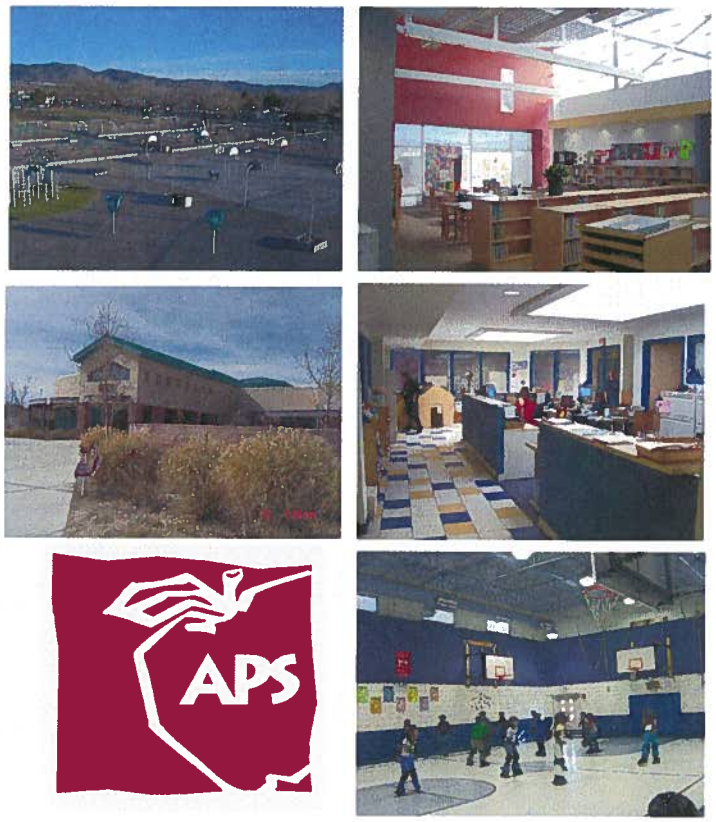
Albuquerque Public Schools
Office of Capital Facilities Design & Construction

Elementary School Planning Standards



Revised August 2014

Acknowledgements

The standards owe a large debt to the advisory committee, executive committee, expert reviewers and prior APS curriculum area coordinators, the *Guide for School Facility Appraisal* developed by Harold L. Hawkins, Ed.D. and H. Edward Lilley, Ph.D., in cooperation with the Council of Educational Facility Planners International. This guide served as the conceptual base from which adaptations were made in order to adjust to the unique characteristics of APS. *The Facility Condition Survey Standards,* developed by the Jefferson County Public Schools in Colorado, was also an excellent resource for the original version of the policies and standards.

TABLE OF CONTENTS

School & Site Factors Specific to Different Schools
The information is for general site and facility parameters not covered in the more "performance based" standards that follow.

The requirements for the Elementary School project are as follows:

1. The contract Architect / Engineer (A/E) will coordinate their work with the Department of Facilities Design and Construction (FD+C) Project Manager and participate in the School Building Committee process.
2. Elementary School Facility
   - The school facility shall be capable of educating any child, including severely behavior disordered students and / or students in the intensive support program (ISP) for special needs students with multiple, profound disabilities. Standard "neighborhood" special education requirements are separately defined programs for the purpose of this document and are included in this facility. A new school will be completely accessible to all students, staff, and visitors to the extent stipulated in the building codes.
   - Elementary schools will house pre-kindergarten through 5th grade programs. The district may elect to design schools for pre-K through 8th grade in which event the Elementary School Standards would be used in conjunction with the Middle School Standards.
3. If a new facility is designed and constructed in multiple phases, Phase 1 shall provide all specialized spaces to operate as a fully functioning school for 650 students. The construction of Phase 2 is to be constructed with as little disruption as possible to the permanent and portable spaces in Phase 1.
4. The contract A/E will thoroughly review files of the APS Real Estate Director to ensure that legal description, boundary description, vacations, easements, rights-of-way, property lines, and zoning issues are clarified. If available, existing surveys, drainage plans, and public infrastructure plans are generally on file with FD+C.
   a. The contract A/E will meet with the city / county / utility companies on drainage, street access, zoning, utility availability, sector development (or other area plan restrictions), fire protection, easements, right-of-way, and other applicable considerations.
   b. Where known, APS will notify the A/E of extension requirements for telephone, cable, or power from substation; water / sewer line taps requirements; fire hydrant requirements; up and down stream storm water requirements; number of meters APS will allow; and street extensions.
5. These standards do not specifically address furnishings. The contract Architect will coordinate the configuration of spaces requiring furnishings with FD+C.
6. The contract A/E and FD+C will agree on colors, surfaces, and level of material quality based on these standards and the budget. Then FD+C will share the information with the School Building Committee.

7. All new stand alone buildings shall follow the sustainability process developed by the U.S. Green Building Council called Leadership in Energy and Environmental Design or *LEED® for Schools for New Construction and Major Renovations*. The district strives for all stand alone new school buildings to meet a minimum of LEED® for Schools Silver Certification. Policies and Standards influenced by the LEED® process are noted when possible.
8. Designers of all new construction shall consider the principles of Universal Design. Designing buildings and the environment around them should be more than compliant with codes relating to persons with functional limitations. Ron Mace defined the term as, *"Universal design is an approach to design that incorporates products as well as building features which, to the greatest extent possible, can be used by everyone."*

Noteworthy

The following policies and standards are written in a "performance" language rather than a "prescriptive" language, except where APS lessons learned require more detail. The following types of notes occur in the document:

NOTE: Refers to information complementing or expanding the more general policy or standard.

LEED®: Refers to elements of the *LEED® for Schools* process that will possibly influence the approach, execution, or options evaluated for the referenced policy or standard.

FD+C and M&O Notes: Refers to information that directly impacts the department of Facilities Design and Construction (FD+C) and Maintenance & Operations (M&O) and often provides some restrictions or lessons learned to be used in executing the standard.

Refer to latest version of design standards on the FD+C webpage at www.apsfacilities.org/facilities.

Point your Smartphone's QR Reader camera to image on left to be lead to website.

OVERVIEW

This document contains policies and standards that guide the design of APS elementary schools. As schools serve a vital role in the community, their design impacts the lives of thousands: as a learning environment for our children; a place of employment for teachers, administrators, and staff; and as a focus of neighborhood and community activities. For all endeavors, APS seeks to provide facilities that are safe and appropriate for the activities taking place.

APS facility policies and standards are explicit statements about how school facilities are to perform to support the educational and other needs of the district. Facility **policies** are broad statements of intent while **standards** are specific factors to measure the implementation of the policies. All standards are based on the assumption that facilities exist to support the instructional (curricular) needs of the district.

The facility policies and standards are used to:

- Serve as a basis for new school design.
- Provide crosswalk between these standards and the N.M. Public School Facilities Authority (PSFA) Statewide Adequacy Standards.

The policies and standards address concerns at the district-wide scale (primarily the location and distribution of facilities) and at the site and facility scale (primarily concerned with the adequacy and environment of the spaces provided, health/safety issues, and maintenance concerns). It is anticipated and encouraged that the policies and standards will be reviewed and refined as time goes on. The intent of this document is to make explicit the ideas that are important in new APS facilities.

The policies and standards contained in this document were compiled from an assessment of national standards, current APS facility and curriculum practices, and input from a committee composed of key APS administrative personnel, content area experts, principals, and community representatives.

The APS Policies and Standards equal or exceed N.M. Public School Facilities Authority (PSFA) Statewide Adequacy Standards.

GENERAL SITE & FACILITY DESIGN CONCEPTS

Through an evolutionary process, APS has developed site and facility concepts that all new elementary schools are to possess. Design of each school will vary in response to specific enrollment characteristics and the site. However, major concepts are provided in this document for standards-based elementary schools.

■ School Sites

- Situated on about 10 acres of land in a primarily residential area.
- Provide for on-site staff and visitor parking.
- Provide a clear and safe separation of:
  - Buses.
  - Student drop-off / pick-up.
  - Kindergarten and pre-k drop-off / pick-up.
  - Service access.

■ School Facilities

- An enclosed circulation school with about 79,000 gsf of permanent facilities. The site should be able to accommodate 8 portables. The core facilities to be designed to accommodate potential future growth and the student population in specialized programs.
- Provide a safe environment that promotes learning opportunities in accordance with relevant codes and ordinances.
- Provide opportunities to adjust to programmatic (instructional and community) and technological changes:
  - Flexibility of existing spaces to meet a number of purposes.
  - Ability to expand.
  - Ability to accommodate new communication and information technologies into learning environments.
- Organized in a clear and consistent manner that:
  - Centralizes common-use facilities (media center, cafeteria/kitchen, restrooms, and work rooms).
  - Provides natural light to learning areas.
  - Separates noisy from quiet activities.
  - Promotes ease of supervision and security (controlled building access - control of functions, after-hour use).
  - Provides accessibility for physically impaired.
  - Provides covered (protected) circulation between separate permanent buildings.
- Meet specific instructional and functional needs of specified activities.
- For new free-standing buildings follow the LEED® process (design, construction, and operation) as required to meet the minimum LEED® silver certification level. Consider materials for schools that are reusable, returnable for reuse, recyclable, or disposable (with limited negative impact on the environment).
- Devote about 74% of its interior space to direct instructional use; about 18% to instructional support activities (media center, cafeteria); and about 8% to administrative functions.

- Approximately 42 classrooms (full-size equivalences in permanent and portables) that consider/include:
  - ISP demographics may increase size/design of school.
  - Space for kindergarten and pre-k DD program in regular kindergarten classroom with restroom.
  - Pre-school program space.
  - 6 Kindergarten and / or pre-kindergarten – larger specialized classrooms.
  - 24 regular classrooms (grades 1-5).
  - 2 regular classrooms (Special Education – many schools are going to full inclusion model so increasing the number of full-size classrooms for grades 1-5).
  - Fine arts – larger specialized classroom for art and music. The space must be able to be used for art one year and music the next. With large storage area for musical instruments and a kiln.
  - Computer lab – larger specialized classroom (2 regular classrooms if satisfied by enrollment).
  - 0.5 classroom equivalent for special education resource specialist.
  - 2 classrooms equivalent for federal categorical, reading, or bilingual type programs.
  - 0.5 classroom equivalent as large office spaces for speech and language pathologists. Assume 2 minimum at 200 sf each, could need up to 4 spaces (equal to 1 classroom). Psychologist, social worker, and counselor are covered under administration area.
  - 1.5 classroom equivalent as a half classroom sized space each for special education head teacher and individual education plan (IEP), for the instructional coach, and for occupational therapy / physical therapy (OT/PT).
  - 1 gym (teaching only, unless another source funds an expanded gym).
- General instructional support spaces such as a conference room, media center, storage, and teachers' workroom.
- Administrative space for all staff including Principal (spare space for Assistant Principal), school secretary, clerk area, reception, and nurse.
- Other support areas such as a cafeteria, kitchen (for serving of food prepared on site), teachers' lounge, parents' room, and storage.
- If applicable, provide optional support spaces for New Mexico Human Services Department, before and after-school education, and community programs.

■ School Sites and Schools

- Accommodate the 650-student base population with ability to increase to 1,000 using portables (permanent area for 8 portable classrooms and an interim area for up to 12 more portable classrooms).
- Be adaptable as center for community use and education, fine arts education, and/or before and after-school program development.
- Be located in areas convenient to the student population in a manner that minimizes busing and provides student, parent, and community controlled safe pedestrian and vehicle access to the school.
- Be designed for cost effective operation and maintenance.

- Provide a pleasant environment for students, teachers, and staff and be a positive addition to the community.
- Address PSCOC Statewide Adequacy Standards (design and permitting process). APS reserves the right to exceed the Adequacy Standards for site and facility areas noted in this document, desired by the Design Assistance Committee, and approved by APS FD+C.

Positive Features of Recent Designs

APS schools come in many shapes and sizes. There are many different facility design options to meet the facility policies and standards contained in this document. Some of the positive features of recent designs follow.

Facility

- Permanent construction with interior circulation to all school areas. Give consideration for the uninterrupted day-to-day operation of the school.
- Consider phased construction process at existing sites.
- General and special education classrooms distributed from the "core" area in a manner that takes advantage of natural light and access to the outside.
- Allow for team teaching options in part of each group of classrooms. (Use of extra wide double doors has worked well in many schools.)
- Restrooms distributed to be convenient to students and staff.
- Teaching gymnasium centrally located.
- Music and art room.

Site

- Separate areas for buses and parents to pick-up and drop-off students. (The number of cars and congestion are increasing with each new school design.)
- Extensive staff and visitor parking. (See requirements in this document)
- Extensive site development including landscaped and hard-surface play areas.
- Separate kindergarten and separate pre-kindergarten play areas.
- Grass or artificial turf recreation field.
- Variety of courtyards that can be used for educational purposes.
- Areas preplanned for portable classrooms.

SITE AND FACILITY DESIGN POLICIES AND STANDARDS

1.0 THE SCHOOL SITE

This section discusses standards for the school site in terms of:

- Location / Surroundings / Size
- Pedestrian and Vehicular Accessibility
- Site Features
- Safety / Security
- Maintenance

Policy 1.1 School Location

Schools to be conveniently located for the student populations they serve.
Schools serve as an important part of a residential neighborhood and are located in a manner that minimizes busing and promotes student, parent, and community access to the school. According to the State regulations that identify school bus eligibility based on a walking radius of students to their school, elementary school children should not walk more than 1 mile to school. Past this distance, students are eligible for bus transportation. Most students within APS travel no more than 15-20 minutes on the bus.

Existing APS policy dictates the primary considerations that govern the establishment of a school attendance boundary:

- Instructional – effective use of each school's physical capacity.
- Geographic – location of each school in relationship to the surrounding student population.
- Optimization of safe walking patterns consistent with school district and State transportation policies.

Also,

- Where possible, major thoroughfares and natural barriers will be used as boundaries for the preservation of neighborhood integrity and equity of educational experiences and programs available to the students at schools involved.

Standard 1.1.1 Expansion Options

Campus is to allow options for on-site expansion of facilities.
Factors to evaluate the capacity to expand:

- Size of site.
- Relationship to other site activities.
- Infrastructure (water, sewer, gas, electricity) to serve portables or new structures.
- Ability to accommodate a minimum of 8 portables without disrupting essential site functions. Ability to expand portable area for high growth areas to 1,000 students temporarily.

NOTE: For elementary schools in high growth areas, increases up to 20 portable classroom units may be required for a school with base 42+ classroom equivalent spaces.

NOTE: Portables are needed to handle aging of a community. Continuous enrollment of over 750 students and presence of over 8 portable units is not desired policy, generating the need for construction of a new school or an addition to the school.

LEED®: Designing the site to accommodate future build-out qualifies for points.

Standards-based ES (650 students)

1. Site Requirements	#	(GSF)	Acres
Permanent Buildings allowing for build-out *	1	78,930	1.82
Visitor / Staff / Parking = 1.5 times staff #	135	400	1.24
Buses at bus drop-off	14	1,344	0.43
Cars at drop-off / pick-up area for students	33	400	0.30
ES Play Field	1	36,000	0.83
Playground for Pre-K	115	115	0.30
Playground for Kindergarten	150	100	0.70
Playground 1st - 5th	530	100	0.53
Basketball court	1	6,600	0.15
Shade / Performance Area (shelter + seating)	1	12,100	0.28
Single Portables in Portable Park	8	1,806	0.33
Double Portables in high growth surge area	6	3,182	0.44
* Assumes single story construction		Net	7.34
** TARE = roads, landscaping, un-useable area	TARE** at	25%	2.45
	Sub-total school area needed		**9.80**

Policy 1.2 Site Accessibility

Elementary schools are to be safely accessible for pedestrians and vehicles.

Sub-Policy 1.2.1 Off-Site Student Pedestrian Access

There is to be clear and safe pedestrian access to a school in accordance with State and APS policy.

All major streets exceeding 55 vehicles / minute or 70 vehicles / minute within 1 mile distance from elementary schools are to have:

- A pedestrian crossing area with crossing guard and standardized signage, or
- Appropriate traffic signals, and
- Provision for student bus transportation.

APS and A/E will work closely with the City Police Department, County Sheriff's Department, and City and County Transportation Planners, local Fire Marshal, APS Transportation, APS Risk Management / Bus Loading and Unloading Zone (BLUZ) team to identify and eliminate any hazardous walking conditions.

Standard 1.2.1.a Access Streets

Access streets are to have sufficient signals and signs to permit safe pedestrian entrance to and exits from the school area.

NOTE: The need for crossing zones / guards, speed bumps, flashing lights, and school zone signage will be resolved with APS FD+C, APS Transportation, and the City of Albuquerque (or local entity).

Standard 1.2.1.b Off-Site Sidewalks

Off-site sidewalks are to be available for safety of pedestrians. Sidewalks along APS property perimeter adjoining streets shall be available for safety of pedestrians where required by zoning agency. These sidewalks shall provide barrier-free access. Connections to adjacent residential areas from the APS site should be considered if allowed by zoning, provides safe approach to the school, and does not encourage "park and walk" use of adjacent neighborhood streets.

LEED®: If public bus service is available, consider provisions to safely provide student / staff / parent access to bus stop. LEED® points are available if ½ mile to light rail or ¼ mile to bus transit routes.

Sub-Policy 1.2.2 On-Site Pedestrian Access

There will be paved sidewalks connecting all school activity areas (to provide accessibility and avoid undue maintenance in interior areas from mud or sand).

Standard 1.2.2.a On-Site Bicycle Use

Provide fenced in pad with lock for bicycle storage by provisions of Zoning Code.

LEED®: Bike amenities qualify for points.

Standard 1.2.2.b On-Site Sidewalks

The school site will provide adequate and accessible on-site sidewalks between school areas. The pedestrian entry to the site needs clear definition. There will be paved sidewalks between school portables.

Standard 1.2.2.c Disabled Accessibility

Disabled access facilities such as ramps, handrails, and curb cuts will be available at building entrances, parking areas, playgrounds, and pedestrian walks in accordance with the New Mexico Building Code, American National Standards Institute (ANSI 117.1), specifications for designing buildings and facilities accessible to and usable by physically disabled people and stipulations from the Governor's Commission on Disability.

NOTE: Provide easy access to the main office and to key public-use spaces (gyms, appropriate restrooms, performance area, likely voting location, media center, etc.). Access needs to have appropriate parking area; a drop-off space; have no barriers; be well lit; and not compromise general building security.

LEED®: Having joint use space with easy access can qualify for points.

Standard 1.2.2.d. Main Entry

The main entrance to buildings or building complexes will be clearly defined through the use of building design, landscaping, directional signage, or other method and communicate a positive image of the school. Signage will clearly identify car, bus, delivery, parking for persons with disabilities, and drop-off areas; different parking areas; location of accessible routes; and route to the office. Provide one flagpole that is a minimum of 20' tall with sheathed metallic flag snaps. Do not use Flagpoles with shafts constructed of more than one piece, fiberglass or steel flagpoles or poles that are tilted.

The main entry and all other entries into the building will have an interior walk-off mat 10' in the direction of travel and exceed the width of the opening a minimum of 6" on each side. The walk-off mat must be installed in sections to be manageable by one custodian. See Standard 2.1.2.b for specification.

NOTE: The school is to have an integral sign mounted on the building with the name of the school and the street number. The school may also have a free standing monument sign with the name of the school and street number located near the street. The monument sign is not to be confused with a marquee sign (refer to Standard 2.3.8 Exterior Signage).

Sub-Policy 1.2.3 Vehicular Access

There is to be clear, separate, distinct and safe on-site circulation paths for pedestrians, school buses and staff, visitor, and service vehicles. Multiple access points for vehicles are preferred.

