GRAVENSTEIN UNION SCHOOL DISTRICT FACILITY MASTER PLAN







Gravenstein Elementary School

Hillcrest Middle School

August 3rd, 2012 Prepared by:



TABLE OF CONTENTS

- 1. Introduction and Acknowledgements
- 2. District and Master Plan Overview
- 3. Process
- 4. Facility Assessments: Hillcrest Middle School
- 5. Facility Assessments: Gravenstein Elementary School
- 6. Future Projects



1: INTRODUCTION:

Gravenstein Union School District has requested that a facility master plan be prepared to identify and prioritize facility improvements required to accommodate the growth, operations, and educational vision of the District in the future. Preparation of a Master Plan is good business practice to address aging facilities and remain viable, safe, productive, operationally efficient, and successful in meeting educational goals and objectives.

This Master Planning process has been developed with community involvement, school stakeholder participation, and the oversight of a steering committee. The plan addresses the following core objectives:

- Establishing an overall vision for the school facilities
- General assessment of the existing state of the campuses and identification of general recommended facility repairs
- Analysis and recommendations for energy efficiency improvements
- Assessment of current Accessibility and noted deficiencies
- Prioritization the projects
- Establishment of an initial estimated construction cost.

The focus of this proposal will be to develop a plan in partnership with the Board of School Directors, School Stakeholders, and the Community.



ACKNOWLEDGEMENTS

Participation:

GUSD Board of Trustees

Jim Horn, President Sandra Wickland Kay Crocker Jeff Weaver Jan Zlotnick

Superintendent

Linda LaMarre

Principals

David Fichera, Hillcrest Middle School Linda LaMarre, Gravenstein Elementary School

District Maintenance and Facilities Manager Brian Sposato

Community Meeting Participants from June 26th, 2012

Design and Assessment Team

Doug Hilberman, Principal in Charge, AXIA Architects
Robert Jacques, AXIA Architects
Eddie VanSlambrouck, AXIA Architects
Robin Wendler, ZFA Structural Engineers
Terry Szalai, Suite 16 Electrical Engineers
Jim Horn, Horn Mechanical Engineers
Tom Terry, Roof Consultant
Kevin Gilleran, Gilleran Energy Management
David Lopez, Permit Services, LLC (ADA Assessment)
Brian Sposato, Facilities Manager, GUSD



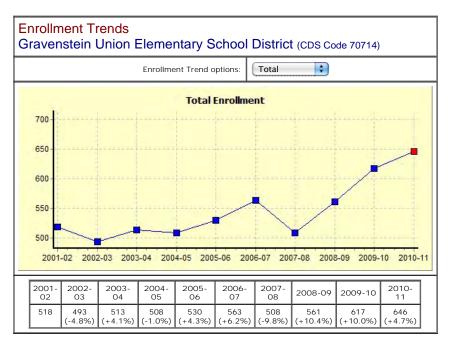
2: DISTRICT AND MASTER PLAN OVERVIEW:

Gravenstein Union School District is home to two small, award-winning public schools in the rolling hills near Sebastopol in the western portion of Sonoma County, California. The District provides resources from pre-kindergarten through 8th grade. Students from the Gravenstein Union School District feed into the West Sonoma County Union High School District after 8th grade.



The focus of the curriculum is on strong academic programs including creative arts and music instruction in a quant rural setting. Both campuses and educational programs are recognized as California Distinguished Schools. The population of the schools has been increasing in recent years, attributable to the academic excellence.





Source: Ed-Data

The Gravenstein Elementary School campus serves approximately 350 children. The original campus was built in 1956. A large portion was modernized about 25 years ago and is at the end of its recognized life cycle for finish materials. One wing of classrooms was modernized in 2005.

The Hillcrest Middle School campus serves approximately 280 students. The original campus was built in 1966, with most portions modernized in 2007. The multi-use was added to the campus in 2000.

The School District recognizes that the campuses must be updated to meet current educational demands and to provide for the safety and wellbeing of its students. As part of the Master Planning preparation the team visited each campus and performed assessments of the existing conditions including building envelope, structural, electrical, mechanical, and general energy efficiency.

The Master Plan is intended as a state-of-the-District report, a blueprint for the future of the Gravenstein Union School District, and a working document that can be updated as the District implements portions of the plan and natural evolution and new needs occur.



