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# Educational Specification (Ed Spec) Overview

The purpose of an Ed Spec is to aid the District in decision making regarding the facilities and educational environments their students interact with. The Ed Spec provides insight for the design process and allows collaborators to outline the vision of their schools.

This document is not intended to present the exact facility needs, or the specific methods through which those needs should be met. The education specification is only intended to provide a foundational knowledge for the selected design team to utilize in the development of the final building solution. As outlined by the California Department of Education: *Educational specifications are interrelated statements that communicate (or specify) to the architect, the public, and other interested parties what educators believe is required for a proposed educational facility to support a specific educational program.*

Guidelines in this document are not intended to restrict the effective or efficient design of a school facility or campus. 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.

Now, more than ever, we have a greater understanding of the impact facilities have on teaching and learning. While facility goals should align with educational goals, they should never drive how student and community learning goals are met. It should also be understood that concepts and examples included throughout this document are only examples, and should be thoroughly explored for applicability to individual schools and/or sites. Design teams are encouraged to explore additional concepts and examples during the planning and design process.

# District Vision and Guiding Principles

As development continues in the areas surrounding East Nicolaus High School, the East Nicolaus Joint Union High School District is anticipating an enrollment growth of close to five hundred students.

These students bring with them both exciting opportunities and challenges for the District. The focus of this document is to assist the District in visualizing how best to house this growth while maintaining the commitments outlined in the District's Philosophy, Vision and Mission Statement.

East Nicolaus High School Philosophy

The purpose of our school is to provide educational opportunities for the maximum growth of each individual within our educational system. We believe a positive self-image, self-realization, and constructive participation in our society are best enhanced through the intellectual, cultural, emotional, social, and physical development of each person.

Recognizing that successful education is the mutual responsibility of the community and the educator, the School District commits itself to:

1. Open, effective communication among students, parents, citizens, and educators.
2. Secure qualified educators who create dynamic learning situations, communicate effectively with all individuals, and function cooperatively within the school community.
3. Develop school policies that utilize available resources to fulfill the needs and interests of participants in the educational process.

East Nicolaus High School Vision Statement

East Nicolaus High School will inspire and prepare every student for academic excellence, individual achievement and future success, while maintaining the courage and honor of our traditions.

East Nicolaus High School Mission Statement

Through partnerships with families and community, East Nicolaus High School is committed to:

- Academic excellence and 21st century learning skills
- A safe and small school environment
- Fostering school pride and tradition
- Diverse opportunities in and out of the classroom

- Preparing students with leadership skills who are self-directed, responsible community members with a strong work ethic

This Ed Spec is one of many tools that will be developed to assure that as students come to live in new homes they will have access to the highest level of educational facilities.

# Document Structure and Overview

This document has been developed to address how to expand the existing East Nicolaus High School campus from a site that currently houses +/- 350 students to a campus that could accommodate 800 students.

As this document addresses the expansion of an existing site, through both the modernization of existing facilities and the construction of new facilities, many parameters must be considered.

The document has been organized in the following sections:

Section 1 - Governing Design Philosophies

This section outlines the governing design principals that will guide the design and development of this project.

Section 2 - Space and Use Requirements

This section outlines the type, function, and special characteristics of each space and the spatial relationships of the instructional areas.

Section 3 - Area Analysis

This section outlines the area requirements of the facilities required to house +/- 800 students.

# Section 1 - Governing Design Philosophies

## Site Considerations

A school site must be able to accommodate a variety of activities and uses including outdoor activities, physical education, athletics and environmental learning programs, in addition to the infrastructure needs of automobile and bicycle parking, access roads for fire, trash and deliveries, bus and parent drop-off areas, and pedestrian walkways.

The following sections outline the design goals of the overall campus as well as the requirements of the State of California. These design concepts should be seen as complimentative to the local planning goals and the requirements of the building code.

### General Site Design

The campus should have an overall inviting feel. It should be well organized with a clear sense of entry and arrival, and an organizational theme that is understood at the pedestrian level. Landscaping should be attractive, drought tolerant, and easily maintainable. Shaded areas should be provided and the development of functional outdoor learning areas is encouraged. Circulation should be clearly defined with appropriate signage and every effort should be made to extend accessibility for all to each area of the campus.

### Parking and Drop Off

There should be a clear and understandable separation of the parent drop-off, bus loading, and parking areas. These areas should be physically separated with built elements (planters, curbs, ornamental fencing etc). Buses should not be required to pass through parking areas and their routes should be designed with simple, easy to navigate drive lanes.

Parent drop off area should be near the front of the school, well organized and aesthetically pleasing.

Vehicle and foot traffic should be separated whenever possible and pedestrians should not have to pass through driveways to enter the campus. Parking stalls should be oriented in a way that does not require them to back into bus lanes or drop off areas.

### Building Placement and Orientation

Buildings should be placed in a manner that allows for easy integration of classroom and support spaces. Travel distances to shared amenities should be limited when possible, and restrooms should be conveniently located in a manner that minimizes supervision

requirements. Buildings should be oriented to maximize natural lighting in a way that does not obstruct views or create areas that are not easily supervisable.

## Campus Circulation

Clearly defined and accessible circulation routes are an essential component of school design. Circulation pathways should be clearly identified with signage and well lit. Pathways should provide clear connectivity between buildings and the different use areas of the campus.

## Site Furnishings

Site furnishings, including benches and tables, should be integrated throughout the campus. Where appropriate consideration should be given to movable outdoor furnishings to allow for flexible group sizes. Enclosed trash receptacles should be provided to encourage campus cleanliness.

## Delivery and Service Areas

There should be a clear separation between student activities and the delivery, waste removal, and essential service areas required to support the campus. These areas should be located as close as possible to their associated use and consolidated in order to reduce their impact throughout the campus. These areas should be visually screened and located / oriented in a way that maximizes student safety and minimizes the chance of dangerous student / vehicular interaction.

