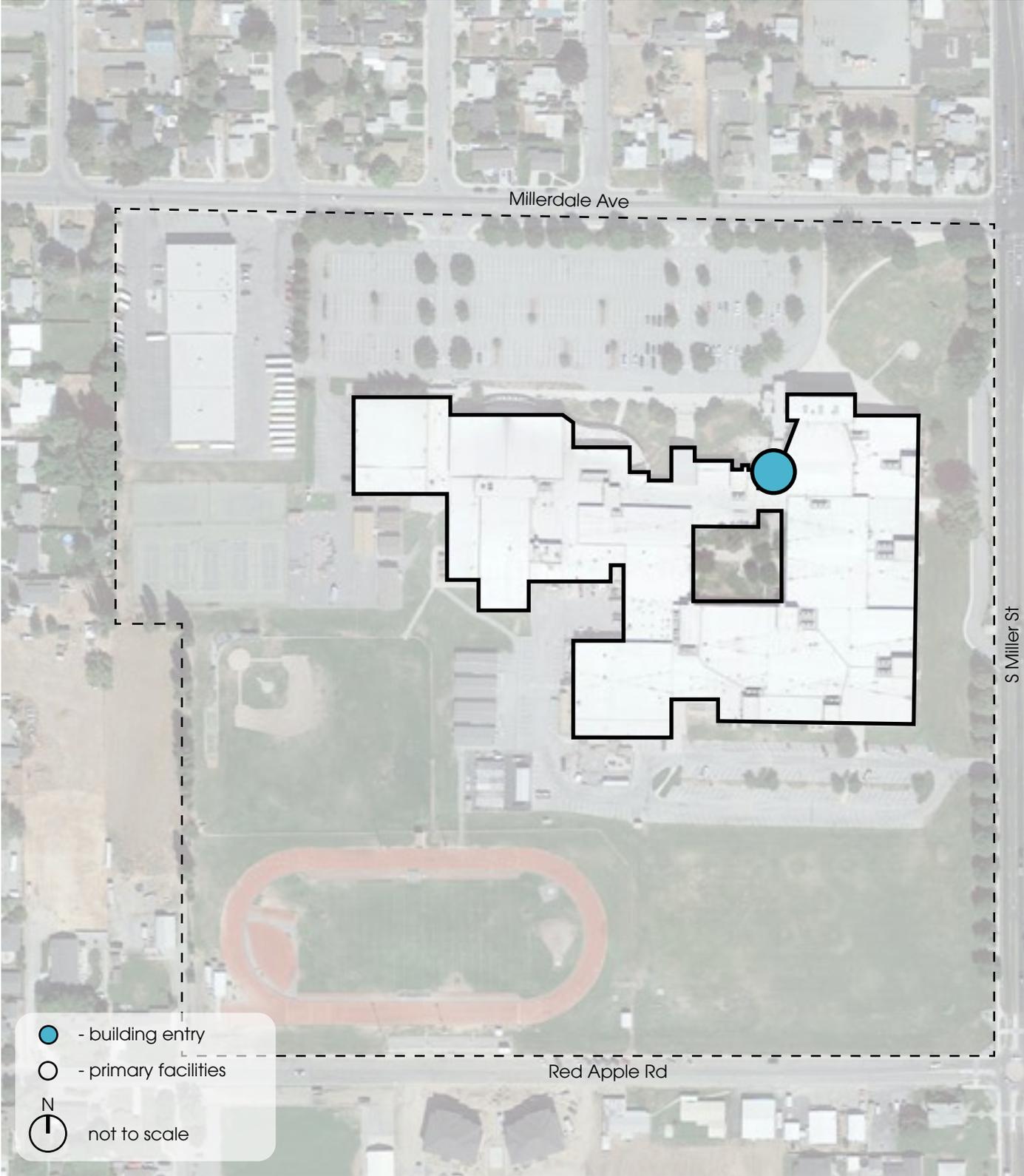
