

Alaska School Design and Construction Standards

P U B L I C A T I O N C O V E R

September 8, 2021 [\(revised\)](#)

Issue

The department is pleased to be presenting an initial draft of the new *Alaska School Design and Construction Standards* handbook. This draft is proposed for use in soliciting public comment.

Background

Last Updated/Current Edition

This is a new publication; no current edition is available.

Publication Summary

Between April 2017 and the date of this paper, the department, through the Model School Subcommittee and its public and private entity partners, and with consultant assistance from BDS Architects, has completed work on an initial draft of the *Alaska School Design and Construction Standards*. The publication is organized in three parts to accomplish the mandate in AS 14.11.017(d) to develop regionally based model school construction standards that describe acceptable building systems to achieve cost-effective school construction. These parts are identified and discussed below. The narrative includes for each includes an assessment of the effectiveness of issuing this initial draft for public comment.

Part 1 – Purpose and Applications is an introduction to the Standards, their background, the intended purpose, and implementation. Content in this section of the publication was completed as part of the BDS contract in July 2019 and has had very few edits since then. However, of significance in this initial draft are revisions to terminology in a section titled *Levels of Implementation*. Prior terms to describe the range of acceptable elements of Required, Recommended and Premium, were borrowed from a similar document published by the Maine Department of Education. This initial draft retains Premium but revises the first two levels to Baseline and Provisional. Definitions for these are on pages 2 and 3 of the handbook. Part 1 of the handbook is well developed in this initial draft and highly suitable for receiving public comment.

Although Part 1 fully describes the structure and organization of the handbook, the full scope of the standards content is developed in Parts 2 and 3. In each of these, a comprehensive structure is presented that addresses each element of a school facility. In Part 2, a compendium of school space is listed. In Part 3, this comprehensive structure results in a detailed hierarchy of building systems and sub-systems. While the criteria for many building elements is fully developed, others are less so in this initial draft. Use of the convention ‘(Reserved)’ was adopted to alert the reviewer of possible additional criteria that may be presented in the future. This is likely to not only be an administrative convention for use in the initial public comment period, but also to remain in use throughout the life of the document as additional detailed is added.

Part 2 – Design Principles deals with overall planning and design principles for site and building design, especially as they relate to safety, security and sustainability. Part 2 elements continue to be organized under the major headings of *Regionally Based Design*, *Site and Infrastructure*, *School Buildings*, and *High Performance Facilities*. Most of these elements present standards criteria for implementation using the levels (Baseline, Provisional, Premium) identified in Part 1. The subsection, *School Buildings*, provides guidance organized by types of functional spaces within schools. Within that subsection, the document generally uses the categories and types of space listed in the CIP application instructions, Appendix D. While acknowledging the need for some consolidation and differenced in level of detail, it will be a goal of the department to fully align the terminology in Appendix D and this handbook. The content in the *School Buildings* subsection for this initial draft is presented as input from the Alaska Chapter A4LE.

[An optional format for the *School Buildings* subsection is offered by DEED and is provided as a supplement. On review, the A4LE-offered content, while valid and valuable, probably offers too rich a mix and variety in its categories of comment/standard. Some are design lessons, some are planning and adjacency items, some are code conditions, some are system/component standards. There was also an absence of discussion about appropriate planning factors regarding sizes and multiples of space types. For years, an oft-consider question has been whether the state should address school space beyond the macro-view of gross square feet as discussed in 4 AAC 31.020. Last, and because of some meaningful content in the A4LE version, the optional format introduces a specific lessons-learned/best practice segment.](#)

Part 2 of the handbook is moderately well developed in this initial draft. The *School Buildings* subsection is a substantial element of this Part, however, and is still relatively undeveloped and is seeking its equilibrium (i.e., what content is needed/helpful, etc.).

Part 3 – System Standards is organized by a DEED-specific elemental cost structure with specific material or system selections, design criteria, and guidance. Part 3 elements are organized into the 11 building systems of the DEED CostFormat, 2020 version. Generally, each section wraps four narrative subsections: *Building System Summary*, *Design Philosophy*, *Model Alaskan School*, and *Design Criteria & Ratios* around the CostFormat breakout of building systems. Although there has been some compacting of the CostFormat detail, each section still provides opportunity to comprehensively address system and components. Substantial analysis has been completed for the appropriate level of detail in each section, however, some variation has been intentionally incorporated into the initial draft to elicit public comment. Most sections were indexed to the subsections used in the. However, sections with minimal breakout.

Part 3 of the handbook is very well developed in this initial draft and is highly suited to public comment. The convention of ‘(Reserved)’ is used in Part 3 but is not prevalent.

Public Comment

No public comment period has occurred.

The handbook proposed for public comment to start in September 2021 following BRGR review of the initial draft.

Version Summary & BRGR Review

Drafts of the publication were presented to the committee at the following meetings:

September 8, 2020 – original BDS draft presented that provided an overall structure to the publication and completed Part 1 describing its purpose and use. Part 2 Design Standards, and Part 3 System Standards were left incomplete due to limited funding for the consultant assistance; committee directed DEED to develop incomplete sections.

February 25, 2021 – DEED presented four draft sections for Part 3: 01 Site and Infrastructure; 02 Substructure; 03 Superstructure; and 07 Conveying Systems. Updated Part 3 structure and numbering to index to *DEED CostFormat*.

March 17, 2021 – DEED presented two additional Part 3 sections: 10 Equipment and Furnishings, and 11 Special Conditions. Part 2 had several sections with further development and included some alternative formats for comparison and consideration.

July 21, 2021 – DEED presented subcommittee work primarily aimed at finalizing the structure and level of detail of the document. New content was also developed for ~10 subsystems.

September 8, 2021 – DEED is presenting an initial draft for consideration of issuing for public comment.

BRGR Input and Discussion Items

- Is the draft publication at a point where meaningful public comment can be provide and received.

Suggested Motion

“I move that the Bond Reimbursement and Grant Review Committee approve the initial draft *Alaska School Design and Construction Standards* [as presented / as edited] for a period of public comment.”

Part I. DESIGN PRINCIPLES

1. REGIONALLY BASED DESIGN

School construction in Alaska encompasses a wide range of climates and must respond to the challenging logistics of building in remote areas with limited construction seasons. Design principles must be adapted based on climate and geographic region. The climates zones illustrated below will be used as a baseline to identify and evaluate appropriate design strategies in the application of these Standards. It remains the responsibility of design and facility professionals to understand any micro-climate or site-specific conditions that may impact the application of the Standards on a project-by-project basis.