M&O Notes: Posts for signs to be #3 U-channel. Sign hardware to be vandal guard. Fence mounted signs to have 0.35" aluminum plates. All traffic signs for directions, safety, traffic control, and ADA will be installed by general contractor.

Standard 1.2.3.a Bus Loading / Unloading

Where possible, provide separate bus loading/unloading zones accommodating the required number of buses for that school that do not conflict with other vehicular or pedestrian pathways and provides for the safe loading and unloading of students.

Sub-Standard 1.2.3.a.1 Bus Area

The loading area will be able to accommodate up to 80% of the school population in a safe and orderly manner and preferably load students from the curb directly into the bus door without passing between or behind buses. General buses are 36'-6" long and 8'-0" wide and require a turning radius of 39'-4". Up to 14 buses will be required for a 650-student school. Provide curb access area for 1 or 2 SPED buses with lifts that are 28'-0 to 36'-6 long (check with transportation) and 9' wide as well as up to 4 daycare vans.

NOTE: The contract A/E is required to meet with APS Transportation and BLUZ team regarding approval of the bus loading area layout and entry / egress turning schemes.

Standard 1.2.3.b Student Drop-Off / Pick-Up

There will be a separate area for the drop-off and pick-up of students by parents that does not conflict with other vehicular or pedestrian pathways and provides for the safe loading and unloading of students.

This area has become a design problem for schools, as walking students are fewer and safety concerns grow. The area should provide right door exit from the vehicle to the curb. Use of fencing for control is generally needed to eliminate the option for pedestrians to walk in front of waiting cars.

NOTE: Many schools now have over 50 cars queuing up for student pick-up and drop-off.

Standard 1.2.3.c Kindergarten / Pre-k Drop-Off / Pick-Up

There is to be a separate, safe, and convenient drop-off and pick-up area for kindergarten / pre-k students. Allow for adequate parking spaces in the same area so parents can walk their pre-k or kindergarten child to the classroom.

Standard 1.2.3.d Vehicular Entrances / Exits

Vehicular entrances and exits are to be safe for traffic flow. If possible, buses should not be dependent on other on-site traffic movement in order to exit, since buses all exit at the same time turning both directions from the site drives.

Standard 1.2.3.e Service / Emergency Access

Appropriate access to all areas of the site by service, garbage, and emergency vehicles are to be properly identified. Design of surfaces for maintenance vehicles shall be appropriate for the weight and clearance. Truck access to the kitchen and garbage trucks will not pass through general pedestrian or play areas. Design dumpster area and garbage truck approach per City of Albuquerque details.

A/Es will meet with local Fire Department to determine access points for fire trucks to site. Allow for fire hose access to all parts of the school and fire trucks to portable classroom area. Access to the nurse's office is to be direct and easily identifiable for emergency medical personnel. APS Nursing Services has requested a reserved area for emergency medical service vehicles at every school.

Standard 1.2.3.f Street / Parking Area Condition

Streets and parking areas are to be paved with appropriate profile for vehicles using them.

LEED®: Design recommendations relating to pervious paving areas and water harvesting impact scoring.

Standard 1.2.3.g Portable Buildings

There is to be sufficient room for ingress and egress of portable buildings to the site.

NOTE: Provide 32' improved access lane with straight-in clearance of 96' for doubles and 60' for singles. Access lane gate is to be 30' wide.

Sub-Policy 1.2.4 Parking

There is to be adequate, safe parking for staff and visitors. Parking areas are to be paved and separate from other access ways. Parking areas are to have security LED lighting (including rough-ins for security cameras). Design lighting in compliance with New Mexico Night Sky Protection Act, City Ordinances and Neighborhood Regulation and per APS Electrical Design Standards

Parking standards and required signage

- Provide 3 designated parking spaces with signs for the principal and 2 other personnel to be determined during design.
- Provide 3 visitor parking spaces with signs. Prefer visitor parking and part of staff parking centralized for control of access to the office.
- Provide 1 parking space for APS police with sign.
- Provide a designated parking area with signage for 1.5 spaces for each teacher and staff member for maximum possible enrollment levels of 1,000 for new elementary school. Prefer visitor parking and part of staff parking centralized for control of access to the office.
- Provide at least 5 parking spaces for kitchen staff near the kitchen area with signage.
- A/E must confirm parking requirements for other agencies (social services, city daycare, etc.) with school administration.
- Number of parking spaces for disabled will be as required per most restrictive code designated and dispersed between staff and visitor lots.
- Provide an M&O parking space with sign.
- Provide an emergency vehicle parking space with sign.
- Provide signs for parent drop-off lane indicating no parking
- Provide signs for bus lane indicating buses only, no private vehicles or parking
- Provide signage at entrances to direct visitors to the Principals office. "Visitors must report to the Principals office".

M&O Notes: Posts for signs to be #3 U-channel. Sign hardware to be vandal guard. Fence mounted signs to have 3.5" aluminum plates. All traffic signs for directions, safety, traffic control, and ADA will be installed by general contractor. The signs that are mounted on buildings to be attached on all corners of the sign and high enough to prevent graffiti or vandalism. Identification numbers or letters of school names etc. will be high enough off ground and adhered sufficiently to inhibit vandalizing.

LEED®: The nature of parking needs for APS violates the parking principles of LEED® to reduce parking impact and reliance on one driver vehicles.

Standard 1.2.4.a Special Event Parking

A/E should consider ability to accommodate visitor parking for special events.

LEED®: If site is near commercial / retail development, APS should consider negotiations with business owners to use their parking for special APS events.

Policy 1.3 Site Development

School sites are to be developed to enhance the educational environment and the image of the school to the surrounding community. APS Site Design Directives on the FD+C website.

Elements of site development include the harmonious blend of the following elements for the school site, perimeters, parking lots, and adjacent streets. The aesthetic appeal and subsequent maintenance are important concerns.

- Landscaping / plant material
- Paved and play areas
- Pedestrian areas
- Drainage control
- Portable areas

LEED®: Illuminate areas as required for safety, comfort, and expected night use to minimize glare onto neighboring land or to sky. Put lighting on timer to allow shut-off.

NOTE: Areas adjacent to an existing or planned housing development are to be buffered from the houses. Drainage or blow sand impact on neighbors is not allowed. Consider impacts of fugitive dust and storm water run-off in project planning.

Standard 1.3.1 Plant Material / Landscaping

Site landscaping is to require minimal maintenance and be water conservative. APS site maintenance personnel are to be able to maintain the site with existing equipment. Avoid raised or steep lawn areas requiring small mower use.

Plant material is to provide shade, visual screening, wind protection, and aesthetic qualities for the building and surrounding area. From 7 -15% of the school site is to be landscaped with indigenous trees and planted areas (not including a grass field). (See APS Site Design Directives on the FD+C website for a list of preferred plants.)

LEED®: Consider 25% of open space to be landscaped.

The following areas are to be landscaped

- Parking lots (break up the visual expanse of paving and meet ordinance).
- Perimeters of the school facing public right-of-ways (on APS property).
- Public areas (courts, plaza, between wings, permanent portable area).
- Outside learning areas.
- Playgrounds and fields – see playground section for size. See APS Site Design Directives on the FD+C website for APS grass mix or turf type at

M&O Note: Provide tree wells with mulch in grass areas and with sufficient open dirt around them in hard surface areas to deter uplifting of surface.

M&O Note: Provide for remote control of irrigation system controllers. For new systems provide the conduit and pull wire to allow for this connection to occur.

Other landscape considerations include

- Minimize use of water and consider water harvesting to assist plant survival.
- Types and placement of plantings.
- Irrigation systems.
- Irrigated landscaping not allowed immediately adjacent to buildings.

M&O Note: Avoid loose rock or gravel ground cover near windows and artificial stucco surfaces.

LEED®: Mulching of trimmings, grass, and leaves; use of captured rainwater; efficiency of irrigation system; or modem control of irrigation system comply with scoring elements.

Standard 1.3.2 Walkways / Gathering Areas

High pedestrian traffic areas are to have paved surfaces.

NOTE: For accessibility, walkway slopes are to comply with accessibility standards for children.

Standard 1.3.3 Outdoor Seating

Seating is required in high pedestrian areas. An outdoor learning area will have seating for 30 students with a shade structure. Consider an outdoor performance area with electrical and data outlets.

M&O Note: Provide skateboard deterrents on all low walls, curbs, seating etc. that are targeted by skate boarders. Modular play units of recycled material are acceptable except for slides. (Slides have had high UV degradation rate and vandalism in past.)

Standard 1.3.4 Irrigation Systems

There are to be fully automatic underground sprinkler systems with vandal-proof sprinkler heads that cover all play fields, lawns, and planting areas. Systems are remote controlled. See APS Site Design Directives on the FD+C website for acceptable products and design.

NOTE: Provide separate metering for domestic water and irrigation (water service only) systems with back flow prevention. Sprinkler controls are to be in an outside vandal-proof vault.

Standard 1.3.5 Developed Area

The school site is to be developed as completely as practical with building area, landscaping, traffic areas, hard-surface play areas, and pedestrian ways with the intent of minimizing vacant, dirt areas.

LEED®: If open area is not developed, consider returning area to native or adaptive vegetation to restore habitat.

FD+C Note: Non-landscaped areas impose legal storm water and fugitive dust control issues on APS.

Standard 1.3.6 Student Gardens

When possible an area is to be set aside for a student garden. The garden area is to be approximately 100 square feet with east or southeast orientation. A hose bib with key access or water valve for a hose connection is required near the garden area. The area should be free of boulders and large rocks. Raised planters are recommended for accessibility and may be constructed of concrete, CMU, non-toxic wood or straw bales. The planters should be no wider than 3'-0". Water flow should be toward the garden area to conserve water.

Policy 1.4 Drainage

The site is to be graded to ensure effective drainage directed away from buildings, pedestrian traffic, and congregation areas.

NOTE: Due to requirements of new federal regulations for storm water pollution protection, leaving large areas in bare soil is no longer acceptable. Recommendation is to plant perimeter areas in native grasses and provide a permanent irrigation system (to support initial germination and allow for sustaining the area in drought conditions).

Drainage requirements

- Water is to not discharge over sidewalks except by sheet flow.
- Discharge on the north side of a building is to be avoided over walks or traffic areas.
- Drainage is to be removed by adequate catch basins and drainpipes.
- Roof drainage is to be directed away from the building and not flow into the landscape areas near buildings.
- Recreation and play areas are to be properly drained at about 2% slope.
- Drainage into public rights-of-way is prohibited unless approved by governing authority.

LEED®: Consider design elements for storm water management such as water harvesting, minimizing erosion and windblown dirt, and reducing off-site impact of on-site water generation towards levels of pre-construction runoff volume. Wetlands or vegetated side slopes of naturally designed ponds may qualify for points.

Policy 1.5 Site Recreation

The school site is to provide outdoor recreation and learning areas suitable for age of student population served. Design of play areas and equipment selection will follow APS Playground Guidelines and the *U.S. Consumer Product Safety and ASTM F 1487 Standard Consumer Safety Performance Specification for Playground Equipment for Public Use.*

Standard 1.5.1 Playground Location

Playground is to be conveniently located for student population and away from streets and parking areas. Provide a 10'-0" wide gate into playground areas where the playground or site is enclosed with a fence.

Standard 1.5.2 Playground Equipment

Playground equipment is to be safe, free of sharp and pinching elements, and well designed/equipped to serve all students.

Playgrounds are to reflect the needs of elementary grades 1 – 5. Suggested equipment at playgrounds include (for every 300 students):

- Chinning bars (1 per 200 students).
- 1 mountain climber.
- 1 rainbow climber and/or horizontal climber.
- 3 swing sets (6 swings each).
- 6 tetherball poles.
- Trash receptacles.
- Modular play unit per grade level (pre-k / kindergarten / 1st-5th).
- Walls designed to throw balls against.

Other considerations:

- Utilize engineered wood fiber surfaces.
- Consider rolled edges to containment areas or allow for entry into a containment area from one side of the curbed edging that is flush with the surrounding paving. As a general rule, avoid curbs more than 8 inches above finish grade.
- 8 foot clear minimum maintenance access with apron.

M&O Note: Do not use *Tuff Timbers interlocking curb units because the units degrade in UV in about 6-8 years.*

LEED®: Pervious materials for physical education spaces are engineered wood chips and pervious paving.

- Shade with trees or permanent structure (vandal resistant), and include benches and tables in the shade area.
- Design play equipment so students of all abilities can share in the play experience. Installation of special needs students' play equipment is on a case-by-case basis. *See APS Site Design Directives on the FD+C website*

Standard 1.5.3 Kindergarten / Pre-kindergarten Playground

There are to be a separate fenced kindergarten and a separate fenced pre-k playground in close proximity to the building with appropriate equipment scaled to kindergartner or pre-k use including:

- Climber
- Play structure
- Tables and sitting area
- Hard and soft surfaces
- Water availability
- Hard surface area for games and tricycle use
- Exterior storage shed (optional)

Standard 1.5.4 Playground Safety

The playground equipment is to be located and designed to minimize hazards. A required safety audit will be completed by APS before and after installation of new equipment.

Design factors include

- Proper spacing between equipment.
- Cushioned soft ground surfaces beneath the equipment, and the means of containing the surface from blowing away or causing slip problems on adjacent hard surface. Design containment to minimize trip hazard from hard surface to soft surface areas.
- Metal or plastic rather than wood play structures to minimize hazards of splinters and minimize maintenance. All equipment must be International Play Equipment Manufacturers Association (IPEMA) certified and installed per U.S. Consumer Protection and American Society for Testing and Materials standards.
- Designs free of obstacles.
- Accessible routes to play areas.

LEED®: Consider equipment made from recycled materials.

M&O Note: Provide skateboard deterrents on all low walls, curbs, seating etc. that are targeted by skate boarders. Modular play units of recycled material are acceptable except for slides. (Slides have had high UV degradation rate and vandalism in past.)

Standard 1.5.5 Hard Surface Play Areas

There are to be hard surface play areas located near the buildings with southern sun exposure where possible. If distant from the buildings and accessed through unpaved areas, extend a wide walk between the two to minimize mud and sand being tracked into the buildings. Areas are to include:

- 1 concrete pad (60' x 80') or 2 pads (each 40' x 60') with 12 basketball goals (6 goals around each pad).
- Asphalt play area (25,000 sf, or about 160' x 160') with painted game lines.
- Measured, surfaced, running / walking track about 8' wide.

Standard 1.5.6 Grass Playing Field

There is to be one grass game field not to exceed 180' x 320'. For sites under 1 acre, provide artificial turf.

Standard 1.5.7 Playground Supervision

Playgrounds are to be organized to minimize the number of supervisory personnel required.

Policy 1.6 Safety / Security Hazards

The site is to be a safe and secure environment for student population served and free from hazards (especially excessive slopes).

Standard 1.6.1 Electric Service

Electric service is to be underground. Overhead lines are allowed for portable areas to facilitate connection and allow for special systems wiring that will share masts. For such overhead lines comply with special wiring requirements of M&O and codes.

Standard 1.6.2 Fencing

The school site will be fully fenced, unless the front facade of the building acts as an access barrier with the site fence butting into the building at appropriate points. Safety security fences are to be provided to protect students from hazard of traffic, steep terraces, and drainage ponds; to protect adjacent properties from trespass by students; and to discourage passersby from walking onto the campus. There is to be lockable pedestrian access at convenient locations. Provide chain link fencing material with closed-loop only at top and bottom.

Standard 1.6.3 Security Lighting

Sites are to have illuminated parking areas, walks, entrances, portable areas, and exterior building areas for both safety and security purposes.

LEED®: *'Night sky' laws will influence the design of this lighting.*

Standard 1.6.4 Drain Fields

Septic tanks and drainage fields are to be located away from all student-accessed areas or sealed in monitored vaults. All such areas will be fenced.

Policy 1.7 Utilities

School site is to be designed for easy and low cost maintenance.

Standard 1.7.1 Electrical Equipment

Outdoor light fixtures, electric outlets, equipment (such as sump pumps), and other fixtures are to be accessible for repair and replacement, energy efficient, and locally serviceable. Access means sized so a person can efficiently work on the item, and safe so buried items are not in water filled vaults. Equipment will be vandal resistant and avoid glass components. See APS Electrical Design Standards on the FD+C website.

M&O Note: APS has transferred ownership and servicing of primary transformers to PNM.

Standard 1.7.2 Water

Outside water supply is to be adequate for normal usage. Meter domestic and irrigation water separately. Irrigation systems shall be water only meter. If gray water system is proposed, discuss with APS M&O and FD+C.

LEED®: Consider maximizing water efficiency to reduce burden on municipal water supply.

Sub-Standard 1.7.2.1 Water for Fire Protection

Fire hydrants must be included per city Development Process Manual (DPM) standards. For rural facility, provide protection using tanks if no city / county water service is available.

Standard 1.7.3 Gas Lines

Site gas piping is to be traceable and accessible for repair. Locate "U" shut-off above surface in fenced enclosure for each portable area. Zone site piping so sections of the site can be turned off and tested without turning off the main gas service for the whole school.

M&O Note: Comply with APS M&O low/medium pressure design guidelines for gas piping.

Standard 1.7.4 Garbage Collection

Each school is to have a designated garbage collection area meeting City of Albuquerque standards, located near the kitchen, and accessible to a service access drive. Coordinate service requirements with APS M&O. The garbage collection area is to:

- Meet city standard detail for enclosure with gates.
- Provide space for 4 six cubic yard dumpsters (of which one is for recyclables).
- Accommodate *Waste Management* garbage truck access clearances.

LEED®: Recycling is an important element of the operation of the facility when working in a LEED® process. Consider fenced area for recycling options for paper, plastic, glass, etc.

Standard 1.7.5 Mechanical Units

Ensure units are protected from vandalism, safe, and easy to access for maintenance and screened to public areas. Refer to APS Mechanical Design Standards on the FD+C website.

2.0 SCHOOL DESIGN & CONSTRUCTION INTEGRITY

Policy 2.1 Health / Safety

Site and facilities are to be designed and constructed to provide a safe and healthy environment for learning in accordance with appropriate codes and ordinances.

Sub-Policy 2.1.1 General Structural and Exterior Building Components

The structural components of the school are to provide a safe and sound educational environment that permits reasonable opportunity for internal flexibility and adaptability to meet new circumstances. The structure is not to transfer vibrations from walking, mechanical, or outside noise sources into occupied spaces.

Standard 2.1.1.a Foundations

There is to be positive drainage away from foundations, especially for basement areas. Adjacent utility trenches will have drains and, as needed sump pump systems.

Standard 2.1.1.b Floors (Slabs / Balconies / Porches)

Floors are to be of adequate strength to support structural loads imposed. Floor surfaces will be appropriate for any covering material, be weather resistant, and drain.

M&O Note: Proper moisture vapor barrier must be applied before a concrete slab is poured to eliminate moisture issues with the surfacing.

Standard 2.1.1.c Walls

Walls are to be plumb, insulated, weather tight, and with junctures where applicable joint pattern is to facilitate graffiti treatment by allowing M&O to treat a panel or subdivision of the wall without treating the entire wall. Walls are to be impervious to moisture and seepage. Walls in high traffic, common ball impact, or vandal prone areas are to avoid systems that are easily penetrated with sticks, balls, and rocks.

Standard 2.1.1.d Exterior Openings

Design exterior glazing – windows and storefront system – in accordance with APS Glazing and Window Standards and APS Aluminum Storefront Specification on the FD+C website.

Standard 2.1.1.e Structural System Flexibility

Structural system should permit flexibility to adjust to program requirements. (See discussion on allowing some classrooms to be subdivided or not as teaching styles change.)

