

Northgate High School

Items	Description	
Project Name	Northgate High School	
Property Type	Academic	
Full Address	425 Castle Rock Road Walnut Creek, CA 94598	
Year Built	1973	
Gross Building Area (GSF)	176,820	
Current Replacement Value (CRV)	\$132,615,000	
CRV/GSF (\$/Sq Ft)	\$750	
Number of Classrooms	X	
Number of Portables	0	
Student population (2018/2019)	1,542	
Site Acreage	14.6	
Building Name	Gross Square Footage	Built/Renovated
Library/Administration	54,000	1973/2014
Applied Art	24,500	1973/2014
Theater/Music	17,000	1973
Locker/Shower	12,000	1973
Gymnasium	12,500	1973/2014
North Wing	47,000	1973
Portables	2,400	2014
55-57	3,500	2014
Weight Room	2,800	2014
Restroom	900	2014
Sports Med.	4,200	2014
Utility	750	2012
Ticket	350	1973
Total SF	176,820	

All 176,820 square feet of the property are occupied by Mount Diablo Unified School District. The spaces are mostly a combination of offices, classrooms, and laboratory spaces with supporting restrooms, administrative offices, and mechanical and other utility spaces.

Northgate High School

OVERVIEW

Property Executive Summary

Northgate High School is a fully occupied academic high school. It is a single-story structure with twelve buildings. The Library / Administration building, Applied Art, Theater / Music, Locker / Shower and Gymnasium were constructed in 1973 and had limited renovation between 2002 and 2016. The Classroom Buildings 55-57, Weight Room, Sport Med, Utility Pool room, portable and Restroom building were constructed in 2014.

Although handicap accessibility issues have generally been addressed there are recommended improvements provided in the report.

Site Executive Summary

The buildings cover nearly the entire site. Landscaping consists of trees, shrubs, and lawn areas. Landscaped areas are irrigated by an in-ground overhead spray sprinkler system. Fencing is located at the perimeter of the site with an automatic vehicle gate and security post and around the pool area. Parking is provided in asphalt paved lots, on-site solar paneled carports and open lots. There is no service vehicle access. The pedestrian pavement throughout the property is constructed of cast-in-place concrete. General site lighting is provided by pole-mounted HID fixtures. Building perimeter lighting is provided by wall-mounted metal halide fixtures. Pedestrian areas and walkways are lit by metal halide lighting bollards.

Architectural Structural Executive Summary

The foundation system was not able to be directly observed. However, based on similar structures and the POC comments, it is assumed to be Concrete bearing walls on concrete slab/ with raised floor. The roof is flat with single-ply TPO/PVC membrane for the old buildings and some of the new buildings, and gable construction with metal roofing system for some of the new buildings and for the portable. The exterior walls are precast concrete panels. Windows are single and double- glazed, aluminum and steel-framed units on all facades. The buildings interiors generally include painted gypsum board walls and exposed concrete. The floor finishes consist of carpet, vinyl composition tiles (VCT), ceramic tile and concrete. The interior ceiling is finished with acoustic ceiling tiles and painted gypsum board.

Mechanical/Electrical/Plumbing Executive Summary

Domestic hot water is provided to the restrooms and break room areas by individual electric and gas-fired water heaters located in the janitor's closet adjacent to each area. Heating and cooling is provided by rooftop package units and gas-fired furnaces with remote condensers, and heat pump. Supplemental Cooling is provided to the communication rooms by 2 ductless split systems. Fire protection systems include a fire alarm system, smoke detectors, alarms with strobes, pull stations, extinguishers, and appropriate egress signage. General interior lighting is provided by LED, T-12 fluorescent fixtures and T-8 fluorescent fixtures with compact fluorescent (CFL) fixtures and incandescent fixtures in accent locations. Electrical service to the building is provided by single 1200 amp and multiple 800-amp panels that is served from a pad- mounted transformer.

SCHOOL SITE ENGAGEMENT

Principal Priorities:

1. Science Wing Rebuild
2. Secondary multi-use facility
3. Restrooms and running water near athletic stadium

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ASSESSMENT OF SITE

Historical Summary

The Library/Administration building, Applied Art, Theater/Music, Locker/Shower, and Gymnasium were constructed in 1973 and had limited renovation in 2014. Five new buildings and one restroom building were added in 2014.

