ELEMENTARY SCHOOL TK-5 / K-8 EDUCATIONAL SPECIFICATIONS

October 14, 2015

Natomas Unified School District
Connecting students to their future

DLR Group

table of contents

1

introduction

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1.1   Purpose of the Ed Specs

Creating a responsive school environment isn't rigidly defined by square footage, a construction budget, or a design aesthetic. More importantly, it's about establishing a thoughtful connection between learning and educational facilities. This document is intended to be used in conjunction with the educational, operational, administrative, and strategic goals and vision and commitments of the Natomas Unified School District. The Ed Specs shall also be used in conjunction with the District's Facility Master Plan to support those goals and objectives.

Whether building new facilities or modernizing existing structures, the educational facility should be nimble to fulfill the current programmatic requirements of the District while being easily adaptable to changes in the educational, social, economic, and political landscape and the effects those factors have on learning. With a concentration on diversity and community, NUSD facilities should support the concept of a student centered learning environment and the efforts of the District to ensure that every student is connected to their future.

Although intended to ensure equitability, adequacy and consistency, the guidelines in this document are not intended to restrict the effective or efficient design of school buildings and campuses. Instead, flexibility to allow for minor deviations in spatial requirements is expected. Such flexibility is essential to good design, but should not be allowed to become a means of lowering standards. It should be understood that in certain circumstances, there are some programs, spaces, and/or attributes will not be appropriate or cannot be met due to a myriad of unknowns such as site constraints or funding parameters. During the course of the design, the team of architects and engineers in collaboration with the Natomas Unified School District, on-site leadership, and the school community should document and account for these anomalies.

1.2   The Participants

The success of any project is dependent on the individuals participating and their commitment and support. In the development of these Educational Specifications, it was particularly important to have involvement from the Natomas USD community, as well as leadership from key members of the District. DLR Group thanks Natomas USD's Board members, administrative staff, teachers, site administrators, parents, and students who participated in the process. We would like to thank and acknowledge those noted below who made particularly outstanding contributions.

Natomas Unified School District Board of Trustees

- B. Teri Burns
- Scott Dosick
- Ryan Herche
- Susan Heredia
- Lisa Kaplan

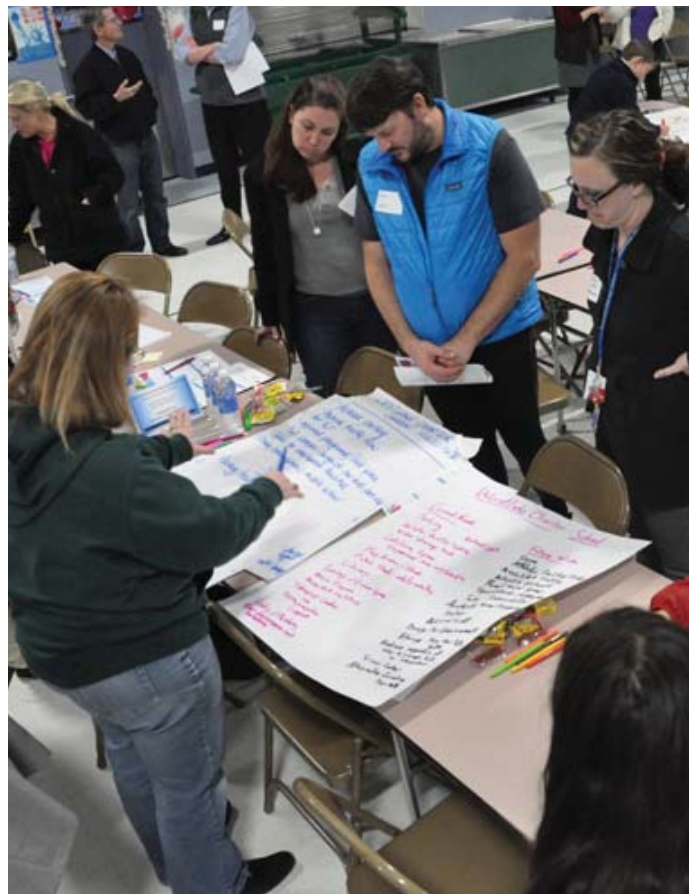Natomas Unified School District Administration and Staff Team

- Kristen Coates, Assistant Superintendent School Leadership & Support
- Mark V. Covington, Executive Director Facilities and Strategic Planning
- Chris Evans, Superintendent
- Angela Herrera, Director of Instructional Technology
- Kevin MacDonald, Associate Superintendent School Leadership & Support
- Jennifer Mellor, Administrative Assistant Facilities & Strategic Planning
- Dave Nickerson, Director School Leadership & Support
- Doug Orr, Assistant Superintendent of Human Resources
- Juanita Reynolds, Director of Student Services & Safety
- Christine Smith, Director School Leadership & Support
- Carol Williams, Executive Director of Special Education and Student Services
- William C. Young, Associate Superintendent Administrative Services

Educational Specification Core Team Participants

- Phil Cox, Teacher Two Rivers Elementary School
- Joann Day, Teacher Two Rivers Elementary School
- Leslie Sargent, Principal Leroy Greene Academy
- Kendra Shelton, Principal Natomas Park Elementary
- Amy Whitten, Principal Heron School

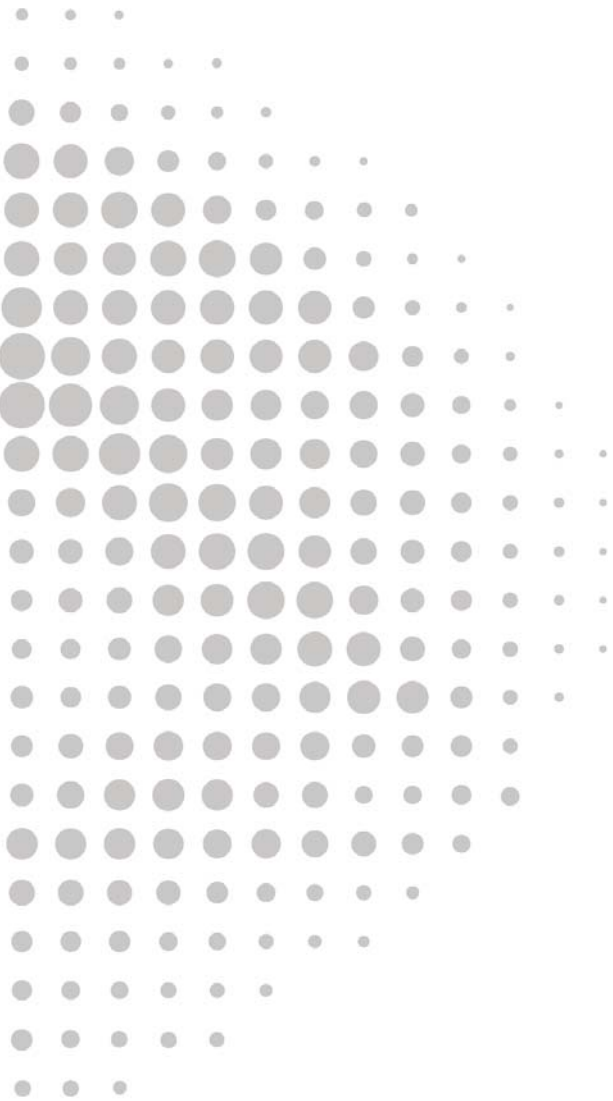DLR Group Educational Specification Team

- Jon Anderson, AIA
- Chris Brown, Associate AIA
- Gary Gery, AIA
- Brett Hobza, AIA
- John Fulton, Associate AIA
- Tim Ross, Associate AIA
- Victoria Bergsagel, Architects of Achievement

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2

vision and process

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2.1   Vision

With the passage of the $129 million Measure J General Obligation Bond and the forthcoming lifting of the building moratorium, the District set forth to establish a clear direction for the design and function of new and modernized facilities to support the vision, goals and commitments of the Natomas USD. The Facility Master Plan is one tool that will provide this direction, but to implement the District's vision on present and future facility designers, an Educational Specification is necessary to fully convey the District's intent on how curriculum should be delivered to Natomas USD students, as well as what the 21st-Century learning environments will look like in future classrooms in order to connect students with their future.

These Educational Specifications provide guidelines for the design of new campuses, campus modernizations and additions and transformative campuses. The information in this document is not meant to be followed without appropriate consideration and there will be circumstances wherein some of the program elements or space attributes cannot be adhered to because of site restraints, funding limitations, or existing building constraints. Additionally, these Ed Specs are not meant to restrict the effectiveness and creativity of present and future designers and educators or limit what new innovations the future holds. With these guidelines, designers will be able to develop facilities that adhere to the District's vision but may not adhere strictly to the recommendations of these Ed Specs. At their core, these Ed Specs reinforce and support the mission, vision, goals, core beliefs and commitments of the Natomas Unified School District as stated on the following pages.

2.2   District Vision and Goals

Vision

All NUSD students graduate as college and career ready, productive, responsible, and engaged global citizens.

Goals

1. Increase student success in ELA, math, science, and literacy

2. Prepare students to be college and career ready

3. Engage parents and families to support student success in school

4. Create safe and welcoming learning environments where students attend and are connected to their schools

5. Recruit, hire, train, and retain high quality staff who are committed, collaborative, caring, and exemplary

NUSD students from district website

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2.3   District Core Beliefs

- Every student can learn and succeed

- Disparity and disproportionality can and must be eliminated

- Our diversity is a strength

- Staff must be committed, collaborative, caring, and exemplary

2.4   District Commitments

Every student can learn and succeed.

- We will ensure every student will learn and succeed.

- We will dedicate differentiated resources based on diverse and unique student family needs.

- We will engage our families and community as partners for student success.

Disparity and disproportionality can and must be eliminated.

- We will eliminate the achievement gaps.

- We will utilize data to identify and eliminate disparity and disproportionality.

- We will increase access and raise expectations.

Our diversity is a strength.

- We will recruit, hire, and retain diverse staff.

- We will champion options and choices for our students.

- We will differentiate instruction and programs to meet the needs and potential of each student.

- We will provide services that meet the diverse needs of our parents and families.

- We will break down barriers and promote cultural understanding.

Staff must be committed, collaborative, caring, and exemplary.

- We will commit to on-going professional development, support, and accountability.

- We will institute collaborative work practices.

- We will value and acknowledge exemplary performance.

- We will demonstrate caring through responsive and quality customer service.

- We will maintain a culture of accountability.

2.5 District Strategic Plan

The Natomas Unified School District Strategic Plan, adopted and updated by the Board of Trustees in 2013, is the management plan for the District.

The Strategic Plan has three main purposes. First, the plan defines the District's vision, mission, and strategic goals. Second, the plan details how the District will achieve those goals. Third, the plan serves as the common tool for managing changing priorities, as indicated by the ordering of objectives. All District decisions should reflect the priorities of the Strategic Plan. The goals of the Strategic Plan are shown herein:

1

Curriculum, Instruction and Assessment:
Design, implement, evaluate, and improve instructional programs to ensure every student meets or exceeds the district standards.

2

Personnel:
Recruit, select, develop, and retain the highest quality staff.

3

Student Services:
Design, implement, evaluate, and improve programs and services to ensure success for each student.

4

Facilities and Equipment:
Provide and maintain a safe, clean, sustainable, and attractive environment that promotes student learning and fosters student, staff, and community pride.

Strategic Plan

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5 6 7 8

Technology:
Provide and maintain equitable access to the appropriate technology necessary to educate students and to support the work and development of staff.

Educational Options:
Design, implement, evaluate, and improve access to distinctive, quality educational options that meet the needs of each student, family and the community.

Family and Community Partnerships:
Design, implement, evaluate, strengthen and improve partnerships that support the goals and objectives of the school and district.

Fiscal Integrity and Efficient & Effective Operation of the District:
In alignment with the strategic plan, design, implement, evaluate, and improve a transparent and sustainable process to ensure that human, financial and capital resources are efficiently and effectively allocated.
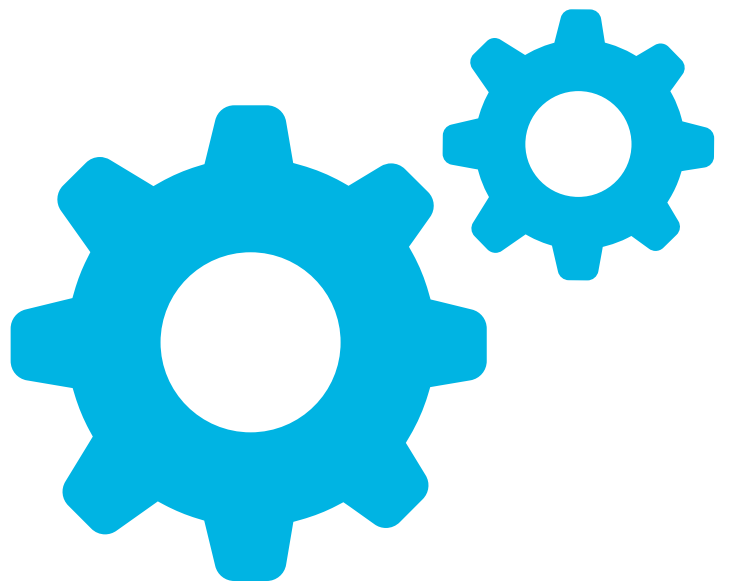
2.6   The FMP Process

Using a process known as the "Roadmap to Success", DLR Group developed a Facility Master Plan for the Natomas Unified School District over a period of seven months, commencing in November 2013. The overall process undertaken in the development of the Natomas Unified School District's Facility Master Plan included the following steps or phases with the final step being these Educational Specifications:

### Step 1: Research and Discovery (also known as Pre-Planning)

This phase included extensive research of District archives and records to gather background information to assist in overall knowledge of the District and schools, including demographics, site and building plans, and recent projects. This research provided the foundation to develop the assessment process, as well as the overall organization of the process tasks and schedule. Of particular importance in this initial phase was the selection and establishment of the District's core planning group and the guiding principles summit for establishing design guidelines for future projects.

Step 2: Facility Condition and Needs Assessments

A team of trained field assessors visited every site within the District to review, photograph and note physical condition deficiencies. Those observations were translated into a report, that outlined site repairs based on the observations related to six pre-determined major review categories. Those repair items that were noted were rated for urgency to establish timelines for projects while project costs were developed. Additionally, the DLR Group design and management team visited all school sites in the district to study and analyze educational adequacy, equity, and 21st-Century learning opportunities for the future projects.

Step 3: Community Outreach

Through a series of four community forums, input was gathered from parents, teachers, staff and students from every school in the District. The forums were held at various schools in different areas of the district. The 120-minute forums included a presentation on today's workplace environment and 21st-Century educational design trends prior to each school site developing and presenting their needs and wants to the forum. Each school site also identified their top three projects for the future master plan of the school, as well as identifying project repair needs. Additionally, a website to track the FMP process was established and a survey was included to gain further input from the Natomas USD community.

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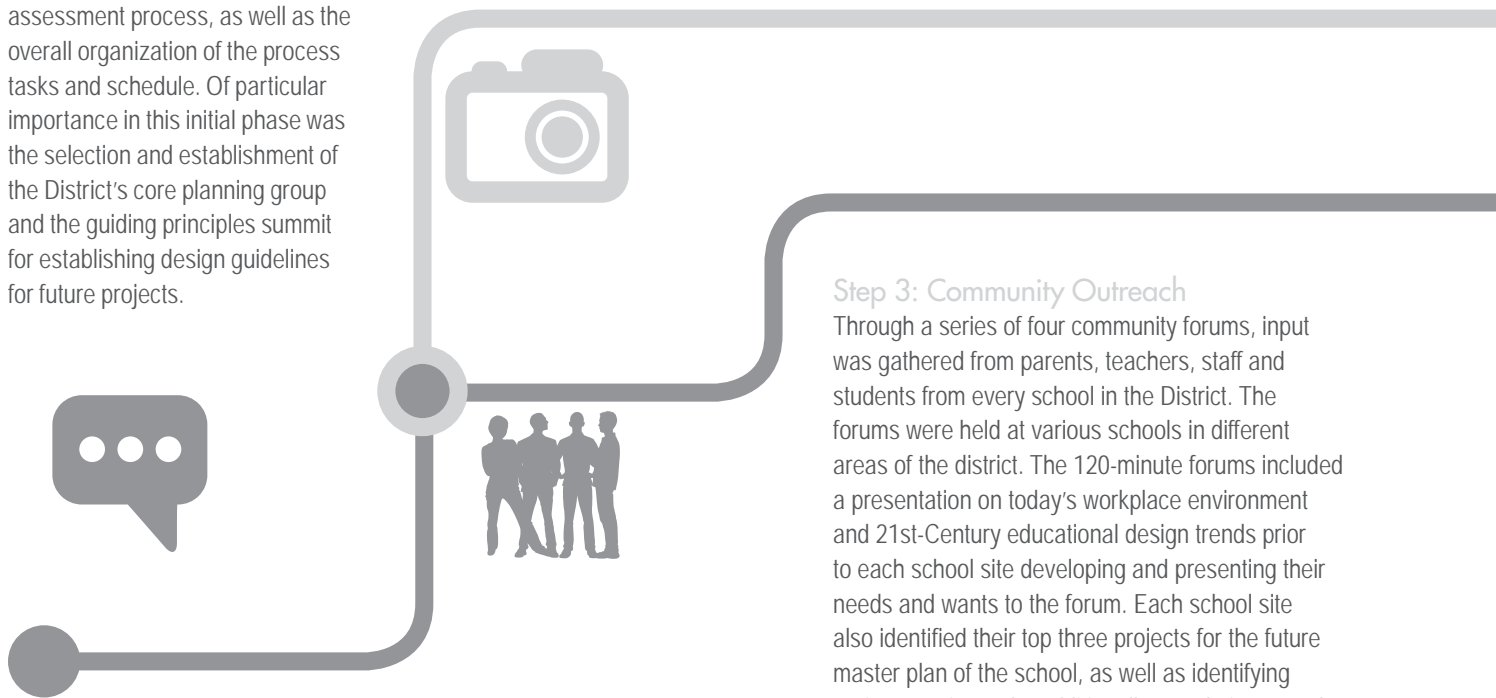
ROADMAP TO SUCCESS

Step 4: Master Planning

Drawing upon our community forums, website surveys, physical assessments and educational adequacy site walks, a comprehensive master plan document was produced for each school site. The master plan identifies the comprehensive repair and renovation projects, as well as new building and site enhancement projects. Using a project identification system tied to the Guiding Principles, a color coded master plan identifies projects for completion on sites over the next 15 years. Additionally, using demographic information, enrollment and growth projections and current school sizes, a strategic plan was developed to establish the direction of the District as the moratorium is lifted. This plan included identifying future schools and target areas for future schools, as well as strategic transformation of existing school sites.

Step 5: Finalization and Implementation

The final step involves the listing and final costing of all physical assessment repair "needs" and educational adequacy "wants" for all school sites and consideration of funding sources were explored.
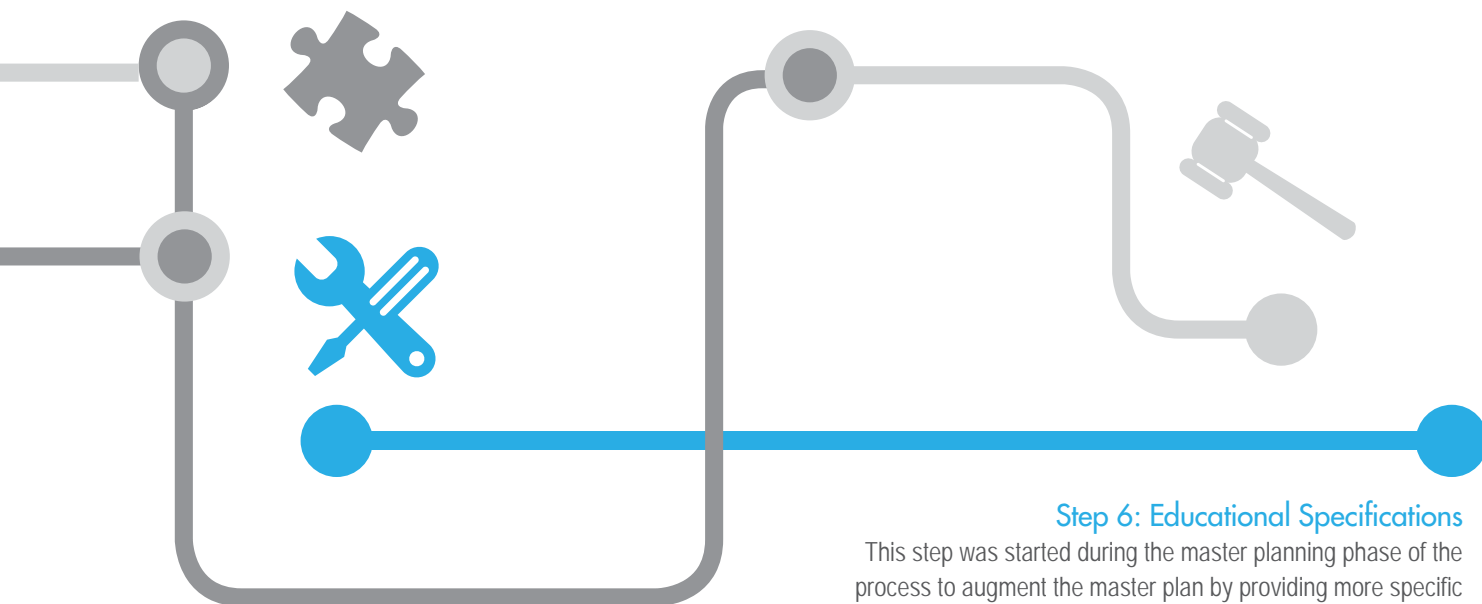
Step 6: Educational Specifications

This step was started during the master planning phase of the process to augment the master plan by providing more specific and detailed information about the components within the identified projects by defining specific facility needs required to complement the educational delivery. They were also created to develop consistency among similar project types from site to site to reduce inequities and simplify design of future projects. Educational specifications were developed through a series of meetings with various district staff, including curriculum, facility and site administrators.

2.7 The Guiding Principles for Design

On January 23, 2014, members of the FMP Core Planning Group, along with additional district and community members invited by the District came together with the DLR Group team at the Guiding Principles Summit to discuss the goals and objectives to be embodied in the design of all future Natomas Unified School district projects. After an introduction of the Facility Master Plan process, a presentation to participants that highlighted the current trends in educational design and included a video of the development of the Guiding Principles by the DLR Group who designed Marysville Getchell High School in the state of Washington.

After a review of sample Guiding Principles developed by other school districts, the participants were divided into smaller groups and asked to think about the goals and objectives they considered critical to the success of the district for the future projects. Through facilitation by the DLR Group team of: Gary Gery, Jon Anderson, Renee Rose and Chris Brown, each group prepared their ideas, presented and consolidated for voting by all participants to identify the top principles.

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Those five guidelines included: *collaboration*, *community*, *safety/security, sustainability,* and *technology*.

The DLR Group team then took the notes and ideas collected at the summit and developed final written Guiding Principles for Design which were distributed, reviewed, edited and approved by the District. These principles, provided below, sit as the centerpiece of the master plans developed for each school site in Natomas Unified School District.

Natomas Unified School District Guiding Principles for Design

Guiding principles are critical to the work of master-planning and school design. They prove invaluable as projects unfold, help leaders focus their work, and clarify important decisions when individual interests come in conflict with overall goals. The guiding principles below will provide ongoing design direction as NUSD makes important educational, architectural and community decisions. As such, these are critically important to be included within the educational specifications.

Co
Collaboration

- Provide a variety of spaces and furnishings that are flexible and adaptable to support collaborative teaching and learning

- Create an environment that provides for engagement of students, staff and the community in a comfortable and challenging setting.

- Provide a variety of outdoor spaces that are natural, flexible and engaging for learning and socialization

C
Community

- Our schools will be the hub of the community

- Provide aesthetics that are colorful, attractive, open and inviting to promote a sense of school and community pride

- Embrace the community and provide an environment of partnership, involvement, engagement and safe exchange of ideas

- Provide community accessible facilities, from fields to community based art

SS
Safety/Security

- Provide environments that embrace change and where students, staff and community feel safe- physically, emotionally, socially and academically

- Strive to continually upgrade and improve existing facilities, equipment and programs and provide for adequate and continuing maintenance and support

- Provide a secure but welcoming and attractive campus environment, from street to entry to interior of campus, for the Natomas community

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S
Sustainability

- Embrace our environment and enhance the school experience through use of outdoor spaces, natural lighting and enduring well maintained facilities

- Reduce operational costs while being good stewards of the environment through proven sustainable measure, such as solar and drought resistant landscaping

T
Technology

- Provide facilities that are focused and infused with 21st Century technology on a broad scale to support collaboration and community

- Anticipate the future of technology and the ability to be flexible and adaptable to changes of programs, population and technology
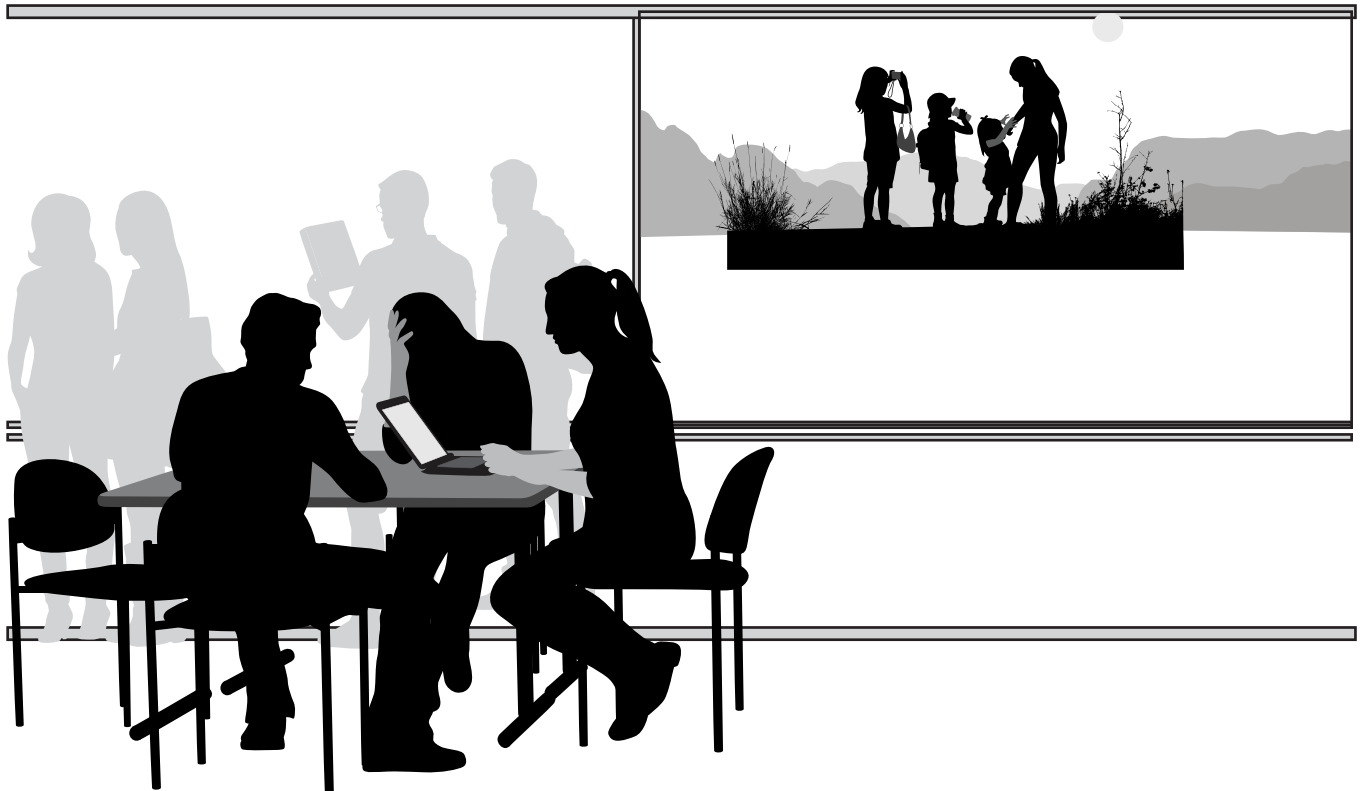
2.8 Survey Results

The Natomas USD web survey asked 3 questions about the District's schools and facilities and **what they felt needed to be done in the future as new or existing renovated facilities are constructed**. Among the comments from participants were:

Feedback

The staff, teachers, students and parents are all very involved in the children's educational experience.

Safe areas for the playground and PE.

I wish students had a school they were proud of.

Access to more digital technology would be good.

Either the number of students per class needs to decrease or the rooms need to be expanded.

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In addition, participants were also asked to rank various facility goals for the design of new and modernized school facilities. The results are shown below.

QUESTION	POINTS (results for 21 responses): 2 pts for "Strongly Agree" 1 pt for "Agree" 0 pts for "Neutral" -1 pt for "Disagree" -2 for "Strongly Disagree"
A facility that is safe and secure for students, teachers, and visitors	42
A facility that promotes parent participation / involvement in the educational process	38
A facility that promotes facility collaboration, interdisciplinary teaching and teaming	36
A school that is responsive to current and future educational technologies	35
A facility that is flexible and adaptable - a physical environment that can change or adjust to meet educational objectives	33
A facility that allows teachers and administrators to work with groups of students in a small school environment	32
A school that includes a variety of outdoor teaching learning, assembly, and quiet contemplative areas	32
A facility that provides optimal relationships/adjacencies between spaces / functional areas	27
A facility that is architecturally interesting, visually exciting and enjoyable - a facility that uplifts the human experience and invokes a sense of pride.	27
A facility that is environmentally responsible - a facility that incorporates or utilizes sustainable / "green" building features	26
A facility that responds to future expansion and growth	26
A facility that promotes an individual student's sense of identity within the total school enrollment	24
A facility that partners with business, civic, government, and / or other educational institutions	24
A facility that fits into the context of the natural and / or built environment	23
A facility that serves as a learning tool even when no teachers are present	22
A facility that is responsive to and invites community usage	17
A facility that recalls and / or alludes to the heritage, culture, and history of the community	14

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2.9 Key Considerations of the Educational Specifications

The following are the key items considered and included in the Educational Specifications for Natomas Unified School District:

Program Areas. A summary of the types, numbers and sizes of instructional and support spaces for each school site with spatial relationship diagrams.

Program Support Components. A summary of the equipment, casework, miscellaneous components, finishes and materials required in each program space to support the program space use.

21st-Century Learning. Provides information pertaining to nationally recognized best practices in collaborative-based education, specifically as they relate to program delivery methods and design layouts, as well as guidelines and layouts for new classroom design and modernized classroom designs.

Furniture. Provides information about types of furnishings to be used in 21st-Century classrooms and other spaces, along with classroom layouts and configurations.

Technology. What technology will be integrated into the curriculum and facilities now and into the future?

Safety and Security. Reflections and guidelines for design elements related to the Safety and Security of school sites, including passive and active systems.

Site Issues. Any special circumstances or considerations are important, such as the design, traffic (pedestrian and vehicular) flow, lighting, landscaping and parking issues.

Outdoor Fields, Courts and Structures. A summary of required types and sizes of physical activity related outdoor elements, including support amenities.

Outdoor Environment and Learning. In response to the "Outdoor Learning" component of the Guiding principles, guidelines for outdoor space design and use, as well as requirements for shade structures and other elements.

Sustainability. In response to the sustainability component of the Guiding Principles, provide guidelines for the design and construction of sustainable and environmentally responsible building components and systems to be included in new and modernized school facilities.