### CDE Requirements for Site Development

The following is an excerpt of California Code of Regulations, Title 5 that relates to the site development guidelines for site layout, field areas, delivery and utility areas, and future expansion:

1. *Site Layout. Parent drop off, bus loading areas, and parking shall be separated to allow students to enter and exit the school grounds safely unless these features are unavailable due to limited acreage in urban areas or restrictive locations, specifically:*
    a. *Buses do not pass through parking areas to enter or exit school site unless a barrier is provided that prevents vehicles from backing directly into the bus loading area.*
    b. *Parent drop off area is adjacent to school entrance and separate from bus area and parking.*
    c. *Vehicle traffic pattern does not interfere with foot traffic patterns. Foot traffic does not have to pass through entrance driveways to enter school. Crosswalks are clearly marked to define desired foot path to school entrance.*

   d. *Parking stalls are not located so vehicles must back into bus or loading areas used by parents. Island fencing or curbs are used to separate parking areas from loading/unloading areas.*
   e. *To provide equal access to insure the purposes of the least restrictive environment, bus drop off for handicapped students is in the same location as for regular education students.*
2. *Playground and Field Areas. Adequate physical education teaching stations shall be available to accommodate course requirements for the planned enrollment, specifically:*
   a. *A variety of physical education teaching stations are available to provide a comprehensive physical education program in accordance with the district's adopted course of study (including hardcourt, field area and indoor spaces).*
   b. *The physical education teaching stations are adequate for the planned student enrollment to complete the minimum instruction and course work defined in Education Code.*
   c. *Supervision of playfields is not obstructed by buildings or objects that impair observation.*
   d. *Joint use for educational purposes with other public agencies is explored. Joint use layout with parks is not duplicative and fulfills both agencies' needs.*
3. *Delivery and Utility Areas. Delivery and service areas shall be located to provide vehicular access that does not jeopardize the safety of students and staff:*
   a. *Delivery/utility vehicles have direct access from the street to the delivery area without crossing over playground or field areas or interfering with bus or parent loading unless a fence or other barrier protects students from large vehicle traffic on playgrounds.*
   b. *Trash pickup is fenced or otherwise isolated and away from foot traffic areas.*
4. *Future Expansion. Site layouts shall have capability for expansion without substantial alterations to existing structures or playgrounds:*
   a. *Site layout designates area(s) for future permanent or temporary additions that are compatible with the existing site plans for playground layout and supervision.*
   b. *Utilities to the expansion area are included in the plans and have the capacity to accommodate anticipated growth.*
   c. *Exits, corridors, stairs, and elevators are located to accommodate capacity of additions, particularly in such buildings added as the multi-purpose/cafeteria, administration, gymnasium/or auditorium.*
5. *Placement of Buildings. Building placement shall consider compatibility of the various functions on campus and provide optimum patterns of foot traffic flow around and within buildings. Site layout of buildings, parking, driveways, and physical education areas shall be adequate to meet the instructional, security and service needs of the educational programs:*
   a. *Building placement is compatible with other functions on campus; e.g., band room is not next to library.*

b. *Physical relationship of classrooms, auxiliary, and support areas allows unobstructed movement of staff and students around the campus.*
c. *Building placement has favorable orientation to wind, sun, rain, and natural light.*
d. *Restrooms are conveniently located, require minimum supervision, and, to the extent possible, are easily accessible from playground and classrooms.*
e. *Parking spaces are sufficient for staff, visitors, and students (where applicable).*
f. *The campus is secured by fencing and electronic devices such as code entries, electronic monitoring or motion sensors when needed.*

## Security and Safety

Site safety should not be approached with a 'fortress' mentality. While it is the goal of the district to have a fully fenced campus, security should be approached from a more holistic perspective with a central focus on observation and connectivity. Classrooms should be equipped with two way communication and windows that allow teachers to quickly identify unusual activity. The campus should be equipped throughout with a video surveillance system and intrusion alarms for monitoring during nights and weekends.

Adequate lighting should be provided at all pedestrian and parking areas, and the site should be designed to channel arriving students, visitors, and parents to the front of the campus / administration building.

## Educational Technology

The goal of technology implementation in the classroom is to develop knowledgeable independent learners that are self directed and comfortable working in the digital environment. While it is easy to focus on the rapid development of these technologies, it is important to note that they will only be effective tools if they are supplemented with staff support and training for successful implementation. To reach the full potential of technical implementation the goal must not be a focus on the hardware, but how these tools allow for educators to fully implement the curriculum. Simply put, the goal should be technology supported learning, not technology driven learning.

The District has developed the following technology goals to better guide the design process:

### Infrastructure and Wireless Capabilities

It is the District's desire to build a robust wireless network with a fiber backbone connecting the campuses MDF to all IDFs. The goal is to build enough capacity to address the needs of each classroom, in addition to supporting a VoIP system with

capacity to accomodate school paging, intercom, clock/bell, emergency alert, security cameras, and the phone system.

### Learning Environment Technology

All Teaching Stations should provide an integrated audio/visual solution, with local media inputs, controls, cabling, speakers, amplifiers, and associated components to support video display at the teaching wall. It would be preferable if learning environment technology is integrated with the campus paging, intercom, clock/bell, and emergency alert system to reduce staff training and district maintenance.

## Environmental Considerations

While each site provides unique opportunities for sustainable design, consideration should be paid to the following items, regardless of location, program, and building type.

### Lighting and Natural Daylight

Studies show that classroom designs utilizing natural lighting provide a significant increase to student's focus, achievement and overall sense of well-being. All facilities should prioritize solar orientation and balanced daylight as an integral part of the design solution. Multipurpose rooms, libraries, and gyms should be designed to maximize diffuse lighting while avoiding glare from direct sunlight.