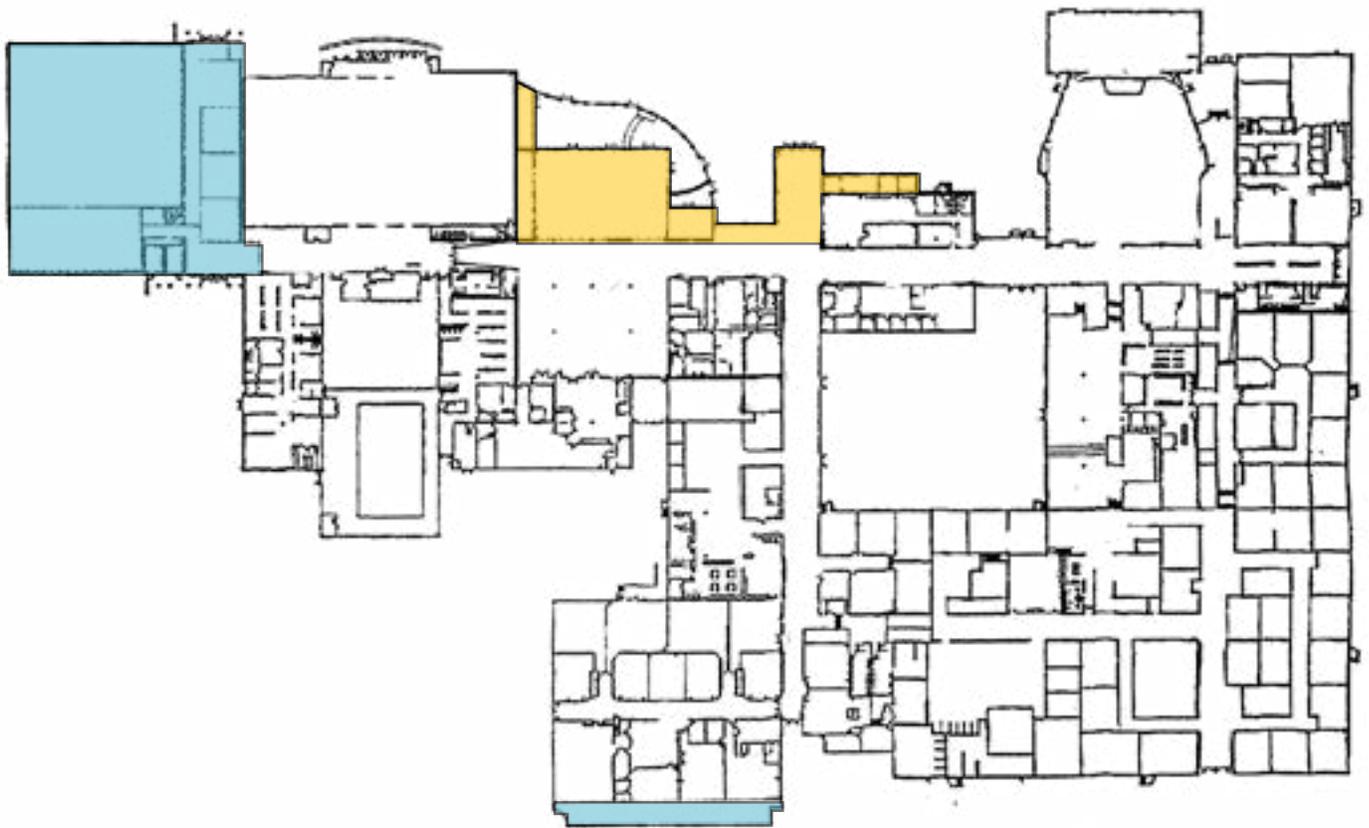


