface 12x12 ceiling tile system throughout (problematic for access, repair), primarily in corridors.
- Many classrooms, corridors have gypsum wall board ceilings, which doesn't provide access, problematic. Likely cost-prohibitive to replace with suspended system, but replace stained areas.
- Replace worn flooring and carpet.
- Staff room is undersized for current capacity needs.

Site Safety and Security Analysis

- Front entry has secure doors currently, but the front office has no good sight lines to visitors entering the building.
- Replace existing access control (wiring is obsolete), look to also add new.
- Consider replacing extensive wire glass in doors.
- Add window film at key locations for intrusion.
- Playground equipment is outdated, recommended for replacement.
- Upgrade exterior door hardware to District standard.

Accessibility

- Building has multiple interior levels but no elevator or ramp connecting them.
- Playground equipment not accessible currently.

Hazardous Materials / Indoor Air Quality

- There is likely still asbestos-containing materials within the building, but currently static and encapsulated (no risk of exposure).

No hazardous materials testing has been performed as part of this evaluation. All information on the presence and performance of these materials has been provided by the District.



Girls' Restroom



Activity Room

4A - NAAS ELEMENTARY SCHOOL

Building Systems

Plumbing:

- Replace existing galvanized supply water piping.
- Replace washbasins in restrooms with new wall-mounted lavatories.
- Drinking fountain upgrades ongoing, may still need to replace / add some.

Mechanical:

- Condensing unit requires immediate replacement.
- Unit ventilator heaters are over 50 years old and beyond life expectancy, replacement is recommended.

Electrical:

- Replace main electrical service and subpanels throughout entire building in the next five (5) years.
- Replace branch circuit wiring.
- Recommend to add generator to this site for resiliency, to improve emergency operations and planning.

Lighting:

- Priority to upgrade all emergency egress lighting.
- Lighting already upgraded to LED at Cafeteria and adjacent Multi-Purpose Room, Classrooms.
- Recommend upgrading all remaining original lighting to LED.
- Recommend to upgrade lighting controls.
- Replace exterior site lighting.

Fire Alarm:

- Upgrade of existing system recommended.

Communication and Security:

- Upgrade outdated fire alarm 'head end' and devices throughout (currently ongoing by District).
- Upgrade intercom / paging to District standard.
- Upgrade low voltage wiring infrastructure.
- Relocate existing IDF(s), slack in wire allows 15' +/- adjustment without running new cables.
- Remove existing abandoned low voltage cabling.
- Look to reconfigure existing MDF at Computer Lab by building closet adjacent to main entry lobby.
- Add voice amplification to all classrooms.

Structural

- The building is rated as a 'Moderate' seismic risk overall.

Refer to full report from ZCS Engineering and Architecture for more detail.



4B - BORING MIDDLE SCHOOL

SITE PLAN



4B - BORING MIDDLE SCHOOL

FLOOR PLAN



4B - BORING MIDDLE SCHOOL



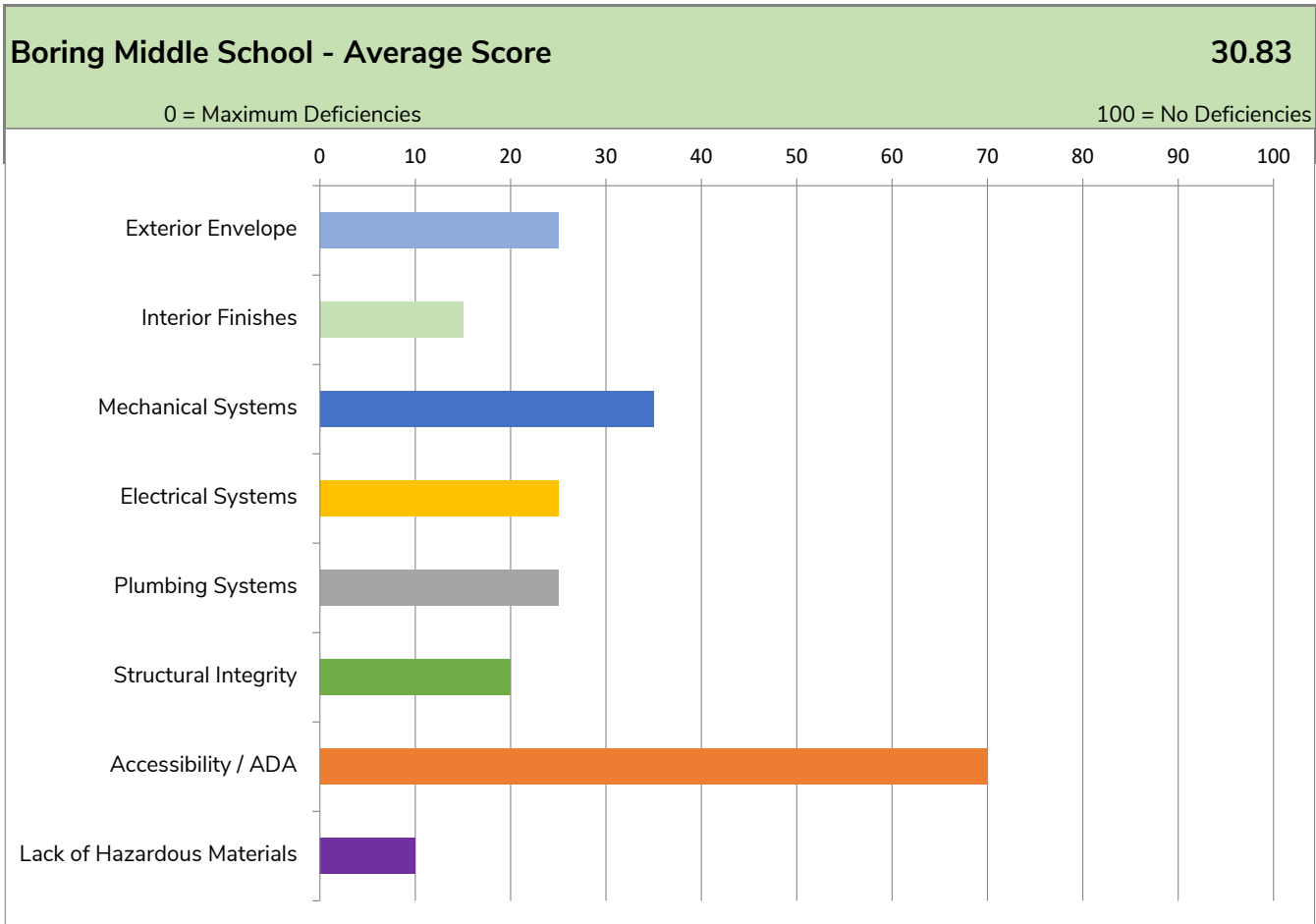
Facility Summary

The original portions of Boring Middle School are over 76 years old and, while well-maintained, have significant needs, both inside and out. The roofing, fascia boards and soffits need complete replacement. There is significant repair of the exterior siding needed as well, with areas near the playground and band wall in particularly poor condition. The interior finishes are well beyond their practical life span, and the site paving is in very poor condition.

The hydronic pipe heating system leaks frequently, and the building ventilation is inadequate.

Site Name:	Boring Middle School
Building Name:	Main
ODE Building ID:	19260300
Building Type:	Middle School
Students:	400
Building Address:	27801 SE Dee Street Boring, OR 97009
County:	Clackamas
Gross Square Footage:	51,330 SF
Site Acreage:	12.56 Acres
Year Built:	1948
Additions/Renovations:	1963, 1968, 1980
Number of Floors:	One (1)
Primary Structure:	Wood Frame, CMU Bearing
Roof Type:	Asphalt Shingle, Built-Up
Replacement Budget:	\$42,606,028

4B - BORING MIDDLE SCHOOL



Excellent	90 - 100
Satisfactory	70 - 90
Minor Modernization Needed	50 - 70
Modernization Needed	30 - 50
Major Modernization Needed	0 - 30



4B - BORING MIDDLE SCHOOL

Architectural

- Replace roofing entirely, including fascia boards, soffits (gutters are acceptable).
- Correct roof insulation to avoid 'ice dams.'
- Replace exterior siding except the street entry walls.
- Replace flooring, including main gym wood floor.
- Replace corridor 12x12 ceilings tile system.
- Lacking a dedicated Cafeteria or Kitchen.
- Maintenance building one of older structures:
 - Has no security alarm.
 - All manual bay doors, not powered.
 - Exterior siding, windows need replacement.
 - Hollow clay tiles at exterior walls.
- Replace outdated, damaged casework.

Site Safety and Security Analysis

- Replace existing access controls (wiring is obsolete), look to possibly add more devices.
- Upgrade exterior door hardware to district standard.

Accessibility

- Replace worn play equipment with modern options.
- Consider adding more basketball goals.

Hazardous Materials / Indoor Air Quality

- There is likely still asbestos-containing materials within the building, but currently static and encapsulated (no risk of exposure).

No hazardous materials testing has been performed as part of this evaluation. All information on the presence and performance of these materials has been provided by the District.



4B - BORING MIDDLE SCHOOL

Building Systems

Fire Protection:

- The entire school building has a sprinkler system that receives routine testing and inspection.

Plumbing:

- Replace existing domestic water piping.

Mechanical:

- Improve mechanical ventilation throughout campus.
- Hydronic piping heating system is a chronic maintenance issue.
- Replace indoor AHUs (air handling units) that are 45+ years old.

Electrical:

- Main electrical service and subpanels recommended for replacement.
- Recommend to add generator to this site for resiliency, to improve emergency operations and planning.

Lighting:

- Priority to upgrade all emergency egress lighting.
- Recommend to upgrade lighting controls throughout.
- Replace exterior site lighting.
- Most lighting has already been retrofit to LED.

Fire Alarm:

- Upgrade of existing system recommended.

Communication and Security:

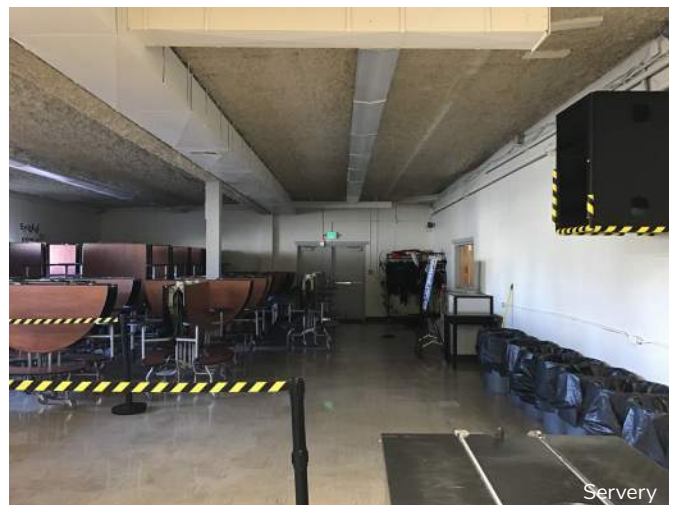
- Upgrade outdated fire alarm 'head end' and devices.
- Upgrade intercom / paging to District standard.
- Upgrade low voltage wiring infrastructure.
- Remove existing abandoned low voltage cabling.