CDE Requirements for School Lighting

The following is an excerpt of California Code of Regulations, Title 5 that relates to the development guidelines for school lighting:

1. *Lighting. Light design shall generate an illumination level that provides comfortable and adequate visual conditions in each educational space, specifically:*
    a. *Ceilings and walls are white or light colored for high reflectance unless function of space dictates otherwise.*
    b. *Lights do not produce glare or block the line of sight.*
    c. *Window treatment allows entrance of daylight but does not cause excessive glare or heat gain.*
    d. *Fixtures provide an even light distribution throughout the learning area.*
    e. *Light design follows the California Electrical Code found in Part 3 of Title 24 of the California Code of Regulations.*

### Indoor Environmental Quality

The recent pandemic has placed increased importance on indoor environmental quality. While studies have long shown the benefits of a comfortable temperature and fresh

outside air, filtration and viral load reduction have quickly escalated to significant concerns relating to HVAC systems. Mechanical systems shall be designed to meet necessary comfort levels and provide for adequate indoor air requirements. Special consideration should be given to the implementation of MERV-13 filters and duct ionization in order to reduce viral load. While it is desirable to allow for some control of the temperature by the end users, campus wide controls should be implemented to standardize the use of the HVAC systems.

### Energy Efficiency

As costs rise and energy consumption continues to be a concern throughout the state of California, energy efficiency remains a topic of focus for school design. Lighting and mechanical systems shall be thoughtfully selected to help reduce energy consumption. Additionally, designers should investigate the feasibility of photovoltaic arrays to help offset energy consumption campus wide.

### Acoustics

Stimulus within the learning environment has been shown to affect learning and behavior in students. As such, good acoustical control is essential. Whenever possible avoid adjacency of uses with differing acoustic needs and expectations (for example gyms and libraries). If adjacency of uses with differing acoustic needs is essential to the delivery of curriculum, then attention should be paid to acoustic separation.

# Section 2 - Space and Use Requirements

## Learning Environments

Campuses should include a variety of learning environments that have been designed for maximum flexibility to accommodate changing educational programs, policy, and demographics. There is a significant correlation between quality classroom design and student performance. Studies show students instinctively respond positively, both emotionally and academically, to the vote of confidence they feel when their community invests in thoughtful design, quality materials and skilled construction.

### Classrooms / Traditional Learning Environments

The classroom or traditional learning environment is the cornerstone of the modern learning environment. These spaces should be designed to accommodate up to 30 students plus a teacher. Classrooms should be flexible in design and centered around whole group instruction. Classrooms should contain wall mounted markerboards, tackboard and the teaching environment technology outlined above.

Additional Considerations for Classroom Spaces

- Fixed casework should be limited to allow for flexibility.
- While the typical classroom only requires a single exit, where feasible a second exit should be considered for emergency situations. .
- Classrooms should be flexible enough to accommodate small group instruction, lecture, independent study, and group projects.
- Classrooms should be connected to the outdoors wherever possible.
- Classroom design should explore the ability to join several smaller classrooms together into larger learning environments when possible.

CDE Requirements for Classroom Spaces

The following is an excerpt of California Code of Regulations, Title 5 that relates to the development guidelines for classrooms:

1. *Classrooms shall have adequate space to perform the curriculum functions for the planned enrollment as described in the school district's facility master plan, specifically:*
    a. *Classroom size standards:*
        i. *General classrooms, grades one through twelve are not less than 960 square feet. Classrooms proposed of less than 960 square feet require written justification to be submitted to and approved by the*

*State Superintendent of Public Instruction. Adjacent instructional space shall be included in the calculation of square feet for purposes of approving classroom design.*

ii. *Proposed classrooms of less than 960 square feet have written justification consistent with the educational program and curriculum indicating that the district's education program can be delivered in the proposed size classrooms.*

b. *Total classroom space meets or exceeds the capacity planned for the school using the district's classroom loading standards in accordance with State Allocation Board policy.*
c. *Consideration is given to some classrooms which are easily alterable in size and shape at a reasonable cost.*
d. *Conduit/cabling and outlets are available for technology in each classroom to provide network and stand alone equipment related to the planned and future potential educational functions.*

### Seminar and Small Group Rooms

Seminar and Small Group Rooms are flexible spaces that can be used for a variety of small group activities, including collaborative project work, parent / teacher meetings, staff / student conferences, individual testing, etc. These spaces should be designed to accommodate up to 15 students plus a teacher. Activities may require a measure of privacy, so acoustical control is desired. These spaces are ideally located close to classroom areas with a visual connection between them.

Additional Considerations for Seminar and Small Group Rooms

- Furniture should be mobile for easy reconfiguration and include a modular conference table and chairs
- Storage should be easily moved to expand space or create a barrier around a smaller space as needed
- Mobile technology systems and carts as needed for in-room technology and instructional aids.

## Specialized Learning Environments

Some students have a need for an adapted curriculum which requires a specialized learning environment. These spaces should be designed for up to 11 students, plus teachers, staff, volunteers, and aides as needed. Activities may include whole group, small group and one-to-one learning to improve auditory, tactile, visual, kinesthetic and academic skills - in general to meet the various needs of differently-abled students who require additional support. There should be several classroom types that provide for different needs.

## Non-Severe Special Education

Students who exhibit mild to moderate disabilities, require a specialized learning environment. These rooms should have flexible seating, accessible spaces for specialized equipment, as well as areas for individualized needs. These classrooms could potentially incorporate sensory considerations, such as dimmable lights. The design of these rooms should consider ways of assisting students who may be hard of hearing, such as amplification, lighting or other devices to get students' attention, and carpet or extra sound padding on wall.

Considerations for Non-Severe Special Education:

- Fixed casework should be minimized to promote flexible use and reconfiguration of space for various activities.
- The design should prioritize easy access to and from student services, specialists offices, school nurse, and drop-off/pick-up
- Restrooms should be accessible from the classroom.
- Variable lighting, auditory and climate controls should be provided.
- Multiple zones for various student needs and activities should be provided.
- Provide additional power outlets for equipment & technology and to allow for flexibility of room configuration as needed.
- Outdoor learning space for the Special Education students are encouraged but they should have minimal visual and acoustic distraction within a safe zone.
- Whenever possible the special education classroom should be integrated into the campus, not placed on the periphery.
- Certain Special Education needs, such as speech therapy, may be integrated into the wellness center if provided at the campus.

