

San Dieguito Union High School District
CARMEL VALLEY MIDDLE SCHOOL MASTER PLAN
November 2011





Overview

Situated on a 21 acre campus, Carmel Valley Middle School (CVMS) was originally built in 1999, and is currently the newest middle school in the District. Through a joint-use agreement, CVMS is home to the Boys and Girls Club of Carmel Valley. The Club occupies approximately 14,250 square feet of space at the southern end of the gymnasium building.

The existing facility is relatively new and in good repair, but the District expressed a desire to incorporate 21st Century learning environment principles into the campus. There are several areas on campus which are not being used efficiently, and some areas that are not meeting the current programmatic needs of the school. Additionally, the District intends to reduce the enrollment from its current level of around 1,500 students to 1,000 students.

Vision

The vision for the facilities of San Dieguito Union High School District is focused on creating learning environments that embrace variety in teaching and learning styles, are responsive to our rapidly changing world, and will encourage students to be good stewards and citizens of a greater community. The three areas of focus are:

- *Flexible, Adaptable and Technology Rich Facilities*
- *Sustainable, High Performance Environments for Learning*
- *Community Focused Campuses*



The image represents a unanimous “vote” by the committee for architectural design that best represents their community vision.

*Foresthill High School
Placer Union High School District*

Process

The design team met 3 times with the site committee to determine the needs for the campus, and to learn lessons from their existing operations.

Meeting #1: Process Review and Goals Discussion. Meeting #1 was a joint meeting with the EWMS committee where goals for the two middle schools were discussed. The meeting allowed the discussion of parity and equity to inform the discussion. In general, larger classrooms were the number one goal of both committees. This is also a District wide goal, as 21st Century teaching and learning modalities suggest more project-based learning and small group learning. District budget impacts suggest larger class sizes when students are in class, and more online learning for lectures and direct instruction.

Meeting #2: 21st Century Spaces. A second meeting focused on how “core spaces” could be transformed into more relevant, functional spaces. For example, how can libraries be transformed into student unions for media use, gathering, and research? The discussion was prompted by images of 21st century learning environments.

Meeting #3: Review of Design Alternatives. The design team presented design options for discussion the group. The feedback from the group is incorporated into the final master plan document.

The results of this process were shared with the District-wide facilities Steering Committee for their review and comment.

In addition to meetings with the site committee, a number of meetings were held with the contractor providing preconstruction services to the District for CVMS, Sundt Construction. The purpose of these meetings was to develop phasing and scheduling strategies as well as estimated costs for the work proposed. The resulting schedule and cost models were submitted to the District Steering Committee for their review and recommendation for the final scope of the project.

The recommendations of this Master Plan document reflect the full scope of needs as identified by the CVMS Site Committee.



Goals

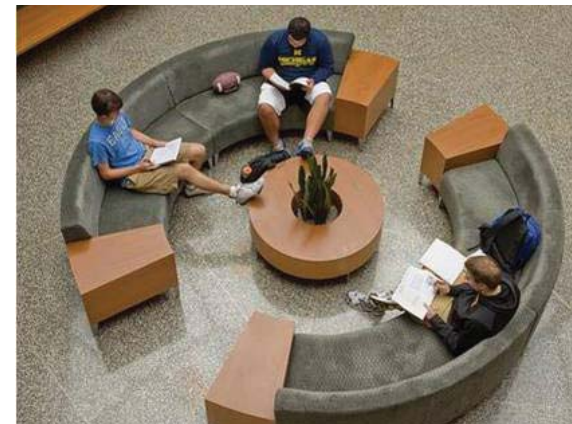
The Site Committee's vision for Carmel Valley Middle School embraces the goals that have been established by the District as well as some specific goals for the CVMS community. These goals were as follows:

- Reduce the capacity of the site to 1,000 students.
- Provide a new music classroom.
- Relocate the drama classroom to a location adjacent to the Performing Arts Center
- Consolidate under-utilized resource spaces between classrooms to create larger classrooms
- Provide technology infrastructure to accommodate the increasing number of wireless devices used by students.
- Create a new student entrance to the campus that diverts students around the administration office.
- Convert existing library into a student union/media center.
- Disperse food service distribution around campus and create a quad that is more conducive to student interaction.