Aesthetics. The visual appeal of each campus is important, so design parameters are developed for the renovation of existing facilities as well as new projects in order to maintain visual consistency.

Community Use. Understanding community needs and integrating those needs into school facilities, as well as the opportunity for joint use, is an important aspect for all school districts.

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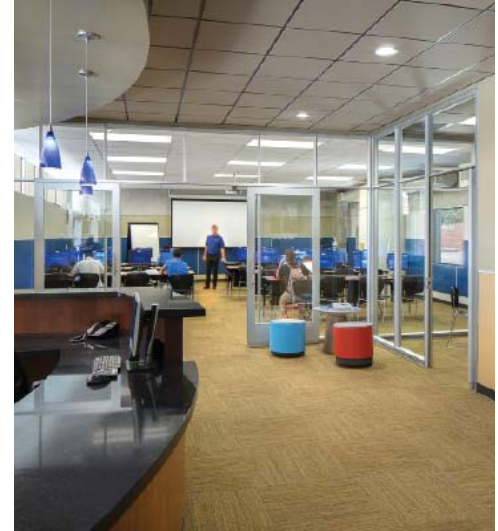
2.10 Document Overview

Natomas USD educators must remain active in facility development because the best projects will evolve from constructive dialogue between the community, the school site, architect and NUSD staff. This Educational Specification document is to be used for Elementary Schools, K-8 Schools, Middle Schools and High Schools and is organized into sections that contain information necessary for the planning, design and construction of new facilities and/or renovation of existing facilities for those specific grade levels. The following is a summary of the components contained in chapters 3 and 4 of this document.

Planning And Design (Chapter 3)

Design Considerations

School facilities today need re-thinking based on changes in society, technology and approaches to educational delivery. The educational specification explores numerous areas to consider in facility designs and the re-thinking of these areas. These design considerations are also linked to the District's Guiding Principles of Design.

21st-Century Learning Environments

What will the future classroom look like? What components are necessary? This section provides guidelines for the design of the 21st-Century classroom by identifying key components that can be incorporated in future designs. This section also explores physical layouts of buildings and how typical existing NUSD classroom buildings can be transformed to create collaborative 21st-Century learning environments.

Sustainability

As one of the District's Guiding Principles, sustainability is not only important, but a responsibility of being a good steward of our environment. This section discusses key features such as water, atmosphere, energy, daylight, materials and landscape and ways to economically incorporate them into facilities.

Guidelines for the 21st-Century Classroom for Natomas USD

What are the key tenets in the 21st-Century classroom in Natomas USD? This section notes the classroom components that should be considered in all future classrooms, including: flexibility of space, flexibility of furniture, how students work, quick and quiet adaptations, creating collaboration, infusing technology, highlighting the student and outdoor connections. Typical 21st-Century classroom layouts are also provided

Spatial Requirements & Relationships (Chapter 4)

Elementary School TK-5 / K-8 School

This section contains the spatial requirements, relationships, programs, adjacency diagrams and space data sheets for all rooms and spaces within a TK-5 Elementary School and K-8 School.

3

planning & design: exploring space

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3.1   Design Considerations (Re-thinking Space)

The Educational Specifications for Natomas USD will provide the guidelines of design considerations in the planning for modernized existing and new district facilities. With the changes in societal awareness, technology and the delivery and approach to education, the trend in today's schools is about **"re-thinking space."** What worked twenty years ago for a school, now provides barriers to education, so a new approach and vision is needed. With an eye toward NUSD's Guiding Principles of Design and the key messages of collaboration, flexibility and adaptability, educating today's students and embracing common core facility design requires a re-thinking of the following design considerations:

• Community	• Nutrition
• Sense of Place	• Social Space
• Classroom	• Daylighting
• Classroom Pods	• Transparency
• Flexibility and Agility	• Sense of Entry
• Collaboration	• School Safety and Security
• Engaging Technology	• Outdoor Learning
• Fitness	• Student Display

The following pages discuss these design considerations in detail while providing photographic examples of practical applications at various schools across the nation. Each design consideration is also classified into one of the Guiding Principles of Natomas USD.

C Re-thinking Space
Community

Lakeland Elementary School

A sense of community is critical to the success of a school. While the facility must obviously serve a community of learners and mentors, it will also be a critical element in the overall fabric of the greater community and will be a beacon of learning that symbolizes the values of the community. As the center of the community, the school should support and further foster the student body.

Petersen Elementary School

Alexander Graham Bell Elementary School

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Re-thinking Space
Sense of Place

A building should integrate well with the landscape in which it is placed. The design should carefully consider site placement, orientation, and massing in order to maximize the unique opportunities presented by the landscape and site such an views, day-lighting, outdoor areas, and amenities unique to the place. The school must respond to its context and provide the occupants with an experience that it is highly connected to its place. In the end, the school should provide that unique feeling that it's buildings and occupants belong. That sense which brings to it's students, staff and community home.

Alexander Graham Bell Elementary School

Marysville Getchell High School

Lakeland Elementary School

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Co Classroom

Re-thinking Space

Widespread focus on learning, personalization, collaboration and creativity are prompting changes in how the "classroom" is designed—moving from only placing the teacher as a lecturer at the head of rows of desks, to considering the teacher as a coach and mentor immersed in the learning process with his and/or her students. Students and teacher switch between different learning styles, or work in them simultaneously.

Rapid changes in technology (and the growing availability of educational resources) are further informing ideas in how the learning studio works and is designed. Schools can even go so far as to take new directions such as blended learning, evidenced in **"The Flipped Classroom"** and enabled by models proposed by Knewton or Khan academy.

Lakeland Elementary School

C Classroom Pods

Re-thinking Space

Consider **Howard Gardner's theory of multiple intelligences,** and its ramifications on how we can approach education. When learning happens in varying forms, settings and groupings, then a school should offer spaces supporting that variety.

A building is no longer driven by long corridors with single classrooms sized for groups of thirty. Instead, a 21st Century school enables strong relationships, and organizes diverse spaces supporting inquiry-based learning; self-directed learning; project-based learning; interactive and collaborative learning.

Southridge Elementary School

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Co Re-thinking Space
Flexibility & Agility

Creating learning environments that are easily adaptable to changing modes of use are of paramount importance. Spaces should be planned to allow for varying degrees of adaptability over time, from immediate/daily user modifications such as movable walls and furniture to substantial modifications such as reconfiguration of spaces. The incorporation of less fixed walls for more open areas is a paramount concept of design.

Southridge Elementary School

Co Collaboration

Re-thinking Space

The ability to collaborate and communicate are essential skills that everyone will need in order to survive in the global workplace. The learning environment should reinforce this by creating opportunities for students, teachers, and community to work together in a collaborative way. Collaboration is essential for building relationships and occurs best when 2 to 8 students gather in more intimate settings or in 16-64 students in group settings.

Blue Ridge Intermediate School

Blue Ridge Intermediate School

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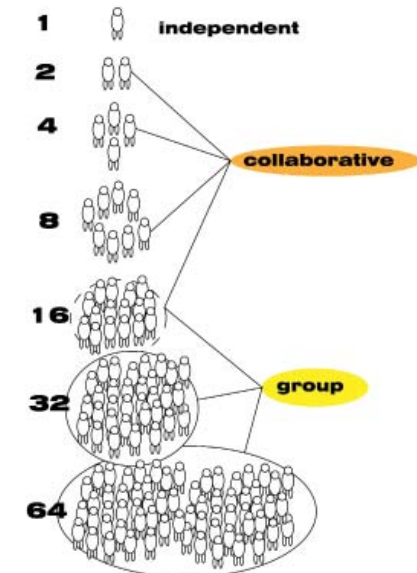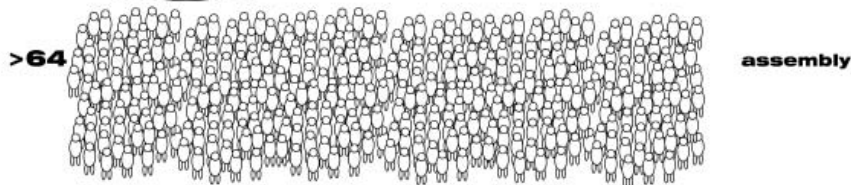
Re-thinking Space
Engaging Technology

Falcon Virtual Academy

Access to technology resources should be abundant throughout. Technology supports education, and thus should be as flexible as possible. Learning spaces should encourage collaboration and group work with high access to digital technology. Wireless connectivity inside and out are to be included. Future considerations for technology should be planned and considered to be sustainable to continue to enhance the educational process. Technology is no longer limited to a computer room.

Falcon Virtual Academy

S Re-thinking Space
Fitness

Consider the measures outlined in **Healthy People 2020,** particularly the acknowledgment that early and middle childhood provide physical, cognitive, and social-emotional foundation for lifelong health, learning and well-being. Physical fitness in the 21st-Century School is not just about athletes and sports, but about positioning students to achieve lifelong healthy practices.

Today's fitness environments look past the idea of the gym, and more at adult health clubs as a model for what a fitness environment should be: open, accessible and offering options to support a diverse range of fitness needs to fit the individual.

Bennignton Elementary School

S Re-thinking Space
Nutrition

The 21st-Century school integrates high nutritional value into both meals and learning by creating direct connections between food and where it comes from. it is more than a cafeteria, it is a sensory experience; it is nourishment for learning; it is a foundation for lifelong health and wellness.

It is an outdoor vegetable garden and concept of "farm to fork" for students.

Pioneer Middle School   Janie Darr Elementary School

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Co Social Space

Re-thinking Space

Interaction and socialization is an integral part of the learning process. Environments that are diverse in size and activity will be provided to address the social needs of all students to ensure a feeling of belonging and safety. Student pride and ownership are enhanced through a stronger sense of inclusion. These spaces will be located adjacent to student support services to encourage increased utilization of these services and allow student and staff interaction in a more informal environment. Spaces can be easily adapted to meet the needs of various users and personalization while providing collaborative environments.

Eudora Elementary School

Panther Lake Elementary School

Lakeland Elementary School

S Re-thinking Space
Daylighting

Studies have shown that proper and abundant daylighting improves learning in the areas of reading comprehension and mathematics. Daylighting can be provided from skylights, solar tubes and window glazing in the form of direct and indirect, with and without views. Besides better student engagement and learning, daylight provides sustainability as use of artificial lighting can be reduced, thus saving energy.

New Meadow Park Elementary School

Panther Lake Elementary School

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Co Transparency

Re-thinking Space
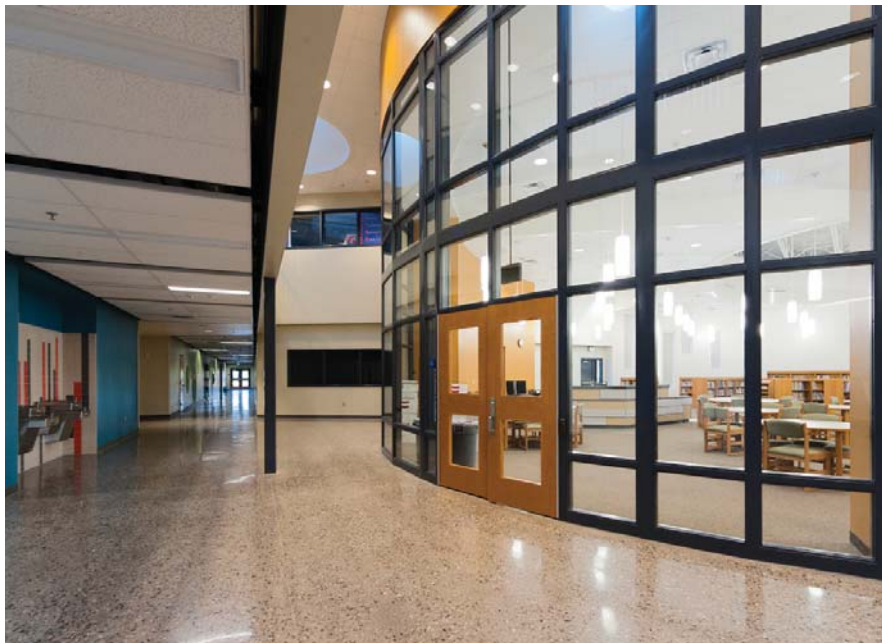
Fireside Elementary School

Transparency plays a fundamental role in establishing a learning environment that supports a stronger sense of community and collegiality. The intent is to provide a visual and experiential connection to a larger group. High levels of transparency are believed to improve supervision and security, and create an environment where learning is pervasive and visible.

Desert Willow Elementary School

Blue Ridge Intermediate School

DLR Group Omaha Office

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C Re-thinking Space
Sense of Entry

Panther Lake Elementary School

"You have arrived at your destination" is the phrase heard on today's technological map guidance system. For schools, a clear and well-defined sense of entry is critically important to the community. The entry becomes the beacon, the pride of the community and a place for all to clearly find and gather. A prominent sense of entry eliminates the guesswork and enhances campus security and safety. It can come in the form of shape, color and site location.

Pioneer Middle School

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SS
Re-thinking Space
Safety & Security

Safety and security solutions should create balance between the need for a secure environment and the need for an open, inviting learning environment. Designs should consider the principles of Crime Prevention Through Environmental Design (CPTED). The three primary areas of focus that can be applied to new and existing campuses are natural surveillance through placement of physical features, access control from limited/secured entry points and territorial reinforcement to define boundaries. Limiting alcoves and hiding spaces for better visibility and selected uses of cameras and technology are major design considerations. Although safety and security is of prime importance, the resulting design does not want to inhibit the learning environment of the school.

New Meadow Park Elementary School

Wisdom Elementary School

SOutdoor Learning

Re-thinking Space

The engagement of spaces beyond traditional learning environments is critical in a quest toward making learning pervasive. Outdoor areas will be provided for teaching, social interaction, mentoring, introspection, and performance. Natural light and fresh air will be provided in learning environments to enhance student and staff performance. The natural characteristics of the site and the surrounding environment will be celebrated. It is especially critical to provide connections to the outdoors from the building interiors for a continuous process of learning. The mild climate of the Sacramento region is a perfect opportunity to integrate and celebrate outdoor learning.

Panther Lake Elementary School

Southridge Elementary School

DLR Group

C Re-thinking Space
Student Display

Student work is at the core of the educational process and should be celebrated. Plan for spaces throughout the school that will easily allow for display of student work. Display cases, vertical surfaces, and even opportunities to hang work should be available throughout the school. Displaying work will enhance the sense of ownership for both students and staff and allow students to identify with the spaces in which they learn as well as creates a stronger sense of community and pride.

High Tech High School: The Stichler Group

Wolf Creek Elementary School

CREATING A CULTURE

of

COLLABORATIVE LEARNING

MATH

SCIENCE

LANGUAGE ARTS

SOCIAL STUDIES

CTE & ELECTIVES

CHALLENGES OF THE TRADITIONAL DEPARTMENTAL MODEL

The traditional organizational model for schools has been based on optimizing operational and construction efficiency by locating similar uses/curriculum together in large clusters. These clusters are often configured with nearly identical spaces arranged along a connecting corridor. Teachers and students are assigned to a designated location and rarely utilize space outside of "their" four walls. Unfortunately, this presumes that every activity and learning style must be accommodated within a "one size fits all" model. It also makes collaborative work difficult as there are very few opportunities and spaces for coming together. The shear size of the department can also make collaborative work difficult because larger groups have more difficulty reaching consensus. Implementing interdisciplinary curriculum is especially difficult as quite often other departments are physically located too far away.

3.2 21st-Century Learning Environments

The Educational Specifications being developed as a part of the NUSD Facility Master Plan process addresses various 21st-Century collaborative classroom configurations based on various typical existing classroom designs of school sites. During the assessments, the varying classroom arrangements on sites were noted and a review of the building was done to ascertain future opportunities to create transformative 21st-Century learning environments. The final master plans for each site identify areas within each school for these new environments. However, the areas identified are often limited based on costs for conversion, structural limitations and a phased approach since conversions cannot occur instantly while allowing for flexibility in the learning environment options.

This section of the Natomas USD Educational Specifications explores new models for classrooms and the re-thinking of existing spaces and typical classroom configurations to transform to 21st-Century learning environments. It also explores the re-thinking of science labs, project-based learning studios, library/media centers, learning commons and performance environments. **Descriptions of the spaces are provided as an overview while photographs illustrate the desired design concepts for the 21st-Century learning environments.**

Re-thinking Space
New Model for Classrooms

It is time for new thinking or re-thinking of the classroom. Avoid the standard 960 sf box classroom. Avoid the standard row of classrooms. Avoid repeating what has been done. Avoid the silos of learning and "sage on a stage." When developing new classroom buildings, the layouts should embrace collaboration and 21st century learning environments by providing layouts that support the design considerations as noted within these educational specifications.

Imagine flexible furniture, varied room sizes, glass between spaces, operable walls and barn doors. Envision a classroom with no "front," natural light and display space for student work. Remember to embrace and connect to outdoor environments to extend the learning beyond the classroom walls. Be bold and lead by example.

- 1 on 1 instructional/ break-out space
- Large meeting space
- Natural light
- Campfire
- Whiteboards
- Video display
- Student display area
- Informal seating for small group discussion
- Small conference/ grouping rooms
- NEW POD
- Garage doors for collaborative spaces
- Flexible learning studios

DLR Group
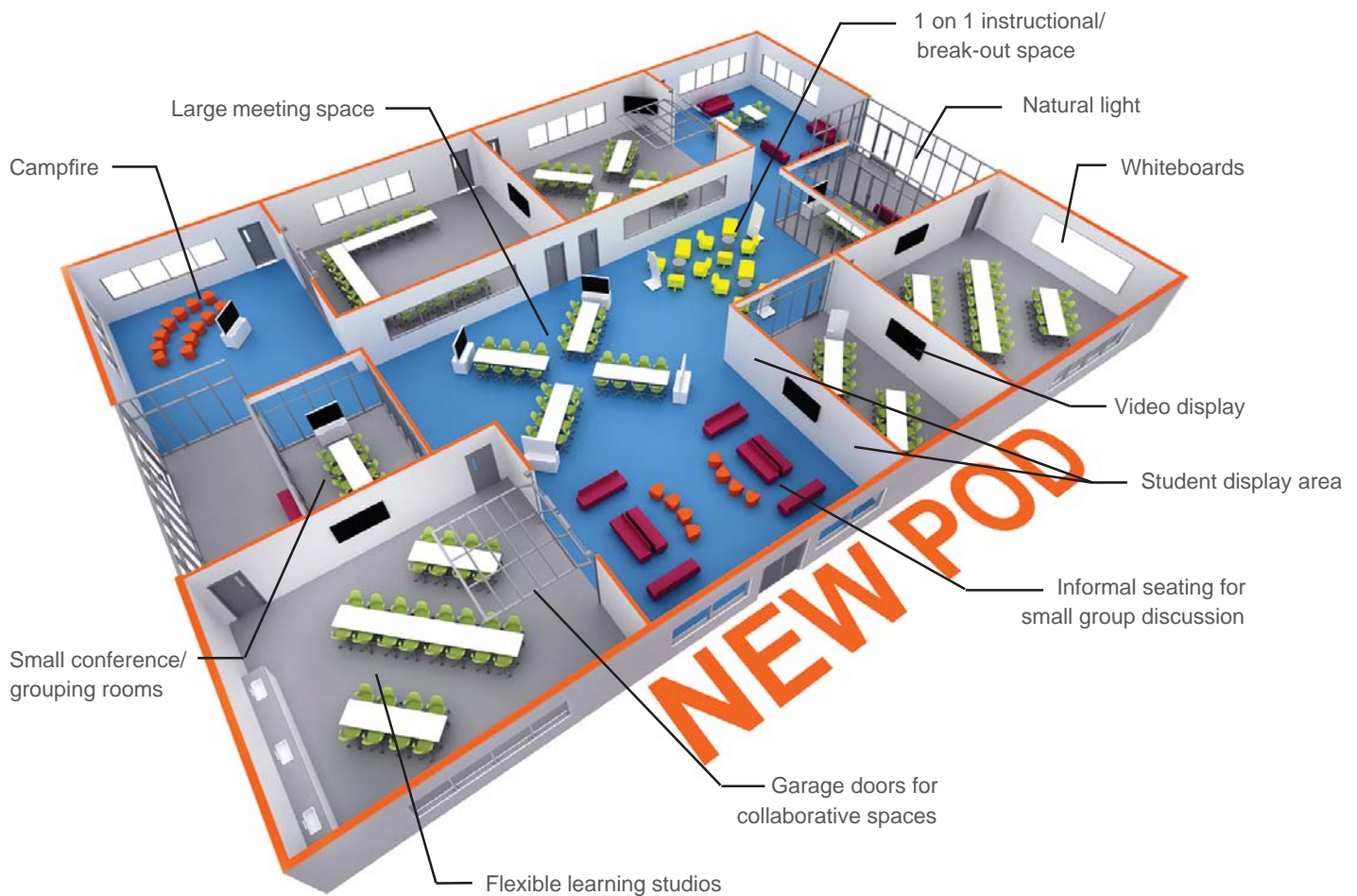
Re-thinking Space

Modernizing Existing

Consider what the opportunities are for using existing space, whether you're looking at a single classroom or an entire building. While designing within existing infrastructure limitations (such as load bearing walls and mechanical systems) and to accommodate code requirements you can still provide opportunities to carry out incredible transformations.

With an understanding of educational best practices, identify the things you can change about your space to align it with your desired learning activities such as online and project-based approaches: daylighting improvements, transparency, spatial variety, flexible and ergonomic furnishings, current and mobile technologies.

With the right planning and creative thinking, many existing facilities can become a model of 21st-Century learning—whether you're updating an existing space, performing a historic renovation, or even retrofitting a shopping mall.

historic renovation

space revitalization

adaptive reuse

Natomas Unified School District
Connecting students to their future

Re-thinking Space
Transforming Existing

Heron Elementary School

During the master planning process, different typical existing classroom building models were studied for ways to integrate 21st-Century learning environments and transform them. The single row of classrooms, the back-to-back classroom building, the double loaded corridor classroom building, and the pod building with classrooms to the outside and inside via a corridor were all conceptualized into 'Next Generation Learning' models. The following diagram layouts are suggestions that can be translated to any of the campuses in the Natomas Unified School District in a true 21st-Century modernization.

H. Allen Hight Elementary School

Witter Ranch Elementary School

Inderkum High School

DLR Group

Transforming Existing:
Single Row

The typical California "finger plan" is abundant within Natomas USD schools. These are among the most challenging to reconfigure. The transformative plan provides flexible learning studios with operable walls, windows and flexible furniture. The addition of a small group collaborative space and a new shared maker space addition with garage door to the outside completes the transformation.

Typ. existing building plan

Garage door for outdoor connection

Folding wall

Flexible learning studios

Seminar/lecture room

Whiteboards

1 on 1 instructional/ break-out space

SINGLE ROW

Campfire

Garage door

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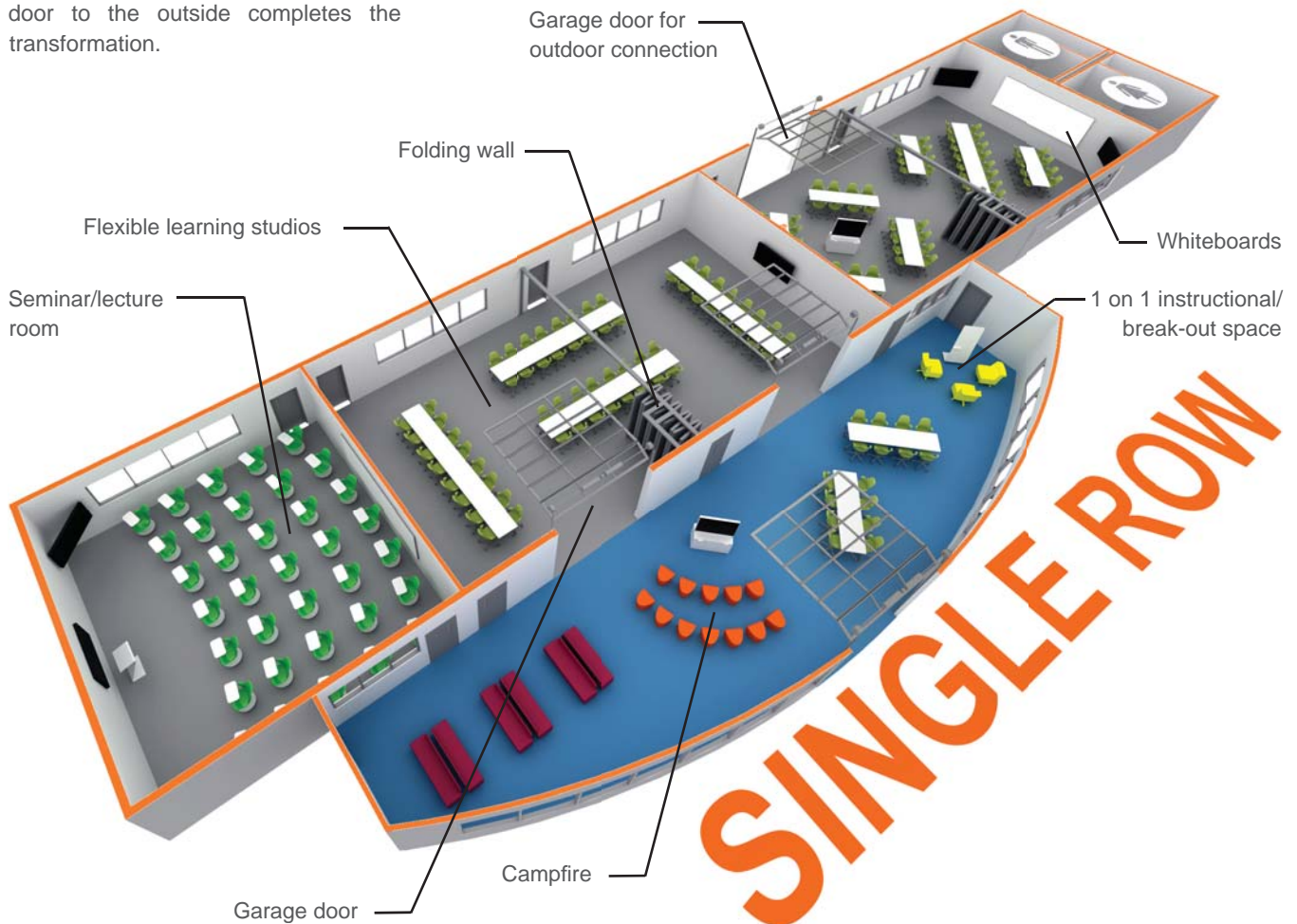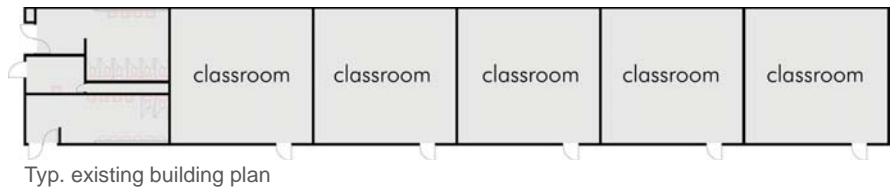
Re-thinking Space
Transforming Existing:
Back-To-Back Row

The typical "back-to-back" rows of classrooms are a model that became popular on Natomas USD campuses as the next generation of the "finger plan." These buildings, dependent on structural limitations of bearing and shear walls, offer much opportunity in creating 21st-Century environments. The transformative plan, in this case, keys in to provide flexible learning studios with an open collaborative environment created by opening up two classrooms. New entries into all classrooms from a larger central maker space is envisioned along with windows and barn doors between rooms.

Typ. existing building plan

| classroom | classroom | classroom | classroom | classroom |
| classroom | classroom | classroom | classroom | classroom |

Barn doors for collaborative learning

Video display

Flexible learning studios

Natural daylighting

1 on 1 instructional/ break-out space

Garage door for outdoor connection

Campfire

Whiteboards

BACK-TO-BACK ROW

DLR Group
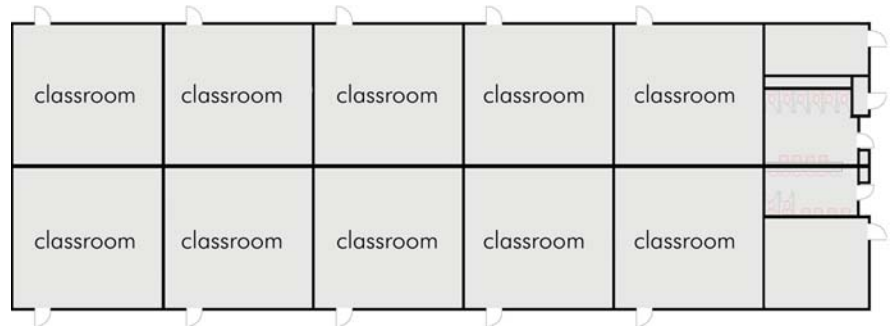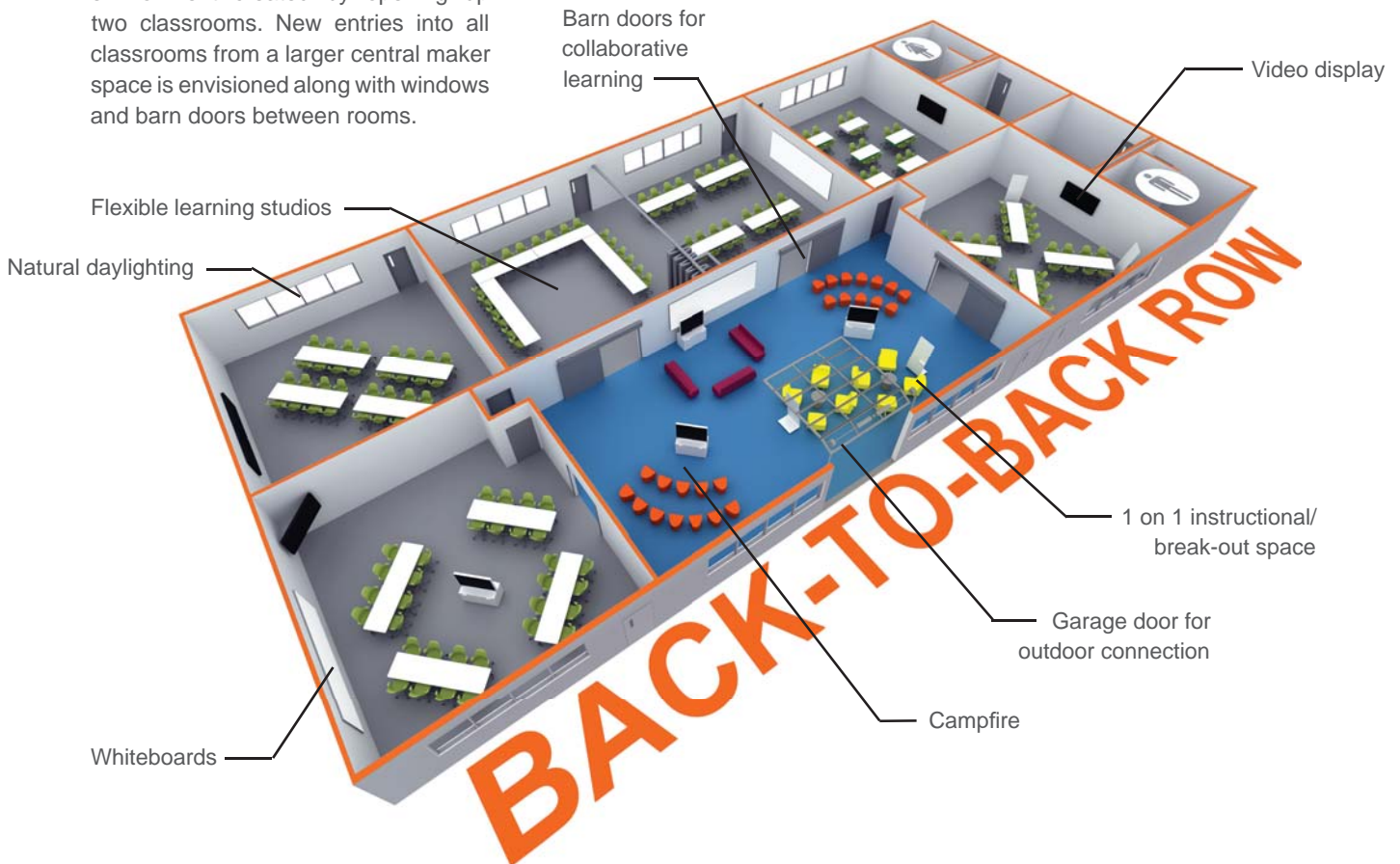
Re-thinking Space

Transforming Existing:
Double Loaded

Another generic building plan used in varying forms at some Natomas USD campuses is the typical double loaded corridor, where a corridor goes through the center of a building with classrooms on each side. These buildings, dependent on structural bearing and shear walls, can easily be transformed into 21st-Century learning environments. A key in the planning is opening the corridors to classrooms to create a central shared maker space. Additional considerations include opening up classrooms to each other with operable walls for collaborative learning, along with windows between rooms and garage doors to the outside to connect with outdoor learning.