3: PROCESS

STEP 1: ESTABLISH GRAVENSTEIN UNION SCHOOL DISTRICT FACILITY MASTER PLAN STEERING COMMITTEE

AXIA Architects assisted the District with the organization of an oversight steering committee. The mission of the steering committee was to assess the data compiled, the recommendations, the formulated options, and provide direction to the design team. The result of the Steering Committee's efforts are summarized in a Report of Recommendations to the Board of School Directors. The Report has been prepared with the assistance of AXIA Architects.

STEP 2: STAKEHOLDER INPUT – COMMUNITY OUTREACH

The AXIA Architect team visited both the Gravenstein Elementary School and Hillcrest Middle School campuses. The school visits included the following activities:

- Observation of drop off/pick up circulation
- A meeting at each campus with representatives of the key school stakeholders and District personnel.
- A discussion to identify the needs, goals, constraints, and vision of each campus.

AXIA conducted one community meeting to solicit input from the community regarding school facilities at each of the campuses.

The visits and the community meeting enhanced the feedback to understand the needs of the facility as perceived by a variety of vantage points.

STEP 3: DATA COLLECTION - SCHOOL FACILITY REVIEW

The design and assessment team gathered data on the existing schools in preparation for analysis and Master Planning. The data gathering generally included the following key areas:

- Assessment of general structural condition
- Assessment of roof condition
- Assessment of main electrical equipment
- Assessment of Fire Alarm systems
- Consideration of potential IT and data upgrades
- Review campus for visible dry rot or building assembly failures.



- Assessment of existing food service equipment based on District lunch program
- Analysis of existing energy utilization
- · Review of modernization needs
- Survey Information*
- Accessibility Reports*
- Assessment of mechanical units*
 - * Assessment information provided by District

The structural assessment of the existing facilities was performed based on an ASCE 31 Tier 1 review. The assessment included a review of the original construction drawings (when available), a site review of the buildings, and a general evaluation report. No special or invasive testing was performed

STEP 4: DATA COLLECTION – ENERGY EFFICIENCY REVIEW

Green Building features have been shown in cases to increase student attendance rates and productivity. Many of these features also have the capability to reduce the District operating costs for the facilities. The team assessed the existing campuses for opportunities to increase energy efficiency and create a healthier environment.

There are three opportunities to track possible energy and or green building upgrades or improvements to the schools. Each system has its benefits and during implementation the design team can work with the District and the District's mechanical engineer to determine which system would best fit the District energy and green building goals.

- EPA's benchmarking tools can certify the buildings under the Energy Star program for commercial buildings.
- Collaborative for High Performance Schools (CHPS) tools and processes can qualify any modernization under the CHPS Designed Program or the CHPS Verified Program. Additional funding may be available for modernizations under the CHPS High Performance Incentives (HPI) program.
- US Green Building Council's LEED Program for Schools can certify the proposed project.

The design and assessment team reviewed the existing campuses and prior 24 months of utility bills to assess current conditions and opportunities for energy conservation. Observations included a review of the following:



- Light Fixtures Replacement, relamping
- Lighting Controls Day light dimming, occupancy sensors
- HVAC (through District's Mechanical Engineer)

 Mechanical Equipment
 Age and Efficiency, Economizers, Controls.
- · Plug Load Controls
- Building Envelope Upgrades: Insulation, windows, clerestories, roof reflectance
- Energy Creation Solar

A preliminary review of both campuses was completed for the potential addition of solar systems.

STEP 5: MASTER PLANNING

AXIA Architects worked with the District and key stakeholders to create a Master Plan for each of the campuses based on the data collected. The plan can be used by the District to prioritize, fund and initiate future modernization, remodeling and building addition projects on campus to meet present and anticipated educational and community goals.

STEP 6: DRAFT PLAN AND RECOMMENDATIONS

At the completion of Steps 1-5, the Steering Committee and the AXIA team drafted an overall plan and formulated recommendations. The draft was presented at the July 11th, 2012 District Board of Trustees meeting. The plan identifies projects, approximates construction costs and the recommended order of implementation. In many cases, not all projects can be done at the same time and based on available resources a phasing criteria has been established.

STEP 7 & 8 : REVIEW WITH KEY STAKEHOLDERS AND BOARD, PREPARE DOCUMENTS

The Master Planning Process culminated with presentations to the Board of Trustees, the Site Committee, Key Stakeholders, and the community.