Capacity and the Building Program

The District's 2008 Facilities Master Plan determined a capacity of 1,000 students at Carmel Valley Middle School. While the facility currently houses about 1,500 students, the completion of a new middle school in the southern portion of the District should allow the downsizing of CVMS to the recommended 1,000 level. The District's methodology for calculating school site capacity assumes a 30:1 student/teacher ratio, and then applies an "efficiency" factor of 85% to accommodate teacher preparation periods which occur in the classroom. The model capacity is shown below:

Teaching Stations:	35 TS @ 30:1 (.85) =	892
Special Education:	1 TS @ 15:1 (1.0) =	15
PE Stations:	2 TS @ 30:1 (1.0) =	<u>60</u>
	Total	967



21st Century Learning Environments

Flexible, adaptable facilities encourage teaching and learning that is responsive to the needs of the user. Small learning communities, interactive public spaces and "anytime, anywhere" access to technology will expand the boundaries of the traditional classroom setting.



Areas for individual and small group study are key elements of a 21st century learning environment.

**Sustainable, High Performance
Environments for Learning**

*The facts have shown that high performance learning environments improves **student performance** and attendance. Sustainably designed facilities are models of **energy efficiency**, but more importantly are teaching tools that **model behavior** for living in our resource challenged world.*



School gardens are an important component of a sustainable school.

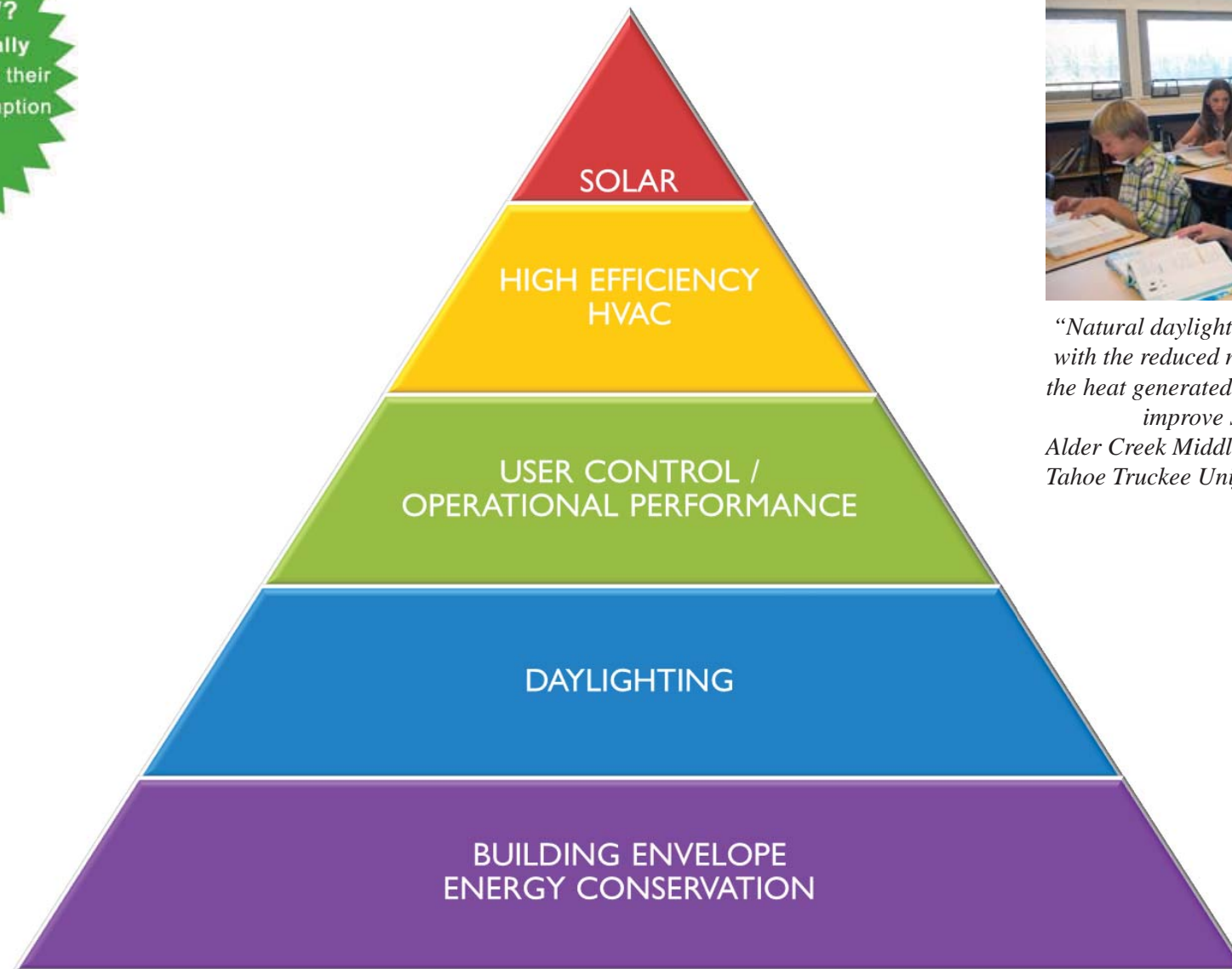
Sustainable, High Performance Learning Environments