## Severe Special Education

Students who exhibit moderate to severe disabilities require a specialized learning environment. These classrooms need to provide a safe and accessible learning environment. These rooms should have spaces for specialized equipment, as well as a bathroom attached to the classroom with a changing table. There should also be a refrigerator in the classroom for the storage of medical needs.

Additional Considerations for Severe Special Education

- A cluster of two classrooms may be considered if support or auxiliary services (e.g., bathrooming, feeding, physical or occupational therapy, laundry, kitchen) can be shared, however these clusters should be integrated into the campus and not placed at the periphery of the campus.
- Special consideration should be paid to storage of students' individual mobility equipment. Storage should be secure and weather proof.

- Spaces should be oversized and open with consideration paid to the circulation and potential ambulatory needs of the students.
- Additional outlets should be placed throughout the space for medical devices
- Soft seating, work tables, stools, collaboration tables, mobile storage units and furniture that can also be used to subdivide space as needed.
- A conference area is available to conduct annual individualized education program meetings (IEP) for each special education student.
- Medical therapy units, if necessary, are kept near visitor parking areas and accessible after school hours.
- Rooms should include a kitchen area to facilitate teaching life skills

CDE Requirements for Specialized Classrooms and Areas

The following is an excerpt of California Code of Regulations, Title 5 that relates to the development guidelines for Specialized Classrooms and Areas:

1. *Specialized classrooms shall be designed to reflect the function planned for that portion of the educational program. If any of the following classrooms are needed, these standards apply:*
    a. *Small-Group Areas.*
        i. *Small-group instruction areas are not included in the computation of classroom size unless the area is an integral part of the classroom and can be visibly supervised by a teacher from the classroom.*
        ii. *Small-group instruction areas are designed to allow for collaborative learning opportunities where appropriate to support the regular education program and are located in the vicinity of classrooms.*
    b. *Special Education Classrooms and Areas.*
        i. *A new school designates at least 240 square feet for the resource specialist program and provides additional space in accordance with the allocations in Education Code as larger enrollments are being planned.*
        ii. *A new school designates at least 200 square feet for the speech and language program which is close to classrooms when an individualized instruction program is necessary.*
        iii. *A new school designates office area for the psychologist/counseling program which provides for confidentiality and may be shared with other support service programs.*
        iv. *Special day classrooms are at least the same size as regular education classrooms at that site and are properly equipped for the students who will occupy the space, for their age and type of disabling condition.*
        v. *The square footage allowance in Education Code for special day class programs is used for the design of classroom space and other space on the campus to support the special education program. The*

*support space includes but is not limited to speech specialist area, psychologist, counseling offices and conference area.*

vi. *Special day classrooms are distributed throughout the campus with age appropriate regular education classrooms.*

vii. *A cluster of two special day classrooms may be considered if support or auxiliary services (e.g., bathrooming, feeding, physical or occupational therapy) are needed to serve the students throughout the school day.*

viii. *A conference area is available to conduct annual individualized education program meetings for each special education student.*

ix. *Medical therapy units, if planned for the site, are close to visitor parking areas and accessible after school hours.*

## Science Laboratories

These spaces should be designed to accommodate up to 30 students plus a teacher. Science Laboratories should be flexible in design, but still contain the robust power, data, and plumbing required to execute a comprehensive science curriculum. Science casework can be either mounted or mobile, but it should allow for the full transition of students from a lecture environment to a lab work space, that is the lecture area should not double as the laboratory area. Science laboratories should be provided with adequate storage and preparation rooms to supplement the learning environment.

Additional Considerations for Science Laboratories

- Fume hoods and/or environment safety cabinets should be provided depending on the curriculum.
- Special attention should be paid to the location of safety features including fire extinguishers, first aid kits, safety showers, gas disconnect valves and more. All of these items should be clearly labeled and easily accessible.
- While required by code, special consideration should be paid to excavation fans and their controls. These items should all be clearly labeled and easily accessible.
- The design should facilitate the quick transition from the lecture space to the laboratory setting however possible with the goal to maximize student learning time.

CDE Requirements for Science Laboratories

The following is an excerpt of California Code of Regulations, Title 5 that relates to the development guidelines for Science Laboratories:

1. *Laboratories shall be designed in accordance with the planned curriculum.*

a. *Size is at least 1300 square feet including storage and teacher preparation area.*
b. *Science laboratory design is consistent with the requirements for proper hazardous materials management specified in both the "Science Facilities Design for California Public Schools," published by the California Department of Education, 1993, and the "Science Safety Handbook for California Public Schools(PDF)," published by the California State Department of Education, 1999.*
c. *Accommodations are made for necessary safety equipment and storage of supplies; e.g., fire extinguisher, first aid kit, master disconnect valve for gas.*
d. *Secured storage areas are provided for volatile, flammable, and corrosive chemicals and cleaning agents.*
e. *Properly designated areas are provided with appropriate ventilation for hazardous materials that emit noxious fumes, including a high volume purge system in the event of accidental release of toxic substances which may become airborne.*
f. *Exhaust fume hoods, eye washes, deluge showers are provided.*
g. *Floor and ceiling ventilation is provided in areas where chemicals are stored.*
h. *Room is provided for movement of students around fixed-learning stations.*
i. *There is the capability for technology which complements the curriculum.*
j. *Classrooms are flexibly designed to insure full student access to laboratory stations and lecture areas.*

## Applied Learning / Career Technical Education (CTE)

Applied Learning / Career Technical Education (CTE) is a foundational program for the East Nicolaus High School. As the board continues to develop the educational goals of this campus, special consideration should be given to prioritizing CTE programs as the student population disproportionately enrolls in the CTE programs currently offered. We believe that this enrollment trend indicates a significant need for growth and expansion of the existing CTE programs.

The goal of applied learning is to move learning out of the classroom into real-word settings. As such, applied learning environments need to align curriculum and learning environments with industry standards as much as possible.

These spaces should be designed to accommodate up to 30 students plus a teacher. Spaces should be designed in partnership with school staff and their local industry partners. Lecture spaces should be separate from workrooms and project areas.