Overview of Master Plan

STEP 1:

Establish GUSD Facility Master Plan Steering Committee

STEP 2:

Stakeholder Input Community Outreach

STEP 3:

Data Collection School Facility Review

STEP 4:

Data Collection Energy Efficiency Review

STEP 5:

Master Planning

STEP 6:

Draft Plan and Recommendations

STEP 7:

Review with Stakeholders and Board

STEP 8:

Supporting Documentation Prepared for Bond



4: FACILITY ASSESMENTS

This section of the Master Plan contains the following information for each campus:

- 1. SCHOOL OVERVIEW
- 2. GENERAL SUMMARY OF EXISTING CONDITIONS: This is a brief summary of the assessment notes made by the design team during the visual observation of the campus. A more thorough list of assessment notes can be found in the Appendix
- 3. RECOMMENDATIONS
- 4. MASTER PLAN OF SITE
- 5. CONCEPTUAL COST ESTIMATE

ORGANIZATION OF THE RECOMMENDATIONS:

The Master Plan includes a list of proposed improvements as well as related assessment reports from the Architect's and Owner's consultants. The identified improvements for the campuses are organized into three major categories as follows:

- A. *Mandatory Improvements:* These improvements are viewed as safety issues that are necessary for compliance with regulatory codes.
- B. *Necessary Improvements:* These improvements are required to preserve the campus and provide necessary classroom upgrades. Inaction for these improvements will likely affect the integrity of the facilities or the student performance.
- C. *Important Improvements:* This level of improvements is required to accommodate educational program changes, address current educational needs, create greater operational efficiencies, or to provide quality of life improvements important to the school.



4: HILLCREST MIDDLE SCHOOL

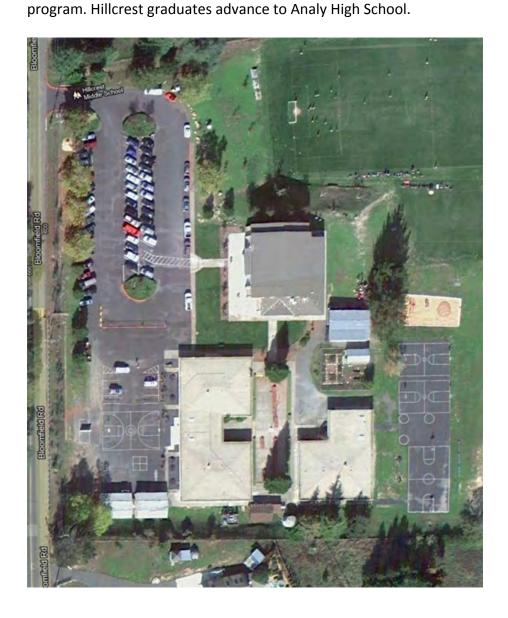
725 Bloomfield Road, Sebastopol, CA 95472 (707) 823-7653

Overview

Principal: David Fichera

Grades: 6th through 8th Grades

Curriculum Snapshot: A California Distinguished School, Hillcrest offers advanced mathematics courses, a two-year laboratory science program, regular Spanish instruction for all students, and a strong music and performing arts





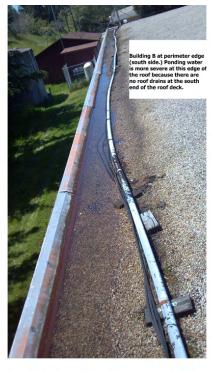
General Summary of Existing Conditions Noted:

- Programmatic deficiencies noted:
 - There are no walkway covers to keep students dry when circulating between buildings
 - There is no shade in the lunch area
 - Student pick-up areas lack shelter from the elements
 - The Principal's Office is removed from the Administrative Offices
- Dry rot noted in numerous locations
- Building F: Music building has considerable dry rot.
- Accessibility upgrades required in various areas
- Existing roof is not at the end of its life, but should be replaced if solar is added.
- Solar Array Availability: Estimated that 3/4 of roof area could accommodate solar panels with system weight of 4lbs / square foot
- No fire suppression sprinklers currently on site: Additional buildings will likely trigger need for fire sprinklers, pump, and fire water storage tank.
- Mechanical: Repair storm drain lines
- Flectrical:
 - Existing main switchboard is old and undersized
 - PGE service is undersized for the size of campus
 - Older T12 light lamps should be replaced
 - Fire alarm panel lacks addressable technology
 - Phone system is a discontinued outdated system
 - Public address system is non-operational
 - Clock system is non-operational likely due to condition of master clock, failing system clocks, and wiring
 - The Main Distribution Frame (MDF) is currently located in the school office with copper wiring and surface run raceways. This configuration is operational but has limited effectiveness for existing and future needs.