Refer to full report from MKE & Associates for more detail.

Structural

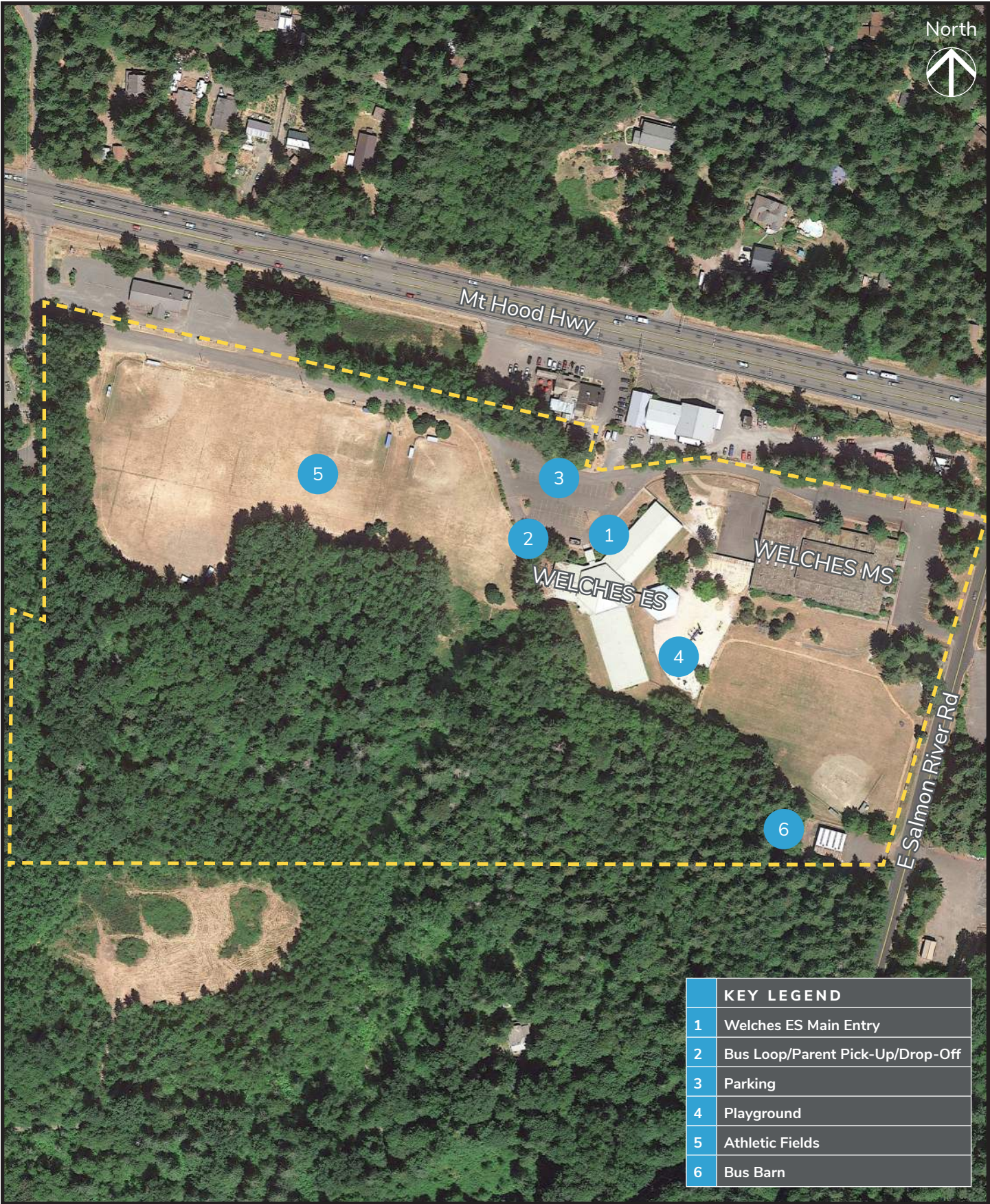
- The original classroom building and the 'Multi-Purpose Room' are classified as 'High' seismic risk structures.
- The CTE Room is designated as 'Low' risk.

Refer to full report from ZCS Engineering and Architecture for more detail.



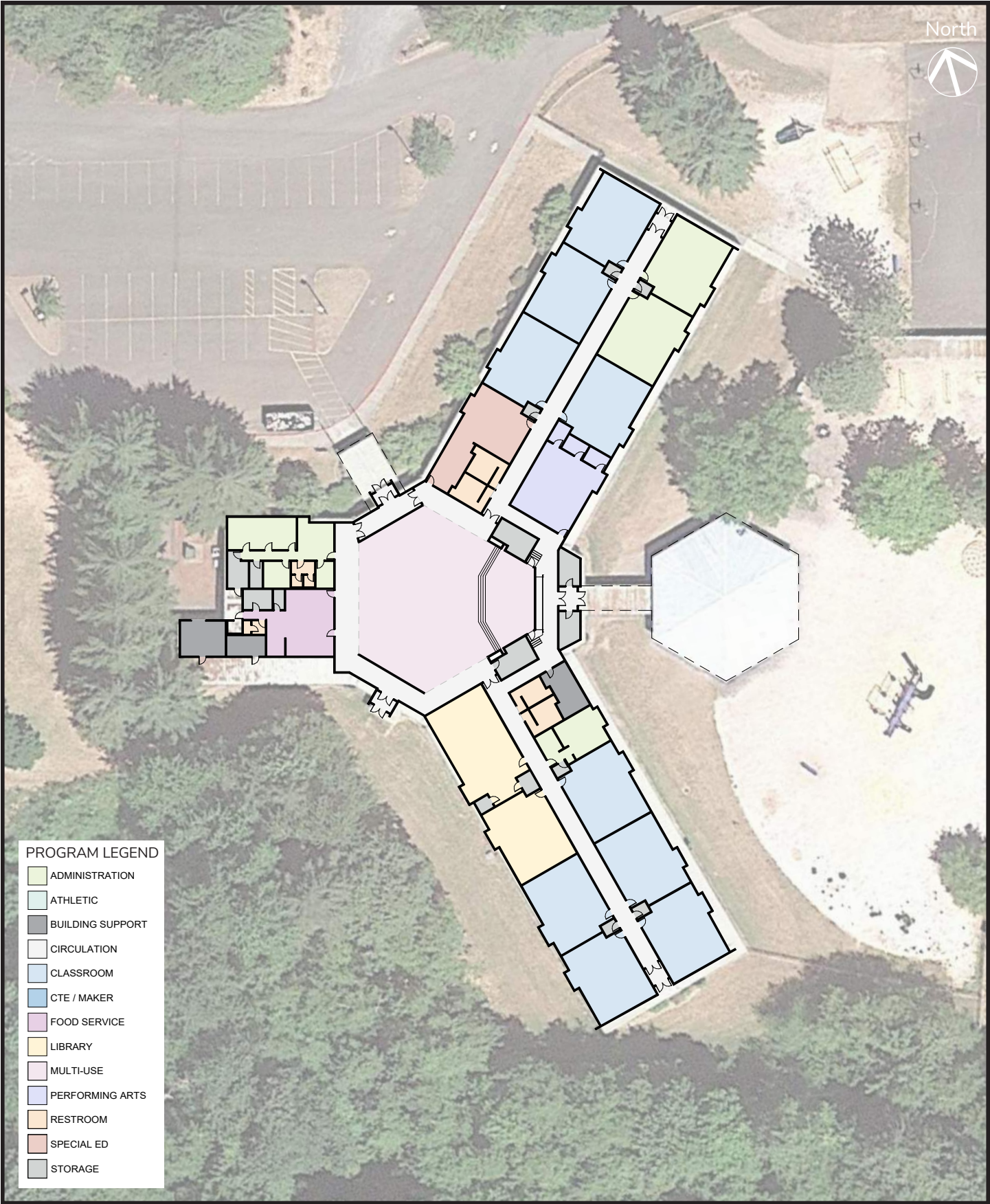
5A - WELCHES ELEMENTARY SCHOOL

SITE PLAN



5A - WELCHES ELEMENTARY SCHOOL

FLOOR PLAN



5A - WELCHES ELEMENTARY SCHOOL



Facility Summary

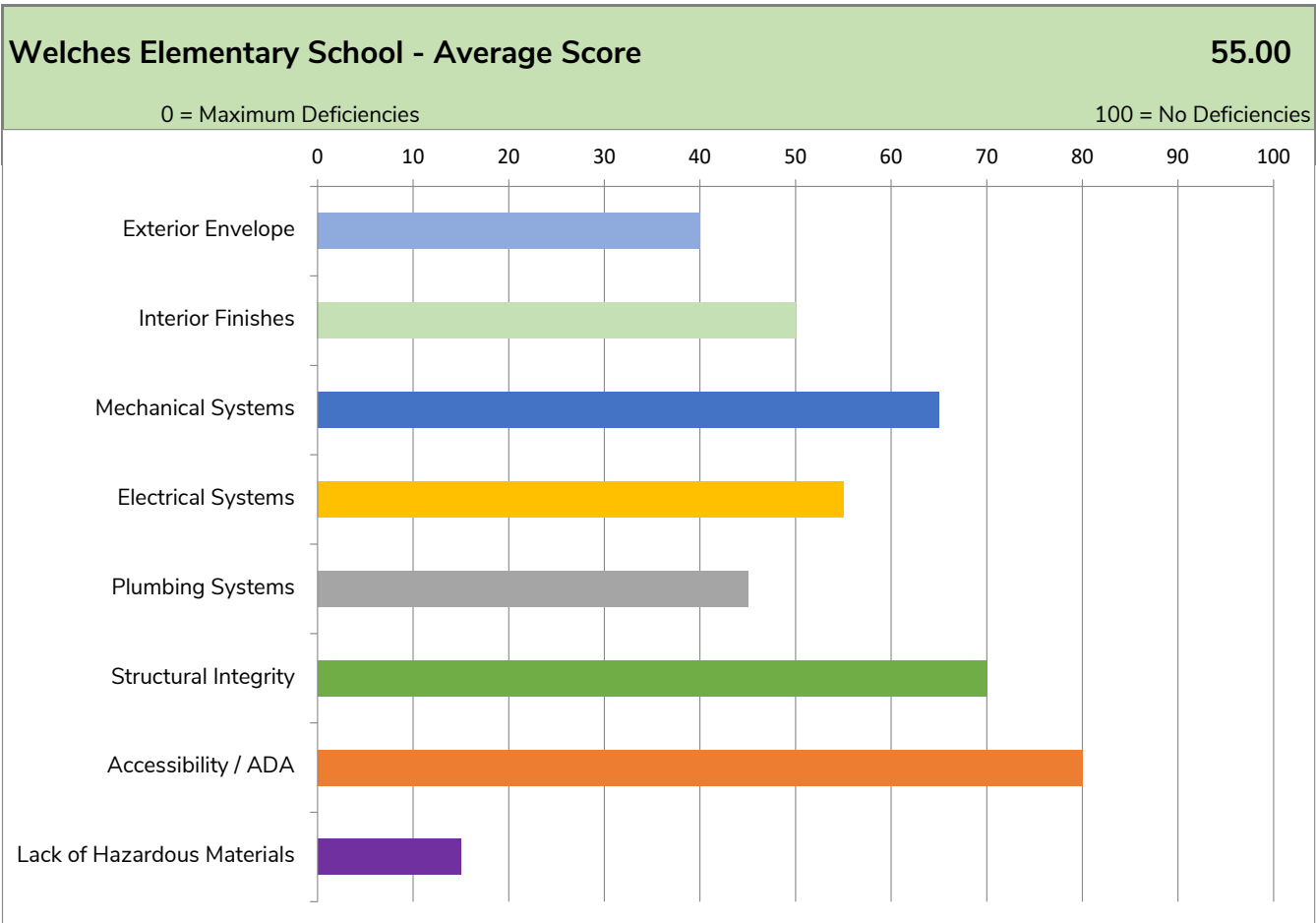
Welches Elementary School, paired with Welches Middle School, is one of the most remote / rural campuses and serves an essential and unique community. The main office lacks good line of sight and a direct connection to the entry.