Site

The asphalt at the playground and the parking lot area is in fair condition.

Architectural

During the construction of the new buildings, a solar system was added at parking lot. Interior and exterior painting and VCT replacement was completed in 2014. Lifecycle replacements of the interior and exterior finishes are budgeted and anticipated.

Mechanical, Electrical, Plumbing & Fire (MEPF)

The MEPF systems and infrastructure vary significantly in age; while some components were replaced and upgraded during the 2014 construction and renovations, many remain older, with some still original to the original construction. Some of the rooftop units are dated 2006. Most piping is original. Some of the facility's electrical infrastructure components were replaced in 2014.

Recommended Additional Studies

Additional investigation is currently taking place to address specific AB-300 requirements and potential independent structural system review to remove this building from the state list.

Facility Condition Index

In this report we have calculated the Facility Condition Index (FCI) which is used in Facilities Management to provide a benchmark to compare the relative condition of a group of facilities. The FCI is primarily used to support asset management initiatives of federal, state, and local government facilities organizations.

The FCI is the ratio of accumulated Total Cost (TC) (Deferred Maintenance, Capital Renewal and Plant Adaptation) to the Current Replacement Value (CRV) for a constructed asset calculated by dividing the TC by the CRV. The range is from zero for a newly constructed asset, to one for a constructed asset with a TC value equal to its CRV. Acceptable ranges vary by "Asset Type", but as a general guideline the FCI scoring system is as follows:

Condition	Definition	Percentage Value
GOOD	In a new or well-maintained condition, with no visual evidence of wear, soiling or other deficiencies.	0% to 5%
FAIR	Subject to wear and soiling but is still in a serviceable and functioning condition.	5% to 10%
POOR	Subjected to hard or long-term wear. Nearing the end of its useful or serviceable life.	Greater than 10%
V-POOR	Subjected to hard or long-term wear. Has reached the end of its useful or serviceable life. Renewal now necessary.	Greater than 60%

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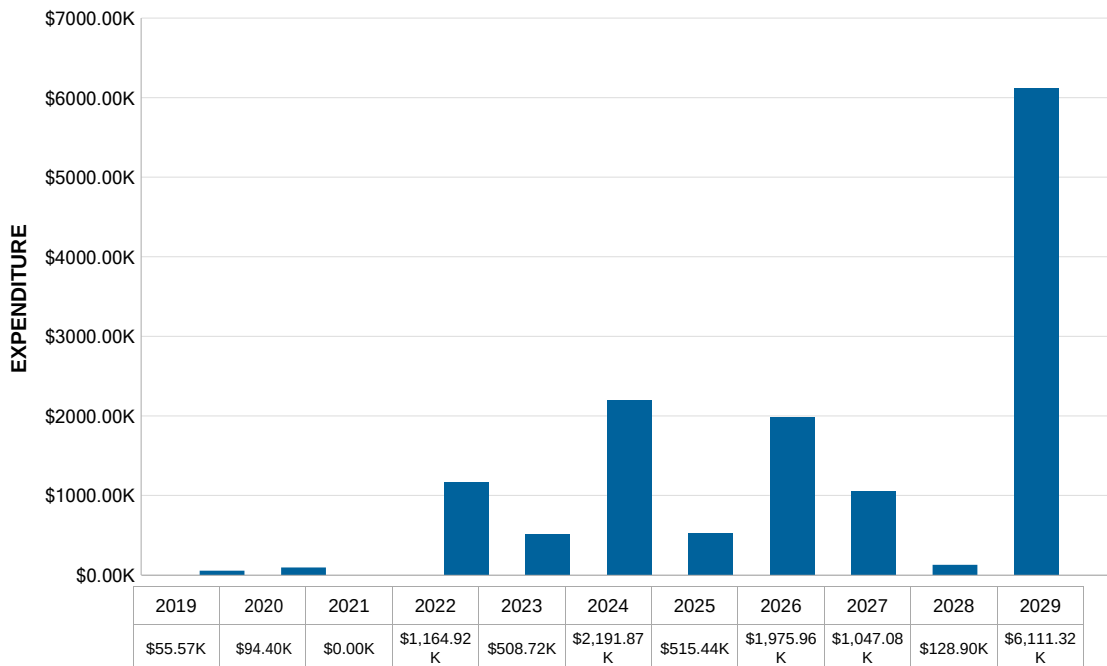
Summary of Findings