Standard 2.1.1.f Sound Transmission

Design walls, floors, and ceilings to absorb or retard transmission of unwanted sound from outside the space, speech transmission between learning spaces, and in high dB (85 or greater) noise producing spaces due to occupancy or tasks performed. Certain areas may require sound absorbing treatment in addition to sound wall construction, especially for gym, music, and cafeteria areas. Compliance with ANSI S12.60 – 2002 is required.

Normal speaking voice "speech privacy" in all offices is required, especially relating to wall / ceiling connections. Sound quality in gym and cafeteria must allow for readily recognized amplified voice transmissions, as well as reasonable acoustics for performance (stage area).
NOTE: All sound transmission rated walls are to be continuous to the roof or floor structure above. Sound boots are to be used at return air transfers through sound rated walls.

Standard 2.1.1.g Acoustical Requirements

Conform to ANSI S12.60 - 2002, American National Standard Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools.
Reverberation Time limits:

Spaces under 10,000 Cubic Feet - 0.6 Seconds
Spaces between 10,001 and 20,000 Cubic Feet - 0.7 Seconds
Spaces with Volumes exceeding 20,001 Cubic Feet - 1.5 Seconds

Sound Transmission Class for Partitions and other Building Elements:

Classroom to Classroom: STC 50
Classroom to Corridor: STC 45
Classroom to Restroom: STC 53
Classroom to Mechanical: STC 60
Classroom to Cafeteria: STC 60
Classroom to Gymnasium: STC 60
Building Envelope (Exterior Walls and Roof/Ceiling Assembly): STC 50
Windows and Translucent Panel Assemblies: STC 35

Background Noise:

Background noise created by HVAC or other building utility systems is limited to 45 dBA.

NOTE: All sound transmission rated walls are to be continuous to the roof or floor structure above. Sound boots are to be used at return air transfers through sound rated walls.

Standard 2.1.1.h Roofs

Roofs are to be structurally sound, have positive drainage, weather tight, insulated, equipment free, and incorporate control / expansion joints to control movement. Roof/ceiling assembly insulation to be a minimum of R-38 without insulation installed on lay-in or rigid ceilings. Comply with APS Roofing Standards on the FD+C website. Avoid discharge points for roofs on to north areas with walks and roads. Provide interior access via roof hatch for maintenance.

The interior side of parapets can be an issue as the manufacturers limit the height of the base flashing, which sometimes leaves a gap between the top of the roof base flashing system and the parapet cap; this surface must be treated with a weatherproof exterior finish.

LEED®: Surface color, reflectance, as well as insulation type and rating may qualify for points.

Sub-Policy 2.1.2 Interior Building Components

Safe materials used in construction will be asbestos and lead free as well as stabilized for fiber and gas vapor discharge. Paint will be low volatile, washable, easily matched, and durable.

LEED®: The quality of material is an element of the evaluation process.

Standard 2.1.2.a Walls

Interior walls and partitions

- Construct walls per Sound Transmission Class (STC) and Noise Reduction Coefficient (NRC) ratings as designated by the American Society for Testing and Materials (ASTM).
- Provide impact resistant surface in lower 4' (minimum) of corridors with concrete masonry unit, tile, or fiberglass reinforced gypsum wallboard, or 2 layers of 5/8" gypsum wallboard.
- Provide stainless steel or heavy-duty clear plastic corner guards on all high traffic areas.
- Protect walls of restrooms and gyms where vandalism and impact are common.
- Provide smooth-surface walls in high-traffic areas.

Standard 2.1.2.b Floors

Interior floors

- Surfaces are to be non-skid, attractive, easy to maintain, and free from projections.
- All floor finishes will be easily cleaned without the use of special equipment.
- Floor sub-surfaces and base will be appropriate for floor covering material.
- Polished concrete is the preferred flooring material for corridors, cafeterias, wet areas in classrooms, teacher workrooms and teacher's lounge. Art/music rooms are to have half of the classroom with polished concrete near the sink(s) for the art program and half of the classroom with approved carpet tiles for the music program.
- Restroom to have ceramic tile floors.
- Mini Gymnasium flooring will be commercial grade sheet marmoleum with welded seams.

M&O Note: Use approved FD+C carpet and carpet tiles (refer to Carpet Tile Specifications on the FD+C website). If floor patch is used, the recommended product is Ardex Floor Patch.

NOTE: APS requires a durable flooring surface in corridors, toilet rooms, cafeterias, mini-gyms, wet areas in classrooms, and nurse's area. Smooth finish concrete surface, ceramic tile, porcelain tile, and linoleum tile are acceptable only with FD+C agreement. Offices, classrooms, media center, and other quiet areas should be carpet or carpet tiles, Mini-gyms need a resilient floor surface.

Recessed mud mats are to be on the interior side of all exterior doors except in gymnasiums. The recessed mud mats must be removable for cleaning and in segments that are manageable by one person. They should be inset in an aluminum frame and be level with the surrounding floor.

LEED®: Low vapor / low particle emitting or off-gassing materials, adhesives, and sealants need to be considered.

Standard 2.1.2.c Ceilings

Depending on use of space, heights are to range from 9' to 14' for economy of heating, air conditioning, illumination, servicing light fixtures, and ventilation. Texture and reflectivity to reinforce the illumination levels of the room.

Sub-Policy 2.1.3 Energy Conservation

Facility is to meet or exceed energy conservation standards from the State of New Mexico Energy Conservation Code.

LEED®: Thermal mass, passive cooling and heating, as well as renewable energy systems such as solar cells should be considered as optional energy means. Protect from vandalism and limit need for maintenance.

Sub-Policy 2.1.4 Mechanical System (Heating / Cooling / Ventilation)

Mechanical systems are to provide for a reliable year-round comfortable environment in a cost efficient manner in conformance to local health and safety codes. See APS Mechanical Design Standards on FD+C website. .

LEED®: HVAC thermal comfort, energy efficiency, and control are critical to philosophy.

Standard 2.1.4.a Year-Round Comfort

There is to be provision for year-round comfortable temperature throughout the building. The owner should be able to by-pass the time clock with manual timed overrides at each HVAC zone. Refer to the APS Mechanical Design Standards on FD+C website.

Standard 2.1.4.b Ventilation

Ventilating system is to provide adequate year-round circulation of fresh air. Every teaching space is to have an operable window. If no operable window, provide a fan or zone mode to allow for removal of odors and stale air. Restrooms, lounge, kitchen, cafeteria, gym, conference room, Occupational Therapy/Physical Therapy, Intensive Support Program, kindergarten / pre-k DD classrooms, and nursing areas will have exhaust fans independent of the HVAC systems.

LEED®: Natural ventilation should be emphasized in the indoor air quality (IAQ) and energy saving elements of design.

Sub-Policy 2.1.5 Plumbing

Plumbing systems and fixtures are to reliably supply water and meet wastewater requirements for the population served in a cost efficient manner and in conformance with local health and safety codes. (See the APS Mechanical Design Standards on FD+C website.)

Standard 2.1.5.a Restroom Fixtures

Number and size of restrooms and fixtures are to meet or exceed code requirements. The numbers of fixtures are to conform to the minimum standards of the current building and plumbing codes. APS, the City of Albuquerque, Public School Facility Authority, and the Governor's Commission on Disability may have varying interpretations on the codes. Notify FD+C of code interpretation disagreements.

NOTE: Each separate restroom for staff and students is to have at least 1 accessible fixture of each type provided. All multi-fixture restrooms will have a plumbing chase access. Refer to the APS Mechanical Design Standards on the FD+C website for plumbing chase requirements.

NOTE: APS practice has been to seek a code modification to:

- *Reduce the number of boys' water closets and provide more urinals.*
- *As more women work in elementary schools, APS desires to provide more water closets for female employees than is required by code (e.g. 9 instead of 2 required if a dispersed floor plan and having portables).*
- *Portable areas are to have main domestic water and sewer lines installed and ready for connection. In areas with more than 4 doubles, expect installation of restroom portable.*
- *Low-flow urinals with manual flush. Manual flush water closet valves. Faucets for lavatories shall be piston or spring loaded with a high efficiency aerator. Install protective shields under the lavatories is required. All plumbing shall be accessible for repair but not accessible to students.*

LEED®: Water conservation should be considered when selecting plumbing fixtures.

Standard 2.1.5 b Distribution of Restrooms

Restrooms are to be properly distributed for staff and student populations including access from:

- Permanent building – distribution within building to be even throughout with equal access to male and female units in each area.
- Portable buildings – provide hard surface access for student and staff population.
- Exterior play areas – provide access to restrooms through the vestibule area if possible. No restrooms that open directly to the exterior.

Standard 2.1.5.c Drinking Fountains

There are to be no exterior drinking fountains. There are to be an adequate number of drinking fountains appropriately placed with access available for the disabled. Locate interior fountains at central and convenient points on each floor or wing of the school, in

vestibules near playground, and in or near portables and parks. Distribution of units for the disabled is to be the same, except for areas not readily accessible in existing schools.

NOTE: Do not refrigerate water for drinking fountains to minimize maintenance and energy.

Standard 2.1.5.d Plumbing Fixtures

Provide privacy stalls for multiple male and female restroom water closets. Comply with accessibility codes. Design restrooms with multiple fixtures without door or barrier to corridors while maintaining privacy.

Provide hose bibbs near major entrances.

Standard 2.1.5.e Water Supply

Water supply is to have sufficient pressure and treated to meet health and safety needs. The system will have shut-off valves in all building zones for ease of maintenance. The domestic hot water system will provide adequate re-circulating hot water to meet health department requirements in restrooms and kitchen areas.

LEED®: Reduction of potable water demand and the efficiency of the domestic hot water system are part of design evaluation.

Standard 2.1.5.f Waste Water System

Wastewater (sewer) systems are to meet or exceed code requirements. The system will be able to handle build-out of proposed permanent additions and portable areas.

Provide all interior floor drains with "Trap Guard" and no trap primers. Refer to the APS Mechanical Design Standards on the FD+C website.

LEED®: Use of innovative wastewater systems advantageous.

Standard 2.1.5.g Plumbing System Reliability

Plumbing systems are to be robust, reliable, and low maintenance. Provide diagram of the valve layout for all piping systems in building and on site. Design system for heavy use 9 months of the year.

Standard 2.1.5.h Plumbing System Maintenance

Cut-off valves are to be accessible for normal maintenance.

Standard 2.1.5.i Fire Protection System

New schools will have an approved automatic sprinkler system throughout and fire hydrants around the site where required. The system will have its own zone designation for notification of APS Security when the main valve opens. Provide adequate coverage and pressure to meet insurance, fire inspection, and safety standards. Vandal-proof heads inside and freeze-proof heads outside are required.

School renovations and additions will also require an approved automatic sprinkler system throughout the renovated and added spaces but a sprinkler system will not be added to the existing spaces that are not being modified. Provide adequate coverage and pressure to meet insurance, fire inspection, and safety standards. Vandal-proof heads inside and freeze-proof

heads outside are required. Refer to the APS Mechanical Design Standards on the FD+C website.

For existing construction consult FD+C.

Sub-Policy 2.1.6 Electrical / Fire Alarm / Security Systems / Special Systems / Telecommunications

There are to be adequate system services to permit effective and safe program instruction in accordance with proper codes.

NOTE: Telecommunications refers to phone, public address, voice augmentation in the classroom, and Internet access services. Voice Over Internet Protocol (VOIP) services may be a requirement as well as link access to APS Wide Area Network (WAN), HVAC energy management system, APS central security, and possible irrigation remote system. (See APS Electrical Design Standards on the FD+C website).

Standard 2.1.6.a Electrical Service

Electrical service is to be adequate for existing and projected load plus 20% spare capacity to include all expected additions and distribution to at least 20 portable classrooms.

Standard 2.1.6.b Electrical Outlets

Each learning/teaching area is to have a minimum of 2 duplex outlets per wall. Some spaces will require floor or pedestal outlet options. (See Section 3 for these exceptions.) Provide outlet for all computer jack locations. Provide a minimum of 1 exterior outlet per building elevation.

Standard 2.1.6.c Lighting – Artificial Illumination

Easily maintained light sources, properly placed, should provide adequate lighting. In some special programs students require special lighting with different cycles, spectrum, noise level, etc. (See Section 3.4.2 for ISP, OT and PT room needs and modify the fixtures.)

NOTE: Provide adequate emergency lighting in all areas of school to illuminate egress points at night and in areas without natural light. Wall and ceiling textures and colors are to be chosen to enhance illumination. Light fixtures will be readily accessible by 6 foot ladder (except in gym) for re-lamping unless approved by APS FD+C. For normally occupied interior spaces without day lighting, consider solar tubes or skylights to introduce day lighting.

Refer to APS Electrical Design Standards on the FD+C website.

LEED®: There are many actions that qualify for points under illumination: energy consumption, day lighting balance, occupancy sensors, multiple bank design, etc.

Sub-Standard 2.1.6.c.1 Lighting – Natural Day Lighting

Provide day lighting in all learning and work spaces with a view to the exterior. The quality of light is an important consideration to provide a healthy learning environment. Both general illumination and task lighting requirements vary according to activity. In general, as

much natural light as possible is recommended and augmented by light sources replicating the natural spectrum where required.

M&O Note: For skylights refer to APS Glazing and Window Standards on the FD+C website.

LEED®: Consider using diffused skylights or light tubes where windows or clerestories are not possible in occupied learning or working spaces.

Standard 2.1.6.d Fire Alarm Systems

Emergency systems are to be properly maintained and meet or exceed code requirements including:

- Automatic and manual fire alarm systems with distinctive sounds and flashing lights and able to be monitored from a remote location
- Fire alarm horns located to provide sound coverage throughout the building
- Alarm pull-stations located at points of egress
- Properly functioning smoke detectors will be located as required
- Panels and pull-stations will be accessible to persons with disabilities
- Connect fire alarm system to portables
- The fire sprinkler system will be integrated into the fire alarm system and will be monitored
- Connect control panel to security head end equipment with conduit.
- Provide fire alarm water gong on the exterior of the building for each fire riser in an enclosed tempered space.

NOTE: Design special systems following consultation with FD+C, M&O, and APS special systems contractors. Special systems equipment and wiring will be provided by APS special systems contractors; conduit systems and j-boxes will be provided by general contractor's electrical sub-contractor. Refer to APS Electrical Design Standards on the FD+C website. Refer to the APS Mechanical Design Standards on the FD+C website.

Standard 2.1.6.e Security Systems (Intrusion, Security Camera, and Card Access)

***Intrusion security systems** – Must be adequate and functioning, reflecting the individual needs of each school. Security systems vary depending upon the design of the school but will have the following characteristics:*

- Door or passive infrared sensors. All spaces with exterior doors or windows will have infrared/motion sensors.
- Door contacts on all exterior doors.
- Central control unit communicates system status and control mode to APS Security office.
- Devices will allow full coverage of corridors, stairwells, main entries, and key spaces such as media center, kitchen, computer labs, administration area, gym, science areas, etc.

System will be zoned to allow common after-hour areas to be used while the rest of the school is alarmed. Coordinate design with APS Security / Police.

- Conduit and j-boxes to be provided by general contractor. Wiring and devices to be provided by APS contractor.

Security camera systems *– Suggested by APS Police for building and site. Camera systems will vary in number of cameras due to building size but standard requirements follow.*

- Provide rough-in, AC power, and conduit for cable to centralized location for cameras distributed around the facility and site.
- In buildings, cover entries into halls, computer labs, gyms, administration suites, etc.
- For the site provide conduit underground to light pole pedestals to give panorama coverage of the lot and front entry to building. Provide rough-ins for camera locations on perimeter of building.

Card access entry system *– Suggested by APS Police at main building entries only. This system allows tracking the person (identifies when and where the entry was made); makes changing access codes easy; and enables a quick lock-down of a facility. Discuss with APS Police in early design.*

NOTE: Design special systems following consultation with FD+C, M&O, and APS special systems contractors. Special systems equipment and wiring will be provided by APS special systems contractors; conduit systems and j-boxes will be provided by general contractor's electrical sub-contractor. Refer to APS Electrical Design Standards on the FD+C website.

Standard 2.1.6.f Special Systems (Intercom / Bell, Clocks)

Schools will have functioning and adequate intercom/bell/clock:

- **Intercom and Bell Systems**
  - Adequate and functioning with provision for "all call" voice calling to individual loud speakers and two-way voice communications with loudspeakers located in all offices, learning, and support areas, including portables (to have call switches as well). Speakers to be in a 2 x 2 box in the ceiling.
  - All call answering to be provided from the console to all speakers by means of a single operating control.
  - Provide bell / chime system to cover all occupied spaces and all outdoor activity areas especially paved "safe zone" areas for fire drills.
  - Rough-in conduit to be provided by general contractor. The wiring and equipment will be provided by an APS contractor.
- **Clock System**
  - Clocks are provided by an APS on-call contractor and are to be located to avoid easy tampering. Electrical power is to be provided by the general contractor. Clocks to be located in:
  - All offices and main circulation areas.
  - All teaching areas near the door to hallway. Do not locate in center of wall.

- Cafeteria and kitchen.
- Parent and conference rooms, teachers' lounge, and workroom.

- **Interactive Projector**
  Each classroom is to have the capability to have a Short-Throw Interactive Projector projecting on to a whiteboard (magnetic). The interactive projector will be provided by APS and the rough-in for power and data is to be provided by the general contractor. See Appendix C.4 for projector specifications.

NOTE: Design special systems following consultation with FD+C, M&O, and APS special systems contractors. Special systems equipment and wiring will be provided by APS special systems contractor; conduit systems and j-boxes will be provided by general contractor's electrical sub-contractor. Refer to APS Electrical Design Standards on the FD+C website.

NOTE: Voice, Video, and Data Cabling. All cabling will be Category V plenum rated at a minimum (Cat VI cabling is preferred). The cabling technology (copper, fiber optic, etc.) will accommodate voice, video, and data traffic. Cable trays are to be used on hallway straight-aways where possible. J hooks can be used in areas that cannot be reached by cable tray/ladder racks. No under slab cable chases are to be used.

Standard 2.1.6.g Telephones

Provide an adequate and functioning telephone system with a phone in every classroom and office. In existing schools that have a phone system the new equipment is to match the existing system with provisions to change the system toe VOIP at a future time. In new schools the PBX systems are to be VOIP.

Phone requirements

- All new schools must be designed to VOIP standards.
- All renovation upgrades and additions to existing schools the contract architect/engineer will provide rough-in for VOIP but the VOIP system may not be activated at the time of the renovation. VOIP may be added at a later date. APS will give direction on phone system prior to design.
- Cafeteria/kitchen will have one point of service in the cafeteria office and two points of service at the food serving line for the cash registers.
- Elevator cab will have a dedicated telephone line that calls directly to a specified number at school police (505-243-7750).

NOTE: Design special systems following consultation with FD+C, IT, and APS special systems contractors. Special systems equipment and wiring will be provided by APS special systems contractors; conduit systems and j-boxes will be provided by general contractor's electrical sub-contractor. Refer to APS Electrical Design Standards on the FD+C website.

Standard 2.1.6.h Computers

An adequate technologically state-of-the-art computer system will be provided in all teaching, work, and cafeteria/kitchen spaces.

- **External**: Every school to have a dedicated data link to connect to the central APS computer.
- **Internal:** Every classroom and office area to have conduit with conveniently located computer ports (with adjacent outlets) that can eventually be connected to a central computer file server.

NOTE: For Main Distribution Frame (MDF) and Intermediate Distribution Frame (IDF) specifications Refer to APS Electrical Design Standards on the FD+C website.

NOTE: Design special systems following consultation with FD+C, M&O and APS special systems contractors. Special systems equipment and wiring will be provided by APS special systems contractors; conduit systems and j-boxes will be provided by the general contractor's electrical sub-contractor. Refer to APS Electrical Design Standards on the FD+C website.