The siding and windows require replacement, as they are beyond their practical lifespan. The building mechanical system is beyond it's practical lifespan and needs significant work, likely requiring a bond to support a project of this scale. The metal deck canopy connecting the two schools also needs replacement.

Some of the shared program spaces are lacking, including the Cafeteria and Kitchen. Additionally, having the elementary students walk to the middle school for lunch takes significant passing / travel time.

Site Name:	Welches Elementary School
Building Name:	Main
ODE Building ID:	19260100
Building Type:	Elementary School
Students:	212
Building Address:	24901 E Salmon River Road Welches, OR 97067
County:	Clackamas
Gross Square Footage:	31,29 SF
Site Acreage:	21.75 Acres
Year Built:	1980
Additions/Renovations:	N/A
Number of Floors:	One (1)
Primary Structure:	Wood Framed
Roof Type:	Metal
Replacement Budget:	\$24,738,398

5A - WELCHES ELEMENTARY SCHOOL



Excellent	90 - 100
Satisfactory	70 - 90
Minor Modernization Needed	50 - 70
Modernization Needed	30 - 50
Major Modernization Needed	0 - 30



5A - WELCHES ELEMENTARY SCHOOL

Architectural

- Replace siding, windows throughout.
- Replace flooring throughout.

Site Safety and Security Analysis

- Front entry has secure doors, but the front office has no good sight lines to visitors entering the building.
- Evaluate site drainage.
- Upgrade exit door hardware to District standards.

Accessibility

- Modify stage access to provide full clearance at ramp.
- Playground equipment worn out, recommend replacement.

Hazardous Materials / Indoor Air Quality

- There is likely still asbestos-containing materials within the building, but currently static and encapsulated (no risk of exposure).

No hazardous materials testing has been performed as part of this evaluation. All information on the presence and performance of these materials has been provided by the District.



Hallway and Stage Entrance



Typical Classroom

5A - WELCHES ELEMENTARY SCHOOL

Building Systems

Fire Protection:

- The entire building has a sprinkler system and backflow device that receives routine testing and inspection.

Plumbing:

- Replace existing supply water piping.
- Restrooms have drainage, fixture issues that need addressing.

Mechanical:

- Replace indoor mechanical units recommended.
- Replace unit ventilators / unit heaters recommended.
- Upgrade existing mechanical controls.
- Provide testing and balancing of existing systems.

Electrical:

- Main electrical service and subpanels recommended for replacement.
- Recommend to add generator to this site for resiliency, to improve emergency operations and planning.

Lighting:

- Recommend upgrading emergency egress lighting.
- Recommend to upgrade lighting controls.
- Recommend to replace exterior site lighting.

Fire Alarm:

- Upgrade of existing system recommended.

Communication and Security:

- Upgrade outdated fire alarm 'head end' and devices.
- Upgrade intercom / paging to District standard.
- Upgrade low voltage wiring infrastructure.
- Remove existing abandoned low voltage cabling.

Refer to full report from MKE & Associates for more detail.

Structural

- The two (2) classroom wings are classified as 'Low' seismic risk structures.
- The Gymnasium is designated as 'Moderate' risk.

Refer to full report from ZCS Engineering and Architecture for more detail.