Chapter 1: Wenatchee High School Site Plan



Chapter 1: Wenatchee High School Floor Plan



- 1972 original
- 1994 addition
- 2004 addition
- not to scale

Year	Sq. Ft.
1972	243,133
1994	26,135
2004	9,060
Grand Total	278,238

Chapter 1: Wenatchee High School Systems Narrative: Architectural Report - ALSC Architects

A Study and survey was completed on the Wenatchee High School facility in the year 2014. There have been alterations made to the facility between that time and the present. The Wenatchee high school facility was originally constructed in approximately 1972. A gymnasium classroom addition was added to the facility during the mid 1990s.

Mechanical

The mechanical systems in the original building are now approximately 50 years old, and in the addition now approximately 25 years old.

The mechanical HVAC systems in the 1972 building are comprised of numerous central HVAC systems located in rooftop mechanical rooms, serving the various portions of the facility. Cooling is provided in all portions of the facility with the exception of the gymnasium, locker rooms, weight room and swimming pool area. Where cooling is provided, the central systems are a combination of variable volume or constant volume systems, utilizing a combination of single duct or dual duct systems with terminal reheat units.

Cooling is provided by split system DX units with DX coil in the central air handling units. Heating is by electric preheat and electric terminal heating coils, or hot deck electric heating coils for dual duct systems. All of the central systems have economizer capability.

Controls are a combination of pneumatic and direct digital controls.

The heating only areas of the 1972 facility are also provided with central air handling units. Zone control is by means of electric duct zone coils. Separate systems are provided for the gymnasium/weight room area, swimming pool area, and locker room areas.

The locker room system operates on 100% outside air, rather than transfer air from other portions of the building, and no heat recovery system is utilized. Modification of this system could improve energy consumption. Locker room areas are 100% exhausted.

The swimming pool area has humidity control only by means of the amount of outside air introduced into the space. Operational problems have been encountered in cold weather, where adequate humidity control is not possible due to inadequate amount of outside air capability due to inadequate heating capacity of the system electric heating coil. High humidity causes sweating and freezing of the exterior doors.

The facility's Vo-Tech area, housed in a separate building, was renovated in the mid nineties. An exterior pad mounted central VAV air handling system with terminal electric reheat units serves this facility. Cooling is split system DX. The 1972 Commons and ASB areas were modified in the mid nineties for the addition of split system DX cooling. Prior to this time, these areas were heating only.

The facility's kitchen is a full service kitchen. Kitchen grease hood with hood fire protection system is provided. DX cooling has recently been provided for the kitchen air handling system. Kitchen supply air handling system and kitchen hood exhaust are interlocked.

The 1993 addition to the facility included a gymnasium, wrestling gym and several classrooms. The gymnasium and wrestling gym are served by heating /ventilating units with indirect gas fired duct heaters, with 100% outside air capability. The classrooms are served by a central VAV system with indirect fired gas duct heater and split system DX cooling. These areas are the only ones provided with gas as a heat source.

Domestic hot water is provided by two large electric tank type water heaters located in a mechanical room adjacent to the swimming pool.

Toilet rooms and plumbing fixture appear to be in reasonable condition for their age. Toilet rooms have been modified for the addition of a wheelchair type lavatory in both the boys and girls toilet rooms. Water closets, and urinals in the boys toilet rooms are however not ADA compliant for accessibility and use. The gymnasium locker room fixtures and showers are not ADA compliant for accessibility or use.

The facility is fully covered by an automatic sprinkler system.

There were additions and alterations made to the facility, in approximately 2005, which addressed numerous issues:

A cafeteria and administration addition, including a new entryway was provided. The addition utilized a new rooftop variable air volume AHU, with VAV fan powered terminal reheat units with electric heat. Cooling is by means of an air cooled DX condensing unit. The entire existing administration area was rezoned and re air balanced, utilizing new dual duct terminal units connected to the existing dual duct air handling system. Miscellaneous areas were rezoned and new dual duct terminal units were provided in rezoned

areas. All science room purge fans were replaced, and control was modified.

The existing temperature control system is a mix of pneumatic and proprietary digital controls. 2005 additions and alterations included the provision of a new head end digital control system, which is Bacnet compliant. New HVAC units installed under the additions and alterations are also Bacnet compliant. Existing digital flat plate room sensors were replaced with adjustable room sensors with LED readout. Proprietary digital control system was not replaced, however, interface between the new head end and the existing proprietary digital controls was accomplished.

In approximately 2006, alterations were made to the kitchen waste piping to connect grease producing fixtures to a new grease trap.

The home economics room was renovated in 2010. HVAC systems alterations were connected to the existing dual duct system serving the space.

The Wenatchee high school mechanical HVAC systems are adequately maintained and are operational. Plumbing fixtures are in reasonable condition for their age and appear operational. The following conditions are noted:

The temperature control system consists of outdated pneumatic controls and outdated proprietary digital controls. There would be a benefit from full state of the art (Bacnet, web based) direct digital control in all areas, rather than the mixture of outdated controls.