Standard 2.1.6.i Voice Augmentation Systems

Recent learning mode studies have pointed to the problems of students adequately hearing teachers from throughout the room. Some schools are using voice augmentation systems to amplify teacher voices. Classrooms to be designed to provide the rough-in for such a system with individual classroom control.

Policy 2.2 Accessibility / Safety

School facilities are to be accessible to all populations in normal and emergency situations.

Standard 2.2.1 Doors

All doors (except code excluded) are to be of sufficient width and threshold clearance to be accessible to persons with disabilities. Provide view lites into all public access doors including main office, classrooms, corridors, etc. View lites will be located for use by all students including those in wheelchairs. Doors into corridors, kitchen, gym, cafeteria, and mechanical rooms are to be wider without a mullion, or have removable mullions to allow for one point access for large items common to that space.

M&O Note: Door hardware and accessories to follow APS M&O and FD+C standards. Refer to APS Door Hardware Standards on the FD+C website

Standard 2.2.2 Exterior Doors

Exterior doors are to open outward and be equipped with panic hardware. Main entry, parent drop-off entry doors and bus area entry doors shall have one leaf power-assisted. Such power-assisted doors will have controls in the approach way rather than behind the door swing. Provide on-off switches for these doors for off-hours. Hardware is to be selected from APS M&O list and with proper fire rating.

Standard 2.2.3 Classroom Doors

Classroom doors are to be recessed, open outward, and have smoke seals as required. Hardware should be selected from APS M&O list and with proper fire rating. Access doors to the outside from classrooms are desired but not required. Attach all doorstops mechanically into robust blocking. Any lights in doors are to be no greater in size than half-lite above hardware.

Standard 2.2.4 Barrier-Free

Barrier-free design must be age appropriate. Structure to meet or exceed all barrier-free requirements, both externally and internally, in accordance with Accessible and Usable Buildings and Facilities (ICC/ANSI *A117.1 – 2003 as amended by 14-NMAC 7.2, the Americans with Disabilities Act Architectural Guidelines - ADAAG 2004), specifications for making buildings and facilities accessible to and usable by physically disabled people, and the Governor's Commission on Disability.*

Standard 2.2.5 Interior Signage

Identify all occupied spaces with signage (some schools with dual language programs will have signage in two languages). Signage will comply with ADA regulations and will assist children in finding their way around the school. Signage schedule shall be coordinated with site administration.

LEED®: Consider using signage highlighting at least 5 sustainable features in certified buildings that qualify for LEED points and add to the educational process for sustainable design.

Standard 2.2.6 Fire Extinguishers

The school will have fire extinguishers (FE) in number and location per the code. FE cabinets will be semi-recessed, glass free, and sized to hold 10 lb FEs provided by M&O. In the kitchen allow space for a 60 lb. K- rated FE and provide a hood fire suppression system. M&O provides the 10 LB. and K-rated FE's. The contract A/E provides the cabinets, brackets and location of each extinguisher.

Standard 2.2.7 Knox Boxes

Provide Knox Boxes as required by the Fire Marshal. Establish location and height of the boxes with the Fire Marshal during the design process.

Policy 2.3 Cost-Effective Maintenance

Design site and grounds for cost effective operation and ease of maintenance by APS maintenance personnel. *See APS Site Design Directives on the FD+C website for acceptable products and design.*

Standard 2.3.1 Windows, Doors, Walls

Windows, doors, and walls are to be of material and finish requiring minimum maintenance. Windows and Translucent Panels require STC rating of 35 when placed in Core Learning Areas.

FD+C Notes: Windows - All glazing areas are to be regular/rectangular, recessed to receive window treatment, and where possible in classrooms and offices with a sill height a minimum of 30" a.f.f. High windows in all teaching spaces and libraries beyond reach are to have a light control device included in the construction contract and should receive covering treatment designed by architect for general contractor to provide and install. Manually operated blinds for regular windows will be owner-provided and installed. Electrically operated shades are to be included in the general construction. Operable window hardware and screen application shall not interfere with the ability to install window treatments. View lites in office and classroom doors that require covering need to have the sill above the lockset.

M&O Notes: Windows / Glazing: Refer to APS Glazing and Window Standards on the FD+C website.

Doors - Any window in a door which will need treatment must be above opening mechanism. This includes all office and classroom doors, but not necessarily entry doors.

Doors / Hardware: Grout-fill all hollow metal welded door frames. Provide screen door for service drive access to kitchen.

Walls: Use semi-gloss paint on all interior walls. Provide corner guards in high pedestrian areas.

Standard 2.3.2 Floor Coverings

Classroom floor coverings are to be durable and require a minimum of care.

Polished concrete flooring is the preferred flooring material for corridors, teacher's lounges, cafeterias, around the sink areas in the general classrooms, art/music rooms, and in kindergarten / pre-k classrooms. Placing the sink areas closer to the classroom doors would minimize problem of washing, waxing, and buffing because these areas could be cleaned at the same time the corridors are cleaned. Carpet tiles may be considered for offices, administration areas, library, and in classrooms areas away from sink areas.

M&O Note: Refer to APS Modular Carpet Specifications on the FD+C website.

Standard 2.3.3 Ceilings

Ceilings and walls are to require minimum care.

M&O Note: If required by code, use fire rated ceiling tile #895 fissured "fireguard." When installing grid do not anchor ceiling tie wire to duct work, but tie to permanent structure with proper anchors and wire.

For all wet areas use only moisture-rated board ceilings. In student restrooms, use moisture-rated gypsum board ceilings.

Standard 2.3.4 Built-in Equipment

Built-in equipment is to be designed and constructed for ease of maintenance and durability.

Standard 2.3.5 Floors in Special Areas

Durable floors in restrooms (ceramic tile), kitchens (polyfloor), cafeterias (polished or stained concrete), and corridors (polished or stained concrete) are to require minimum daily maintenance and tolerate disinfecting chemicals.

Floors in nurse's area and mini gym to be commercial grade sheet Marmoleum with welded seams. Kitchen floors to be Polyfloor in a color other than white (off white okay). Restrooms to have ceramic tile. Polished concrete desirable in other areas where appropriate including the teacher's workroom.

M&O Note: All floor tiles shall be slip resistant.

Standard 2.3.6 Custodial Areas

Provide adequate custodial storage spaces with hot/cold water and mop sink. The rule of thumb is a minimum of one custodial room per floor. Coordinate with custodial services.

NOTE: Provide fire sprinkler, make-up air/exhaust, shelving, and backsplash on walls around mop sink. The room size must allow for the custodial cart.

Standard 2.3.7 All Sink Locations (other than restrooms)

Restroom accessories are to be wall mounted and of quality finish. (See Mechanical Standards)

All sinks to be provided with:

- Soap dispenser - surface mounted with screws (receives pouch soap refills)
- Paper towel dispenser - surface mounted, polycarbonate, paddle operation to receive roll towels (must be ADA compliant).
- Trash receptacle - freestanding 18 gallon capacity stainless steel

Standard 2.3.8 Exterior Signage

All signage is to be vandal resistant, easily visible from a distance, and compliant with ADA requirements. The building signage shall include the name of the school and street number. It must be visible from the street.

M&O Notes: Posts for signs to be #3 U-channel. Sign hardware to be vandal guard. Fence mounted signs to have 3.5" aluminum plates. All traffic signs for directions, safety, traffic control, and ADA will be installed by general contractor. Signs on buildings to be attached on all corners of the sign and high enough to prevent graffiti or vandalism. Identification numbers or letters of school names etc. will be high enough off ground and adhered sufficiently to inhibit vandalizing.

Standard 2.3.9 Monument Signs

Provide a free-standing, durable sign that has the name and address of the school. This sign is not to be confused with a Marquee sign. The monument sign should be less than 8'-0" high and located on the site to be visible by cars passing on the main road in front of the school without creating a visual barrier for traffic.

Marquee Signs will not be installed as part of the construction project. During the design phase of each project a location should be designated and electrical conduct installed from the building to the designated location. FD+C does not purchase or install marquee signs but in some instances will relocate existing signs to accommodate construction projects. All marquee signs and their installations need to be approved through M&O.

3.0 ADEQUACY AND ENVIRONMENT FOR EDUCATION

The policies and standards in this section assess the adequacy of the school structures to support educational and curriculum requirements while providing an environment conducive for learning.

Policy 3.1 Plan for Flexibility

School facilities are to provide ability to adjust to programmatic (instructional and community) and technological change.

Provide a learning environment supportive of the district's educational programs and curricula. Build into facilities opportunity to adjust to:

- Internal flexibility.
- Expanding and contracting.
- Accommodating future technology.

Standard 3.1.1 Flexibility of Classrooms

Educational areas are to allow internal flexibility for program adaptations. Factors to consider:

- Classrooms sized to allow a variety of grade levels.
- Classrooms and support areas designed to allow for different programs.
- Some classrooms (20%) can be varied in size through use of large double doors or high sound transmission class (STC) rated folding wall systems.
  - 1/2 size classrooms that can be made into full classrooms.
  - Full classrooms that can be made into double size (for team teaching).
  - Appropriate plumbing stub-outs.
- Allow positive use of walls and ceilings for display and learning.
- Flexibility in furniture arrangement (not long narrow rooms).

NOTE: In some APS schools there are classrooms with moveable STC rated partitions in each wing of the school to allow some classrooms to expand to meet new purposes. Demountable panel partitions are not acceptable.

Standard 3.1.2 Ability to Add Permanent and Portable Classrooms

Every elementary is to have the ability to serve at least 650 students in the permanent classrooms and expand in population and program needs by adding portables easily.

Standard 3.1.3 Expansion Capability of Core Support Facilities

Support facilities (e.g. cafeterias, restrooms, media center) are to have the capability to support anticipated expansion of the school population and have infrastructure potential for unexpected enrollment increases.

Standard 3.1.4 Communication and Information Technologies

Learning and office spaces are to have the capability to accommodate communication and information technologies.

Policy 3.2 Site / Facility Organization

School sites and facilities are to be organized in a clear and consistent manner that is conducive to learning and allows proper supervision.

Standard 3.2.1 Centralization of Common-Use Facilities

Common-use facilities are to be centralized to population served:

- Administration
- Counselor/Social Worker
- Nurses Office
- Media Center
- Teachers Work Room and Lounge
- Computer Lab
- Cafeteria
- Student / Staff Restrooms

Standard 3.2.2 Noisy-Quiet Separation

Noisy activities (gymnasium, music, assembly areas) are separated from quiet learning areas.

Standard 3.2.3 Kindergarten and Pre-k Pick-Up / Drop-Off

Kindergarten / pre-k classrooms are to be close to parent pick-up/drop-off areas. Separating this kindergarten / pre-k traffic area from other traffic areas due to parking needs is recommended.

Standard 3.2.4 Covered Circulation

Covered circulation with hard surface sidewalks is to connect all school permanent structures.

Standard 3.2.5 Entrance / Exit Location

Entrances and exits are to be located to permit efficient student traffic flow. The main entrance will be designed to be visible from the main office. Walk-off mats as specified in Standard 2.1.2.b.

Standard 3.2.6 Portable Classroom Location

Portable classroom buildings are to be integrated with other academic learning areas and have equal access to school support facilities.

NOTE: There are many potential portable discussion issues (e.g. access, security, condition, room for expansion, total number of portables on-site). In general:

- *Portable classroom locations are to be defined.*
- *Integrated open space will be provided.*
- *Infrastructure support will be planned during building construction.*

Standard 3.2.7 Supervision of Large Group Areas

Large group areas (cafeteria, media center, outside gathering areas) are to be designed for effective supervision.

Policy 3.3 Community / After Hour-Use

School facilities are to provide the opportunity for community and after-hour use.

The APS Board of Education endorses the philosophy and goals of community education as a district-wide program to the extent that resources are available, within current federal and state statutes, and State Public Education Department regulations. The public investment in school plants and sites, and the general community welfare, justifies the use of school buildings and grounds by local citizens for educational, cultural, civic, and recreational purposes outside of school hours or when such use will not conflict/interfere with the school program.

Standard 3.3.1 Community Education / After Hour-Use

The facility is to permit the use of some portions of the school after regular school hours without impacting security of other portions of the school. Joint-use space is to be safe, secure, and include separately keyed activity spaces (gym, cafeteria, and classrooms), accessible restrooms, and storage areas.

Standard 3.3.2 Joint-Use Facilities

Joint-use facilities (parks, swimming pools, libraries, child care, and senior citizen facilities etc.) will be integrated into campus in a safe and secure manner with an accessible restroom.

Policy 3.4 Instructional Needs

All school areas will provide an environment that meets instructional and functional needs of the activities taking place.

The size and nature of the following areas are to meet standards specifications. (The size range of all areas discussed is provided in Appendix B.)

Standard 3.4.1 Standard Classrooms

Size

Standard classroom size is roughly determined by assessment of State Pupil Teacher Ratios (PTR), a size allocation per student, and practical experience. In practice, to leave options for moving classes between different grade levels, the following size ranges are requested:

Classroom Square Foot Recommendations

Existing Schools				New Schools	Comments
Type of Classroom	Low	Medium	High	Recommended Minimum	Possible Uses
Pre-kindergarten	775	850	1000	900	Pre-K, Kindergarten DD
Kindergarten / Labs	900	1050	1250	1200	Kindergarten, computer lab
Full Size Classroom	775	840	900	840	General classrooms, music*1 and art *1
3/4 Size Classroom	500	630	775	600	
1/2 Size Classroom	300	420	500	420	PT*1, SPED head teacher, resource room
1/4 Size / Large Office	175	210	300	200	SLP, OT

Note *1 = SF minimum does not include associated storage

NOTE: The larger the classroom, the more flexible the options for different programs. For schools with high special program needs, consider a small tutorial space between 2 or 4 classrooms. The prior calculations are based on the following Pupil/Teacher Ratios (PTR). Classroom averaging is allowed between grades 1 – 3.

General Education	Students / Teacher	Students / Teacher + Aide	SLP
Pre-Kindergarten 4 year old	10 to 1	20 to 2	not given
Kindergarten	15 to 1	20 to 2	
1st, 2nd, & 3rd	22 to 1		
4th, 5th, & 6th	24 to 1		
Special Education			
A Level	35 to 1		60 to 1
B Level	24 to 1		35 to 1
C Level	15 to 1		not given
D Level	8 to 1		not given
3 and 4 year old DD	4 to 1		not given
Programs for profoundly disabled	2 to 1		not given

General needs for corridors and lobby areas to support classrooms

- Provide polished concrete flooring, graffiti resistant wall surface, and way-finding.
- Provide tack strip not to exceed 20% of the hall length. Locate tack strip outside each classroom. Provide attractive durable flooring, graffiti resistant wall wainscot, and way-finding.
- At the art / music classroom and the main office area provide a tall display cases with safety glass for student work.

General needs for all elementary school classroom spaces

- Minimum of 840 sf.
- Convenient to common resources (media center, cafeteria, PE facility).
- Utilize natural light to reduce daytime lighting costs, balance spectrum of lighting available, and provide views. Windowsill height of no less than 30" a.f.f. Operable windows to provide cross ventilation.

- Acoustically balanced for hearing voice in the space and blocking noise from outside the space. Consider use of sound augmentation system.
- Accommodate technology needs for teacher and students to include: telephone, computers, and printers and electrical and data connections for an interactive projector.
- Accommodate APS furniture and equipment list. Arrange primary furniture to allow for good view lines for two whiteboards from all desks and tables.
- A minimum of 2 duplex outlets per wall.
- Easily maintained surfaces.
- Large, deep stainless steel sink with hot and cold running water, with soap dispenser, surface mounted with tamper-proof screws (receives pouch soap refills), and paper towel dispenser, surface mounted, polycarbonate, paddle operation for ADA compliance (receives roll towels).
- Sufficient storage (174 cubic feet) organized to avoid clutter:
  - Wardrobe/storage (95 cf, 6'-6" x 7'-4" x 2'-0") to allow for globes and other large items.
  - Sink storage cabinets (25 cf base, 2'-6" x 5' x 2'; 8.3 cf upper, 2'-6" x 2'-6 " x 1'- 4"; 20 cf corner cabinet).
  - Paper storage (27.6 cf flat storage, 3' x 4' x 2'-4").
  - Shelves (9 cf, 3' x 3' x 1').
  - Use of secure closet for some of this storage is allowed.
- Standard 50% blackboard, 50% white boards (2 - 8'x 4') and tack boards (4 - 4'x 4') with tack strip on top. Consider tack strip around the rest of classroom. Consider flexibility in mounting heights.
- Manual pencil sharpener on wooden block with blocking in wall at child height for each classroom, library, art/music room and other areas where students will be working. The sharpeners are to be provided by and installed by general contractor.
- Area for coats that does not clutter the classroom and avoids safety issues of hooks in high traffic areas. General contractor is to provide blocking, shelf, and hooks. For early childhood consider cubbies for each child to handle additional clothing, etc.
- Minimize carpet areas as much as possible. (Refer to APS Carpet Tile Specifications on the FC+C website.)
- Polished concrete floors are preferred throughout but especially at wet areas.

NOTE: Consider providing additional storage space for teachers off-track.

Expected instructional spaces (full-size equivalences)

See list of anticipated teaching spaces in a school for 650, whether in permanent or portable structures.

Additional special needs for kindergarten and pre-k

- Minimum of 1,200 sf including classroom, bathroom, and storage. It should have a refrigerator and location for a microwave.
- Teaching Kitchen (kitchenette) to be shared by all kindergarten classes will be between 450 – 600 sf (large enough for a class to observe the food preparation). It shall include a dishwasher, range with oven and induction cooktop including signage "Use only cast iron or stainless steel cooking vessels", refrigerator, space for a microwave, teacher sink but no child sink, commercial fume/fire hood and a grease trap. Provide instant hot water heater for dishwasher to meet Environmental Health regulations. The counter should be adult height to enable the appliances but a section of the counter should be at child height so that children can sit around and "work". All appliances to be Energy Star labeled.
- In each room provide a fire extinguisher, smoke detectors, emergency lighting , illuminated exit signs, and a fire alarm pull station.
- Comply with Children's ADA Standards for this age group.
- Easy or direct access to the outside.
- A separate kindergarten play area and a separate pre-k play area (with hose bib water available and variety of play materials). Directly accessible from the classroom space is preferred.
- Convenient restrooms designated and designed for kindergarten and pre-k student use. (Refer to Appendix C.3). Pre-k toilet seat height to be 11"-12" a.f.f. Kindergarten toilet seat height to be 12"-15" a.f.f. These must also be ADA accessible.
- Locate near a convenient parent pick-up and drop-off space with parking.
- Carpet in dry areas and polished concrete surface in wet areas. (Refer to the APS Website for specific carpet guidelines)
- Furniture and cabinets scaled to kindergartener / pre-k heights.
- Doors designed so that young children can open and close safely.
- Provide following appliances:
  - Energy Star (white) Oven with an induction cooktop.
  - Energy Star (white) 18 cubic foot frost free refrigerator with ice maker for each classroom and one for the shared kitchen.
  - Energy Star (white) dishwasher with a booster water heater.

NOTE: Consider group restrooms and kitchens in a secure area.

Standard 3.4.2 Special Education Spaces

Special Education requirements are the same as the regular classrooms except where noted. The allocation for each elementary school will vary according to the specific enrollment needs, but the following is the typical minimum impact on teaching space needs.

- 2 half-classrooms for resource program and special education head teacher.
- Possible kindergarten / pre-k – developmentally disabled room at 900 sf (800 plus restroom at 60 sf and storage closet at 40 sf).