PHOTOS OF EXISTING CONDITIONS











HILLCREST MIDDLE SCHOOL

Recommendations:

Mandatory:

- 1. Accessibility upgrades
- 2. Fire Alarm Panel upgrades required by code

Necessary:

- 3. Replace main switchboard for the campus
- 4. Addition of a new 6,000 SF +/- wing comprising the following classrooms:(2) standard classrooms, (1) science classroom, (1) arts classroom, (1) music classroom
- 5. Not Used
- 6. Dry rot repair
 - a. Roof fascias
 - b. Exterior plaster corners
- 7. New pump house building
- 8. Repair of the storm drainage line on south and east ends of campus.

Important:

- 9. Proposed energy efficiency upgrades:
 - a. Insulation in the walls of the classrooms
 - b. Rigid insulation on the roof substrate prior to reroofing
 - c. Change glazing assemblies to insulated glass
- 10. New sheltered walkways strategically placed to connect the key buildings on campus
- 11. Natural solar shading in the lunch area
- 12. New shelter at the student pick-up zone, possibly attached to the face of the multi-use.
- 13. Addition of 5600 SF solar arrays on the roofs of the classroom buildings
- 14. New roof assemblies, including increased insulation.
- 15. Remodel of the Administrative Offices to include relocating the Principal into the Administrative Office.
- 16. New electrical systems including the following:
 - a. Upgrade the PGE service
 - b. Replace lighting in parking lot
 - c. Light fixture replacements to incorporate T8 or T5 lamping
 - d. Additional convenience outlets in the classrooms
 - e. Phone System replaced with VoIP system
 - f. Public Address System with UPS backup supply
 - g. Clock System including IP-based wiring and wireless technology
 - h. Category 6 wiring to be installed to support data needs
 - i. New IDF / MDF Locations
- 17. New concrete masonry unit trash enclosure



HILLCREST MIDDLE SCHOOL PROJECT PHASING: PHASE 1

The Master Plan implementation will be divided into phases based on funding constraints, impact to school activities, and logical clustering of the proposed improvements. The phasing has been crafted in response to feedback from the stakeholders and site committee.

Phase 1 of the Master Plan scope at Hillcrest Middle School includes the following proposed improvements:

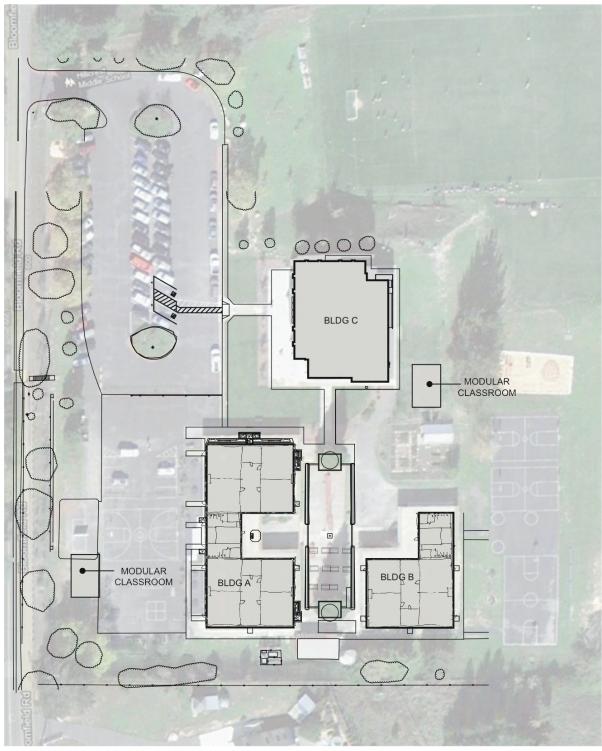
- 1. Addition of a new 3,000 SF +/- classroom wing to house a science classroom and a music room. The 1,800 SF music room will include instrument storage and performance riser. The 1,200 SF science room will include classroom and lab space.
- Accessibility upgrades required by the California Building Code for the scope in Phase 1. A more detailed list of these upgrades is available in Appendix A available at the District office.
- 3. Fire alarm panel upgrade