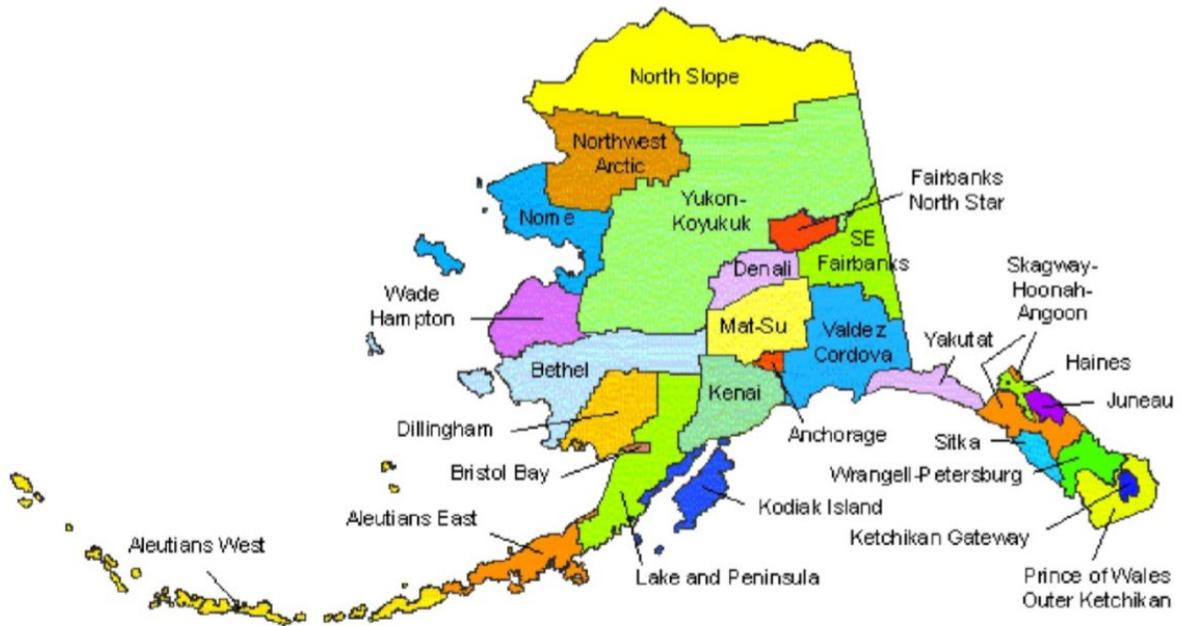


Table A301 Alaska Census Areas

Zone 6	Zone 7	Zone 8	Zone 9
Juneau	Aleutians East	Bethel	North Slope
Ketchikan Gateway	Aleutians West	Denali	
Prince of Wales	Anchorage	Fairbanks North Star	
Sitka	Bristol Bay	Nome	
Skagway-Hoonah-Angoon	Dillingham	Northwest Arctic	
Wrangell-Petersburg	Kenai Peninsula	Southeast Fairbanks	
Yakutat	Kodiak Island	Kusilvak (Wade Hampton)	
Haines	Lake & Peninsula	Yukon-Koyukuk	
	Matanuska-Susitna		
	Valdez-Cordova		

Consideration of geographic regions in the application of the Standards relate primarily to initial construction costs. The department has established an analytical model for the evaluation of geographic cost variations across Alaska, as it relates to school facilities, and publishes the results of that analysis as part of the *Program Demand Cost Model for Alaskan Schools*. The geographic cost factors identified in that DEED publication will be used as a baseline to identify and evaluate appropriate design strategies in the application of these Standards. As with climate zones, it remains the responsibility of design and facility professionals to understand any local variations and site-specific conditions which may impact the application of the Standards on each project.

2. SITE & INFRASTRUCTURE

The State must be involved in reviewing site selection, education specifications (i.e., programming), and design. Selected sites should be affordable, easily developed, and close to commercial-grade utilities wherever possible. Sites requiring extensive earthwork, long driveways, or environmental challenges should be avoided. In urban areas, schools should not be located directly on major roadways with high speeds or heavy traffic.

Recent tragedies at schools around the country have reinforced the need for designs to keep students and staff safe in our public schools. School safety experts and educational facility planners have been working together to develop recommendations that cover the outside and inside of school buildings. DEED encourages school districts to consider student safety as one of the most important criteria when designing or renovating schools.

A. Safety & Security Site Design

Baseline:

1. Develop site plans that allow two separate points of access to the site.
2. Make the main entrance easily identifiable from the street, primary parking area, or main access route.
3. In settings where the school building is at or near grade, develop main entrances with discrete physical barriers such as concrete-filled steel bollards, boulders, planters or other physical barriers, as applicable, to prevent vehicles from being driven into the school.
4. Maintain clear and unobstructed sight lines for security and safety.
5. Obtain preliminary approvals from the Department of Transportation & Public Facilities (driveways), the Army Corp of Engineers (wetlands), and other appropriate agencies before site approval.
6. In school settings where emergency services are available, provide emergency vehicle access to all areas of the site, including playgrounds and fields.
7. In school settings where bus service is available, separate bus loop and parent drop-off areas and install fencing or guardrails to limit pedestrian circulation to designated crosswalks and sidewalks.
8. At urban schools, provide safe access for pedestrian and bicycle circulation from site entrances to the main building entrance and consider keeping pedestrian paths away from automobiles.
9. Provide safe, clearly marked pedestrian pathways, sidewalks, and boardwalks through the site.

10. Locate play areas away from vehicle circulation and parking areas. Provide accessible pedestrian pathways to playgrounds and athletic fields that avoid vehicular traffic.
11. Provide chain link fencing at the perimeter of playgrounds as required.
12. Avoid sidewalks that link to high-speed roads and highways.
13. Provide clear vehicular circulation patterns and signage. Provide stop signs and speed tables.
14. Provide lighting at all travel ways, parking areas, and building perimeter.
15. Oil, propane, and gasoline tanks are preferred to be located below ground. When above ground, protect the tank with fencing, berms or bollards. Small propane tanks serving kitchen or science room equipment may be located above ground.
16. Separate service vehicles from bus and parent drop-off areas.
17. Keep perennial bushes and trees a minimum of 20'-0" away from each side of major entrance doors.
18. Keep electric and telephone services secure from vandalism. Use the preferred method of protection, underground service from a street telephone pole to the entering point of a building.
19. Provide adequate lighting for the main entrance sidewalk and parking lot to discourage loitering and vandalism.
20. Provide appropriate site security gates at fire lanes to prevent non-authorized vehicles from driving around the sides or back of the school.
21. Provide exterior public address systems that can be heard in the parking lot, bus loop, and playgrounds.

Provisional:

22. Consider developing emergency off-site staging areas.
23. Consider providing a secondary access to the site for emergency vehicles.
24. Consider how an emergency evacuation will be conducted. Consider bus loading areas and/or staging areas.

Premium:

25. Locally required (i.e., municipality, borough, etc.) off-site improvements.
26. Concrete sidewalks further than 50'-0" from the main entrance.

B. Building Location and Orientation

Baseline:

1. Select the building site to minimize environmental impact and encourage a simple, straightforward construction process.
2. Orient the main entrance to face primarily south. Avoid entrances facing north.
3. Consider prevailing wind and wind speeds with regard to doors. Provide measures such as wing walls or rails to prevent wind from catching doors and causing damage.
4. Orient the building design to maximize natural daylighting in classrooms and other occupied spaces.
5. Keep building ventilation intakes away from vehicle exhaust and other sources of air pollution. Consider the site's prevailing winds when locating intake and exhaust equipment.