San Dieguito Union High School District brought forward a vision for sustainable, high performance learning environments focused on saving energy, improving student performance and on creating future environmental stewards with a strong understanding of the impact of the built environment on the world. The district has already invested in renewable energy resources (solar energy) in its pursuit of their sustainable vision. As the pyramid demonstrates (facing page), solar energy is the proverbial “icing on the cake” in the sustainable movement. As the CVMS moves through the design process, the team will focus on those items that will make the most difference, namely:

- **Building Envelope/Energy Conservation:** The building envelope is the most effective way to save energy. Proper building orientation, high quality building materials (insulation, dual paned windows, etc.) and energy management systems that promote conservation are the most important first steps in sustainably designed buildings. The first and most important goal is to first reduce the demand for energy.
- **Daylighting:** Daylighting, or natural light, when appropriately oriented and controlled saves energy and improves user well being. By reducing the electric lighting needed, energy is saved – both from the reduced electricity and the lowered demand on air conditioning systems when less heat is generated from electric lights. Also, appropriately designed daylighting in classrooms has been proven to improve student performance. This is the most significant benefit to schools.
- **User Control/Operational Performance:** Why do sustainable strategies fail when placed in to operation? The answer is usually in the area of user control. When users have some control of their environment, and understand the system, they are more likely to behave in a way that saves energy. Examples such as thermostat control, lighting controls and appropriate window blinds influence the user’s experience.
- **High Efficiency HVAC:** The more efficient the system, the greater the savings. After demand is reduced to its lowest level, the size of the system can be reduced as well. Displacement ventilation, as an example, is a system that may be considered here as well.
- **Solar:** Solar and other renewable create energy to meet the demand, or a portion of the demand. By reducing demand first, the investment in renewable can be lessened.

The Carmel Valley Middle School starts with proper orientation, taking advantage of the best schemes for natural daylighting. The opportunity for natural ventilation (operable windows) in the temperate climate is an excellent one as well. Renewable, recycled and local material choices are important characteristics of sustainable buildings and will be incorporated where the long term maintenance properties align with the district’s operational goals.