Preliminary Construction Cost Estimate for Phase 1:

1.	Science and Music classroom wing	\$	1	,456,000
2.	Limited Accessibility Upgrades	\$		321,300
3.	Fire Alarm Panel Upgrades	\$		17,100
4.	Contingencies During Construction (10%)	<u>\$</u>		179,400
	Total:	\$	1	,973,800



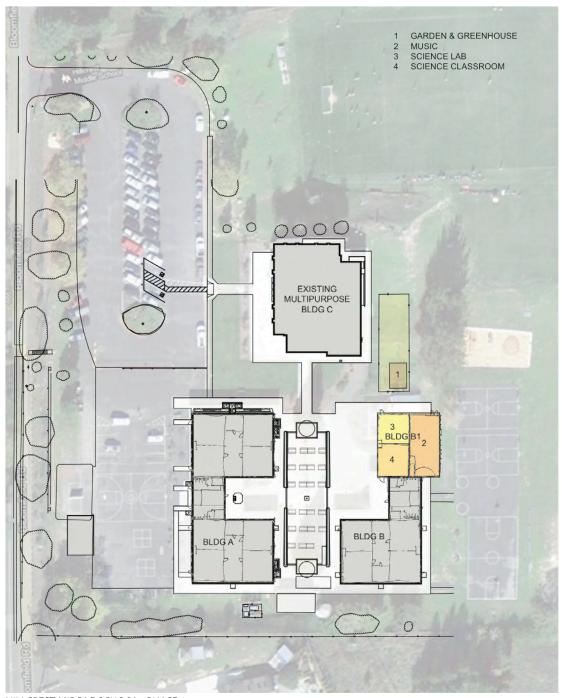
HILLCREST MIDDLE SCHOOL - EXISTING SITE PLAN



HILLCREST MIDDLE SCHOOL - EXISTING CAMPUS

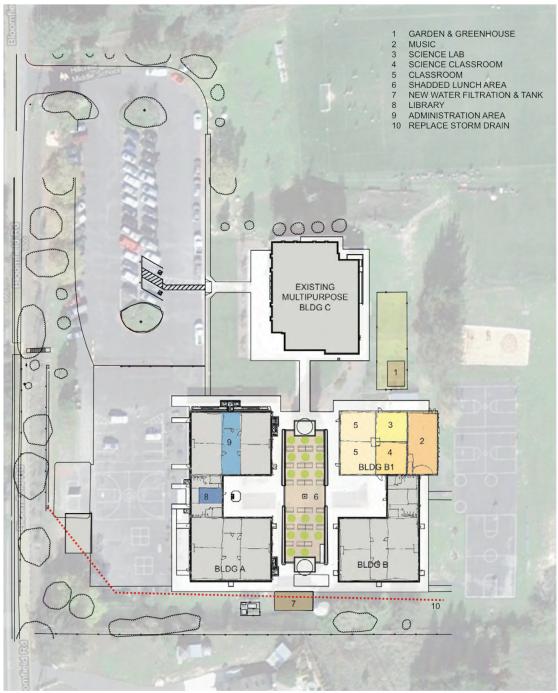


HILLCREST MIDDLE SCHOOL - PHASE 1 OF MASTER PLAN



HILLCREST MIDDLE SCHOOL - PHASE 1

HILLCREST MIDDLE SCHOOL - SITE MASTER PLAN



HILLCREST MIDDLE SCHOOL - MASTERPLAN



REFERENCE IMAGES:

The following images are provided as examples of how other projects have incorporated features similar to those suggested for the courtyard of the Hillcrest campus.

PLAZA CONCEPTS



GOLDEN GATE MUSIC CONCOURSE



TREE SHADED DINING AREAS



5: GRAVENSTEIN ELEMENTARY SCHOOL

3840 Twig Avenue, Sebastopol, CA 95472 (707) 823-5361

Overview

Principal: Linda LaMarre

Grades: Pre-Kindergarten through 5th Grade

Curriculum Snapshot: A California Distinguished School, Gravenstein Elementary School provides approximately 350 children with a strong academic program along with music, technology and the acclaimed "Artist in the Classroom" experience.





