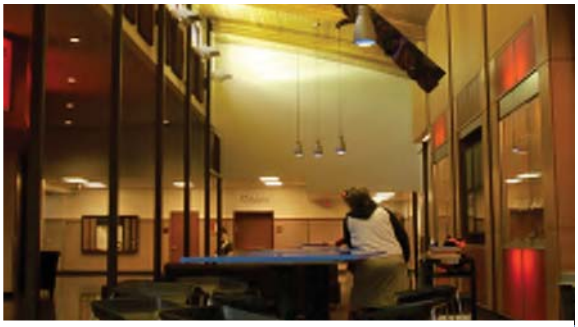





Sherwood School District

Facilities Planning and Assessment Report

by DOWA - IBI Group Architects, Inc. | August 2015



Overview of Report

The report has been organized to allow the reader to gain an insight at several different levels. The first part of this report provides an introduction to the project and an overview of the methodology used to conduct the study.

Part II consists of an Executive Summary organized into sections that focus on the district as a whole as well as each school individually. Summary information is provided, along with overall estimated costs for each facility. The Executive Summary for each facility does not contain every recommendation that is found in the Detailed Report; rather it provides highlighted observations in addition to the total cost for all levels of work. Recommendations for each project are divided into Levels I, II, and III.

Part III includes a capacity analysis of each District school facility. Individual school information data spreadsheets are provided summarizing student capacity based on the number of teaching stations, as well as the square footage of key common areas. Color-coded building floor plans for each school are included to illustrate current room assignments and uses.

Part IV provides an educational adequacy overview of each school in the District, based on interviews with the principal at each facility. The educational adequacy assessment determines the extent to which the current facility supports teaching and learning practices and goals.

The last portion of this report (Part V) contains a detailed report for each facility in the Sherwood School District. This section is where you will find information to support the observations stated in the Executive Summary. It includes full descriptions of site observations, images and breakdown of recommendations with associated costs. These reports include structural, architectural, mechanical, electrical, plumbing, food service and grounds components. Cost sheets are located at the end of each detailed facility report.

Project Budgets

Budget cost amounts have been established for each of the line item deficiencies identified in the facility assessment.

The cost analysis for each item is based on cost information from a professional cost estimator. Each item includes the actual estimated construction cost and the following mark ups:

- 10% General Contractor Overhead and Profit
- 16.5% Estimating Contingency

A factor of 25% for Project Soft Costs, including design fees, permits, special testing requirements, project management, furniture and equipment, and other project related costs have been applied to larger scale projects such as additions, remodels or significant system changes. (Please note that soft costs can increase dramatically if high System Development Charges are required and if local jurisdiction determines needs for wetlands mitigation and offsite improvements such as street and traffic related improvements).

If other recommendations result in more significant scope, a factor of 25% can be applied to the numbers provided for true projects costs. Please note that the mark ups do not include a factor for inflation.

Building Codes

The latest editions of the following codes were utilized in developing this assessment: International Mechanical Code (IMC), International Plumbing Code (IPC), International Electrical Code (IEC), National Fire Protection Association (NFPA) Codes and Standards, and American Society of Heating, Refrigerating and Air-conditioning Engineers (ASHRAE) Standard 90.1.

All references to “the code” or “code requirements” in the architectural components of this document refer to the 2014 Oregon Structural Specialty Code (OSSC).

OVERALL FACILITY ASSESSMENT

The Sherwood School District facilities have been well cared for and exhibit a high level of maintenance. The age of the facilities ranges from over 79 years to less than 6 years and all facilities show a high attention to detail in terms of care and maintenance. However, the majority of the facilities suffer from deferred maintenance issues, accessibility issues, building code and/or fire and life safety deficiencies. Deferred maintenance refers to those maintenance items or building repairs which may not have been performed at the optimum time due to budget or other constraints. These problems tend to exist at the older facilities. Facilities are in need of various upgrades in order to meet current and future needs of the school.

Observations and recommendations are based on the concept of a “useful life” of the building and its elements. In general, all products have a life span in terms of durability and maintenance. It is also based on the current use of each facility.

DISTRICT WIDE EVALUATION OF FACILITIES

The following charts are an overall evaluation of District facility improvements by category, by priority and by school. Individual charts for each facility are addressed in the Executive Summary and the Detailed Reports.

Buildings were reviewed under six categories: Structure/Substructure (structural systems, exterior, wall, roof and window assemblies), Interiors (including toilet facilities), Systems (mechanical, plumbing and fire protection), Electrical, Food Service and Grounds (included in this category are fields and grounds in addition to site components such as parking and sidewalks).

In the Detailed Summary for each facility, a rating system based on levels was used, ranging from Level I to Level III. The levels aided in determining the priority or need of each improvement listed. The levels represent the following evaluations:

Level I: Highest Priority - Issues that affect the life safety concerns of the occupant, related to notification of occupants to emergency situations and the ability to safely evacuate the facility; subcomponents of Level I include safety concerns such as electrical loads, hazardous materials that might be affected with remodel or modifications, and lack of fall protection. Level I items may also include structural upgrades to facilities constructed prior to current building codes. Level I items should be addressed within a five year plan.

Level II: Moderate Priority - Issues that are related to the integrity and adequacy of systems within the building to sufficiently withstand a potential significant seismic or wind event and still function; also related are the age of systems or building components that keep day to day operations running without constant repair. Issues may include mechanical, electrical and plumbing systems, fire suppression, lighting and security, as well as flooring, windows doors and other architectural components. Level II Items should be considered in a 5 to 10 year plan.

Level III: Low Priority - Issues that may over time affect the day to day maintenance of the building or long-term use of the facility. Issues also include access and clearances at equipment and fixtures, access for individuals with disabilities and both indoor and exterior environment quality. Level II items may also be issues that are related to the aesthetics of the building's interior and exterior as well as integrity and adequacy of building systems that don't pose any issues or are nearing the end of their remaining lifecycles. Level III Items could be considered long-term plans (10 years or more).

District Wide Facilities Assessment Costs

Recommendations by Category	Cost
Structure/Shell	$11,489,295
Interiors	$13,530,401
Systems	$5,531,857
Electrical	$961,834
Food Service	$407,960
Grounds	$1,676,386
Total	$33,597,733

Recommendations by Priority	Cost
Level I	$8,606,966
Level II	$12,427,304
Level III	$12,563,463
Total	$33,597,733

Recommendations by Facility	Cost
Archer Glen Elementary School	$914,615
Edy Ridge Elementary School	$894,972
Hopkins Elementary School	$2,291,555
Middleton Elementary School	$1,910,445
Laurel Ridge Middle School	$919,151
Sherwood Middle School	$8,986,703
Sherwood High School	$11,234,943
District Administrative Building	$5,378,476
Support Services Building	$1,066,873
Total	$33,597,733

Soft costs have been added to larger scale recommendations.

District Wide Facilities Assessment Costs

School	Priority I	Priority II	Priority III
Archer Glen ES	$205,841	$328,540	$380,324
Edy Ridge ES	$26,573	$117,134	$751,265
Hopkins ES	$669,475	$1,183,124	$438,956
Middleton ES	$116,845	$676,550	$1,117,050
Laurel Ridge MS	$12,238	$125,648	$781,265
Sherwood MS	$6,537,974	$1,748,748	$699,981
Sherwood HS	$1,022,873	$1,998,976	$8,213,094
District Administrative Building	$8,456	$5,306,121	$63,899
Support Services Building	$6,691	$942,463	$117,719
Total	$8,606,966	$12,427,304	$12,563,463

Soft costs have been added to larger scale recommendations.

Critical Needs by Facility

Archer Glen Elementary School:

- Replace Gutters
- Enclose/Construct Entry Vestibule
- Replace Boilers
- Replace Select Lighting
- Additional Site Fencing

Edy Ridge Elementary School:

- Install bird netting/bird spikes on exterior
- Replace Select Lighting
- Replace Lighting Controls

Hopkins Elementary School:

- Replace Gutters
- Enclose/Construct Entry Vestibule
- Cosmetic Upgrades in Cafeteria
- Update Fire Alarm System
- Replace Select Lighting
- Additional Site Fencing

Middleton Elementary School:

- Replace Select Flooring
- Enclose/Construct Entry Vestibule
- Replace Chilled Water System
- Replace Select Mechanical Equipment

Laurel Ridge Middle School:

- Install bird netting/bird spikes on exterior
- Replace Select Ceiling Tiles
- Replace Select Lighting
- Replace Lighting Controls

Sherwood Middle School:

- Replace Select Windows
- Repaint Interior and Exterior Doors
- Replace Select Casework and Furniture
- Replace Dust Collector
- Replace Select Mechanical Systems
- Replace Select Lighting

Edy Ridge Elementary School

21472 SW Copper Terrace
Sherwood, Oregon 97140

Built: 2009
Enrollment: 676 students (2014-15 school year)

Floor Area: 80,905 SF

Key Recommendations:

- Install bird netting/bird spikes on exterior
- Replace Select Lighting
- Replace Lighting Controls

Facility Assessment Costs

Recommendations by Category	Cost
Structure/Shell	**$ 757,795**
Interiors	**$ 5,412**
Systems	**$ 57,707**
Electrical	**$ 68,310**
Food Service	**$ 2,150**
Grounds	**$ 3,598**
Total	**$ 894,972**

Recommendations by Priority	Cost
Level I	**$ 26,573**
Level II	**$ 117,134**
Level III	**$ 751,265**
Total	**$ 894,972**

Laurel Ridge Middle School

21416 SW Copper Terrace
Sherwood, Oregon 97140

Built: 2009
Enrollment: 567 students (2014-15 school year)

Floor Area: 80,905 SF

Key Recommendations:

- Install bird netting/bird spikes on exterior
- Replace Select Ceiling Tiles
- Replace Select Lighting
- Replace Lighting Controls

Facility Assessment Costs

Recommendations by Category	Cost
Structure/Shell	**$ 787,526**
Interiors	**$ 16,796**
Systems	**$ 57,746**
Electrical	**$ 53,130**
Food Service	**$ -**
Grounds	**$ 3,953**
Total	**$ 919,151**

Recommendations by Priority	Cost
Level I	**$ 12,238**
Level II	**$ 125,648**
Level III	**$ 781,265**
Total	**$ 919,151**

Sherwood School District

Elementary School Capacity Study | School Information

Edy Ridge Elementary **Capacity Analysis - Goal Class Size**

Capacity Comments: Edy Ridge is over capacity; however, it is anticipated that the school boundary changes in the fall will alleviate overcrowding and bring class sizes within District goals. One (1) additional classroom will be needed to accommodate full-day kindergarten in fall of 2015.The school is presently using a space designed as a shared community room (with Laurel Ridge) as a 3rd grade classroom due to lack of space. The school has no potential or underutilized classrooms, and only one (1) computer lab.

Design Capacity - Total Classroom-sized Spaces					
Classroom-sized Spaces - Main Bldg	28	*This does not reflect the functional capacity of the building, as not every classroom-sized space will be used as a general classroom. Some classroom-sized spaces will inevitably need to be used for other purposes, such as SPED, computer labs, and other programs.*			
Classroom-sized Spaces - Portables	0				
Total Classroom-sized Spaces	28				
Capacity Overview	# K-5 Students	Building Capacity - Main Bldg	Building Capacity - w/ portables	% Capacity	Notes
Spring 2015 Enrollment	689	624	N/A	110% Capacity	The school's community room was converted to a general classroom to alleviate overcrowding. No portable classrooms are present at this school. One (1) additional classroom will be required to accommodate full-day kindergarten in the fall.
Projected Fall 2015 Enrollment	551	624	N/A	88% Capacity	
Classroom Need Summary					
Classrooms	Clsrm Quantity	Capacity -- current class size goals (2)	Total Capacity	Notes	
Current # of Classrooms in Use for General K-5 Instruction (Main Bldg)	24	26	624	Current enrollment is 689 students in 24 K-5 general classrooms. This includes use of a room that was designed as a community room, but is being used as a classroom due to overcrowding.	
Current # of Portable Classrooms in Use for General K-5 Instruction	0	26	0	There are no portable classrooms at this school.	
Total Classrooms in Use	**24**	26	**624**		
Potentially Available Classrooms - Main Building(1)	0	26	0		
Potentially Available Classrooms - Portables (1)	0	26	0		
Total Current and Potential Classrooms - Main Bldg and Portables	**24**	26	**624**		
Current Classroom Usage					
Teaching Stations	Clsrm Quantity	Capacity -- current class size goals (2)	Capacity	Spring 2015 Enrollment	Notes
Kindergarten	3	26	78	103	One additional classroom is needed to accommodate full-day kindergarten.
1st - 5th Grade	21	26	546	586	Exceeds average class size goal. Includes a community room that is now being used as a 3rd grade classroom due to overcrowding.
Current Unassigned Classrooms	0	N/A	N/A	0	
Special Use and Support Spaces: Classroom spaces currently used for other programs or services.	Clsrm Quantity	Notes			
SPED (4)	1	Room E-25			
ELL	1	Room E-5			
Pre-K Program	0				
Computer Lab	1	Room E-20			
Music	1				
TOTAL Support Spaces	**4**				
Capacity of Core Spaces					
Room or Space	Area in Sq Ft	Code (3)	Max No. of Occupants	Notes	
Cafeteria	3410	15	227	Three (3) lunch periods will be needed in fall of 2015 (based on projected enrollment divided by code-allowed number of occupants),	
Gym	5801	7	829	Occupants seated in chairs	
Library	3126	7	447	Occupants seated in chairs	

Notes:

(1.) Includes classrooms used for other programs or purposes (not general education). Does ***not*** include SPED, ELL, Pre-K or computer labs.