DID YOU KNOW?
People Habitually
Underestimate their
Energy Consumption
by 2.8 times



“Natural daylighting not only reduces energy consumption with the reduced need for electric lighting and by covering the heat generated by electric lighting, it has been proven to improve student academic performance”

*Alder Creek Middle School
Tahoe Truckee Unified School District*

Sustainability (cont'd)

Sustainable design principles are essential to high quality building design. The pyramid at the left reflects an efficient and effective prioritization of these strategies. Especially in the design of public buildings, emphasis is on providing the “biggest bang for the buck” whether in energy (and general fund) savings, improving occupant comfort or bolstering student performance.

For example, the foundation of the pyramid is to first save energy, thereby reducing the overall demand on the system. Next, effective daylighting not only enhances student performance and well being, it also allows lights to be turned off and heat gain in the classrooms to be reduced, saving energy.

User behavior has a big effect on the effectiveness of sustainable design - do they understand the systems and compliment them by say, keeping the lights off?

Creating new energy, with solar or other renewables is the final strategy. Often expensive, good sustainable design should rely on renewables primarily to offset an already minimized demand.

Master Plan

The scope of this Master Plan generally covers the following:

- The creation of a new student entry point at the front of the campus.
- The reconfiguration of the student quad and creation of new food service outlets.
- Conversion of the existing library to a student union/media center.
- Creation of a new drama classroom in the old food service space.
- Construction of a new music classroom.
- The reconfiguration and technology upgrade of existing classrooms to create 21st Century Learning Environments.







Student Entry

The current primary entry point to the campus is through the Administration Building main office, with secondary entrances along the east edge of the campus. Though this path allows good visual screening of who is entering the campus, the level of student traffic through the main office is distracting to the staff and visitors in the office.

In order to provide a student entry point from the front of the campus, the existing service yard between the Gymnasium and the Performing Arts Center will be relocated to the rear of the campus. New pedestrian paving and landscaping will be provided to create a strong visual cue indicating an entry point to the campus. Low masonry walls lead pedestrians along the path and provide seating areas for students awaiting pick-up.