General Summary of Existing Conditions Noted:

- Programmatic deficiencies noted:
 - The existing multi-use is insufficiently sized for current uses
 - The existing kitchen was designed for a food service program over 40 years ago
 - Parking lot back-up during pick-up/drop-off extends significantly down Twig Avenue
 - The Administrative office is not easily recognized from the parking lot
 - A significant number of classrooms have not been updated in about 25 years and are outdated in multiple ways.
 - Most restrooms rely on operable windows for ventilation
- Existing sewer, water, underground gas, and vent pipes are approximately 50 years old
- Dry rot noted in numerous locations
 - Roof fascia, walkway overhangs, window walls, wood sills
- The walkways lack seismic separation joints to allow the buildings to move more independently in an earthquake.
- Accessibility upgrades required in various areas
- Existing roof is at the end of its life and should be replaced
- Solar Array Availability: Estimated that 2/3rds of roof area could accommodate solar panels with system weight of 4lbs / SF or less
- Mechanical:
 - Most mechanical equipment on site is outdated and inefficient.
 - Most sinks, other than the wing modernized in 2007, are inaccessible
 - Restrooms in Administrative Office building are inaccessible
 - There is no seismic shutoff for the gas line into the campus
 - The District has not reported any problems with the well or septic.
- Electrical:
 - Existing main switchboard is undersized and may wish to be replaced
 - PGE service is undersized for the size of campus
 - Older T12 light lamps should be replaced
 - Fire alarm panel lacks addressable technology
 - Phone system is a discontinued outdated system
 - Public address system trunk wiring was replaced in 2005 and appears in good operation. The branch wiring from the distribution blocks to the speakers is likely original
 - Clock system is non-operational likely due to condition of master clock, failing system clocks, and wiring



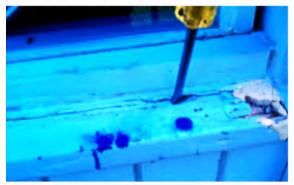
PHOTOS OF EXISTING CONDITIONS



DRY ROT TYPICAL AT WINDOWS EXPOSED TO THE WEATHER



DRY ROT TYPICAL AT EXPOSED WINDOW FRAMES



DRY ROT TYPICAL AT EXPOSED WINDOW SILL WHERE NO OVERHANG OCCURS



TYPICAL BUILDING FLOOR SILL PLATE IN CONTACT WITH GRADE. THIS WAS OBSERVED PRIMARILY AT THE EAST ENDS OF BUILDINGS A,B AND ADMIN



DAMAGED RAIN LEADER AND SURROUNDING FINISH MATERIALS



DRY ROT AT SIDING TRIM OBSERVED PRIMARILY AT BUILDINGS C, AND D



DRY ROTTING ROOF BEAM OBSERVED AT VARIOUS LOCATIONS



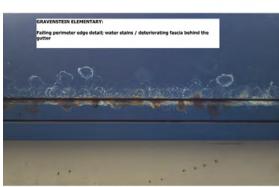
PHOTOS OF EXISTING CONDITIONS

















Recommendations:

Mandatory:

- 1. Install seismic expansion joints in the walkways between buildings
- 2. Accessibility upgrades

Necessary:

- 3. Modernize majority of classrooms in 2015 when the campus becomes eligible for state modernization funds
- 4. Install new roof assemblies
- 5. Dry rot repair
 - a. Roof fascia, walkway overhangs, window walls, wood sills

Important:

- 6. Expansion of the Multi-Use through one of three methods:
 - a. Replace roof/ceiling framing with longer beams and expand width of the room.
 - b. Relocate stage to the west side of the room and capture additional space on north side.
 - c. Demolish existing building and construct a new multi-use building
- 7. Alter overhang at walkway in front of multi-use to create amphitheater
- 8. Remodel the food service areas in the multi-use building
- 9. Proposed energy efficiency upgrades:
 - a. Insulation in the walls of the classrooms
 - b. Rigid insulation on the roof substrate prior to reroofing
 - c. Change glazing assemblies to insulated glass
 - d. Install more efficient mechanical and electrical systems
- 10. Addition of 5600 SF solar arrays on the roofs of the main classroom buildings
- 11. Remodel of the Administrative Offices to include accessible restrooms and identifiable entry
- 12. New electrical systems including the following:
 - a. Main switchgear to the campus
 - b. Upgrade the PGE service
 - c. Replace lighting in parking lot
 - d. Light fixture replacements to incorporate T8 or T5 lamping
 - e. Additional convenience outlets in the classrooms
 - f. Fire Alarm Panel
 - g. Phone System replaced with VoIP system
 - h. Public Address System with UPS backup supply
 - i. Clock System including IP-based wiring and wireless technology
 - j. Category 6 wiring to be installed to support data needs