The air handling systems provided in the original 1972 building are now 50 years old, and are past their life expectancy.

The Wenatchee High School facility mechanical systems are attempting to be maintained and appear to have some operational issues. The mechanical systems are failing due to age and a lack of repair parts. There are signs of corrosion on the hydronic system and building controls should be updated. The systems are past the end of their life expectancy of 15-20 years and should be scheduled for replacement or refurbishment without delay to avoid costly repairs for unscheduled work.

Electrical

The Electrical system should be evaluated for capacity to support the current technology demands as well as infra-red scanning of the main distribution panels for loose connections. The lighting fixtures in the are T-8 vintage and should be upgraded to LED fixtures to improve lighting levels and reduce energy costs.

Chapter 1: Wenatchee High School Site Condition Rating Summary

**STATE OF WASHINGTON - SUPERINTENDENT OF PUBLIC INSTRUCTION
SITE CONDITION RATING SUMMARY
WENATCHEE SCHOOL DISTRICT (04246)**

WENATCHEE HIGH SCHOOL

Profile Name: High School - Rural
Inventory Status: Recognized
Condition Rating: Ratings Not Started

Last Review: -

Sub-Assembly	Component	Condition Rating						Component Score	Priority		
		E	G	F	P	U	N/A		L	M	H
Site Improvement											
G2010	Roadways	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
G2020	Parking Lots	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
G2030	Pedestrian Plazas and Walkways	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
G2050	Athletic, Recreational and Playfields Areas	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
G2060	Site Development	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
G2080	Landscaping	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
Liquid and Gas Site Utilities											
G3010	Water Utilities	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
G3020	Sanitary Sewerage Utilities	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
G3030	Storm Drainage Utilities	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
G3060	Site Fuel Distribution	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
Electrical Site Improvements											
G4010	Site Electric Distribution Systems	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
G4050	Site Lighting	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
Site Communications											
G5010	Site Communications Systems	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					

Chapter 1: Wenatchee High School Building Condition Assessment



School Facilities and Organization
INFORMATION AND CONDITION OF SCHOOLS
Detailed Condition Assessment by Building
Reporting Year 2023-2024

Wenatchee
49.65

Wenatchee High School - Main Building

Building Details

PROFILE TYPE	High School - Single Story
NUMBER OF FLOORS	1
CHARACTERISTICS	Occupied

Building Inventory

AREA YEAR BUILT	DISTRICT ASSIGNED AREA	GROSS BUILDING SQ FT	GROSS INSTRUCTIONAL SQ FT	SCAP RECOGNIZED SQ FT	ORIGINAL OCCUPANCY DATE	ORIGINAL BOARD ACCEPTANCE DATE
1972	Main Building	243,133	243,133	243,133		
1993	93 Addition	26,135	26,135	26,135		
2004	04 Addition	9,060	9,060	0		9/1/2004
Building Totals		278,328	278,328	269,268		

Building Components

SUB-ASSEMBLY	COMPONENT	COMPONENT CODE	MAINTENANCE PRIORITY	CONDITION RATING
Foundations	Standard Foundation	A1010		62.00% Fair
Slabs on Grade	Standard Slabs on Grade	A4010		62.00% Fair
Water and Gas Mitigation	Building Subdrainage	A6010		62.00% Fair
Superstructure	Roof Construction	B1020		62.00% Fair
Exterior Vertical Enclosures	Exterior Walls	B2010		62.00% Fair
	Exterior Windows	B2020		62.00% Fair
	Exterior Doors and Grilles	B2050		30.00% Poor
	<i>Deficiencies:</i>	Deficient Hardware/Operating Parts		
	<i>Causes:</i>	Material Condition		