(2.) Class size is 26 students per teaching station.

(3.) The floor area in square feet per person allowed per the Building Code.

(4.) SPED students are included in the total enrollment; however, SPED classrooms are not counted for capacity purposes. Self-contained SPED classrooms have significantly lower (and widely fluctuating) class sizes. Other SPED classrooms may provide primarily pull-out services. Consequently, these classrooms are not counted toward the overall capacity of the school.

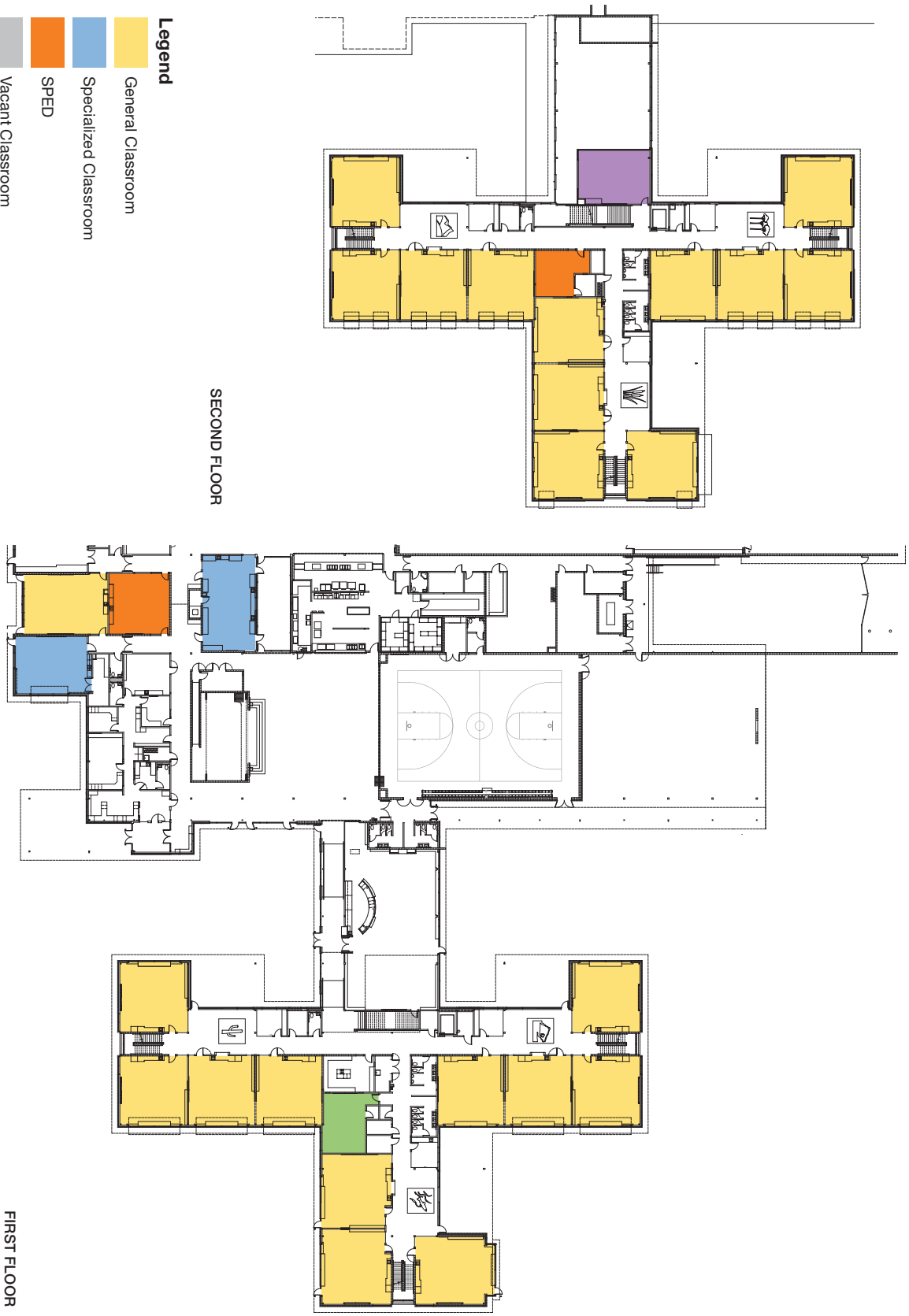
Dull Olson Weekes - IBI Group Architects, Inc.

OVERALL FLOOR PLAN

Edy Ridge Elementary School | Sherwood School District

Legend

- General Classroom
- Specialized Classroom
- SPED
- Vacant Classroom
- Other Programs
- Computer Lab



REFERENCE PLAN
SCALE: NOT TO SCALE

August 2015

Sherwood School District

Elementary School Capacity Study | School Information

Edy Ridge Elementary **Capacity Analysis - Capacity of Current Spaces**

Capacity Comments: Edy Ridge is over capacity; however, it is anticipated that the school boundary changes in the fall will alleviate overcrowding and bring class sizes within District goals. One (1) additional classroom will be needed to accommodate full-day kindergarten in fall of 2015.The school is presently using a space designed as a shared community room (with Laurel Ridge) as a 3rd grade classroom due to lack of space. The school has no potential or underutilized classrooms, and only one (1) computer lab.

Design Capacity - Total Classroom-sized Spaces					
Classroom-sized Spaces - Main Bldg	28	*This does not reflect the functional capacity of the building, as not every classroom-sized space will be used as a general classroom. Some classroom-sized spaces will inevitably need to be used for other purposes, such as SPED, computer labs, and other programs.*			
Classroom-sized Spaces - Portables	0				
Total Classroom-sized Spaces	28				
Capacity Overview	# K-5 Students	Building Capacity - Main Bldg	Building Capacity - w/ portables	% Capacity	Notes
Spring 2015 Enrollment	689	600	N/A	115% Capacity	The school's community room was converted to a general classroom to alleviate overcrowding. No portable classrooms are present at this school. One (1) additional classroom will be required to accommodate full-day kindergarten in the fall.
Projected Fall 2015 Enrollment	551	600	N/A	92% Capacity	
Classroom Need Summary					
Classrooms	Clsrm Quantity	Capacity -- current class size goals (2)	Total Capacity	Notes	
Current # of Classrooms in Use for General K-5 Instruction (Main Bldg)	24	25	600	Current enrollment is 689 students in 24 K-5 general classrooms. This includes use of a room that was designed as a community room, but is being used as a classroom due to overcrowding.	
Current # of Portable Classrooms in Use for General K-5 Instruction	0	25	0	There are no portable classrooms at this school.	
Total Classrooms in Use	**24**	25	**600**		
Potentially Available Classrooms - Main Building(1)	0	25	0		
Potentially Available Classrooms - Portables (1)	0	25	0		
Total Current and Potential Classrooms - Main Bldg and Portables	**24**	25	**600**		
Current Classroom Usage					
Teaching Stations	Clsrm Quantity	Capacity -- current class size goals (2)	Capacity	Spring 2015 Enrollment	Notes
Kindergarten	3	25	75	103	One additional classroom is needed to accommodate full-day kindergarten.
1st - 5th Grade	21	25	525	586	Exceeds average class size goal. Includes a community room that is now being used as a 3rd grade classroom due to overcrowding.
Current Unassigned Classrooms	0	N/A	N/A	0	
Special Use and Support Spaces: Classroom spaces currently used for other programs or services.	Clsrm Quantity	Notes			
SPED (4)	1	Room E-25			
ELL	1	Room E-5			
Pre-K Program	0				
Computer Lab	1	Room E-20			
Music	1				
TOTAL Support Spaces	**4**				
Capacity of Core Spaces					
Room or Space	Area in Sq Ft	Code (3)	Max No. of Occupants	Notes	
Cafeteria	3410	15	227	Three (3) lunch periods will be needed in fall of 2015 (based on projected enrollment divided by code-allowed number of occupants),	
Gym	5801	7	829	Occupants seated in chairs	
Library	3126	7	447	Occupants seated in chairs	

Notes:

(1.) Includes classrooms used for other programs or purposes (not general education). Does ***not*** include SPED, ELL, Pre-K or computer labs.

(2.) Class size is 25 students per teaching station.

(3.) The floor area in square feet per person allowed per the Building Code.

(4.) SPED students are included in the total enrollment; however, SPED classrooms are not counted for capacity purposes. Self-contained SPED classrooms have significantly lower (and widely fluctuating) class sizes. Other SPED classrooms may provide primarily pull-out services. Consequently, these classrooms are not counted toward the overall capacity of the school.

Sherwood School District

Secondary School Capacity Study | School Information

Laurel Ridge Middle School **Capacity Analysis - Goal Class Size**

Six-Period Day

Capacity Summary	
# of Teaching Stations (1) (2)	23
Class Size Goal	30
Periods / Day	6
Instructional Periods	5
Prep Factor	0.83
Capacity - Main Building	**573**
Capacity with Portables	**N/A**

Capacity Comments: Laurel Ridge's enrollment is very near its capacity. It is anticipated that the school boundary changes in the fall will alleviate overcrowding and bring class sizes within District goals. School administrators are concerned that the size of core spaces (e.g. cafeteria and gym) may be insufficient to meet the needs of the current student population.

Design Capacity - Total Classroom-sized Spaces

Classroom-sized Spaces - Main Bldg	27 (7)	*This does not reflect the functional capacity of the building, as not every classroom-sized space will be used as a general classroom. Some classroom-sized spaces will inevitably need to be used for other purposes, such as SPED, computer labs, and other programs.*
Classroom-sized Spaces - Portables	0	
Total Classroom-sized Spaces	27	

Capacity Overview	# Students	Building Capacity - Main Bldg	Building Capacity - w/ portables	% Capacity	Notes
Spring 2015 Enrollment	554	573	N/A	97% capacity	The school boundary adjustments will ease overcrowding at Laurel Ridge. No portable classrooms are present at this school.
Projected Fall 2015 Enrollment	494	573	N/A	86% capacity	

Capacity Based on Potential Use
6th - 8th Grade (6 period day)

Teaching Stations	Quantity	Class Size Goals (3)	Capacity at 100% Use	Prep Factor (4)	Adjusted Capacity	NOTE
General Classrooms (in use and available) (1)	16	30	480	0.83	398	
Current Unassigned Classrooms	0	30	0	0.83	0	
Science Labs	3	30	90	0.83	75	Rooms M-7, M-26 and M-27
Music	1	30	30	0.83	25	
Art Classrooms	1	30	30	0.83	25	M-3 and M-4 (counted as one teaching st.)
Electives / CTE	1	30	30	0.83	25	"Explore" Lab (FACS)
Gym (as P.E. CR) (2)	1	30	30	0.83	25	
TOTAL	**23**		**690**		**573**	

Special Use: CRs spaces for support or pullout programs	Quantity	NOTE
Classrooms used for other purposes or programs	0	
SPED (6)	2	Rooms M-5 and M-6
ELL	0	
Auditorium	0	
Computer Lab	2	Rooms M-1 and M-20
TOTAL	**4**	

Capacity of Core Spaces

Core Facility	Square Feet	Code (5)	Capacity	NOTE
Cafeteria	4,183	15	279	Two (2) lunch periods will be needed in fall of 2015 (based on projected enrollment divided by code-allowed number of occupants),
Gym	7,313	7	1045	Occupants seated in chairs
Library	2,920	7	417	Occupants seated in chairs

Notes:
(1.) For general instruction not requiring a specialized classroom.
(2.) The Gym is counted as a teaching station.
(3.) The District's class size goal for middle school grades is 30 students per class.
(4.) A prep factor has been calculated in order to take into account that classrooms are scheduled all but one period per day.
(5.) The area per person allowed in such occupancy type space per the Building Code.
(6.) SPED students are included in the total enrollment; however, SPED classrooms are not counted for capacity purposes. Self-contained SPED classrooms have significantly lower (and widely fluctuating) class sizes. Other SPED classrooms may provide primarily pull-out services. Consequently, these classrooms are not counted toward the overall capacity of the school.

Dull Olson Weekes - IBI Group Architects, Inc.

OVERALL FLOOR PLAN

Laurel Ridge Middle School | Sherwood School District

August 2015

Sherwood School District

Secondary School Capacity Study | School Information

Laurel Ridge Middle School — **Capacity Analysis - Capacity of Current Spaces**

Six-Period Day

Capacity Summary	
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Instructional Periods	5
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Capacity with Portables	**N/A**

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Design Capacity - Total Classroom-sized Spaces

Classroom-sized Spaces - Main Bldg	27 (7)	*This does not reflect the functional capacity of the building, as not every classroom-sized space will be used as a general classroom. Some classroom-sized spaces will inevitably need to be used for other purposes, such as SPED, computer labs, and other programs.*
Classroom-sized Spaces - Portables	0	
Total Classroom-sized Spaces	27	

Capacity Overview	# Students	Building Capacity - Main Bldg	Building Capacity - w/ portables	% Capacity	Notes
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Teaching Stations	Quantity	Class Size Goals (3)	Capacity at 100% Use	Prep Factor (4)	Adjusted Capacity	NOTE
General Classrooms (in use and available) (1)	16	30	480	0.83	398	
Current Unassigned Classrooms	0	30	0	0.83	0	
Science Labs	3	30	90	0.83	75	Rooms M-7, M-26 and M-27
Music	1	30	30	0.83	25	
Art Classrooms	1	30	30	0.83	25	M-3 and M-4 (counted as one teaching st.)
Electives / CTE	1	30	30	0.83	25	"Explore" Lab (FACS)
Gym (as P.E. CR) (2)	1	30	30	0.83	25	
TOTAL	**23**		**690**		**573**	

Special Use: CRs spaces for support or pullout programs	Quantity	NOTE
Classrooms used for other purposes or programs	0	
SPED (6)	2	Rooms M-5 and M-6
ELL	0	
Auditorium	0	
Computer Lab	2	Rooms M-1 and M-20
TOTAL	**4**	

Capacity of Core Spaces

Core Facility	Square Feet	Code (5)	Capacity	NOTE
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(2.) The Gym is counted as a teaching station.