Additional Considerations for Applied Learning Spaces

- Implementation of industry appropriate technology should be maximized whenever possible.
- Whenever possible lecture areas should be located adjacent to work spaces to minimize student travel time during class.
- Special attention should be given to the location and identification of all safety equipment and safe storage areas.
- When appropriate access to the outdoors should be incorporated into the space

CDE Requirements for Applied Learning / Career Technical Education Area

The following is an excerpt of California Code of Regulations, Title 5 that relates to the development guidelines for Applied Learning / Career Technical Education Area:

1. *Industrial and Technology/Education Laboratory:*
    a. *Room is provided for movement of students around fixed learning stations.*
    b. *Flexible stations with sufficient outlets and power source for industrial type equipment is provided.*
    c. *Space is provided for various simulations of job-related experiences and laboratory work stations.*
    d. *There is capability to utilize technology which complements the curriculum, such as computer-aided graphics, electronics and specialized tools.*
    e. *There is lecture area within each laboratory or near the laboratory area where appropriate.*
    f. *There are accommodations for necessary health and safety equipment, such as fire extinguisher and first aid kit.*
    g. *Secured storage areas for volatile, flammable and corrosive chemicals and cleaning agents are provided where appropriate.*
    h. *There are properly designated areas with appropriate ventilation for the use of hazardous material that emit noxious fumes or excessive dust particles.*
    i. *Proper storage and removal access for hazardous waste materials is provided in each laboratory using such materials.*

## Physical Education and Athletic Considerations

Physical Education and sports athletics help students gain the knowledge, attitudes and behaviors that will prepare them to maintain a high level of physical, social, and mental health throughout their life.  As such, these facilities should be considered as their own learning environments rather than facilities supplemental to the learning process.

## Indoor Physical Education

Indoor Physical Education spaces require an open flexible space, usable for a variety of activities. It should look and feel like an energizing and fun space to be in. Indoor instructional spaces should be designed to facilitate a variety of activities such as weight training, dance, fitness classes, yoga, aerobics and more. The indoor physical education building should support school pride and serve as an icon on the campus.

Additional consideration for Indoor Physical Education

- Gymnasium should have high ceilings that maximize natural daylight but also the ability to darken the space as needed.
- Mixed mode HVAC systems should work in conjunction with natural ventilation for better energy efficiency.
- The building should include auxiliary space for weight and fitness, aerobics, exercise equipment etc
- Wireless access for public and private networks
- Restrooms available for public use should be separate from the restrooms in the locker rooms.
- Staff office should be connected to the locker rooms, with a window between the two for supervision.
- Locker rooms should have direct access to outdoor play fields and courts.
- The gymnasium should have bleacher seating appropriate for sporting events, school rallies and athletics competitions.
- If possible the building should be placed in a secure location, adjacent to the main campus for ease of use after school hours.

CDE Requirements for Indoor Physical Education

The following is an excerpt of California Code of Regulations, Title 5 that relates to the development guidelines for Gymnasium, Shower Rooms, and Locker Rooms:

1. *Gymnasium, Shower Rooms, and Locker Rooms shall be designed to accommodate multiple use activities in accordance with the planned enrollment:*
    a. *The gymnasium is secured from other parts of the campus for evening and weekend events or for public use purposes.*
    b. *The shower/locker area is of sufficient size to allow students enrolled in the physical education program to shower and dress each period.*
    c. *Toilets are available for the public in facilities intended for shared community use other than in shower/locker areas.*
    d. *Office space is provided for physical education teachers.*
    e. *Space is available for specialized age-appropriate physical education activities such as weight lifting, exercise equipment usage, aerobics.*

## Outdoor Physical Education

Outdoor physical education should have supplemental teaching stations to accommodate course requirements. Depending upon acreage available, outdoor physical education spaces should include stadium, track & field, baseball fields, tennis courts, basketball hard courts, and multi-use fields with baseball, softball, soccer, and football overlays. No buildings and/or objects should impair observation of Outdoor Physical Education areas when possible.

Additional Considerations for Outdoor Physical Education

- The campus should provide both hard surface and open turf areas for structured and unstructured activities.
- Drinking water should be readily available near each teaching station. CDE recommends one drinking fixture per ten students in order to allow students to drink without excessively encroaching into instructional time.
- Wireless connectivity should reach the athletics fields.
- Athletics fields should be close to the locker rooms and equipment storage spaces, as well as the press box, concession stand, and ticketing.
- Community access to parts of the building or grounds that involve after-school activities should be clear and distinct.
- Athletics are extended-use areas of the school so should be convenient to safe, well light evening parking.
- Public Restrooms should be easily accessible and have clear signage
- Joint use with other community agencies should be explored

CDE Requirements for Outdoor Physical Education

1. *Playground and Field Areas. Adequate physical education teaching stations shall be available to accommodate course requirements for the planned enrollment, specifically:*
    - **a.** *A variety of physical education teaching stations are available to provide a comprehensive physical education program in accordance with the district's adopted course of study (including hardcourt, field area and indoor spaces).*
    - **b.** *The physical education teaching stations are adequate for the planned student enrollment to complete the minimum instruction and course work defined in Education Code sections 51210(g), 51220(d) and 51225.3(a)(1)(F).*
    - **c.** *Supervision of playfields is not obstructed by buildings or objects that impair observation.*
    - **d.** *Joint use for educational purposes with other public agencies is explored. Joint use layout with parks is not duplicative and fulfills both agencies' needs.*

# Supplemental Facilities

## Administration Areas

Administration areas serve as a welcome center and a point of arrival for the public. The entry and lobby area should allow for parents to quickly find what they need, including current events, programs and activities. The admin building is home to all the shared functions of the campus. These include administration offices, nurses office, attendance office, faculty and health services, as well as: staff work rooms, restrooms, and lounge. Areas should be provided for students to safely and securely wait for meetings with the principal or other campus staff.