Typ. existing building plan

1 on 1 instructional/
break-out space

Whiteboards

Seminar/lecture
room

Flexible learning studios

Garage door for
outdoor connection

Informal seating for
small group discussion

Garage doors for
collaborative spaces

Natural daylighting

DOUBLE LOADED
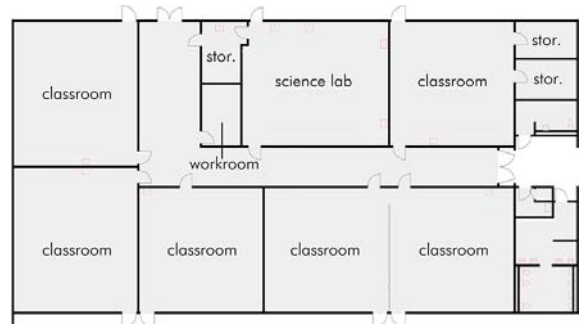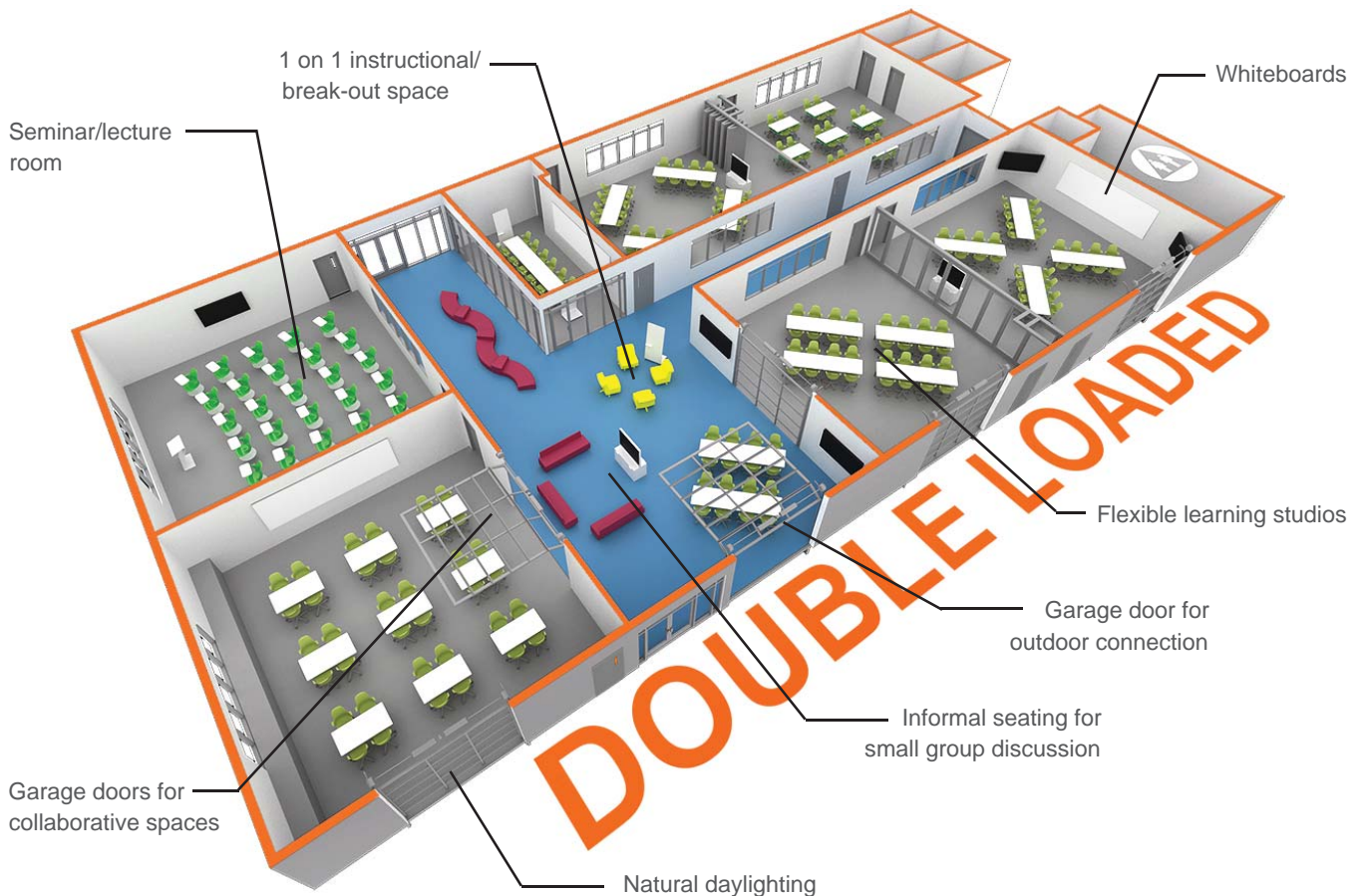
Re-thinking Space

Transforming Existing or New:
Learning Studios

Flexible and varied furniture with operable walls, a technology wall, windows and garage door to the outdoors are the keys to an effective learning studio. The three typical studio arrangements are shown.

(2) 70"/80" digital displays in room

SHARED / COLLABORATE

Multiple writable surfaces (minimum of 2) 4"x12" marker boards or marker wall. Ability for mobile/sliding writing surfaces.
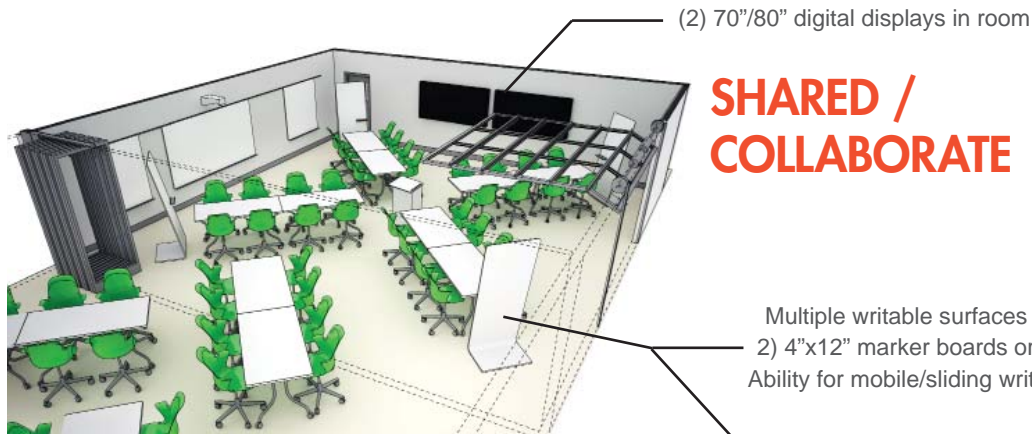
DISTRIBUTED / SMALL GROUP

Folding glass wall

SEMINAR

Roll-up glass garage door

Flexible, comfortable and reconfigurable furniture appropriately designed for the grade level and student size.

DLR Group
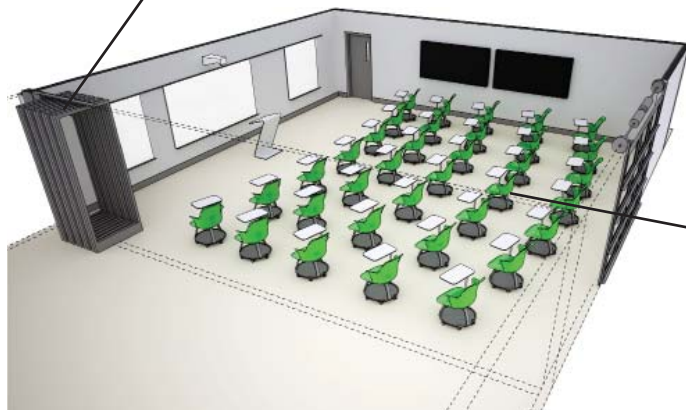
Re-thinking Space

Transforming Existing or New:
Science Labs

Even science labs need transformation to provide for a more flexible, adaptable and collaborative environment. For elementary and middle school grades, the spaces need to provide science centers at the edges while flexible and moveable tables and chairs allow for group learning, or overall lecture and testing. A technology wall, outside view and an ability to expand the room into another science or FLEX space are critical components.

LOWER GRADE SCIENCE LAB

Sliding markerboards or marker walls

80" digital display

Adequate storage cabinetry for student and staff equipment and projects

Roll-up glass garage door

Folding glass wall

Flexible, comfortable and reconfigurable furniture for the science environment
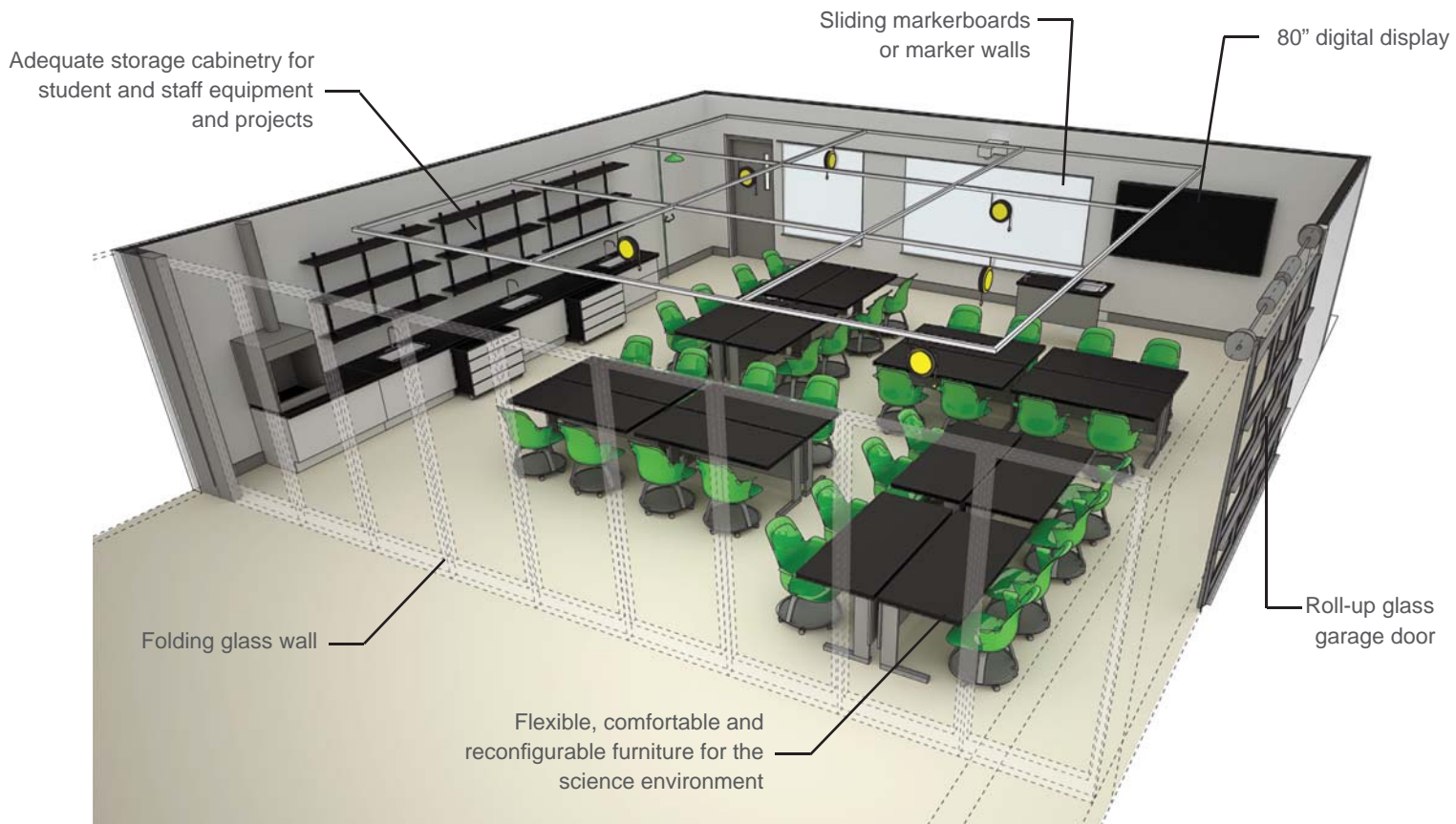
Re-thinking Space

Transforming Existing or New:
Applied / Project Based

Applied/Project Based learning spaces come in many forms. Whether they are engineering technology spaces that need computer stations or "maker" spaces that these spaces need flexibility. Open rooms, open ceilings, windows, daylight and flexible moveable furnishings should be provided. These spaces are to be celebrated and highlighted for all to see the experience. They need not be confined to one room but should be able to move through the building and into the outdoors.

Build your robot and display it for all to see. Or, is it an art project, sculpture or woodworking? Celebrate the creativity in each and every student. Celebrate learning by doing.

St. Therese School

DLR Group
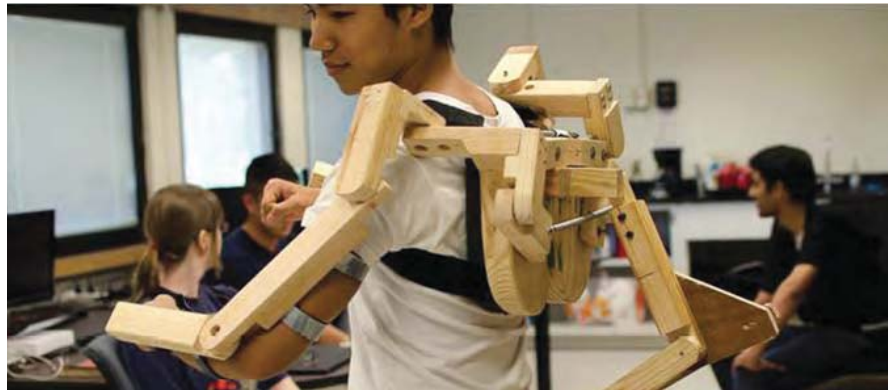
Re-thinking Space

Transforming Existing or New:
Performance

1.

2.

3.
Gary Comer Youth Center
John Ronan / Portland, OR

Alexander Graham Bell Elementary School

Performance in the school setting furthers the demonstration and community aspect of the student experience and serves to provide connection to the community while providing them with a view into the activities, lives, and programs of the high school. Students are able to display and show what they have learned to the larger community and also learn from the community at large. Performance opportunities come in large and small, formal and informal, finely tuned or unfinished. Each type lends itself to a different use, while all types help create a sense of pride and unity among the school.

Performance spaces need to have flexibility and multiple uses. Avoid dedicating a space to one use with no flexibility.

Natomas Unified School District
Connecting students to their future

Re-thinking Space

Transforming Existing or New:
Libraries

Consider the Library of Congress or the Harvard Library. They are online. You can access them from anywhere. With rapid changes in technology and information resources, it is becoming harder to confine access to those resources in a single room.

The "library" is now becoming an information resources center—no longer a hushed repository of books, but instead a place of research, discussion, collaboration and access to multiple resources both print and electronic.

Meadow Park Elementary School

Alexander Graham Bell Elementary School

DLR Group

Re-thinking Space

Transforming Existing or New:
Media Center

Christian Brothers High School

Christian Brothers High School

There are fewer books and more technology as this space becomes the campus hub. Varied and comfortable furniture for seating, to study, research, lounge or socialize; the furniture needs to be mobile and able to reconfigure. Imagine a cafe' or Starbucks—a place for students to feel comfortable. Whiteboard walls to write on or bars to plug in and charge their electronic devices. This is not your parents' library anymore.

Before

Before

Re-thinking Space

Transforming Existing or New:
Furniture

Today's classrooms and schools can be transformed not only by transparent and collaborative layouts, but with dynamic, moveable and flexible furniture. There are no more rows of static desk chairs and tables. Natomas USD schools are about to discover a new world of furniture, specifically tailored for today's diverse learner and the new age of technology.

These pages illustrate numerous types of furnishings, including: Steelcase's Node Chair, Verb Classroom Tables with marker boards, Mediascape and others.

All furniture and equipment not built as part of the project will be covered by a separate F.F.E. budget by the District. These pages are only suggestions of furnuture types for a project. Each campus should have a conversation as to the appropriate furniture for each grade level at the time of the design or construction of a particular project.

Steelcase: Mediascape

Smith System Furniture

DLR Group

VS America: Shift +

VS America: Shift +

Steelcase: Verb Tables

Allsteel: Sketch

VS America: Hokki Stool

DLR Group

Allsteel: Scooch Seating and Belong Tables

Allsteel: Scooch Seating

Coalesse: Circa Modular Seating

Feek: Coated Foam Seating

3.3 Sustainability

Sustainability is the capacity to endure. In ecology, the word describes how biological systems remain diverse and productive over time. For humans it is the potential for long-term maintenance of well-being, which in turn depends upon the well-being of the natural world and the responsible use of natural resources.

People depend on natural resources for their livelihood. However, pressures on the environment resulting from development are steadily increasing. Therefore, it is necessary for citizens and the business community to ensure that their activities and operations are environmentally responsible.

Think about all of the things you do each day. You make hundreds of choices that impact energy, water, waste and air quality. Many of these choices affect YOU; others may affect your family and your friends.

You may not think so now, but many of these choices—even the smallest ones—have an impact on the environment as well. What about that bottle you tossed away? The computer that you recently replaced with a newer, faster model? Your decision to drive instead of walk to the store a half a mile away? By choosing well and responsibly, you can better your own health, the health of your friends and family, and the planet for future generations.

Sustainability will be a key factor in all decisions regarding learning environments and operational effectiveness. Student performance will be enhanced throughout the inclusion of daylighting, natural ventilation, and other strategies. The operational effectiveness of the facility will be considered in addition to material and system selections with consideration to maintenance and ease of operation. The use of local materials will celebrate the spirit of the community and decrease overall costs.

Peterson Elementary School

DLR Group

About CHPS

The Collaborative for High Performance Schools believes kids learn better in schools with good lighting, clean air, and comfortable classrooms. That's why CHPS works with schools and experts to make changes to ensure that every child has the best possible learning environment with the smallest impact on the planet.

Their mission

The Collaborative for High Performance Schools is a non-profit organization dedicated to making schools better places to learn. CHPS was founded in 1999 as a collaboration of California's major utilities to address energy efficiency in schools. The program quickly expanded to address all aspects of school design, construction and operation.

Their work

CHPS provides resources – in many cases, free resources – to schools, school districts and professionals about all aspects of high performance school design, construction and operation. CHPS develops tools that help make schools energy, water and material efficient, well-lit, thermally comfortable, acoustically sound, safe, healthy and easy to operate. These resources include a well-respected six-volume best practices manual, training and conferences, a high performance building rating and recognition program and other tools for creating healthy, green schools.

About LEED

LEED, or Leadership in Energy & Environmental Design, is a green building certification program that recognizes best-in-class building strategies and practices. To receive LEED certification, building projects satisfies prerequisites and earn points to achieve different levels of certification. Prerequisites and credits differ for each rating system, and teams choose the best fit for their project.

LEED stands for green building leadership. LEED is transforming the way we think about how buildings and communities are designed, constructed, maintained and operated across the globe.

LEED certified buildings save money and resources and have a positive impact on the health of occupants, while promoting renewable, clean energy.

Sustainability is important to Natomas USD, achieving CHPS verification is desired if economically viable and, as a minimum, projects must be designed to meet 2009 CHPS and board resolution. Both programs provide great guidelines for sustainable design and should be used as a resource in best design practices.

Sustainability
Educating Students

Natomas USD values sustainability in their schools. As one of the District's Guiding Principles, the District realizes the importance of its role as a steward of our resources. The schools should be used as an educational tool to teach students the importance of sustainable environments through displays, interactive maps and actual working sustainable features. Realizing that we have only one planet and diminishing natural resources, educating today's students on our responsibility to be good stewards is crucial not just to themselves, but to society and the planet. In response, the Natomas USD Educational Specifications address the following tenets of sustainability:

- Being Good Stewards
- Water
- Atmosphere
- Energy
- Daylight
- Materials
- Landscape

All Natomas USD projects shall consider these noted tenets and find ways to economically implement as many as are practical. These are not items to be ignored, but rather should be embraced as a responsibility.

DLR Group

SUSTAINABILITY
BEING GOOD STEWARDS

Making responsible choices in our buildings and our lives.

WATER

Buildings are major users of our potable water supply. The goal of water efficiency is to encourage smarter use of water, inside and out. Water reduction is typically achieved through more efficient appliances, fixtures and fittings inside, and water-wise landscaping outside.

ATMOSPHERE

The surrounding air, both outdoors and indoors, has the potential to affect human health, attitudes, productivity, and people's ability to enjoy their lives. It is important to maintain the quality of outdoor air since all life forms depend on it, and since the quality of indoor air is dependent on that of the outdoors.

Fossil fuels such as coal, natural gas, and oil provide most of the energy used in the United States, but also contribute to climate change and other environmental problems. Adapting to possible effects of climate change by promoting renewable energy sources and the reduced consumption of energy will be critical to support environmental protection.

ENERGY

One of the most beneficial, free sources of energy is daylight. Daylight makes a useful contribution to interior luminance when properly utilized, and can be more comfortable than electric lighting by providing a better quality of light.

DAYLIGHT

The selection of materials we use everyday is important to sustainability because of the extensive network of extraction, processing and transportation steps required to process them. Choosing materials that are produced locally, reusable and made of recycled content can greatly reduce the impact on our world's rescources and climate.

MATERIALS

Buildings should respect the landscape. Sustainable site development strategies include selective landscape clearing, brownfield or soil remediation and erosion control. These efforts are an important component of green building because they conserve natural resources, limit on-site toxins and manage erosion while restoring the site to its natural state.

LANDSCAPE

Natomas
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Connecting students to their future

○ If you are taking a shower, do not waste cold water while waiting for hot water to reach the shower head. Catch that water in a container to use on your outside plants or to flush your toilet. Saves 200 to 300 gallons a month.

○ Turn off the water while brushing your teeth. Saves three gallons each day.

○ Turn off the water while shaving. Fill the bottom of the sink with a few inches of water to rinse your razor. Saves three gallons each day.

WATER
CONSERVE H2O

Water is essential to life on earth.
We need water to grow food,
keep clean, provide power and control fire.
Finally, last but not least,
we need it to stay alive!

When you use water wisely, you help the environment. You save water for fish and animals. You help preserve drinking water supplies. And you ease the burden on wastewater treatment plants—the less water you send down the drain, the less work these plants have to do to clean our water.

○ There are many effective ways to conserve water in and around your home. Look through this list for ways that will work for you. Indoor savings are based on a family of two adults and one child. Many more tips can be found online.

○ When taking your car to a car wash--a good idea for saving water--be sure it's one of the many that recycles its wash water.

○ Water is an essential ingredient in most manufacturing operations. Especially for those 1 billion of us in the high-consumption class, cutting down on our purchases of material things--from clothes and shoes to paper and appliances--conserves and protects water supplies as effectively as installing a low-flush toilet does.

DLR Group
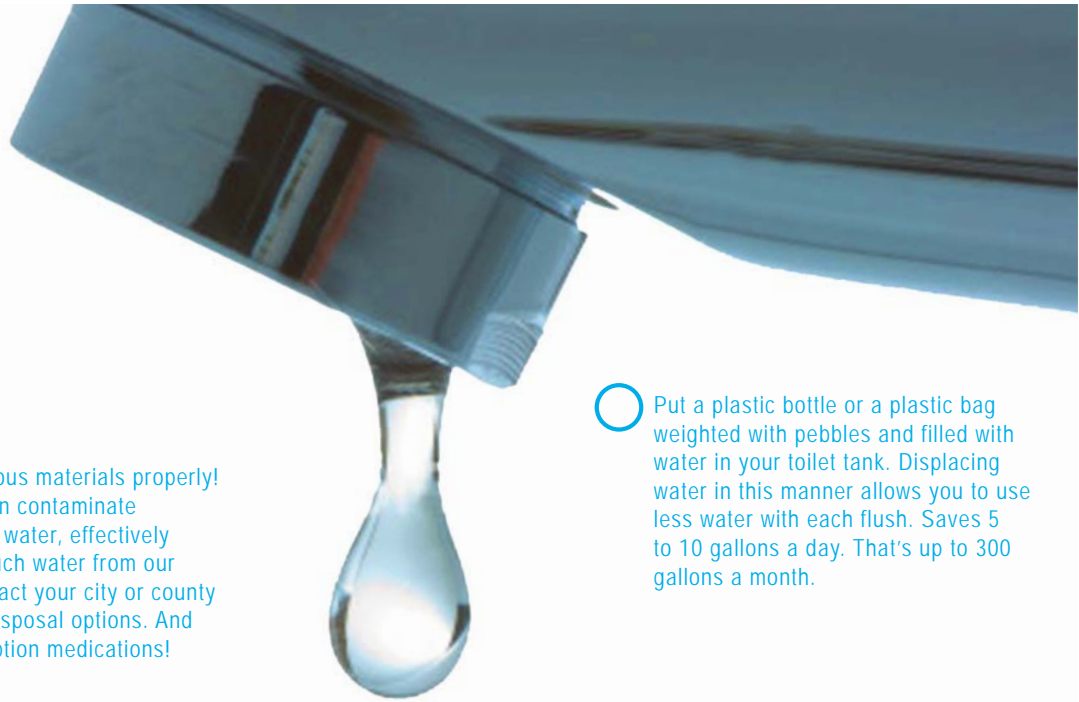
Dispose of hazardous materials properly! One quart of oil can contaminate 250,000 gallons of water, effectively eliminating that much water from our water supply. Contact your city or county for proper waste disposal options. And don't flush prescription medications!

Put a plastic bottle or a plastic bag weighted with pebbles and filled with water in your toilet tank. Displacing water in this manner allows you to use less water with each flush. Saves 5 to 10 gallons a day. That's up to 300 gallons a month.

When you use water wisely, you save energy. You save the energy that your water supplier uses to treat and move water to you, and the energy your family uses to heat your water.

When you use water wisely, you save money. Your family pays for the water you use. If you use less water, you'll have more money left to spend on other things.

If you wash dishes by hand--and that's the best way--don't leave the water running for rinsing. If you have two sinks, fill one with rinse water. If you only have one sink, use a spray device or short blasts instead of letting the water run. Saves 200 to 500 gallons a month.

Use the least amount of detergent possible. This minimizes rinse water needed. Saves 50 to 150 gallons a month.

Use the garbage disposal less and the garbage more (even better--compost!). Saves 50 to 150 gallons a month.

Keep a bottle of drinking water in the refrigerator. This beats the wasteful habit of running tap water to cool it for drinking. Saves 200 to 300 gallons a month.

Natomas
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Connecting students to their future

1

2

4
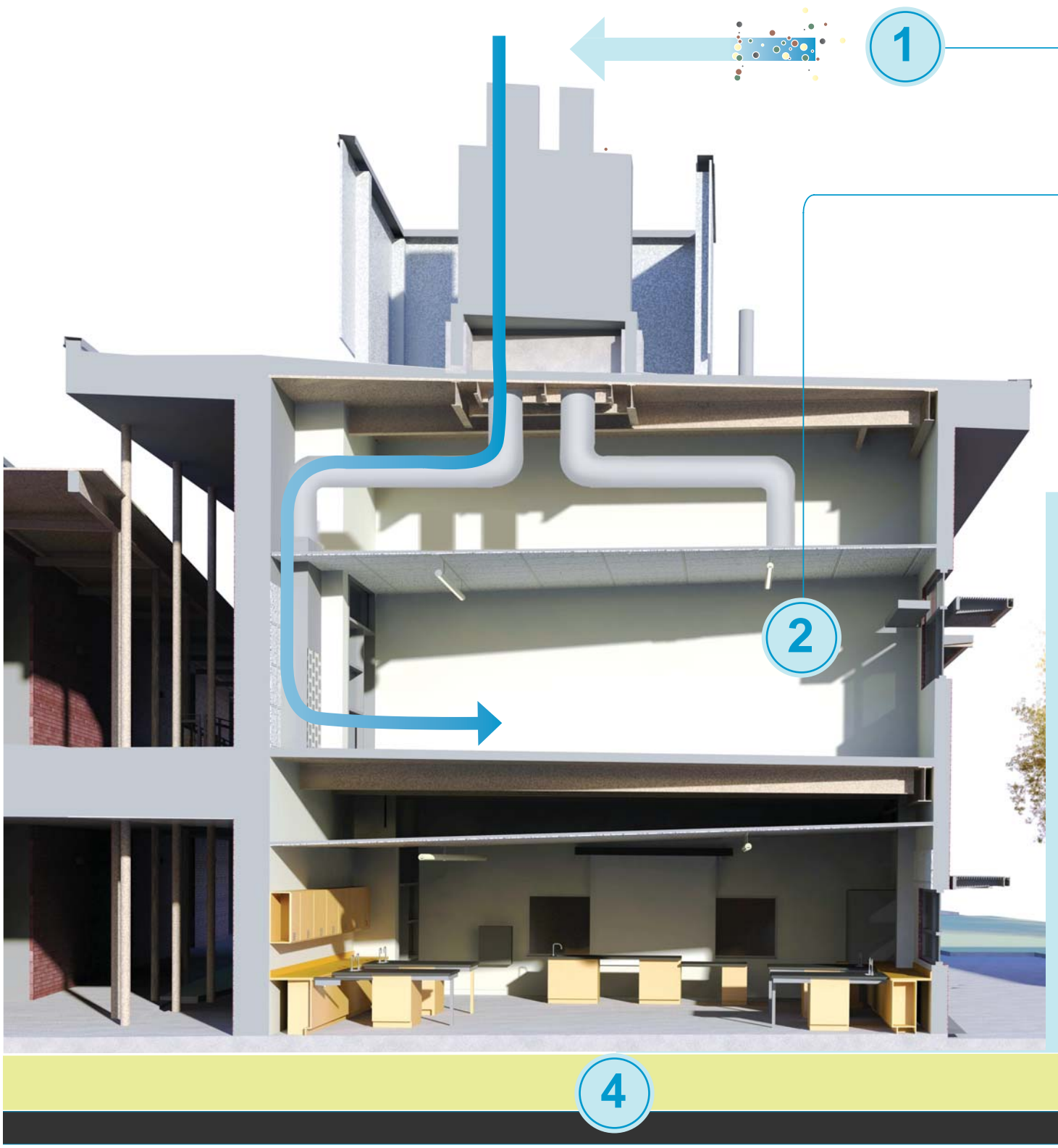
Carpets, drapes and other absorbent fabrics can help trap indoor air pollutants, along with dust, mites and other allergens. While it is okay to use these products, it's important to keep them clean to avoid accumulations of indoor pollutants.