(3.) The District's class size goal for middle school grades is 30 students per class.

(4.) A prep factor has been calculated in order to take into account that classrooms are scheduled all but one period per day.

(5.) The area per person allowed in such occupancy type space per the Building Code.

(6.) SPED students are included in the total enrollment; however, SPED classrooms are not counted for capacity purposes. Self-contained SPED classrooms have significantly lower (and widely fluctuating) class sizes. Other SPED classrooms may provide primarily pull-out services. Consequently, these classrooms are not counted toward the overall capacity of the school.

Edy Ridge Elementary School

Educational Programs / Instructional Delivery

Edy Ridge is Sherwood School District's newest elementary school. The school building features flexible learning environments and team rooms for teacher planning activities. Staff are generally pleased with the condition and layout of their facility. An art room is shared with the adjacent Laurel Ridge Middle School.

The school does not include a dedicated space for a before / afterschool program (e.g. Champions). A program was previously offered in the gym, but it was very distracting to teachers. It would be beneficial to be able to support this program onsite in a dedicated room or space.

Special Education

Edy Ridge has two (2) SPED resource rooms – one is used for ELL, whereas the other is used to deliver pull-out services for students with IEP's. SPED rooms are smaller than general classrooms. The school also includes two (2) "think rooms." The space that was designed as the OT/PT room has no natural light and is positioned far away from the students served. Consequently, this room is currently used for other purposes.

Technology

Edy Ridge has a one-to-one student/device ratio in two classrooms, supplying iPads and/or Chromebooks. The school is working to increase the student/device ratio in other classrooms. Classroom audio-visual technology is very functional. Ceiling-mounted projectors are included in all classrooms. Smart Boards are present in approximately nine (9) classrooms; however, this technology is being phased out. The school needs to add marker/white boards to the classrooms where the Smart Boards are being removed. Staff report that wireless capacity is sufficient.

The high windows in the cafeteria can interfere with the ability to see projected images – the school would like the ability to darken the room. The projectors in some classrooms need to be brighter, as daylighting interferes with the ability to see projected images. The District is replacing bulbs (as they burn out) with higher lumens. The speakers in the gym vs. the cafeteria were not connected at the time of installation; consequently, announcements cannot be broadcast on both sides at the same time.

Safety / Security

Edy Ridge includes design features that support security and access control. Edy Ridge is the only elementary school in the District with a vestibule-style entry. Rolling cage doors can seal off instructional wings from public areas (e.g. cafeteria). Staff report that stairs and corridors can become congested during dismissals and arrivals.

Laurel Ridge Middle School

Educational Programs / Instructional Delivery

Laurel Ridge is Sherwood School District's newest middle school facility. High enrollment limits the school's ability to use some spaces for their intended purposes due to capacity issues.[3] The current overcrowded conditions present challenges related to use of the cafeteria. The school currently has three lunches – staff would prefer to offer two lunches, but there are obstacles to implementing this change (not just facility-related – there are other issues also).

General classrooms support instructional needs. There is a lack of planning space for teachers. The number of science labs (3) is sufficient; however, additional equipment is needed to meet future needs. A band room is provided; however, there is not a separate room for choir. The school would like to add a woodworking shop. Additional library storage is needed. The facility includes an art classroom that is shared with Edy Ridge. The space is functional, though the art room tables are showing wear and tear. Ample display areas are provided throughout the school.

The school only has one gym – it does not have an auxiliary gym or a weight room. Staff feel that a second gym is needed. Locker rooms are generally adequate. There is a muddy path from road to track – a paved walkway would be beneficial (students track in mud).

Special Education

One SPED classroom with a divider wall is provided at Laurel Ridge. The SPED classroom is smaller than general classrooms; however, the provided space is sufficient.

Technology

Classrooms are equipped with ceiling-mounted data projectors and document cameras. Some classrooms have Smart Boards. Audio amplification systems are present in classrooms. Wireless is generally sufficient for teachers to stream content, though it can be slow at times. Two computer labs are present (including one adjacent to the library). The lab next to the library is unusable during certain times of the year, as the school must store books in this area due to lack of space.

Teachers report that students have trouble seeing the screens in classrooms; this is particularly true in the science labs, where rooms are long and narrow. Teachers must hook their computer up to the data projector show videos in class; it would be helpful to have the ability to project videos in a manner that allows simultaneous use of their laptop.

Safety / Security

Laurel Ridge is equipped with a vestibule-style entry. The glass interior walls can present security-related challenges. An intercom / panic button system is located in the main office only, and staff report that it is complicated to use. Every classroom has a telephone, as well as doors equipped with intruder locks. Window coverings are provided throughout the facility.

[3] Laurel Ridge's enrollment is expected to decrease following school boundary adjustments in fall of 2015, alleviating overcrowded conditions to some degree.

The configuration of the stairs has presented a hazard during crowded transitions. The stairs are very wide – there are rails on each side, but not in the middle. Students have fallen in the past, when they have lost their footing and had nothing to grab onto.

Top Parity Issues between Schools

While recognizing that every school building provides unique resources and challenges, it is the District's goal to offer a certain level of parity in the educational resources of Sherwood students (where feasible). During the principal interviews, the following items were mentioned as parity issues between school facilities in the District.

- Flexibility: The District's newer school facilities provide flexible learning environments, allowing teachers to more easily adapt spaces for a variety of learning approaches. Teachers in the District's older facilities are more limited in their activities due to the lack of breakout spaces and other design features.

- Art Spaces: The District's newer elementary and middle schools have access to an art classroom; the older elementary and middle schools do not have this resource. Consequently, the newer schools have the ability to offer an expanded array of STEAM activities, whereas the older schools are not necessarily equipped to accommodate messy, hands-on projects.

- Technology: Access to technology is not uniform across all District schools. Some schools are much better equipped in terms of computer labs, mobile devices, and audio-visual equipment.

- Community Room: Some schools include a community room, whereas others do not have this resource. Community rooms have proven to be heavily utilized within the District – it is felt that all schools would benefit from a space.

- Parking: Parking is at a premium at some schools, limiting their ability to host events. Site constraints may limit the District's ability to expand parking at certain sites.

- Access to Meeting Spaces: Some school buildings do not include sufficient meeting spaces to accommodate small and/or large group meetings (particularly those requiring auditory privacy). This is particularly an issue with older and more crowded facilities within the District.

- Gymnasium Space(s): There is a disparity in the number and sizes of gymnasium space(s) among District schools. This presents an obstacle to providing sufficient P.E. instructional time to students, as well as meeting community needs for extracurricular athletics.

- Quality of Furnishings: There was a noted disparity in the condition, age, function and aesthetics of furnishings in the older vs. newer District schools.

- Outdoor Play Areas: Some District school sites include outdoor learning resources and student gardens, as well as ample covered play areas. Other schools have more basic play structures and fields.

Edy Ridge Elementary School

21472 SW Copper Terrace
Sherwood, Oregon 97140

Built: 2009
Enrollment: 676 students (2014-15 school year)

Floor Area: 80,905 SF

Field Review Team: Thea Wayburn, DOWA – IBI Group
John Mayer, Froelich Engineers
Ray Soucie, RSA
Robert Connell, MFIA Engineers
Gary Adovnik, MFIA Engineers
Scott Miller, MFIA Engineers

Report Date: **AUGUST 2015**

Date of Field Visit: April 23, 2015

Time of Day: 2:30 pm

Weather: Cloudy with times of rain

Neighborhood: Residential

Site Contacts: Dale Goracke

General Building Description:

Edy Ridge Elementary School is the newest elementary school in the School District, and was constructed approximately 6 years ago. It is on the same campus as Laurel Ridge Middle School, and physically shares several spaces including a Community Room.

Edy Ridge is a structural steel framed building. The structure is founded on conventional spread footings and the first level consists of a 5" reinforced concrete slab on grade. Intermediate floor levels are framed with steel beams and composite metal deck with concrete topping. The roof is framed with a mix of steel wide flange beams and open web steel joists supporting a metal deck that serves as the roof diaphragm. Lateral loads are resisted by a combination of CMU shear walls and special concentric steel braced frames located throughout the buildings.

Overall this facility is in excellent condition. The only issue/observation is that the size and type of exposed structure on the building's exterior has provided areas for birds to nest and be a nuisance for building maintenance.

A full building review of architectural, structural, mechanical, electrical, plumbing and low voltage components was conducted. Food Service was reviewed concurrently and will be referenced in this report; a detailed Food Service assessment will be located in the Appendix of this report. A Roofing Assessment was conducted at a later date and will also be included in the Appendix of this report.

An educational adequacy interview with each School Principal was conducted concurrently with the physical building review. This information will be included in a separate section of this Report.

A - STRUCTURE / SHELL

A10 – STRUCTURE / SUBSTRUCTURE

Item		Findings	Comments
A10.1	Foundations	• No issues observed	
A10.2	Subgrade Enclosures	• There are several locations where shrinkage cracks were evident in the existing slab on grade.	• The cracks that were viewed were very small in width and do not pose a structural concern.
A10.3	Structural Systems	• No issues observed	

RECOMMENDATIONS

A20 - EXTERIOR COMPONENTS

Item		Findings	Comments
A20.1	Exterior Walls	• No issues observed	• Exterior wall materials are comprised of concrete masonry units (CMU) of varying colors and sizes and metal siding.
A20.2	Doors and Hardware	• No issues observed	• Typical hardware is lever-type hardware.
A20.3	Windows and Skylights	• No issues observed	
A20.4	Roof	• Roofing is in good condition.	• Roofing is a TPO membrane system. • See Appendix for complete Roofing Report.
A20.5	Canopies and Covered Walks	• No issues observed	
A20.6	Gutters and Downspouts	• No issues observed	
A20.7	Trim and Overhangs	• Many of the roof overhangs are open web steel joists, which have provided areas for birds to nest and cause maintenance issues. Bird nests were observed as well.	

RECOMMENDATIONS

A20.4 Plan for replacement of roofing in long term maintenance plans (15 plus years).
A20.7 Install bird spikes or netting in large overhang areas (by classroom commons) and at main entry.

B - INTERIORS

B10 – INTERIOR CIRCULATION

Item		Findings	Comments
B10.1	Construction and Exiting	• No issues observed	• Building is fully sprinklered. • Fire doors are present in select locations.
B10.2	Stairs and Handrails	• No issues observed	• Stairs and handrails are in very good condition.
B10.3	Ramps and Elevators	• No issues observed	• Portions of this building are 2-story, and an elevator is present (Schindler). • A ramp provides an accessible route to Stage and in front of the Library.
B10.4	Accessibility	• The permanent barriers designed at both classrooms stairs have been removed and the space under the stairs appears to be used for instruction. See Figure B10.4.	• This may violate the reduced vertical clearance requirements stated in ANSI (American National Standards Institute) A117.1 Section 307.4.
B10.5	Signage	• No issues observed	

RECOMMENDATIONS

B10.4 If current setup does not comply with ANSI requirements, reinstall barriers.

B20 – INTERIOR FINISHES

Item		Findings	Comments
B20.1	Flooring	• Thresholds/transition strips between flooring materials in several rooms has significant gaps.	• The main flooring material is stained, polished concrete. Carpeting is present in select locations and in all classrooms and is in excellent condition. • The Gymnasium has a wood floor. • Kitchen flooring is quarry tile. • It was noted there are areas of staining on the concrete floors and at drinking fountains. When the flooring receives new sealer, these areas should be attended to.

B20.2	Ceilings	• No issues observed	• Ceilings include painted gypsum board, wood and acoustical tile ceiling clouds.
B20.3	Ceiling Issues	• No issues observed	
B20.4	Fixed Equipment	• No issues observed	• The stage curtains and lighting are in excellent condition. • Typical classroom equipment includes projectors, Smart Boards and markerboards. • Built-in wood benches near the main entry are in excellent condition. • The Gymnasium has (6) backstops and manual bleachers (5 rows) as well as a scoreboard.
B20.5	Walls	• Hallway walls in the office area lack cornerguards. See Figure B20.5.	• Gymnasium walls have wall padding. • The wall between the Gymnasium and Cafeteria is an operable wall with tackable finish.
B20.6	Wall Finishes	• No issues observed	• Wall finishes include wood paneling, wainscoting, painted gypsum board and exposed concrete block. • Tackable wall areas are present throughout this facility. • Kitchen walls have FRP (fiber reinforced panel) paneling.
B20.7	Furnishings	• Room E12 has one set of broken blinds.	• Furniture throughout this facility is in excellent condition. • Blinds are in good condition.