ADDITIONAL FOOD SERVICE OUTLETS
RELOCATED SHADE CANOPIES

DOUBLE ROW OF WIDE-CANOPY
TREES FOR SHADING



SMALLER, INTIMATE GATHERING
AREAS WITH STEPS AND PLANTER
WALLS FOR SEATING

MONUMENT
TREE

DOUBLE ROW OF WIDE-CANOPY TREES FOR SHADING

SMALLER, INTIMATE GATHERING AREAS WITH STEPS AND PLANTER WALLS FOR SEATING

ADDITIONAL FOOD SERVICE OUTLETS

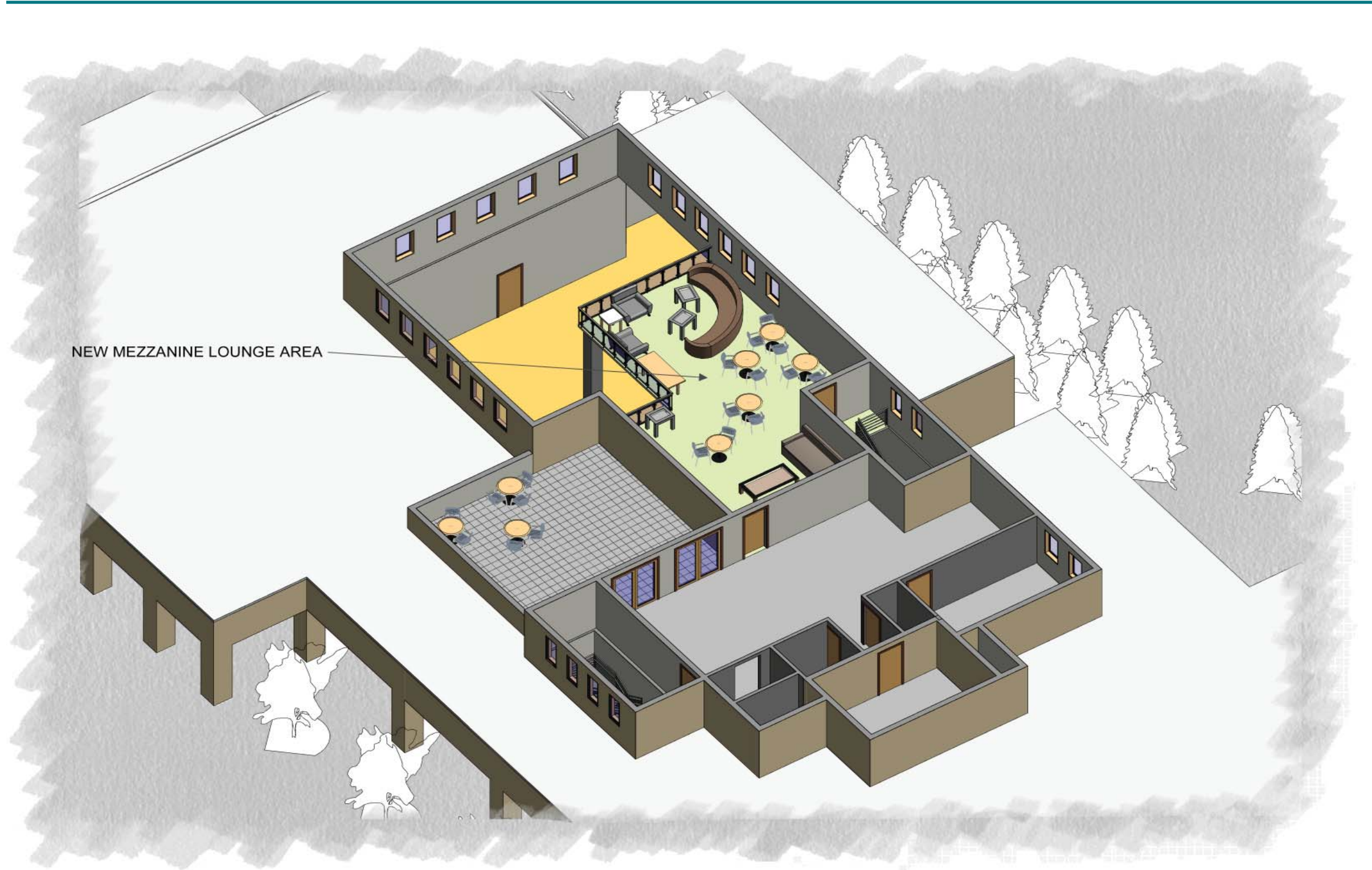


Quad Reconfiguration/ Food Service

The current quad area is criss-crossed with concrete pedestrian paths, making it a “transitional” space rather than a “gathering” space. There is a lack of shaded spaces, with a single row of trees casting sparse shade in narrow swaths across the grass. The only shaded place for eating is the covered area near the current food service windows.

The food service area at CVMS is currently adjacent to the Performing Arts Center. Originally built as the central preparation kitchen for the schools serving southern portion of the District, it has since been replaced the central kitchen located at Canyon Crest Academy. The kitchen/ serving window areas comprise about 2,400 square feet of space that is planned for conversion to drama classroom space. Food service outlets will be located in two places near the center of the student quad.

The new quad space will be defined by a double row of trees lining the east and west edges of the quad, providing a consistent level of shade over student seating areas. “Seating” will consist of steps and planter walls that create natural places for students to sit, either alone or in small groups. Large paved areas will be available for table seating. A large open green area oriented toward the “stage” at the back of the PAC will provide the opportunity for large student body gatherings or for audience seating for 8th Grade Promotion ceremonies.