Provisional:

6. Consider orienting the longer axis of the building using a North-South for classrooms for maximum solar impact.

Premium:

7. Building pads/sites with slopes in excess of 10 percent.

C. High-Performance Site Principles

Baseline:

1. Site buildings to maximize daylighting (a north-south orientation for classrooms).
2. Orient buildings with a major entrance on the south side whenever possible.
3. Choose native and adaptive plants that do not need permanent irrigation systems.
4. Conduct a Phase I Environmental Assessment (and Phase II if necessary, based on Phase I) to identify hazardous materials. Conduct required mediation on site.
5. Control erosion and sedimentation during construction.

Provisional:

6. Consider opportunities to reduce light trespass onto adjacent sites and improve nighttime visibility by reducing up-lighting, reducing maximum lumens of fixtures above horizontal, and locating luminaires well inside the project site boundary.
7. Consider opportunities to reduce impervious surfaces on site, reduce quantity and improve quality of stormwater runoff. Practice low-impact rainwater management strategies.

Premium:

8. Stormwater management unless required by local ordinances: bioswales, pervious pavers.
9. Green roofs.
10. School vegetable gardens.

D. Building Entrances

Baseline:

1. Provide a single point of entry for all visitors that is easily identifiable from the main approach to the school. When called for by school district policy, visitors shall enter through a secure vestibule at the main building entrance. This arrangement may not be practical in a renovation or necessary in a very small school.
2. Design all exits and entrances so the building can be securely locked down after the start of school if desired.
3. Safety and Security at Main Office
 - a. Locate the main office door adjacent to the security vestibule lobby so office personnel can maintain visual supervision while visitors come in to sign the visitor log.
 - b. Provide a hidden electronic security panic button in the office that can send a signal to police or emergency responders when a crisis is developing at the school.
 - c. Provide a minimum of two locations for interior intercom and exterior public address system. The second location should be designated as a “safe room.”

- d. Design main offices with a second means of exit, either directly outdoors or into a more remote hallway.
 - e. Provide security cameras at the main entrance and other remote locations around the school. Video systems should be capable of being reviewed for live on-demand broadcasting as well as a minimum thirty-day archival library system.
 - f. Design the main office so it has easy supervision of the security vestibule, the main entrance lobby, and one or more main corridors leading into the “heart” of the school.
4. In a secure vestibule arrangement, the interior bank of doors of the vestibule should be equipped with an electronic strike that allows the door to be unlocked electronically by main office personnel after visitors have been approved for entrance.
 5. Provide proximity card readers for staff at the main, kitchen, and at least one other staff entrance.
 6. Provide video cameras in the ceiling of the security vestibule and directly inside of the vestibule doors so that visitors can be photographed on video loops for later review.
 7. Design all major entrances and exits with vestibules if they are likely to be used during school hours.
 8. Design entrance doors to be controllable from a remote location, preferably at the administrative office, with a direct view and oversight of the main entrance security vestibule.
 9. Install exterior rain canopies at the main entrance and exterior doors that are expected to have high usage.
 10. In buildings that are at or near grade, protect all front entrances and other major doors used on a regular basis throughout the school day with concrete-filled steel bollards or other appropriate, rugged obstructions.

Provisional:

11. (Reserved)

Premium:

12. Pivot hinges, sliders, or revolving doors.
13. Electric door openers other than at the ADA main entrance.
14. Overly complex ceiling finishes and features.

3. SCHOOL BUILDINGS

Every school plan should be a reflection of the Space Allocation Guidelines found in Alaska Administrative Code (4 AAC 31.020), as well as the school district’s educational specifications and pedagogy. The opportunity to design new or redesign existing school buildings is often a once-in-a-lifetime experience for teachers, school boards, and the local community. Serious consideration should be given to a comprehensive educational visioning process at local expense that reviews current state-of-the-art thinking and considers which educational strategies are most appropriate for the school’s age group and local community values. Learning spaces should support traditional as well as expeditionary, and “virtual” learning experiences. The following general planning principles apply to all school facility design:

A. General Planning Principles

Baseline:

1. Design interior wall layouts to be simple and straightforward.
2. Zone the building for public and after-hours use.
3. Consider zoning the building for lockdowns that allow different sections of the building to be securely isolated.
4. Design the floor plan to carefully separate quiet, academic areas from noisy, high activity functions.
5. Design classrooms to conform to best practices for acoustic isolation and separation as defined by ANSI-S12.60-2010 (Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools Part I).
6. Organize functional layouts to support small-group and large-group activities.
7. Designs should emphasize multi-functioning rooms to maximize daily use and minimize underutilized spaces.
8. Design the floor plan to optimize multi-functioning spaces such as cafeterias, commons, gymnasiums, and exploratory labs.
9. At the Concept Design or Schematic Design phase, school designs must demonstrate the ability to be expanded to accommodate a 15% increase in student population.
10. Provide acoustical and smoke separation by designing classroom walls to extend to the underside of the structural deck whenever possible and when required by codes.

Provisional:

11. Consider single or double intercommunicating doors between classrooms.
12. Consider achievements for rewarding good behavior to include, but not be limited to:
 - a. Comfortable lounge-type furniture.
 - b. Gaming equipment with monitors, video access and controls.
13. Schools should be designed to be as flexible as possible to accommodate future learning styles and technology.
14. Group rooms to have marker boards, tackable surfaces, a conference table and 8-10 chairs.
15. Operable partitions or large sliding doors.

Premium:

16. Complex floor patterns involving curves, cuts, and intricate details.
17. Wood floors, except where allowed for gymnasiums, or natural stone floors.
18. Elaborate, expensive, curved or complex walls, ceilings, windows, and arches.
19. Building plans with more than one elevator.
20. Stairways not required by code for egress.
21. Elaborate, monumental stairs, regardless of location or code compliance.
22. Interior channel glass wall systems or glass block walls.
23. Complex ceilings with multiple levels and decorative soffits.
24. Wood or metal slat ceilings.
25. Plaster or fiberglass shaped ceiling planes.

26. Ceiling tiles larger than 24" x 48".

B. Safety & Security Building Design

Baseline:

1. Design the building so it can be locked down into separate security zones, preferably at internal firewalls requiring rated steel fire doors.
2. Provide a minimum of two means of exit out of any gymnasium, cafeteria, or library.
3. Provide a secure steel service door at the service entrance with a proximity reader and a means of identifying visitors without opening the door.
4. Provide locked, secure chemical storage areas that are not accessible to students or visitors.
5. Provide laminated security glass at remote exterior doors or sidelights.
6. Reduce the number of exterior doors that need to be supervised or checked for security and safety purposes.
7. Provide exterior doors convenient to playgrounds and playfields that can be quickly unlocked by proximity card readers in cases requiring "reverse evacuation."

Provisional:

8. Consider providing steel frame doors with no glass vision panels at remote, unsupervised doors.
9. Consider putting fire doors on electric hold opens and having them tied into the emergency security notification system that allows the main office to release fire doors for lockdown.

Premium:

10. (Reserved)

C. Safety & Security at Classrooms

Baseline:

1. Provide commercial-grade hardware and locksets on all doors.
2. Provide hardware at classroom doors where the door can be quickly locked by the teacher from the inside.
3. Provide small vision panels with laminated security glass in classroom doors.
4. Provide a phone and two-way intercom system in every classroom.
5. Provide a minimum of one National Fire Protection Assoc. (NFPA)-approved escape window in every classroom, where necessary.

