

Bel Air Elementary School

Items	Description	
Project Name	Bel Air Elementary School	
Property Type	Academic	
Full Address	663 Canal Road Bay Point, CA 94565	
Year Built	1950	
Gross Building Area (GSF)	49,800	
Current Replacement Value (CRV)	\$37,350,000	
CRV/GSF (\$/Sq Ft)	\$750	
Number of Classrooms	X	
Number of Portables	0	
Student population (2018/2019)	443	
Site Acreage	8.1	
Building Name	Gross Square Footage	Built/Renovated
Building 1 - Office	5,000	1954
Building 2 - A2-A5	4,800	1954
Building 3 - A1	1,600	1954
Building 4 - B1	2,000	1954
Building 5 - B2-B5	4,800	1954
Building 6 - B6-B9	5,000	1954
Building 7 - C1	1,000	2002
Building 8 - C2	1,000	2002
Building 9 - C3-C6	5,200	2003
Building 10 - C7-C11	5,000	1954
Building 11 - C12-13	5,000	1954
Building 12 - Multi Use Building	5,800	1954

All 46,200 square feet of the property are occupied by Mount Diablo Unified School District. The spaces are mostly a combination of offices, classrooms, and multi-purpose room with supporting restrooms and mechanical and other utility spaces.

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OVERVIEW

Property Executive Summary

Bel Air Elementary School is a fully-occupied academic campus. It is a single-story structure with multiple classroom wings and additional classroom buildings that were constructed around 2003. Two additional “pods” were moved onto the site within the last year. The main building roof was replaced within the last year. There are some isolated areas of peeling and worn paint on the wooden fascia of the original buildings and Classroom Building 26-28. There are some isolated areas of peeling paint on original classroom windows.

Site Executive Summary

The building and adjacent finished surfaces cover approximately half of the site. Landscaping consists of trees, shrubs, a student garden, and lawn areas. Some landscaped areas are irrigated by an in-ground sprinkler system near the main office. Fencing is located at the perimeter of the site and around the buildings with lockable gates at multiple locations around the classroom buildings. Parking is provided for 109 vehicles in three asphalt paved lots. Service vehicle access is provided at the north side of the west parking lot and at the southeast corner of the property. The pedestrian pavement throughout the property is constructed of cast-in-place concrete and asphalt. Cast-in-place concrete steps with metal handrails are located at grade changes. Building perimeter lighting is provided by wall-mounted sodium vapor HID fixtures and metal halide flood lights. There are two pole-mounted flood lights near the west parking lot. Pedestrian areas and walkways along the buildings are lit by recessed LED or CFL fixtures.

Architectural Structural Executive Summary

The foundation system was not able to be directly observed. However, based on similar structures and drawings of the original school, it consists of concrete piers supporting reinforced concrete slab-on-grade. The newer classroom additions are constructed on concrete slabs-on-grade. The building structural systems consist of wood framing with wood truss roofs. The roof of the original building is flat and was replaced in 2018. The classroom additions generally have gabled roofs finished with metal. Classrooms 26-28 has a flat roof finished with modified bitumen. Roof access to Pods/Classrooms P1 and P2 was not available. The exterior walls are painted stucco and painted plaster. The pods have stained wood exteriors. Windows are single-glazed, metal-framed units in punched openings. The original buildings have steel-framed windows, and the additions have aluminum-framed windows. The building interiors generally include painted plaster with some areas of tack board and acoustical panels. In the additions, areas not finished with tack board are finished with painted drywall.

The floor finishes consist primarily of vinyl composition tile (VCT) and carpet. There are small areas of carpet, linoleum, polished concrete, wood stage flooring, and poured rubber flooring. The interior ceilings are finished primarily with adhered acoustic ceiling tiles with small areas of finished drywall or plaster. Classrooms 21-25 have small areas of a fiberglass and metal ceiling panels with the remainder consisting of painted drywall. Some of the original 1'x1' ceiling tiles have areas of stains from previous roof leaks. In classrooms 6-8, half the ceiling is open to the structure, which has been painted over time.