RECOMMENDATIONS

B20.1 Replace transition strips in (6) rooms.
B20.5 Add cornerguards to all hallway walls in the main office area.
B20.7 Replace one set of blinds.

B30 – INTERIOR COMPONENTS

Item		Findings	Comments
B30.1	Interior Windows	• No issues observed	
B30.2	Interior Doors and Hardware	• No issues observed	• Doors are wood with painted metal frames, and are generally in very good condition.
B30.3	Acoustics	• No issues observed	
B30.4	Casework	• The plastic laminate sill in Room E9 was damaged. See Figure B30.4.	• All other casework is in excellent condition. • Classroom sinks include

			bubblers.
B30.5	Safety/Security	• No issues observed	• Exterior windows and interior doors and windows have horizontal louver blinds.
RECOMMENDATIONS			
B30.4	Replace damaged plastic laminate.		

B40 – TOILET FACILITIES

Item		Findings	Comments
B40.1	Walls and Wall Finishes	• No issues observed	• Restroom walls are painted gypsum board and ceramic tile or resilient flooring and gypsum board (staff restrooms).
B40.2	Floors and Floor Finishes	• No issues observed	• Flooring is resilient flooring or ceramic tile.
B40.3	Ceilings	• No issues observed	• Ceilings are all painted gypsum board.
B40.4	Partitions	• No issues observed	
B40.5	Fixtures	• No issues observed	
B40.6	Accessories	• No issues observed	
B40.7	Accessibility	• No issues observed	
RECOMMENDATIONS			

C - SYSTEMS

C10 - PLUMBING

Item		Findings	Comments
C10.1	Water Service	• No issues observed	• A well is present on site for irrigation.
C10.2	Piping	• No issues observed	• Pipe is copper and PEX water piping.
C10.3	Drain and Vent Systems	• No issues observed	• Cast iron waste lines above the floor slab; plastic waste lines below the slab. • Plastic vent lines throughout. • Grease interceptor for the entire kitchen.
C10.4	Fixtures	• No issues observed	• Flush valve water closets and urinals are present.
C10.5	Water Pressure and Service	• No issues observed	• Pressure: 70 PSI.
C10.6	Storm and Overflow Drains	• No issues observed	• Plastic pipe below grade. • The roof is a flat roof drained with gutters.
C10.7	Water Heater	• The water heater connection is leaking and not tight.	• There are two tank style condensing gas fired water heaters with recirculation system.

RECOMMENDATIONS

C10.7 Tighten connection at water heater.

C20 - HVAC

Item		Findings	Comments
C20.1	Mechanical Equipment	• No issues observed	
C20.2	Air Filtration	• No issues observed	• 2” 30%
C20.3	Equipment Accessibility	• No issues observed	• Roof access is good to most units.
C20.4	Air Distribution and Ventilation	• Access to fire smoke dampers is difficult.	• Sheet metal duct work system was observed. • Displacement VAV system present at classrooms.
C20.5	Controls	• It is noted there are problems with lighting control system.	• Controls are Automated Logic digital control system.
C20.6	Generator	• No issues observed	• Gas fired generator
C20.7	Cooling Systems	• Refrigerant lines need insulation protection.	• Central air handler units are present with integral DX cooling system. • Mini-split units are located in the data closets.
C20.8	Chillers	• None present	

C20.9	Heating Systems	• Corridor radiant heaters need floor support.	• Central air handler units with hot water heating coils. • VAV reheat coils are hot water. • Hot water radiators present at perimeter of classrooms and corridors.
C20.10	Boiler	• There is a leak at one boiler combination temperature / pressure gauge. See Figure C20.10.a. • There are leaks at the boiler flue material joints. See Figure C20.10.b.	• Condensing gas fired stainless steel are Aerco Benchmark units.

RECOMMENDATIONS

C20.4 Complete code analysis of building under new code to eliminate the need for some fire smoke dampers.
C20.5 Remove lighting control system and place lights on BAS.
C20.7 Install refrigerant line insulation protection.
C20.9 Add floor supports to corridor radiators.
C20.10 Replace gauge and stacks.

C30 – FIRE PROTECTION

Item		Findings	Comments
C30.1	Fire Suppression System	• No issues observed	• Building is fully sprinklered.
C30.2	Water Service and Backflow Prevention	• No issues observed	• Service is in place and appears appropriate.
C30.3	System Pressure	• No issues observed	• Pressure: 70 PSI
C30.4	Standpipes	• No issues observed	
C30.5	Fire Pump	• No issues observed	
C30.6	Fire Sprinkler Pipe Condition	• No issues observed	
C30.7	Fire Department Connection	• No issues observed	
C30.8	Fire Sprinkler Zoning	• No issues observed	
C30.9	Flow Monitoring and Alarm	• No issues observed	• In place and appears appropriate.
C30.10	Hoses and Extinguishers	• Not Required	• No hose cabinets in place or necessary.

RECOMMENDATIONS

D - ELECTRICAL

D10 - ELECTRICAL EQUIPMENT

Item		Findings	Comments
D10.1	Transformers	• No issues observed	
D10.2	Switchgear and Panelboards	• No issues observed	• This is a recently constructed facility with sufficient expansion capability. • Equipment is Square D.
D10.3	Lighting	• Indirect lighting in cafeterias and media centers appears underlit. See Figure D10.3. • Some fluorescent bulb types are hard to obtain.	• Ceilings are not white in these locations.
D10.4	Lighting Controls	• Maintenance personnel indicate programming is difficult.	• Leviton lighting control panels are used in some areas.
D10.5	Back-up and Emergency Power	• No issues observed	• This is a recently constructed facility with sufficient expansion capability.
D10.6	Egress and Emergency Lighting	• No issues observed	
D10.7	Exit Signage	• No issues observed	
D10.8	Sensors	• No issues observed	

RECOMMENDATIONS

D10.3 Replace indirect lighting with LED direct lighting for increased lighting levels, energy savings, and reduced maintenance costs. Install dimmers for better control, as LED light fixtures are more easily dimmed as opposed to fluorescent lighting.

D20 – SAFETY / SECURITY

Item		Findings	Comments
D20.1	Fire Alarm	• No issues observed	• Fire Alarm - EST
D20.2	Smoke Detection	• No issues observed	
D20.3	Pull Stations	• No issues observed	
D20.4	Annunciation	• No issues observed	
D20.5	Addressable Zones and System	• No issues observed	
D20.6	Monitoring	• No issues observed	
D20.7	Access Control	• No issues observed	• Access Control: Sonitrol
D20.8	Intrusion Detection	• No issues observed	• Intrusion Detection: Hirsch
D20.9	Video Surveillance	• No issues observed	

RECOMMENDATIONS

D30 - TECHNOLOGY			
Item		**Findings**	**Comments**
D30.1	Backbone Cabling Infrastructure	• No issues observed	• Siemens
D30.2	Horizontal Cabling Infrastructure	• No issues observed	• Cable: Mohawk Cable
D30.3	MDF and IDF Grounding	• No issues observed	
D30.4	MDF and IDF Conditions	• The IDF near the Main Office needs cooling.	
D30.5	Projection and Smart Boards	• No issues observed	
D30.6	Audio Reinforcement	• No issues observed	
D30.7	CATV	• No issues observed	

RECOMMENDATIONS

D40 – TECHNOLOGY COMMUNICATIONS			
Item		**Findings**	**Comments**
D40.1	Paging and Intercom – Head End Condition	• No issues observed	• Telecenter
D40.2	Master Clock	• No issues observed	• Sapling
D40.3	Infrastructure	• No issues observed	
D40.4	Speakers	• No issues observed	• Rauland
D40.5	Coverage	• No issues observed	
D40.6	Clock System	• No issues observed	• Sapling
D40.7	Clock – Head End	• No issues observed	• Sapling

RECOMMENDATIONS	
D30.4	Add cooling to IDF Room.

E - FOOD SERVICE

E10- FOOD SERVICE

Item		Findings	Comments
E10.1	Equipment	• There is excessive ice build-up in the walk-in freezer. • The Dish Room lacks a spray reel.	• See Appendix for complete Food Service Report.
E10.2	Deliveries and Storage	• No issues observed	
E10.3	Serving Line and Flow	• Serving line edges are not protected.	

RECOMMENDATIONS

E10.1 Seal air gap and conduit in walk-in freezer. Add spray reel.
E10.3 Add cornerguards to serving line edges.

F - GROUNDS

F10 – SITE CIRCULATION AND PARKING

Item		Findings	Comments
F10.1	Parking Lots	• No issues observed	• There are (112) standard parking stalls and (5) accessible stalls. • Carpool and compact parking stalls are provided. A separate staff lot is located near the building entry.
F10.2	Site Signage	• No issues observed	• There are (2) site signs onsite. • A flagpole is present.
F10.3	Vehicular Circulation	• No issues observed	• Drive aisles are 2-way and adequately sized. • Separate fire lanes are provided.
F10.4	Curbs and Sidewalks	• Fire lane curbs are showing wear.	• Sidewalks and other non-painted curbs are in excellent condition.
F10.5	Accessibility	• The courtyard area near the cafeteria is tiered, and not fully accessible.	• The site itself and exterior doors locations are fully accessible. • A door actuator is located at the main entrance.
F10.6	Bikes and Bike Parking	• No issues observed	• Bike parking is located in (2) areas, both covered. One of these locations is at the main entry.

RECOMMENDATIONS

F10.4 Repaint all fire lane curbs.

F20 - SITE COMPONENTS

Item		Findings	Comments
F20.1	Fields	• No issues observed	• Site includes a large field area with several soccer nets and (2) baseball fields.
F20.2	Landscaping	• It is noted that plantings are in fair condition. Plant type and wear and tear have attributed to this. As a result, the sloped area is bark and dirt that becomes an issue in wet weather conditions. However, no issues observed at the time of the site visit.	• Landscaping includes lawn areas, trees and plants. • A landscape architect and civil engineer should be consulted to review existing conditions and proposed options to mitigate issues.
F20.3	Irrigation	• Not Applicable	
F20.4	Site Buildings	• There is evidence of bird nesting/presence at the covered play area.	• The covered play area is in excellent condition. There are basketball backstops located under the covered play. • Trash area is enclosed

			and gated.
F20.5	Site Security	• Play fields are accessed by crossing the fire/bus lane.	
F20.6	Fencing	• No issues observed	
F20.7	Playground Equipment	• No issues observed	• There are (2) playground areas. Equipment is located in bark chips areas.
F20.8	Play Surfaces	• No issues observed	
F20.9	Site Lighting	• See Electrical Section	
F20.10	Grading and Drainage	• No issues observed	
RECOMMENDATIONS			
F20.4	Install bird spikes or netting at covered play area.		

IMAGES

Figure B10.4 – Under Stair Use

Figure B20.5 – Office Walls

Figure B30.4 – Damaged Sill

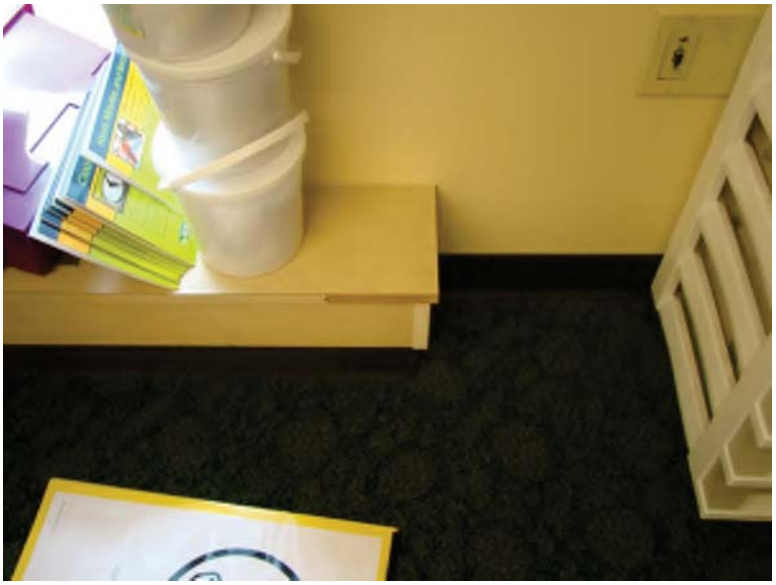


Figure C20.10.a – Boiler

Figure C20.10.b – Boiler

Figure D10.3 – Lighting

Edy Ridge Elementary			Priority Level (Refer to Legend)			Priority Level	Priority Level	Priority Level
ITEMS			I	II	III	**I**	**II**	**III**
A - STRUCTURE/SHELL								
A10 - STRUCTURE/SUBSTRUCTURE								
A20 - EXTERIOR COMPONENTS								
A20.4	1	Budget for roof replacement (15 plus years)			X			$ 750,000
A20.7	1	Add bird netting/bird spike at building exterior	X			$7,795		
TOTALS - STRUCTURE/SHELL						**$ 7,795**	**$ -**	**$ 750,000**
B - INTERIORS								
B10 - INTERIOR CIRCULATION								
B10.4	1	Reinstall existing barriers under stairs (no cost)	X			$ -		
B20 - INTERIOR FINISHES								
B20.1	1	Replace transition strips in (6) classrooms		X			$986	
B20.5	1	Add cornerguards		X			$759	
B20.6	1	Replace blinds		X			$537	
B30 - INTERIOR COMPONENTS								
B30.4	1	Replace damaged laminate top		X			$3,130	
B40 - TOILET FACILITIES								
TOTALS - INTERIORS						**$ -**	**$ 5,412**	**$ -**
C - SYSTEMS								
C10 - PLUMBING								
C10.7	1	Tighten connection at water heater		X			$ 150	
C20 - HVAC								
C20.4	1	Complete code analysis of building		X			$ 1,265	
C20.5	1	Remove lighting control system and replace		X			$ 28,462	
C20.7	1	Install refrigerant line protections		X			$ 2,530	
C20.9	1	Add floor supports for radiators		X			$ 10,120	
C20.10	1	Replace gauge/stacks		X			$ 15,180	
C30 - FIRE PROTECTION								
TOTALS - SYSTEMS						**$ -**	**$ 57,707**	**$ -**
D - ELECTRICAL								
D10 - ELECTRICAL EQUIPMENT								
D10.3	1	Replace fluorescent lighting		X			$ 53,130	
D20 - SAFETY/SECURITY								
D30 - TECHNOLOGY								
D30.4	1	Add cooling to IDF rooms near Offices (for both buildings)	X			$ 15,180		
D40 - TECHNOLOGY COMMUNICATIONS								
TOTALS - ELECTRICAL						**$ 15,180**	**$ 53,130**	**$ -**