### Additional Considerations for Administration Areas

- The administration area should provide a clear, secure and accessible point of entry to the campus.
- Staff support areas such as the staff lunchroom, lounge, mail room, and work room should be easily accessible from within the campus and from all grade level communities and classrooms.
- Students, staff and visitors should have good access to service offices such as counseling and conference rooms.
- The health office (nurse) should have visibility from the main office, and easy access for parents to check-out a sick student if necessary.
- Parents and other volunteers should have easy access to the parent / volunteer area after obtaining clearance from the front office.
- Restrooms should be clearly marked and easily accessible
- Areas to display student work and create a school identity should be clearly visible.

### CDE Requirements for Administration Areas

1. *Administrative Office. The administrative office shall have sufficient square footage to accommodate the number of staff for the maximum enrollment school district and shall be designed to efficiently conduct the administrative functions, specifically:*
    a. *Students have direct confidential access to pupil personnel area.*
    b. *Counter tops are accessible for an age-appropriate population both at a standing and wheelchair level.*
    c. *Clerical staff have a clear view of nurse's office.*
    d. *The nurse's office has a bathroom separate from staff bathroom(s) in administration area.*
    e. *Space for private conference and waiting area is available.*
    f. *Capability for such computer networking functions as attendance accounting and communicating to each classroom is considered.*

g. *A faculty workroom is available for a staff size proportionate to the student population.*

### Wellness Center

Providing a Wellness Center, while not required, is a valuable investment in the health and academic potential of students. Providing easily accessible support for students experiencing emotional problems significantly improves their academic performance, behavior, social integration, and overall satisfaction. The Wellness Center would ideally be staffed with a team focused on physical, mental, and emotional health and provide students, their families, and the community comprehensive support services. Proposed services may include, but not be limited to:

- Individual or Group Counseling
- Career and College Preparation Services
- Crisis Intervention
- Substance Use Interventions including vaping and tobacco
- Safe space for students in emotional distress
- Bullying Intervention

#### Wellness Center Considerations

- If a wellness center is provided consideration should be given to integrating the nurse's area in the wellness center to develop a whole body space inclusive of all health needs. This approach would encourage collaboration between physical and mental health professionals.
- The wellness center should provide smaller rooms adjacent to a larger main space which can be used for private counseling, smaller groups, offices, therapy intervention, assessments etc.
- Acoustic control of all areas in the wellness center should be a high priority.
- The wellness center should be integrated into the campus in an area where students would travel for a number of reasons, not simply to visit the wellness center.

## Library / Media Center

The Library / Media Center should function as a central hub for all students for reading, researching, developing projects, supporting collaboration, and providing exposure to printed materials and technology. The space should be technology rich with the latest tools for seeking and documenting information and ideas, as well as a space where students can work in groups to share ideas with each other or read a book or magazine in a comfortable and informal setting.

Additional Considerations for the Library / Media Center

- The Library/ Media Center should include a large, flexible and open area intended to facilitate a variety of activities.
- Circulation desk should be provided with space for computers, technology, book return, supply storage and filing.
- The circulation desk should have clear views of the entire space for easy supervision.
- Large and small group work areas integrated, and access to multiple forms of media should be easily available to students and adults.
- Technology/connectivity should exist to offer support, training and general tech help.
- Furniture should be mobile and flexible to accommodate various activities and groupings.

CDE Requirements for Library / Media Center

The following is an excerpt of California Code of Regulations, Title 5 that relates to the development guidelines for Library / Media Centers:

1. *Library/Media Center and Technology. Library space shall be proportional to the maximum planned school enrollment. The size shall be no less than 960 square feet. However, to allow adaptation for changing technology and communication systems, the following is recommended:*
   *-two square feet per unit of ada for middle or junior high (grades 6-8);*
   *-four square feet per unit of ada for high school. In addition:*
   a. *Provide security for technology and media equipment.*
   b. *Space and capability for computer terminals is considered for student use, research and report writing.*
   c. *Visual supervision from circulation desk is available to study areas, stack space, and student work centers.*
   d. *Design for open and closed-circuit television, dedicated phone line, electrical outlets for stand-alone computers, and conduit connecting all instructional areas is considered.*
   e. *Computer Instructional Support Area:*
   f. *If a standard classroom is being designated as a computer laboratory, size is at least 960 square feet.*
   g. *Room is provided for movement of students around learning stations.*
   h. *Sufficient outlets, power sources, and network links for the amount of equipment are provided.*
   i. *Proper ventilation is provided.*
   j. *Room provides for security of equipment.*
   k. *Lighting minimizes screen glare and eye strain.*

## Student Commons

The student commons are shared by the school community in both structured and unstructured ways, and should feel inclusive and welcoming. Interior commons space should be designed to encourage students to gather, study, socialize and dine. Since commons are shared by the entire school community, they are ideally a centrally located space on campus.

Additional Consideration Student Commons

- Integrated indoor and outdoor spaces should be provided that can be easily reconfigured for a variety of activities.
- Flexible seating should be provided that is well designed and can be easily reconfigured.
- Providing adequate shade for outdoor seating should be prioritized.
- Storage for chairs and tables should be adjacent and easily accessible with a clear pathway.
- After hours access to some, or all, of these areas can enhance school-community relationships and partnerships.

### Auditorium and Multi-Purpose Room

Multi-Purpose rooms should be designed to support a wide variety of programs and activities. Some of the most common uses include school programs, pep rallies, large group learning, music performances, team practice space, and as a community gathering space.

Additional Considerations for Auditorium and Multi-Purpose Rooms

- An A/V system should be provided for presentations and performances. This system should be designed as a performance space with special attention paid to acoustic control.
- The space should provide a simple elevated stage to serve as a place for performance and presentations. The stage does not need to be permanently installed, but storage for the stage should be provided if it is not.

### Food Service and Kitchens

Staff will be responsible for preparing and serving food at this site. The kitchen area should have Wi-Fi, data drops for Point- of-Sale (POS), and multiple phone sets for easy access throughout the kitchen. The kitchen should be adjacent to the serving area and close to student dining. Serving lines should be designed for quick and efficient student access. Students should be able to quickly choose healthy food options and then move to cashiers.