Mechanical/Electrical/Plumbing Executive Summary

Domestic hot water is provided to the M-U building kitchen and restrooms by a commercial-grade, gas-fired water heater located in a small mechanical room. Small electric instantaneous heaters provide domestic hot water to the staff restrooms adjacent to Classroom 20. Heating and cooling is provided by rooftop package units and gas furnaces and with remote condensing units. Heating and cooling is provided to the office building by a multi-zone ductless split system. Supplemental cooling for the IT room and the kitchen is provided by ductless mini-splits. A gas-fired boiler in the M-U Building provides heating to

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cabinet unit heaters in the M-U Building only. Fire protection systems include a fire alarm system, smoke detectors, alarms with strobes, pull stations, extinguishers, and appropriate egress signage. The school does not have fire sprinklers. The kitchen hood in the M-U Building kitchen does not have a fire suppression system. General interior lighting is provided by T-8 fluorescent fixtures. Electrical service is provided by a single 1,600-amp panel served from a pad-mounted transformer. The school incorporates net electric metering as a component of the solar carport systems.

SCHOOL SITE ENGAGEMENT

Principal Priorities:

1. Painting (indoor and outdoor)
2. Upgraded/additional playground
3. Cameras

ASSESSMENT OF SITE

Historical Summary

Bel Air Elementary School was built in 1950. The Multi-Use (M-U) Building lies at the front and south side of the site and includes the cafeteria, kitchen, and stage. Around 2005, classroom buildings were built on to accommodate growing enrollment. These units were added to the north and east sides adjacent to the existing original classrooms. In 2017, two portable classrooms were moved onto the site adjacent to Classrooms 26-28.

Site

The site parking lot is in fair condition with minimal surface cracking in isolated areas. Parking spaces are well marked. Sidewalk concrete and asphalt are in fair condition with no major deficiencies. Trees, shrubs, and grass are all well maintained. Site lighting is mostly limited to the building exteriors in addition to two pole-mounted lights. All pedestrian paths are well lit by recessed or wall-mounted lighting fixtures. *Originally constructed in 1950, Maintenance indicates deteriorating site utility infrastructure in need of replacement.*

Architectural

The original building roofs are finished with liquified rubber over modified bitumen installed in 2018. Roofs on the additions consist of modified bitumen and metal. The floors in the original buildings have been upgraded to vinyl tile over time and have been well maintained. The additions have a combination of vinyl tile and carpet, both of which are in fair condition. Interior wall finishes include plaster that has been repainted periodically over the years. Other wall finishes include tack board with some remaining areas of painted gypsum board. Interior finishes have been repainted periodically as needed over the years. Lifecycle interior finish, exterior finish, and roof replacements are budgeted and anticipated.

Mechanical, Electrical, Plumbing & Fire (MEPF)

A major mechanical upgrade to the original classroom buildings was completed around 2008. In the original classroom buildings, the hydronic heating systems have been replaced with packaged rooftop units and split systems with some mini-split systems for complimentary cooling. The M-U Building boiler provides heating hot water to four cabinet unit heaters. The additions are heated and cooled by split systems and packaged rooftop units. The MEPF infrastructure is generally in good working condition with no major expenditures anticipated in the short term.

Recommended Additional Studies

No additional studies are recommended.

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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%