Provisional:

6. (Reserved)

Premium:

7. (Reserved)

Category A – Instructional or Resource

General Use Classrooms

Baseline:

1. Provide space and amenities for instruction and learning associated with grade levels in support of adopted curriculum and a variety of teaching/learning styles in all or some of the following areas: instructor-led learning, individual, team and project-based learning, small group activities, computer-based learning/research, instructional storage, and personal storage.
2. Provide from among the following features for this educational space:

System	Features
Planning Factors	Typical 800 – 900sf; minimum 550sf
Spatial Elements	Ceilings: 9ft +/-, traditional rectangular or 'fat L' configuration
Finishes	Floor: vinyl or rubber sheet at project and entry/exit areas (where used), carpet at teacher and student stations. Ceiling: acoustic tile, Walls: paint
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	Sills at approx. 42in or lower for visual connection to exterior; one tilt/turn operable unit minimum
Specialties	36in base cabinets w/laminate counter, 42in wall cabinets, teacher wardrobe, 24lf whiteboard, 12lf tack board, window coverings (full, room darkening)
Plumbing	None required; see <i>Provisional</i> below
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	As calculated for code compliance
Lighting	Pendant or drop-in indirect, banked controls plus dimming
Power	110v duplex for code compliance, 110v quadplex at each data port
Special Systems	Phone/intercom, synchronized clock, interactive whiteboard, projector, duplex data ports (~1 per 4 students + teaching station)
Equipment/Furnishings	None required

Provisional:

3. Consider double leaf door openings between classrooms.
4. Consider classroom cubbies for coats, hats, and boots in grades Pre-K–2.
5. Consider toilets in the classrooms for grades Pre-K and Kindergarten. Add seamless or ceramic tile flooring and ceramic tile to a wainscoting height of 48" in wet areas to *Finishes*.
6. Consider infrared touchless fixtures in classroom toilet rooms.
7. Consider sinks in the classroom serving grades Pre-K–5; add PT and Soap dispenser to *Specialties*.
8. Consider solid-surface acrylic and polymer counter tops where sinks are installed.
9. Consider paperless gypsum board or water-resistant materials for wet walls.

10. Consider extending interior walls to the underside of the deck for smoke and acoustical performance.
11. Consider instructional voice amplification system.

Premium:

12. Sinks in general use classrooms beyond grade five.
13. Operable wall systems or large sliding doors.
14. Curved walls.
15. Architectural woodwork such as picture rails, wainscoting, crown moldings, or paneling.
16. Decorative ceiling systems such as metal or wood slat ceilings.
17. Decorative lighting.

Best Practice/Lessons Learned

- A. Design all classroom doors to be easily lockable from the inside by the teacher but to allow egress from the classroom at any time.
- B. Specify laminate countertops with postformed front edge for durability. Use field-installed backsplash for efficient transportation.
- C. Specify extended rims for classroom sinks with bubblers.
- D. Provide waterproof finishes at ‘in-classroom’ coat and boot storage.
- E. Consider appropriate fixture location and light levels on vertical surfaces used for instruction (white boards, screens, televisions, etc.)

Dedicated Classrooms

Art

Baseline:

1. Provide space and amenities for dedicated visual arts instruction and learning in all or some of the following areas: multi-media drawing/painting, multi-media sculpture/fabrication including wood, plastics, fabrics, digital 2D and 3D art including printing. Support includes instructional storage, devices, and equipment.
2. Provide from among the following features for this educational space:

System	Features
Planning Factors	Dedicated space where K-6 student population exceeds 300, or 7-12 student population exceeds 200; typical 900 – 1500sf including support spaces
Spatial Elements	Ceilings - 10ft +/-, traditional rectangular configuration
Finishes	Floor: polished concrete or ‘seamless’ resilient; Ceiling: acoustic tile, Walls: paint
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	Optional
Specialties	36in base cabinets w/stainless steel counter, 52in base cabinets, wall cabinets, teacher wardrobe, 24lf whiteboard, 24lf tackboard, window coverings (as needed)

System	Features
Plumbing	Utility sinks (3) w/hot and cold valves, cleanable solids drain traps for ceramic programs; see <i>Premium</i> below
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	As calculated for code compliance; provide negative pressure; exhaust at kiln room
Lighting	Pendant or drop-in indirect, three-bank controls plus dimming; utility track lighting at display walls
Power	110v duplex for code compliance, 110v quadplex at each data port; GFCI outlets; Floor or retractable ceiling at large project area
Special Systems	Phone/intercom, synchronized clock, projector, retractable screen, duplex data ports (1 per 6 students + teaching station)
Equipment/Furnishings	Display case(s)

Provisional:

3. Consider separate instructional storage area for large programs.
4. Consider separate kiln room with exhaust.
5. Consider exposed structure at ceilings; provide suspension grid for display.
6. Consider floor drains with cleanable solids traps and trap primers.
7. Consider multiple station student cleanup sinks.
8. Consider instructional voice amplification system.

Premium:

9. Ceramics/pottery equipment in schools serving students below grade 9, or grades 6-9 with school capacity below 900 students.
10. Stone or epoxy countertops.
11. Wood cabinetry or architectural millwork.
12. Decorative or special light track lighting.
13. Decorative flooring, ceramic tile, or epoxy coatings.

Best Practice/Lessons Learned

- A. Provide acoustical absorption panels in exposed ceilings as needed.
- B. Consider appropriate fixture location and light levels on vertical surfaces used for instruction (white boards, screens, televisions, etc.)

Science**Baseline:**

1. Provide space and amenities for dedicated science instruction and learning in all or some of the following areas: physical and life sciences. Support includes instructional storage, devices and equipment.

2. Provide from among the following features for this educational space:

System	Features
Planning Factors	Provide dedicated space where 7-12 student population exceeds 50; typical 900 – 1200sf including support spaces
Spatial Elements	Ceilings: 9ft +/-, rectangular configuration
Finishes	Floor: vinyl or rubber sheet, Ceiling: acoustic tile, Walls: paint
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	Optional
Specialties	Base cabinet lab stations w/resin work surface, wall cabinets (lockable), teacher demonstration center, teacher wardrobe, 24lf whiteboard, 12lf tackboard, Window coverings (as needed)
Plumbing	Sinks integrated in lab stations w/cold water, deep clean-up sink w/hot and cold, portable eye wash, see <i>Provisional</i> below
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	As calculated for code compliance, direct exhaust at demonstration, negative pressure
Lighting	Pendant or drop-in indirect, three-bank controls plus dimming
Power	110v duplex for code compliance, 110v quadplex at each data port
Special Systems	Phone/intercom, synchronized clock, interactive whiteboard, projector, duplex data ports at lab stations.
Equipment/Furnishings	Chemical storage cabinets

Provisional:

3. Consider deluge showers with floor drains for programs serving grades 10-12.
4. Consider plumbed eye wash stations with floor drain.
5. Consider fume hoods, acid neutralization tanks, and acid-resistant plumbing in chemistry labs.
6. Consider instructional voice amplification system.