Additional Considerations for Food Service and Kitchens

- This kitchen needs to be provided with an adequate area for both dry goods storage and cold storage.
- The kitchen should provide commercial kitchen equipment including: Walk-in cooler and freezer, hood with Ansul system, combi-ovens, ovens, warmers, dishwashers and prep tables- stationary and/or mobile.
- The space should provide adjacent restroom and locker room areas for employees.

## Student Dining Area

The student dining area will serve as a central indoor/outdoor gathering space for the school. This space should be a pleasant and inviting environment with indoor space connected directly to the outdoor covered dining. This space should be a comfortable area for students, where they can relax and socialize while they eat.

Additional Considerations for Student Dining

- Acoustical sound control should be utilized throughout to minimize reverberation.
- Drinking fountain/water filling station should be provided, clearly marked, and easily accessible.
- Wireless accessibility should be provided over public and private networks
- Adequate tables, chairs and trash cans should be available in indoor and outdoor dining.
- Storage for tables and chairs should be adjacent to the dining area.

CDE Requirements for  Multipurpose / Cafeteria Area Development

The following is an excerpt of California Code of Regulations, Title 5 that relates to the development guidelines for Multipurpose / Cafeteria Areas:

1. *Multipurpose/cafeteria area (indoor or outdoor) shall be adequately sized and flexibly designed to protect students from the elements and to allow all students adequate eating time during each lunch period and to accommodate such uses as physical education activities, assemblies, and extracurricular activities:*
    a. *Tables and benches or seats are designed to maximize space and allow flexibility in the use of the space.*
    b. *The location is easily accessible for student and community use, but is close to street for delivery truck access.*
    c. *Stage/platform may have a dividing wall to be used for instructional purposes but is not intended as a classroom.*

d. *Area for the cafeteria line is designed for the flow of traffic for each lunch period.*
e. *Design of kitchen reflects its planned function; e.g., whether for food preparation or warming only.*
f. *Space is available for refrigeration and preparation of foods to accommodate maximum number of students planned for the school.*
g. *Office, changing, and restroom area for food preparation staff is available and shall comply with local department of health requirements.*
h. *Ceiling height allows for clearance of light fixtures for physical education activities.*

## Performing Arts Building

The performing arts are centered around the band, choir, dance and drama programs. These programs have both static and dynamic needs to consider in design. A large group practice space which can be adapted and shared between the programs as needed should be considered, as well as smaller practice studios for each program. Additional small group and individual practice rooms could be shared amongst all programs. Acoustical integrity should be prioritized throughout the building. The following are unique considerations for each department's practice studio, with "general" considerations for the building as a whole following.

The building should provide a drama classroom. This room should be large and flexible with adequate storage for props and costumes. The space should be equipped with a high quality sound system including microphones and amplifiers

Additional Considerations for Performing Arts Buildings

- Design should prioritize acoustic control for performances. This building should house a sophisticated A/V system designed by a team with performance facility experience.
- It had been determined that the space does not need a fly loft and should be designed to accommodate multiple performance methods and not solely prioritize drama.
- Separate, secure storage should be designed to be easily accessible and able to accommodate the unique daily needs of each program.
- This area should be acoustically isolated as much as possible from the rest of the campus.

## Music Room

A music room should be provided to support the band and choir programs. The room should be outfitted with risers for rehearsal and instruction. The space should be large enough to house a piano, and equipped with a high quality sound system including microphones and amplifiers.

### Additional Considerations for Music Rooms

- The primary use of this is instrumental rehearsal space for band and orchestra, as well as being utilized for music theory instruction and independent music projects.
- Students will be bringing instruments into this room from the instrument storage, which should be easily accessible.
- The room is expected to always house a piano.
- This area should be acoustically isolated as much as possible from the rest of the campus.

# Section 3 - Area Analysis

## Enrollment and Class Loading

As outlined above the projected enrollment for the campus expansion of East Nicolaus High School is 800 students. The district has provided the following loading factors for this study.

| | |
|---|---|
| Total Enrollment | 800 |
| | |
| Class Size Loading | |
| Grade 9-12 | 27 |
| Special Education - Severe | 9 |
| Special Education - Non-Severe | 11 |

In order to adequately allow for teacher prep periods a utilization ratio of 85% has been used to calculate the total number of required teaching stations. The recommended teaching stations are outline below:

| | |
|---|---|
| Total Grade 9-12 Teaching Stations | 34 |
| Self-Contained Special Ed Teaching Stations | 3 |

| | | | |
|---|---|---|---|
| Standard Classroom | 18 | Digital Design Lab | 1 |
| Science Labs | 4 | Music Room | 1 |
| Applied Learning / CTE Labs | 6 | Drama Classroom | 1 |
| Non-Severe Special Education | 2 | Gymnasium | 1 |
| Severe Special Education | 1 | Auxiliary Gymnasium | 1 |
| Art Studio | 1 | Drama Classroom | 1 |

This distribution of teaching stations illustrates an emphasis on applied learning and CTE as the governing board has expressed a desire to develop the school as a CTE magnet school.

The following pages outline the space requirements for a projected 800 student campus. Please note a confirmation check should be performed at the start of the design process to assure the needs of campus are still met by this distribution and area allocation.

## Area Analysis for the Proposed 800 Student Campus at East Nicolaus High School

| | |
|---|---|
| Target Enrollment | 800 |
| Total Teaching Stations | 37 |

| Teaching Station Summary | Count |
|---|---|
| Classrooms | 18 |
| Science Labs | 4 |
| Special Education Classroom | 3 |
| Art Studio | 1 |
| Digital Design Lab | 1 |
| Music Room | 1 |
| Applied Learning Rooms (CTE) | 6 |
| Gymnasium | 1 |
| Aux. Gymnasium | 1 |
| Drama Classrooms | 1 |

| Areas Summaries | Total Area (sf) |
|---|---|
| Core Learning Areas | 49,720 |
| Supplemental Areas | 45,140 |
| Campus Support Areas | 21,580 |
| **Total Proposed Area** | **116,440** |

| Minimum Essential Facility Analysis | Area |
|---|---|
| Gymnasium | 12,240 |
| Library | 4,040 |
| Multi Purpose Room | 8,200 |
| Administration Area | 3,200 |
| Restrooms | 4,000 |