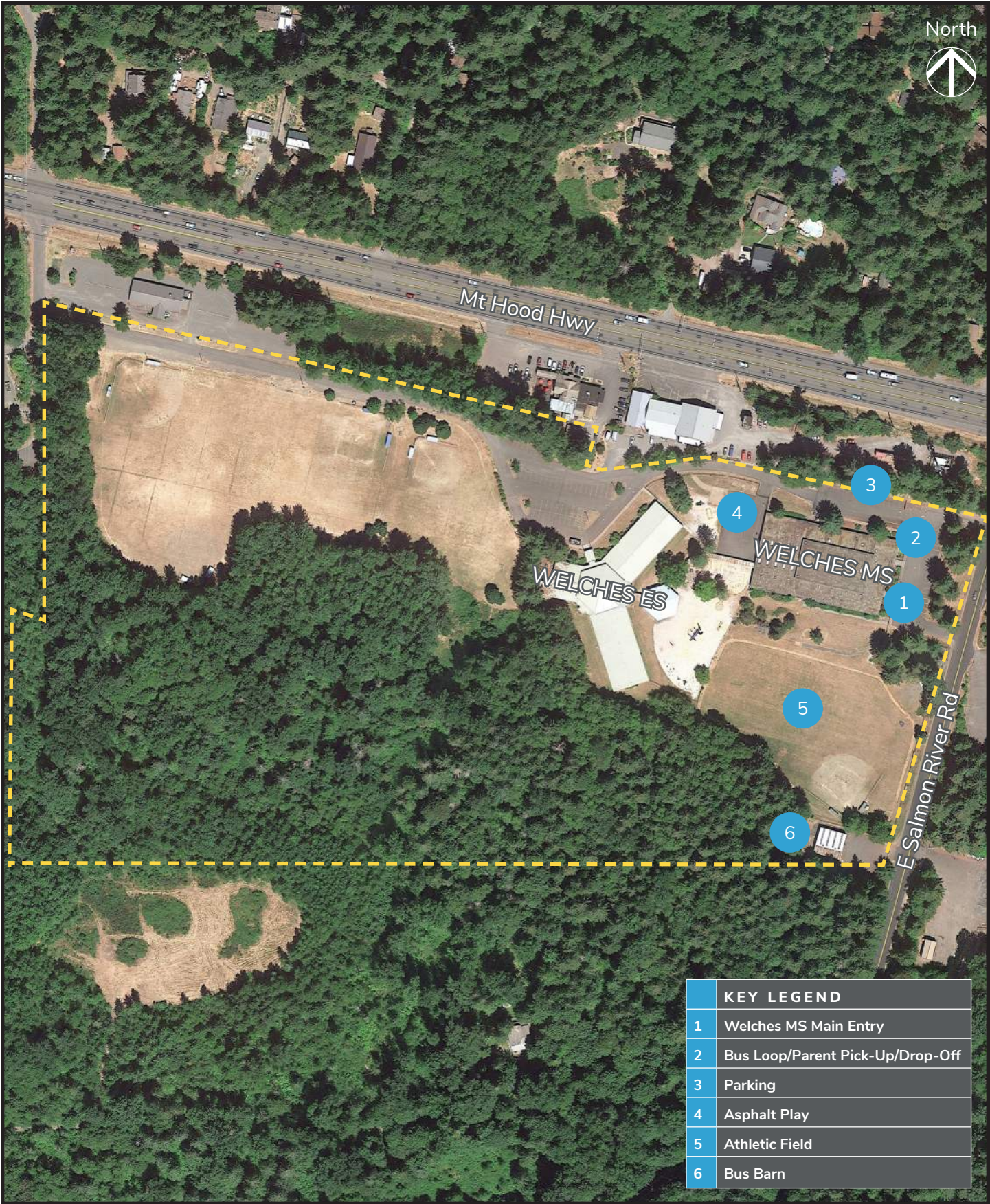
Covered Walkway



Entry Vestibule and Main Office

5B - WELCHES MIDDLE SCHOOL

SITE PLAN



5B - WELCHES MIDDLE SCHOOL

FLOOR PLAN



5B - WELCHES MIDDLE SCHOOL



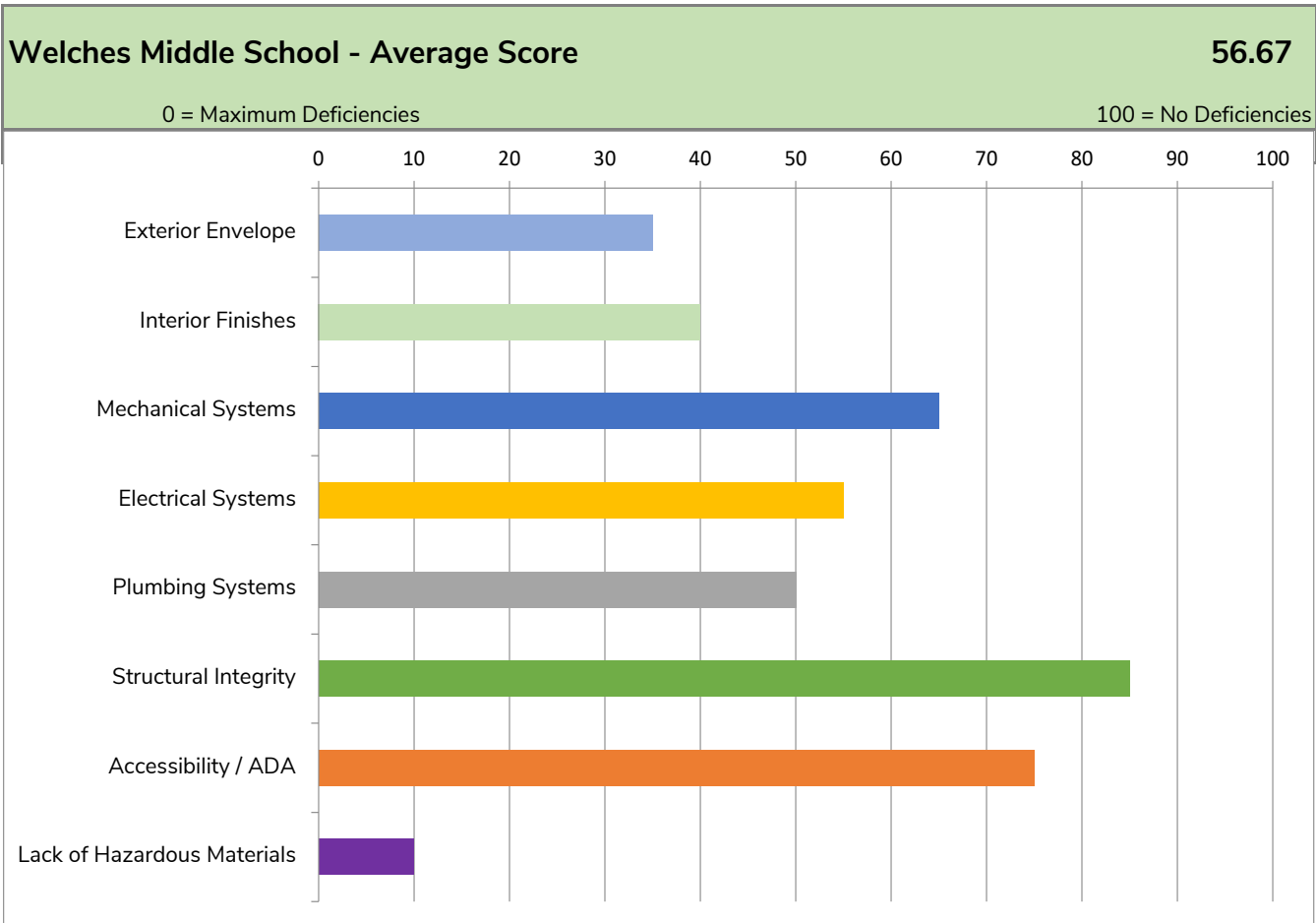
Facility Summary

The physical condition of the Welch Middle School building, while well-maintained, has many elements at the end of their practical lifespan. The roofing needs a complete replacement, and the siding needs significant repair or replacement fully. The interior finishes are also in need of replacement, including flooring and ceilings.

As far as program, the cafeteria is under capacity for current need, and the gymnasium overall needs significant improvements.

Site Name:	Welches Middle School
Building Name:	Main
ODE Building ID:	19260900
Building Type:	Middle School
Students:	86
Building Address:	24903 E Salmon River Road Welches, OR 97067
County:	Clackamas
Gross Square Footage:	32,205 SF
Site Acreage:	9.46 Acres
Year Built:	1968
Additions/Renovations:	1978
Number of Floors:	Two (2)
Primary Structure:	Wood Framing, Masonry
Roof Type:	Built-Up
Replacement Budget:	\$26,731,485

5B - WELCHES MIDDLE SCHOOL



Excellent	90 - 100
Satisfactory	70 - 90
Minor Modernization Needed	50 - 70
Modernization Needed	30 - 50
Major Modernization Needed	0 - 30



5B - WELCHES MIDDLE SCHOOL

Architectural

- Replace all roofing.
- Replace / repair all siding.
- Replace flooring throughout, including wood gym floor (needs replacement, can't be refinished).
- Ceiling tile needs replacement throughout.
- Kitchen equipment upgrades needed, under capacity.
 - Walk-ins recommended for replacement, larger.

Site Safety and Security Analysis

- Upgrade basketball goals to be seismically braced, add power for main goals.
- Replace all exterior doors and hardware, including District-standard exit hardware.

Hazardous Materials / Indoor Air Quality

- There is likely still asbestos-containing materials within the building, but currently static and encapsulated (no risk of exposure).

No hazardous materials testing has been performed as part of this evaluation. All information on the presence and performance of these materials has been provided by the District.



5B - WELCHES MIDDLE SCHOOL

Building Systems

Fire Protection:

- The entire building has a sprinkler system and backflow device that receives routine testing and inspection.

Plumbing:

- Replace existing supply water piping.
- Replace wall-mounted urinals.

Mechanical:

- Replace indoor mechanical units recommended.
- Replace unit ventilators / unit heaters recommended.
- Upgrade existing mechanical controls.
- Provide testing and balancing of existing systems.

Electrical:

- Main electrical service and subpanels recommended for replacement.
- Recommend to add generator to this site for resiliency, to improve emergency operations and planning.

Lighting:

- Priority to upgrade all emergency egress lighting.
- Upgrade existing lighting to LED.
- Recommend to upgrade lighting controls.
- Replace exterior site lighting.

Fire Alarm:

- Upgrade of existing system recommended.

Communication and Security:

- Upgrade outdated fire alarm 'head end' and devices.
- Upgrade intercom / paging to District standard.
- Upgrade low voltage wiring infrastructure.
- Relocate existing IDF(s), slack in wire allows 15' +/- adjustment without running new cables.
- Remove existing abandoned low voltage cabling.

Refer to full report from MKE & Associates for more detail.

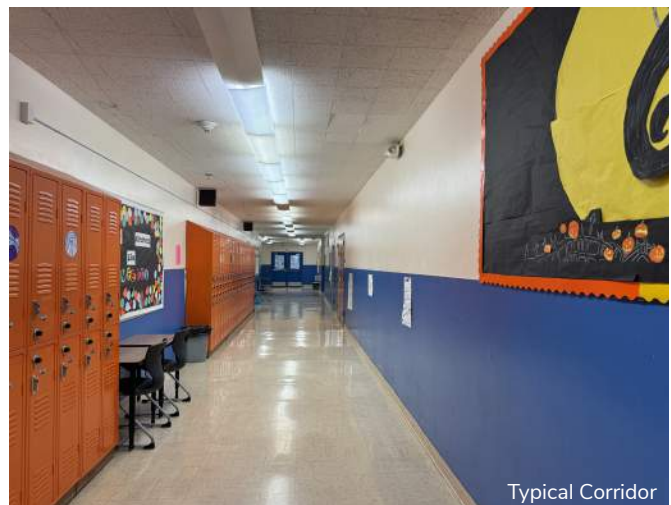
Structural

- The original classroom building is rated as a 'Low' seismic risk.

Refer to full report from ZCS Engineering and Architecture for more detail.