Chico High School Classroom Building Section

DLR Group

Air from outside enters a building through a ventilation system that includes filters to remove pollutants from the air before it's allowed into your spaces. It's important to keep filters and vents clean to keep pollutants from cycling through air ducts and central heating and cooling mechanisms—and your lungs!

Many products emit Volatile Organic Compounds (VOCs), often for a long period of time. VOC's can be traced back to items like cleaning chemicals, printers and new building materials such as paints, sealers, furnishings, etc. Now, manufacturers offer products with no or low VOC emissions. During the design of this school, it was very important to choose such products (like linoleum, adhesives, paints, furnishings and other materials) to ensure the cleanest air possible.

ATMOSPHERE
INDOOR AIR QUALITY
How buildings can better the air we breathe

3 Mold is a common indoor air contaminant. Mold can grow on virtually any organic substance, as long as moisture and oxygen are present. There are molds that can grow on wood, paper, carpet, foods, and insulation. Buildings are designed to control indoor mold growth by keeping moisture from entering through the building envelope. You can prevent mold by not allowing excessive moisture to accumulate in or around your school.

Indoor air quality (IAQ) is a term referring to the air quality within and around buildings and structures, especially as it relates to the health and comfort of building occupants. Aspects of comfort affected by IAQ include thermal comfort and olfactory or sensory comfort. For the sake of the people who use them, it is important for buildings to provide clean, healthy indoor air.

IAQ conditions depend upon the design, construction, maintenance, and operation of a building and on the outdoor environmental conditions. Indoor pollutant concentrations depend primarily on:
- outdoor concentrations of pollutants;
- the rates of pollutant emissions from various indoor sources;
- the rates at which pollutants are removed from indoors by ventilation and filtration;
- and on people and their activities!

6 Just as it's important to use green cleaning methods indoors, keeping pesticides out of your garden and off your lawn can also help, as they're easy to track inside on shoes and clothing!

7 One of the most dangerous air pollutants is cigarette smoke. Restricting smoking is an important key to a healthier environment. Legislation to control smoking is in effect in some locations, but personal exposure should be monitored and limited wherever possible.

5 Many cleaning materials use chemicals that can be harmful to us. Even citrus and pine-based solvents can react with ozone to create formaldehyde. Using green cleaning products can help cut way back on the toxins in buildings.

8 Displacement ventilation is an innovative system in which fresh supply air is introduced near floor level. The fresh air effectively displaces stale air. This system provides cleaner air, quieter air supply, energy savings, and more outside air.

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Connecting students to their future

ENERGY
HIGH PERFORMANCE BUILDINGS
Saving energy preserves our future

Energy is arguably the single most important consideration for people on this planet, now and into the future. Not only are fossil fuel supplies limited, but the use of them creates pollutant emissions that are increasing the Earth's temperatures in a trend called Global Warming. We must act now to make sustainable energy choices in order to stop global warming before it makes our planet uninhabitable!

Current courses of action include reducing our need for energy through our actions, reducing the amount of energy our products use, and finding new, clean sources of energy. Nowhere is this more important than in the buildings we design, construct and use!

With so much attention given to transportation emissions, many people are surprised to learn that buildings are the single largest contributor to global warming. Energy used by buildings in the United States is responsible for nearly 50 percent of our national emissions of greenhouse gases that contribute to global climate change.

Lighting Systems

Electrical Systems

HVAC&R Systems

LOAD REDUCTION STRATEGIES
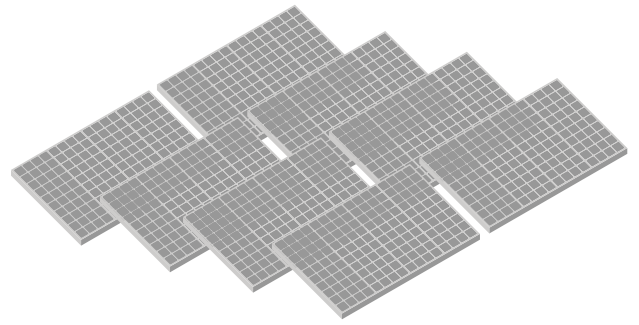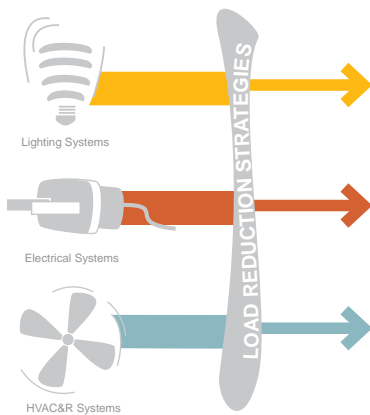
① Reduce Need

Building design and construction teams first evaluate how to reduce the amount of energy a building needs to operate, called energy load. Experts first determine opportunities to eliminate energy-consuming systems. For necessary energy-consuming systems, they then determine how to make those systems as efficient as possible. And finally they evaluate how, if possible, to take advantage of sustainable energy sources.

② Explore Sources

Sustainable energy sources meet current needs without hurting our ability to meet those of the future. These include renewable energy sources such as geothermal energy, wind power, and solar power. Renewable energies often depend heavily on climate, so designers must closely evaluate the viability of these options to make sure that they make sense. For example, the photovoltaic (PV) panels that are used on the roof of this school where sunlight is strongest to collect solar energy may not make sense in a cloudy climate.

DLR Group

Save energy when doing laundry! When using a washing machine, adjust the water level to match your laundry load size. Use a cold rinse. Try drying your clothes outdoors in the air. When you need to use a dryer, clean the lint filter and use the auto sensor if your dryer has one.

If you have a fireplace, close the damper when you don't have a fire burning. An open fireplace damper can let 8 percent of heat from your furnace escape through the chimney! In the summer, an open fireplace damper can let cool air escape. It's like having a window open!

Don't keep the refrigerator door open any longer than you need to. Close it to keep the cold air inside. Also, make sure the door closes securely. Make sure the rubber seal is effective.

Turn off battery-operated devices when not in use. Wherever possible, use rechargeable batteries intead of disposables to minimize the amount of material and toxic waste that enters our landfills.

If you use a dishwasher, save energy by running it only when fully loaded. Allow dishes to air dry rather than using the machine's heated dry cycle.

Save water! Wasting water wastes electricity. Why? Because the biggest use of electricity in most cities is supplying water and cleaning it up after it's been used.

Get outside! Turning off the television, video games or the stereo to enjoy the outdoors not only saves energy, but gives you the opportunity to get some healthy exercise, either alone or together with family and friends.

Use sunlight instead of artificial lights whenever possible. When you do use artificial lights, be sure to turn them off when you leave the room.

Adopt energy conservation habits like these ▶
in how you live, work and play to help ensure
a healthy future for everyone.

Install energy-efficient compact-fluorescent lightbulbs.

Unplug appliances when you are not using them to avoid wasteful energy draw, especially on appliances with a "standby" light.

In cold weather, heat your home at 68 degrees or cooler with the thermostat fan switch on "auto." To save even more, lower your thermostat to 65 degrees or cooler at bedtime or when you're away from home.

In hot weather, cool your home at 78 degrees or warmer with the thermostat fan switch on "auto." For additional savings, raise your thermostat to 82 degrees or warmer when you're away from home.

Lighting Systems   Heating & Cooling Systems   Electrical Systems

Building Heating & Cooling Systems
Building Electrical Systems
Building Lighting Systems
Integrated Computer Control System
Fire Alarm Systems
Security Systems
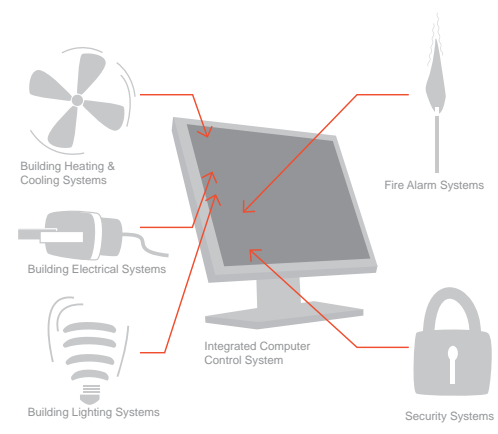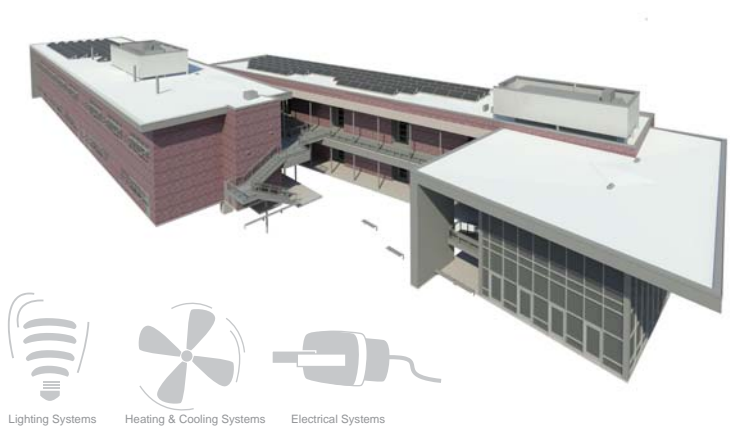
③ Commission Systems

Building systems can be very complex.
For this reason, it is important to make sure that they work properly once the building has been built. This process is called commissioning. Building commissioning involves managing the installation, calibration, and performance of building systems associated with energy to ensure that they function efficiently.

④ Monitor Usage

Once a building is operating, we can observe exactly how much energy it is using. By monitoring performance, we can identify not only efficiencies in action, but any inefficiencies that might need to be addressed to ensure that we are conserving as much energy as possible. Specialists monitor energy performance remotely.

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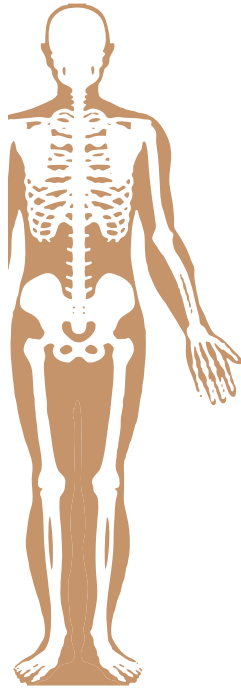
a healthier body

Getting some sun tends to help clear up different skin diseases. Sunlight stimulates your appetite and improves your digestion, elimination, and metabolism. Sunshine encourages healthy circulation. Sunlight improves the function of your liver and helps it break down toxins and wastes. Sunlight helps your body convert a form of cholesterol that is present in your skin into vitamin D.

clearer vision

The natural qualities of sunlight reduce eye strain. Daylighting usually provides more light on the task than electric lighting. Daylight also tends to provide more diffused task lighting than would be provided by electric light alone, reducing glare and improving detail visibility.

cleaner air

How does daylighting lead to clean air? Relying more on daylight in buildings decreases the need for electric lighting. Decreasing our use of electric lighting reduces energy use. R`educing energy use reduces carbon emissions into the atmosphere.

improved sleep

If you are exposed to natural light during the day, it will increase your melatonin output at night. Melatonin is a natural sleep-enhancing hormone made by our bodies.

E S
N W
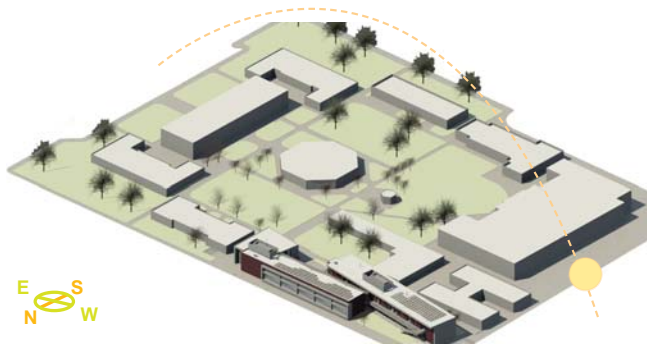
1 1. Designers look at the path of the sun across the sky to understand where light will come from at different times of day. They then plan a building to take advantage of those light patterns by maximizing north and south facade exposure.

DAYLIGHT
HARVESTING SUNSHINE
How buildings are designed to capture and manage natural light

Most simply, daylighting is the practice of using natural light to illuminate building spaces. Rather than relying solely on electric lighting during the day, daylighting brings indirect natural light into the building. Daylighting reduces the need for electric lighting and connects people to the outdoors. And it provides pleasing illumination at a fraction of the cost of the most efficient electric lights.

Good daylighting creates beautiful, appropriately lit spaces while saving energy. Additionally, daylighting provides health benefits including helping with vision, improving mood, increasing concentration and helping a body to function. A successfully daylit building is the result of a combination of art and science, of architecture and engineering. Climate, geographical region, building type and use are big factors in designing a successfully daylit building.

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How harvesting natural light into buildings improves your wellbeing.

a sunnier smile

Sunlight causes the body to produce Vitamin D, which builds strong bones and teeth. Studies in schools have found that students in daylit rooms had better dental records. Sunlight increases the production of endorphins and serotonin in your brain which will definitely leave you feeling much better—contributing to your daily smiles for your friends, family and community.

better A+ scholastic performance

According to the *Journal of the Illuminating Engineering Society*, classrooms with large windows or skylights, helped students improve their performance at a rate of 15-23% in one year, over students in nearly windowless classrooms. Students in naturally lit classrooms, with even, uniform lighting (regardless of window type) showed an increased rate of improved performance 20-26% when compared to students in classrooms with insufficient or poor quality daylighting.

3. Direct/Indirect lighting is directed partially at the ceiling and partially onto the worksurface. The reflected light creates less glare in the classroom, leading to better lighting on the worksurface and less eye strain. The lighting is controlled with sensors that dim the lights when adequate natural light is available.

4. Light shelves in the windows can serve two purposes. First, they can shade spaces near the windows from glare. And second, they can bounce light up onto reflective ceilings and deeper into the building.

2. The principal means of harvesting daylight is through windows. The amount, size and configurations of windows determine how much light enters spaces and where it falls. Designers must also choose types of glass for light quality, thermal quality and glare control.
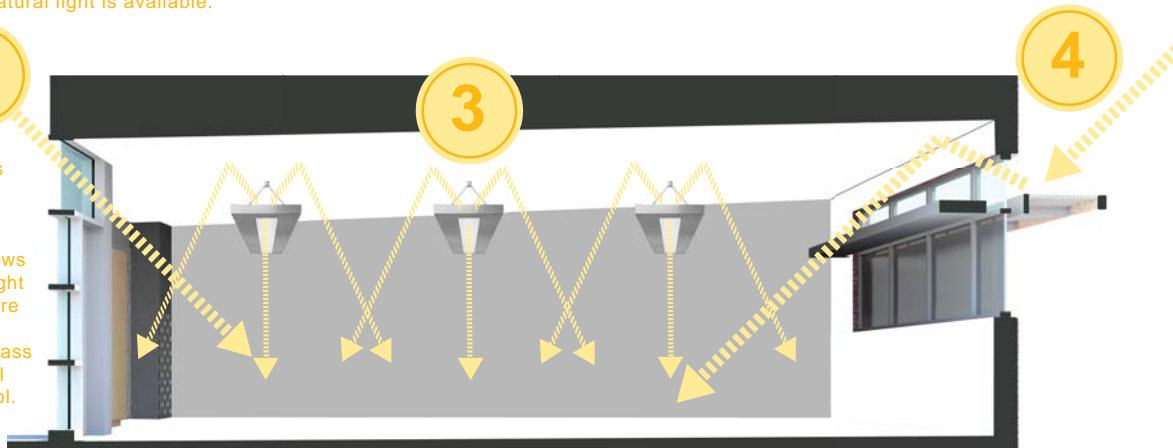
The relative intensity of the sun's light necessitates that buildings be carefully crafted to create appropriate daylight conditions inside. Daylighting isn't about using a lot of glass. It's about how the building is oriented relative to the sun's path across the sky. It is about the size and shape of the building. It is about managing the amount and quality of the light allowed into the building at different times of day. Finally it is about determining optimal means of letting light into the building, in which glass plays a role.

The sun provides 7,000 to 10,000 foot-candles of light, while indoor learning spaces need only about 50 foot-candles. Too much light causes glare and the "cave effect", where the back of the room appears dark compared to other surfaces. This encourages people to close the blinds and turn on overhead lights to cut down the contrast in the room. Well-designed daylighting lets in natural light that balances overhead electric lighting while curtailing glare.

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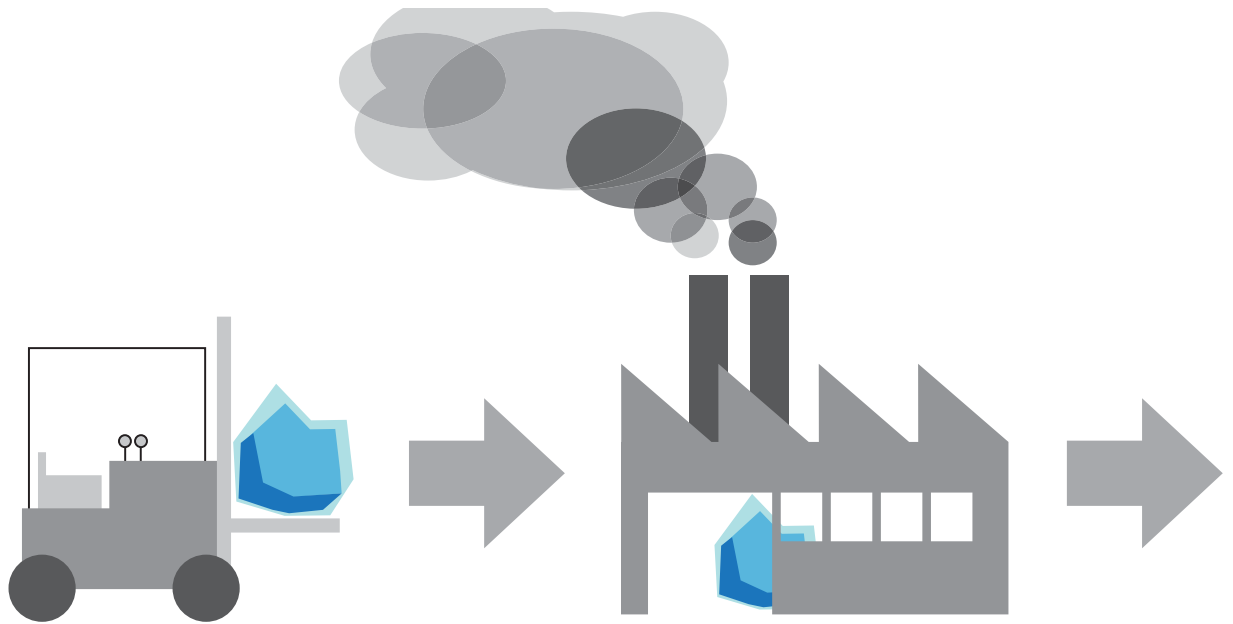
Stage 1: Raw Materials
- Mining metal ore and smelting into metal alloys.
- Pumping oil and cracking into fuel to make plastics.
- Refining sand into glass and semiconductors.
- Cutting trees and processing them into wood or paper.

Stage 2: Manufacture – parts formation and assembly
- Transforming material into parts via cast or tool.
- Combining parts into subassemblies.
- Combining subassemblies into products.
- Packing products for distribution.

MATERIALS
PRODUCT LIFE CYCLE
How recycling is only one part of a chain of choices

Humans produce waste. Some of it is natural, a majority of it is not. Waste and harmful toxins from manufacturing processes go right into our earth, water and air. Living sustainably includes making choices that at least reduce waste, and at best eliminate it altogether. A choice that you can make right now is to sort recyclable waste from garbage in order to reduce landfills and other harmful collections of trash.

You can recycle to help alleviate these problems. Recycling involves processing used materials into new products to prevent wasting potentially useful materials. It reduces the consumption of new raw materials and energy, and reduces air and water pollution, which are caused by incinerators and landfills. Recycling also lowers greenhouse gas emissions by reducing the need for conventional waste disposal.

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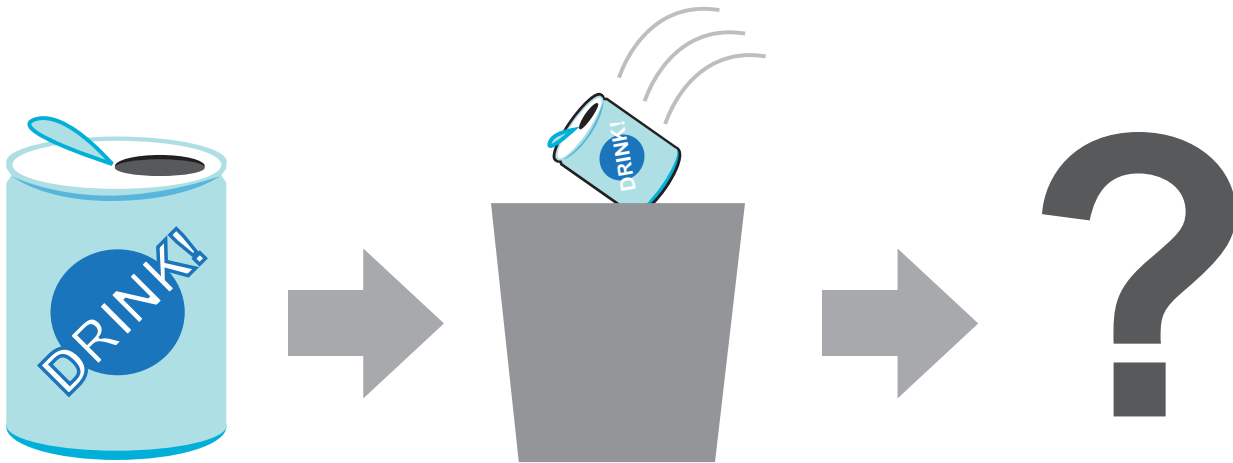
Stage 3: Use – from shelf to consumers
- Exposure of product in retail outlet.
- Support by advertising media.
- Information about product (staff, advertising, leaflet).

Stage 4: Use – consumption of product
- Installation of products.
- First use, regular use, or one time use.
- Maintenance and repair.

Stage 5: Disposal – collecting and moving the used product
- Consumer chooses waste or recycling.
- Consumer uses the collection system.
- Collectors sort and process the material.

Stage 6: Disposal – reuse, recycling and disposal, and sorting and processing
- If reusable, the product is serviced, repackaged and redistributed.
- If recyclable, the product is disassembled: recyclable components are sent to recycling centers and non-recyclable components treated as disposable.
- If none of these apply, the product is landfilled or incinerated.

Before you purchase a product, make sure it's something you really need, something that improves your quality of life and that of those around you. Then consider its life cycle from beginning to end. Is this product reusable or recyclable, or will it be thrown away? Garbage leads to landfills and litter.

Garbage also pollutes our oceans. Marine litter frequently washes up on our beaches, and has even formed into gyres—large islands of floating trash. The Great Pacific Garbage Patch alone has been estimated to be larger than the state of Texas! By making responsible consumer choices in products and waste, you can help solve these growing problems.

Each stage outlined above could consume resources such as energy and water. Pollutant emissions and other wastes are created at each stage, as well as during the transfer of materials between stages.

Recycling is important, but only represents one stage in a product's life cycle. In addition to recycling, you can have a positive impact on your environment by consuming less, choosing longer-lasting products and avoiding manufactured products.

Sustainable designers choose plants that:

Belong here

Over eons, certain plants have evolved to grow harmoniously within specific ecologies. Taking a plant species into an entirely different ecological zone can have negative impacts: from something as minor as the plant being unable to grow, to something as major as completely taking over and ruining a landscape. For this reason, sustainable designers choose native plant species that will thrive in the local ecology.

Save water

Some plant species require less water to live and grow than others. Sustainable designers choose such plants (called drought-tolerant species) for building landscapes to reduce our water use in taking care of plants, conserving this important natural resource. Often, a sustainably designed landscape can live principally on rainfall.

Additionally, plantings in balance with the natural water cycle can help prevent water-related issues due to reduction in water consumption or irrigation!

LANDSCAPE
GREEN GOES BEYOND THE LEAVES
How plantings contribute to sustainable landscapes

A sustainable landscape is more than exterior decoration. By using less water, fertilizer, and pesticides than a traditional landscape, it has minimal impact on the environment. Thus, it is both aesthetically pleasing and environmentally sound. Creating a sustainable landscape means working toward a thoughtful balance between resources used and results gained. Generally, a sustainable landscape is also low-maintenance.

In order to create a sustainable garden, you might need to change your idea of what a landscape should look like. Perfect lawns, plants, and fruits are all desirable. However, by adjusting your expectations slightly, you can reduce the labor and chemicals used in your landscape, while still achieving pleasing results.

When you look around campus, can you identify the types of plants selected for this landscape?

DECIDUOUS CANOPY TREES

White Oak

Sycamore

Sweet Gum

EVERGREEN TREES / SHRUBS

Shrubby Yew Pine

DLR Group

Preserve soil

Through geological erosion, soil is naturally removed by the action of water or wind. Natural processes replenish eroded soil over time. The interference of people on a site can accelerate erosion unnaturally and lead to damaging losses. Selecting sustainable vegetation, trees, ground cover, shrubs and other plants for building landscapes can prevent unnatural erosion. Roots from these plants help hold soil in place on the ground.

Reduce toxins

Plants can get diseases just like people and animals, and are susceptible to pests like destructive insects. Taking care of these plants can involve the use of chemicals that are toxic to people. Sustainable designers can choose plants that are naturally resistant to pests and diseases, and minimize any need for such chemical-based caretaking. Selecting pest and disease-resistant plants maintains good soil and water quality, protects local animal and (beneficial) insect life, and keeps us healthier!

Provide beauty

Sustainable plant choices help create a landscape in harmony with natural conditions. The plants themselves are pleasing to look at, smell and even touch. They can attract benefical animals and insects. They create a much more natural outdoor condition than non-sustainable planting—an experience of nature that studies have shown to improve peoples emotional and psychological well-being.

Drought tolerant landscaping

A sustainable landscape requires as much, if not more, planning as a traditional landscape. The goal is to create a plant community that becomes easier to care for as it matures.

Careful plant selection is the key to developing a self-perpetuating landscape. By selecting the right plant for the right place, you can greatly reduce the need for water, fertilizer, pesticides, and labor. Proper plant placement also prevents soil erosion, influences a building's summer cooling and winter heating needs, and attracts beneficial insects and wildlife, all of which make the landscape an asset to the local environment.

DECIDUOUS ORNAMENTAL TREES

Japanese Maple

Red Maple

Crape Myrtle

DECIDUOUS SHRUBS
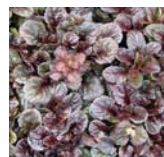
Carpet Bugle

GRASSES

Red Fountain Grass

Dwarf Fescue

Sustainability

Building as a Learning Tool

Green Valley Ranch E-12 Campus

Alexander Graham Bell Elementary School

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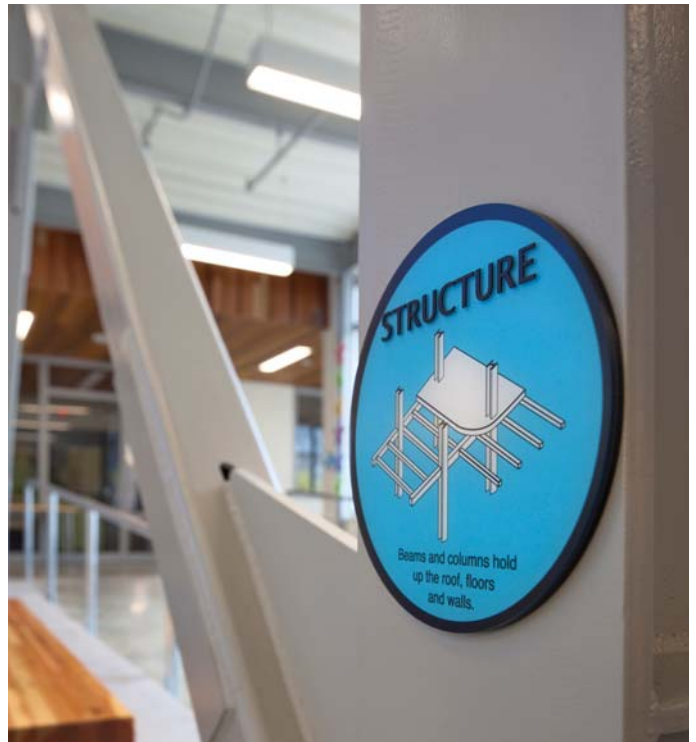
Alexander Graham Bell Elementary School

Sunnycrest Elementary School

DLR Group

Southridge Elementary School

3.4 Guidelines for the 21st-Century Classroom for Natomas USD

Having provided guidelines of design considerations for new and modernized Natomas USD facilities, along with 21st-Century design transformations for schools, this section of the Educational Specifications addresses the specifics of the future classroom. By defining the key elements to be included in the 21st-Century classroom, this section shall serve as the roadmap in the design of new and modernized classrooms in the District. Since not every grade has the same environmental needs, and not every teacher delivers education in the same manner, the guidelines provided have flexibility to be adapted to each site and classroom.