- 2 classrooms for C level programs and D level programs whether full inclusion or not. One D-level space requires a time-out room (25 sf with floors and walls of soft, easily cleanable material, door w/safety window, and light switch on the outside).
- Two 200 sf offices for speech and language pathologists (sound isolated).
- Intensive Support Program (ISP) – Many schools may have a cluster ISP classroom to handle severely disabled students. An ISP room for 4 students and 2 staff represents a full-size 840 sf classroom with 200 sf storage; a large ADA restroom with shower; an Energy Star (white) extra large capacity washer and an Energy Star (white) extra large capacity electric dryer. Provide a 5'-0" x 2'-6" space for APS to provide a changing table. Provide storage space for diapers and supplies of 100 sf; an office of 120 sf; and a separate HVAC, lighting, special systems designed for severely disabled students. It is possible to share the support spaces between two ISP classrooms. Some special programs students require specialized lighting with different cycles, spectrum, ballast noise level, etc. Provide for a 400# point load eye-hook in the ceiling of the classroom.
- OT/PT – can share or split functions into a classroom of about 600 sf for PT with 140-200 sf storage, a restroom, and a provision for a 400# point load eye-hook in the ceiling. The OT space is expected to be a 240 sf conference room type space.
- Individual Educational Program – Provide meeting space for 16 people of at least 240 sf with storage and sink unit.

Standard 3.4.3 Fine Arts / Music

Unless the school can fund fine arts (art, dance and music) programs full-time, fine arts and music teachers rotate to schools. At least 1 dedicated space for fine arts is recommended, 2 for schools over 700 students. Hubert H. Humphrey ES has a good example of a fine arts space and integration of outdoor performance option next to space. The configuration of a fine arts space follows.

- 1,000 sf of instructional space large enough to accommodate at least 8 – 60" x 60" tables for art, space for movement instruction, and space for risers, platforms, sets and scenery, and other music performance equipment.
- A large kiln is to be located in a dedicated room or space adjacent to the art/music room. It must be properly vented and should include adjacent space for open shelving and storage. (Refer to Appendix C.5) In addition to the kiln vent, the room is required to have a room exhaust fan operated by a thermostat to protect against overheating of the room due to the kiln.
- Design the art/music classroom using at least one non-parallel wall for sound diffusion. Other acoustical treatment will need to be considered based on the proximity of the art/music room to other instructional spaces in order to avoid sound "bleeding."
- An outdoor teaching area adjacent to the art/music room is desirable, such as an outdoor amphitheater.
- Ample storage to accommodate the various supplies and equipment that the art and music teachers bring to each school. Ideally, this storage would be located in a separate, adjacent room with locking doors; easily accessible from within the art/music classroom; and include an open shelving system for storage.

- Provide a large, deep, sink that is equipped with a clay/plaster trap. (This source of water is essential for art classes and for cleaning music equipment and instruments.) Provide a separate lower sink that is ADA accessible.
    - Provide at least 8 linear feet of counter space around sink with at least 1 electrical outlet close to the sink.
    - Provide at least 2 electrical outlets along each wall of the room.
- Ample wall space to accommodate 2 large bulletin boards for display of instructional visuals and finished art work.
- 1 large 4' x 8' magnetized chalkboard positioned in the room so as to be part of the instructional focus. A chalkboard is preferred over a "white board" for art instruction.
- As most music instruction takes place on the floor, individual carpets will be provided by APS for students to sit on over the polished concrete floor.
- Natural light from windows is desired.
- Build-in speaker system for music reproduction is required.
- Storage located within the instructional space should be limited to cabinets and horizontal drawers large enough to accommodate the largest papers used in art class (tagboard: 24" x 36").
    - Open adjustable shelving is optimal for storage of various musical instruments including drums in the storage room.
    - No more than 2' deep.
- Although not a big consideration for the art/music room itself, provide space throughout the school for the display of student art. Provide a recessed, lighted glass display case in the corridor, approximately 4'-0" wide, 12" - 15" deep, and 5'-0" high with adjustable glass shelves to hold both 2-D and 3-D work.

Standard 3.4.4 Computer Learning Center

Every school is to have at least 1 computer laboratory accommodating 30 computer stations.

- Centrally located near the media center.
- Consider built-in surfaces for computer workstation layout arranged where possible in concentric pattern.
- 1 printer with option to bring in laptop cart.
- Provide separate cooling and exhaust for computer rooms.

Standard 3.4.5 Library / Media Center

The library / media center requirements follow.

- Seat about 65 students.
- Minimum 3,900 sf in size (about 60 sf / student).
- Limited access and visual control throughout from 16' circulation desk. The circulation desk is built-in casework.
- Accessible electrical outlets on every wall and columns. Coordinate with casework, furniture, and equipment FD+C staff.

- Provide day lighting (with a minimum window sill height of 48" to clear shelving).
- Space able to be darkened enough for AV use.
- Lights in individually controlled banks to allow darkening.
- Appropriate wiring for interactive projector and computer equipment is required.
- Space to allow for different arrangements and programs to occur at one time and include:
  - 3 ln.ft. of shelving for every 25 volumes (or 50 picture books). Work with APS FD+C for age appropriate furniture, shelving, desks, and layout.
  - Work study area for 2 classes, for large group reading activities, and for reference.
  - 12 stations for computer research and group work (30 sf each) with data.
- Provide area for storytelling, videos, and special presentations fully accessible.
- Wire power for future security gate installation at main entry.
- Tack strip area above the shelves and around the raised area for multiple display options.
- Provide a Librarian office adjacent to library/media center with phone and data. Provide sink with pouch-type soap dispenser and paper-roll towel dispenser.
- Direct access to a media center workroom is desirable.

Standard 3.4.6 Mini Gym / Physical Education (Interior Area)

The mini gym / physical education area requirements follow.

- Indoor mini gym play area average of 2,400 sf with minimum 20' ceiling is required.
- A safety space between the court and wall is required.
- Provide flooring of commercial grade sheet marmoleum with welded seams.
- Gym should have 2 adjustable basketball goals with backboard and wall pads.
- 4 additional adjustable basketball goals with backboard and wall pads on the gym sidewalls with free throw lines are required.
- Wall eye bolts for net activities, and a climbing rope attachment.
- Discuss climbing wall option. Provide location to be installed by APS.
- Floor sleeve inserts with matching standards and nets for volleyball are required.
- Mini gym to be located near the exterior playgrounds and recreation fields and away from classrooms.
- Provide direct access to outdoor play areas.
- Provide windows that are impact resistant or protected.
- An office for physical education and Adaptive Physical Education is required with sufficient storage (420 sf, minimum together).
- If this space is to have a performance platform, provide a minimum 400 sf platform with curtain option, ramp access, and storage (200 sf).
- Commercial grade sheet marmoleum with welded seams for floors.
- If there are before and after-school programs, provide 150 sf office / storage space.
- Consider joining the gym and cafeteria buildings to allow for a folding wall between them. This would provide the opportunity to have a school assembly in an expanded space.

(Exterior physical education specifications are discussed in Policy 1.5)

Policy 3.5 Support Spaces

All school areas will provide an environment that meets the functional needs of support services.

Standard 3.5.1 Cafeteria

Cafeterias serve as a food serving area as well as a multi-purpose area for school activities.

- Centrally located.
- Sized to seat 15 sf/student with no more than 3 lunch periods. Average cafeteria is about 3,000 sf.
- Provide ample storage for additional special events folding tables and chairs (250 - 500 sf).
- If space is to have a performance platform, provide a minimum 400 sf platform with curtain option, ramp access, and storage (200 sf). Also provide a short-throw projector and screen.
- Acoustically treated ceiling to absorb sound.
- Provide windows to the outside that are shaded from summer solar gain.
- Discuss with Food & Nutrition Service the option of self-service and/or cafeteria staff-serve.
- Consider joining the gym and cafeteria buildings to allow for a folding wall between them. This would provide the opportunity to have a school assembly in an expanded space.
- Flooring to be polished concrete.
- For all after school programs, provide storage, sink, snack cooler, and required outlets.

Standard 3.5.2 Kitchen

Some *schools are served from the APS central kitchen, yet most schools have on-site food preparation. Each project must be reviewed with the Food and Nutrition Services personnel before design begins.*

- Kitchen to be approximately 1,700 sf and include the following areas. (See Appendix C.3 for *Guide to Space Planning of a School Food Service Facility* based on the number of meals served). The contract A/E will meet with Food and Nutrition Services for current operating needs prior to design. The following is a guide.
  - Food preparation area with vegetable sink.
  - Dish/pot washing area (requires a 3 compartment sink).
  - Hand washing sink for cook/prep/serve area with soap dispenser - surface mounted with tamper-proof screws (receives pouch soap refills), and paper towel dispenser - surface mounted, polycarbonate, paddle operation for ADA compliance (receives roll towels).
  - Dish/pot washing area (requires a 3 compartment sink).
  - Cold and hot storage equipment generally including a freezer / refrigerator walk-ins, and 2 to 4 transporters for hot food.
  - Dry storage.
  - Restroom for the staff with access to lockers and electric washer / dryer units.

- Office with telephone, fax, and data.
- Janitor closet in or adjacent to kitchen.

- 18" minimum backsplash around stoves, sinks, and dirty tray drop-off.
- Kitchen to be free of any hazards to students (e.g. hot serving line surfaces).
- Sufficient access for delivery vehicles into a receiving area through a 3' - 8" door (minimum) x 7' - 0 high screen door and fly fan entry. Cover screen on door with expanded metal covers on both sides to protect screening.
- Provide doorbell at rear entry.
- Poly floor preferred in kitchen area. Kitchen floors to be poly vinyl in color other than white (off white okay). Polished concrete desirable in other areas were appropriate.
- Sufficient access for trash pick-up.
- Shield exterior trash area near kitchen.
- Surfaces able to be disinfected. Consider use of reinforced fiberglass panels (RFP) on all walls where serving functions occur. Provide stainless steel behind cooking and washing areas (floor to ceiling).
- Data is required for the kitchen office and one or two at the serving lines for the cash registers. Refer to APS Electrical Design Standards on the FD+C website

LEED®: Consider the appropriateness of solar preheating of HW in the kitchen.

Standard 3.5.3 Utility / Storage

Custodial Utility Areas

There are to be sufficient custodial areas with hot and cold water to efficiently clean all permanent and portable facilities. They are to be conveniently distributed in a manner that is appropriate to serve entire school.

- 3-4 interior custodial areas per elementary school. If different permanent buildings, at least 1 custodial closet in each.
- Each custodial closet to be 60 sf with 1 at 200 sf in size for supplies and desk.
  - All shall have a janitor's floor mop sink and sufficient shelves for storage.
  - Provide an outlet.
  - Cover walls around sink with tile or stainless steel surround.
  - All spaces to have active mechanical ventilation.
- Provide access to the roof from some of the custodial storage areas or nearby storage rooms. The roof hatches shall be OSHA-approved, water tight and lockable.
- Custodial Rooms will have painted walls (and ceilings if they are not lay-in). The floors will have a concrete sealer.

LEED®: Selection of cleaning supplies is part of LEED® evaluation.

Facility Storage Interior (other than in classrooms)

Provide as much storage in the school as possible (about 5% of the net area) including:

- Assigned storage associated with specific rooms (gym, cafeteria, administration, fine arts / music).

- Unassigned storage (200 sf that can be used for a variety of purposes).
- Teaching materials storage at 800 sf (bookroom).
- Year-around schools require additional storage.
- Paint all walls and hard ceilings. The floors are to have sealed concrete.

Facility Storage Exterior

- Exterior storage of 200 sf and 10' tall directly accessible to the outside to store inventory salvage and excess equipment and furniture.
- Provide storage with exterior door.

Mechanical, Boiler and Electrical Rooms

- Paint all walls and hard ceilings. The floors are to have sealed concrete.

Data closets (IDF, MDF) Rooms

- Paint all walls and hard ceilings. The floors are to have resilient flooring and base (no exposed concrete slabs). Refer to APS Electrical Design Standards on the FD+C website

LEED®: Recycling is an important element of the operation of the facility when working in a LEED® process.

Standard 3.5.4 Administrative Offices / Support Areas

Sub-Standard 3.5.4.a Administrative Offices

The administration area will be central to the school and visitor access. It is the school's access control point so visibility and way finding is important to and from these offices.

- Main office should be easily located.
- The main office reception desk should be designed and installed as a permanent fixture located as visitors enter the main lobby.
- Provide a suitable reception area for seating 8-10 and allowing table area for registration. This area is to have visual control of the school's main entry point.
- Administration area to include a Principal's office; Assistant Principal's office; conference room (accessible to the Principal's office and to the school); supporting offices for counselor and psychologist / social worker; main PA and intercom system control; file room; storage; mail/work area; reception area; and secretarial area.
- Secretary shall have a clear view of the nurse's cot room and special-system panels.
- Ample and conveniently located storage that includes a secure place for permanent records (locking fire files).
- Space for file cabinets to include (sufficient for population) file proof and lockable cabinets.
- Administrative offices will have data drops.
- Provide lighted, recessed display space with locking glass doors to display student 2-D and 3-D art work.
- Mail boxes (1 per staff) to be located in staff only area here or in the teachers' lounge.
- A 300 sf parent room can be in the vicinity with data and power. Refer to APS Electrical Design Standards on the FD+C website

FD+C Note: All windows to have a minimum sill height of 30"a.f.f. Minimize curved walls and odd angled walls in this area to best accommodate high density of furniture.

Sub-Standard 3.5.4.b Nurse's Area

The nurse's area should be adjacent to and entered by way of the school's central office / control area.

- Minimum 675 - 800 sf for suite of all health related spaces.
- The school secretary to have direct visual contact with nurse's cot room.
- Minimum of 6 chairs in reception area and wall rack for educational materials.
- Sufficient space to conduct eye exam (10 feet deep) with dedicated light.
- Provide private office for school nurse to include at least 2 duplex outlets, phone with dedicated line, computer with Internet access, fax, paper shredder, and window to cot area with blinds. Design walls / window for hearing testing (as sound proof as possible).
- Treatment /cot room:
  - 1 cot / 250 students with tables between for equipment and curtains mounted in ceiling for privacy.
  - Duplex outlets at each cot for equipment.
  - Deep sink unit with hot and cold water with soap and paper towel dispensers and locking cabinets with counter space.
  - One 7 foot tall storage cabinet for large equipment.
  - Second desk with at least 2 outlets for a phone and computer with Internet access.
  - Refrigerator (white, Energy Star, 18 cubic foot, frost free with ice maker)
- Double locking medication cabinet. (See Appendix C.1 Health Room requirements for list of equipment requirements.)
- 36" minimum door opening to allow for an emergency gurney.
- ADA compliant bathroom with ceramic tile to include an area for a padded changing table 28"-38" from floor (provided and installed by APS). For schools with ISP students, allow space for Hoyer lift in bathroom. Inclusion of shower if special-ed program requires.
- Choose paint, tile, and other coverings to be easily cleaned and disinfected. Flooring to be commercial grade sheet marmoleum with welded seams.
- Dedicated climate control. Operable window if possible; if not, provide exhaust fan in rooms.
- Provide space for 1 locking fire proof file cabinet for every 800 students.
- Provide storage closet for wheelchair, crutches, and other bulk item storage.
  All sinks to have soap dispenser – surface mounted with tamper-proof screws (receives pouch soap refills), and paper towel dispenser - surface mounted, polycarbonate, paddle operation (receives roll towels).
- Provide single unit washer/dryer.

Sub-Standard 3.5.4.c Bookroom

The Bookroom is to be located either in the Administration Area or adjacent to the Library/Media Center with easy access from the corridor and delivery area.

- Minimum 440 sf.
- Shelving to be provided by APS FD+C.

Sub-Standard 3.5.4.d Workroom

The workroom is to be centrally located to the teaching staff with easy access from the corridor.

- Minimum 675 sf.
- Centrally located with proximity access to the Media Center preferred.
- Sufficient permanent lockable storage.
  - Base cabinets with sufficient countertop for workspace and equipment.
  - Upper cabinets.
- Deep double sink area with
  - Soap dispenser - surface mounted with tamper-proof screws (receives pouch soap refills)
  - Paper towel dispenser - surface mounted, polycarbonate, paddle operation (receives roll towels)
- Consider use of a utility sink set into the counter.
- Sufficient storage area, minimum 60 sf.
- Accommodate a variety of shelving systems for storage of paper, books, supplies, and audio-visual material.
- Ability to accommodate a desk for an educational assistant.
- Provide lay-out table.
- Dedicated circuits and outlets for equipment.
- Polished concrete floors are preferred.

Sub-Standard 3.5.4.e Teachers' Lounge

- Located near the administrative offices or workroom and adjacent to staff restrooms. Where applicable, provide patio area with wall privacy.
- 850 sf minimum with seating for at least 30.
- Small kitchenette area with a refrigerator, microwave oven (no range), and double sink. Provide 5 duplex outlets with dedicated circuits above counter. At the sink provide soap dispenser – surface mounted with tamper-proof screws (receives pouch soap refills), and paper towel dispenser - surface mounted, polycarbonate, paddle operation (receives roll towels).
- Space and power for two vending machines.
- Staff mail boxes (1 per staff) either here or in a staff only area of the administration area.
- Windows and, ideally, access to an outside patio area. Keep window sills at minimum 30" a.f.f.
- Provide one 4' x 4' tack board.
- Provide polished concrete flooring.

Sub-Standard 3.5.4.f Restrooms

- Conveniently located so accessible to both staff and students:
  - Student restrooms central to all activities (access to all wings).
  - Separate restrooms convenient to the kindergarten / pre-k.
  - Convenient to portables.
  - Floor mounted toilets throughout.
  - Convenient to playgrounds with no exterior access.
  - At least one of each fixture in each restroom will be ADA accessible.
  - In all new schools restroom accessories to be provided:

    . Soap dispenser - surface mounted with screws (receives pouch soap refills)

    . Paper towel dispenser - surface mounted, polycarbonate, paddle operation (receives roll towels)

    . Toilet paper dispenser – vandal resistant (receives jumbo or standard roll based on schools current usage)

    . Trash receptacle - freestanding 18 gallon capacity stainless steel

    . In adult women's restrooms provide sanitary napkin disposal receptacles at each water closet or shared between two water closets
  - In existing schools verify accessories with school staff. (Paper product dispensers are to match products already in use by the school.)
  - Consider Dyson Airblade hand dryer in lieu of paper towel dispensers.

- **Student Restrooms**
  - First through 5th grades - boys' and girls' restrooms adjacent to each other.
  - Lavatories and mirrors directly accessible from the hallway but shielded from direct view and physically separated from the toilet facilities to allow efficient supervision.
  - "Airport style" entrances (no doors or gates) at all student multi-fixture restrooms. The design must provide visual blocking of stalls and urinals while maintaining open access.
  - Wall-hung sinks with carriers only; no counters.

- **Kindergarten and Pre-kindergarten Restrooms**
  - Kindergarten – the rim of the toilets should be 14" above finish floor. Pre-kindergarten toilets should be smaller.
  - Wall-hung sinks with carriers only; no counters.

- **Staff Restrooms**
  - Staff restrooms to be distributed near staff activities.
  - As more women than men teach at the elementary level, provide plumbing fixture counts accordingly (female fixtures more than code minimum).
  - Automatic sensors on lavatory faucets to be hard wired.
  - Low-flow urinals.

- Water closets with manual dual flush.

Standard 3.5.5 Outside Gathering Areas

Provide exterior space central to school that permits social gathering of students during leisure time and for group presentations (e.g. commons area, amphitheater).

Appendix A: Abbreviations and Definitions

The following list identifies abbreviations or unique terms used in this document.