GRAVENSTEIN ELEMENTARY SCHOOL

PROJECT PHASING: PHASE 1

The Master Plan implementation will be divided into phases based on funding constraints, impact to school activities, and logical clustering of the proposed improvements. The phasing has been crafted in response to feedback from the stakeholders and site committee.

Phase 1 of the Master Plan scope at Gravenstein Elementary School includes the following proposed improvements:

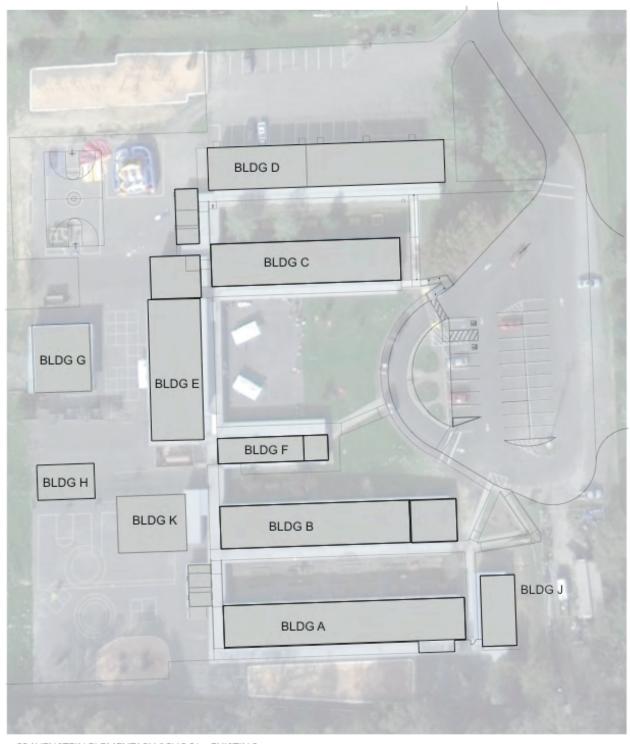
- 1. Modernize majority of classrooms in 2015 when the campus becomes eligible for state modernization funds. Phase 1 includes a limited modernization focused on relamping light fixtures, replace mechanical units, Accessible sinks and cabinets, refurbished ceilings, and minor finish upgrades.
- 2. Accessibility upgrades required by the California Building Code for the scope in Phase 1. A more detailed list of these upgrades is available in Appendix A available at the District office.
- 3. Install seismic expansion joints in the walkways between buildings.

Preliminary Construction Cost Estimate for Phase 1:

5.	Limited Modernization of Classrooms	\$ 2,521,000
6.	Limited Accessibility Upgrades	\$ 1,395,000
7.	Structural Seismic Joints at Canopies	\$ 21,700
8.	Contingencies During Construction (10%)	\$ 393,700
	Total:	\$ 4,331,400



GRAVENSTEIN ELEMENTARY SCHOOL – EXISTING SITE PLAN



GRAVENSTEIN ELEMENTARY SCHOOL - EXISTING



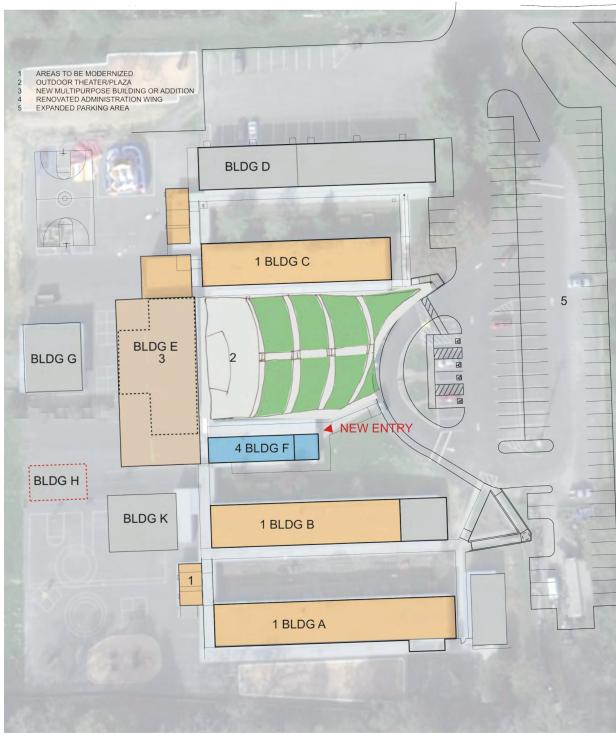
GRAVENSTEIN ELEMENTARY SCHOOL - PHASE 1 PLAN