In designing the Natomas 21st-Century classroom, the key tenets to consider are:

- Flexibility of Space
- Flexibility of Furniture
- How Do Students Work
- Quick and Quiet Adaptations
- Creating Collaboration
- Infusing Technology into Spaces
- Highlighting the Student
- Connect to Outdoors

21st-Century Classroom Components

Flexibility of Space
- Minimize built-ins/minimize storage
- No front of room
- Ability to project on multiple walls
- Provide areas and furniture for different uses—individual, groups (4 students usually), lounging, studying
- Larger classroom for more students
- Whiteboards or paint on multiple walls (maximize surfaces)

Flexibility of Furniture
- Wheels to move
- Consider shapes of furniture—square and rectangular desks and tables preferred
- Mobile desks
- Tables with whiteboard tops
- Adjustable heights and configurations of tables and desks

How Do Students Work
- Comfortable furniture
- Soft seating for studying
- Groups of 4 to work
- Groups of 4-6 around computer
- Access to technology and charging
- Stand-up work areas (bars)

Quick and Quiet Adaptations
- Folding furniture (tables and chairs) to move aside
- Mobile furniture
- Flexibility with ability to insulate walls for sound
- Noise control between spaces

Creating Collaboration
- Operable walls and barn doors
- Open to adjacent classrooms and spaces
- Various size groups

Infusing Technology into Spaces
- Access to 110V power and USB for charging at walls, floors
- Projector that pivots to show on multiple walls with whiteboards
- Good speaker system—zone controls
- Eliminate cords on floor and overhead
- Wi-Fi for 1:1 devices
- Daylight control through easily operated window coverings

Highlighting the Student
- Areas for display of work
- Ability to feel comfortable in space
- Students need place for their stuff
- Socialization

Connect to Outdoors
- Daylighting
- Windows for view connection
- Transparency
- Roll-up garage doors to outside
- Covered exterior
- Seating areas

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Examples:

Built-in-Cabinets

SLIDING WHITE BOARD / BUILT-IN STORAGE

SINK

80" LCD

PROJECTOR

GARAGE DOOR

50" LCD

FOLDING WALL

Lower-Grade Grouping

SINK

BUILT-IN STORAGE

80" LCD

SLIDING WHITE BOARDS

PROJECTOR

GARAGE DOOR

50" LCD

FOLDING WALL

Mediascape Plan

SLIDING WHITE BOARDS

SINK/CABINET

PROJECTOR

WHITE BOARD WALL

GARAGE DOOR

80" LCD

FOLDING WALL

Node Plan

SINK/CABINET

80" LCD

SLIDING WHITE BOARD

PROJECTOR

GARAGE DOOR

80" LCD

FOLDING WALL

4
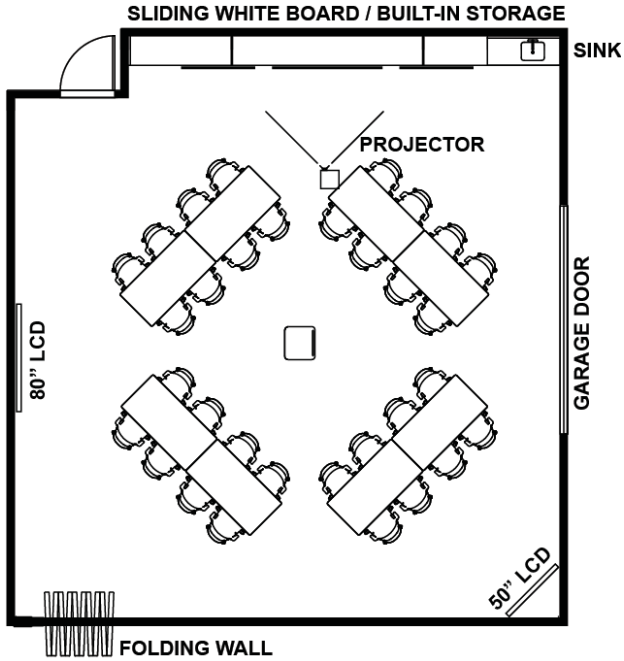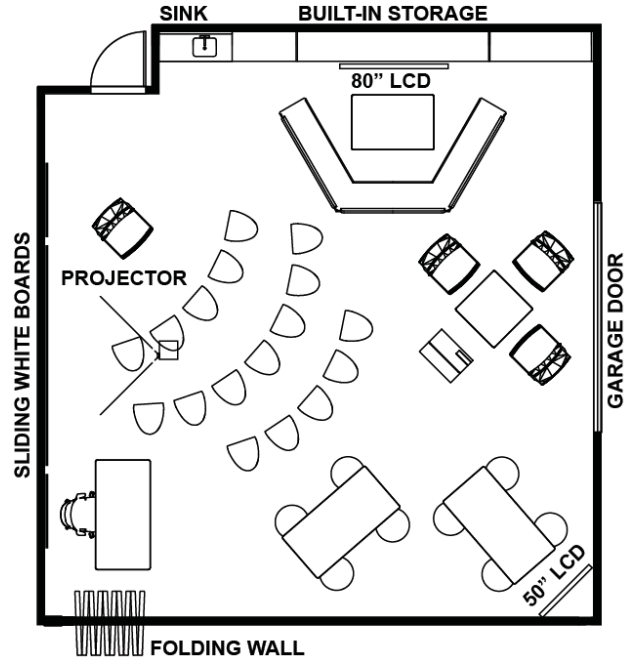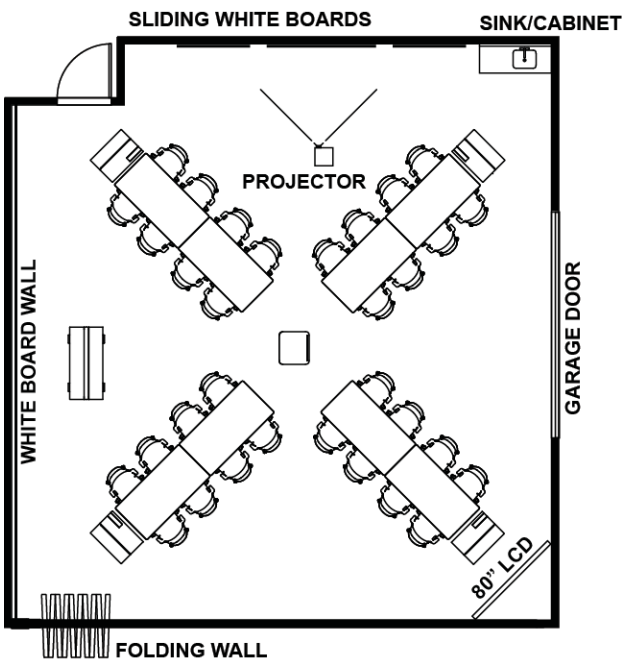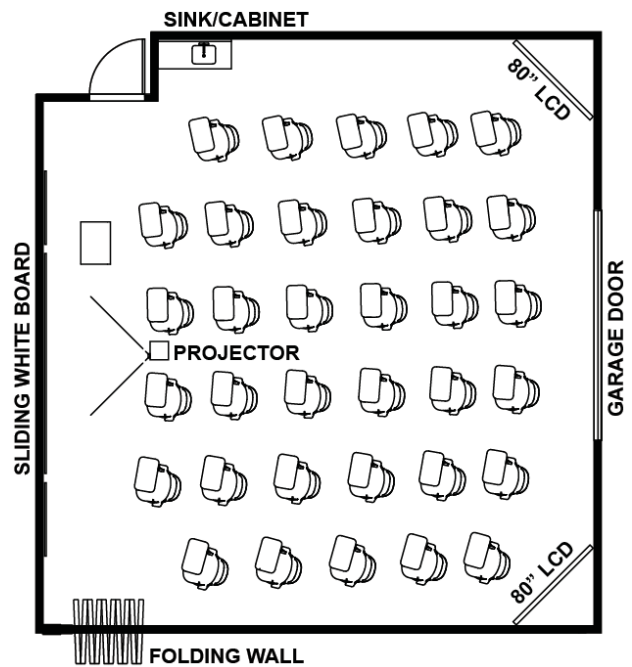
elementary school tk-5/k-8
spatial requirements

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4.1   Spatial Requirements and Relationships

With an expected minimum life span of 50 years, a school will inevitably undergo changes throughout its life. Change may be technological, spatial, and /or academic. The design of educational facilities must consider how a facility will change over time. This section of educational specifications contains detailed information about the major spaces or functional areas that should be provided in each **elementary school and K-8 school**, whether it is a new or modernized existing campus. This section provides a detailed Spatial Program organized by 14 components or departments based on an elementary school with a population of 582 students, and a K-8 school with a population of 966 students. Each of the components or departments are provided with an adjacency diagram and general description and goals that are followed by individual data sheets for each room or space within that component or department.

The educational specification data sheets for each space contains the following information:

- The total net recommended area of the space which corresponds to the spatial program.
- The total number of occupants that will typically use the space.
- A brief description of the activities and uses of the space.
- The identification of support spaces needed to support the activity or use of the space, including any exterior areas.
- A description of the building system requirements needed for the space including mechanical, plumbing, electrical/lighting, and technology.
- Door and window recommendations for the space including glazing. A description of the amount of daylighting, window coverings, transparency and security of the doors and windows.
- A description of the type and number of furnishings that will be used in the space. Any built-in equipment, casework, and millwork needed for the space described with approximate quantities.
- A description of any special considerations of the space including materials and finishes, ceiling height, acoustics, built-in instructional aids, aesthetics and flexibility of the space.

All rooms are required to meet California Department of Education (CDE) standards for approval. CDE recognizes the trends of 21st-Century designs and are flexible to approve classrooms which are not 960sf boxes.

4.2   Spatial Program

The Spatial Program summarizes the number and sizes of spaces to be contained within the new elementary school for the Natomas Unified School District. The space program recommendations are the result of District staff and DLR Group's elementary / K-8 school planning and design experience. The program is separated into fourteen organizational components/departments:

Administration

TK-K Instructional Community

1-3 Instructional Community

4-5 Instructional Community

Special Education

Specialty Labs

Learning Commons/Media Center

K-5 Multi-purpose Room

Nutritional Services

Outdoor Learning

Maintenance/Misc.

Add for K-8 School

6-8 Instructional Community

K-8 Gymnasium

K-8 Cafeteria (delete K-5 Multi-purpose Room)

The spatial program includes recommendations for the number of primary occupants, number of spaces, enrollment capacity provided by the District, net square feet per space and total net square feet per component. Each teaching station was not given a utilization percentage; therefore the program assumes 100% utilization of every space. The enrollment capacity is a mathematical calculation of the number of students accommodated by a teaching station(s) at any time during the school day (number of occupants X number of spaces).

Since the District has several existing campuses and the bulk of the future work will be modernization or addition of new buildings, the spatial program is designed to have several components or buildings that the District can choose from for an elementary school. Each component is given its own net subtotal, circulation and services percentage and a gross square footage total. The document is designed for the District to take a component out of the spatial program along with its spatial type data sheets to design a new elementary school, add to or modernize an existing one.

The following spatial program is a generic program for an elementary school that relates to Natomas Unified School District to apply to future projects within the District. If the campus size is smaller or larger than the program target student population, the spatial program sizes and number of rooms should be proportionately and logistically adjusted.

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Spatial Program - Elementary School TK-5/K-8

Space/Functional Area	No. of Spaces	Net S.F.	Total Net S.F.	No. of T.S.	No. of Students	Capacity	Notes
ADMINISTRATION							
Reception / Welcome Center	1	250	250				Near the drop off
Student Gallery Space	1	60	60				Inspirational 3D & 2D Art
Student Reception/Waiting	1	100	100				Separate Entry from Public Reception directed towards the campus
Admin/Open Office	3	80	240				
Principal Office	1	180	180				
Assistant Principal Office	1	120	120				
Staff Room / Workroom	1	900	900				Includes Mail and Copy - Division between workroom and staff room
Storage	1	100	100				
Health Exam/Cot Area	1	200	200				1-2 cots with access to the outside
Health Assistant Office	1	80	80				
Toilet	1	80	80				Includes a shower
Storage	1	60	60				
Conference Room	1	250	250				10-15 People (20sf per person)
Parent Workroom/Resource Room	1	300	300				
Staff Restrooms	2	60	120				
Administration SubTotal			**3,040**				
TK-K INSTRUCTIONAL COMMUNITY							
Classroom/Studio	4	1,350	5,400	4	24	96	Classroom s.f. minimum per CDE (1is TK)
Teacher Collaboration	1	200	200				Shared space between studios
Toilets	6	50	300				2 each studio
Outdoor Learning							Gardens, seating areas and learning landscapes
Outdoor Covered Area							Play equipment area
TK-K Community SubTotal			**5,900**	**4**		**96**	
1-3 INSTRUCTIONAL COMMUNITY							
Classroom/Studio	9	960	8,640	9	24	216	Classroom
First Grade Restrooms	2	65	130				
Small Group Collaboration	4	200	800				BreakOut Space
Teacher Collaboration	3	200	600				
Community Restrooms	2	180	360				
Outdoor Learning							Gardens, seating areas, study and learning landscapes
1-3 Community SubTotal			**10,530**	**9**		**216**	
4-5 INSTRUCTIONAL COMMUNITY							
Classroom/Studio	9	960	8,640	9	30	270	Classroom
Small Group Collaboration	4	200	800				BreakOut Space
Teacher Collaboration	3	200	600				
Community Restrooms	2	180	360				
Outdoor Learning							Gardens, seating areas, study and learning landscapes
4-5 Community SubTotal			**10,040**	**9**		**270**	
SPECIAL EDUCATION							
Learning Center/Classroom	2	960	1,920				Number of Learning Centers vary per school and program. Special Day Class (SDC), Resource Program Specialist (RSP), Independent Learning Study (ILS)
Occupational Therapy (OT)	1	100	100				Space within the Motor Room
Motor/Sensory/Adaptive P.E.	1	960	960				Space needed at sites where autism exists.
Child Break Area	1	0	0				With-in Learning Center
Kitchen	1	120	120				
Laundry	1	80	80				
Restroom/Changing Room	1	75	75				With changing table

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Spatial Program - Elementary School TK-5/K-8

Space/Functional Area	No. of Spaces	Net S.F.	Total Net S.F.	No. of T.S.	No. of Students	Capacity	Notes
Administration Suite							
Teacher Office	1	100	100				
Teacher Office/Testing	1	100	100				Shared with office or small group
Psychologist	1	100	100				
Speech Therapy	1	100	100				
Work Room	1	180	180				
Conference Room/Small Group	1	150	150				
Outdoor Play Area	1	0	0				Exterior Space
Special Education SubTotal			3,985	0	0		
SPECIALTY LABS							
Music/Band Room	1	1600					For K-5 and K-8 Campus
Instrument Storage	1	200					Includes locker storage for instruments
Project Based Lab / Art Studio	1	1,300	1,300				Innovation Center/Maker Space
Art Storage	1	200	200				
Student Display	1	150	150				Could be in a corridor or along extrior walls
Outdoor Patio	1						Exterior Space
Project Lab SubTotal			1,650	0	0		
LEARNING COMMONS / MEDIA CENTER							
Control/Help Desk/Genius Bar	1	100	100				Genius Desk
Stacks	1	800	800				12,500 Volumes
Storage	1	120	120				Includes chrome book storage
Reading Area/Lounge	1	960	960				Space for a class to sit.
Computer Area	1	500	500				
Learning Commons/Media Center SubTotal			2,480		0		
K-5 MULTI-PURPOSE ROOM							
Dining Commons/P.E.	1	4,400	4,400				Sized for 275 students eating at one time on round tables using 16 s.f. per student - if double sided rectangular tables are used then 2700 s.f. is acceptable using 9 s.f. per student.
Public Restrooms	2	200	400				
PE Storage	1	150	150				
PE Office	1	80	80				
Table and Chair Storage	1	250	250				
Stage	1	960	960				
Stage Storage	1	100	100				
Multi-purpose SubTotal			6,340		0		
NUTRITION SERVICES							
Kitchen	1	500	500				Desk space and lockers
Servery	1	240	240				
Staff Toilet	1	60	60				
Cooler Walk-in	1	150	150				
Freezer Walk-in	1	150	150				
Dishwashing	1	80	80				
Dry Storage	1	200	200				
Nutritional Services SubTotal			1,380		0		
OUTDOOR LEARNING							
Amphitheater							Exterior Space
Outdoor classrooms							Exterior Space
MAINTENANCE / MISC							
Student Restrooms	4	180	720				May vary per campus/review code.
Staff Restrooms	4	65	260				May vary per campus/review code.
Cutodial	4	60	240				
Storage	4	60	240				
Maintenance SubTotal			1,460				

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Space/Functional Area	No. of Spaces	Net S.F.	Total Net S.F.	No. of T.S.	No. of Students	Capacity	Notes
FOR K-8 SCHOOL (Add these components)							
6-8 INSTRUCTIONAL COMMUNITY							
Art Studio	1	1,200	1,200	1	0	0	
Art Storage	1	100	100				
Art Patio							
Prep/Storage	1	300	300				
Community Restrooms	2	180	360				
6th Grade Neighborhood							
Classroom	4	960	3,840	4	32	128	
Science Lab	1	1,350	1,350	1	0	0	
FLEX/Small Group	1	600	600				
Teacher Workroom	1	200	200				
7th Grade Neighborhood							
Classroom	4	960	3,840	4	32	128	
Science Lab	1	1,350	1,350	1	0	0	
FLEX/Small Group	1	600	600				
Teacher Workroom	1	200	200				
8th Grade Neighborhood							
Classroom	4	960	3,840	4	32	128	
Science Lab	1	1,350	1,350	1	0	0	
FLEX/Small Group	1	600	600				
Teacher Workroom	1	200	200				
6-8 Instructional SubTotal			19,930	16		384	
K-8 CAFETERIA							
Dining Commons/Elementary P.E.	1	4,400	4,400				Includes area for a small platform in space. Sized for 275 students eating at one time on round tables using 16 s.f. per student - if double sided rectangular tables are used then 2700 s.f. is acceptable using 9 s.f. per student.
K-5 P.E. Storage	1	150	150				
Table and Chair Storage	1	250	250				
K-8 Cafeteria SubTotal			4,800			0	
K-8 GYMNASIUM							
Public Restrooms	2	200	400				
Lobby	1	200	200				
Gymnasium	1	7,000	7,000				250 Seats
Gym Storage	1	150	150				
Stage	1	960	960				
Stage Storage	1	100	100				
Girls Locker Room	1	650	650				
Boys Locker Room	1	650	650				
Girls Team Room	0	0	0				Included in the Locker Room
Boys Team Room	0	0	0				Included in the Locker Room
Girls Restroom	1	200	200				
Boys Restroom	1	200	200				
Girls Storage	1	100	100				Located off the locker room
Boys Storage	1	100	100				Located off the locker room
Coach's Office	2	100	200				
Toilet & Shower Room	2	80	160				
K-8 Gymnasium SubTotal			11,070	0		0	
SubTotal Square Footage			46,805				
Circulation & Services		15%	7,021				Electrical, IDF, MDF, and Mechanical
Campus Total Square Footage			53,826	22		582	*TK-5*
						384	*6-8*
			84,826	38		966	*K-8*

ELEMENTARY SCHOOL TK-5/ K-8
EDUCATIONAL SPECIFICATIONS

COMPONENT:

administration

ADJACENCY DIAGRAM

DROP-OFF

FRONT ENTRY

PARENT RESOURCE

RECEPTION/ WELCOME CENTER

STUDENT GALLERY

SECURED PERIMETER

CONFERENCE

ADMIN/ OPEN OFFICE

STAFF ROOM/ WORKROOM

M

W

PRINCIPAL

STAFF ENTRY

ASST. PRINCIPAL

STUDENT RECEPTION/ WAITING

HEALTH EXAM

T

STO.

STO.

FROM CAMPUS

HEALTH ASST.

EMERGENCY VEHICLE ACCESS

Entry

Direct (Main Spaces)

Direct (Support Space to Adjacent Room)

Indirect

ADMINISTRATION

Reception / Welcome Center	1	250	250	Near the drop off
Student Gallery Space	1	60	60	Inspirational 3D & 2D Art
Student Reception/Waiting	1	100	100	Separate Entry from Public Reception directed towards the campus
Admin/Open Office	3	80	240	
Principal Office	1	180	180	
Assistant Principal Office	1	120	120	
Staff Room / Workroom	1	900	900	Includes Mail and Copy - Division between workroom and staff room
Storage	1	100	100	
Health Exam/Cot Area	1	200	200	1-2 cots with access to the outside
Health Assistant Office	1	80	80	
Toilet	1	80	80	Includes a shower
Storage	1	60	60	
Conference Room	1	250	250	10-15 People (20sf per person)
Parent Workroom/Resource Room	1	300	300	
Staff Restrooms	2	60	120	
Administration SubTotal			**3,040**	

DESCRIPTION / GOALS

- The administrative office suite will oversee and coordinate all activities at the elementary school.
- The public reception/welcome center should be near the drop off and front of the school. Since all campuses need to be secured, this is the only point of entry at the exterior perimeter for visitors. The public must enter here before being allowed on campus. Visitors will then be permitted onto campus through the student reception area.
- The administrative offices should be located to allow visual supervision of vehicular traffic at the campus and the pedestrian traffic between buildings and outdoor learning, gathering, and activity spaces.
- It should be clear from the front of the school where the administration building is. Signage should be visible, readable and easy to understand.

ROOM:
PUBLIC ENTRY/WELCOME CENTER

SIZE: 250 sf
OCCUPANTS: Varies

ACTIVITIES AND USES

The first space everyone sees when coming to the campus. The space should feel welcome and inviting. It is a reception/waiting/seating area for students, parents or visitors awaiting appointments or needing informational, referral, or directional assistance. It is preferred to have visitor entry separated from student entry points with separate reception/waiting areas for each. Clerical and secretarial areas may be located to provide reception functions for both visitors and for students. The area also provides opportunity for exhibition of student work. This also becomes the point of access for the campus, secured perimeter where all visitors must check in before, in essence "buzzed" onto school grounds. Visitor parking area should be visually prominent at main campus entry and staff should have visual surveillance of visitor arrival.

SUPPORT SPACES

- Student Gallery Space: 60 sf
- Public restrooms: 2 @ 60 sf

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of area within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- N/A

ELECTRICAL / LIGHTING

- Outlets for general room requirements and workstation use
- Clean, segregated power distribution with surge suppression.
- Special lighting for student display area
- Glare reducing lenses
- Direct/indirect dimmable LED light fixtures
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP
- Hard-wired data outlet for network connectivity to accept online streaming of announcements, presentation of art, campus map and/or sustainability features
- Wireless access capable for most computer communications/applications
- Wired data outlet at reception workstation for network connectivity
- Access to file server, printer and scanner

DOORS / WINDOWS

- Visibility from adjacent public entry area and reception to front of school
- Natural light desirable
- Skylights acceptable
- Window coverings as required for sun/glare control
- Ability to lock down doors
- Keyless electronic lock access

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- Casual seating for 4-6 visitors in each reception/waiting area
- TV wall-mount brackets and TV monitor display
- Clock

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic tile or exposed structure
- Ceiling height: 9'-0" min. A higher volume may be desired for display of student work
- Wall material: painted gypsum board
- Floor material: vinyl composition tile, carpet tile or linoleum product
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools
- Colorful, inviting, public/student-friendly atmosphere

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

ROOM:
ADMIN / OPEN OFFICE

SIZE: 80 sf each totaling 240 sf
OCCUPANTS: 3 primary occupants

ACTIVITIES AND USES

Directly adjacent to the reception counter, the open office will house administrative assistants, attendance and/or clerks. Three staff workstations to conduct various office and administrative activities and assist faculty, staff, students, and visitors. The three staff shall include but not limited to the Principal's Secretary, Attendance or Reception and a Registrar.

The open office should have direct supervision to the reception/welcome center and the student reception/waiting area.

The health office should also be in close proximity for added supervision.

SUPPORT SPACES

- Student Reception/Waiting: 100 sf
- Secure Storage Room (records): 100 sf

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of area within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- No plumbing required

ELECTRICAL / LIGHTING

- Outlets for general room and workstation use
- Clean, segregated power distribution with surge suppression
- Glare reducing lenses
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP
- Wired data outlets at office workstations for local area network connectivity
- Hard-wired data outlet for network connectivity to accept online streaming of announcements, presentation of art, campus map and/or sustainability features
- Access to file server, printer and scanner
- Wireless access capable for most computer communications/applications

DLR Group

DOORS / WINDOWS

- Natural light desirable
- Window coverings as required for sun/glare control and privacy
- Ability to lock down doors
- Keyless electronic lock access
- Visibility to reception/welcome center

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- Administrative office workstations with file cabinets and lockable storage
- Guest chairs

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile or exposed structure
- Ceiling height: 9'-0" min.
- Wall material: painted gypsum board
- Floor material: carpet tile or linoleum product
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools,"

Part 1: Permanent Schools

- Clear visual connection through the reception/welcome center to the front of school and parking lot
- Clear visual connection from student waiting to campus circulation or courtyard

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

ROOM:
PRINCIPAL OFFICE

SIZE: 180 sf
OCCUPANTS: 1 primary occupant (+1-4 visitors)

ACTIVITIES AND USES

Office space to prepare materials and conduct administrative activities to include individual and small group informal and formal conferences and consultations with colleagues, staff, students and community members.

Private phone calls, planning and computer input.

SUPPORT SPACES

- Direct access to the Admin/Open Office Area
- Close proximity to the conference room

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of area within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- N/A

ELECTRICAL / LIGHTING

- Outlets for general room and workstation use
- Clean, segregated power distribution with surge suppression
- Glare reducing lenses
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP
- Wired data outlet at office workstation for local area network connectivity
- Hard-wired data outlet for network connectivity to accept online streaming of announcements, presentation of art, campus map and/or sustainability features
- Access to file server, printer and scanner
- Wireless access capable for most computer communications/applications

DLR Group

DOORS / WINDOWS

- Natural light desirable
- Sidelight at door for view into office area
- Window coverings as required for sun/glare control and privacy
- Direct access to the exterior through second door for security
- Ability to lock down doors
- Keyless electronic lock access

- Windows for exterior campus view
- Door to exterior

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- Administrative office workstation including file cabinets and wardrobe closet; lockable
- Credenza and bookcase

- Guest chairs
- Conference tables with chairs where required
- Clock
- Marker board

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9'-0" min.
- Wall material: painted gypsum board
- Floor material: carpet tile
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools,"

Part 1: Permanent Schools
- Direct exterior access
- Provide secondary entry/exit pathway that does not pass through welcome/reception area

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

ROOM:
ASSISTANT PRINCIPAL OFFICE

SIZE: 120 sf
OCCUPANTS: 1 primary occupant (+1-2 visitors)

ACTIVITIES AND USES

Office space to prepare materials and conduct administrative activities to include individual and small group informal and formal conferences and consultations with colleagues, staff, students and community members.

Private phone calls, planning and computer input.

SUPPORT SPACES

- Close proximity to the Admin/Open Office Area

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of area within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- No plumbing required

ELECTRICAL / LIGHTING

- Outlets for general room and workstation use
- Clean, segregated power distribution with surge suppression
- Glare reducing lenses
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP
- Wired data outlet at office workstation for local area network connectivity
- Hard-wired data outlet for network connectivity to accept online streaming of announcements, presentation of art, campus map and/or sustainability features
- Access to file server, printer and scanner
- Wireless access capable for most computer communications/applications

DLR Group

DOORS / WINDOWS
- Natural light desirable
- Sidelight at door for view into office area
- Window coverings as required for sun/glare control and privacy
- Ability to lock down door
- Windows for exterior campus view
- Door to exterior

FURNITURE / EQUIPMENT/ MILLWORK
- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- Administrative office workstations including file cabinets and wardrobe closet; lockable
- Credenza and bookcase
- Guest chairs
- Clock

SPECIAL CONSIDERATIONS
- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9'-0" min.
- Wall material: painted gypsum board
- Floor material: carpet tile
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools
- Provide secondary entry/exit pathway that does not pass through welcome/reception area

SUSTAINABILITY
- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

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Connecting students to their future

ROOM:
STAFF ROOM / WORKROOM

SIZE: 900 sf
OCCUPANTS: Varies

ACTIVITIES AND USES

A combination of staff lounge and workroom, staff will use this space for office supplies storage, printing, copy and mail distribution/delivery. Faculty and staff can collaborate with colleagues, take breaks, relax, dine and snack. There should be a division between the two areas at times, whether a moveable partition or even a glass wall for visibility between the two spaces. Depending on the campus, these rooms may want to be separated for accoustics and/or privacy. The staff room should be located the furthest from the public in the administrative area.

SUPPORT SPACES

- Staff Restrooms: 2 @ 60 sf
- Storage Room: 100 sf
- Should have direct access to the Open Office Area and campus circulation

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of area within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Room exhaust in kitchenette area
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- Counter sink with hot and cold water

ELECTRICAL / LIGHTING

- Outlets for general room and counter use
- Power for kitchenette appliances, vending machines, TV monitor display, copiers and other office machines
- Glare reducing lenses
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP
- Hard-wired data outlet for network connectivity to accept online streaming of announcements, presentation of art, campus map and/or sustainability features
- Wireless access capable for most computer communications/applications
- Wired data outlets at copiers and printers

DLR Group

DOORS / WINDOWS

- Natural light desirable
- Sidelight at door
- Window coverings as required for sun/glare control and privacy
- Skylights acceptable

- Windows for view into open office area
- Ability to lock down doors
- Keyless electronic lock access

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- Lounge seating
- Tables with chairs for lunch and team meeting
- Refrigerator
- Microwave oven
- TV monitor display screen
- TV monitor wall-mount bracket
- Vending machines

- Clock
- Kitchenette base cabinets with counter work surface, adjustable shelving and hinged doors and drawers, countertop sink, and locks (verify locations)
- Wall cabinets with adjustable shelving and hinged doors above base cabinets, locks (verify locations)
- (1) 4′ x 8′ tackboard and marker board
- Layout/work tables
- Misc. office equipment to include printers, scanners, fax and copy machines
- Mail slots for faculty and staff (verify # and size)
- Paper storage, shredder and cutter

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9′-0″ min.
- Wall material: painted gypsum board
- Floor material: vinyl composition tile, linoleum product, and/or carpet tile

- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

ROOM:
HEALTH EXAM / COT AREA

SIZE: 200 sf
OCCUPANTS: 1-3 student patient, 1 nurse

ACTIVITIES AND USES

Space for school nurse. An office for the nurse to perform administrative activities to include individual and small group conferences and consultations with colleagues, staff, students, and parents to be directly adjacent to this space. Reception/waiting/seating area for students awaiting medical care or discharge. Cot area available for students to lay down, rest and receive examination. Vision and hearing testing and isolation.

SUPPORT SPACES

- Toilet: 80 sf - direct access and includes a shower
- Storage: 60 sf
- Close proximity to Admin/Open Office Area

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of area within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- Countertop sink with hot and cold water

ELECTRICAL / LIGHTING

- Outlets for general room and workstation use
- Clean, segregated power distribution with surge suppression
- Glare reducing lenses
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset at workstation, VoIP
- Hard-wired data outlet for network connectivity to accept online streaming of announcements, presentation of art, campus map and/or sustainability features
- Access to file server, printer and scanner
- Wireless access capable for most computer communications/applications

DLR Group

DOORS / WINDOWS

- Natural light desirable
- Window desirable for supervision of reception area
- Window coverings as required for sun/glare control and privacy
- Skylights acceptable
- Ability to lock down doors
- Access to the exterior through separate exterior door.

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- (1-2) guest chairs
- 4-drawer file cabinets for records storage
- Medications storage cabinet
- Examination table and equipment

- (2) cots
- Curtain system to subdivide/isolate cot areas
- Clock
- Base cabinets with drawers, adjustable shelves and hinged doors, drawers, countertop sink, work station
- Overhead cabinets with adjustable shelving and hinged doors
- (1) 4′ x 4′ tackboard

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9′-0″
- Wall material: painted gypsum board
- Floor material: vinyl composition tile or linoleum product
- Provide 20′-0″ clear area within space or adjacent to area for vision testing

- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools,"
  Part 1: Permanent Schools

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

ROOM:
HEALTH ASSISTANT

SIZE: 80 sf
OCCUPANTS: 1 primary occupant

ACTIVITIES AND USES

Office space to prepare materials and conduct administrative activities to include individual and small group informal and formal conferences and consultations with colleagues, staff, students and community members.

Private phone calls, planning and computer input.

SUPPORT SPACES

- Close proximity to the Admin/Open Office Area
- Direct access to the Health Exam and Cot area.

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of area within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- No plumbing required

ELECTRICAL / LIGHTING

- Outlets for general room and workstation use
- Clean, segregated power distribution with surge suppression
- Glare reducing lenses
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP
- Hard-wired data outlet for network connectivity to accept online streaming of announcements, presentation of art, campus map and/or sustainability features
- Access to file server, printer and scanner
- Wireless access capable for most computer communications/applications

DLR Group

DOORS / WINDOWS

- Natural light desirable
- Sidelight at door for view into office area
- Window coverings as required for sun/glare control and privacy
- Ability to lock down door

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- Administrative office workstations including file cabinets; lockable
- Guest chairs
- Clock

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9'-0" min.
- Wall material: painted gypsum board
- Floor material: vinyl composition tile, linoleum product.
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools,"

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

ROOM:
CONFERENCE ROOM

SIZE: 250 sf
OCCUPANTS: 10-15 occupants

ACTIVITIES AND USES

Large and small group meetings/conferences for a variety of informal and formal student, faculty, and staff uses.