Premium:

7. Compressed air systems.
8. Gas at rooms other than chemistry.
9. Fume hoods at rooms other than chemistry.

Best Practice/Lessons Learned

- A. Design to maximize shared amenities such as fume hoods, prep rooms, and storage.

Music/Drama

Baseline:

1. Provide space and amenities for dedicated music instruction and learning in all or some of the following areas: choral/singing, instruments, music appreciation. Drama and dance instruction. Support includes instructional storage, devices and equipment.

2. Provide from among the following features for this educational space:

System	Features
Planning Factors	Dedicated space where K-6 student population exceeds 300, or 7-12 student population exceeds 200; typical 800 – 1200sf including on-suite office/storage room; provide acoustical isolation
Spatial Elements	Ceilings: 9ft +/-, rectangular configuration
Finishes	Floor: vinyl or rubber sheet. Ceiling: acoustic tile, Walls: paint
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	Optional at K-6 space; None typical at 7-12 space.
Specialties	Lockers/cabinets (lockable) for instrument storage, Wall cabinets, Teacher wardrobe, 12ft whiteboard (2), Window coverings (full, room darkening)
Plumbing	None required; see <i>Provisional</i> below
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	As calculated for code compliance
Lighting	Pendant or drop-in indirect, three-bank controls plus dimming
Power	110v duplex for code compliance, 110v quadplex at each data port
Special Systems	Phone/intercom, synchronized clock.
Equipment/Furnishings	None required

Provisional:

3. Consider separate office/instructional storage area for large programs. Fit this space with additional *Specialties* to include: open wall shelving, work counter for instrument repair, upper and lower cabinetry for storage of materials and resources, lockable wardrobe storage, and tackboard.
4. Consider adjacency to Multipurpose Room; access to stage and performance areas.
5. Consider acoustical tuning in programs serving grades 9-12.
6. Consider dedicated practice rooms in programs serving grades 9-12. Provide security glass in doors.
7. Consider acoustic vestibules at doorways sound isolation cannot be resolved by adjacency or construction features.
8. Consider instructional voice amplification system.

Premium:

9. Sloped or tiered floors in programs below grade 6.
10. Natural hardwood paneling or woodwork used as acoustical baffles and reverberation panels.
11. Specialty flooring.
12. Television or acoustical recording studios or services.
13. Prefabricated practice rooms.

Best Practice/Lessons Learned

- A. Design door configurations to allow for the easy movement of pianos, drums, and other large instruments.
- B. Design walls and floors to prevent noise through ceilings or structural elements.

Bi-Cultural/Bilingual & Consumer Education

Baseline:

- 1. Provide space and amenities for project-based learning associated with cultural and traditional language heritage when supported with intentional curriculum in all or some of the following areas: food processing and preparation, construction and use of traditional art/artifacts and apparel, oral and visual presentation both live and electronic.
- 2. Provide from among the following features for this educational space:

System	Features
Planning Factor	Provide dedicated space where 7-12 student population exceeds 30; typical 900 – 1200sf including support spaces
Spatial Elements	Ceilings: 9ft +/-, rectangular, typical 900 – 1200sf including support spaces.
Finishes	Floor: vinyl or rubber sheet, Ceiling: acoustic tile, Walls: paint
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i> ; see <i>Provisional</i> for exterior door
Windows	Sills at ~42in or lower for visual connection to exterior; one tilt/turn operable unit minimum
Specialties	36in base cabinets w/laminate counter, solid surface counter at sink, 42in wall cabinets, teacher wardrobe, 24lf whiteboard, 12lf tack board, window coverings (full, room darkening); PT dispenser, soap dispenser
Plumbing	Stainless steel double sink w/lever mixing valve
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	Range hood at cooking surfaces
Lighting	Drop-in indirect, two-bank controls
Power	110v duplex for code compliance, 110v quadplex at each data port, as required for appliances.
Special Systems	Phone/intercom, synchronized clock, interactive whiteboard, projector, duplex data ports (~1 per 4 students + teaching station)
Equipment/Furnishings	Range, Refrigerator, Microwave/hood, Dishwasher (all residential)

Provisional:

- 3. Consider an exterior door for biologic products and/or for the purpose of afterhours/ community use.
- 4. Consider solid-surface acrylic and polymer counter tops where sinks are installed.
- 5. Consider dedicated room exhaust for odor control.
- 6. Consider solids interceptor on waste pipe and accessible cleanout on waste riser.

7. Consider locking hardware on one or more cabinets if valuables will be stored.
8. Consider elements for display of 2D and 3D projects.
9. Consider extending interior walls to the underside of the deck for increased acoustical performance.
10. Consider instructional voice amplification system.

Premium:

11. Commercial appliances.
12. Oversize or non-standard doors.

Best Practice/Lessons Learned

- A. Design door configurations to allow for the easy movement of pianos, drums, and other large instruments.
- B. Design walls and floors to prevent noise through ceilings or structural elements.

Special Education

Baseline:

1. Provide space and amenities for instruction and learning for students with special needs as identified in an individual education plan (IEP) for all grade levels in support of adopted curriculum and a variety of education delivery in all or some of the following areas: group activity, motor skills, center-based activities, project-based, etc. Include core curriculum lifeskills, occupational/physical therapy. Provide instructional storage, and personal storage, health/hygiene support.
2. Provide from among the following features for this educational space:

System	Features
Planning Factors	Provided dedicated space where student population exceeds 50; typical 700 – 1000sf; minimum 600sf + 200 – 400sf support space
Spatial Elements	Ceilings: 9ft +/-, traditional rectangular or 'fat L' configuration
Finishes	Floor: vinyl or rubber sheet at project and entry/exit areas (where used), carpet at teacher and student stations, seamless resilient or ceramic tile at toilet room; Ceiling: acoustic tile; Walls: paint, ceramic tile to 48in; Add seamless or ceramic tile flooring and ceramic tile to a wainscoting height of 48in in wet areas to <i>Finishes</i>
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	Sills at ~42in or lower for visual connection to exterior; one tilt/turn operable unit minimum
Specialties	36in base cabinets w/laminate counter, 42in wall cabinets, teacher wardrobe, 24lf whiteboard, 12lf tack board, window coverings (full, room darkening)
Plumbing	Stainless steel double sink w/lever mixing valve; toilet room with water closet and lavatory;
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	As calculated for code compliance; see also <i>Provisional</i>

System	Features
Lighting	Pendant or drop-in indirect, banked controls plus dimming
Power	110v duplex for code compliance, 110v quadplex at each data port
Special Systems	Phone/intercom, synchronized clock, interactive whiteboard, projector, duplex data ports (~1 per 4 students + teaching station)
Equipment/Furnishings	Structure-mounted OT/PT items; undercounter refrigerator; wall-mounted equipment rack(s)

Provisional:

3. Consider instructional kitchen with range, refrigerator, microwave/hood, dishwasher (all residential) for life skills programs serving grades 6-12; add approx. 150sf to listed planning factors.
4. Consider solid-surface acrylic and polymer counter tops where sinks are installed.
5. Consider color temperature adjustable and dimmable lighting in special needs classrooms and behavioral settings.
6. Consider accessible restroom where program requires.
7. Consider shower where program requires.
8. Provide quiet or timeout spaces that are hygienic, vandal proof, and code compliant.