- ADA - American with Disabilities Act
- a.f.f. - Above finished floor
- ANSI - American National Standards Institute
- APS - Albuquerque Public Schools
- ASHRAE - American Society of Heating, Refrigerating, and Air-conditioning Engineers. Key for ASHRAE Standard 62 for ventilation
- ASTM - American Society for Testing and Materials
- BC - Building code
- BIP - Severely behavior disordered student
- C Level SPED - Designation of special education level allowing 15:1 PTR
- CMU - Concrete masonry unit
- Db - decibels
- DPM - Development Process Manual
- CR - Classroom
- Certified Wood - Wood based materials used in building construction that are supplied from sources that comply with sustainable, forestry practices, protecting trees, wildlife habitat, streams, and soil as determined by the Forest Stewardship Council.
- D - Designation of special education level allowing 8:1 PTR
- DD - Designation of special education level allowing 4:1 PTR
- Energy Management System - A control system capable of monitoring environmental and system loads and adjusting HVAC operations accordingly in order to conserve energy while maintaining comfort
- FD+C - APS Department of Facilities Design and Construction
- EB - Refers to existing buildings
- FF&E - Fixtures, furniture, and equipment
- FE - Fire Extinguisher
- FRP - Fiberglass reinforced panels
- GFI - Outlet access
- gsf - Gross square feet; all area in a building measured from the outside of the wall plane
- HW - Hot water
- HM - Hollow metal
- HVAC - Heating, ventilation, and air-conditioning
- IAQ - Indoor air quality
- IBC - International Building Code (new construction)
- IDF - Intermediate distribution frame for technology system
- IEBC - International Existing Building Code (remodeling)
- IEEE - Institute of Electrical and Electronics Engineers
- IEP - Individual education plan
- IMC - International Mechanical Code
- IPC - International Plumbing Code
- IPEMA - International Play Equipment Manufacturers Association

- ISP - Intensive support program
- LEED® - Leadership in Energy and Environmental Design
- Ln.ft. - Linear feet
- M&O - Maintenance and Operations at APS
- MDF - Main distribution frame for technology system
- nasf - Net assignable square feet; the area assigned to a function not including walls, corridors, restrooms, custodial space, mechanical, and electrical rooms
- NC - Noise criteria
- NFPA - National Fire Protection Agency
- NRC - Noise reduction coefficient
- Off gas - A process of evaporation or chemical decomposition through which vapors are released from materials
- OT - Occupational Therapy
- PT - Physical Therapy
- PSCOC - New Mexico Public School Capital Outlay Council
- PSFA - Public School Facility Authority
- PTR - Pupil Teacher Ratio
- Rainwater Harvesting - The practice of collecting, storing, and using precipitation from a catchments area as a roof
- ROW - Right of way
- RR - Restroom
- sf - Square feet often referred to as nasf or net assignable square feet
- SLP - Speech and language pathologist
- STC - Sound Transmission Class
- Sustainable - A resource or system that meets present needs without compromising those of future generations
- Tare/TARE - The area remaining in a building that is not assigned including walls, restrooms, halls, mechanical / electrical rooms, custodial spaces, etc.
- TDD - Telecommunication device for the deaf
- VCT - Vinyl composition tile
- VOIP - Voice Over Internet Protocol
- WAN - Wireless Access Network

Appendix B: Needs Analysis for Standards-based Elementary School

The following charts apply the proposed policies and standards to a standards-based elementary school designed for 650 students (with expansion for short periods to 1000).

Standards-based ES (650 students)

	NASF	GSF
Instructional Program Spaces	36,810	52,590
Administration Areas	4,180	5,970
Gymnasium and Cafeteria	9,410	13,440
Instructional Support	4,850	6,930
	55,250	78,930

Preschool	0	Pre-K DD	6
Kindergarten	Grades 1/2/3	Grades 4/5	# Students K-5
115	305	230	650
Assumes Full Inclusion SPED, if not add to capacity			25
Staff	Visitors	Students	Parking
80	15	0	
120	1.5 times staff for parking		
Total Classroom Equivalencies		41	

Standards-based ES (650 students)

1. Site Requirements	#	(GSF)	Acres	
Permanent Buildings allowing for build-out *	1	78,930	1.81	
Visitor / Staff / Parking = 1.5 times staff #	135	400	1.24	
Buses at bus drop-off	14	1,344	0.43	
Cars at drop-off / pick-up area for students	33	400	0.30	
ES Play Field	1	36,000	0.83	
Playground for Pre-K / Kindergarten	115	115	0.30	Pre-K assumed different time so shares Kinder play area
Playground 1st -3rd	305	100	0.70	includes hardsurface area
Playground 4th - 5th	230	100	0.53	includes hardsurface area
Basketball court	1	6,600	0.15	
Shade / Performance Area (shelter + seating)	1	12,100	0.28	
Single Portables in portable park	8	1,806	0.33	
Double Portables in high growth surge area	6	3,182	0.44	
* Assumes single story construction		Net	7.34	
** TARE = roads, landscaping, unuseable area	TARE** at	25%	2.45	0.25 Change to 0.35 if difficult site or a lot of portables
	Sub-total school area needed		9.79	

Standards-based ES (650 students)

Notes

	Room Description	# of Spaces	# of Students	Area/ Person	Space Criteria	Total Area	TOTAL ASSIGNABLE	Sub-total	CR Equivalencies
	Instructional Program Spaces								
Expect either K-DD or a Pre-school program	Pre-kindergarten DD with CR/Storage/RR	1	6		900	900	900		1
	Preschool, Child Find, Even Start, CDC	0	0		1,200	1,200	0		0
	Kindergarten with CR/Storage/Kitchen/RR	6	115		1,200	1,200	7,200		6
	Classrooms for grades 1st - 3rd	14	305		840	840	11,760		14
	Classrooms for grades 4th - 5th	10	230		840	840	8,400		10
	Student restrooms in TARE							28,260	
	Special Education	2			840	840	1,680		2
	Time out space in one SPED CR	1			40	40	40		
	Head Special Education teacher classroom	1			420	420	420		0.5
	Special Education IEP space	1	16	15		240	240		0.25
	Federal categorical / special programs	2			840	840	1,680		2
	Special Education resource specialist	1			420	420	420		0.5
	Occupational Therapy (OT)	1			240	240	240		0.25
	Physical Therapy (PT)	1			600	600	600		0.75
	RR for PT functions	1			50	50	50		
	Storage for PT	1			140	140	140		
								5,510	
	Computer Lab	1	30	30		900	900		1
	Storage / repair	1			120	120	120		
	MDF support	1			140	140	140		
	IDF support (distributed in building)	2			50	50	100		
								1,260	
	Fine Arts Classroom	1			840	840	840		1
	Fine arts storage with kiln area	1			200	200	200		
								1,040	
	Instructional Coach	1			240	240	240		0.25
	Evaluation Testing Room	1			100	100	100		
	Speech and Language Pathologists	2			200	200	400		0.5
								740	
					NET ASSIGNABLE		36,810	NASF	
					Contingency at 0%		0		
	TARE = the % value divided into the Net Assignable (NASF/0.70 - NASF)				Efficiency at 70%		15,780	TARE	
					GROSS SQUARE FEET		52,590		40

Notes	Room Description	# of Spaces	# of Persons	Area/ Person	Space Criteria	Total Area	TOTAL Assignable	Sub-total	CR Equivalencies
	Administration Areas								
	Principal	1	6	15	150	240	240		
	Assistant principal	1	4	15	100	160	160		
	Conference	1	16	15		240	240		
								640	
	Waiting / registration area	1	10	25		250	250		
	Receptionist / clerk	1			150	150	150		
	Secretary	1			100	100	100		
	File Room Storage	1			200	200	200		
	Mail area (could be in lounge)	1			40	40	40		
	Work area	1			60	60	60		
								800	
	Teachers' Lounge	1	30	25	100	850	850		
	Workroom	1	3	25	600	675	675		
	Storage	1			80	80	80		
	Staff restrooms in TARE					0	0		
								1,605	
650-800 sf	Nurse - open area and first aid	1	6	15	160	250	250		
	Office	1	2	15	100	130	130		
	Isolation	1	3	60		180	180		
	Storage	1			45	45	45		
	Restroom with changing table/shower	1			80	80	80		
								685	
	Itinerant services office(s) - psychologist / social worker	1	4	15	90	150	150		
	Counselor	1	6	15	210	300	300		
								450	
					NET ASSIGNABLE		4,180	NASF	
					Contingency at 0%		0		
	TARE = the % value divided into the Net Assignable (NASF/0.70 - NASF)				Efficiency at 70%		1,790	TARE	
					GROSS SQUARE FEET		5,970		0

Notes	Room Description	# of Spaces	# of Persons	Area/ Person	Space Criteria	Total Area	TOTAL ASSIGNABLE	Sub-total	CR Equivalencies
	Gymnasium and Cafeteria								
	Mini-gym	1			2,900	2,900	2,900		1
	Office (PE and APE staff)	1			180	180	180		
	Storage	1			240	240	240		
	After school program office / storage	1			150	150	150		
	Restrooms for gym in TARE							3,710	
	Cafeteria	1	200	15		3,000	3,000		
	Chair storage	1			400	400	400		
	Platform	1			400	400	400		
	Platform storage	1			200	200	200		
	Kitchen (all sub-spaces)	1			1,700	1,700	1,700		
								5,700	
	Consider design that abuts gym and cafeteria to allow for moveable folding wall, opening the spaces into each other for assemblies.					0	0		
								0	
					NET ASSIGNABLE		9,410	NASF	
					Contingency at 0%		0		
	TARE = the % value divided into the Net Assignable (NASF/0.70 - NASF)				Efficiency at 70%		4,030	TARE	
					GROSS SQUARE FEET		13,440		1

Notes	Room Description	# of Spaces	# of Persons	Area/ Person	Space Criteria	Total Area	TOTAL ASSIGNABLE	Sub-total	CR Equivalencies
	Instructional Support								
About 6 SF / students	Media Center					0	0		
	Main area and circulation	1	50	25	840	2,090	2,090		
	Computer research	1	16	30		480	480		
	Reading area	1	30	15		450	450		
	Workroom	1			150	150	150		
	Office	1			100	100	100		
	Storage	1			200	200	200		
	Hub room	1			100	100	100		
								3,570	
	Storage					0	0		
	Main custodial office / storage	1			80	80	80		
	Custodial closets in TARE					0	0		
	General storage	1			200	200	200		
	Teaching Materials Storage Room	1			600	600	600		
	Parent Room / School Store	1			400	400	400		
	Recycle area is covered and secured	0			80	80	0		
	Salvage area is covered fenced area	0			400	400	0	1,280	
					NET ASSIGNABLE		4,850	NASF	
					Contingency at 0%		0		
	TARE = the % value divided into the Net Assignable (NASF/0.70 - NASF)				Efficiency at 70%		2,080	TARE	
					GROSS SQUARE FEET		6,930		0

C.1 Health Room Requirements

The health room must be designed so that it will be appropriate for the particular school population, meet ADA requirements, and be ***accessible*** to all students, parents, and staff. The nurse's office ***must ensure privacy*** for conferences with students, parents, and school personnel and be as soundproof as possible to facilitate audiometric testing. Each health room will have a locked storage space for supplies and equipment, and a restroom meeting ADA requirements equipped with hot and cold water and toilet facilities. (Based on NMSHM – Section I (05/1999) and NMSHM – Section I (08/2003) I-8)

Facilities

- Sink with hot and cold running water.
- Counter space.
- Adequate storage.
- Double-Locked (narcotic grade) cabinet for medications **only.**
- Adequate ventilation system.
- Bathroom meeting ADA standards with ventilation (including sink) and room to maneuver a Lift (e.g. Hoyer or Partner lift).
- Adequate area (minimum 10 feet deep) for vision screening.
- Two (2) separate rooms - one for school nurse's office and one for the health room with two (2) computer drops and two (2) phone lines (one in each room).
- The health room or cot room must be able to be visualized from the nurse's office (window or door) while still ensuring privacy.

Equipment

Wheelchair
Audiometer*
Blackboard / whiteboard**
Bulletin board**
Refrigerator**
Computers
Printer
Paper towel dispenser**
Scales
CPR mask
Soap dispenser**
Paper cup dispenser
Stethoscopes*
Cot
Icemaker**
Phone (private)
Clock**
Lockable desk
Vision screening equipment*
Chairs
Filing cabinet
Fireproof locking cabinet for student files
Otoscope*
Blood pressure cuffs* (infant, child, adult, obese)
Plastic-lined trash vans
Sharps container*
Access to references and reference books including School Health Manual (available online only)

**** Supplied by Nursing Services and remain with the Nurse.***

***** Contractor provided and installed.***

All other items (equipment and suggested first aid supplies) remain at the school and are supplied by the school.

Suggested First-Aid Supplies

Cotton balls
Eye glass repair kit
Plastic bags
Eye wash
Masking tape
Flashlight
Thermometer (Oral)
Kleenex
Tweezers
Cotton applicators
Triangle bandages (37" x 37")
Vaseline
Paper cups
Mild liquid soap
Spray bottle
Sanitary napkins
Ice trays
Large wash basin
Disposable linens
Adhesive tape
Un-medicated Band-Aids
Chlorine bleach or antiviral solution
Sterile gauze squares
Roller bandages – (1", 2", 3", two each)
Ice bag or cold packs
Thermometer covers
Portable emergency kit
Vision charts
Peroxide (not for use on wounds)
Washable blankets
Splints
Table salt
Paper towels
Blades
Safety pins
Scissors
Disposable latex gloves
Alcohol (not for use on wounds)

C.2 Food Service Guidelines

To determine likely levels of meals to be served, canvas the surrounding area schools.

Guide to Space Planning of a School Foodservice Facility

Are	Meals			
	Up to 350	315-500	501-700	701-1000
Receiving area				
Loading	60	80	100	100
Receiving area inside building	48	48	60	80
Storage				
Dry storage (1/3-1/2 sq ft per meal)	175	250	325	450
Nonfood	30	50	70	90
Office space	40-48	48	60	80
Lockers and toilet for employees	45	60	75	85
Kitchen				
Preparation including refrigeration (1.1-1.5 sq ft per meal)	500	650	800	980
Serving	200	300	400	600
Dishwashing	150	150	180	210
Maintenance area				
Mop area	25	25	30	30
Garbage area	30	48	60	75
Total kitchen and serving areas	1303	1709	2160	2780
Dining area (based on two				
Elementary (10 sq ft/meal	1750	1750-2500	2500-3500	3500-5000
Secondary (12 sq ft/meal)	2100	2100-3000	3000-4200	4200-6000
Total dining, kitchen, and serving				
Elementary	3053	3459-4209	4635-5635	6280-7780
Secondar	4303	3809-4709	5135-6335	6980-8780

From: *School Food Service Management for the 21st Century* Dorothy Pannell-Martin 5th ed. 1999

C.3 Children's Accessible Elements Table

CHILDREN'S ACCESSIBLE ELEMENTS TABLE

Element	Details	Ages 3 and 4 Pre-K	Ages 5 through 8 K through 2nd grade	Ages 9 through 12 3rd through 6th grade
Ramps See NMBC 2006 section E112.3 *See ANSI 405*	Slope	1 :16	1 :16	1 :16
	Width for single wheelchair	44" min (118 mm)	44" min (118 mm)	44" min (118 mm)
	Width for two wheelchairs	88'' min. (2236 mm)	88'' min. (2236 mm)	88'' min. (2236 mm)
Drinking fountains and water coolers *See ANSI 602*	Spout height to outlet *See ANSI 602.2 Exception 2*	30" max. (760 mm)	30" max. (760 mm)	30" max. (760 mm)
Element	**Details**	**Ages 3 and 4 Pre-K**	**Ages 5 through 8 K through 2nd grade**	**Ages 9 through 12 3rd through 6th grade**
Water closets for Toilet Rooms, Wheelchair Stalls, and Ambulatory Stalls *See ANSI 604.10 and 604.1*	Centerline *See ANSI 604.10.2*	12" max. (305 mm)	12"-15" (305-380 mm)	15"-18" (380-455 mm)
	Clearance *See ANSI 604.10.3 and 604.3*	60" (1525 mm) wide by 56" (1420 mm) min. deep	60" (1525 mm) wide by 56" (1420 mm) min. deep	60" (1525 mm) wide by 56" (1420 mm) min. deep
	Toilet seat height *See ANSI 604.10.4*	11"-12" (280-305 mm)	12"-15" (305-380 mm)	15"-17" (380-430 mm)
	Horizontal grab bar height to centerline *See ANSI 604.10.5, 604.5 and 609.4*	18"-20" (455-510 mm)	20"-25" (510-635 mm)	25"-27" (635-685 mm)
	Rear grab bar may be split or shifted *ANSI 604.5.2 Exception 3*	18"-20" (455-510 mm)	20"-25" (510-635 mm)	25"-27" (635-685 mm)
	Vertical grab bar 18" (455mm) long See NMBC 2006 section E112.7	Bottom is 21" (533 mm) min. - 30" (760 mm) max.	Bottom is 21" (533 mm) min. - 30" (760 mm) max. above the floor	Bottom is 21" (533 mm) min. - 30" (760 mm) max. above the floor

	See ANSI 604.10.5 and 604.5.1	above the floor		
		Centerline is 34 inches (865 mm) max. - 36" (915 mm) max. from the rear wall	Centerline is 34 inches (865 mm) max. - 36" (915 mm) max. from the rear wall	Centerline is 34 inches (865 mm) max. - 36" (915 mm) max. from the rear wall
	Flush control *See ANSI 604.10.6*	36" max. (915 mm)	36" max. (915 mm)	36" max. (915 mm)
Wheelchair water closet compartments *See ANSI 604.10.8*	Size *See ANSI 604.8.2*	60" (1525 mm) min. wide by 59" (1500 mm) deep min.	60" (1525 mm) min. wide by 59" (1500 mm) deep min.	60" (1525 mm) min. wide by 59" (1500 mm) deep min.
	Toe clearance beneath front partition and one side partition [2] *See ANSI 604.8.*	12" (305 mm) min.	12" (305 mm) min.	12" (305 mm) min.
Ambulatory water closet compartments See NMBC 2006 section E112.5 *See ANSI 604.10.8*	Size *See ANSI 604.9.2*	36" (915 mm) wide by 60" (1525 mm) long	36" (915 mm) wide by 60" (1525 mm) long	36" (915 mm) wide by 60" (1525 mm) long
	Horizontal parallel grab bars on both sidewalls 42" (1065 mm) long	18"-20" (455-510 mm)	20"-25" (510-635 mm)	25"-27" (635-685 mm)
Urinals See NMBC 2006 section E112.6 *See ANSI 605*	Top of rim	14" max. (355 mm)	14" max. (355 mm)	14" max. (355 mm)
Element	**Details**	**Ages 3 and 4 Pre-K**	**Ages 5 through 8 K through 2nd grade**	**Ages 9 through 12 3rd through 6th grade**
Lavatories and sinks *See ANSI 606.2*	Sink rim *See ANSI 606.2 Exception 2 and 3*	22" max. (559 mm)	31" max. (797 mm)	31" max. (797 mm)
	Knee clearance *See ANSI 606.2 Exception 2 and 3*	none required with parallel approach	24" min. (610 mm)	24" min. (610 mm)
Mirrors See NMBC 2006 section E112.4	Full length mirror 60" (1525 mm) min. tall	Bottom of reflecting surface 12" (455 mm) max. above floor	Bottom of reflecting surface 12" (455 mm) max. above floor	Bottom of reflecting surface 12" (455 mm) max. above floor

	Mirrors over sinks	Bottom of reflecting surface 28" (710 mm) max. above floor	Bottom of reflecting surface 37" (940 mm) max. above floor	Bottom of reflecting surface 37" (940 mm) max. above floor
Dining surfaces and work surfaces *See ANSI 902.4*	Tops of tables and counters	26" (660 mm) min. 30" (760 mm) max.	26" (660 mm) min. 30" (760 mm) max.	26" (660 mm) min. 30" (760 mm) max.
Benches See NMBC 2006 section E112.8 *See ANSI 903*	Top of seat	11" (280 mm) min. 12" (305 mm) max.	11" (280 mm) min. 17" (430 mm) max.	11" (280 mm) min. 17" (430 mm) max.
Tray slides See NMBC 2006 section E112.9	Top of tray slide	28" (710 mm) min. 30" (762 mm) max.	28" (710 mm) min. 30" (762 mm) max.	28" (710 mm) min. 30" (762 mm) max.
Storage See NMBC 2006 section E112.10 *See ANSI 905*	Frontal approach height	20"-36" (510-915 mm)	20"-40" (510-1015 mm)	20"-44" (510-1120 mm)
	Side approach height	20"-36" (510-915 mm)	40" max. (1015 mm)	44" max. (1120 mm)

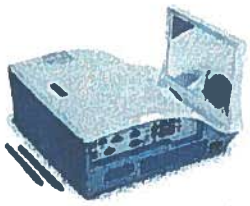
[2] In a compartment greater than 65" (1650 mm) in depth, toe clearance at the front partition is not required.