SUPPORT SPACES

- Direct access to Open Office Area and/or close proximity to the principal

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of area within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- N/A

ELECTRICAL / LIGHTING

- Outlets for general room and TV monitor display location
- Clean, segregated power distribution with surge suppression
- Glare reducing lenses
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP
- Hard-wired data outlet for network connectivity to accept online streaming of announcements, presentation of art, campus map and/or sustainability features
- Wireless access capable for most computer communications/applications
- Apple TV available for various network devices to connect to TV monitor display via iPad, Mac and Windows mirroring

DLR Group

DOORS / WINDOWS

- Natural light desirable
- Sidelight at door
- Window coverings as required for sun/glare control and privacy
- Skylights acceptable
- Windows for visual connection to open office area/ maximum transparency desired

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- Conference table(s) and chairs for flexible seating configurations
- 70″ TV monitor display
- TV monitor wall-mount bracket
- Clock
- (1) 4′ x 8′ marker board or full marker wall
- (1) 4′ x 4′ tackboard

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9′-0″ min.
- Wall material: painted gypsum board
- Floor material: vinyl composition tile, carpet tile or linoleum product
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

ROOM:
PARENT WORKROOM/ RESOURCE ROOM

SIZE: 300 sf
OCCUPANTS: 10

ACTIVITIES AND USES

A small group meeting and work area for parents and volunteers to meet and organize events. Space should be located at the front door or off of the main reception area.

SUPPORT SPACES

- None

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of area within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- No plumbing required

ELECTRICAL / LIGHTING

- Outlets for general room, and TV monitor display screen on front wall
- Clean, segregated power distribution with surge suppression
- Glare reducing lenses
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP
- Hard-wired data outlet for network connectivity to accept online streaming of announcements, presentation of art, campus map and/or sustainability features
- Wireless access capable for most computer communications/applications
- Wired data outlet at printer location

DLR Group

DOORS / WINDOWS
- Natural light desirable
- Sidelight at door
- Window coverings as required for sun/glare control
- Skylights acceptable
- Ability to lock down door

FURNITURE / EQUIPMENT/ MILLWORK
- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- Conference table(s) and chairs for flexible seating configurations
- TV monitor display
- TV monitor wall-mount bracket
- Wall cabinets with adjustable shelving and hinged doors above base cabinets; locks
- Base cabinets with counter work surface, adjustable shelving and hinged doors and drawers; locks
- Clock
- (1) 4′ x 8′ marker board or marker wall
- (1) 4′ x 4′ tackboard
- Printer

SPECIAL CONSIDERATIONS
- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9′-0″ min.
- Wall material: painted gypsum board
- Floor material: vinyl composition tile, linoleum product or carpet tile
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools

SUSTAINABILITY
- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

ELEMENTARY SCHOOL TK-5/ K-8
EDUCATIONAL SPECIFICATIONS

COMPONENT:

tk-k instructional community

ADJACENCY DIAGRAM

TK CLASSROOM/ STUDIO

CAMPUS & PARENT DROP-OFF

OUTDOOR PLAY / OUTDOOR LEARNING

K CLASSROOM/ STUDIO

SMALL GROUP OR FLEX SPACE

TEACHER COLLAB.

K CLASSROOM/ STUDIO

SPECIAL ED

B G

Legend:

→ Entry

↔ Direct (Main Spaces)

— Direct (Support Space to Adjacent Room)

⇠⇢ Indirect

TK-K INSTRUCTIONAL COMMUNITY							
Classroom/Studio	4	1,350	5,400	4	24	96	Classroom s.f. minimum per CDE (1 is TK)
Teacher Collaboration	1	200	200				Shared space between studios
Toilets	6	50	300				2 each studio
Outdoor Learning							Gardens, seating areas and learning landscapes
Outdoor Covered Area							Play equipment area
TK-K Community SubTotal			5,900	4		96	

DESCRIPTION / GOALS

- The elementary school school should be arranged into TK-K, 1-3, and 4-5 communities as much as is practicable and possible. While slightly more challenging, existing schools can be re-organized into grade-level communities, particularly "finger-wing" layouts (of which there are many in the district) wherein grade-level communities can be located in opposing building wings rather than remaining in a straight-line configuration within a single wing.

- The TK-K Community should be configured to allow this grade level to be kept together as an autonomous unit within the larger campus structure with restrooms, outdoor learning environments and play areas easily accessible to all community learning studios.

- The community should promote teacher collaboration and help advance the feeling of a professional learning environment for grade-level teachers.

- The community configuration should sustain the safety and foster the security of the TK-K learner by allowing easy and constant supervision by the community's teachers.

- Ideally, the TK-K Community is located with easy and close access to a parent drop-off/pick-up area that is separate from the school's main drop-off/pick-up area.

ROOM:
CLASSROOM / STUDIO

SIZE: 1350 sf
OCCUPANTS: 1 instructor, 24 students

ACTIVITIES AND USES

Whole group and small group lecture/discussion. Individual, small group, and whole group cooperative and collaborative teaching and learning activities, instructor group tutoring, peer tutoring, and student testing.

SUPPORT SPACES

- Toilets: 50 sf (2 per classroom)
- Adjacent to Outdoor Learning Area
- Adjacent to Outdoor Covered Play Area

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of room within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- Counter sink with drinking fountain bubbler
- Age appropriate toilets/sinks @ toilet rooms

ELECTRICAL / LIGHTING

- Outlets for general room, instructor workstation, chrome book and iPad charging and student computer workstations, TV monitor display locations
- Clean, segregated power distribution with surge suppression
- Glare reducing lenses
- Adjustable lighting levels via independently controlled banks of lights
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP on wall.
- Hard-wired data outlet for network connectivity to accept online streaming of announcements and other resources needed for classroom instruction
- Wireless access capable for most computer communications/applications
- Apple TV available for various network devices to connect to TV monitor display via iPad, Mac and Windows mirroring

DLR Group

DOORS / WINDOWS

- Natural light desirable
- Sidelight at door
- Window coverings with the ability to darken space
- Skylights acceptable
- Ability to lock down door
- Keyless electronic lock access

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- (1) instructor workstation (instructor should be mobile with in the classroom)
- (1) 80" TV monitor display
- (1) 50"-55" TV monitor display
- (2) TV wall-mount bracket
- Clock
- Base cabinets with counter work surface, adjustable shelving and hinged doors and drawers, countertop sink, and locks (verify locations)
- Wall cabinets with adjustable shelving and hinged doors above base cabinets, locks (verify locations)
- Tall storage cabinets with adjustable shelving and hinged doors, locks (verify locations), sufficient space for storage of digital document camera
- (2) 4' x 12' markerboards
- (4) 4' x 6' tackboards

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9'-0" min.
- Wall material: painted gypsum board
- Floor material: vinyl composition tile and/or carpet tile
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools
- Capability of opening (2) adjacent classrooms (per team) to each other via operable partition(s) to accommodate large group/team meeting configuration
- Flexible/mobile furniture

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

Natomas Unified School District
Connecting students to their future

ROOM:
TEACHER COLLABORATION

SIZE: 200 sf
OCCUPANTS: Varies

ACTIVITIES AND USES

Shared work area for teachers to prepare instructional materials, confer with colleagues, assist students, plan and develop curricula, and conduct activities related to teaching and learning. Activities also include formal and informal conferences and consultation with colleagues, staff and students.

SUPPORT SPACES

- None

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of room within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- N/A

ELECTRICAL / LIGHTING

- Outlets for general room and workstation use
- Clean, segregated power distribution with surge suppression
- Power for office machines
- Glare reducing lenses
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP
- Data outlets for local area network connectivity
- Hard-wired data outlet for network connectivity to accept online streaming of announcements and other resources needed for classroom instruction
- Wireless access capable for most computer communications/applications

DLR Group

DOORS / WINDOWS

- Natural light desirable
- Sidelight at door
- Window coverings as required for sun/glare control
- Skylights acceptable
- Maximum visibility to outdoor learning area
- Keyless electronic lock access

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- Work tables and chairs
- (3-5) instructor workstations along a wall
- Clock
- Base cabinets with counter work surface, adjustable shelving and hinged doors and drawers, locks (verify locations)
- Wall cabinets with adjustable shelving and hinged doors above base cabinets, locks (verify locations)
- Tall storage cabinets with adjustable shelving and hinged doors, locks (verify locations)
- (1) 4′ x 4′ tackboard

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9′-0″ min.
- Wall material: painted gypsum board
- Floor material: vinyl composition tile or carpet tile
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

ELEMENTARY SCHOOL TK-5/ K-8
EDUCATIONAL SPECIFICATIONS

COMPONENT:

1-3 instructional community

ADJACENCY DIAGRAM

2 CLASSROOM/ STUDIO

SMALL GROUP

2 CLASSROOM/ STUDIO

1 CLASSROOM/ STUDIO

3 CLASSROOM/ STUDIO

B

G

SMALL GROUP

TEACHER COLLAB.

FLEX SPACE

SMALL GROUP

1 CLASSROOM/ STUDIO

B

SPECIAL ED

G

3 CLASSROOM/ STUDIO

OUTDOOR LEARNING

→ Entry

↔ Direct (Main Spaces)

▬ Direct (Support Space to Adjacent Room)

◄--► Indirect

1-3 INSTRUCTIONAL COMMUNITY							
Classroom/Studio	9	960	8,640	9	24	216	Classroom
First Grade Restrooms	2	65	130				
Small Group Collaboration	4	200	800				BreakOut Space
Teacher Collaboration	3	200	600				
Community Restrooms	2	180	360				
Outdoor Learning							Gardens, seating areas, study and learning landscapes
1-3 Community SubTotal			10,530	9		216	

DESCRIPTION / GOALS

- The elementary school should be arranged into TK-K, 1-3, and 4-5 communities as much as is practicable and possible. While slightly more challenging, existing schools can be re-organized into grade-level communities, particularly "finger-wing" layouts (of which there are many in the district) wherein grade-level communities can be located in opposing building wings rather than remaining in a straight-line configuration in a single wing.

- While not as critical for the 1-3 Community as it is for the TK-K Community, the 1-3 Community should still be configured to allow these grades to be kept together as an autonomous unit within the larger campus structure with their own outdoor learning area that can be tailored to and be reflective of the community's requirements and activities.

- The community should promote teacher collaboration and help advance the feeling of a professional learning environment for grade-level teachers.

- The community configuration should sustain the security and foster the safety of the learner by allowing easy and constant supervision by the community's teachers.

- Small group collaboration spaces should be situated to allow access from two adjacent learning studios. The collaboration centers should support project-based curriculum by accommodating multiple, flexible small group activities.

- Learning studios should be connected to collaboration spaces through significant fenestration to ensure student safety as well as promoting transparency of the teaching and learning activities.

ROOM:
CLASSROOM

SIZE: 960 sf
OCCUPANTS: 1 instructor, 24 students

ACTIVITIES AND USES

Whole group and small group lecture/discussion. Individual, small group, and whole group cooperative and collaborative teaching and learning activities, instructor group tutoring, peer tutoring, and student testing.

SUPPORT SPACES

- Adjacent to Outdoor Learning Area
- First Grade Restrooms: 2 @ 65 sf
- Community Restrooms: 2 @ 180 sf Access to the outdoor learning area.

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of room within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- Counter sink with drinking fountain bubbler
- Age appropriate toilets/sinks @ toilet rooms

ELECTRICAL / LIGHTING

- Outlets for general room, instructor workstation, chrome book and iPad charging and student computer workstations, TV monitor display locations
- Clean, segregated power distribution with surge suppression
- Glare reducing lenses
- Adjustable lighting levels via independently controlled banks of lights
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP on wall.
- Hardwired data outlet for network connectivity to accept online streaming of announcements and other resources needed for classroom instruction
- Wireless access capable for most computer communications/applications
- Apple TV available for various network devices to connect to TV monitor display via iPad, Mac and Windows mirroring

DLR Group

DOORS / WINDOWS

- Natural light desirable
- Sidelight at door
- Window coverings with the ability to darken space
- Skylights acceptable
- Ability to lock down door
- Keyless electronic lock access

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- (1) instructor workstation (instructor should be mobile with in the classroom)
- (1) 80″ TV monitor display
- (1) 50″-55″ TV monitor display
- (2) TV wall-mount bracket
- Clock
- Base cabinets with counter work surface, adjustable

shelving and hinged doors and drawers, countertop sink, and locks (verify locations)
- Wall cabinets with adjustable shelving and hinged doors above base cabinets, locks (verify locations)
- Tall storage cabinets with adjustable shelving and hinged doors, locks (verify locations), sufficient space for storage of digital document camera
- (2) 4′ x 12′ marker boards
- (4) 4′ x 6′ tackboards

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9′-0″ min.
- Wall material: painted gypsum board
- Floor material: vinyl composition tile and/or carpet tile

- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools
- Capability of opening (2) adjacent classrooms (per team) to each other via operable partition(s) to accommodate large group/team meeting configuration
- Flexible/mobile furniture

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

ROOM:
SMALL GROUP COLLABORATION

SIZE: 200 sf
OCCUPANTS: Varies

ACTIVITIES AND USES

Small group meeting and conference area for a variety of informal and formal student, faculty, and staff uses.

SUPPORT SPACES

- None

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of room within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- N/A

ELECTRICAL / LIGHTING

- Outlets for general room and workstation use
- Clean, segregated power distribution with surge suppression
- Power for office machines
- Glare reducing lenses
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP on wall.
- Data outlets for local area network connectivity
- Hard-wired data outlet for network connectivity to accept online streaming of announcements and other resources needed for classroom instruction
- Wireless access capable for most computer communications/applications

DLR Group

DOORS / WINDOWS

- Interior wall glazing desirable - supervision from circulation desk and/or office areas
- Natural light desirable
- Sidelight at door
- Window coverings as required for sun/glare control
- Skylights acceptable
- Maximum visibility to outdoor learning area
- Keyless electronic lock access

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- Work tables and chairs
- (3-5) instructor workstations along a wall
- Clock
- Base cabinets with counter work surface, adjustable shelving and hinged doors and drawers, locks (verify locations)
- Wall cabinets with adjustable shelving and hinged doors above base cabinets, locks (verify locations)
- Tall storage cabinets with adjustable shelving and hinged doors, locks (verify locations)
- (1) 4' x 4' tackboard

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9'-0" min.
- Wall material: painted gypsum board
- Floor material: vinyl composition tile or carpet tile
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

ROOM:
TEACHER COLLABORATION

SIZE: 200 sf
OCCUPANTS: Varies

ACTIVITIES AND USES

Shared work area for teachers to prepare instructional materials, confer with colleagues, assist students, plan and develop curricula, and conduct activities related to teaching and learning. Activities also include formal and informal conferences and consultation with colleagues, staff and students.

SUPPORT SPACES

- None

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of room within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- N/A

ELECTRICAL / LIGHTING

- Outlets for general room and workstation use
- Clean, segregated power distribution with surge suppression
- Power for office machines
- Glare reducing lenses
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP
- Data outlets for local area network connectivity
- Hard-wired data outlet for network connectivity to accept online streaming of announcements and other resources needed for classroom instruction
- Wireless access capable for most computer communications/applications

DLR Group

DOORS / WINDOWS

- Natural light desirable
- Sidelight at door
- Window coverings as required for sun/glare control
- Skylights acceptable
- Maximum visibility to outdoor learning area
- Keyless electronic lock access

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- Work tables and chairs
- (3-5) instructor workstations along a wall
- Clock
- Base cabinets with counter work surface, adjustable shelving and hinged doors and drawers, locks (verify locations)
- Wall cabinets with adjustable shelving and hinged doors above base cabinets, locks (verify locations)
- Tall storage cabinets with adjustable shelving and hinged doors, locks (verify locations)
- (1) 4′ x 4′ tackboard

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9′-0″ min.
- Wall material: painted gypsum board
- Floor material: vinyl composition tile or carpet tile
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

ELEMENTARY SCHOOL TK-5/ K-8
EDUCATIONAL SPECIFICATIONS

COMPONENT:

4-5 instructional community

ADJACENCY DIAGRAM

4 CLASSROOM/ STUDIO

SMALL GROUP

5 CLASSROOM/ STUDIO

4 CLASSROOM/ STUDIO

TEACHER COLLAB.

5 CLASSROOM/ STUDIO

SMALL GROUP

FLEX SPACE

SMALL GROUP

4 CLASSROOM/ STUDIO

B

SPECIAL ED

G

5 CLASSROOM/ STUDIO

OUTDOOR LEARNING

→ Entry

↔ Direct (Main Spaces)

▬ Direct (Support Space to Adjacent Room)

←--→ Indirect

4-5 INSTRUCTIONAL COMMUNITY							
Classroom/Studio	9	960	8,640	9	30	270	Classroom
Small Group Collaboration	4	200	800				BreakOut Space
Teacher Collaboration	3	200	600				
Community Restrooms	2	180	360				
Outdoor Learning							Gardens, seating areas, study and learning landscapes
4-5 Community SubTotal			10,040	9		270	

DESCRIPTION / GOALS

- The elementary school should be arranged into TK-K, 1-3, and 4-5 communities as much as is practicable and possible. While slightly more challenging, existing schools can be re-organized into grade-level communities, particularly "finger-wing" layouts (of which there are many in the district) wherein grade-level communities can be located in opposing building wings rather than remaining in a straight-line configuration in a single wing.

- The 4-5 Community should be configured to allow these grades to be kept together as an autonomous unit within the larger campus structure with their own outdoor learning area that can be tailored to and be reflective of the community's requirements and activities.

- The community should promote teacher collaboration and help advance the feeling of a professional learning environment for grade-level teachers.

- The community configuration should sustain the security and foster the safety of the learner by allowing easy and constant supervision by the community's teachers.

- Small group collaboration spaces should be situated to allow access from two adjacent learning studios. The collaboration centers should support project-based curriculum by accommodating multiple, flexible small group activities.

- Learning studios should be connected to collaboration spaces through significant fenestration to ensure student safety as well as promoting transparency of the teaching and learning activities.

ROOM:
CLASSROOM

SIZE: 960 sf
OCCUPANTS: 1 instructor, 24 students

ACTIVITIES AND USES

Whole group and small group lecture/discussion. Individual, small group, and whole group cooperative and collaborative teaching and learning activities, instructor group tutoring, peer tutoring, and student testing.

SUPPORT SPACES

- Adjacent to Outdoor Learning Area
- Community Restrooms: 2 @ 180 sf - Access to the outdoor learning area

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of room within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- Counter sink with drinking fountain bubbler
- Age appropriate toilets/sinks @ toilet rooms

ELECTRICAL / LIGHTING

- Outlets for general room, instructor workstation, chrome book and iPad charging and student computer workstations, TV monitor display locations
- Clean, segregated power distribution with surge suppression
- Glare reducing lenses
- Adjustable lighting levels via independently controlled banks of lights
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP on wall.
- Hardwired data outlet for network connectivity to accept online streaming of announcements and other resources needed for classroom instruction
- Wireless access capable for most computer communications/applications
- Apple TV available for various network devices to connect to TV monitor display via iPad, Mac and Windows mirroring

DLR Group

DOORS / WINDOWS
- Natural light desirable
- Sidelight at door
- Window coverings with the ability to darken space
- Skylights acceptable
- Ability to lock down door
- Keyless electronic lock access

FURNITURE / EQUIPMENT / MILLWORK
- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- (1) instructor workstation (instructor should be mobile with in the classroom)
- (1) 80″ TV monitor display
- (1) 50″-55″ TV monitor display
- (2) TV wall-mount bracket
- Clock
- Base cabinets with counter work surface, adjustable shelving and hinged doors and drawers, countertop sink, and locks (verify locations)
- Wall cabinets with adjustable shelving and hinged doors above base cabinets, locks (verify locations)
- Tall storage cabinets with adjustable shelving and hinged doors, locks (verify locations), sufficient space for storage of digital document camera
- (2) 4′ x 12′ markerboards
- (4) 4′ x 6′ tackboards

SPECIAL CONSIDERATIONS
- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9′-0″ min.
- Wall material: painted gypsum board
- Floor material: vinyl composition tile and/or carpet tile
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools,"

Part 1: Permanent Schools
- Capability of opening (2) adjacent classrooms (per team) to each other via operable partition(s) to accommodate large group/team meeting configuration
- Flexible/mobile furniture

SUSTAINABILITY
- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

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ROOM:
SMALL GROUP COLLABORATION

SIZE: 200 sf
OCCUPANTS: Varies

ACTIVITIES AND USES

Small group meeting and conference area for a variety of informal and formal student, faculty, and staff uses.

SUPPORT SPACES

- None

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of room within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- N/A

ELECTRICAL / LIGHTING

- Outlets for general room and workstation use
- Clean, segregated power distribution with surge suppression
- Power for office machines
- Glare reducing lenses
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP on wall.
- Data outlets for local area network connectivity
- Hard-wired data outlet for network connectivity to accept online streaming of announcements and other resources needed for classroom instruction
- Wireless access capable for most computer communications/applications

DLR Group

DOORS / WINDOWS

- Interior wall glazing desirable - supervision from circulation desk and/or office areas
- Natural light desirable
- Sidelight at door
- Window coverings as required for sun/glare control
- Skylights acceptable
- Maximum visibility to outdoor learning area
- Keyless electronic lock access

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- Work tables and chairs
- (3-5) instructor workstations along a wall
- Clock
- Base cabinets with counter work surface, adjustable shelving and hinged doors and drawers, locks (verify locations)
- Wall cabinets with adjustable shelving and hinged doors above base cabinets, locks (verify locations)
- Tall storage cabinets with adjustable shelving and hinged doors, locks (verify locations)
- (1) 4' x 4' tackboard

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9'-0" min.
- Wall material: painted gypsum board
- Floor material: vinyl composition tile or carpet tile
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

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4

ROOM:
TEACHER COLLABORATION

SIZE: 200 sf
OCCUPANTS: Varies

ACTIVITIES AND USES

Shared work area for teachers to prepare instructional materials, confer with colleagues, assist students, plan and develop curricula, and conduct activities related to teaching and learning. Activities also include formal and informal conferences and consultation with colleagues, staff and students.

SUPPORT SPACES

- None

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of room within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- N/A

ELECTRICAL / LIGHTING

- Outlets for general room and workstation use
- Clean, segregated power distribution with surge suppression
- Power for office machines
- Glare reducing lenses
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP
- Data outlets for local area network connectivity
- Hard-wired data outlet for network connectivity to accept online streaming of announcements and other resources needed for classroom instruction
- Wireless access capable for most computer communications/applications

DLR Group

DOORS / WINDOWS

- Natural light desirable
- Sidelight at door
- Window coverings as required for sun/glare control
- Skylights acceptable
- Maximum visibility to outdoor learning area
- Keyless electronic lock access

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- Work tables and chairs
- (3-5) instructor workstations along a wall
- Clock
- Base cabinets with counter work surface, adjustable shelving and hinged doors and drawers, locks (verify locations)
- Wall cabinets with adjustable shelving and hinged doors above base cabinets, locks (verify locations)
- Tall storage cabinets with adjustable shelving and hinged doors, locks (verify locations)
- (1) 4' x 4' tackboard

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9'-0" min.
- Wall material: painted gypsum board
- Floor material: vinyl composition tile or carpet tile
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

ELEMENTARY SCHOOL TK-5/ K-8
EDUCATIONAL SPECIFICATIONS

COMPONENT:
special education

ADJACENCY DIAGRAM

OUTDOOR LEARNING

CHILD BREAK

LEARNING CENTER/ CLASSROOM

CONF./ SM. GROUP

PSYCH

(1) SPECIAL ED ADMIN SUITE PER CAMPUS

OCC. THERAPY

SPEECH THERAPY

GRADE LEVEL COMMUNITIES

SENSORY/ MOTOR

SUPPORT SPACES

KIT-CHEN

LAUN-DRY

RR

TEACHER

WORK RM.

2ND TEACHER IF (2) LEARNING CENTERS OR TESTING

LEARNING CENTER/ CLASSROOM

CHILD BREAK

OUTDOOR LEARNING

→ Entry

⟷ Direct (Main Spaces)

— Direct (Support Space to Adjacent Room)

⟵--→ Indirect

					Number of Learning Centers vary per school and program. Special Day Class (SDC), Resource Program Specialist (RSP), Independent Learning
Learning Center/Classroom	2	960	1,920		Study (ILS)
Occupational Therapy (OT)	1	100	100		Space within the Motor Room
Motor/Sensory/Adaptive P.E.	1	960	960		Space needed at sites where autism exists.
Child Break Area	1	0	0		With-in Learning Center
Kitchen	1	120	120		
Laundry	1	80	80		
Restroom/Changing Room	1	75	75		With changing table
Administration Suite					
Teacher Office	1	100	100		
Teacher Office/Testing	1	100	100		Shared with office or small group
Psychologist	1	100	100		
Speech Therapy	1	100	100		
Work Room	1	180	180		
Conference Room/Small Group	1	150	150		
Outdoor Play Area	1	0	0		Exterior Space
Special Education SubTotal			3,985	0	0

DESCRIPTION / GOALS

- This program offers a campus, choices for theSpecial Education program. Each new campous should contain the above components to offer equity throughout the district.
- The Special Education Learning Centers shall be integrated in with the instructional grade communities and not separated in an area with themselves.
- The number of learning centers will vary per school. Where the student population is less than 500, then there shall be one learning center. If the student population is greater than 500, then there shall be two or more learning centers.
- There shall be one administrative suite per campus and attached to a learning center suite.
- The configuration of the area must sustain the security and foster the safety of the Special Education learner by allowing easy and constant supervision by teachers.
- Care must be given to the selection of such things as light fixtures to ensure the materials and equipment incorporated into the final design will not disturb or distract the Special Education learner.

Natomas Unified School District
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ROOM:
SPECIAL ED LEARNING CENTER/CLASSROOM

SIZE: 960 sf
OCCUPANTS: Varies

ACTIVITIES AND USES

Whole group and small group lecture/discussion, individual, small group, and whole group cooperative and collaborative teaching and learning activities, instructor group tutoring, peer tutoring, and student testing with consideration given for special needs students.

SUPPORT SPACES

- Restroom: 75 sf with strong changing table with steps from floor
- Child Break Area within space

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of area within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- Sink with hot and cold water and bubbler

ELECTRICAL / LIGHTING

- Outlets for general room and workstation use
- Clean, segregated power distribution with surge suppression
- Lighting: per IES Lighting Handbook guidelines
- Ability to dim room in response to video projection requirements
- Warm lighting not to disturb the students.

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone / intercom handset, VoIP on wall.
- Intercom speaker with outlet
- Hard-wired data outlet for network connectivity to accept online streaming of announcements and other resources needed for classroom instruction
- Local area network connectivity for instructor workstation and student workstations
- Wireless access capable for most computer communications/applications

DLR Group

DOORS / WINDOWS

- Door with view panel
- Energy efficient windows with blinds
- Skylights acceptable
- Large windows to exterior - Natural light highly desirable for special education
- Ability to darken room

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- (2) Instructor workstation (instructor should be mobile with in the classroom)
- (20) Mobile student workstations (chromebooks or iPads)

- (1) 80″ TV monitor display, fixed, wall-mounted
- Special systems / technology console
- Casual seating furniture
- Storage cabinets (with locks)
- Marker board: (2) 4′ x 12′ or marker wall
- Tackboard: (2) 4′ x 4′
- Clock

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9′-0″ min.
- Wall material: painted gypsum board
- One wall tackable surface
- Floor material: carpet tile with tile at sink

- Adjacent classrooms accessible through common door
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools
- Min. 35 STC rating between adjacent teaching space

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

ROOM:
MOTOR ROOM

SIZE: 960 sf
OCCUPANTS: Varies

ACTIVITIES AND USES

Whole group and small group lecture/discussion, individual, small group, and whole group cooperative and collaborative teaching and learning activities, instructor group tutoring, peer tutoring, and student testing with consideration given for special needs students.

SUPPORT SPACES

- Occupational therapy: 100 sf

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of area within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- Sink with cold water

ELECTRICAL / LIGHTING

- Outlets for general room and workstation use
- Clean, segregated power distribution with surge suppression
- Lighting: per IES Lighting Handbook guidelines
- Ability to dim room in response to video projection requirements
- Warm lighting not to disturb the students.

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone / intercom handset, VoIP on wall.
- Intercom speaker with outlet
- Hard-wired data outlet for network connectivity to accept online streaming of announcements and other resources needed for classroom instruction
- Local area network connectivity for instructor workstation and student workstations
- Wireless access capable for most computer communications/applications

DLR Group

DOORS / WINDOWS

- Door with view panel
- Energy efficient windows with blinds
- Skylights acceptable
- Large windows to exterior -Natural light highly desirable for special education.

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- Swing with attachments for 300 lb. capacity, eye bolt at structure
- Tumbling mats (minimum of two to be placed under the platform swing)
- Mini trampoline
- Foam balance beams; approx. 16' in length when assembled w/ each individual beam 4' in length when separated
- "Crash Mat" (5' X 5' enclosed foam pit)

- Sink with running water (preferred)
- Work station for student (desk and chair)
- Folding mini ramp OR incline mat (foam tumbling mat material)
- Scooter boards
- Mini rocking chair
- Step cushions w/ noise (set of 3)
- Crawling tunnel (rolling wheel)
- Balancing Plastic Hemispheres

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9'-0" min.
- Wall material: painted gypsum board
- One wall tackable surface
- Floor material: carpet tile with tile at sink

- Adjacent classrooms accessible through common door
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools
- Min. 35 STC rating between adjacent teaching space

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

ROOM:
OFFICE

SIZE: 100 sf
OCCUPANTS: Varies

ACTIVITIES AND USES

Office space for either occupational therapy, teacher, psychologist, or speech therapy to prepare materials and conduct administrative activities to include individual and small group informal and formal conferences and consultations with colleagues, staff, students and community members.

SUPPORT SPACES
- None

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of area within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- N/A

ELECTRICAL / LIGHTING

- Outlets for general room, office machine and workstation use
- Clean, segregated power distribution with surge suppression
- Glare reducing lenses
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP
- Wireless access capable for most computer communications/applications
- Hard-wired data outlet for network connectivity to accept online streaming of announcements, presentation of art, campus map and/or sustainability features
- Access to file server, printer and scanner

DLR Group

DOORS / WINDOWS

- Natural light highly desirable for special education.
- Window coverings as required to control glare and privacy
- Ability to lock down door
- Keyless electronic lock access

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- (1) staff workstation and storage cabinets
- Clock

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9'-0" min.
- Wall material: painted gypsum board
- Floor material: vinyl composition tile or carpet tile
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools,"
  Part 1: Permanent Schools

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

ROOM:
WORK ROOM

SIZE: 180 sf
OCCUPANTS: Varies

ACTIVITIES AND USES

Staff will use this space for office supplies storage, printing, copy and mail distribution/delivery.

SUPPORT SPACES

- None

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of area within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- N/A

ELECTRICAL / LIGHTING

- Outlets for general room and counter use
- Power for TV monitor display, copiers and other office machines
- Glare reducing lenses
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP
- Hard-wired data outlet for network connectivity to accept online streaming of announcements, presentation of art, campus map and/or sustainability features
- Wireless access capable for most computer communications/applications
- Wired data outlets at copiers and printers

DLR Group

DOORS / WINDOWS

- Natural light highly desirable for special education.
- Sidelight at door
- Window coverings as required for sun/glare control and privacy
- Skylights acceptable

- Windows for view into open office area
- Ability to lock down doors
- Keyless electronic lock access

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- TV monitor display screen
- TV monitor wall-mount bracket
- Clock
- Wall cabinets with adjustable shelving and hinged doors above base cabinets, locks (verify locations)
- (1) 4' x 8' tackboard and markerboard
- Layout/work tables

- Misc. office equipment to include printers, scanners, fax and copy machines
- Mail slots for faculty and staff (verify # and size)
- Paper storage, shredder and cutter

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9'-0" min.
- Wall material: painted gypsum board
- Floor material: vinyl composition tile, linoleum product, and/or carpet tile

- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

ROOM:
CONFERENCE ROOM

SIZE: 150 sf
OCCUPANTS: 10

ACTIVITIES AND USES

Large and small group meetings/conferences for a variety of informal and formal student, faculty, and staff uses.