Edy Ridge Elementary			Priority Level (Refer to Legend)			Priority Level	Priority Level	Priority Level
ITEMS			I	II	III	**I**	**II**	**III**
E - FOOD SERVICE								
E10 - FOOD SERVICE								
E10.1	1	Seal air gaps and electrical conduit	X			$ 1,265		
	2	Add spray real to Dish Room		X			$ 506	
E10.3	1	Add stainless steel cornerguards to serving line		X			$ 379	
		TOTALS - FOOD SERVICE				**$ 1,265**	**$ 885**	**$ -**
F - GROUNDS								
F10 - SITE CIRCULATION AND PARKING								
F10.4	1	Repaint all fire lane curbs			X			$ 1,265
F20 - SITE COMPONENTS								
F20.4	1	Add bird netting or spikes at covered play area	X			$ 2,333		
		TOTALS - GROUNDS				**$ 2,333**	**$ -**	**$ 1,265**

TOTALS BY CATEGORY	
STRUCTURE/SHELL	**$ 757,795**
INTERIORS	**$ 5,412**
SYSTEMS	**$ 57,707**
ELECTRICAL	**$ 68,310**
FOOD SERVICE	**$ 2,150**
GROUNDS	**$ 3,598**
FACILITY TOTAL	**$ 894,972**

TOTALS BY PRIORITY	
LEVEL 1	**$ 26,573**
LEVEL 2	**$ 117,134**
LEVEL 3	**$ 751,265**
PRIORITY TOTAL	**$ 894,972**

LEGEND:

PRIORITY LEVELS

Level I: Highest Priority; Issues that affect the life safety concerns of the occupant, related to notification of occupants to emergency situations and the ability to safely evacuate the facility; subcomponents of Level I include safety concerns such as electrical loads, hazardous materials that might be affected with remodel or modifications, lack of fall protection. Level I items may also include structural upgrades to facilities constructed prior to current building codes or systems or components at the end of their useful life. Level I items need to be addressed within a 5-year timeframe.

Level II: Moderate Priority; Issues that are related to the integrity and adequacy of systems within the building to sufficiently withstand a major event and still function; also related are the age of systems or building components that keep day to day operations running without constant repair. Issues may include mechanical, electrical and plumbing systems, fire suppression, lighting and security, as well as flooring, windows doors and other architectural components. Level II Items may be part of a 5-10 year timeframe.

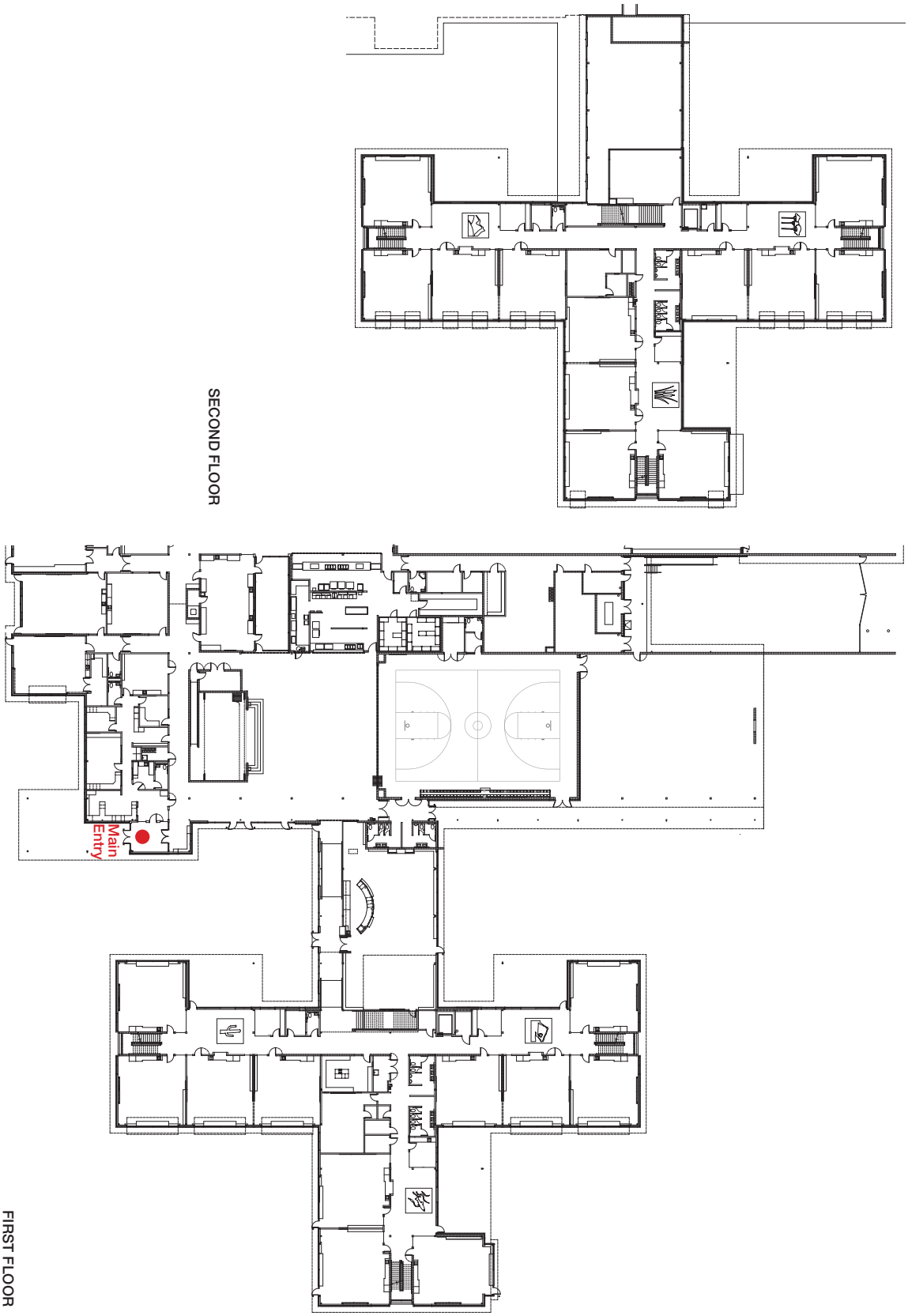
Level III: Lower Priority; Issues that may over time affect the day to day maintenance of the building or long term use of the facility. Issues also include access and clearances at equipment and fixtures, access for individuals with disabilities and both indoor and exterior environment quality in addition to cosmetic/aesthetic upgrades. Level III Items would be considered in a 10+ year timeframe.

Dull Olson Weekes - IBI Group Architects, Inc.

OVERALL FLOOR PLAN

Edy Ridge Elementary School | Sherwood School District

August 2015



REFERENCE PLAN
SCALE: NOT TO SCALE

Laurel Ridge Middle School

21416 SW Copper Terrace
Sherwood, Oregon 97140

Built: 2009
Enrollment: 567 students (2014-15 school year)

Floor Area: 80,905 SF

Field Review Team: Thea Wayburn, DOWA – IBI Group
John Mayer, Froelich Engineers
Ray Soucie, RSA
Gary Adovnik, MFIA Engineers
Robert Connell, MFIA Engineers
Scott Miller, MFIA Engineers

Report Date: **AUGUST 2015**

Date of Field Visit: April 23, 2015

Time of Day: 1:00 pm

Weather: Cloudy with times of rain

Neighborhood: Residential

Site Contacts: Dale Goracke

General Building Description:

Laurel Ridge Middle School is one of (2) middle schools in the School District, and was constructed approximately 6 years ago. It is on the same campus as Edy Ridge Elementary School, and physically shares several spaces including a Community Room.

Laurel Ridge is a structural steel framed building. The structure is founded on conventional spread footings and the first level consists of a 5" reinforced concrete slab on grade. Intermediate floor levels are framed with steel beams and composite metal deck with concrete topping. The roof is framed with a mix of steel wide flange beams and open web steel joists supporting a metal deck that serves as the roof diaphragm. Lateral loads are resisted by a combination of CMU shear walls and special concentric steel braced frames located throughout the buildings.

Overall this facility is in excellent condition. The only issue/observation is that the size and type of exposed structure on the building's exterior has provided areas for birds to nest and be a nuisance for building maintenance.

A full building review of architectural, structural, mechanical, electrical, plumbing and low voltage components was conducted. Food Service was reviewed concurrently and will be referenced in this report; a detailed Food Service assessment will be located in the Appendix of this report. A Roofing Assessment was conducted at a later date and will also be included in the Appendix of this report.

An educational adequacy interview with each School Principal was conducted concurrently with the physical building review. This information will be included in a separate section of this Report.

A- STRUCTURE / SHELL

A10 – STRUCTURE / SUBSTRUCTURE

Item		Findings	Comments
A10.1	Foundations	• No issues observed	
A10.2	Subgrade Enclosures	• There are several locations where shrinkage cracks were evident in the existing slab on grade.	• The cracks that were viewed were very small in width and do not pose a structural concern.
A10.3	Structural Systems	• No issues observed	

RECOMMENDATIONS

A20 - EXTERIOR COMPONENTS

Item		Findings	Comments
A20.1	Exterior Walls	• No issues observed	• Exterior wall materials are comprised of concrete masonry units (CMU) of varying colors and sizes and metal siding.
A20.2	Doors and Hardware	• No issues observed	• Typical hardware is lever-type hardware.
A20.3	Windows and Skylights	• No issues observed	
A20.4	Roof	• Roofing is in good condition.	• Roofing is a TPO membrane system. • See Appendix for complete Roofing Report.
A20.5	Canopies and Covered Walks	• No issues observed	• The main entry canopy is a metal and wood structure and in excellent condition.
A20.6	Gutters and Downspouts	• No issues observed	
A20.7	Trim and Overhangs	• Many of the roof overhangs are open web steel joists, which have provided areas for birds to nest and cause maintenance issues. Bird nests were observed as well. See Figures A20.7.a and b.	

RECOMMENDATIONS

A20.4 Plan for replacement of roofing in long term maintenance plans (15 plus years).
A20.7 Install bird spikes or netting in large overhang areas (by classroom commons) and at main entry.

B - INTERIORS

B10 – INTERIOR CIRCULATION

Item		Findings	Comments
B10.1	Construction and Exiting	• No issues observed	• Building is fully sprinklered. • Fire doors are present in select locations.
B10.2	Stairs and Handrails	• Handrail finishes are starting to show wear.	• Stairs are in excellent condition.
B10.3	Ramps and Elevators	• No issues observed	• Portions of this building are 2-story, and an elevator is present (Schindler). • A ramp provides an accessible route to Stage and in front of the Library.
B10.4	Accessibility	• No issues observed	
B10.5	Signage	• No issues observed	

RECOMMENDATIONS

B10.2 Repaint all interior handrails.

B20 – INTERIOR FINISHES

Item		Findings	Comments
B20.1	Flooring	• No issues observed	• Most floors are stained and polished concrete, all which are in very good condition. • Carpeting is located in select areas and is in very good condition. • The Gymnasium has wood flooring. • Kitchen flooring is quarry tile.
B20.2	Ceilings	• See B20.3.	• Ceilings include painted gypsum board, wood and acoustical tile ceiling clouds.
B20.3	Ceiling Issues	• There are several water damaged tiles observed throughout this facility. See Figure B20.3.	• It is not known if the water damage is from recent or prior issues.

B20.4	Fixed Equipment	• Exposed ductwork in the Gymnasium is damaged and painted finishes are chipped off. See Figure B20.4.	• The Gymnasium has (6) backstops and manual bleachers (5 rows) as well as a scoreboard. • Double height lockers are present in classroom hallways, and are in excellent condition. • Built-in wood benches near the main entry are in excellent condition. • The stage curtains and lighting are in excellent condition. • Typical classroom equipment includes projectors, Smart Boards and markerboards. • Science classrooms are equipped with eyewashes, and fire extinguishers (and blankets).
B20.5	Walls	• No issues observed	• Gymnasium walls have wall padding. • The wall between the Gymnasium and Cafeteria is an operable wall with tackable finish. • All gypsum walls have wall protection (i.e. cornerguards).
B20.6	Wall Finishes	• No issues observed	• Wall finishes include wood paneling, wainscoting, painted gypsum board and exposed concrete block. • Tackable wall areas are present throughout this facility. • Kitchen walls have FRP (fiber reinforced panel) paneling.
B20.7	Furnishings	• No issues observed	• Blinds are in good condition.