Media Center

Part of the District's plan to create 21st Century Learning Environments is the recognition that the role of traditional libraries on middle school campuses will change. As more library resources become digital versus printed media, the need for storage of print media will diminish. The library will become more of a student union/media center, where students will access online resources from their own devices, working independently or in small groups.

The Carmel Valley Middle School library is a large volume space with pleasant natural daylight that lends itself well to the creation of such a space. Because of the very high ceiling spaces, there is the opportunity to add a mezzanine space, nearly doubling the square footage of the existing space. Seating would be soft upholstered chairs and couches. The ambiance would be similar to that of a Starbucks's, where students could eat and work in a more casual setting.



Drama Classroom

The Drama Classroom will move from its current location on the north end of the Gymnasium building to a 2,400 square foot location adjacent to the Performing Arts Center where food service is currently located. Existing ceilings in the food service area will be removed to create a high volume space suitable for theatrical rehearsal. Large roll-up doors will provide the ability to move scenery and props easily from the classroom into the Performing Arts Center, or to the outside for construction. The space will be divisible by a curtain, allowing for multiple activities to take place concurrently.

- Drama Classroom 2,400 sf



Music Building

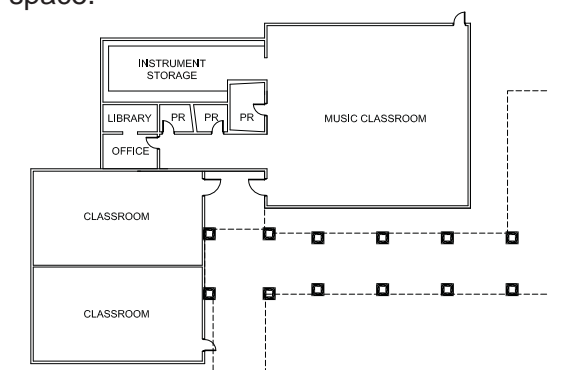
The campus' music program currently rehearses in the Performing Arts Center. However, the size of the PAC is too small for a full orchestra, and scheduling of the Center for other functions requires the removal of all band equipment.

To mitigate this problem, a new music room is proposed to be located at the north-west corner of the campus. The music room will have enough space to rehearse a concert band or choir. The volume of the space will provide an "acoustically appropriate" environment for the rehearsal of any sized ensemble. Three acoustically separated practice rooms provide the opportunity for individual or small group practice. An instrument storage room allows for the safe storage of large and small band instruments and an office and music library create a secure location for the storage of the school's sheet music collection.

Two general purpose classrooms are also proposed as part of the building that will house the music classroom. Should the music program grow to the point where a separate choral classroom is required, the partition between the two classrooms could be removed to create one large rehearsal space.