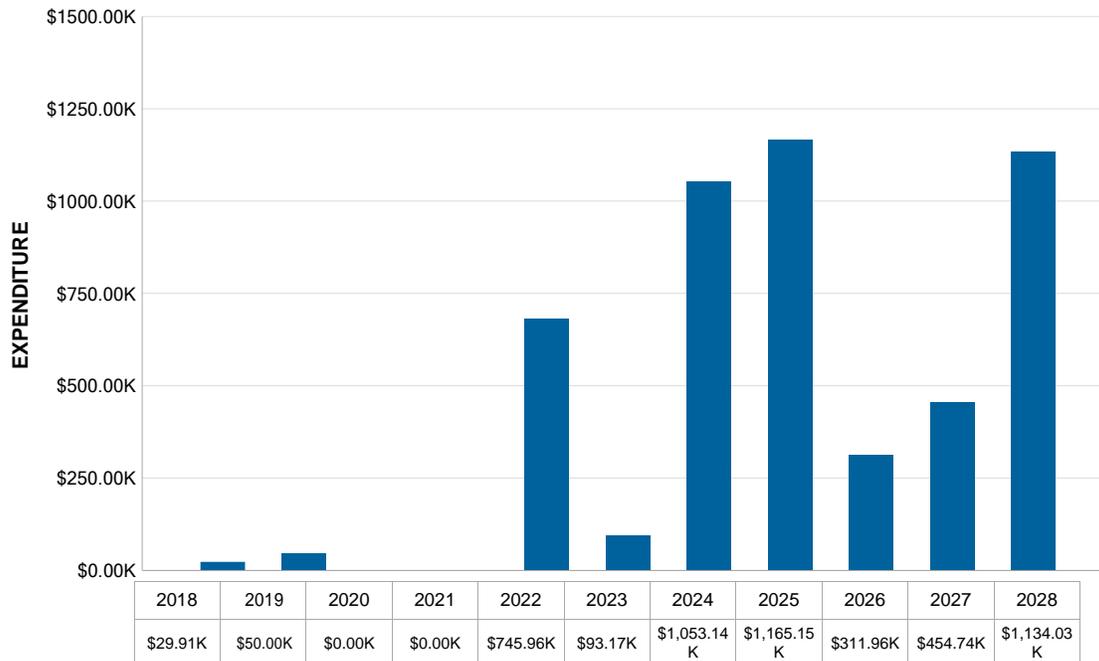
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Summary of Findings

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)	0.06 %
Current Replacement Value (CRV)	\$37,350,000
Immediate Capital Needs (Current Year or Year 0)	\$29,906
Short Term Capital Needs (Year 1 to 5)	\$889,128
Long Term Capital Needs (Year 6 to 10)	\$4,119,021
TOTAL Capital Needs (Year 0 to Year 10)	\$5,038,055
Average Capital Needs Per Year	\$503,806

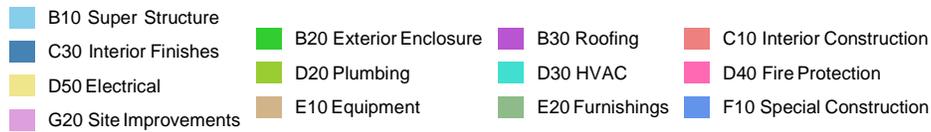
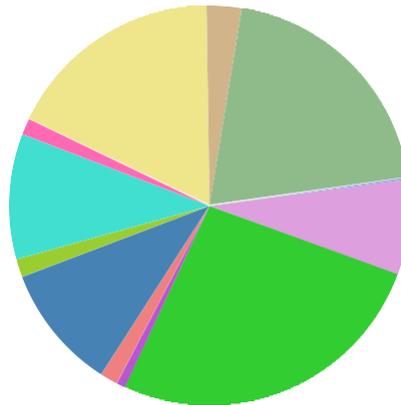
The building expenditure summary section provides an executive overview of the findings from the assessment. The chart below provides a summary of yearly anticipated expenditures over the study period for the Bel Air Elementary School building. In addition, we have scheduled key findings highlighting 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 \$5,038,055.

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
B10 Super Structure	\$1,435	0.03 %
B20 Exterior Enclosure	\$1,320,481	26.37 %
B30 Roofing	\$35,139	0.70 %
C10 Interior Construction	\$71,832	1.43 %
C30 Interior Finishes	\$508,256	10.15 %
D20 Plumbing	\$73,621	1.47 %
D30 HVAC	\$506,709	10.12 %
D40 Fire Protection	\$66,234	1.32 %
D50 Electrical	\$882,400	17.62 %
E10 Equipment	\$140,597	2.81 %
E20 Furnishings	\$1,009,625	20.16 %
F10 Special Construction	\$6,000	0.12 %
G20 Site Improvements	\$385,820	7.70 %
Total	\$5,008,149	100 %