RECOMMENDATIONS

B20.3 Replace all damaged ceiling tiles.
B20.4 Repaint all exposed ductwork in Gymnasium. Remove existing ductwork and replace with a heavier gauge sheet metal.

B30 – INTERIOR COMPONENTS

Item		Findings	Comments
B30.1	Interior Windows	• No issues observed	
B30.2	Interior Doors and Hardware	• Several doors show a significant wear, considering the age of the building. See Figure B30.2. • The finish on the doors and frames to the	• Doors with wear are located near the Kitchen and Gymnasium areas. • Doors are wood with painted

		Music Room are in fair condition.	metal frames, and are generally in very good condition.
B30.3	Acoustics	• No issues observed	• Acoustical wall (and ceiling) treatment is present throughout the facility, especially in higher volume spaces.
B30.4	Casework	• The interior carpet finish of the instrument storage casework is ripped and damaged in several locations. See Figure B30.4.	• All other casework is in excellent condition. • Classroom sinks include bubblers.
B30.5	Safety/Security	• No issues observed	• Exterior windows and interior doors and windows have horizontal louver blinds. • Classroom wings do not have the ability to be locked off for after-hours use of the building.

RECOMMENDATIONS

B30.2 Remove partial kickplate at (10) interior door locations and replace with larger kickplates to protect doors from traffic and wear. Repaint frames at music classroom. Replace doors or add larger kickplates for protection.

B30.4 Remove and replace damaged carpet finish from instrument storage. Add trim at front of all cubbies.

B40 – TOILET FACILITIES

Item		Findings	Comments
B40.1	Walls and Wall Finishes	• No issues observed	• Restroom walls are painted gypsum board and ceramic tile or resilient flooring and gypsum board (staff restrooms).
B40.2	Floors and Floor Finishes	• No issues observed	• Flooring is resilient flooring or ceramic tile.
B40.3	Ceilings	• No issues observed	• Ceilings are all painted gypsum board.
B40.4	Partitions	• No issues observed	
B40.5	Fixtures	• No issues observed	
B40.6	Accessories	• No issues observed	
B40.7	Accessibility	• No issues observed	

RECOMMENDATIONS

C - SYSTEMS

C10 - PLUMBING

Item		Findings	Comments
C10.1	Water Service	• No issues observed	• A well is present on site for irrigation.
C10.2	Piping	• No issues observed	• Pipe is copper and PEX water.
C10.3	Drain and Vent Systems	• No issues observed	• Cast iron waste lines above the floor slab; plastic waste lines below the slab. • Plastic vent lines throughout. • Grease interceptor for the entire kitchen.
C10.4	Fixtures	• No issues observed	• Flush valve water closets and urinals are present.
C10.5	Water Pressure and Service	• No issues observed	• Pressure: 70 PSI.
C10.6	Storm and Overflow Drains	• No issues observed	• Plastic pipe below grade. • The roof is a flat roof drained with gutters.
C10.7	Water Heater	• The water heater connection is leaking and not tight.	• There are two tank style condensing gas fired water heaters with recirculation system.

RECOMMENDATIONS

C10.7 Tighten connection at water heater.

C20 - HVAC

Item		Findings	Comments
C20.1	Mechanical Equipment	• No issues observed	
C20.2	Air Filtration	• No issues observed	• 2” 30%
C20.3	Equipment Accessibility	• No issues observed	• Roof access is good to most units.
C20.4	Air Distribution and Ventilation	• Access to fire smoke dampers is difficult.	• Sheet metal duct work system was observed. • Displacement VAV system present at classrooms.
C20.5	Controls	• It is noted there are problems with lighting control system.	• Controls are Automated Logic digital control system.
C20.6	Generator	• No issues observed	• Gas fired generator
C20.7	Cooling Systems	• Refrigerant lines need insulation protection.	• Central air handler units are present with integral DX cooling system. • Mini-split units are located in the data closets.
C20.8	Chillers	• None present	

C20.9	Heating Systems	• Corridor radiant heaters need floor support.	• Central air handler units with hot water heating coils. • VAV reheat coils are hot water. • Hot water radiators present at perimeter of classrooms and corridors.
C20.10	Boiler	• There is a leak at one boiler combination temperature / pressure gauge. See Figure C20.10.a. • There are leaks at the boiler flue material joints. See Figure C20.10.b.	• Condensing gas fired stainless steel are Aerco Benchmark units.

RECOMMENDATIONS

C20.4 Complete code analysis of building under new code to eliminate the need for some fire smoke dampers.
C20.5 Remove lighting control system and place lights on BAS.
C20.7 Install refrigerant line insulation protection.
C20.9 Add floor supports to corridor radiators.
C20.10 Replace gauge and stacks.

C30 – FIRE PROTECTION

Item		Findings	Comments
C30.1	Fire Suppression System	• No issues observed	• Building is fully sprinklered.
C30.2	Water Service and Backflow Prevention	• No issues observed	• Service is in place and appears appropriate.
C30.3	System Pressure	• No issues observed	• Pressure: 70 PSI
C30.4	Standpipes	• No issues observed	
C30.5	Fire Pump	• No issues observed	
C30.6	Fire Sprinkler Pipe Condition	• No issues observed	
C30.7	Fire Department Connection	• No issues observed	
C30.8	Fire Sprinkler Zoning	• No issues observed	
C30.9	Flow Monitoring and Alarm	• No issues observed	• In place and appears appropriate.
C30.10	Hoses and Extinguishers	• Not Required	• No hose cabinets in place or necessary.

RECOMMENDATIONS

D - ELECTRICAL

D10 - ELECTRICAL EQUIPMENT

Item		Findings	Comments
D10.1	Transformers	• No issues observed	
D10.2	Switchgear and Panelboards	• No issues observed	• This is a recently constructed facility with sufficient expansion capability. • Equipment: Square D
D10.3	Lighting	• Indirect lighting in cafeterias and media centers appears underlit. See Figure D10.3. • Some fluorescent bulb types are hard to obtain.	• Ceilings are not white in these locations.
D10.4	Lighting Controls	• Maintenance personnel indicate programming is difficult.	• Leviton lighting control panels are used in some areas.
D10.5	Back-up and Emergency Power	• No issues observed	• This is a recently constructed facility with sufficient expansion capability.
D10.6	Egress and Emergency Lighting	• No issues observed	
D10.7	Exit Signage	• No issues observed	
D10.8	Sensors	• No issues observed	

RECOMMENDATIONS

D10.3 Replace indirect lighting with LED direct lighting for increased lighting levels, energy savings, and reduced maintenance costs. Install dimmers for better control, as LED light fixtures are more easily dimmed as opposed to fluorescent lighting.

D20 – SAFETY / SECURITY

Item		Findings	Comments
D20.1	Fire Alarm	• No issues observed	• Fire Alarm - EST
D20.2	Smoke Detection	• No issues observed	
D20.3	Pull Stations	• No issues observed	
D20.4	Annunciation	• No issues observed	
D20.5	Addressable Zones and System	• No issues observed	
D20.6	Monitoring	• No issues observed	
D20.7	Access Control	• No issues observed	• Access Control: Sonitrol
D20.8	Intrusion Detection	• No issues observed	• Intrusion Detection: Hirsch
D20.9	Video Surveillance	• No issues observed	

RECOMMENDATIONS

D30 - TECHNOLOGY			
Item		**Findings**	**Comments**
D30.1	Backbone Cabling Infrastructure	• No issues observed	• Siemens
D30.2	Horizontal Cabling Infrastructure	• No issues observed	• Cable: Mohawk Cable
D30.3	MDF and IDF Grounding	• No issues observed	
D30.4	MDF and IDF Conditions	• See Edy Ridge Report	
D30.5	Projection and Smart Boards	• No issues observed	
D30.6	Audio Reinforcement	• No issues observed	
D30.7	CATV	• No issues observed	

RECOMMENDATIONS

D40 – TECHNOLOGY COMMUNICATIONS			
Item		**Findings**	**Comments**
D40.1	Paging and Intercom – Head End Condition	• No issues observed	• Telecenter
D40.2	Master Clock	• No issues observed	• Sapling
D40.3	Infrastructure	• No issues observed	
D40.4	Speakers	• No issues observed	• Rauland
D40.5	Coverage	• No issues observed	
D40.6	Clock System	• No issues observed	• Sapling
D40.7	Clock – Head End	• No issues observed	• Sapling

RECOMMENDATIONS

E - FOOD SERVICE

E10- FOOD SERVICE

Item		Findings	Comments
E10.1	Equipment	• See Edy Ridge Report	
E10.2	Deliveries and Storage	• See Edy Ridge Report	
E10.3	Serving Line and Flow	• See Edy Ridge Report	

RECOMMENDATIONS

F - GROUNDS

F10 – SITE CIRCULATION AND PARKING

Item		Findings	Comments
F10.1	Parking Lots	• No issues observed	• There are (110) standard parking stalls and (5) accessible stalls. • Carpool and compact parking stalls are provided.
F10.2	Site Signage	• No issues observed	• There are (2) site signs onsite. • A flagpole is present.
F10.3	Vehicular Circulation	• No issues observed	• Drive aisles are 2-way and adequately sized. • Separate fire lanes are provided.
F10.4	Curbs and Sidewalks	• Fire lane curbs are showing wear.	• Sidewalks and other non-painted curbs are in excellent condition.
F10.5	Accessibility	• The courtyard area near the cafeteria is tiered, and not fully accessible.	• The site itself and exterior doors locations are fully accessible. • A door actuator is located at the main entrance.
F10.6	Bikes and Bike Parking	• No issues observed	• Bike parking is located in (2) areas, both covered. One of these locations is at the main entry.

RECOMMENDATIONS

F10.4 Repaint all fire lane curbs.

F20 - SITE COMPONENTS

Item		Findings	Comments
F20.1	Fields	• No issues observed	• Site includes a football field with 8-lane asphalt track, tennis courts and baseball fields. Large field areas are also available for soccer.
F20.2	Landscaping	• No issues observed	• Landscaping includes lawn areas, trees and plants.
F20.3	Irrigation	• Not Applicable	
F20.4	Site Buildings	• There is evidence of bird nesting/presence at the covered play area.	• The covered play area is in excellent condition. There are (6) backstops located under the covered play. • Trash area is enclosed and gated.
F20.5	Site Security	• Play fields are accessed by crossing the fire/bus lane.	
F20.6	Fencing	• No issues observed	
F20.7	Playground Equipment	• No issues observed	

F20.8	Play Surfaces	• No issues observed	
F20.9	Site Lighting	• See Electrical Section	
F20.10	Grading and Drainage	• No issues observed	
RECOMMENDATIONS			
F20.4	Install netting or bird spikes at the covered play area.		

IMAGES

Figure A20.7.a – Bird Issues

Figure A20.7.b – Bird Issues

Figure B20.3 – Ceiling Tiles

Figure B20.4 – Damaged Duct

Figure B30.2 – Worn Doors

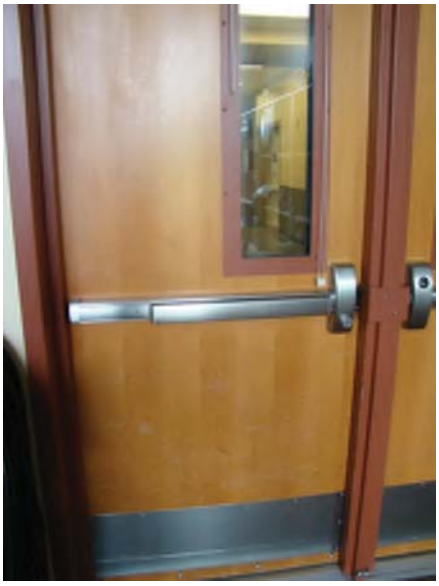


Figure B30.4 – Instrument Storage

Figure C20.10.a - Boilers

Figure C20.10.b – Boilers

Figure D10.3 – Lighting

Laurel Ridge Middle School	Priority Level (Refer to Legend)			Priority Level	Priority Level	Priority Level
ITEMS	I	II	III	I	II	III
A - STRUCTURE/SHELL						
A10 - STRUCTURE/SUBSTRUCTURE						
A20 - EXTERIOR COMPONENTS						
A20.4 1 Budget for roof replacement (15+ years)			X			$ 780,000
A20.7 1 Install bird netting/bird spikes to building's exterior	X			$ 7,526		
TOTALS - STRUCTURE/SHELL				**$ 7,526**	**$ -**	**$ 780,000**
B - INTERIORS						
B10 - INTERIOR CIRCULATION						
B01.2 1 Repaint all interior handrails		X			$ 1,897	
B20 - INTERIOR FINISHES						
B20.3 1 Replace damaged ceiling tiles		X			$ 600	
2 Repaint exposed ductwork in Gymnasium		X			$ 600	
3 Replace damaged ductwork with heavier gauge	X			$ 2,024		
B30 - INTERIOR COMPONENTS						
B30.2 1 Remove existing kickplates and replace with larger ones		X			$ 1,882	
2 Repaint frames at Music Classroom		X			$ 632	
3 Replace doors at Music Classroom		X			$ 3,342	
4 Replace select doors		X			$ 3,795	
B30.4 1 Replace carpeting in instrument storage cabinets		X			$ 2,024	
B40 - TOILET FACILITIES						
TOTAL - INTERIORS				**$ 2,024**	**$ 14,772**	**$ -**
C - SYSTEMS						
C10 - PLUMBING						
C10.7 1 Tighten connection at water heater		X			$ 189	
C20 - HVAC						
C20.4 1 Complete code analysis of building		X			$ 1,265	
C20.5 1 Remove lighting control system and replace		X			$ 28,462	
C20.7 1 Install refrigerant line protections		X			$ 2,530	
C20.9 1 Add floor supports for radiators		X			$ 10,120	
C20.10 1 Replace gauge/stacks		X			$ 15,180	
C30 - FIRE PROTECTION						
TOTAL - SYSTEMS				**$ -**	**$ 57,746**	**$ -**