Chapter 1: Wenatchee High School Building Condition Assessment

Building Components

SUB-ASSEMBLY	COMPONENT	COMPONENT CODE	MAINTENANCE PRIORITY	CONDITION RATING	
Exterior Vertical Enclosures	<i>Comments:</i>	Deficiency: Hardware, hinges, are worn and need upgrading. High abuse.			
	Exterior Louvers and Vents	B2070		62.00% Fair	
Exterior Horizontal Enclosures	Roofing	B3010		62.00% Fair	
	Roof Appurtenances	B3020		62.00% Fair	
	Horizontal Openings	B3060		62.00% Fair	
	Overhead Exterior Enclosures	B3080		62.00% Fair	
Interior Construction	Interior Partitions	C1010		30.00% Poor	
	<i>Deficiencies:</i>	Acoustical Transference			
	<i>Causes:</i>	Defective Material			
	<i>Comments:</i>	Deficiency: Original design included movable walls, which ave no accoustical value.			
	Interior Windows	C1020		62.00% Fair	
	Interior Doors	C1030		30.00% Poor	
	<i>Deficiencies:</i>	Not ADA Compliant			
	<i>Causes:</i>	Other			
	<i>Comments:</i>	Deficiency: Some units are not ADA accessible, size and hardware.			
	Interior Grilles and Gates	C1040		62.00% Fair	
Suspended Ceiling Construction		C1070		30.00% Poor	
	<i>Deficiencies:</i>	Other			
	<i>Causes:</i>	Need to Replace Components, Other			
	<i>Comments:</i>	Deficiency: Product no longer available, as need, areas are being replaced with current products			
Interior Finishes	Wall Finishes	C2010		62.00% Fair	
	Interior Fabrications	C2020		62.00% Fair	
	Flooring		C2030		30.00% Poor
		<i>Deficiencies:</i>	Broken or Loose Tiles, Holes, Tears, Stains, Discoloration		
		<i>Causes:</i>	Deterioration		
	<i>Comments:</i>	Deficiency: aging carpet needs replacement, especially in corridors			
Ceiling Finishes	C2050	High	30.00% Poor		

Chapter 1: Wenatchee High School Building Condition Assessment

Building Components

SUB-ASSEMBLY	COMPONENT	COMPONENT CODE	MAINTENANCE PRIORITY	CONDITION RATING
Interior Finishes	<i>Deficiencies:</i>	Cracking, Peeling, Flaking, Efflorescence and Staining, Surface Appearance, Warped/Delaminating Finishes		
	<i>Causes:</i>	Defective Material, Maintenance, Moisture, Surface Damage		
Plumbing	Domestic Water Distribution	D2010	High	30.00% Poor
	<i>Deficiencies:</i>	Discolored Fixtures, Heat Loss, Lack of Water Flow, Mineral Build Up in Pipes		
	<i>Causes:</i>	Excessive Wear, Lack of Insulation		
	<i>Comments:</i>	Deficiency: Aged galvanized piping corrosion. Worn fixtures.		
	Sanitary Drainage	D2020		62.00% Fair
	<i>Deficiencies:</i>	Slow Draining		
	<i>Causes:</i>	Other		
	<i>Comments:</i>	Worn systems		
	Building Support Plumbing Systems	D2030		62.00% Fair
	<i>Deficiencies:</i>	Other		
<i>Causes:</i>	Other			
<i>Comments:</i>	Worn systems/equipment, slow drainage			
HVAC	General Service Compressed-Air	D2050		62.00% Fair
	<i>Deficiencies:</i>	Pneumatic Controls Sluggish		
	<i>Causes:</i>	Air Leaks		
	Facility Fuel Systems	D3010		62.00% Fair
	Heating Systems	D3020	High	30.00% Poor
	<i>Deficiencies:</i>	Inoperable Devices, Insufficient Air Flow, Insufficient Heat, System Inefficient		
	<i>Causes:</i>	Equipment Obsolescence, Misadjusted Air Balancing, Misadjusted Controls		
	Cooling Systems	D3030	High	30.00% Poor
	<i>Deficiencies:</i>	Excessive Cooling Fluctuation, Inoperable Devices, Insufficient Air Flow, Insufficient Cooling, System Inefficient, Uneven Zone Coverage		
	<i>Causes:</i>	Equipment Obsolescence, Misadjusted Air Balancing, Misadjusted Controls		
Facility HVAC Distribution Systems	D3050	High	30.00% Poor	
<i>Deficiencies:</i>	Excessive Particulates, Inoperable Devices, Insufficient Air Flow, System Inefficient, Uneven Zone Coverage			