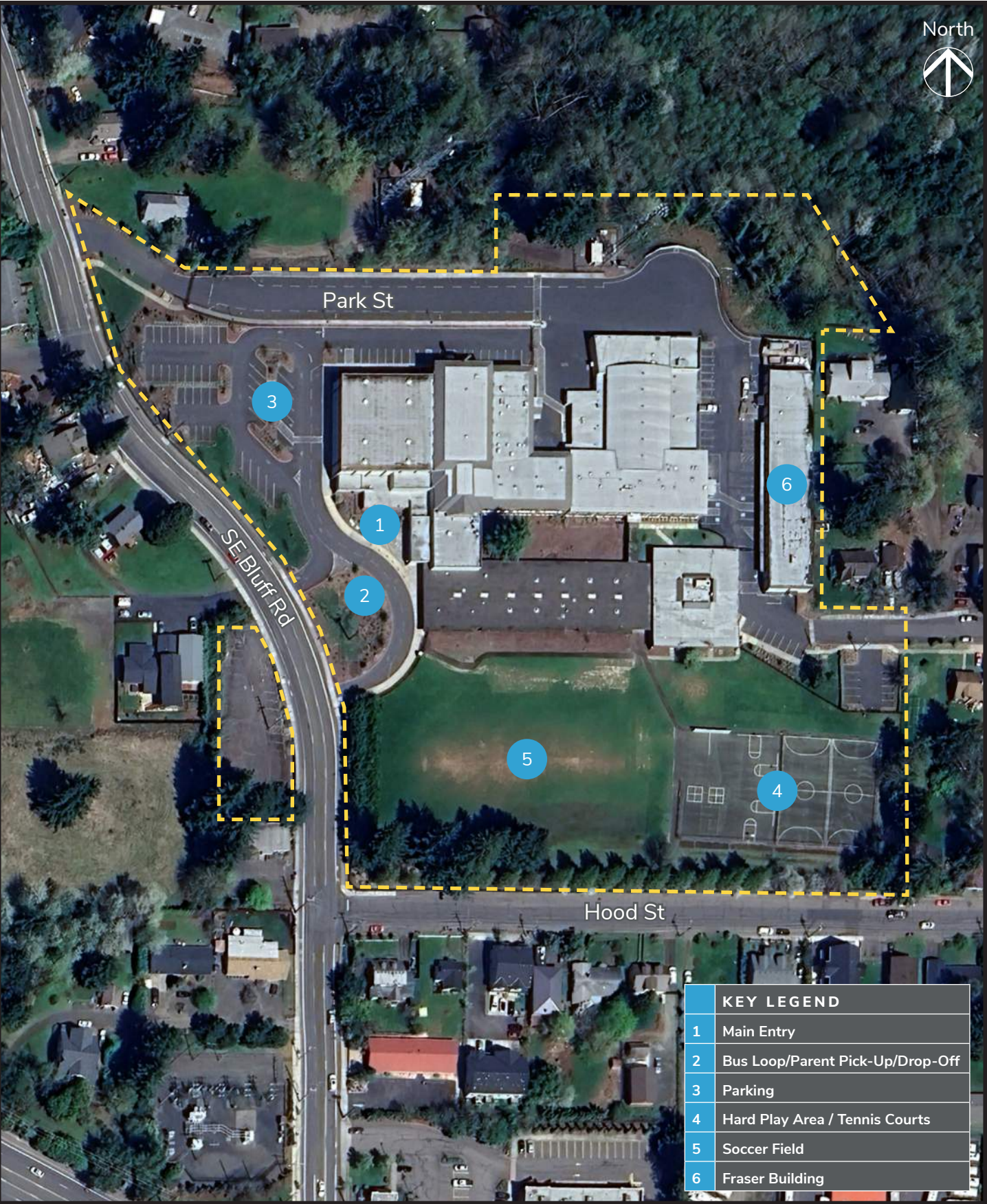
Exterior Canopy and Siding



Typical Corridor

06 - CEDAR RIDGE MIDDLE SCHOOL

SITE PLAN



06 - CEDAR RIDGE MIDDLE SCHOOL

FLOOR PLAN



06 - CEDAR RIDGE MIDDLE SCHOOL



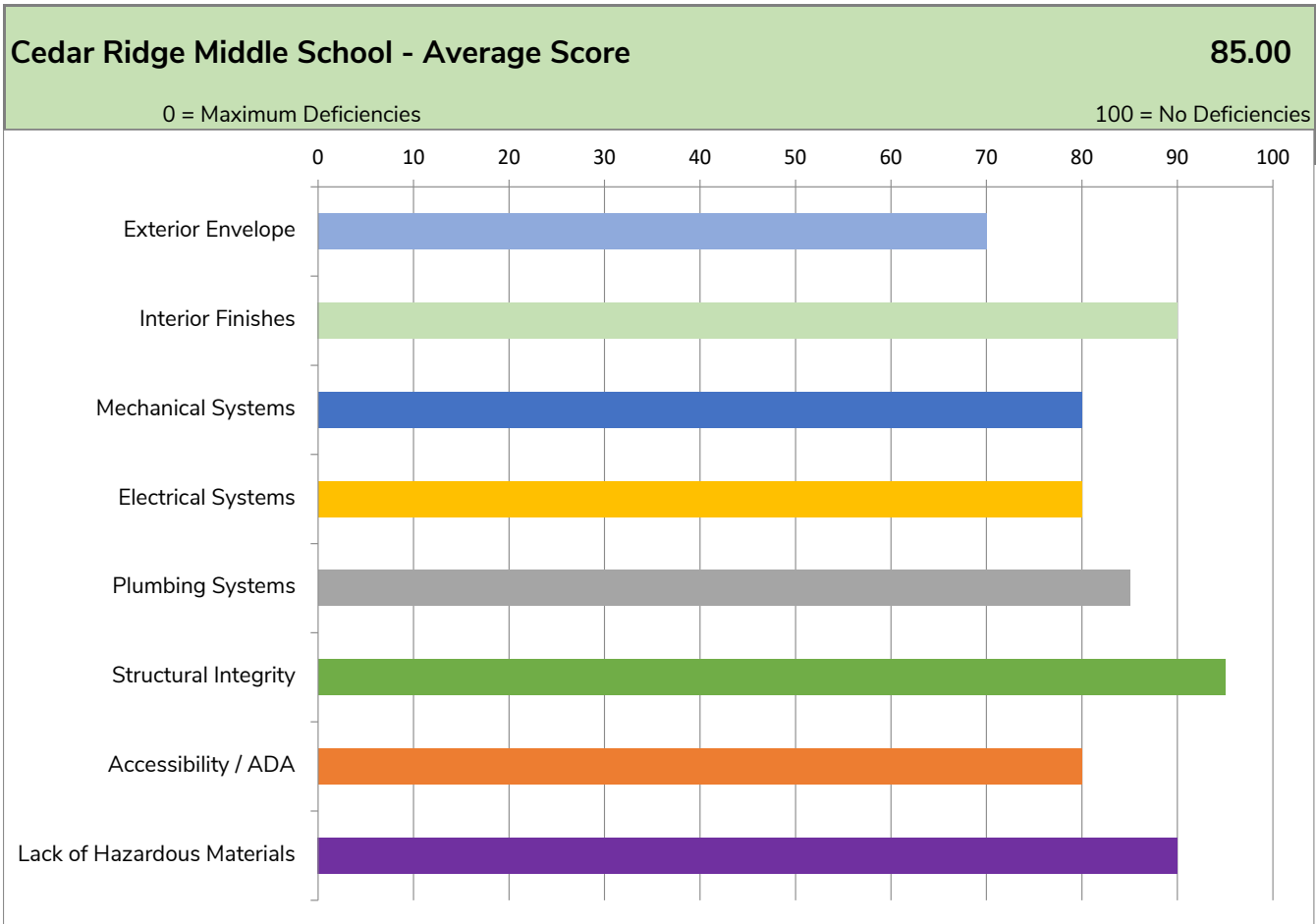
Facility Summary

Cedar Ridge Middle School received a significant renovation with the last bond, providing upgrades and improvements to most of the site.

There are some outstanding exterior envelope issues that were not able to be resolved previously, including some window replacement and exterior masonry maintenance / repair.

Site Name:	Cedar Ridge Middle School
Building Name:	Main
ODE Building ID:	19260700
Building Type:	Middle School
Students:	436
Building Address:	17100 SE Bluff Road Sandy, OR 97055
County:	Clackamas
Gross Square Footage:	123,766 SF
Site Acreage:	11.96 Acres
Year Built:	1934
Additions/Renovations:	2014
Number of Floors:	Two (2)
Primary Structure:	Wood Framing
Roof Type:	Asphalt Shingle, Built-Up
Replacement Budget:	\$102,730,912

06 - CEDAR RIDGE MIDDLE SCHOOL



Excellent	90 - 100
Satisfactory	70 - 90
Minor Modernization Needed	50 - 70
Modernization Needed	30 - 50
Major Modernization Needed	0 - 30



06 - CEDAR RIDGE MIDDLE SCHOOL

Architectural

- Repair soffits, parapet caps throughout, and through-wall flashing elements.
- Replace Library roofing immediately.
- Replace Gym roofing within the next 10 years.
- Replace upper breezeway canopy entirely, re-path utilities / services.
- Replace roofing at Fraser Building.
- Replace all original windows still remaining, including glass block windows (likely contain asbestos).
- Replace windows and coverings in Kitchen.
- Re-point exterior brick veneer walls, re-seal brick.
- Correct exterior CMU wall moisture issues (by Band).
- Replace damaged, stained ceiling tiles (24x48).

Site Safety and Security Analysis

- Replace existing access controls with new (wiring is obsolete).
- Look to isolate gym for after-hours use.
- Upgrade exterior door hardware to District standard.

Accessibility

- None identified at this time.

Hazardous Materials / Indoor Air Quality

- The majority of hazardous materials have been abated in the previous renovation.
- There is likely still asbestos-containing materials within the building, but currently static and encapsulated (no risk of exposure).

No hazardous materials testing has been performed as part of this evaluation. All information on the presence and performance of these materials has been provided by the District.



06 - CEDAR RIDGE MIDDLE SCHOOL

Building Systems

Fire Protection:

- The entire building has a sprinkler system that receives routine testing and inspection.

Plumbing:

- Replace supply water piping.

Mechanical:

- Replace indoor mechanical units recommended.
- Replace unit ventilators / unit heaters recommended.
- Upgrade existing mechanical controls.
- Provide testing and balancing of existing systems.

Electrical:

- Main electrical service and subpanels recommended for replacement.

Lighting:

- Priority to upgrade all emergency egress lighting.
- Recommend to upgrade lighting controls.
- Upgrade lighting to LED, including corridors, where needed.

Fire Alarm:

- Upgrade of existing system recommended.

Communication and Security:

- Upgrade outdated fire alarm 'head end' and devices.
- Upgrade intercom / paging to District standard.
- Upgrade low voltage wiring infrastructure.

Refer to full report from MKE & Associates for more detail.

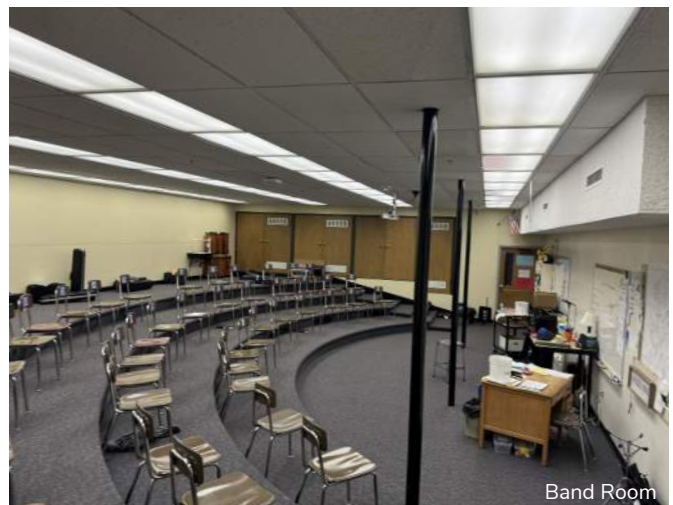
Structural

- The original classroom building, Cafeteria / Kitchen / Band Room, and Covered Entrance are classified as 'High' seismic risk structures.
- The Gymnasium is designated as 'Moderate' risk.
- All remaining areas of the campus are 'Low' risk.

Refer to full report from ZCS Engineering and Architecture for more detail.