Laurel Ridge Middle School

ITEMS	Priority Level (Refer to Legend) I	II	III	Priority Level I	Priority Level II	Priority Level III
D - ELECTRICAL						
D10 - ELECTRICAL EQUIPMENT						
D10.3 1 Replace fluorescent lighting		X			$ 53,130	
D20 - SAFETY/SECURITY						
D30 - TECHNOLOGY						
D40 - TECHNOLOGY COMMUNICATIONS						
TOTALS - ELECTRICAL				**$ -**	**$ 53,130**	**$ -**
E - FOOD SERVICE						
E10 - FOOD SERVICE						
SEE EDY RIDGE						
TOTALS - FOOD SERVICE				**$ -**	**$ -**	**$ -**
F - GROUNDS						
F10 - SITE CIRCULATION AND PARKING						
F10.4 1 Repaint all fire lane curbs			X			$ 1,265
F20 - SITE COMPONENTS						
F20.4 1 Add bird spikes or netting to covered play area	X			$ 2,688		
TOTALS - GROUNDS				**$ 2,688**	**$ -**	**$ 1,265**

TOTALS BY CATEGORY	
STRUCTURE/SHELL	$ 787,526
INTERIORS	$ 16,796
SYSTEMS	$ 57,746
ELECTRICAL	$ 53,130
FOOD SERVICE	$ -
GROUNDS	$ 3,953
FACILITY TOTAL	**$ 919,151**

TOTALS BY PRIORITY	
LEVEL 1	$ 12,238
LEVEL 2	$ 125,648
LEVEL 3	$ 781,265
PRIORITY TOTAL	**$ 919,151**

LEGEND:

PRIORITY LEVELS

Level I: Highest Priority; Issues that affect the life safety concerns of the occupant, related to notification of occupants to emergency situations and the ability to safely evacuate the facility; subcomponents of Level I include safety concerns such as electrical loads, hazardous materials that might be affected with remodel or modifications, lack of fall protection. Level I items may also include structural upgrades to facilities constructed prior to current building codes or systems or components at the end of their useful life. Level I items need to be addressed within a 5-year timeframe.

Laurel Ridge Middle School	**Priority Level** (Refer to Legend)			Priority Level	Priority Level	Priority Level
ITEMS	I	II	III	**I**	**II**	**III**

Level II: Moderate Priority; Issues that are related to the integrity and adequacy of systems within the building to sufficiently withstand a major event and still function; also related are the age of systems or building components that keep day to day operations running without constant repair. Issues may include mechanical, electrical and plumbing systems, fire suppression, lighting and security, as well as flooring, windows doors and other architectural components. Level II Items may be part of a 5-10 year timeframe.

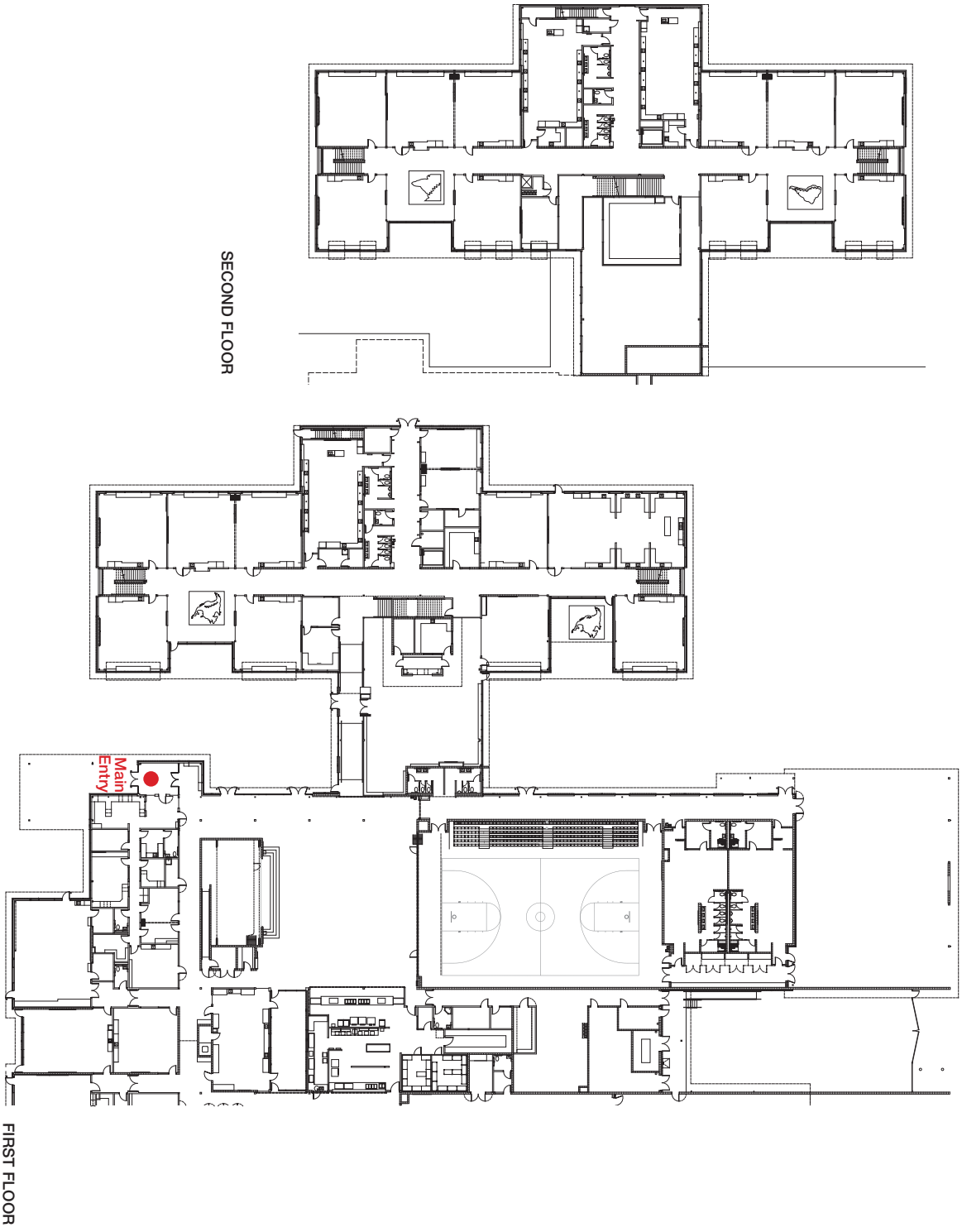
Level III: Lower Priority; Issues that may over time affect the day to day maintenance of the building or long term use of the facility. Issues also include access and clearances at equipment and fixtures, access for individuals with disabilities and both indoor and exterior environment quality in addition to cosmetic/aesthetic upgrades. Level III Items would be considered in a 10+ year timeframe.

Dull Olson Weekes - IBI Group Architects, Inc.

OVERALL FLOOR PLAN

Laurel Ridge Middle School | Sherwood School District

August 2015



REFERENCE PLAN
SCALE: NOT TO SCALE

RSA INC.
FOODSERVICE CONSULTING
DESIGN PLANNING OPERATIONS
3700 SE LAFAYETTE CT.
PORTLAND, OR 97202

Sherwood School District
Evaluation Of District Wide Foodservice Facilities
April 22, 2015

Laurel Ridge MS & Edy Ridge ES

Date April 22, 2015

General conditions: The Kitchen is well maintained and in very good condition.

Walk-ins: The freezer has excessive ice build-up on the common wall at the ceiling. This is a sign of an air gap leak at the panel joints. It should be sealed as soon as possible to prevent further issues from developing. The light fixture has ice inside the lens. Seal electrical conduit as soon as possible. **Life Expectancy:** 10 Years **Estimate:** $1,000.00

Dish Room: In good condition. **Life Expectancy:** 10 Years

Main Cooking Equipment: In good condition. **Life Expectancy:** 10 Years

Main Exhaust System: Working well. **Life Expectancy:** Indefinite

Fire protection system: N/A

Service Line: In general good condition. Suggest adding Stainless Steel foot and edge guards to protect wearing laminate. **Life Expectancy:** 10-15 Years. **Estimate:** $300.00

Miscellaneous Comments: A spray real is desired in Dish Room to spray down tables. **Estimate:** $400.00

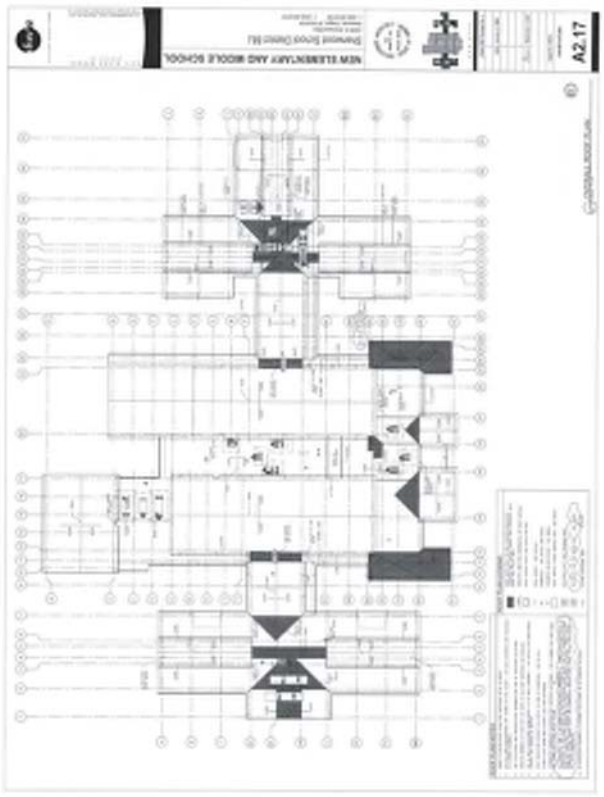
Rough order of magnitude cost for equipment replacement: $1,700.00

Edy Ridge Elementary School

Single Ply TPO: 618 Squares

The school was constructed in 2008-2009 and is roofed with a GAF TPO membrane system that appears to be holding up well. A few minor leaks have occurred but have been dealt with via warranty. There are minimal roof penetrations and most roof areas drain well meaning this roof should reach its full life expectancy of 25 years meaning replacement should be scheduled in approximately 19 years or approximately in 2034.