Chapter 1: Wenatchee High School Building Condition Assessment

Building Components

SUB-ASSEMBLY	COMPONENT	COMPONENT CODE	MAINTENANCE PRIORITY	CONDITION RATING
HVAC	<i>Causes:</i>	Equipment Obsolescence, Misadjusted Air Balancing, Misadjusted Controls, Missing Ceiling Tiles		
	Ventilation	D3060		62.00% Fair
	<i>Deficiencies:</i>	Stuffy Areas		
Fire Protection	<i>Causes:</i>	Equipment Obsolescence, Misadjusted Controls		
	Fire Suppression	D4010		0.00% Unsatisfactory
	<i>Deficiencies:</i>	Other		
	<i>Causes:</i>	Other		
	<i>Comments:</i>	No sprinkler system		
Electrical	Fire Protection Specialties	D4030		90.00% Good
	Facility Power Generation	D5010		90.00% Good
	Electrical Services and Distribution	D5020		62.00% Fair
	<i>Deficiencies:</i>	Other		
	<i>Causes:</i>	System Undersized		
	<i>Comments:</i>	May need additional outlets. Panels need cleaning and thermal imaging		
	General Purpose Electrical Power	D5030		62.00% Fair
	<i>Deficiencies:</i>	Access Hazards, Other		
	<i>Causes:</i>	System Undersized		
	<i>Comments:</i>	Need cleaning and thermal imaging.		
Communications	Lighting	D5040		90.00% Good
	Data Communications	D6010		62.00% Fair
	Voice Communications	D6020	High	30.00% Poor
	<i>Deficiencies:</i>	Dead Zones, Other		
	<i>Causes:</i>	Equipment Obsolescence		
	<i>Comments:</i>	Deficiency: No expansion ability on phone system		
	Audio-Video Communications	D6030		62.00% Fair
	Distributed Communications and Monitoring	D6060		30.00% Poor
	<i>Deficiencies:</i>	Other		
	<i>Causes:</i>	Equipment Obsolescence		
<i>Comments:</i>	.			

Chapter 1: Wenatchee High School Building Condition Assessment

Building Components

SUB-ASSEMBLY	COMPONENT	COMPONENT CODE	MAINTENANCE PRIORITY	CONDITION RATING
Electronic Safety and Security	Access Control and Intrusion Detection	D7010		62.00% Fair
	Electronic Surveillance	D7030	Medium	30.00% Poor
	<i>Deficiencies:</i>	Blind Zones , DVRs Insufficient		
	<i>Causes:</i>	Equipment Obsolescence		
	<i>Comments:</i>	Corrective Actions: System is being systematically upgraded.		
	Detection and Alarm	D7050		90.00% Good
	<i>Deficiencies:</i>	Other		
	<i>Causes:</i>	Other		
	<i>Comments:</i>	Deficiency: Need mass notification at greenhouses.		
Integrated Automation	Integrated Automation Facility Controls	D8010		62.00% Fair
	<i>Deficiencies:</i>	System Not working to Capacity		
	<i>Causes:</i>	Equipment Obsolescence, Programming Not Kept Up to Date		
Equipment	Vehicle and Pedestrian Equipment	E1010		62.00% Fair
	Commercial Equipment	E1030		62.00% Fair
	Institutional Equipment	E1040	High	30.00% Poor
	<i>Deficiencies:</i>	Code Non-compliance, Energy Inefficiency		
	<i>Causes:</i>	Equipment Deterioration, Equipment Obsolescence		
	<i>Comments:</i>	Location: Kitchen Deficiency: Lacks Type 1 Hood over grills		
	Entertainment and Recreational Equipment	E1070		90.00% Good
	Other Equipment	E1090		90.00% Good
Furnishings	Fixed Furnishings	E2010		62.00% Fair
	Movable Furnishings	E2050		30.00% Poor
	<i>Deficiencies:</i>	Incorrect Application, Surface Deterioration, Unightly		
	<i>Causes:</i>	Deterioration, Looseness of Fasteners, Operation Abuse or Vibrations, Physical Damage		