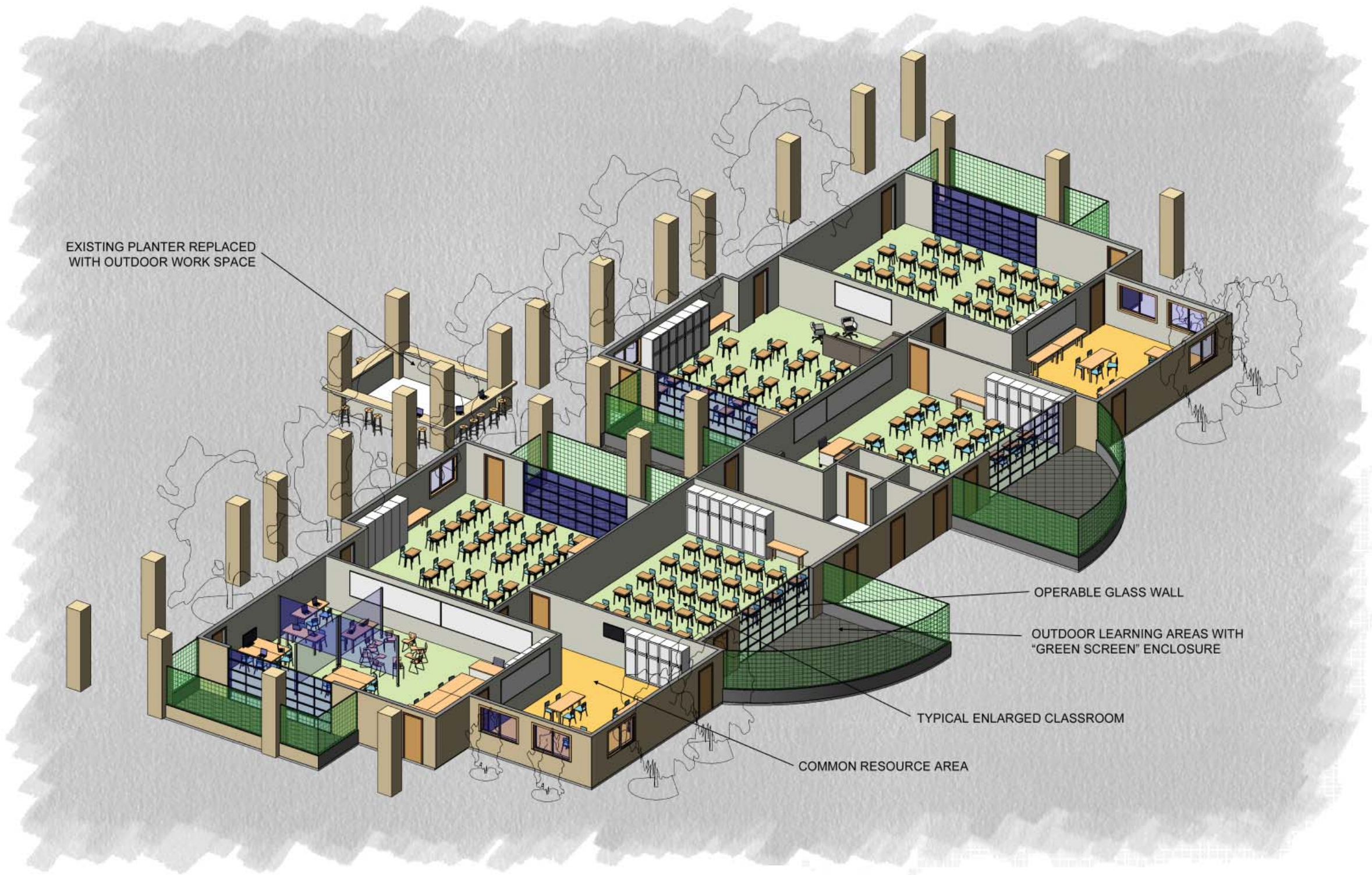


- Music Room 2,700 sf
- Classroom (2) X 1,200 sf
- Practice Room - small (2) X 65 sf
- Practice room - large 120 sf
- Instrument Storage 720 sf
- Office 250 sf





EXISTING PLANTER REPLACED WITH OUTDOOR WORK SPACE



Classrooms

The existing classrooms at Carmel Valley Middle School are a mix of sizes and proportions. Long narrow rooms that were intended as shared resource spaces between classrooms are underutilized often relegated to storage of books or large AV equipment. This plan proposes that the classrooms be reconfigured to absorb those spaces, thus enlarging the classrooms to approximately 1,150 square feet to allow for project-based learning and small group break-out. Small enclosed outdoor spaces adjacent to each classroom would allow the classroom to expand outside by way of glazed fold-up doors, increasing the flexibility and functionality of the classroom. These same fold-up doors increase the amount of natural light and ventilation to the classrooms. Movable furniture and partitions allow the classrooms to be set up to adapt to various learning modalities and instructional methods. The campus' technology infrastructure will be enhanced to allow for the simultaneous use of numerous wireless devices streaming various types of media.

- Classrooms @ 1,150 sf