Fraser Building Exterior



Band Room

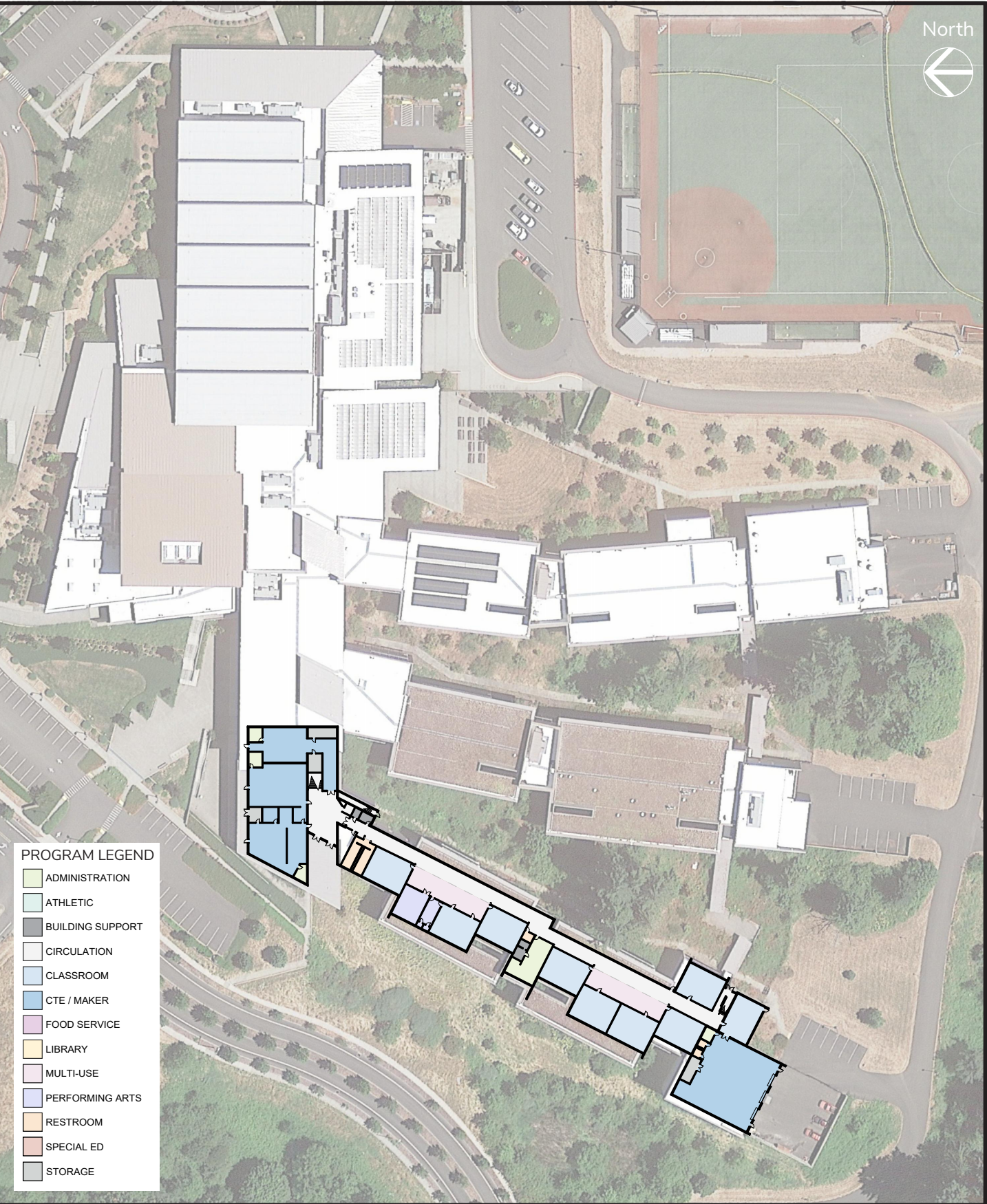
07A - SANDY HIGH SCHOOL

SITE PLAN



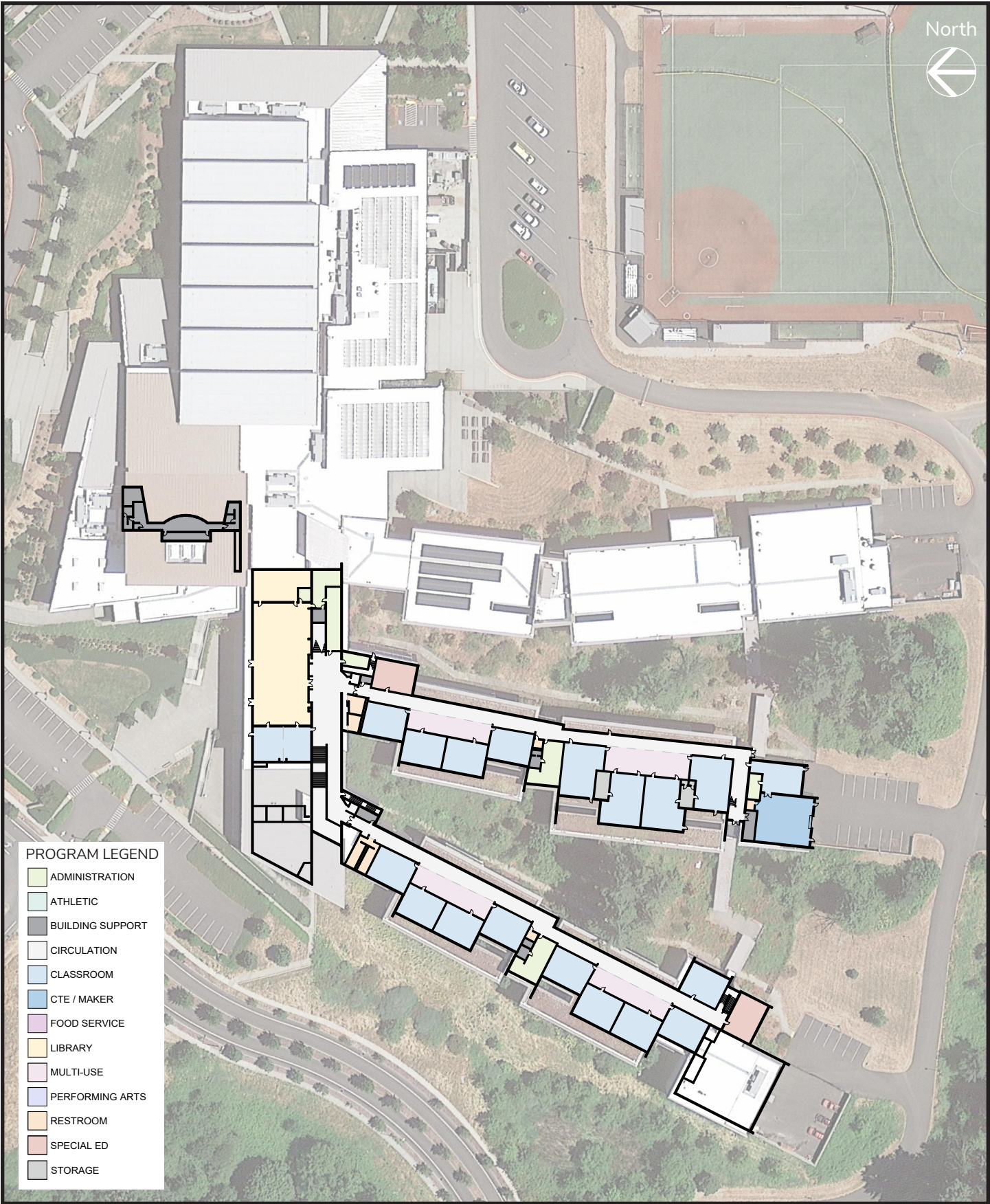
07A - SANDY HIGH SCHOOL

LOWER LEVEL FLOOR PLAN



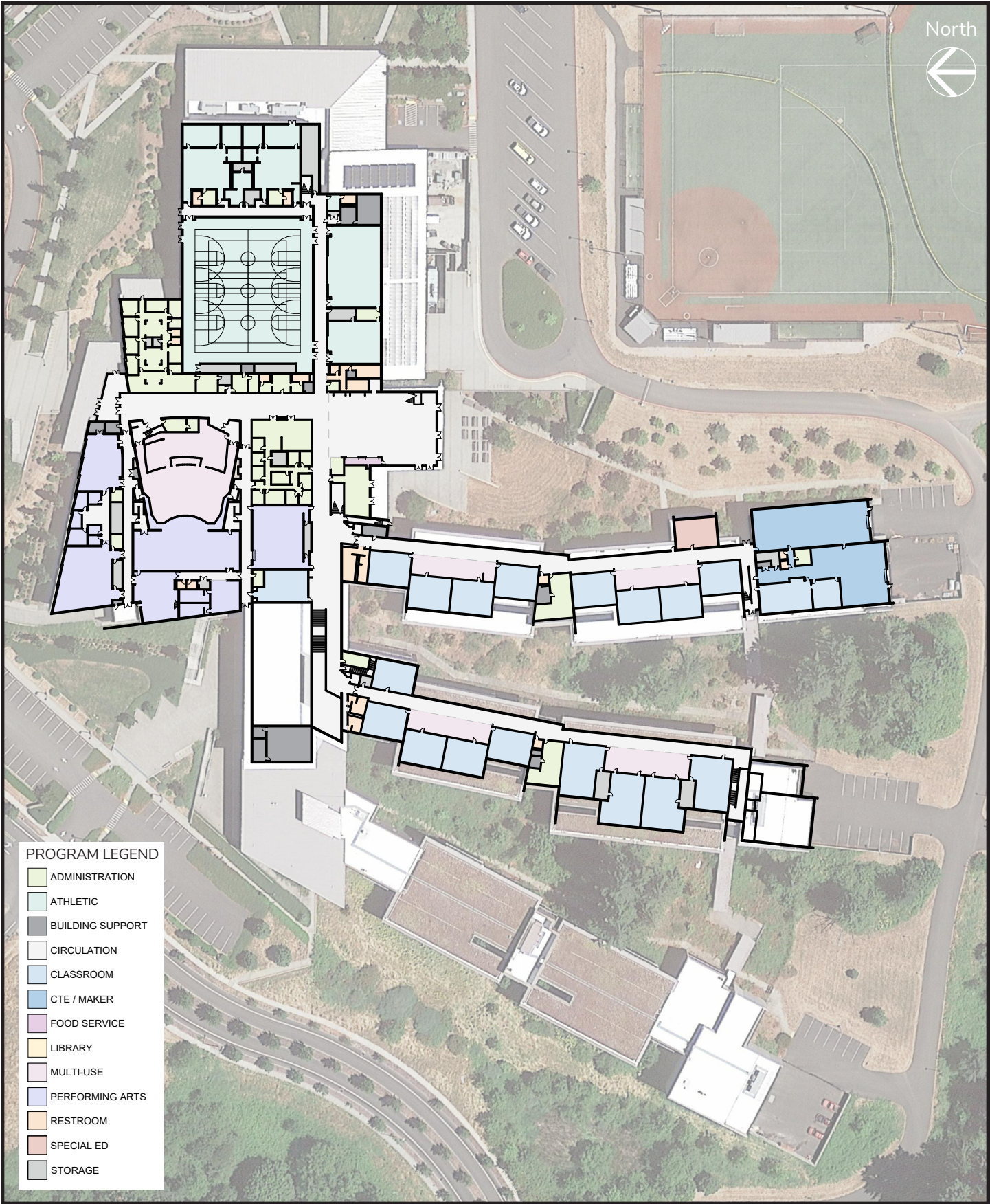
07A - SANDY HIGH SCHOOL

LOWER LEVEL 2 FLOOR PLAN



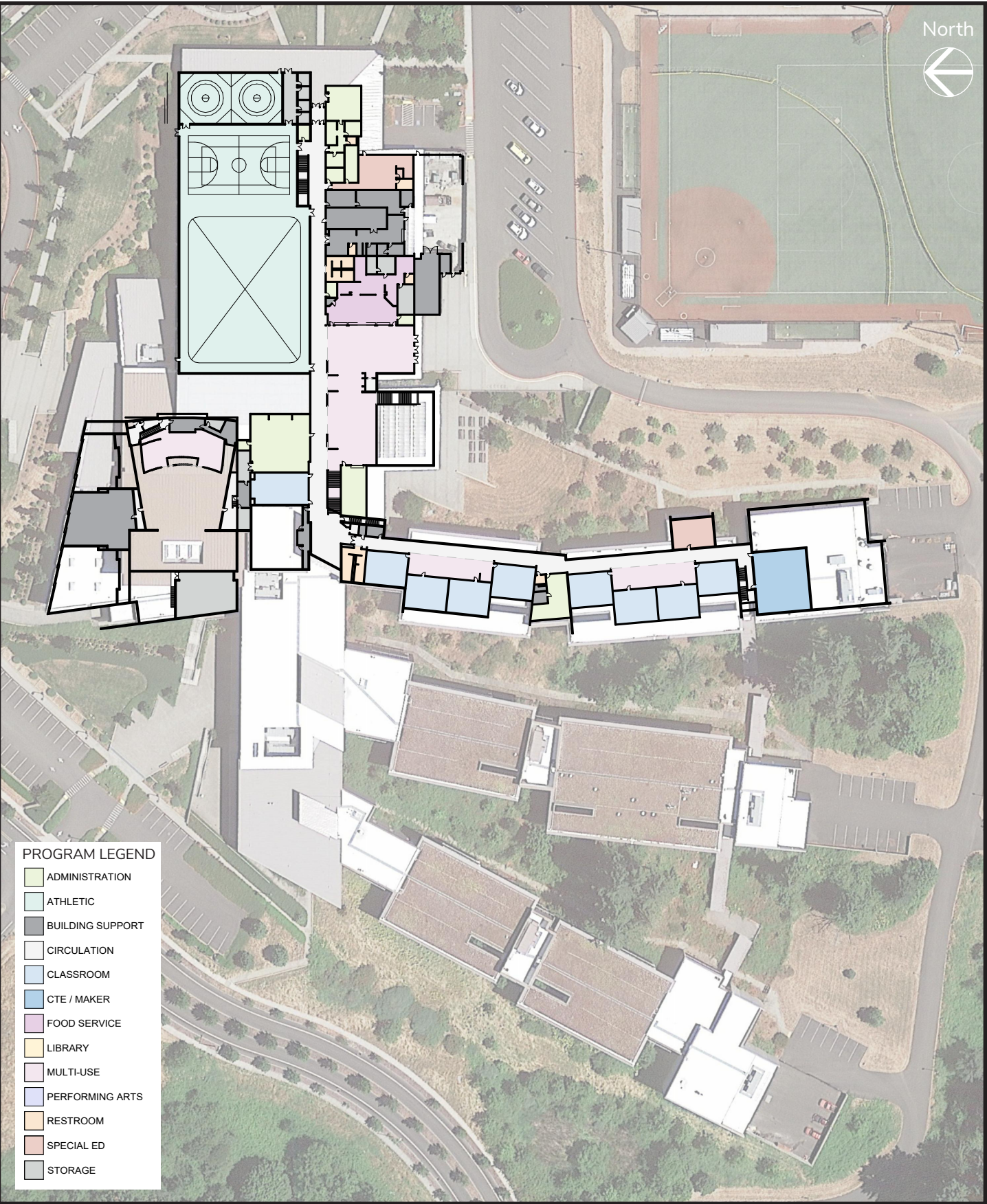
07A - SANDY HIGH SCHOOL

MAIN LEVEL FLOOR PLAN



07A - SANDY HIGH SCHOOL

UPPER LEVEL FLOOR PLAN



07A - SANDY HIGH SCHOOL

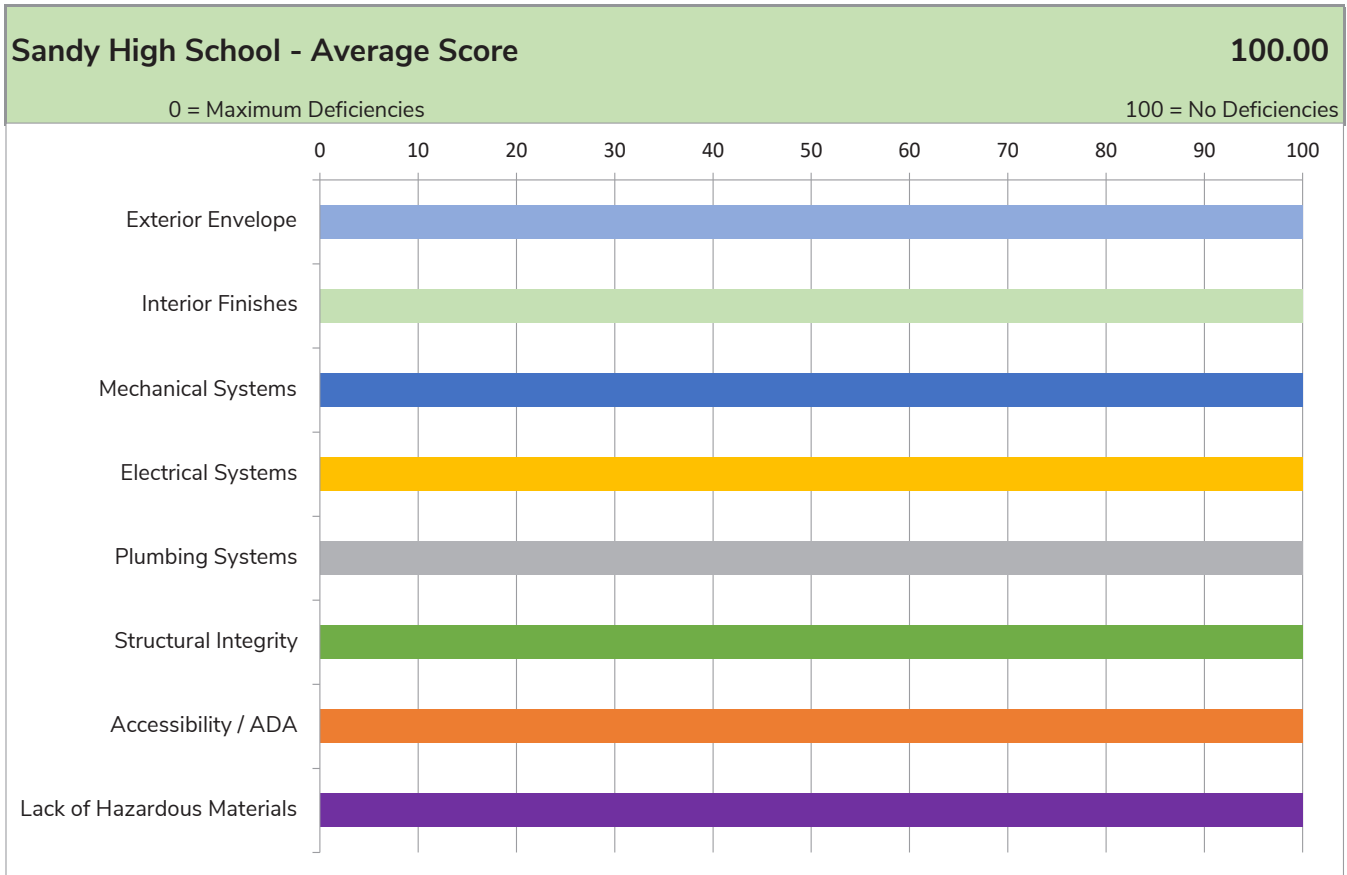


Facility Summary

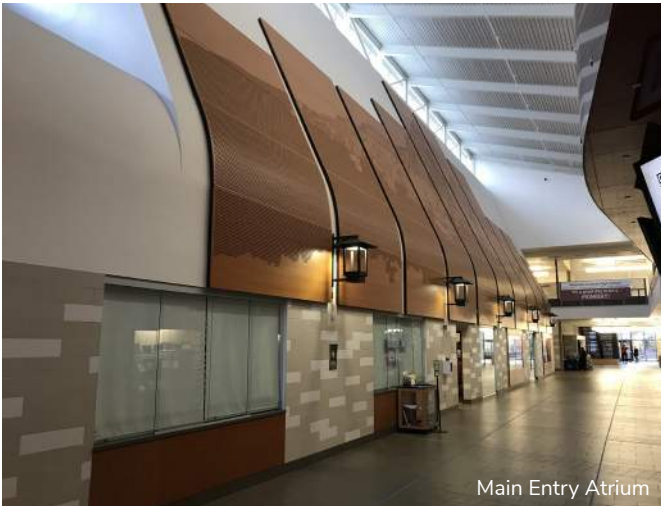
As the newest (and largest) building in the District, built with the last bond, this building / campus have no needs identified at this time.

Site Name:	Sandy High School
Building Name:	Main
ODE Building ID:	19260800
Building Type:	High School
Students:	1,376
Building Address:	37400 Bell Street Sandy, OR 97055
County:	Clackamas
Gross Square Footage:	306,500 SF
Site Acreage:	68.54 Acres
Year Built:	2012
Additions/Renovations:	N/A
Number of Floors:	Four (4)
Primary Structure:	Metal Framing, CMU
Roof Type:	Metal, Built-Up
Replacement Budget:	\$290,751,667

07A - SANDY HIGH SCHOOL



Excellent	90 - 100
Satisfactory	70 - 90
Minor Modernization Needed	50 - 70
Modernization Needed	30 - 50
Major Modernization Needed	0 - 30



07A - SANDY HIGH SCHOOL

Architectural

- No issues identified.

Site Safety and Security Analysis

- No issues identified.

Accessibility

- No issues identified.

Hazardous Materials / Indoor Air Quality

- With the age of the building, there should not be any hazardous materials installed in the building or in the site elements.

Building Systems

Fire Protection:

- The building has complete coverage from fire sprinklers throughout the entire property.

Plumbing, Mechanical, Electrical:

- No issues identified.

Lighting:

- No issues identified.

Fire Alarm:

- No issues identified.

Communication and Security:

- No issues identified.

Refer to full report from MKE & Associates.

Structural

- The high school has been built to current code.

Refer to full report from ZCS Engineering.