Premium:

9. Instructional kitchens in schools serving only grades K-5.

Best Practice/Lessons Learned

- A. Integrate special needs spaces within the larger school population.
- B. For life skills programs in small student populations, consider multi-function use of kitchen/kitchenette provided in support of other programs.
- C. Consider OT/PT space adjacent to or inside of other multi-functioning spaces to maximize efficiency.
- D. Provide appropriate structural support for special swings or hanging equipment in OT/PT spaces.

Wood/General/Small Machine Shop

Baseline:

1. Provide space and amenities for dedicated visual arts instruction and learning in all or some of the following areas: multi-media drawing/painting, multi-media sculpture/fabrication including wood, plastics, fabrics, digital 2D and 3D art including printing. Support includes instructional storage, devices and equipment.
2. Provide from among the following features for this educational space:

System	Features
Planning Factors	Provide dedicated space where 6-12 student population exceeds 30; typical 900 – 1200sf including support spaces
Spatial Elements	Ceilings: 10ft +/-, traditional rectangular configuration

System	Features
Finishes	Floor: sealed concrete or steel diamond plate; Ceiling: acoustic tile, Walls: protective material (plywood, steel sheet, etc. to 4ft), paint above
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	Optional; sill height approx. 60in minimum to maximize wall storage
Specialties	72in locker cabinets, teacher wardrobe, 24lf whiteboard, 12lf tackboard
Plumbing	Utility sink (1) w/hot and cold valves, cleanable solids drain traps; see <i>Premium</i> below
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	As calculated for code compliance; provide negative pressure; (welding exhaust see <i>Provisional</i>); (note: portable/local dust collection as FF&E)
Lighting	Pendant or drop-in indirect, three-bank controls plus dimming; utility track lighting at display walls
Power	110v duplex for code compliance, 110v quadplex at each data port; GFCI outlets; Floor or retractable ceiling at large project area
Special Systems	Phone/intercom, synchronized clock, projector, retractable screen, duplex data ports (1 per 6 students + teaching station)
Equipment/Furnishings	Floor mounted wood/plastic working, metal working tools by instructional program; dust and exhaust system (see <i>Provisional</i>)

Provisional:

3. Consider separate instructional storage area for large programs.
4. Consider exposed structure at ceilings.
5. Consider insulated overhead door to exterior for large item entry/exit.
6. Consider covered, secure exterior storage for large materials not sensitive to exposure.
7. Consider multiple station student cleanup sink.
8. Consider centralized dust collection system to exterior tank for large programs.
9. Consider centralized welding exhaust system to exterior for large programs.

Premium:

10. Distributed compressed air systems.

Best Practice/Lessons Learned

- A. Often designed as 'maker space' for grades 6-8 with powered hand tools only.

Assembly Spaces

Library /Media Center

Baseline:

1. Provide space and amenities which supports the following uses: collections (i.e., stacks), computer workstations, individual and group seating, staff workspace, meeting/collaboration space, and presentation space.
2. Provide from among the following features for this educational space:

System	Features
Planning Factor	Provide dedicated space where student population exceeds 50; typical 750 – 3000sf (approx. 5sf/student at large populations) + 100 – 500sf of support space
Spatial Elements	Ceilings: 10ft +/-, vaulted accepted, non-rectilinear room configuration accepted
Finishes	Floor: carpet, vinyl or rubber sheet at workroom; Ceiling: acoustic tile, Walls: paint
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	Sills at ~42in or lower for visual connection to exterior; maximize under allowable energy standards
Specialties	24lf whiteboard, 24lf tack board, window coverings (full, room darkening) (see <i>Provisional</i> for support spaces)
Plumbing	None required
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	As calculated for code compliance
Lighting	Pendant or drop-in indirect, banked controls plus dimming
Power	110v duplex for code compliance, 110v quadplex at each data port, integral USB ports
Special Systems	Phone/intercom, synchronized clock, interactive whiteboard, projector, duplex data ports (~1 per 4 students + teaching station), robust wireless
Equipment/Furnishings	Circulation desk

Provisional:

3. Consider planning and design guidance from the American Association of School Librarians (AASL).
4. Consider distributed versus centralized media for small student populations and adjust classroom sizes accordingly.
5. Consider library office/workroom within or adjacent to the library space. Provide 36in base cabinets w/laminate counter, lockable drawer cabinets and intermittent openings for knee space.

- 6. Consider a single bowl stainless steel sink in workroom. Add paper towel & soap dispensers to *Specialties*.
- 7. Consider library storage room to have upper & lower cabinetry, heavy duty shelving, lockable file cabinets, video monitors and other A/V equipment on rolling carts and laptop carts.
- 8. Consider providing an exterior swing door for connection to supporting exterior spaces.

Premium:

- 9. Space required for non-district, municipal/borough-owned library functions.
- 10. Architectural woodwork such as picture rails, wainscoting, crown moldings, or paneling.
- 11. Decorative lighting.
- 12. Custom ceilings, soffits, skylights, or other monumental architectural features.
- 13. More than one exterior door.

Best Practice/Lessons Learned

- A. Design room and furniture layout for easy supervision, avoiding dead zones.
- B. Thought practice is to place book shelving, full height, at perimeter only as electronic media increases; room space becomes multi-functional for group interaction and individual consumption.
- C. Review structural design for heavy book loading when present.
- D. Provide moveable furniture and equipment for maximum flexibility; use fixed built-in features sparingly.

Gym

Baseline:

- 1. Provide space and amenities for physical education supported with intentional curriculum in all or some of the following areas: gross motor activity, group play and competition, skill and knowledge in individual, recreational, and team sports, fitness, dance, etc.
- 2. Provide from among the following features for this educational space:

System	Features		
Planning Factor <i>Notes:</i> 1. Does not include spectator space; at lowest populations spectator space may be unavailable unless combined with Commons or Multipurpose.	3500sf		
	Grade Level(s)	Student Population	Notes
	K-12	30 - 55	
	K-6	30 - 400	
	7-12	25-50	
	Mixed Grade	30-55	
	Note: For student populations below 30 (45 if K-6 only) see <i>Multipurpose Room</i>		
	5000sf		
	Grade Level(s)	Student Population	Notes
	K-12	55 - 170	
K-6	400 - 900		
7-12	50-160		
Mixed Grade	55-170		
Note: For K-6 student populations beyond this maximum, possible multiple gymnasium space is acknowledged.			