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Building Type 1 Information



Building Type 1 Information		
Building Locations	Office, Library, Original Classrooms, Restrooms	
Constructed/ Renovated	1950	
Total Area	23,400 SF	
Number of Stories	1	
<i>System</i>	<i>Description</i>	<i>Condition</i>
Structure	Conventional wood-framed structure on concrete slabs Wood framed walls and wood-framed roofs	Good
Façade	Painted plaster with steel-framed operable and fixed windows	Fair
Roof	Primary: Flat construction with liquified rubber over modified bituminous finish	Excellent
Interiors	Walls: Painted plaster Floors: Carpet, VCT, linoleum Ceilings: Painted plaster, adhered tile, open wood framing	Fair
Elevators	None	--
Plumbing	Galvanized supply, cast iron waste and vent No hot water	Fair
HVAC	Individual packaged rooftop units, multi-zone ductless split systems, split systems Supplemental components: ductless mini split-systems	Fair
Fire Suppression	Fire extinguishers	Good
Electrical	Source & Distribution: Exterior switchboard with copper wiring fed from exterior main distribution panel with copper wiring Interior Lighting: T-8	Fair
Fire Alarm	Alarm panel, smoke detectors, alarms, strobes, pull stations, back-up emergency lights, and exit signs	Fair
Equipment/Special	None	--
Key Issues & Findings	Buildings lack fire suppression, peeling paint on some original windows, peeling paint on some wood fascia around library, remodeled restroom sinks do not have wrapped drains per ADA, lots of exterior lights are on during the day	

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Building Type 2 Information



Building Type 2 Information		
Building Locations	Classroom Building 26-28	
Constructed/ Renovated	~2003	
Building Size	3,800 SF	
Number of Stories	1	
<i>System</i>	<i>Description</i>	<i>Condition</i>
Structure	Conventional wood-framed structure on concrete slabs Wood-framed bearing walls and wood-framed roofs	Good
Façade	Stucco with aluminum-framed operable windows	Fair
Roof	Primary: Flat construction with modified bituminous finish	Fair
Interiors	Walls: Painted gypsum board, tackboard Floors: Carpet Ceilings: Dropped 2x4 ACT	Fair
Elevators	None	--
Plumbing	Copper supply, PVC waste and vent No hot water	Fair
HVAC	Packaged rooftop unit	Fair
Fire Suppression	Fire extinguishers	Good
Electrical	Source & Distribution: Exterior switchboard with copper wiring fed from exterior main distribution panel with copper wiring Interior Lighting: T-8	Fair
Fire Alarm	Alarm panel, smoke detectors, alarms, strobes, pull stations, back-up emergency lights, and exit signs	Fair
Equipment/Special	None	--
Key Issues & Findings	Building lacks fire suppression, wood fascia needs new coat of paint, rodent issues in Classroom 27 due to poor door sweeps	

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 Building Type 3 Information



Building Type 3 Information		
Building Locations	Classroom Buildings 21-25, 17-20, 13-14	
Constructed/ Renovated	~2005	
Total Area	15,000 SF	
Number of Stories	1	
<i>System</i>	<i>Description</i>	<i>Condition</i>
Structure	Conventional wood-framed structure on concrete slabs Wood-framed bearing walls and wood-framed roofs	Good
Façade	Stucco with aluminum-framed operable windows	Fair
Roof	Primary: Gable construction with metal roof	Fair
Interiors	Walls: Painted gypsum board, tack board Floors: Carpet, VCT Ceilings: ACT, fiberglass or metal panels, painted drywall	Fair
Elevators	None	--
Plumbing	Copper supply, PVC waste and vent Instantaneous electric hot water heaters in staff restrooms	Fair
HVAC	Gas furnaces with remote condensing units	Fair
Fire Suppression	Fire extinguishers	Good
Electrical	Source & Distribution: Exterior switchboard with copper wiring fed from exterior main distribution panel with copper wiring Interior Lighting: T-8	Fair
Fire Alarm	Alarm panel, smoke detectors, alarms, strobes, pull stations, back-up emergency lights, and exit signs	Fair
Equipment/Special	None	--
Key Issues & Findings	No fire suppression	