SUPPORT SPACES

- Direct access to open office area and close proximity to the principal

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of area within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- N/A

ELECTRICAL / LIGHTING

- Outlets for general room and TV monitor display location
- Clean, segregated power distribution with surge suppression
- Glare reducing lenses
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP
- Hard-wired data outlet for network connectivity to accept online streaming of announcements, presentation of art, campus map and/or sustainability features
- Wireless access capable for most computer communications/applications
- Apple TV available for various network devices to connect to TV monitor display via iPad, Mac and Windows mirroring

DLR Group

DOORS / WINDOWS

- Natural light highly desirable for special education.
- Sidelight at door
- Window coverings as required for sun/glare control and privacy
- Skylights acceptable
- Windows for visual connection to open office area/ maximum transparency desired

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- Conference table(s) and chairs for flexible seating configurations
- 70" TV monitor display

- TV monitor wall-mount bracket
- Clock
- (1) 4' x 8' marker board or full marker wall
- (1) 4' x 4' tackboard

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9'-0" min.
- Wall material: painted gypsum board
- Floor material: vinyl composition tile, carpet tile or linoleum product
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

Natomas
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ROOM:
KITCHEN/LAUNDRY

SIZE: 200 sf
OCCUPANTS: Varies

ACTIVITIES AND USES

Independent Living Skills to be shared between Learning Centers. Atmosphere should feel like home or an apartment studio. There shall be a kitchenette and laundry facility. Both may be in the same room.

SUPPORT SPACES

- Direct access to the Learning Centers and shared between two if there are two on a campus

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of area within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- Kitchen sink with garbage disposal
- Dishwasher

ELECTRICAL / LIGHTING

- Outlets for general room and TV monitor display location
- Clean, segregated power distribution with surge suppression, washer and dryer
- Glare reducing lenses
- Lighting: per IES Lighting Handbook guidelines
- Warm lighting not to disturb the students.

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP on wall.
- Hardwired data outlet for network connectivity to accept online streaming of announcements, presentation of art, campus map and/or sustainability features
- Wireless access capable for most computer communications/applications

DOORS / WINDOWS

- Natural light highly desirable for special education.
- Sidelight at door or open to the learning center
- Window coverings as required for sun/glare control and privacy
- Skylights acceptable
- Windows for visual connection to open office area/ maximum transparency desired

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- Countertop with kitchen sink, tall, upper and lower cabinetry for storage like a residential kitchen
- Clock
- Washer and dryer

- Stove/Oven
- Microwave

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9'-0" min.
- Wall material: painted gypsum board
- Floor material: vinyl composition tile or linoleum product
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

ELEMENTARY SCHOOL TK-5/ K-8
EDUCATIONAL SPECIFICATIONS

COMPONENT:

specialty labs

ADJACENCY DIAGRAM

GRADE LEVEL COMMUNITIES

STAGE AT M.P. OR GYM

MUSIC/ BAND

INST. STO.

PROJECT BASED LAB/ ART STUDIO

ART STO.

STUDENT DISPLAY

OUTDOOR PATIO

FOR A K-5

M.P. BUILDING
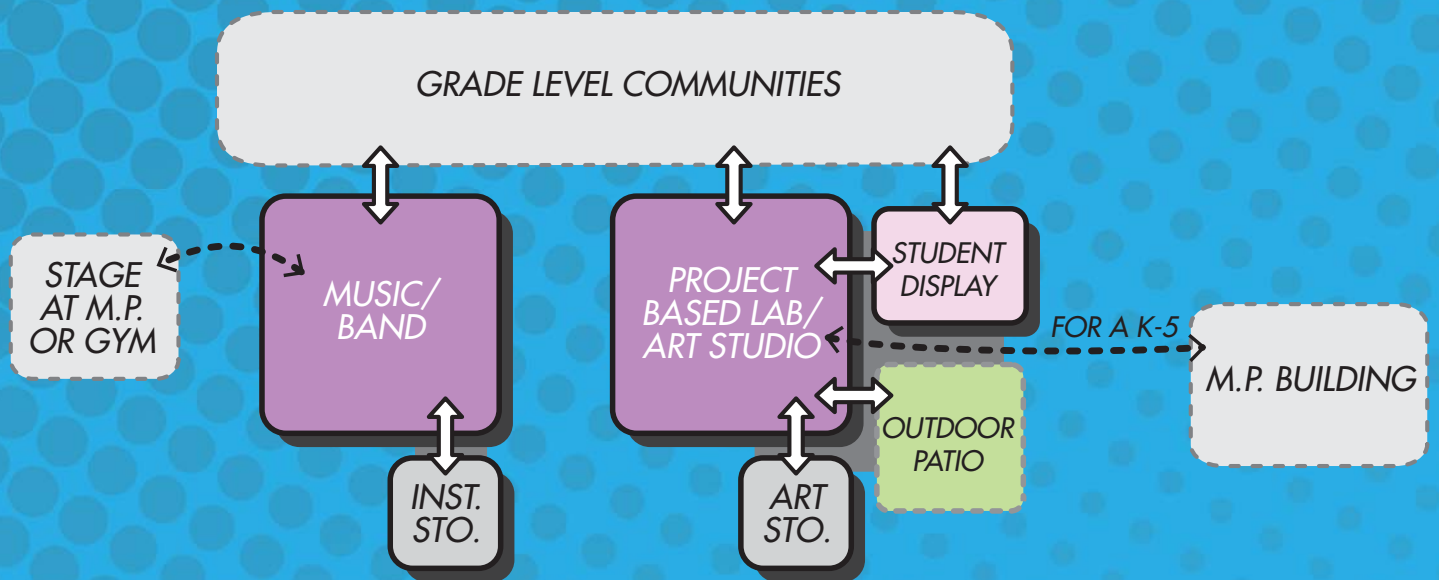
→ Entry

↔ Direct (Main Spaces)

▬ Direct (Support Space to Adjacent Room)

◂--▸ Indirect

SPECIALTY LABS					
Music/Band Room	1	1600			For K-5 and K-8 Campus
Instrument Storage	1	200			Includes locker storage for instruments
Project Based Lab / Art Studio	1	1,300	1,300		Innovation Center/Maker Space
Art Storage	1	200	200		
Student Display	1	150	150		Could be in a corridor or along extrior walls
Outdoor Patio	1				Exterior Space
Project Lab SubTotal			1,650	0	0

DESCRIPTION / GOALS

- The Project Lab/Art Studio is intended to provide space for project-based learning curricula. The lab should be flexible as a variety of subject matter and activities will be engaged in these spaces.
- At the elementary school the Project Lab/Art Studio should be near or off of the multi-purpose building space.
- The Outdoor Area is a critical component of the Project Lab/Art Studio. It should be of a size to allow multiple groups to work on projects simultaneously and there should be visual transparency between the lab and the patio. The ability to create a true physical connection between indoors and outdoors - such as through the use of a roll-up or garage door - is preferred.
- The Music/Band room will be used for a variety of music lessons for grades 2-8. There will be no music for TK-1st grades in the District.
- The Music/Band Room should have a relationship to the stage within the MP Room or the Gymnasium depending whether it is an elementary school or a K-8 school.

ROOM:
MUSIC/BAND ROOM

SIZE: 1600 sf
OCCUPANTS: up to 60 students, 1 instructor

ACTIVITIES AND USES

Music instruction for grades 2-5 and through to the 8th grade for a K-8 and Middle School Band. Elementary students will practice more rhythm and recorder type instrument instruction. For the middle school there is the opportunity for a full band. The Music/Band Room should have close proximity to the stage.

SUPPORT SPACES

- Instrument storage: 200 sf

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of room within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- (4) stainless steel sinks with plaster traps (1 drinking fountain bubbler)
- Hot and cold water

ELECTRICAL / LIGHTING

- Outlets for general room, instructor workstation, chrome book and iPad charging and student computer workstations, TV monitor display locations
- Clean, segregated power distribution with surge suppression
- Outlet for pug mill and electric pottery wheels
- Outlets for electric kilns @ kiln room
- Glare reducing lenses
- Ability to darken front or back half of room
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP on wall.
- Intercom speaker
- Hardwired data outlet for network connectivity to accept online streaming of announcements and other resources needed for classroom instruction
- Wireless access capable for most computer communications/applications
- Apple TV available for various network devices to connect to TV monitor display via iPad, Mac and Windows mirroring
- Speaker system with volume control
- Sound system with 24 channel surround sound speakers with mixing and rcording capability
- Conduit from sound system cabinet to speaker and microphone locations (verify juntion box number and locations)

DLR Group

DOORS / WINDOWS

- Natural light desirable (north light preferred)
- Skylights acceptable
- Window coverings as required to control glare and to darken space
- Ability to lock down door
- Acoustic seals at door
- Keyless electronic lock access

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- (1) instructor lab/portable demonstration station (instructor should be mobile with in the classroom)
- (60) student chairs
- (60) music stands
- (6) 54" x 64" student work tables w/ 4 seats per table or (12) 36" x 56" student work tables w/ 2 seats per table
- (1) 80" TV monitor display
- (1) 55" TV monitor display
- (2) TV wall-mount brackets
- Clock
- (1) 4' x 12' marker board or marker wall
- (2) 4' x 6' tackboards
- Wall cabinets with adjustable shelving and hinged doors above base cabinets, locks (verify locations)
- File cabinets for sheet music storage
- (2) 4' x 8' marker board - 1 with permanent staff lines or marker wall
- (2) 4' x 6' tackboards
- Instrument locker storage for storage of instruments, verify number and types of instruments. Lockers shall be lockable with a front grille door for vision.
- Sound reinforcement
- Instrument racks
- Instruments: see next page for a list of possible instruments to be stored in room for Middle School Band

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: Ceiling height: 18' to 22' preferred (500-700 cu.ft./musician is suggested)
- Wall material: painted gypsum board, acoustic wall panels for reverberation/flutter echo/acoustic design requirements
- One wall tackable wall surface
- Floor material: sealed concrete, carpet or linoleum product
- Flat Floor
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools
- Various diffusers and reflectors on walls and ceiling to aid in acoustics in room for a variety of musical performance and instruction

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

MUSIC/BAND ROOM (CONTINUED)

INSTRUMENTS

Verify number of instruments to store in room

- Piccolos
- Oboes
- English horns
- Clarinets
- Bass clarinets
- Bassoons
- French Horns
- Trumpets
- Trombones
- Baritones
- Tubas
- Snare drum
- Base drum
- Gong
- Cymbals
- Marimba
- Xylophone
- Bells
- Vibraphone
- Flutes
- Alto clarinet
- Alto sax
- Tenor sax
- Baritone sax
- Violins
- Violas
- Violoncello
- Double bass
- Piano

DLR Group

ROOM:
PROJECT BASED LAB / ART STUDIO

SIZE: 1300 sf
OCCUPANTS: Varies

ACTIVITIES AND USES

Individual, small and large group art instruction and exploration to include drawing, painting, print making, ceramics, and graphics. Ceramics instruction and exploration to include hand-building, slab, wheel throwing, glazing and firing. Intended to be a "messy" space. At the elementary school, the project Lab/Art Studio may be near or adjacent to the Multi-Purpose Room.

SUPPORT SPACES

- Art storage: 200 sf
- Student display: 150 sf
- Outdoor patio
- Kiln room or locate kilns at outdoor patio

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of room within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- (4) stainless steel sinks with plaster traps (1 drinking fountain bubbler)
- Hot and cold water

ELECTRICAL / LIGHTING

- Outlets for general room, instructor workstation, chrome book and iPad charging and student computer workstations, TV monitor display locations
- Clean, segregated power distribution with surge suppression
- Outlet for pug mill and electric pottery wheels
- Outlets for electric kilns @ kiln room
- Glare reducing lenses
- Ability to darken front or back half of room
- Track/spot lighting for still life/shadow study, etc.
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP on wall.
- Intercom speaker
- Hardwired data outlet for network connectivity to accept online streaming of announcements and other resources needed for classroom instruction
- Wireless access capable for most computer communications/applications
- Apple TV available for various network devices to connect to TV monitor display via iPad, Mac and Windows mirroring
- Speaker system with volume control

DLR Group

DOORS / WINDOWS

- Natural light desirable (north light preferred)
- Skylights acceptable
- Window coverings as required to control glare and to darken space
- Ability to lock down door

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- (1) instructor lab/portable demonstration station (instructor should be mobile with in the classroom)
- (8.5) 54″ x 64″ student work tables w/ 4 seats per table or (17) 36″ x 56″ student work tables w/ 2 seats per table
- (1) 80″ TV monitor display
- (1) 55″ TV monitor display
- (2) TV wall-mount brackets
- Paper cutting table
- Miscellaneous art equipment
- (4-6) pottery wheels
- Wedging table
- Slab roller
- Pug mill
- (4) greenware carts
- (4) drying racks

- (2) electric kilns @ kiln room
- Storage for 40 boxes of clay @ storage room
- Clock
- Perimeter base cabinets with drawers, adjustable shelving and hinged doors and (4) countertop sinks, flat files to accommodate 30″ x 42″ construction paper, student portfolio drawers, vertical slot storage, cubicles (16″ x 18″) for 24 students, locks (verify locations)
- Wall cabinets with adjustable shelving and hinged doors above base cabinets, locks (verify locations)
- Tall storage cabinets with adjustable shelving and hinged doors, locks (verify locations)
- Shelves for project storage in kiln room
- (1) 4′ x 12′ marker board or marker wall
- (2) 4′ x 6′ tackboards
- Corridor/exterior display case for student work

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 10′-0″ min.
- Wall material: painted gypsum board
- One wall tackable wall surface

- Floor material: sealed concrete or linoleum product
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework

- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

COMPONENT:

learning commons/ media center

ADJACENCY DIAGRAM

ENTRY

CONTROL/ HELP DESK/ GENIUS BAR

STACKS

READING AREA/ LOUNGE

STO.

COMPUTER AREA
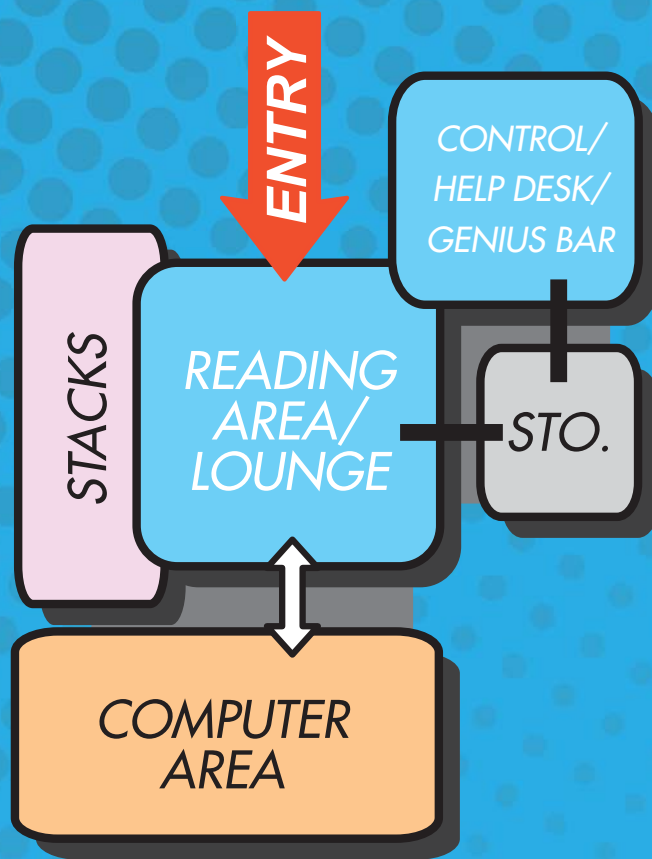
→ Entry

⟷ Direct (Main Spaces)

— Direct (Support Space to Adjacent Room)

←--→ Indirect

LEARNING COMMONS / MEDIA CENTER				
Control/Help Desk/Genius Bar	1	100	100	Genius Desk
Stacks	1	800	800	12,500 Volumes
Storage	1	120	120	Includes chrome book storage
Reading Area/Lounge	1	960	960	Space for a class to sit.
Computer Area	1	500	500	
Learning Commons/Media Center SubTotal			2,480	0

DESCRIPTION / GOALS

- The modern Media Center can become the theoretical hub of a campus and as such, should be accessible to all grade level communities.
- The Media Center can become the social center of campus and not the traditional quiet zone at school.
- The Media Center should be designed to accommodate a wide variety of individual and group activities, research, information access and retrieval, studying and instruction.
- The Media Center needs to be inviting, user friendly and flexible.
- Book collections are still an important part of an elementary school so significant space must be provided to accommodate stacks.
- The Reading Lounge should be adjacent to and open to the stack area. This area should provide a variety of seating options which would include traditional chairs at tables, but should also include non-traditional soft-type seating and lounging options.
- The Genius Bar, like in Apple stores, is a relatively new concept in schools and serves as a help desk for students.
- The Media Center will be the central hub for extra chrome book storage and carts. There should be an area in the teacher workrooms at the neighborhoods for secure storage of chrome book carts during the school year.

ROOM:
CONTROL / HELP DESK / GENIUS BAR

SIZE: 100 sf
OCCUPANTS: Varies

ACTIVITIES AND USES

Information resource for students/staff, including needing help with their electronics and checking out books.

SUPPORT SPACES

- None

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of area within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- N/A

ELECTRICAL / LIGHTING

- Outlets for general room, instructor workstation, chrome book and iPad charging and student computer workstations, TV monitor display location
- Clean, segregated power distribution with surge suppression
- Glare reducing lenses
- Adjustable lighting levels via independently controlled banks of lights
- Pendant lighting above desk
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP at help desk
- Intercom speaker
- Hard-wired data outlet for network connectivity to accept online streaming of announcements, presentation of art, campus map and/or sustainability features
- Wireless access capable for most computer communications/applications
- Apple TV available for various network devices to connect to TV monitor display via iPad, Mac and Windows mirroring
- Speaker system with volume control

DLR Group

DOORS / WINDOWS
- Natural light desirable (north light preferred)
- Skylights acceptable
- Window coverings as required to control glare and to darken space
- Ability to lock down door at Media Center entry
- Keyless electronic lock access at entry doors

FURNITURE / EQUIPMENT/ MILLWORK
- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- Stools for 2-3 visitors at help desk
- (2-3) desktop computer workstations
- TV monitor display located behind help desk
- TV monitor wall-mount bracket
- Clock
- Circulation/help desk millwork for (2) staff workstations
- Book theft detection system at entry doors
- Book drop, lock

SPECIAL CONSIDERATIONS
- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9'-0" min.
- Wall material: painted gypsum board
- Floor material: carpet tile
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools

SUSTAINABILITY
- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

ROOM:
READING AREA / LOUNGE

SIZE: 960 sf
OCCUPANTS: Varies

ACTIVITIES AND USES

Individual and group use by students, staff, and the community for general reading, research, information access and retrieval, studying, and library/information literacy instruction. Activities within the Media Center will include housing of print and non-print collections, charging and discharging of instructional and informational materials, distribution/storage/charging of laptop computers, general reading, quiet studying, reference material/consultation, etc. Area should have a Starbucks feel and feel comfortable.

SUPPORT SPACES
- Stacks: 800 sf
- Storage: 120 sf (space for storage of Chromebooks and carts)

BUILDING SYSTEM REQUIREMENTS

MECHANICAL
- Independent temperature control of area within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING
- N/A

ELECTRICAL / LIGHTING
- Wall and floor outlets for maintenance, general room and instructional technology needs. Charging outlets for student Chromebooks and iPads.
- Segregated power with transient voltage surge suppression
- Glare reducing lenses
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY
- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Intercom speakers
- Hard-wired data outlet for network connectivity to accept online streaming of announcements and other resources needed for classroom instructions, stage performances, and transmitting to on-campus or off-campus locations
- Local area network connectivity for the charge desk, carrels, table, and computer workstations
- Wireless access capable for most computer communications/applications

DLR Group

DOORS / WINDOWS

- Natural light and views desirable
- Acceptable for supervision from office/work support areas
- Skylights acceptable
- Ability to lock down door
- Keyless electronic lock access

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- Shelving for approx. 14000 volumes print material (5-high shelving), 2200 volumes reference (3-high shelving), periodical display shelving for (40) titles.
- (6-8) 4-person rectangular work/study tables (24-32) students
- (2-3) groups of soft casual seating
- (1) 80" TV monitor display for presentations

- TV monitor wall-mount bracket
- Laptop computer cart (24 computers)
- Book theft detection system at entry doors
- Clock
- Secure storage/charging of laptop computers, locks (verify locations)
- Tackable wall surfaces and display cases for display of media materials and student work

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile, painted gypsum board, and/or painted exposed structure
- Ceiling height: varying
- Wall material: Various materials acceptable, tackable wall surfaces for display
- Floor material: carpet tile, linoleum product, or sealed concrete
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria,

Design Requirements and Guidelines for Schools," Part 1: Permanent Schools
- Flexible media center space with accommodations for relocation/reconfiguration of study seating and stacks areas
- Inviting, public/student-friendly atmosphere, learning commons, student union, Starbucks atmosphere

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

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ROOM:
COMPUTER AREA

SIZE: 500 sf
OCCUPANTS: Varies

ACTIVITIES AND USES

Computer supported instruction and exploration to include lecture, demonstration, discussion, individual and small group cooperative and collaborative learning. Printing of student work and studying at certain times of day.

SUPPORT SPACES

- None

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of room within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- N/A

ELECTRICAL / LIGHTING

- Wall and floor outlets for maintenance, general room and computer workstations, printer, charging outlets for student chrome books and iPads.
- Segregated power with transient voltage surge suppression
- Glare reducing lenses
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP
- Intercom speakers
- Hard-wired data outlet for network connectivity to accept online streaming of announcements and other resources needed for classroom instructions, stage performances, and transmitting to on-campus or off-campus locations
- Local area network connectivity for computer workstations and printer locations
- Wireless access capable for most computer communications/applications
- Speaker system with volume control

DLR Group

DOORS / WINDOWS
- Natural light and views desirable
- Acceptable for supervision from Control/Help Desk
- Skylights acceptable
- Keyless electronic lock access

FURNITURE / EQUIPMENT/ MILLWORK
- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- (1) 80″ TV monitor display
- TV display wall-mount brackets
- Printer station
- Instructor podium station
- Marker wall
- Clock
- (34) chairs
- (17) computer desks for two, workstations that hold C.P.U. below work surface

SPECIAL CONSIDERATIONS
- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile, painted gypsum board
- Ceiling height: 9′-0″ min.
- Wall material: painted gypsum board and/or tackable wall surfaces for display
- Floor material: carpet tile or linoleum product
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools
- Inviting, public/student-friendly atmosphere
- Separation from reading area (acoustics) but a direct connection to the reading area or control

SUSTAINABILITY
- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

ELEMENTARY SCHOOL TK-5/ K-8
EDUCATIONAL SPECIFICATIONS

COMPONENT:

k-5 multi-purpose room

ADJACENCY DIAGRAM

ENTRY

M W

STO.

P.E. STO.

P.E. OFFICE

STO.

DINING COMMONS

CHAIR/ TABLE STO.

SERVERY KITCHEN

STAGE

OUTDOOR AMPHITHEATER

→ Entry

⟷ Direct (Main Spaces)

▬ Direct (Support Space to Adjacent Room)

←--→ Indirect

K-5 MULTI-PURPOSE ROOM

Dining Commons/P.E.	1	4,400	4,400	Sized for 275 students eating at one time on round tables using 16 s.f. per student - if double sided rectangular tables are used then 2700 s.f. is acceptable using 9 s.f. per student.
Public Restrooms	2	200	400	
PE Storage	1	150	150	
PE Office	1	80	80	
Table and Chair Storage	1	250	250	
Stage	1	960	960	
Stage Storage	1	100	100	
Multi-purpose SubTotal			**6,340**	**0**

DESCRIPTION / GOALS

- At the elementary school level, the Multi-Purpose Room must accommodate a wide variety of functions that include such activities as lunch-time eating and athletic functions, to staged performances, school assemblies, and night-time community gatherings.
- At an elementary school, the Multi-Purpose Room must also accommodate athletic activities, in particular basketball.

ROOM:
DINING COMMONS

SIZE: 4800 sf
OCCUPANTS: Varies

ACTIVITIES AND USES

Cafeteria dining, student gathering, large group assembly, performance (stage) activities, and ability to play basketball.

SUPPORT SPACES

- P.E. storage: 150 sf
- Table and Chair Storage: 250 sf
- Public Restrooms: 2 @ 200 sf

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of room within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- Drinking fountains

ELECTRICAL / LIGHTING

- Outlets for maintenance, mobile serving and/or cashier stations, additional outlets for charging of student Chromebooks and iPads.
- Glare reducing lenses
- Lighting: per IES Lighting Handbook guidelines
- Power to basketball backstops, if provided.

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Intercom speakers, VoIP
- Intercom speakers
- Sound reinforcement system
- Hard-wired data outlet for network connectivity to accept online streaming of announcements and other resources needed for classroom instructions, stage performances, and transmitting to on-campus or off-campus locations
- Wireless access capable for most computer communications/applications
- Hard-wired data outlet at "point of sale"

DLR Group

DOORS / WINDOWS

- Natural light desirable
- Skylights and/or clerestory glass acceptable
- Window coverings as required for sun/glare control and darkening of space for stage/assembly activities
- Keyless electronic lock access

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- Round dining tables and stacking chairs
- 55″ TV monitor displays on each side of stage opening
- TV wall-mount brackets
- Clocks
- Sound amplification system

- Meal accounting and inventory
- Satellite service areas for carts
- (4) sets of floor pole sleeves for volleyball
- (6) basketball stops: 2 cross court and 1 main court

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile or exposed structure
- Ceiling height: 22′-0″ min./varying (coordinate with stage proscenium height and if basketball standards are present)
- Wall material: painted gypsum board
- Floor material: vinyl composition tile, concrete, rubber floor, or wood
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools,"

Part 1: Permanent Schools
- Acoustic wall and/or ceiling panels as required for cafeteria and stage/assembly functions
- Room configuration/ shape, acoustic treatment, and lighting to accommodate varied dining and assembly/ performance functions/ activities
- Inviting, public/student-friendly atmosphere
- Direct access to outdoor dining and playground

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

ROOM:
PE OFFICE

SIZE: 80 sf
OCCUPANTS: 1 primary occupant

ACTIVITIES AND USES

Office space to prepare materials and conduct administrative activities to include individual and small group informal and formal conferences and consultations with colleagues, staff, students and community members.

SUPPORT SPACES

- None

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of area within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- N/A

ELECTRICAL / LIGHTING

- Outlets for general room, office machine and workstation use
- Clean, segregated power distribution with surge suppression
- Glare reducing lenses
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP
- Wireless access capable for most computer communications/applications
- Hard-wired data outlet for network connectivity to accept online streaming of announcements, presentation of art, campus map and/or sustainability features
- Access to file server, printer and scanner

DLR Group

DOORS / WINDOWS

- Natural light desirable
- Window coverings as required to control glare and privacy
- Ability to lock down door
- Keyless electronic lock access

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- (1) staff workstation and storage cabinets
- Clock

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9'-0" min.
- Wall material: painted gypsum board
- Floor material: vinyl composition tile or carpet tile
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

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ROOM:
STAGE

SIZE: 960 sf
OCCUPANTS: Varies

ACTIVITIES AND USES

Proscenium type stage without flyloft (dead-hung scenery/curtains) for a variety of school lecture and performance functions to include school assembly, lecture, drama, band and orchestra concerts, choral, dance performances and video presentations.

SUPPORT SPACES

- Stage storage: 100 sf

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of stage
- Air delivery/velocity designed for low ambient noise level (max. ambient NC 20) & no curtain billowing
- Automatic smoke vents as required
- Fire alarm/suppression/venting as required - controls in the MDF

PLUMBING

- N/A

ELECTRICAL / LIGHTING

- Outlets for maintenance and general stage use
- Fluorescent working lights
- Stage lighting positions to include over-stage light bars and forestage light bar
- Stage lighting/dimmer system
- Stage sound system

- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Sound reinforcement system with microphone receptacles at back wall, sides of proscenium, and stage front
- Hard-wired data outlet for network connectivity to accept online streaming of announcements and other resources needed for classroom instructions, stage performances, and transmitting to on-campus or off-campus locations
- Wireless access capable for most computer communications/applications

DLR Group

DOORS / WINDOWS
- Operable wall at stage proscenium to create another music teaching space
- Access to the exterior from stage either by 4'-0" x 7'-0" door or a roll-up door

FURNITURE / EQUIPMENT/ MILLWORK
- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- Portable music risers
- Motorized projection screen
- Support grid for dead-hung scenery, curtains and lighting
- Stage curtains (e.g. front curtain with valance, fire curtain, legs, borders, travelers, and cyclorama - curtain requirements and configuration to be determined)

SPECIAL CONSIDERATIONS
- *Refer to the District's Material Product Standards.
- Ceiling material: exposed structure or painted gypsum board
- Ceiling height: as required for proscenium, valances, borders, lighting bars, and dead-hung curtains (approx. 20-22' depending on proscenium height)
- Wall material: painted gypsum board
- Floor material: softwood, stained opaque black or vinyl composition tile, linoleum product

- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools
- Proper accessible path of travel to and from stage

SUSTAINABILITY
- Use of rapidly renewable materials
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

ELEMENTARY SCHOOL TK-5/ K-8
EDUCATIONAL SPECIFICATIONS

COMPONENT:

nutrition services

ADJACENCY DIAGRAM

OFFICE/ LOCKERS

T

DRY STORAGE

K-5 M.P. ROOM OR K-8 CAFETERIA

SERVERY

KITCHEN

FREEZER

COOLER

DISH WASHING

RECEIVING

ENTRY

OUTDOOR CLEANING/ DELIVERY

STREET

TRASH

Entry

Direct (Main Spaces)

Direct (Support Space to Adjacent Room)

Indirect

NUTRITION SERVICES

Kitchen	1	500	500	Desk space and lockers
Servery	1	240	240	
Staff Toilet	1	60	60	
Cooler Walk-in	1	150	150	
Freezer Walk-in	1	150	150	
Dishwashing	1	80	80	
Dry Storage	1	200	200	
Nutritional Services SubTotal			**1,380**	**0**

DESCRIPTION / GOALS

- Provide food storage and preparation and serving facility for the school.
- The district does not have satellite food preparation facilities so each school is a stand-alone storage and preparation location.
- The district uses hard plates and utensils so dishwashing and storage facilities are necessary.

ROOM:
KITCHEN

SIZE: 500 sf
OCCUPANTS: 5 kitchen staff

ACTIVITIES AND USES

Food receiving, heating, preparation and serving.