This report represents summary-level findings for the Property Condition Assessment. The deficiencies identified in this assessment can be combined with potential new construction requirements to develop an overall Long Term Capital Needs Plan that can be the basis for a facility wide capital improvement funding strategy. Key findings from the Assessment include:

Key Findings	Metric
Facility Condition Index (FCI)	0.04 %
Current Replacement Value (CRV)	\$132,615,000
Immediate Capital Needs (Current Year or Year 0)	\$55,570
Short Term Capital Needs (Year 1 to 5)	\$3,959,910
Long Term Capital Needs (Year 6 to 10)	\$9,778,691
TOTAL Capital Needs (Year 0 to Year 10)	\$13,794,170
Average Capital Needs Per Year	\$1,379,417

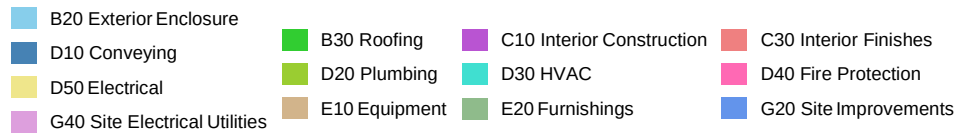
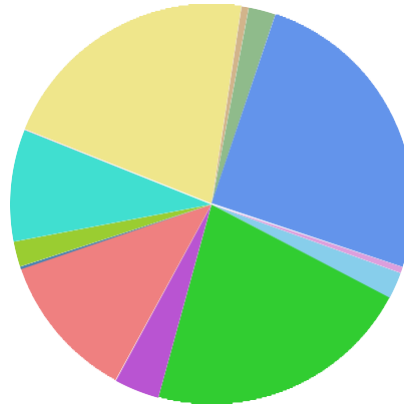
The building expenditure summary section provides an executive overview of the findings from the assessment. The chart below provides a summary of yearly anticipated expenditures over the study period for the Northgate High School building. In addition, we have scheduled key findings highlighting key items of greater than \$5,000 and their anticipated failure year. Further details of these expenditures are included within each respective report section and within the expenditure forecast, in Appendix A of this report. The results illustrate a total anticipated expenditure over the study period of approximately \$13,794,170.

Expenditure Forecast Over Study Period



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Distribution of Future (Year 1-Year 10) Needs by Building System



Building System	Estimated Cost	Percentage of Total Cost
B20 Exterior Enclosure	\$295,255	2.15 %
B30 Roofing	\$2,852,667	20.76 %
C10 Interior Construction	\$483,298	3.52 %
C30 Interior Finishes	\$1,522,420	11.08 %
D10 Conveying	\$29,347	0.21 %
D20 Plumbing	\$300,463	2.19 %
D30 HVAC	\$1,201,685	8.75 %
D40 Fire Protection	\$4,447	0.03 %
D50 Electrical	\$2,825,888	20.57 %
E10 Equipment	\$77,641	0.57 %
E20 Furnishings	\$288,000	2.10 %
G20 Site Improvements	\$3,309,368	24.09 %
G30 Site Mechanical Utilities	\$480,714	3.50 %
G40 Site Electrical Utilities	\$67,407	0.49 %
Total	\$13,738,600	100 %