Budget for Replacement of TPO Membrane in 19 years: $ 750,000.00



LAUREL RIDGE AND EDY RIDGE ROOF DIAGARM

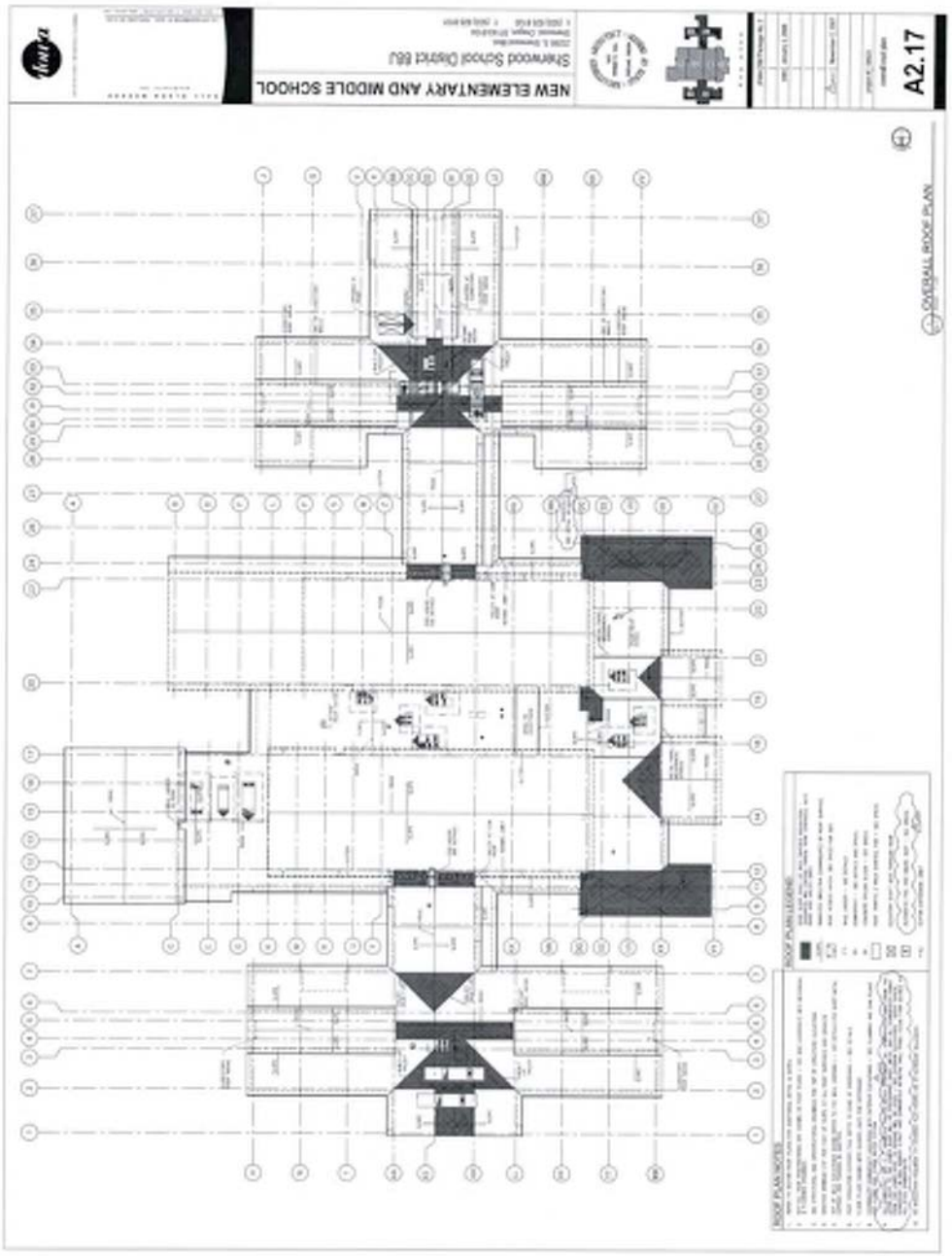
OPEN CLEAN ROOF WITH GOOD SLOPE

Laurel Ridge Middle School

Single Ply TPO: 703 Squares

The school was constructed in 2008-2009 and is roofed with a GAF TPO membrane system that appears to be holding up well. A few minor leaks have occurred but have been dealt with via warranty. There are minimal roof penetrations and most roof areas drain well meaning this roof should reach its full life expectancy of 25 years meaning replacement should be scheduled in approximately 19 years or approximately in 2034.

Budget for Replacement of TPO Membrane in 19 years: $ 780,000.00



LAUREL RIDGE AND EDY RIDGE ROOF DIAGARM

OPEN CLEAN ROOF WITH GOOD SLOPE

SUMMARY

The District has many roofing needs throughout the various buildings. These needs vary from immediate to long-term and from minor repairs to major projects. The following is a summary of the budgets required to make these necessary repairs or replacements arranged by timeframe required.

PROJECT	TIMELINE	COST ESTIMATE
Immediate roofing repair/replacement projects:	0-2 years:	$ 234,000
Roofing Replacement projects:	2-5 years:	$1,279,000
Roofing Replacement projects:	5-10 years:	$ 412,900
Roofing Replacement projects:	10-20 years:	$2,827,000
Long-term Roofing Replacement projects:	20 + years:	$ 541,000
TOTAL ROOFING BUDGET REQUIREMENTS		$5,293,900
PROFESSIONAL FEES AND PERMITS (SOFT COSTS)		$ 688,207
CONTINGENCY (10%)		$ 530,000
TOTAL BUDGET IMPACT		$6,512,107

As you can see roofs comprise a very sizeable budget impact and should be budgeted both for long and short term projects to protect your facility envelopes. These projects will require approximately $1,500,000 in the next 5 years and another $3,200,000 in the following 15 years. These estimate are based on today's dollars and will need to be adjusted for both inflation and the volatile price of petroleum based products.

We would strongly recommend a roofing standard be adopted to minimize the large variety of systems to reduce costs for replacement and repairs, as well to ease such efforts. A standard for the various systems would be appropriate and each roof must be looked at for specific requirements for any particular system. In most districts we recommend a standard for shingles, a standard for metal roofing, as well as a standard for single ply systems. We have put together roofing educational programs for school boards before and would be happy to provide one to your District if you have an interest in learning more about these various systems, their performances, and applications.

Sherwood School District

Elementary School Capacity Study | School Information

Edy Ridge Elementary — **Capacity Analysis - Capacity of Current Spaces**

This analysis reflects Sherwood School District's capacity methodology used in 2014.

Capacity Comments: Edy Ridge is over capacity; however, it is anticipated that the school boundary changes in the fall will alleviate overcrowding and bring class sizes within District goals. One (1) additional classroom will be needed to accommodate full-day kindergarten in fall of 2015.The school was using a space designed as a shared community room (with Laurel Ridge) as a 3rd grade classroom due to lack of space. The school has no potential or underutilized classrooms, and only one (1) computer lab.

Design Capacity - Total Classroom-sized Spaces		
Classroom-sized Spaces - Main Bldg	28	*This does not reflect the functional capacity of the building, as not every classroom-sized space will be used as a general classroom. Some classroom-sized spaces will inevitably need to be used for other purposes, such as SPED, computer labs, and other programs.*
Classroom-sized Spaces - Portables	0	
Total Classroom-sized Spaces	28	

Capacity Overview	# K-5 Students	Building Capacity - Main Bldg	Building Capacity - w/ portables	% Capacity	Notes
Spring 2015 Enrollment	689	600	N/A	115% Capacity	The school's community room was converted to a general classroom to alleviate overcrowding. No portable classrooms are present at this school. One (1) additional classroom will be required to accommodate full-day kindergarten in the fall.
Projected Fall 2015 Enrollment	551	600	N/A	92% Capacity	

Classroom Need Summary

Classrooms	Clsrm Quantity	Class size (2)	Total Capacity	Notes
Current # of Classrooms in Use for General K-5 Instruction (Main Bldg)	24	25	600	Current enrollment is 689 students in 24 K-5 general classrooms. This includes use of a room that was designed as a community room, but is being used as a classroom due to overcrowding.
Current # of Portable Classrooms in Use for General K-5 Instruction	0	25	0	There are no portable classrooms at this school.
Total Classrooms in Use	**24**	25	**600**	
Potentially Available Classrooms - Main Building(1)	0	25	0	
Potentially Available Classrooms - Portables (1)	0	25	0	
Total Current and Potential Classrooms - Main Bldg and Portables	**24**	25	**600**	

Current Classroom Usage

Teaching Stations	Clsrm Quantity	Class size (2)	Capacity	Spring 2015 Enrollment	Notes
Kindergarten	3	25	75	103	One additional classroom is needed to accommodate full-day kindergarten.
1st - 5th Grade	21	25	525	586	Exceeds average class size goal. Includes a community room that is now being used as a 3rd grade classroom due to overcrowding.
Current Unassigned Classrooms	0	N/A	N/A	0	

Special Use and Support Spaces: Classroom spaces currently used for other programs or services.	Clsrm Quantity	Notes
SPED (4)	1	Room E-25
ELL	1	Room E-5
Pre-K Program	0	
Computer Lab	1	Room E-20
Music	1	
TOTAL Support Spaces	**4**	

Capacity of Core Spaces

Room or Space	Area in Sq Ft	Code (3)	Max No. of Occupants	Notes
Cafeteria	3410	15	227	Three (3) lunch periods will be needed in fall of 2015 (based on projected enrollment divided by code-allowed number of occupants),
Gym	5801	7	829	Occupants seated in chairs
Library	3126	7	447	Occupants seated in chairs

Notes:

(1.) Includes classrooms used for other programs or purposes (not general education). Does ***not*** include SPED, ELL, Pre-K or computer labs.

(2.) Class size is 25 students per teaching station.

(3.) The floor area in square feet per person allowed per the Building Code.

(4.) SPED students are included in the total enrollment; however, SPED classrooms are not counted for capacity purposes. Self-contained SPED classrooms have significantly lower (and widely fluctuating) class sizes. Other SPED classrooms may provide primarily pull-out services. Consequently, these classrooms are not counted toward the overall capacity of the school.

Sherwood School District

Secondary School Capacity Study | School Information

Laurel Ridge Middle School — **Capacity Analysis - Capacity of Current Spaces**

Six-Period Day — *This analysis reflects Sherwood School District's capacity methodology used in 2014.*

Capacity Summary	
# of Teaching Stations (1) (2)	23
Class Size Goal	30
Periods / Day	6
Instructional Periods	5
Prep Factor	0.83
Capacity - Main Building	**573**
Capacity with Portables	**N/A**

Capacity Comments: Laurel Ridge's enrollment is very near its capacity. It is anticipated that the school boundary changes in the fall will alleviate overcrowding and lower class sizes. School administrators are concerned that the size of core spaces (e.g. cafeteria and gym) may be insufficient to meet the needs of the current student population.

Design Capacity - Total Classroom-sized Spaces

Classroom-sized Spaces - Main Bldg	27 (7)	*This does not reflect the functional capacity of the building, as not every classroom-sized space will be used as a general classroom. Some classroom-sized spaces will inevitably need to be used for other purposes, such as SPED, computer labs, and other programs.*
Classroom-sized Spaces - Portables	0	
Total Classroom-sized Spaces	27	

Capacity Overview	# Students	Building Capacity - Main Bldg	Building Capacity - w/ portables	% Capacity	Notes
Spring 2015 Enrollment	554	573	N/A	97% capacity	The school boundary adjustments will ease overcrowding at Laurel Ridge. No portable classrooms are present at this school.
Projected Fall 2015 Enrollment	494	573	N/A	86% capacity	

Capacity Based on Potential Use

6th - 8th Grade (6 period day)

Teaching Stations	Quantity	Class size (3)	Capacity at 100% Use	Prep Factor (4)	Adjusted Capacity	NOTE
General Classrooms (in use and available) (1)	16	30	480	0.83	398	
Current Unassigned Classrooms	0	30	0	0.83	0	
Science Labs	3	30	90	0.83	75	Rooms M-7, M-26 and M-27
Music	1	30	30	0.83	25	
Art Classrooms	1	30	30	0.83	25	M-3 and M-4 (counted as one teaching st.)
Electives / CTE	1	30	30	0.83	25	"Explore" Lab (FACS)
Gym (as P.E. CR) (2)	1	30	30	0.83	25	
TOTAL	**23**		**690**		**573**	

Special Use: CRs spaces for support or pullout programs	Quantity	NOTE
Classrooms used for other purposes or programs	0	
SPED (6)	2	Rooms M-5 and M-6
ELL	0	
Auditorium	0	
Computer Lab	2	Rooms M-1 and M-20
TOTAL	**4**	

Capacity of Core Spaces

Core Facility	Square Feet	Code (5)	Capacity	NOTE
Cafeteria	4,183	15	279	Two (2) lunch periods will be needed in fall of 2015 (based on projected enrollment divided by code-allowed number of occupants),
Gym	7,313	7	1045	Occupants seated in chairs
Library	2,920	7	417	Occupants seated in chairs

Notes:

(1.) For general instruction not requiring a specialized classroom.

(2.) The Gym is counted as a teaching station.

(3.) The District's class size goal for middle school grades is 30 students per class.

(4.) A prep factor has been calculated in order to take into account that classrooms are scheduled all but one period per day.

(5.) The area per person allowed in such occupancy type space per the Building Code.

(6.) SPED students are included in the total enrollment; however, SPED classrooms are not counted for capacity purposes. Self-contained SPED classrooms have significantly lower (and widely fluctuating) class sizes. Other SPED classrooms may provide primarily pull-out services. Consequently, these classrooms are not counted toward the overall capacity of the school.

EDY RIDGE

	Current				
	Main Building	Classrooms	Avg. Class	Utilization	Students
	General Ed	23	25	1	575
	Science	0	25	1	
	Extended Learning Spaces	6	25	1	
	Team Rooms	6	12	1	
	Sped	2	8 to 15	1	
	OT/PT (LRMS is using)	1	25	0	
	Art Room - Share LRMS	1	32	0	
	PE	1	25	1	
	Music	1	25	1	
	Computer Lab	2	25	1	
				Current Maximum Capacity	575
				Enrollment as of 12/30/2015	538

OVERALL FLOOR PLAN

Legend

- General Classroom
- Specialized Classroom
- SPED
- Vacant Classroom
- Other Programs
- Computer Lab

REFERENCE PLAN
SCALE: NOT TO SCALE

Dull Olson Weekes - IBI Group
Architects, Inc.

Laurel Ridge MS

	Current				
	Main Building	Classrooms	Avg. Class	Utilization	Students
	General Ed	17	30	0.83	425
	Science	3	30	0.83	75
	SPED - Intervention	2	10	0.83	17
	Band/Choir	1	40	0.83	33
	FACS	1	36	0.83	30
	PE / Athletics	1	40	1.00	40
	Computer Lab	2	36	0.00	0
	OT/PT Room	1	25	0.00	0
				Maximum Capacity	620
	Other Programs	Classrooms	Avg. Class	Utilization	Students
	#Capacity Adjustment				-70
				Capacity Reduction	-70
				Total Available Capacity	550
				Enrollment as of 12/30/2015	499

Notes:

#Capacity limited by having only one gym and only three science classrooms; further, utilization of health, Spanish, band and FACS classes at less than .83 due to scale; Capacity of 620 not operational.

OVERALL FLOOR PLAN

SECOND FLOOR

FIRST FLOOR

Legend

- General Classroom
- Specialized Classroom
- SPED
- Vacant Classroom
- Other Programs
- Computer Lab
- Science

REFERENCE PLAN
SCALE: NOT TO SCALE

Dull Olson Weekes - IBI Group
Architects, Inc.