SUPPORT SPACES

- Servery: 240 sf
- Staff Toilet: 60 sf
- Cooler Walk-In: 150 sf
- Freezer Walk-In: 150 sf
- Dishwashing: 80 sf
- Dry Storage: 200 sf

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of servery and food preparation areas
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF
- Room and hood exhaust/ventilation

PLUMBING

- As required for food service equipment
- Drinking fountains
- Sink
- Grease trap/tank

ELECTRICAL / LIGHTING

- As required for food service equipment and maintenance in kitchen and servery
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset in kitchen located at desk, VoIP
- Local area network connectivity at desk workstation, cashier and meal accounting/inventory stations

DLR Group

DOORS / WINDOWS
- Sidelight/window at office
- Keyless electronic lock access
- High windows at exterior wall or tubular skylights in kitchen and servery

FURNITURE / EQUIPMENT/ MILLWORK
- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- Miscellaneous food service equipment and furnishings at kitchen as determined by nutrition services consultant and district nutrition services director
- Tray retrieval/dishwashing system
- (2) 12″ w. x 21″ d. x 72″ h. lockers each staff locker area
- Clock
- Meal accounting and inventory
- (1) 4′ x 4′ tackboard at office
- (1) 4′ x 4′ tackboard at staff lockers

SPECIAL CONSIDERATIONS
- *Refer to the District's Material Product Standards.
- Ceiling material: moisture resistant acoustic ceiling tile
- Ceiling height: 10′-0″ min.
- Wall material: fiberglass reinforced plastic wall panels or ceramic tile
- Floor material: epoxy floor or safety sheet flooring
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools
- Provide exterior pot wash area with drain
- Provide exterior delivery/service area located with street access
- Provide trash enclosure at exterior service area

SUSTAINABILITY
- Natural daylighting into the space
- Use of rapidly renewable materials to be used
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

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ELEMENTARY SCHOOL TK-5/ K-8
EDUCATIONAL SPECIFICATIONS

COMPONENT:

6-8 instructional community

ADJACENCY DIAGRAM

Entry

Direct (Main Spaces)

Direct (Support Space to Adjacent Room)

Indirect

6-8 INSTRUCTIONAL COMMUNITY						
Art Studio	1	1,200	1,200	1	0	0
Art Storage	1	100	100			
Art Patio						
Prep/Storage	1	300	300			
Community Restrooms	2	180	360			
6th Grade Neighborhood						
Classroom	4	960	3,840	4	32	128
Science Lab	1	1,350	1,350	1	0	0
FLEX/Small Group	1	600	600			
Teacher Workroom	1	200	200			
7th Grade Neighborhood						
Classroom	4	960	3,840	4	32	128
Science Lab	1	1,350	1,350	1	0	0
FLEX/Small Group	1	600	600			
Teacher Workroom	1	200	200			
8th Grade Neighborhood						
Classroom	4	960	3,840	4	32	128
Science Lab	1	1,350	1,350	1	0	0
FLEX/Small Group	1	600	600			
Teacher Workroom	1	200	200			
6-8 Instructional SubTotal			19,930	16		384

DESCRIPTION / GOALS

- The K-8 school should be arranged into TK-K, 1-3, 4-5, and 6-8 communities as much as is practicable and possible. While slightly more challenging, existing schools can be re-organized into grade-level communities, particularly "finger-wing" layouts (of which there are many in the district) wherein grade-level communities can be located in opposing building wings rather than remaining in a straight-line configuration in a single wing. Additionally, the end space between existing wings can be "filled in" to create a truly separate, 6-8 Community where space allows.

- The 6-8 Community should be configured to allow these grades to be kept together as an autonomous unit within the larger campus structure with their own outdoor learning area that can be tailored to and be reflective of the community's requirements and activities.

- The community should promote teacher collaboration and help advance the feeling of a professional learning environment for grade-level teachers.

- The community configuration should sustain the security and foster the safety of the learner by allowing easy and constant supervision by the community's teachers.

- Small group collaboration spaces should be situated to allow access from two adjacent learning studios. The collaboration centers should support project-based curriculum by accommodating multiple, flexible small group activities.

- Learning studios should be connected to collaboration spaces through significant fenestration to ensure student safety as well as promoting transparency of the teaching and learning activities.

- Special Education rooms shall be integrated in with the grade communities.

- Science labs shall be designed with flexibility for STEM and Robotics, although revisited at the time of design for individual campus as to what program direction to go in.

ROOM:
ART STUDIO

SIZE: 1200 sf
OCCUPANTS: 1 instructor, 29 students

ACTIVITIES AND USES

Individual, small and large group art instruction and exploration to include drawing, painting, print making, ceramics, and graphics. Ceramics instruction and exploration to include hand-building, slab, wheel throwing, glazing and firing.

SUPPORT SPACES

- Art Storage: 100 sf
- Art Patio
- Kiln room or locate kilns at outdoor patio

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of room within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- (4) stainless steel sinks with plaster traps (1 drinking fountain bubbler)
- Hot and cold water

ELECTRICAL / LIGHTING

- Outlets for general room, instructor workstation, chrome book and iPad charging and student computer workstations, TV monitor display locations
- Clean, segregated power distribution with surge suppression
- Outlet for pug mill and electric pottery wheels
- Outlets for electric kilns @ kiln room
- Glare reducing lenses
- Ability to darken front or back half of room
- Track/spot lighting for still life/shadow study, etc.
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP
- Intercom speaker
- Hard-wired data outlet for network connectivity to accept online streaming of announcements and other resources needed for classroom instruction
- Wireless access capable for most computer communications/applications
- Apple TV available for various network devices to connect to TV monitor display via iPad, Mac and Windows mirroring
- Speaker system with volume control

DOORS / WINDOWS

- Natural light desirable (north light preferred)
- Skylights acceptable
- Window coverings as required to control glare and to darken space
- Ability to lock down door

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- (1) instructor lab/portable demonstration station (instructor should be mobile with in the classroom)
- (7.5) 54″ x 64″ student work tables w/ 4 seats per table or (15) 36″ x 56″ student work tables w/ 2 seats per table
- (1) 80″ TV monitor display
- (1) 55″ TV monitor display
- (2) TV wall-mount brackets
- Paper cutting table
- Miscellaneous art equipment
- (4-6) pottery wheels
- Wedging table
- Slab roller
- Pug mill
- (4) greenware carts
- (4) drying racks

- (2) electric kilns @ kiln room
- Storage for 40 boxes of clay @ storage room
- Clock
- Perimeter base cabinets with drawers, adjustable shelving and hinged doors and (4) countertop sinks, flat files to accommodate 30″ x 42″ construction paper, student portfolio drawers, vertical slot storage, cubicles (16″ x 18″) for 24 students, locks (verify locations)
- Wall cabinets with adjustable shelving and hinged doors above base cabinets, locks (verify locations)
- Tall storage cabinets with adjustable shelving and hinged doors, locks (verify locations), sufficient space for storage of digital document camera
- Shelves for project storage in kiln room
- (1) 4′ x 12′ markerboard or marker wall
- (2) 4′ x 6′ tackboards
- Corridor/exterior display case for student work

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 10′-0″ min.
- Wall material: painted gypsum board
- One wall tackable wall surface

- Floor material: sealed concrete or linoleum product
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework

- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

6-8 INSTRUCTIONAL COMMUNITY SPATIAL TYPES
6TH, 7TH, 8TH GRADE NEIGHBORHOOD

ROOM:
CLASSROOM

SIZE: 960 sf
OCCUPANTS: 1 instructor, 29 students

ACTIVITIES AND USES

Whole group and small group lecture/discussion. Individual, small group, and whole group cooperative and collaborative teaching and learning activities, instructor group tutoring, peer tutoring, and student testing.

SUPPORT SPACES

- Adjacent to community restrooms: 2 @ 180 sf

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of room within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- Counter sink with drinking fountain bubbler
- Age appropriate toilets/sinks @ toilet rooms

ELECTRICAL / LIGHTING

- Outlets for general room, instructor workstation, chrome book and iPad charging and student computer workstations, TV monitor display locations
- Clean, segregated power distribution with surge suppression
- Glare reducing lenses
- Adjustable lighting levels via independently controlled banks of lights
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP
- Hard-wired data outlet for network connectivity to accept online streaming of announcements and other resources needed for classroom instruction
- Wireless access capable for most computer communications/applications
- Apple TV available for various network devices to connect to TV monitor display via iPad, Mac and Windows mirroring

DLR Group

DOORS / WINDOWS

- Natural light desirable
- Sidelight at door
- Window coverings with the ability to darken space
- Skylights acceptable
- Ability to lock down door
- Keyless electronic lock access

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- (1) instructor workstation (instructor should be mobile with in the classroom)
- (1) 80″ TV monitor display
- (1) 50″-55″ TV monitor display
- (2) TV wall-mount bracket
- Clock
- Base cabinets with counter work surface, adjustable shelving and hinged doors and drawers, countertop sink, and locks (verify locations)
- Wall cabinets with adjustable shelving and hinged doors above base cabinets, locks (verify locations)
- Tall storage cabinets with adjustable shelving and hinged doors, locks (verify locations), sufficient space for storage of digital document camera
- (2) 4′ x 12′ marker boards
- (4) 4′ x 6′ tackboards

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9′-0″ min.
- Wall material: painted gypsum board
- Floor material: vinyl composition tile and/or carpet tile
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools,"

Part 1: Permanent Schools

- Capability of opening (2) adjacent classrooms (per team) to each other via operable partition(s) to accommodate large group/team meeting configuration
- Flexible/mobile furniture

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

Natomas
Unified School District
Connecting students to their future

ROOM:
SCIENCE LAB

SIZE: 1350 sf
OCCUPANTS: 1 instructor, 29 students

ACTIVITIES AND USES

Flexible science labs designed to teach various science subjects. Whole group and small group lecture and laboratory activities to include individual, small group, and whole group cooperative and collaborative teaching and learning activities, instructor group tutoring, peer tutoring, and student testing in relation to science research and investigation. The science lab shall be flexible enough for STEM and Robotics, however should be revisited at the time of design for the campus as to what program to design for.

SUPPORT SPACES
- Prep/storage: 300 sf

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of room within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF
- Room exhaust

PLUMBING

- Acid resistant sinks and connections at fume hood, each perimeter student lab station (sediment traps)
- Emergency eyewash/shower

ELECTRICAL / LIGHTING

- Outlets for general room, instructor workstation, chrome book and iPad charging and student computer workstations, TV monitor display locationsd power distribution with surge suppression
- Glare reducing lenses
- Adjustable lighting levels via independently controlled banks of lights
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP
- Intercom speaker
- Hard-wired data outlet for network connectivity to accept online streaming of announcements and other resources needed for classroom instruction
- Local area network connectivity for the instructor workstation and (4-6) desktop computer workstations
- Wireless access capable for most computer communications/applications

DLR Group

DOORS / WINDOWS

- Natural light required
- Window coverings as required to control glare and to blackout space
- Keyless electronic lock access

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- (1) instructor lab/portable demonstration station (instructor should be mobile within the classroom)
- (15) 2-person student lab tables and (34) chairs
- TV monitor screen
- TV monitor wall-mount bracket
- Clock
- Perimeter base cabinets with counter work surface, adjustable shelving and hinged doors and drawers, countertop sinks centered in stations, locks (verify locations)
- Wall cabinets with adjustable shelving and hinged doors above base cabinets, locks (verify locations)
- Tall storage cabinets with adjustable shelving and hinged doors, locks (verify locations), sufficient space for storage of digital document camera
- -(2) 4′ x 12′ markerboards
- (4) 4′ x 6′ tackboards

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9′-0″ min.
- Wall material: painted gypsum board or concrete block
- Floor material: sealed concrete or vinyl composition tile
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

Natomas
Unified School District
Connecting students to their future

ROOM:
FLEX / SMALL GROUP

SIZE: 600 sf
OCCUPANTS: Varies

ACTIVITIES AND USES

Small group meeting and conference area for a variety of informal and formal student, faculty, and staff uses.

SUPPORT SPACES

- None

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of room within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- N/A

ELECTRICAL / LIGHTING

- Outlets for general room and workstation use
- Clean, segregated power distribution with surge suppression
- Power for office machines
- Glare reducing lenses
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP
- Data outlets for local area network connectivity
- Hard-wired date outlet for network connectivity to accept online streaming of announcements and other resources needed for classroom instruction
- Wireless access capable for most computer communications/applications

DLR Group

DOORS / WINDOWS

- Interior wall glazing desirable - supervision from circulation desk and/or office areas
- Natural light desirable
- Sidelight at door
- Window coverings as required for sun/glare control
- Skylights acceptable
- Maximum visibility to outdoor learning area
- Keyless electronic lock access

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- Work tables and chairs
- (3-5) instructor workstations along a wall
- Clock

- Base cabinets with counter work surface, adjustable shelving and hinged doors and drawers, locks (verify locations)
- Wall cabinets with adjustable shelving and hinged doors above base cabinets, locks (verify locations)
- Tall storage cabinets with adjustable shelving and hinged doors, locks (verify locations)
- (1) 4′ x 4′ tackboard

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9′-0″ min.
- Wall material: painted gypsum board
- Floor material: vinyl composition tile or carpet tile

- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools,"
  Part 1: Permanent Schools

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

ROOM:
TEACHER WORKROOM

SIZE: 200 sf
OCCUPANTS: Varies

ACTIVITIES AND USES

Shared work area for teachers to prepare instructional materials, confer with colleagues, assist students, plan and develop curricula, and conduct activities related to teaching and learning. Activities also include formal and informal conferences and consultation with colleagues, staff and students.

SUPPORT SPACES

- None

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of room within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- N/A

ELECTRICAL / LIGHTING

- Outlets for general room and workstation use
- Clean, segregated power distribution with surge suppression
- Power for office machines
- Glare reducing lenses
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP
- Data outlets for local area network connectivity
- Hard-wired date outlet for network connectivity to accept online streaming of announcements and other resources needed for classroom instruction
- Wireless access capable for most computer communications/applications

DLR Group

DOORS / WINDOWS

- Natural light desirable
- Sidelight at door
- Window coverings as required for sun/glare control
- Skylights acceptable
- Maximum visibility to outdoor learning area
- Keyless electronic lock access

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- Work tables and chairs
- (3-5) instructor workstations along a wall
- Clock

- Base cabinets with counter work surface, adjustable shelving and hinged doors and drawers, locks (verify locations)
- Wall cabinets with adjustable shelving and hinged doors above base cabinets, locks (verify locations)
- Tall storage cabinets with adjustable shelving and hinged doors, locks (verify locations)
- (1) 4′ x 4′ tackboard

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9′-0″ min.
- Wall material: painted gypsum board
- Floor material: vinyl composition tile or carpet tile
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools
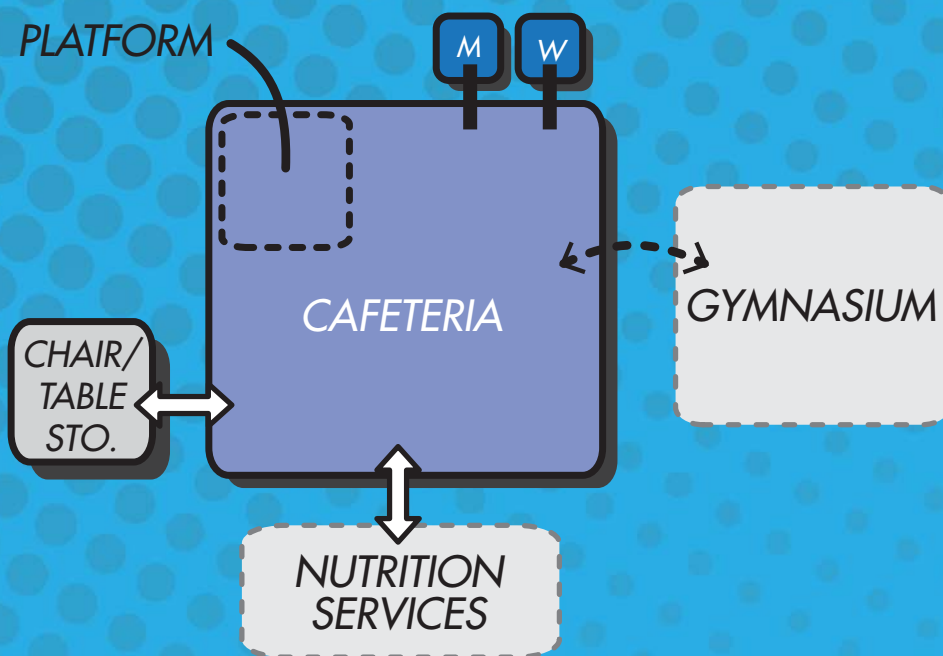
SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials to be used such as wheat board in casework
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

ELEMENTARY SCHOOL TK-5/ K-8
EDUCATIONAL SPECIFICATIONS

COMPONENT:

k-8 cafeteria

ADJACENCY DIAGRAM

PLATFORM

M W

CAFETERIA

GYMNASIUM

CHAIR/
TABLE
STO.

NUTRITION
SERVICES

→ Entry

⟷ Direct (Main Spaces)

— Direct (Support Space
     to Adjacent Room)

←--→ Indirect

K-8 CAFETERIA				
Dining Commons/Elementary P.E.	1	4,400	4,400	Includes area for a small platform in space. Sized for 275 students eating at one time on round tables using 16 s.f. per student - if double sided rectangular tables are used then 2700 s.f. is acceptable using 9 s.f. per student.
K-5 P.E. Storage	1	150	150	
Table and Chair Storage	1	250	250	
K-8 Cafeteria SubTotal			4,800	0

DESCRIPTION / GOALS

- At the K-8 school level, the cafeteria room must accommodate a wide variety of functions that include such activities as lunch-time eating and athletic functions for elementary, small school assemblies, and night-time community gatherings.
- The cafeteria should accommodate elementary school athletic activities, in particular basketball.
- Permanent platform in corner of room for small performance, lecture, or meetings (1 or 2 steps up).

ROOM:
DINING COMMONS

SIZE: 4800 sf
OCCUPANTS: Varies

ACTIVITIES AND USES

Cafeteria dining, student gathering, and ability for elementary school sports.

SUPPORT SPACES

- K-5 P.E. Storage: 150 sf
- Table and Chair Storage: 250 sf
- Student Restrooms: per code in close proximity to the dining commons

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of room within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- Drinking fountains

ELECTRICAL / LIGHTING

- Outlets for maintenance, mobile serving and/or cashier stations, additional outlets for charging of student Chromebooks and iPads.
- Glare reducing lenses
- Lighting: per IES Lighting Handbook guidelines
- Power to basketball backstops, if provided.

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Intercom speakers, VoIP
- Intercom speakers
- Sound reinforcement system
- Hard-wired data outlet for network connectivity to accept online streaming of announcements, presentation of art, campus map and/or sustainability features
- Wireless access capable for most computer communications/applications
- Hard-wired data outlet at "point of sale"

DLR Group

DOORS / WINDOWS

- Natural light desirable
- Skylights and/or clerestory glass acceptable
- Window coverings as required for sun/glare control and darkening of space for stage/assembly activities
- Keyless electronic lock access

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- Round dining tables and stacking chairs
- 55″ TV monitor displays on each side of stage opening
- TV wall-mount brackets
- Clocks
- Sound amplification system
- Meal accounting and inventory
- Satellite service areas for carts
- (2) basketball stops for elementary school

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile or exposed structure
- Ceiling height: 22'-0″ min./varying (coordinate with stage proscenium height and if basketball standards are present)
- Wall material: painted gypsum board
- Floor material: vinyl composition tile, concrete, rubber floor, or wood
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools,"

Part 1: Permanent Schools

- Acoustic wall and/or ceiling panels as required for cafeteria and stage/assembly functions
- Room configuration/ shape, acoustic treatment, and lighting to accommodate varied dining and assembly/ performance functions/ activities
- Inviting, public/student-friendly atmosphere
- Direct access to outdoor dining and playground

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

K-8 SCHOOL
EDUCATIONAL SPECIFICATIONS

COMPONENT:

K-8 gymnasium

ADJACENCY DIAGRAM

GYM STO.

LOBBY

M

W

MUSIC/ BAND

CHAIR/ TABLE STO.

STAGE

GYMNASIUM

BLEACHERS

STO.

GIRLS STO.

COACH OFFICE

BOYS LOCKERS

B

G

GIRLS LOCKERS

COACH OFFICE

BOYS STO.

OUTDOOR COURTS/ FIELDS

→ Entry

↔ Direct (Main Spaces)

— Direct (Support Space to Adjacent Room)

◄--► Indirect

K-8 GYMNASIUM

Public Restrooms	2	200	400	
Lobby	1	200	200	
Gymnasium	1	7,000	7,000	250 Seats
Gym Storage	1	150	150	
Stage	1	960	960	
Stage Storage	1	100	100	
Girls Locker Room	1	650	650	
Boys Locker Room	1	650	650	
Girls Team Room	0	0	0	Included in the Locker Room
Boys Team Room	0	0	0	Included in the Locker Room
Girls Restroom	1	200	200	
Boys Restroom	1	200	200	
Girls Storage	1	100	100	Located off the locker room
Boys Storage	1	100	100	Located off the locker room
Coach's Office	2	100	200	
Toilet & Shower Room	2	80	160	

DESCRIPTION / GOALS

• The room must be large enough to hold basketball competition games and be able to seat a minimum of 250 in roll-out bleachers.

• Because the space will be used as a competition athletic venue, it is desirable to have an entry lobby space rather than being able to walk directly into the space from the exterior as would be the case in a MP room.

• Hardcourts and fields minimum per CDE, then on case-by-case basis per campus.

ROOM:
GYMNASIUM

SIZE: 7000 sf
OCCUPANTS: Bleachers for 450 (verify with CDE per school)

ACTIVITIES AND USES

A variety of athletic competition, physical education, and lifetime sports activities to include basketball, volleyball, badminton, running, calisthenics and physical conditioning. A variety of school assembly functions/activities. Student gathering, large group assembly, performance (stage) activities.

SUPPORT SPACES

- Gym Storage: 150 sf
- Public Restrooms: 200 sf

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of area within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- Drinking fountains

ELECTRICAL / LIGHTING

- Wall outlets for maintenance, power to basketball backstops, scoreboards, divider curtains, and telescopic bleachers
- Glare reducing lenses
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Intercom speakers, call buttons, VoIP
- Intercom speakers
- Sound reinforcement system
- Hard-wired data outlet for network connectivity to accept online streaming of announcements, presentation of art, campus map and/or sustainability features
- Wireless access capable for most computer communications/applications

DLR Group

DOORS / WINDOWS

- Diffused/non-glare natural light acceptable
- Diffused/non-glare skylights acceptable
- Keyless electronic lock access

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- (2) rectangular glass backboards
- (4) cross court basketball stops
- Canvas/mesh divider curtains
- (1) scoreboard and NO shot clock
- Telescoping bleachers with a capacity of 450 seats @ 18"/seat - 24" row spacing, (capacity to be verified per CDE requirements)

- Volleyball and badminton nets with floor sleeves
- Clocks
- Sound reinforcement
- 55" TV monitor display on each side of stage opening
- TV monitor wall-mount brackets
- Sound amplification system

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: painted exposed structure (acoustic metal deck)
- Ceiling height: 25'-0" min.
- Wall material: painted concrete block, painted gypsum board, acoustical wall treatment as required
- Floor material: maple gym flooring, rubber flooring system, or other sports flooring system
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools

- Acoustical metal deck, acoustical wall treatment as required
- Min. 50 STC between gymnasium and adjacent occupied instructional space
- Canvas/mesh divider curtains for multiple group usage
- School colors/logos/graphics

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

ROOM:
STAGE

SIZE: 960 sf
OCCUPANTS: Varies

ACTIVITIES AND USES

Proscenium type stage without flyloft (dead-hung scenery/curtains) for a variety of school lecture and performance functions to include school assembly, lecture, drama, band and orchestra concerts, choral, dance performances and video presentations.

SUPPORT SPACES

- Stage Storage: 100 sf

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of stage
- Air delivery/velocity designed for low ambient noise level (max. ambient NC 20) & no curtain billowing
- Automatic smoke vents as required
- Fire alarm/suppression/venting as required - controls in the MDF

PLUMBING

- N/A

ELECTRICAL / LIGHTING

- Outlets for maintenance and general stage use
- Fluorescent working lights
- Stage lighting positions to include over-stage light bars and forestage light bar
- Stage lighting/dimmer system
- Stage sound system
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Sound reinforcement system with microphone receptacles at back wall, sides of proscenium, and stage front
- Hardwired data outlet for network connectivity to accept online streaming of announcements, presentation of art, campus map and/or sustainability features
- Wireless access capable for most computer communications/applications

DLR Group

DOORS / WINDOWS

- Operable wall at stage proscenium to create another music teaching space
- Access to the exterior from stage either by 4'-0" x 7'-0" door or a roll-up door

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- Portable music risers
- Motorized projection screen
- Support grid for dead-hung scenery, curtains and lighting
- Stage curtains (e.g. front curtain with valance, fire curtain, legs, borders, travelers, and cyclorama - curtain requirements and configuration to be determined)

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: exposed structure or painted gypsum board
- Ceiling height: as required for proscenium, valances, borders, lighting bars, and dead-hung curtains (approx. 20-22' depending on proscenium height)
- Wall material: painted gypsum board
- Floor material: softwood, stained opaque black or vinyl composition tile, linoleum product

- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools
- Proper accessible path of travel to and from stage

SUSTAINABILITY

- Use of rapidly renewable materials
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

ROOM:
GIRLS LOCKER ROOM

SIZE: 650 sf
OCCUPANTS: Varies

ACTIVITIES AND USES

Locker storage of street clothing & phys. ed./athletic clothing, changing, team meetings, showering/drying, toilet functions.

SUPPORT SPACES

- Girl's Team Room (included in locker room)
- Girl's Restroom: 200 sf
- Girl's Storage: 100sf
- Coach's Office: 100 sf

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of area within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF
- Room exhaust in shower/drying, toilet, and locker room areas

PLUMBING

- Individual showers, per code
- Toilets and sinks, per code
- Drinking fountains, per code
- Floor drains in locker rooms, shower/drying, and toilet areas
- Master shower control located in office

ELECTRICAL / LIGHTING

- Hand/hair dryers
- Duplex elec. outlets for maintenance and portable hair dryers
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Intercom speakers
- Wireless access capable for most computer communications/applications

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DOORS / WINDOWS
- Glazing between instructor's/coach's office and adjacent phys. ed./athletic locker area
- Skylights acceptable

FURNITURE / EQUIPMENT/ MILLWORK
- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- Shared instructor/coach work/planning stations w/ chairs and file cabinets at the instructor's/coach's office
- Physical education/athletic lockers, configuration with (6) 12"x12"x12" PE lockers for every (1) 12"x12"x36" street locker. Verify locker count at the time of design, but roughly (60) boy street lockers and (192) PE lockers.

- Locker room benches
- Clothes/towel hooks
- Clock
- (1) 4' x 8' marker board in athletic locker room team seating area

SPECIAL CONSIDERATIONS
- *Refer to the District's Material Product Standards.
- Ceiling material: painted exposed structure or painted gypsum board in locker areas
- Ceiling height: 10'-0" min.
- Wall material: painted concrete block, painted gypsum board, ceramic tile in showers/drying and toilet areas
- Floor material: sealed concrete in locker areas, ceramic/porcelain tile in showers/drying and toilet areas or epoxy floor

- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools
- Acoustical metal deck in exposed structure areas
- Min. 50 STC between locker rooms and adjacent occupied instructional space

SUSTAINABILITY
- Natural daylighting into the space
- Use of rapidly renewable materials
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

ROOM:
BOYS LOCKER ROOM

SIZE: 650 sf
OCCUPANTS: Varies

ACTIVITIES AND USES

Locker storage of street clothing & phys. ed./athletic clothing, changing, team meetings, showering/drying, toilet functions.

SUPPORT SPACES

- Boys Team Room (included in locker room)
- Boys Restroom: 200 sf
- Boys Storage: 100 sf
- Coach's Office:100 sf

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of area within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF
- Room exhaust in shower/drying, toilet, and locker room areas

PLUMBING

- Individual showers, per code
- Toilets and sinks, per code
- Drinking fountains, per code
- Floor drains in locker rooms, shower/drying, and toilet areas
- Master shower control located in office

ELECTRICAL / LIGHTING

- Hand/hair dryers
- Duplex elec. outlets for maintenance and portable hair dryers
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Intercom speakers
- Wireless access capable for most computer communications/applications

DLR Group

DOORS / WINDOWS
- Glazing between instructor's/coach's office and adjacent phys. ed./athletic locker area
- Skylights acceptable

FURNITURE / EQUIPMENT/ MILLWORK
- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- Shared instructor/coach work/planning stations w/ chairs and file cabinets at the instructor's/coach's office
- Physical education/athletic lockers, configuration with (6) 12"x12"x12" PE lockers for every (1) 12"x12"x36" street locker. Verify locker count at the time of design, but roughly (60) girl street lockers and (192) PE lockers.
- Locker room benches
- Clothes/towel hooks
- Clock
- (1) 4' x 8' marker board in athletic locker room team seating area

SPECIAL CONSIDERATIONS
- *Refer to the District's Material Product Standards.
- Ceiling material: painted exposed structure or painted gypsum board in locker areas
- Ceiling height: 10'-0" min.
- Wall material: painted concrete block, painted gypsum board, ceramic tile in showers/drying and toilet areas
- Floor material: sealed concrete in locker areas, ceramic/porcelain tile in showers/drying and toilet areas or epoxy floor
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools
- Acoustical metal deck in exposed structure areas
- Min. 50 STC between locker rooms and adjacent occupied instructional space

SUSTAINABILITY
- Natural daylighting into the space
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ROOM:
COACH OFFICE

SIZE: 100 sf
OCCUPANTS: 1 primary occupant

ACTIVITIES AND USES

Office space to prepare materials and conduct administrative activities to include individual and small group informal and formal conferences and consultations with colleagues, staff, students and community members.

SUPPORT SPACES

- Toilet/Shower: 80 sf

BUILDING SYSTEM REQUIREMENTS

MECHANICAL

- Independent temperature control of area within flexible range set by district's EMS system
- Room temperature sensor connected to campus EMS
- Fire alarm/suppression as required - controls in the MDF

PLUMBING

- N/A

ELECTRICAL / LIGHTING

- Outlets for general room, office machine and workstation use
- Clean, segregated power distribution with surge suppression
- Glare reducing lenses
- Lighting: per IES Lighting Handbook guidelines

TECHNOLOGY

- Refer to the "District Wide Instructional Technology Plan" for school campus requirements
- Telephone/intercom handset, VoIP
- Wireless access capable for most computer communications/applications
- Hard-wired data outlet for network connectivity at the computer workstation
- Access to file server, printer and scanner

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DOORS / WINDOWS

- Natural light desirable
- Window coverings as required to control glare and privacy
- Ability to lock down door
- Keyless electronic lock access

FURNITURE / EQUIPMENT/ MILLWORK

- *Typically all furniture and equipment not built in as part of the project will be covered by a separate F.F.E. budget by the District. Verify any and all F.F.E. by District and/or by Contractor per campus.
- (1) staff workstation and storage cabinets
- Clock

SPECIAL CONSIDERATIONS

- *Refer to the District's Material Product Standards.
- Ceiling material: acoustic ceiling tile
- Ceiling height: 9'-0" min.
- Wall material: painted gypsum board
- Floor material: vinyl composition tile or carpet tile
- Acoustics: per ANSI/ASA S12.60-2010/ Part 1 "American National Standard Acoustical Performance Criteria, Design Requirements and Guidelines for Schools," Part 1: Permanent Schools

SUSTAINABILITY

- Natural daylighting into the space
- Use of rapidly renewable materials
- Design to integrate durable materials with emphasis on regionally available materials, low VOC-emitting and recycled materials to maintain healthy air quality

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