System	Features															
	7500sf <table border="1"> <thead> <tr> <th>Grade Level(s)</th> <th>Student Population</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td>K-12</td> <td>170 - 330</td> <td></td> </tr> <tr> <td>K-6</td> <td>N/A</td> <td></td> </tr> <tr> <td>7-12</td> <td>160-400</td> <td></td> </tr> <tr> <td>Mixed Grade</td> <td>170-330</td> <td></td> </tr> </tbody> </table> <p>Note: For student populations beyond these maximums, multiple gymnasium space is acknowledged.</p>	Grade Level(s)	Student Population	Notes	K-12	170 - 330		K-6	N/A		7-12	160-400		Mixed Grade	170-330	
Grade Level(s)	Student Population	Notes														
K-12	170 - 330															
K-6	N/A															
7-12	160-400															
Mixed Grade	170-330															
Spatial Elements	Ceilings: minimum 20ft, vaulted/exposed, rectangular configuration															
Finishes	Floor: synthetic sports floor; Ceiling: adhered acoustic, Walls: protective material (plywood, steel sheet, etc. to 10ft), paint above															
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>															
Windows	Optional															
Specialties	(see <i>Provisional</i> for support spaces)															
Plumbing	Drinking fountain with water bottle fill station, 1 + ADA															
Heating/Cooling	As calculated for code compliance															
Ventilation/Exhaust	As calculated for code compliance															
Lighting	High-bay fixed or pendant															
Power	110v duplex for code compliance															
Special Systems	Phone/intercom, synchronized clock, LCD projector, retractable screen, robust wireless															
Equipment/Furnishings	Basketball backboards/rims, climbing apparatus, bleachers															

Provisional:

1. Consider available space within allowable maximum (4 AAC 31.020) for Gym support spaces to include: instructor office(s), spectator/classroom seating, and equipment storage. (See *Locker Room* for other dedicated support space.)
2. Consider multi-layer, cushioned hardwood floor systems for programs serving any grades 6-12.
3. Consider floor markings in support of any sport or activity in the curricular program.
4. Consider school names, mascots, or logos on floor, integrated with court markings.
5. Consider installing damage-resistant light fixtures where susceptible to damage.
6. Provide safety and security cages around fixtures, controls, thermostats, sensors, etc. susceptible to damage.
7. Consider strategies for maintaining appropriate humidity levels for wood flooring.
8. Consider sports net dividers to maximize class use of gyms.
9. Consider wall padding when walls are in close proximity to out-of-bounds court lines.

- 10. Consider adjustable, retractable basketball backboards/hoops.
- 11. Consider recessed floor plates for volleyball posts.
- 12. Consider motorized bleachers at height-stacks greater than 8ft.

Premium:

- 13. Indoor running tracks/mezzanine.
- 14. Separate, specialized dehumidification systems for wood floors.
- 15. Glass backboards or automatic electric winch backboards other than two for the main court
- 16. More than one electrically operated net/divider systems.
- 17. College or professional grade floor systems

Best Practice/Lessons Learned

- A. Consider gymnasiums as possible multi-functioning and multipurpose spaces. Provide enough sound absorbing material to allow for good voice recognition, and appropriate sound amplification for group presentations.
- B. Locate gymnasiums adjacent to or with easy access to exterior playfields and parking lots for public events.
- C. Provide public toilet areas near the gymnasium.
- D. Provide for wireless network computer access in the gymnasium and offices.
- E. Locate bleachers and gymnasium doors to protect floors from street shoe traffic.
- F. Locate door swings, equipment, and other enclosures so they do not become dangerous obstructions to running students playing within the space.
- G. Place climbing ropes appropriate distance from walls to account for swinging.

Category B – Support Teaching

Shared Spaces

Teacher Workroom/Breakroom/Offices/Parent Resource

Baseline:

- 1. Provide space and amenities for teacher and staff access to centralized instructional resources and equipment. Provide space and amenities for teacher and staff break, food storage and prep. Provide restroom. If prep and/or teacher office/admin is distributed, provide smaller, centralized restroom amenities.
- 2. Provide from among the following features for this educational space:

System	Features
Planning Factors	Typical 600 – 1000sf; minimum 550sf
Spatial Elements	Ceilings: 8ft +/-, rectangular configuration
Finishes	Floor: vinyl or rubber sheet at Workroom/Toilet, carpet at Breakroom. Ceiling: acoustic tile, Walls: paint
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	One tilt/turn operable unit minimum

System	Features
Specialties	Laminate counter work surface over back-to-back base cabinets, 42in wall cabinets over base cabinets/counter, open shelving and/or cubbies, 8lf whiteboard, 8lf tack board, window coverings; PT and soap dispenser
Plumbing	Stainless steel single bowl sink w/lever mixing valve; toilet room with water closet and lavatory
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	As calculated for code compliance
Lighting	Pendant or drop-in indirect, banked controls plus dimming
Power	110v duplex for code compliance, integrated USB ports
Special Systems	Phone/intercom, synchronized clock
Equipment/Furnishings	Refrigerator, microwave (2); networked copier

Provisional:

3. Consider range/hood and dishwasher if used in support of Special Needs life skills.
4. Consider seamless or ceramic tile flooring and ceramic tile to a wainscoting height of 48in in Toilet Room, add to *Finishes*.
5. Consider infrared touchless fixtures in toilet room.
6. Consider solid-surface acrylic and polymer counter tops where sinks are installed.

Premium:

7. Solid-surface counters at other than wet locations.
8. Commercial appliances.

Best Practice/Lessons Learned

- A. Specify laminate countertops with postformed front edge for durability. Use field-installed backsplash for efficient transportation.

Dedicated Spaces

Counseling/Testing

Baseline:

1. Provide space and amenities for student services to include counseling and testing. Services may be itinerant.
2. Provide from among the following features for this educational space:

System	Features
Planning Factors	Typical 100 – 500sf (upper levels provide for small group space); minimum office size 80sf
Spatial Elements	Ceilings: 8ft +/-, rectangular configuration
Finishes	Floor: carpet; Ceiling: acoustic tile; Walls: paint
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	One tilt/turn operable unit per space preferred

System	Features
Specialties	Open wall shelving, 8lf whiteboard, 4lf tack board, window coverings
Plumbing	None required
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	As calculated for code compliance
Lighting	Pendant or drop-in indirect, provide dimming
Power	110v duplex for code compliance; 110v quadplex at each data port
Special Systems	Phone/intercom, synchronized clock; duplex data port (2)
Equipment/Furnishings	Refrigerator, microwave (2)

Provisional:

3. Consider acoustic separation; walls to achieve STC 50.

Premium:

4. (Reserved)

Best Practice/Lessons Learned

- A. Ideal if area is accessible to parents very near main entry.