C.4 Interactive Projectors

Albuquerque Public Schools is currently providing the "Interactive Projector" at all schools. The design team will be required to provide the necessary electrical outlets and conduit for all other required connections to appropriate locations. APS on-call contractors will provide all other services. Refer to the following information.

December
2013

Albuquerque Public Schools
Interactive Projector



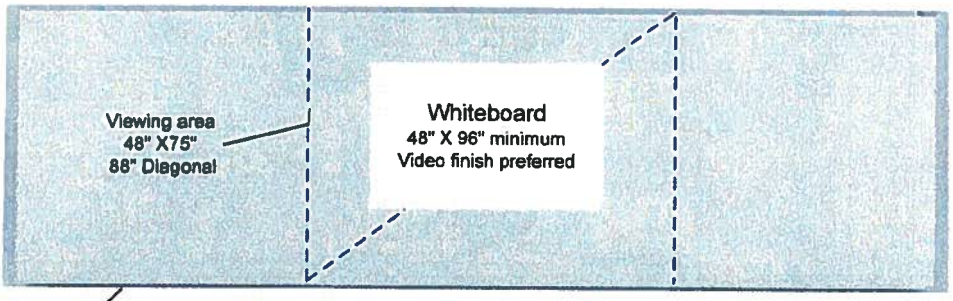
ultra short
throw interactive projector

Wall Mount

Ultra Short throw Projector Mount

Audio / Video/ Data
Cable pass thru
Low Voltage Box

120 Volt
AC outlet



Bottom of Board
Elementary –29"
Mid School 29 "- 34"
High School 29" - 37"

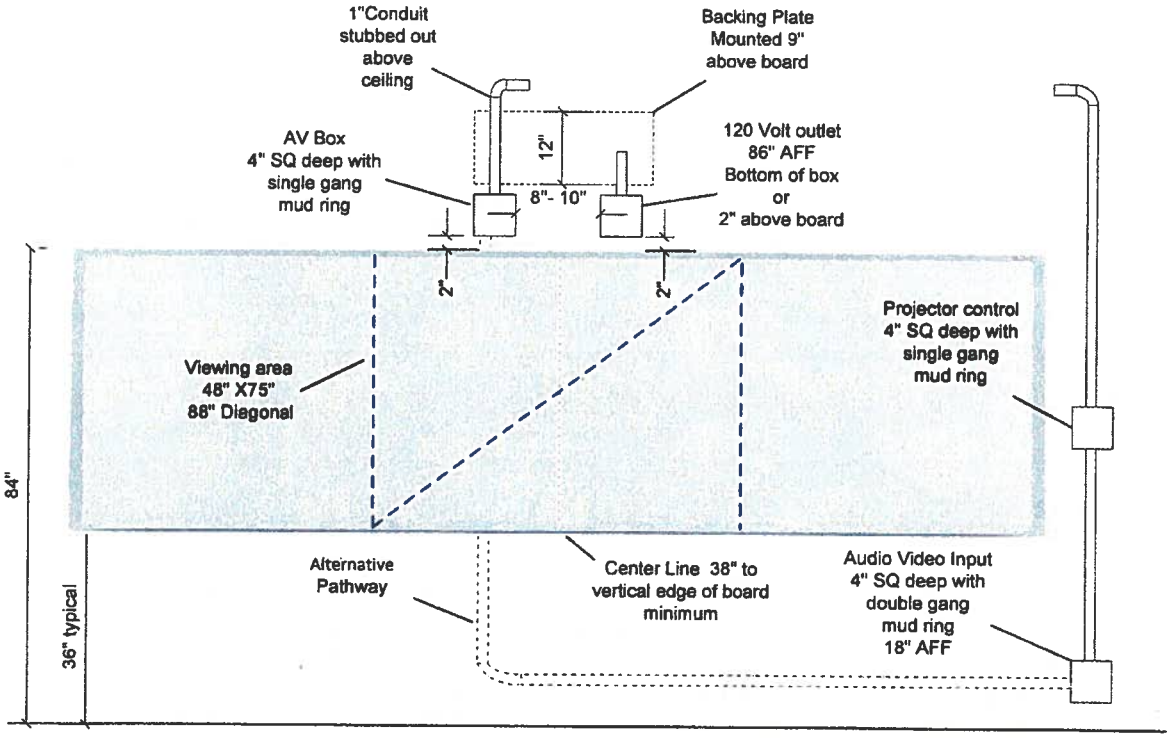
Data
Outlet

Audio / Video Faceplate & Box
Mounted at Teacher's
Work Station

December
2013

Albuquerque Public Schools
Interactive Projector
Mounting

Audio / Video
Pathways



C.5 Elementary School Ceramic Kiln

Skutt KM1227-3, Ultimate Low Production Kiln with the following options: "Envirovent", Furniture Kit and Easy View. Refer to the following information.

Appendix C.5 Elementary School Ceramics Kiln Specifications

Approved Kiln Manufacturer (or Approved Equal)

Skutt Ceramic Products
Address: 6441 SE Johnson Creek Blvd., Portland, OR 97206-9552
Phone: 503-774-6000 / Fax: 503-774-7833
Email: skutt@skutt.com / Web site: www.skutt.com

Model Numbers of Unit and Required Accessories

- **SKKM1218-3-208-3:** Electric Ceramics Kiln, KM1218-3,208V 3 Phase

The Skutt KM1218-3 comes in four electrical power (voltage and phase) configuration options; and you need to specify the one that matches the power being provided at your school. (The specification included for the 208v – 3 phase power exists at the Alamosa ES campus.)

- **SKF12183:** Interior Kiln Furniture for 1218-3 Kiln

- **SKEnvironVent2**: Vent – EnvironVent2 (direct exhaust to exterior of building from bottom of kiln)

- **SKEnvironLink#2480:** EnvironLink Electrical Switching Device (to automatically turn on one or more exhaust vents when kiln is operating)

- **Installation:** Installation and testing of kiln at site

Other Important Design & Code Information

Kiln Vent: The kiln should have a motorized vent from the bottom of the kiln that is exhausted through a vent similar to that used for a residential clothes dryer (EnvironVent2 listed above). Even though the kiln interior is extremely hot, this vent mixes this air with such a large proportion of ambient room air that no special vent construction is required through the wall.

Room Exhaust: The room should have an exhaust fan to remove the heat generated from the kiln, but this does not need to be in a special hood or have special fire suppression equipment. It was confirmed with John Sheets at City Plan Check that a hood is NOT needed, since there is an exception in Chapter 9 if the UMC for electric kilns that are equipped with the vent blowers (that will be specified). This exhaust, in conjunction with the HVAC system, must be able to maintain the room temperature below 105 degrees F, which is the maximum temperature the electronic controller can tolerate. The EnvironLink device (see above) will automatically turn on the EnvironVent on the bottom of the kiln when the kiln is running. The room exhaust fan should be on a line voltage thermostat to prevent the room from ever getting hot enough to trigger the fire sprinkler system. The room fan SHOULD NOT be controlled by a manual switch, because forgetting to turn it on would run the risk of setting off the fire sprinklers (as has happened at two Rio Rancho schools).

Fire Sprinklers: Ceiling mounted fire sprinkler heads should not be located directly above the kiln and should have the highest temperature setting allowable for the building type.

Clearance: The kiln must be a minimum of 18" from any wall or combustible material. The approximate diameter of the kiln is 34" for planning purposes.

Wall & Floor Coverings: Flooring must be non-combustible (such as concrete or ceramic tile). The bare concrete floor slab is the best as it avoids the need to build up the floor and create a step than can be a hazardous obstruction. The non-combustible flooring must extend 12" beyond the outer perimeter of the kiln.

Created by David Ritchey, APS FD+C
November 2009

Skutt KM1227-3 Electric Kiln

ULTIMATE LOW PRODUCTION KILN

This is the perfect automatic electric kiln for high production, with nearly 10 cubic feet of loading capacity. For those who fire the same program for many loads, you need simply to load and start one of your six stored programs, and go back to work on your next batch. The KilnMaster will handle all the firing details with truly superhuman precision, ensuring that you will get superb consistency, load after load. If your 1227-3 is fitted with a Skutt EnviroVent, you can plug all the peepholes, program a Delay to start your firing at night, and be there for shut-off and unloading the next morning. You get more sleep, and much more production. Available in three phase models.

Electrical Requirements

240 Volts 48 Amps 11520 Watts
208 Volts 48 Amps 9980 Watts
Copper Wire Size: 6
Breaker Size: 60
NEMA Receptacle Configuration: 6-50

Available in Single Phase and 3 Phase

BUY NOW !

How Big Is That Kiln?
9.9 Cu. Ft.

Note that a larger diameter kiln holds more bowls per cubic foot due to the larger stacking surface on each shelf.

NEW Now all 10 and 12-sided KilnMaster Kilns come standard with a Skutt Lid Lifter **Details ::**

PRODUCT SPECS | CHAMBER CAPACITY | TOP ACCESSORIES | UPGRADES | WHAT'S INCLUDED | BUY NOW

KM1227-3 Top Accessories

KM1227-3

AVAILABLE ACCESSORIES

ENVIROVENT

THE ENVIROVENT 2 IS A DOWNDRAFT VENTILATION SYSTEM DESIGNED TO EXTRACT FUMES FROM YOUR ELECTRIC KILN AND VENT THEM OUTDOORS BEFORE THEY HAVE A CHANCE TO ENTER THE ROOM.

FURNITURE KIT

TRIANGULAR POSTS AND SHELVES A FURNITURE KIT IS USED TO CREATE SHELF LAYERS INSIDE YOUR KILN. ALTHOUGH THE CONTENTS OF SHELF KITS VARY DEPENDING ON THE KILN MODEL ALL SHELF KITS WILL CONTAIN A SELECTION OF SHELVES AND 1 OR MORE POST ASSORTMENT KITS.

KILN STAND

ROLLING KILN STANDS ARE NOW AVAILABLE FOR YOUR SKUTT KILN. THESE STANDS ARE MADE SPECIFICALLY TO FIT EACH MODEL AND COME FULLY ASSEMBLED. CONSTRUCTED OF HEAVY GAUGE, WELDED, SQUARE METAL TUBING, THESE THINGS ARE TOUGH AND STABLE.

EASY VIEW

THE EASY VIEW IS A NEW OPTIONAL FEATURE THAT MAKES IT EASIER TO SEE AND PROGRAM YOUR CONTROLLER BY ANGLING THE TOUCHPAD UP.

CIS

THIS SYSTEM ALLOWS YOU TO PROGRAM, MONITOR AND GRAPH THE FIRINGS OF UP TO 10 KILNMASTER CONTROLL-ED KILNS USING A PC. INCLUDES A CD WITH THE SOFTWARE AND ALL OF THE NECESSARY HARD-WARE TO CONNECT YOUR COMPUTER TO THE KM CONTROLLER.

ENVIROLINK

ENVIROVENT 2 EXTENSION KIT

[+] Site Feedback

Appendix D: Crosswalk between PSCOC and APS Standards

Crosswalk: State Standards / Evaluation Guidelines

					Support Calcs	State Notes	H/L	Evaluation Guideline Notes	APS Standards
							H/L	H=Higher than standard; L= Below standard	
					Support Calcs	State Notes		Evaluation Guideline Notes	
								Yes means guidelines deals with standard	APS Standards
III.	General Requirements (6.27.30.8)								
	These standards are intended to supplement, but not to supersede or omit, compliance with applicable Building, Fire, Life Safety, Health or Accessibility Code or any other code, regulation, law or standard that has been adopted by a governmental agency having jurisdiction at the site of the school. Existing school buildings are not required to comply with current requirements for new buildings unless this compliance is specifically mandated by law or by the code, regulation or standard of the jurisdiction where the building is located. Design of a facility shall include: ease of maintenance, centralized common use areas; natural light; ease of supervision and security; and site specific covered (protected) circulation if needed.							Add ..."ease of supervision and security; and site-specific covered (protected) circulation if needed."	2.00
	A. Building Condition								
		A school facility must be safe and capable of being maintained.						Yes	
		1. Structural							
			A school facility must be structurally sound. A school facility shall be considered structurally sound and safe if the building presents no imminent danger or major visible signs of decay or distress.					Add wording relating to "...presents no imminent danger or major visible signs of decay or distress."	2.1.1
		2. Exterior Envelope							2.1.1
			An exterior envelope is safe and capable of being maintained if:					Yes	
				a. walls and roof are weather tight under normal conditions with routine upkeep; and				Yes	
				b. doors and windows are weather tight under normal conditions with routine upkeep and the building structural systems support the loads imposed on them.				Yes. Implied structural load note. Issue is how to know "adequate."	
		3. Interior Surfaces							2.1.2
			An interior surface is safe and capable of being maintained if it is:					Yes	
				a. structurally sound;				Yes	
				b. capable of supporting a finish; and				Yes	
				c. capable of continuing in its intended use, with normal maintenance and repair.				Add	
		4. Interior Finishes							2.1.2
			An interior finish is safe and capable of being maintained if it is:					Yes	
				a. free of exposed lead paint;				Add	
				b. free of friable asbestos; and				Add	
				c. capable of continuing in its intended use with normal maintenance and repair.				Add	

Appendix D: Crosswalk between PSCOC and APS Standards

Crosswalk: State Standards / Evaluation Guidelines

	Support Calcs	State Notes	H/L	H=Higher than standard; L= Below standard Evaluation Guideline Notes Yes means guidelines deals with standard	APS Standards
B. Building Systems					
Building Systems in a school facility must be in working order and capable of being properly maintained. Building systems include roof, plumbing, telephone, electrical and heating and cooling systems as well as fire alarm, 2-way internal communication, appropriate technological infrastructure and security systems.				Yes	
1. General					
A building system shall be considered to be in working order and capable of being maintained if all of the following apply.					2.1.4 2.1.6
a. The system is capable of being operated as intended and maintained;				Yes	
b. Newly manufactured or refurbished replacement parts are available;				Add	
c. The system is capable of supporting the adequacy standards established in this rule;				Add	
d. Components of the system present no imminent danger of personal injury.				Add	
2. Plumbing Fixtures					2.1.5
Building Code: Fixtures shall include, but are not limited to: water closets, urinals, lavatories and drinking fountains. In all new construction, restrooms shall be available so student will not have to exit the building. In existing facilities, restrooms shall be available for classrooms for grades 5 and below, and special needs classrooms, without having to exit the building, wherever possible with reasonable cost constraints.				Implied but inside stipulation for only new construction. Add for existing K-5 and special needs classrooms...wherever possible with reasonable cost constraints.	
3. Fire alarm					
A school facility shall have a fire alarm system as required by applicable state fire codes.				Yes	
4. 2-way Communication System					
A school facility shall have a 2-way internal communication system between a central location and each classroom, library, physical education space and the cafeteria.				Yes as PA or specialized telephone system.	
IV. Classification of Public Schools (6.27.30.9)					
Public Schools shall be classified as defined in Section 22-1-3 NMSA 1978. The typical size of each classification is:					
A. Elementary School					
Generally 200 student and generally ranges from 25 - 1,000	25-1,000			300 to 750 APS allows 1,000+ but works to reduce	1.2
B. Middle School/Junior High School					
Generally 400 student and generally ranges from 50 - 1,000	50 to 1,000			600 to 1,000	
C. High School					
Generally 1,200 students and generally ranges from 50 - 2,000	50 to 2,000			1,500 to 2.200	

Appendix D: Crosswalk between PSCOC and APS Standards

Crosswalk: State Standards / Evaluation Guidelines

					H/L	H=Higher than standard; L= Below standard	
				Support Calcs	State Notes		Evaluation Guideline Notes	
							Yes means guidelines deals with standard	APS Standards
V.	School Site (6.27.30.10)							
	A school site shall be of sufficient size to accommodate safe access, parking, drainage and security and be of an area large enough to accommodate a school facility that complies with the net classroom square footage requirements established for the number of students at that facility. Additionally, the site shall be provided with an adequate source of water and appropriate means of effluent disposal.						Yes	1.3, 1.6
	A. Safe Access							
		A school site shall include a student drop-off area or pedestrian pathway that allow students to enter the school facility without crossing vehicular traffic or allow students to use a designated crosswalk if buses are used to transport students. A student drop-off area must be configured to accommodate bus width and turning requirements. For K-5 students, if buses are used to transport students, the site shall include a separate bus drop-off area, as well as a separate parent drop-off area.					Yes	1.4, 3.2.3
	B. Parking							
		A school site shall include a maintainable surfaced area that is stable, firm and slip resistant and is large enough to accommodate 1.5 parking spaces per staff FTE and one student space per four high school students. If this standard is not met, alternative parking may be approved after the sufficiency of parking at the site is reviewed by the council using the following criteria.			1.5 per staff (FTE) with 1/4		ES - 1 per staff plus 10 MS - 1 per staff pus 10 HS - 1 per staff plus 1/4 of students, plus 30	1.4.4
			1. availability of street parking around the school				Add	
			2. availability of any nearby parking lots				Add	
			3. availability of public transit				Add	
			4. number of staff who drive to work on a daily basis, and				Add	
			5. average number of visitors on a daily basis				Add	
	C. Drainage							
		A school site shall be configured such that runoff does not undermine the structural integrity of the school buildings located on the site or create flooding, ponding or erosion resulting in a threat to health, safety or welfare.					Yes	
	D. Security							
		A school site shall include a fenced or walled play/physical education area for students in programs for preschool children with disabilities and kindergarten and students in grades 1 through 6. This standard is met if the entire school is fenced or walled. If this standard is not met, alternative security may be approved after the sufficiency of security at the site is reviewed by the council using the following criteria.					Fencing inferred but only mentioned for kindergarten and tot lot play areas.	1.8
			1. amount of vehicular traffic near the school site,				Add	
			2. existence of hazardous or natural barriers on or near the school site,				Add	
			3. amount of animal nuisance or unique conditions near the school site,				Add. We consider bad zoning, neighbors also.	