**MEF's have been highlighted in blue below**

**Teaching Station Calculations**

| | |
|---|---|
| Enrollment | 800 |

Class Size Loading

| | |
|---|---|
| Grade 9-12 | 27 |
| Special Education - Severe | 9 |
| Special Education - Non-Severe | 11 |

Teaching Station Breakdown

| | |
|---|---|
| Required Stations | 37 |
| Required Stations | 1 |
| Required Stations | 2 |

| | |
|---|---|
| Target Room Utilization | 85% |

Accounts for Teacher Prep and Scheduling

| | |
|---|---|
| Total Enrollment - Self-Contained Spec Ed | 31 |
| Total Enrollment Less Spec Ed | 769 |
| Required Teaching Stations | 29 |
| Utilization Factor (+15%) | 5 |
| Total Grade 9-12 Teaching Stations | 34 |
| Self-Contained Special Ed Teaching Stations | 3 |
| **Total Teaching Stations** | **37** |

| Core Learning Environments | Quantity | Area per Room | Total Area | Teaching Stations |
|---|---|---|---|---|
| Classrooms | 18 | 960 | 17,280 | 18 |
| Science Labs | 4 | 1300 | 5,200 | 4 |
| Science Prep Room | 2 | 250 | 500 | |
| Science Storage | 2 | 250 | 500 | |
| Special Education Classroom | 3 | 1280 | 3,840 | 3 |
| Restroom / Changing | 2 | 100 | 200 | |
| **Core Learning Support Spaces** | | | | |
| Laundry | 1 | 200 | 200 | |
| Sensory Area | 1 | 200 | 200 | |
| OT/PT Room | 1 | 200 | 200 | |
| Specialist Offices | 2 | 120 | 240 | |
| Testing / Quiet Rooms | 2 | 80 | 160 | |
| Storage | 2 | 100 | 200 | |
| **Teacher Support Spaces** | | | | |
| Teacher Workrooms | 2 | 500 | 1,000 | |
| Teacher Conference Room | 4 | 200 | 800 | |
| Teacher Storage Rooms | 4 | 150 | 600 | |

| Visual Arts Learning Environments | Quantity | Area per Room | Total Area | Teaching Stations |
|---|---|---|---|---|
| Art Studio | 1 | 1300 | 1,300 | 1 |
| Digital Design Lab | 1 | 1300 | 1,300 | 1 |
| Supply Storage | 2 | 150 | 300 | |
| Project Storage | 2 | 150 | 300 | |
| Teachers Office | 2 | 150 | 300 | |

| Music Learning Environments | Quantity | Area per Room | Total Area | Teaching Stations |
|---|---|---|---|---|
| Music Room | 1 | 2400 | 2,400 | 1 |
| Practice Room - Individual | 4 | 75 | 300 | |
| Practice Room - Group | 1 | 400 | 400 | |
| Instrument Storage | 1 | 300 | 300 | |
| Music Library | 1 | 150 | 150 | |
| Teachers Office | 1 | 150 | 150 | |
| Uniform Storage | 1 | 300 | 300 | |

| CTE Learning Environments | Quantity | Area per Room | Total Area | Teaching Stations |
|---|---|---|---|---|
| **Applied Learning Rooms (CTE)** | 6 | 1600 | 9,600 | 6 |
| Supply Storage | 2 | 300 | 600 | |
| Project Storage | 2 | 300 | 600 | |
| Teachers Office | 2 | 150 | 300 | |

| PE & Athletic Learning Environments | Quantity | Area per Room | Total Area | Teaching Stations |
|---|---|---|---|---|
| **Gymnasium** | **1** | **12240** | **12,240** | **1** |
| Aux. Gymnasium | 1 | 6000 | 6,000 | 1 |
| Weight and Fitness Room | 1 | 3200 | 3,200 | |
| PE Locker Room / Changing | 2 | 2000 | 4,000 | |
| Team Rooms | 2 | 1200 | 2,400 | |
| PE Restrooms | 2 | 500 | 1,000 | |
| Staff Offices / Coaches Room | 2 | 400 | 800 | |
| Gym Storage | 2 | 300 | 600 | |
| Training Room | 2 | 300 | 600 | |
| Stadium Concession | 1 | 650 | 650 | |
| Stadium Press Box | 1 | 650 | 650 | |

| Performing Arts Learning Environments | Quantity | Area per Room | Total Area | Teaching Stations |
|---|---|---|---|---|
| Performing Arts Building | 1 | 5400 | 5,400 | |
| Drama Classrooms | 1 | 960 | 960 | 1 |
| Control Room | 1 | 300 | 300 | |
| Green Room | 2 | 400 | 800 | |
| Costume / Prop Storage | 1 | 300 | 300 | |
| Stage Restroom | 1 | 150 | 150 | |
| Teachers Office | 1 | 150 | 150 | |

| Library / Media Center | Quantity | Area per Room | Total Area | Teaching Stations |
|---|---|---|---|---|
| **Library** | **1** | **4040** | **4,040** | |
| Technology Office | 1 | 150 | 150 | |
| Technology Storage and Workroom | 1 | 150 | 150 | |
| Campus MDF | 1 | 600 | 600 | |

| Food Services | Quantity | Area per Room | Total Area | Teaching Stations |
|---|---|---|---|---|
| **Multi Purpose Room** | **1** | **8200** | **8,200** | |
| Kitchen and Food Support | 1 | 1500 | 1,500 | |

| Administration & Student Services | Quantity | Area per Room | Total Area | Teaching Stations |
|---|---|---|---|---|
| **Administration Area** | **1** | **3200** | **3,200** | |
| Wellness Center | 1 | 2880 | 2,880 | |

| Building Support | Quantity | Area per Room | Total Area | Teaching Stations |
|---|---|---|---|---|
| Custodial Closets | 6 | 75 | 450 | |
| Custodial Workroom | 1 | 750 | 750 | |
| Building Supply Storage | 3 | 200 | 600 | |
| **Restrooms** | **1** | **4000** | **4,000** | |