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Building Type 4 Information



Building Type 4 Information		
Building Locations	Classrooms P1 and P2	
Constructed/ Renovated	2017	
Total Area	2,000 SF	
Number of Stories	1	
<i>System</i>	<i>Description</i>	<i>Condition</i>
Structure	Conventional wood-framed structure on concrete slabs Wood-framed bearing walls and wood-framed roofs	Excellent
Façade	Painted lap board with aluminum-framed operable windows	Good
Roof	Primary: Flat construction with modified bituminous finish (not observed – estimated)	Excellent
Interiors	Walls: Tack board, painted drywall Floors: VCT Ceilings: Dropped ACT	Good
Elevators	None	--
Plumbing	Copper supply, cast iron waste and vent No domestic hot water heater	Good
HVAC	Packaged exterior wall-mount units	Fair
Fire Suppression	Fire extinguishers	Good
Electrical	Source & Distribution: Exterior switchboard with copper wiring fed from exterior main distribution panel with copper wiring Interior Lighting: T-8	Fair
Fire Alarm	Alarm panel, smoke detectors, alarms, strobes, pull stations, back-up emergency lights, and exit signs	Fair
Equipment/Special	None	--
Key Issues & Findings	Building lacks fire suppression	

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Building Type 5 Information



Building Type 5 Information		
Building Locations	M-U Building	
Constructed/ Renovated	1950	
Building Size	5,600 SF	
Number of Stories	1	
<i>System</i>	<i>Description</i>	<i>Condition</i>
Structure	Conventional wood-framed structure on concrete slabs Wood-framed bearing walls and wood-framed roofs	Good
Façade	Painted plaster with steel-framed fixed and operable windows	Fair
Roof	Primary: Flat construction with liquified rubber over modified bituminous finish	Excellent
Interiors	Walls: Painted plaster Floors: VCT, quarry tile kitchen, wood floor stage Ceilings: ACT, Painted plaster	Fair
Elevators	Wheelchair lift	Fair
Plumbing	Galvanized and copper supply, cast iron waste and vent Gas domestic hot water heater	Fair
HVAC	Natural gas boiler serving cabinet unit heaters	Fair
Fire Suppression	Fire extinguishers	Good
Electrical	Source & Distribution: Exterior switchboard with copper wiring fed from exterior main distribution panel with copper wiring Interior Lighting: T-8, stage lighting system	Fair
Fire Alarm	Alarm panel, smoke detectors, alarms, strobes, pull stations, back-up emergency lights, and exit signs	Fair
Equipment/Special	Commercial kitchen equipment, sound system	Fair
Key Issues & Findings	Building lacks fire suppression, kitchen hood lacks fire suppression, kitchen garbage disposal is not operable, electric code violations with hot water heating pump	

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Site Summary Information



Site Information		
Lot Size	8.1 acres (estimated)	
Parking Spaces	109 total spaces all in open lots 14 accessible (included in total above), 3 van-accessible	
<i>System</i>	<i>Description</i>	<i>Condition</i>
Pavement/Flatwork	Asphalt lots with areas of asphalt and concrete sidewalks, curbs, ramps, and stairs	Fair
Site Development	Building-mounted signage, chain-link fencing Playgrounds and sports courts Moderately furnished park benches, picnic tables, trash receptacles	Fair
Landscaping & Topography	Moderate landscaping features Irrigation present Slight but steady slope from south to north	Fair
Draining Systems and Erosion Control	Surface flow, pits	Fair
Utilities	Municipal water and sewer Local utility-provided electric and natural gas	Fair
Site Lighting	Building-mounted: HPS, metal halide, recessed LED and CFL fixtures Pole-mounted: metal halide floods	Fair
Ancillary Structures	Two steel-framed PV carport systems	Good
Key Issues & Findings	Unlocked main switchboard gate along with unlocked and open main switchboard enclosure, there is a noticeable amount of live tree growth within the east side perimeter fence	