GRAVENSTEIN ELEMENTARY SCHOOL - PHASE 1



GRAVENSTEIN ELEMENTARY SCHOOL - SITE MASTER PLAN



GRAVENSTEIN ELEMENTARY SCHOOL - MASTERPLAN

REFERENCE IMAGES:

The following images are provided as examples of how other projects have incorporated features similar to those suggested for the Gravenstein Elementary School campus plaza and amphitheater.

GRASS AMPHITHEATERS



GRANT ELEMENTARY REDDING SCHOOL FOR THE ARTS



OUTDOOR THEATERS



6: MASTER PLANNING FOR THE FUTURE:

True to the intent of master planning, it is acknowledged that Phase 1 of the implementation plan does not cover all of the needs at the District's facilities. This Section of the GUSD Master Plan is intended to summarize a more holistic review of the identified scope and costs associated with addressing the needs of the District's facilities. These items are cross-referenced from the lists of needs identified in Sections 4 and 5 of this document. The District has not identified funding sources or time frames yet for items beyond Phase 1. Like many Districts in California, GUSD can continue to monitor available funding sources and utilize this document as a referenced implementation plan into the future.

Appendix A, available at the District Office, includes a detailed breakdown of the assessments and cost estimates associated with the enclosed summaries.



Hillcrest Middle School FACILITY UPGRADES Sebastopol, California CONCEPTUAL CONSTRUCTION COST ESTIMATE

SUMMARY

\$17,079	
050 000	
•	
,	
•	
170,496	
86,233	
040.444	
•	
· · · · · · · · · · · · · · · · · · ·	
•	
•	
,	
•	
619,808	
466,443	
198,521	
65,373	
1,577,837	
\$10,363,694	
	353,238 \$2,559,223 316,669 636,153 170,496 86,233 243,141 175,112 181,738 132,445 665,562 712,879 619,808 466,443 198,521 65,373 1,577,837

EXCLUSIONS:
Excludes 100% of Soft Costs (typically 30% of Hard Cost PLUS CO Contingency)
Excludes 10% Change Order Contingency at Time of Bid Award

Printed on 8/20/12



Gravenstein Elementary School FACILITY UPGRADES Sebastopol, California CONCEPTUAL CONSTRUCTION COST ESTIMATE

SUMMARY

ITEM OF WORK	Cost	
Mandatory:	04.000	
Structural / Seismic Joint Installation ADA Accessibility	21,660 \$1,890,026	
Necessary:		
3 Classroom Modernizations	5,909,242	
4 Replace All Roofs	782,526	
5a Walkway Overhang Dryrot Repair	412,474	
5b Beam End Repair at Overhangs	17,682	
5c Ledger Deterioration at Multi Use	1,198	
5d Dryrot Repair at Windows - North	775,690	
5e Wood Sill Dryrot Repair	23,911	
Important:		
6 New Multi Use - Replacement Opt ion	3,690,013	
9 Insulation of Walls: Incl in Modernization - Item 3		
Replace windows w/insulated units - Incl. in Item 5		
Replacement of mechanical units - Incl. in Item 3		
9 Energy Upgrades	940,072	
10 Photovoltaic Panel Installation	712,879	
12a Power Upgrades	379,359	
12b Electrical Upgrades	363,486	
12c Replace Phone System	87,900	
13 Well Equipment Replacement	0.45.050	
14 Parking and Drop Off Improvements	915,353	
15 Hazardous Materials Abatement	1,577,837	
Total Cost Prediction	\$18,501,308	

EXCLUSIONS:

Excludes 100% of Soft Costs (typically 30% of Hard Cost PLUS CO Contingency)
Excludes 10% Change Order Contingency at Time of Bid Award