Cafeteria Entry Exterior



Ceramics Classroom

07B - SANDY HIGH SCHOOL STADIUM

SITE PLAN



07B - SANDY HIGH SCHOOL STADIUM



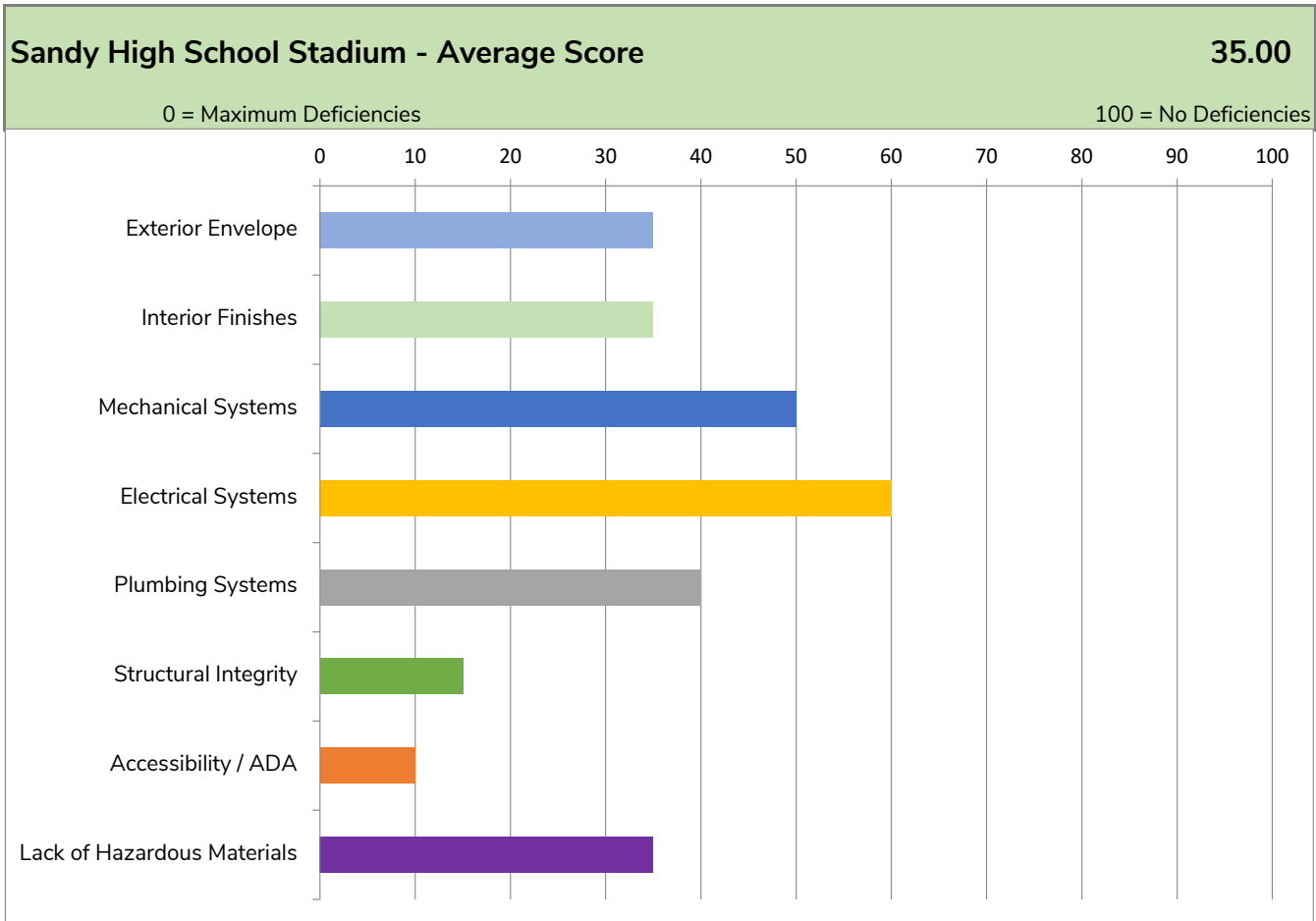
Facility Summary

The stadium building is beyond its practical lifespan. Although the fields were improved as part of a previous bond, the structure was not. Due to it's overall age there are a long list of needs for the entire structure.

There are concerns with the condition of the occupied spaces below the stadium seating, including restrooms and locker rooms. There are also concerns about the overall building structure.

Site Name:	Sandy High School
Building Name:	Stadium
ODE Building ID:	19260800
Building Type:	Stadium / Grandstand
Students:	N/A
Building Address:	37400 Bell Street Sandy, OR 97055
County:	Clackamas
Gross Square Footage:	12,000 SF (estimated)
Site Acreage:	On High School Site
Year Built:	TBD
Additions/Renovations:	N/A
Number of Floors:	Two (2)
Primary Structure:	Metal Framing, CMU
Roof Type:	Built-Up
Replacement Budget:	\$11,383,426

07B - SANDY HIGH SCHOOL STADIUM



Excellent	90 - 100
Satisfactory	70 - 90
Minor Modernization Needed	50 - 70
Modernization Needed	30 - 50
Major Modernization Needed	0 - 30



07B - SANDY HIGH SCHOOL STADIUM

Architectural

- All interior finishes need full replacement.
- Fixtures, finishes and structure is worn, approaching or beyond lifespan.

Site Safety and Security Analysis

- Most of the site is fenced and controlled.
- Provide security system upgrade / overhaul.

Hazardous Materials / Indoor Air Quality

- There is likely still asbestos-containing materials within the building, but currently static and encapsulated (no risk of exposure).

No hazardous materials testing has been performed as part of this evaluation. All information on the presence and performance of these materials has been provided by the District.

Building Systems

Plumbing:

- Update / replace existing fixtures.

Mechanical:

- Update mechanical controls.

Electrical:

- Recommend significant work to repair / replace electrical service and branch panels.

Lighting:

- Recommend to upgrade emergency egress lighting.
- Recommend to upgrade lighting controls.
- Upgrade lighting to LED, including corridors (much already done in previous renovation).

Refer to full report from MKE & Associates.

Structural

- The Stadium building and Grandstands are listed as 'Moderate' seismic risk category.

Refer to full report from ZCS Engineering.



Stadium Shower Room



Coach's Office

08 - COMMUNITY CONNECTIONS

SITE PLAN



08 - COMMUNITY CONNECTIONS

FLOOR PLAN



08 - COMMUNITY CONNECTIONS



Facility Summary

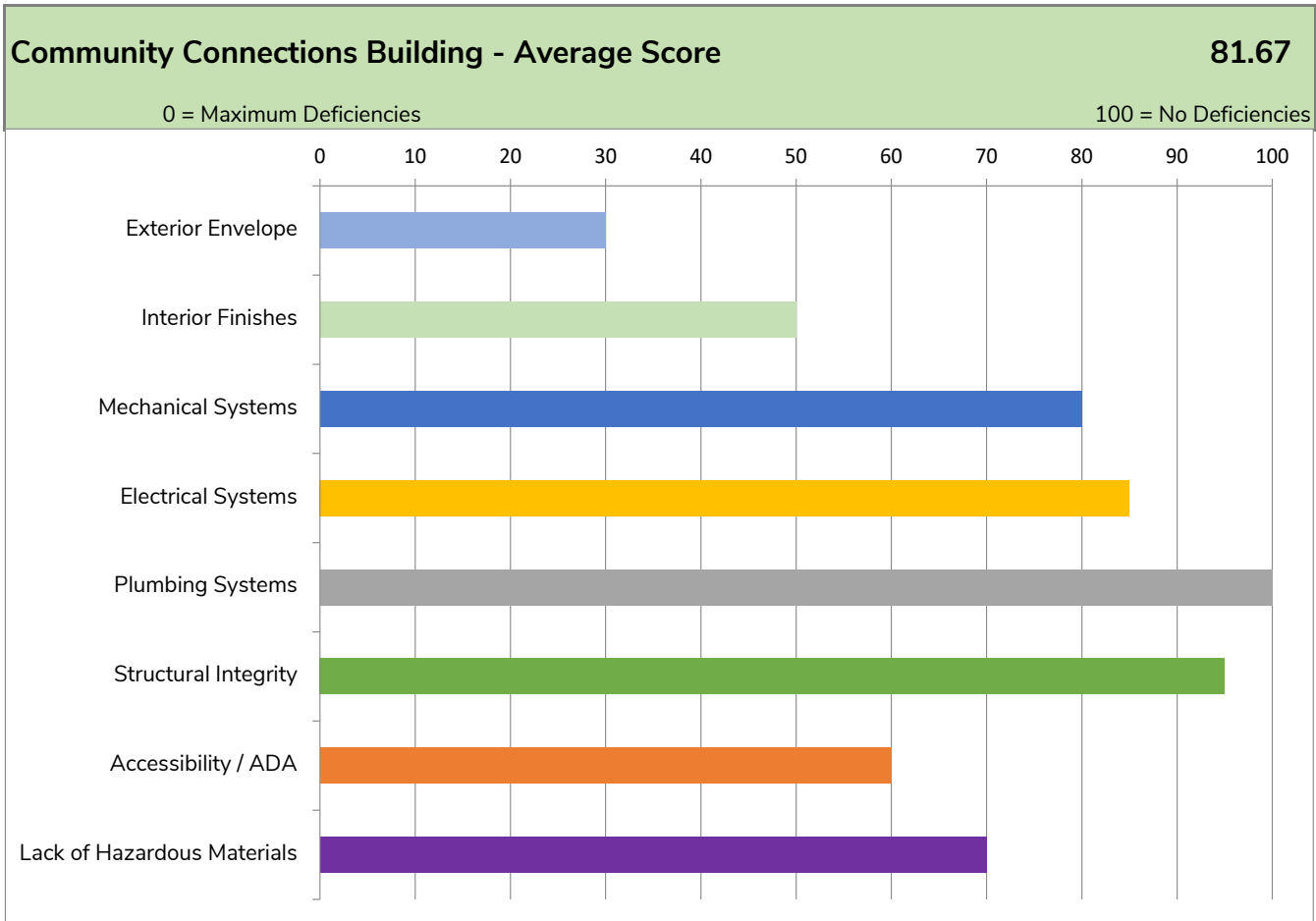
The District Community Connections building supports programs for students 18 - 21 who are still on a path to graduation or require support. The building works relatively well for the program, and there are not any significant needs identified for renovation.

Roofing, siding and window replacement are recommended, as well as interior finishes, particularly the flooring.

There are also improvements needed to the mechanical and electrical systems.

Site Name:	Community Connections
Building Name:	Main
ODE Building ID:	N/A
Building Type:	High School
Students:	N/A
Building Address:	17215 SE Bluff Road Sandy, OR 97055
County:	Clackamas
Gross Square Footage:	1,620 SF
Site Acreage:	0.23 Acres
Year Built:	1983
Additions/Renovations:	N/A
Number of Floors:	One (1)
Primary Structure:	Wood Framing / CMU
Roof Type:	Asphalt Shingle
Replacement Budget:	\$961,865

08 - COMMUNITY CONNECTIONS



Excellent	90 - 100
Satisfactory	70 - 90
Minor Modernization Needed	50 - 70
Modernization Needed	30 - 50
Major Modernization Needed	0 - 30



08 - COMMUNITY CONNECTIONS

Architectural

- Recommend to replace roofing.
- Replace or repair siding.
- Replace all exterior windows.
- Replace flooring, including classroom carpet, restroom resilient flooring.

Accessibility

- No issues identified.

Hazardous Materials and Indoor Air Quality

- There is likely still asbestos-containing materials within the building, but currently static and encapsulated (no risk of exposure).

No hazardous materials testing has been performed as part of this evaluation. All information on the presence and performance of these materials has been provided by the District.

Building Systems

Fire Protection:

- No issues identified.

Plumbing:

- No issues identified.

Mechanical:

- Replace rooftop mechanical unit.
- Upgrade controls, provide testing and balancing of existing system.

Electrical:

- Provide additional electrical outlets.

Lighting:

- Recommend to upgrade emergency egress lighting.
- Upgrade lighting to LED.
- Recommend to upgrade lighting controls.

Fire Alarm:

- No issues identified.

Refer to full report from MKE & Associates for more detail.

Structural

- The building is classified as a 'Low' seismic hazard.

Refer to full report from ZCS Engineering and Architecture for more detail.