Appendix D: Crosswalk between PSCOC and APS Standards

Crosswalk: State Standards / Evaluation Guidelines

						H/L	H=Higher than standard; L= Below standard	
				Support Calcs	State Notes		Evaluation Guideline Notes	
							Yes means guidelines deals with standard	APS Standards
			4. visibility of the ply/physical education are, and				yes	
			5. site lighting, as required to meet safe and normal access conditions.				yes	
VI.	Site Recreation and Outdoor Physical Education (6.27.30.11)							
		A school facility shall have area, space and fixtures, in accordance with the standard equipment necessary to meet the educational requirements of the state board of education for physical education activity.					Yes	
		A. Elementary School						
		A play area and playground adjacent to the school shall be provided for physical education activities. Equipment shall be based on the design capacity of the school.				H	Yes	1.7
		B. Middle School/Junior High School						
		A paved multipurpose ply surface and a playing field for physical education activities shall be provided. Playing fields and equipment shall be based on the design capacity of the school.				H	Yes	
		C. High Schools						
		A paved multipurpose play surface and a playing field for physical education activities shall be provided. Playing fields and equipment shall be based on the design capacity of the school.				H	Yes	
		D. Combination Schools						
		A combination school shall provide the elements of the grades served by subsections A, B and C above without duplication but shall meet the higher standards.				H	Yes	
VII.	Academic Classroom Space (6.27.30.12)							
	Classroom space is measured from interior wall to interior wall.						Yes	
	A. Classroom Space							
		Classroom space - Classroom space shall be sufficient for appropriate educational programs for the class level needs.					Yes	3.4, 3.4.1
	B. Classroom Fixtures and Equipment							
		1. Each general and specialty classroom shall contain a work surface and seat for each student in the classroom. The work surface and seat shall be appropriate for the normal activity of the class conducted in the room.					Yes	3.4.1
		2. Each general and specialty classroom shall have a erasable surface and a surface suitable for project purposes, appropriate for group classroom instruction, and a display surface. A single surface may meet one or more of these purposes.					Yes	3.4.1
		3. Each general and specialty classroom shall have storage for classroom materials or access to conveniently located storage.					Yes	3.4.1
		4. Each general and specialty classroom shall have a work surface and seat for the teacher and for the aide assigned to the classroom and it shall have secure storage for student records that is located in the classroom or is convenient to access from the classroom.					Add the detail "...shall have secure storage for student records that is located in the classroom or is convenient to access from the classroom."	3.4.1

Appendix D: Crosswalk between PSCOC and APS Standards

Crosswalk: State Standards / Evaluation Guidelines

					H/L	H=Higher than standard; L= Below standard	
			Support Calcs	State Notes		Evaluation Guideline Notes	
						Yes means guidelines deals with standard	APS Standards
	c. Classroom Lighting						
		1. Each general, science and arts classroom shall have a lighting system capable of maintaining at least 50 foot-candles of light.				Recommended - 50 but practical is 30 fc.	2.1.8c
		2. The light level shall be measured at a work surface located in the approximate center of the classroom between clean light fixtures.				At desk height where desks set.	
	D. Classroom Temperature						
		1. Each general, science and arts classroom shall have a heating, ventilation and air conditioning (HVAC) system capable of maintaining a temperature between 68 and 82 degrees Fahrenheit with full occupancy.				Add. Set by APS in new construction work.	2.1.4a
		2. The temperature shall be measured at a work surface in the approximate center of the classroom.				Add.	
	E. Classroom Acoustics						
		1. Each general, science and arts classroom shall be maintainable at a sustained background sound level of less than 55 decibels.				Add. Set by APS on new construction work.	
		2. The sound level shall be measured at a work surface in the approximate center of the classroom.				Add.	
	F. Classroom Air Quality						
		1. Each general, science and arts classroom shall have an HVAC system that continually moves air and is capable of maintaining a CO2 level of not more than 1.200 parts per million.				Add.	
		2. The air quality shall be measured at a work surface in the approximate center of the classroom.				Add.	
VIII.	General Use Classrooms (Language Arts, Mathematics and Social Studies) (6.27.30.13)						
	Cumulative classroom het square foot (SF) requirements, excluding locker space and general storage space are						
		A. Kindergarten	50 net sf/student	1,020	H	900 - 1,200 sf	3.4.1
		B. Grades 1 - 5	32 net sf/student	704	H	700 - 900 sf	3.4.1
		C. Grades 6 - 8	28 net sf/student	672	H	700 - 900 sf	
		D. Grades 9 -12	25 net sf/student	700	H	700 - 900 sf	
IX.	Specialty Classrooms (Science, Arts, Career Education and Physical Education) (6.27.30.14)						
	A. Science						
		1. For grades K through 5 no additional space is require beyond the classroom requirement.			H	ARC considers sign-up lab/art/music space.	

Appendix D: Crosswalk between PSCOC and APS Standards

Crosswalk: State Standards / Evaluation Guidelines

				Support Calcs	State Notes	H/L	H=Higher than standard; L= Below standard / Evaluation Guideline Notes	APS Standards
							Yes means guidelines deals with standard	
		2. For grades 6 through 12, 4 net sf/student of practical and instructional science space is required. The space shall not be smaller than the average classroom at the facility. This space is included in the academic classroom requirement and may be used for other instruction. The space shall have science fixtures and equipment, in accordance with the standard equipment necessary to meet the educational requirements of the state board of education. If an alternate science delivery method is used by a school district, the district shall verify the appropriate alternate fixture and equipment to the council.			700	H	1,300 - 1,500 no less than 2 labs.	
	B. Technology							
		Each classroom at a school facility shall have Internet access. Each school facility shall have at least one network multimedia computer, available for student use for every 15 students or an appropriate alternate delivery method. Computer equipment is subject to assessment under the Building systems category.			ES & MS - 3 to 67 HS 5 to	H	Guidelines say Internet access for 1 teacher WS and a pod of 3 computers plus printer and monitor for instruction. So 1 WS/10-11 students.	3.1.4, 3.4.4
	C. Art Education Programs							
		A school facility shall have space to deliver art education programs, including visual, music and performing arts programs, or have access to an alternate delivery method. The space shall not be smaller than the average classroom at the facility. This space may be included in the academic classroom requirement and may be used for other instruction.					Yes	3.4.3
		1. Elementary School						
		A music/drama or art classroom may be the same room as the classroom or may also be used as a general use classroom, plus storage of 60 net sf.			700	H	700 - 900	3.4.3
		2. Middle School/Junior High School						
		A band/orchestra/drama classroom shall have a minimum of 2.5 net sf/student up to a maximum of 1,500 net sf for band/orchestra/drama, including group practice, music storage and storage rooms, two individual practice rooms and an office. A chorus room shall have a minimum of 2.5 net sf/student up to a maximum of 800 sf, including group practice rooms, an office and library. An art room shall have a minimum of 2.5 net sf/student up to a maximum of 800 sf, including storage and an office.			1,500 music 800 chorus 800 art	H	Music - 1,600 to 1,800; Chorus - 1,200 to 1,400; Art - 1,600 to 1,800	
		3. High School						
		A band/orchestra/drama classroom shall have a minimum of 2.5 net sf/student up to a maximum of 2,000 net sf, including group practice, music storage and storage rooms, two individual practice rooms and an office. A chorus room shall have a minimum of 2.5 net sf/student up to a maximum of 1,200 sf with a practice area and an office. An art room shall have a minimum of 2.5 net sf/student up to a maximum of 1,200 net sf, including storage and an office.			2,000 music 1,200 chorus 1,200 art	H	Music - 4,500; Chorus - 2,200; Art (3 labs) - 1,800+1,200+1,200	
		4. Combination School						
		A combination school shall provide the elements of the grades served by subsections 1, 2, and 3 above without duplication, but meeting the height standards.					Add	

Appendix D: Crosswalk between PSCOC and APS Standards

Crosswalk: State Standards / Evaluation Guidelines

				H/L	H=Higher than standard; L= Below standard	
			Support Calcs	State Notes		Evaluation Guideline Notes	
						Yes means guidelines deals with standard	APS Standards
D. Career Education							
	1. Elementary School						
	No requirements					Yes	
	2. Middle School/Junior High School						
	Cooking, sewing, wood shop classrooms, etc., shall have a minimum of 15 net sf/student aggregate, with a minimum or 3,000 net sf.			3,000	H	HE - 1,600 to 1,800; Shop - 1,600 to 2,400 so the impact is about 4,200 net sf.	
	3. High School						
	Cooking, sewing, vocational education, health, child development, computer tech, metal tech, auto tech, transportation tech, coop training, etc., space shall have a minimum of 15 net sf/student aggregate, with a minimum of 5,000 net sf. If a school has a child development program, the space shall have a minimum of 1,100 - 1,500 net sf/student, including a lab, an observation area, a kitchen, an office, restrooms for children and adults and an outside play area of 75 net sf/child (1,000 net sf minimum).			Tech. - 5,000 Child dev - 1,100 - 1,500 w/ out-side		Voc Ed - 1,400 + 1,200 + 1,400 + 1,200 + 1,200; HE - 1,400 + 1,800 + 1,200 + 1,500; Health - 900; Child dev. - 1,100 + 1,500 plus 75 sf/child outside; Shop - 1,600 + 4,500 + 3,300; Coop - 1,000.	
	4. Combination School						
	A combination school shall provide the elements of the grades served by subsections 1, 2, and 3 above without duplication, but meeting the higher standards.					Add	
E. Computer and Keyboarding Labs							
	A school facility shall have space to deliver computer and keyboarding lab programs or have access to an alternate delivery method.					Yes	
	1. Elementary School						
	Lab classrooms shall have a minimum of 15 net sf/student aggregate, with a minimum of 1,000 net sf.			1,000		900 +	3.4.4
	2. Middle School/Junior High School						
	Lab classrooms shall have a minimum of 15 net sf/student aggregate, with a minimum of 1,500 net sf.			1,500		900 + add calc. for # needed. Assume 2 in MS.	
	3. High School						
	Lab classrooms shall have a minimum of 15 net sf/student aggregate, with a minimum of 2,000 net sf.			2,000		1,000 + 1,000 + 720	
	4. Combination School						
	A combination school shall provide the elements of the grades served by subsections 1, 2, and 3 above without duplication but meeting the higher standards.					Add	

Appendix D: Crosswalk between PSCOC and APS Standards

Crosswalk: State Standards / Evaluation Guidelines

			Support Calcs	State Notes	H/L	H=Higher than standard; L= Below standard / Evaluation Guideline Notes / Yes means guidelines deals with standard	APS Standards
	F. Alternate Delivery Method						
		If an alternate delivery method is used by a school district to deliver instruction in science, technology, art, career education or computer and keyboarding technology. G. R. A. D. S. programs and special needs classroom(s), the alternate method must be approved following review by the council.				Ask if this is the case.	
X.	Physical Education (6.27.30.15)						
	A. General Requirements						
		A school facility shall have an area, space and fixtures for physical education activity. This space may have more than one function and may fulfill more than one standard requirement.				Yes	
		1. Elementary School					
		For an elementary school facility, an indoor physical education teaching facility that shall be the greater of 2,400 net sf or the square footage equal to 7 net sf multiplied by one-half of the design capacity.	2,400 - 2,975			2,400 - 3,265	3.4.6
		2. Middle School/Junior High School					
		For a middle school/junior high school facility, an indoor physical education teaching facility that shall have a minimum of 5,200 net sf plus bleacher for 1.5 design capacity.		7,075		5,200 - 7,900	
		3. High School					
		A physical education complex shall have a minimum of 6,500 net sf plus bleachers for 1.5 design capacity.		10,250	H	13,200	
		4. Combination School					
		Shall provide the elements of the grades served by subsections 1, 2, and 3 above without duplication, but meeting the higher standards with bleacher capacity for 2.0 capacity. If the school includes and elementary, then it contain the requirements for an elementary school.				Add	
	B. Additional Physical Education Requirements						
		In addition to space requirements in subsection A					
		1. Elementary School					
		One office shall be provided, with physical education equipment storage with a minimum of 150 net sf. This space may have more than one function and may fulfill more than one standard requirement.				Yes	3.4.6
		2. Middle School/Junior High School					
		Two dressing rooms shall be provided, with lockers, showers, and restroom fixtures. Two offices shall be provided, each with a minimum of 150 net sf. Each shall be provided with a telephone. Physical education equipment storage space shall be provided. Additionally, a fixed or temporary platform shall be provided, which may have more than one function and may fulfill more than one standard.			H	Yes plus adds auxiliary gym and recommends weight room.	

Appendix D: Crosswalk between PSCOC and APS Standards

Crosswalk: State Standards / Evaluation Guidelines

							H/L	H=Higher than standard; L= Below standard
						Support Calcs	State Notes	Evaluation Guideline Notes
								Yes means guidelines deals with standard
		3. High School						
		Two dressing rooms shall be provided, with lockers, showers, and restroom fixtures. Two offices shall be provided, each with a minimum of 150 net sf. Each shall be provided with a telephone. Physical education equipment storage space shall be provided. Additionally, a fixed or temporary platform shall be provided, which may have more than one function and may fulfill more than one standard.					H	Yes and adds auxiliary gym, mezzanines, weight room, wrestling room. Platform is not mentioned unless used for assemblies. PAC often has this stage.
		4. Combination School						
		A combination school shall provide the elements of the grades served by subsections 1, 2, and 3 above without duplication, but meeting the higher standards.						Add
XI.	Libraries and Media Centers/Research Area - General Requirements (6.27.30.16)							
	A school facility shall have space for students to access research materials, books and technology. This shall include space for reading, listening and viewing materials.							Yes
	A. Elementary School							
		For an elementary school facility, this space shall be the greater of 1,000 sf or the square footage equal to 30 net sf/student for 10 percent of the design capacity.				1,000 - 3,000		2,400 with same 30 sf/student
	B. Middle School/Junior High School or High School							
		For a middle school/junior high school or high school facility, this space shall be the greater of 2,000 sf or the square footage equip to 30 net sf/student for 10 percent of the design capacity.						MS - 4,500 - 5,200; HS - 8,400 same 30 sf/student
	C. Combination School							
		A combination school shall provide the elements of the grades set out in subsections A and B above without duplication, but meeting the higher standards.						Add
XII.	Food Service Standards (6.27.30.17)							
	A. Cafeterias - General Requirements							
		1. Serving and Dining						
		A school facility shall have a covered area or space, or combination, to permit students to eat within the school site, outside of general classrooms. This space may have more than one function and may fulfill more than one adequacy standards requirement (for example, auditorium and/or indoor physical education).						Yes. We do not specifically say covered assuming it must be inside.
			Serving 5 - 8 net sf/capacity of dining room					Guidelines in kitchen
			Dining 10 - 15 net sf/seated student					Yes
			a. Elementary School - should seat up to 200 students per sitting				3,160 max.	200 at 3,000 sf
			b. Middle School/Junior High School - should seat up to 250 student per sitting				3,950	250 at 4,000 sf
			c. High School - should seat up to 250 students per sitting				3,950	625 at 9,400 sf

APS Standards
3.4.5
3.4.7

Appendix D: Crosswalk between PSCOC and APS Standards

Crosswalk: State Standards / Evaluation Guidelines

								H/L	H=Higher than standard; L= Below standard	
							Support Calcs	State Notes	Evaluation Guideline Notes	
									Yes means guidelines deals with standard	APS Standards
			d. Combination School - shall provide the elements of the grades served by subsections a, b, and c above without duplication, but meeting the higher standards.						Add	
		2. Fixtures and Equipments								
		A school facility shall have space, fixtures and equipment accessible to the serving area, in accordance with the standard equipment required for the preparation, receipt, storage or service of food to students.							Yes	3.4.7
		Food service facilities and equipment shall be appropriate for the food service program of the school facility. Food service facilities and equipment shall comply with *The Food Service and Food Processing Regulations* of the New Mexico Department of Environment.							Add words "...Food service facilities and equipment shall comply with *The Food Service and Food Processing Regulations of the New Mexico,* Department of the Environment." Ask for last inspection report.	
	B. Kitchen									
		Kitchen and equipment shall comply with either the Food Preparation Kitchen or the Serving Kitchen standards defined as follows:							Yes	3.4.8
		1. Food Preparation Kitchen								
			2 net sf/meal served						Add	
		a. Elementary School - 1,000 net sf minimum						1,000	1,000	3.4.8
		b. Middle School/Junior High School - 1,600 net sf minimum						1,600	1,600	
		c. High School - 1,700 sf minimum						1,700	1,700	
		d. Combination School - shall provide the elements of the grades served by subsections a, b, and c above without duplication, but meeting the higher standards.							Add	
		2. Serving Kitchen							Add	
		Where food is not prepared, there shall be a minimum of 200 net sf with hand wash sink and phone.							Add	3.4.8
XIII.	Other Facility Areas (6.27.30.18)									
	A. Parent Workspace									
		If parents are invited to assist with school activities, a school facility shall include a workspace for use by parents. If this space is provided, it shall consist of 1 net sf/student with a minimum requirement of 150 net sf and a maximum of 800 net sf. The space may consist of more than one room and may have more than one function.						150 - 800	Add. In current APS practice, not written in guidelines, but looked for during evaluations.	3.4.1
	B. Administrative Space									
		A school facility shall have space to be used for the administration of the school. The space shall consist of a minimum of 150 net sf, plus 1.5 net sf/student, up to a maximum requirement of 2,500 net sf. (It may exceed 2,500 net sf, but 2,500 net sf is the maximum that is required.)						# of students or 2,500	H	ES - 1,430; MS - 1,405; HS - 7,050	3.4.10a

Appendix D: Crosswalk between PSCOC and APS Standards

Crosswalk: State Standards / Evaluation Guidelines

					H/L	H=Higher than standard; L= Below standard	
			Support Calcs	State Notes		Evaluation Guideline Notes	
						Yes means guidelines deals with standard	APS Standards
	C. Student Health, Counseling and Ancillary Space						
		A school facility shall have space to isolate a sick student from the other students and may include space for the delivery of other health, counseling, testing and ancillary programs. This space shall be a designated space that is accessible to a restroom, and shall consist of 1 net sf/student with a minimum requirement of 150 net sf and a maximum of 800 net sf. The space may consist of more than one room and may have more than one function. This space shall include a telephone.	150 - 800		H	ES - 250 to 350; MS - 500 + 600; HS - 1,086+ 2,000	3.4.10b
	D. Faculty Workspace or Teacher Lounge						
		A school facility shall have workspace available to the faculty. This space is in addition to any workspace available to a teacher, in or near a classroom. The space shall consist of 1 net sf/student, with a minimum requirement of 150 net sf and a maximum requirement of 800 net sf. the space may consist of more than one room and may have more than one function. This space shall include a break area with a sink.	1 @ 800 all levels		H	2 @ 800 All levels	3.4.10c /d
XIV.	General Storage (Excludes Lockers, Janitorial, Kitchen or Specialty Classrooms) (6.27.30.19)						
	For storage, 3 net sf per K-5 grade student may be distributed in or throughout any type of room or space, including classrooms, but may not count toward required minimum room square footages. General storage must include some secured storage.					Casework in 1 - 5, closet in Kindergarten and lockers off of the hall in MS and HS.	3.4.9
XV.	Maintenance or Janitorial Space (6.27.30.20)						
	Each school shall designate 5 net sf aggregate per student for maintenance or janitorial space. Janitorial space shall include a janitorial sink.		400 - 1,000			480 - 1,000 in 4 to 5 spaces	3.4.9
XVI.	Teacherages (6.27.30.21)						
	Teacherages shall meet standards required by the United States Department of Housing and Urban Development.					Ask, if any	
XVII.	Standards Variance (6.27.30.22)						
	The council may grant a variance from any of the adequacy standards. The council shall grant a variance if it determines that the intent of the standard can be met by the school district in an alternate manner. If the council grants the variance the school district shall be deemed to have met the guideline.					Ask, if any	

Appendix E: APS Technical Specifications and Furnishings

Refer to latest version of design standards on the FD+C webpage at www.apsfacilities.org/facilities.

APS FD+C and M&O Standards and Specifications

The district will provide technical specifications for the following systems / materials:

1. Custom Plastic Laminate Casework Standards
2. Carpet Tile Specifications
3. Mechanical Design Standards
4. Electrical Design Standards
5. Glazing and Window Standards
6. Door Hardware Standards
7. Aluminum Storefront Specification
8. Site Design Directives, Standard Specifications, and Standard Details for Site Design and Construction
9. Roofing Standards

APS FD&C Furniture and Equipment Needs

The district will provide a furnishings list for the designer to accommodate in the occupied spaces. Coordinate color, layout, need for wiring locations, and clearances with FD+C staff.

APS SITE GUIDELINES

1. Site Standards / Landscape Standards / Specifications
2. Playground Standards