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Building Type 1 Information



Building Type 1 Information		
Building Locations	Library/Administration building, Applied Art, Theater/Music, Locker/Shower and Gymnasium	
Constructed/ Renovated	1973/2014	
Total Area	120,000 SF	
Number of Stories	1	
<i>System</i>	<i>Description</i>	<i>Condition</i>
Structure	Concrete bearing walls on concrete slab/ with raised floor	Fair
Façade	Curtain wall with aluminum- and steel-framed windows	Fair
Roof	Primary: Flat construction with single-ply TPO/PVC membrane Secondary: Gable construction with metal finish	Fair
Interiors	Walls: Painted gypsum board and unfinished concrete Floors: Carpet, VCT, ceramic tile Ceilings: Painted gypsum board, ACT	Fair
Elevators	Hydraulic, one car serving mezzanine Wheelchair lifts	Fair
Plumbing	Copper supply, cast iron waste and vent Gas and electric water heaters	Fair
HVAC	Individual package and split-system units Supplemental components: ductless split-systems	Fair
Fire Suppression	Hydrants, fire extinguishers, hose cabinets	Fair
Electrical	Source & Distribution: Main switchboard and distribution panels Interior Lighting: T-8, T-12, incandescent and LED Emergency: None	Fair
Fire Alarm	Alarm panel, smoke detectors, alarms, strobes, pull stations	Fair
Equipment/Special	Commercial kitchen equipment	Fair
Key Issues & Findings	Building lacks fire suppression.	

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Building Type 2 Information



Building Type 2 Information		
Building Locations	Building 55-57, Weight Room, Sport Med, Utility Pool room and Restroom building	
Constructed/ Renovated	2014	
Total Area	13,000 SF	
Number of Stories	1	
<i>System</i>	<i>Description</i>	<i>Condition</i>
Structure	Conventional wood-framed structure on concrete slab	Good
Façade	Stucco with aluminum-framed windows	Good
Roof	Primary: Gable construction with metal finish Secondary: Flat construction with single-ply TPO/PVC membrane	Good
Interiors	Walls: Painted gypsum board Floors: Carpet, VCT, ceramic tile Ceilings: Painted gypsum board, ACT	Good
Elevators	None	--
Plumbing	Copper supply, cast iron waste and vent Gas water heaters	Fair
HVAC	Heat pump, split-system units	Fair
Fire Suppression	Hydrants, fire extinguishers, hose cabinets	Fair
Electrical	Source & Distribution: Main switchboard and distribution panels Interior Lighting: T-8, T-12, incandescent, and LED Emergency: None	Fair
Fire Alarm	Alarm panel, smoke detectors, alarms, strobes, pull stations	Fair
Equipment/Special	Swimming pool	Good
Key Issues & Findings	None	

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Building Type 3 Information



Building Type 3 Information		
Building Locations	Portables	
Constructed/ Renovated	2014	
Building Size	2,700 SF	
Number of Stories	1	
<i>System</i>	<i>Description</i>	<i>Condition</i>
Structur	Conventional wood-framed structure on concrete slab	Good
Façade	Wood siding with aluminum-framed windows	Good
Roof	Primary: Flat construction with metal finish	Good
Interiors	Walls: Painted gypsum board Floors: Carpet Ceilings: ACT	Good
Elevators	None	--
Plumbing	None	--
HVAC	Heat pump	Fair
Fire Suppression	Hydrants, fire extinguishers	Fair
Electrical	Source & Distribution: Distribution panels Interior Lighting: T-8, T-12 Emergency: None	Fair
Fire Alarm	Smoke detectors, alarms, strobes, pull stations	Fair
Equipment/Special	None	--
Key Issues & Findings	None	

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Site Summary Information



Site Information		
Lot Size	44.6 acres (estimated)	
Parking Spaces	375 total spaces all in open lots; 11 of which are accessible 9 accessible (included in total above), 2 van-accessible	
<i>System</i>	<i>Description</i>	<i>Condition</i>
Pavement/Flatwork	Asphalt lots with areas of concrete and concrete sidewalks, curbs, ramps, and stairs	Fair
Site Development	Property entrance signage, Chain Link fencing, Chain Link dumpster enclosures Sports courts, fencing, and site lights	Fair
Landscaping & Topography	Heavy landscaping features Irrigation present No retaining walls Low to moderate site slopes throughout	Fair
Draining Systems and Erosion Control	Surface flow, Inlets, Swales, Underground piping	Fair
Utilities	Municipal water and sewer Local utility-provided electric and natural gas	Fair
Site Lighting	Pole-mounted: metal halide Building-mounted: metal halide	Fair
Ancillary Structures	Steel-framed carports for solar system.	Good
Key Issues & Findings	None	