Educational Resource Storage

Baseline:

1. Provide space and amenities for resources to support seasonal curriculum and other multi-use supplies.
2. Provide from among the following features for this educational space:

System	Features
Planning Factors	Typical 100 – 500sf (upper levels provide for distributed spaces)
Spatial Elements	Ceilings: 8ft +/-, rectangular configuration
Finishes	Floor: carpet; Ceiling: acoustic tile; Walls: paint
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	None
Specialties	Open wall shelving; reinforced for heavy loads
Plumbing	None required
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	As calculated for code compliance
Lighting	Surface mounted or drop-in direct with diffuser
Power	110v duplex for code compliance
Special Systems	None
Equipment/Furnishings	None

Provisional:

3. (Reserved)

Premium:

4. (Reserved)

Best Practice/Lessons Learned

- A. (Reserved)

Time-out Room

Baseline:

1. Provide space and amenities for students to have some quiet time when distressed and/or acting inappropriately.
2. Provide from among the following features for this educational space:

System	Features
Planning Factors	Typical 40 - 80sf (minimum 40sf room size)
Spatial Elements	Ceilings: 8ft +/-, rectangular configuration
Finishes	Floor: carpet; Ceiling: acoustic tile; Walls: FRP or similar vandal resistant
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	None
Specialties	None
Plumbing	None required
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	As calculated for code compliance
Lighting	Surface mounted or drop-in direct with diffuser
Power	110v duplex for code compliance
Special Systems	None
Equipment/Furnishings	None

Provisional:

3. Consider sound absorptive materials as needed.

Premium:

4. (Reserved)

Best Practice/Lessons Learned

- A. Locate away from public interaction but near immediate supervision)

Category C – General Support

Administration

Baseline:

1. Provide space and amenities for student services to include counseling and testing. Services may be itinerant.

2. Provide from among the following features for this educational space:

System	Features
Planning Factors	Typical 100 - 500sf (upper levels provide for small group space); minimum office size 80sf
Spatial Elements	Ceilings: 8ft +/-, rectangular configuration
Finishes	Floor: carpet; Ceiling: acoustic tile; Walls: paint
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	One tilt/turn operable unit per space preferred
Specialties	Open wall shelving, 8lf whiteboard, 4lf tack board, window coverings
Plumbing	None required
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	As calculated for code compliance
Lighting	Pendant or drop-in indirect, provide dimming
Power	110v duplex for code compliance; 110v quadplex at each data port
Special Systems	Phone/intercom head end systems, synchronized clock; duplex data port (2)
Equipment/Furnishings	Large capacity copy/print/scan machine

Provisional:

5. Consider built-in reception counter with ADA height section and lockable storage pedestals, waiting area with chair rail.
6. Consider including dedicated conference room.
- 7.

Premium:

8. (Reserved)

Best Practice/Lessons Learned

- A. Personnel should be able to provide electronic access for approved visitors, who should be welcomed through a glass partition between the administrative office security vestibule. Provide and easily accessible area where visitors may wait, sign in and obtain badges.

Shared Spaces

Student Commons

Baseline:

1. Provide space and amenities for XXX.
2. Provide from among the following features for this educational space:

System	Features
Planning Factors	Typical XXXsf; minimum XXXsf
Spatial Elements	Ceilings: Xft +/-, rectangular configuration

System	Features
Finishes	Floor: carpet; Ceiling: acoustic tile; Walls: paint
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	One tilt/turn operable unit per space preferred
Specialties	8lf whiteboard, 8lf tack board, window coverings
Plumbing	None required
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	As calculated for code compliance
Lighting	Pendant or drop-in indirect, provide dimming
Power	110v duplex for code compliance; 110v quadplex at each data port
Special Systems	Phone/intercom head end systems, synchronized clock; duplex data port (2)
Equipment/Furnishings	TBD

Provisional:

3. (Reserved)

Premium:

4. (Reserved)

Best Practice/Lessons Learned

- A. (Reserved)

Auditorium (& Stage)Baseline:

1. Provide space and amenities for XXX.
2. Provide from among the following features for this educational space:

System	Features
Planning Factors	Typical XXXsf; minimum XXXsf
Spatial Elements	Ceilings: Xft +/-, rectangular configuration
Finishes	Floor: carpet; Ceiling: acoustic tile; Walls: paint
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	One tilt/turn operable unit per space preferred
Specialties	8lf whiteboard, 8lf tack board, window coverings
Plumbing	None required
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	As calculated for code compliance
Lighting	Pendant or drop-in indirect, provide dimming
Power	110v duplex for code compliance; 110v quadplex at each data port

System	Features
Special Systems	Phone/intercom head end systems, synchronized clock; duplex data port (2)
Equipment/Furnishings	TBD

Provisional:

3. (Reserved)

Premium:

4. Square footage that exceeds that required for seating one-third of the student body or for the appropriate stage as recommended by the [enter appropriate space standard source(s)]
5. Additional seating
6. Additional theater curtains
7. Proscenium arches wider than 60'-0"
8. Fly galleries
9. Stage gridirons, pin rails, or catwalks over stages
10. Proscenium openings higher than 25'-0" or stage ceilings higher than 30'-0"
11. Under-stage storage
12. Orchestra pits
13. Professional theater lighting systems
14. Balconies or spectator boxes
15. Elevators dedicated to serving just the auditorium
16. Special curved plaster wall or ceiling assemblies designed for acoustic balancing
17. Decorative wood paneling, wallpaper, and murals
18. Spaces and systems for "black-box" theaters

Best Practice/Lessons Learned

- A. (Reserved)

Multipurpose Room

Baseline:

1. Provide space and amenities for XXX.
2. Provide from among the following features for this educational space:

System	Features
Planning Factors	Typical XXXsf; minimum XXXsf
Spatial Elements	Ceilings: Xft +/-, rectangular configuration
Finishes	Floor: carpet; Ceiling: acoustic tile; Walls: paint
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	One tilt/turn operable unit per space preferred
Specialties	8lf whiteboard, 8lf tack board, window coverings
Plumbing	None required
Heating/Cooling	As calculated for code compliance

System	Features
Ventilation/Exhaust	As calculated for code compliance
Lighting	Pendant or drop-in indirect, provide dimming
Power	110v duplex for code compliance; 110v quadplex at each data port
Special Systems	Phone/intercom head end systems, synchronized clock; duplex data port (2)
Equipment/Furnishings	TBD

Provisional:

- (Reserved)

Premium:

- (Reserved)

Best Practice/Lessons Learned

- (Reserved)

Dedicated Spaces**Lunch Room**Baseline:

- Provide space and amenities for XXX.
- Provide from among the following features for this educational space:

System	Features
Planning Factors	Typical XXXsf; minimum XXXsf
Spatial Elements	Ceilings: Xft +/-, rectangular configuration
Finishes	Floor: carpet; Ceiling: acoustic tile; Walls: paint
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	One tilt/turn operable unit per space preferred
Specialties	8lf whiteboard, 8lf tack board, window coverings
Plumbing	None required
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	As calculated for code compliance
Lighting	Pendant or drop-in indirect, provide dimming
Power	110v duplex for code compliance; 110v quadplex at each data port
Special Systems	Phone/intercom head end systems, synchronized clock; duplex data port (2)
Equipment/Furnishings	TBD

Provisional:

- (Reserved)

Premium:

4. (Reserved)

Best Practice/Lessons Learned

- A. (Reserved)

Pool

Baseline:

1. Provide space and amenities for XXX.
2. Provide from among the following features for this educational space:

System	Features
Planning Factors	Typical XXXsf; minimum XXXsf
Spatial Elements	Ceilings: Xft +/-, rectangular configuration
Finishes	Floor: carpet; Ceiling: acoustic tile; Walls: paint
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	One tilt/turn operable unit per space preferred
Specialties	8lf whiteboard, 8lf tack board, window coverings
Plumbing	None required
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	As calculated for code compliance
Lighting	Pendant or drop-in indirect, provide dimming
Power	110v duplex for code compliance; 110v quadplex at each data port
Special Systems	Phone/intercom head end systems, synchronized clock; duplex data port (2)
Equipment/Furnishings	TBD

Provisional:

3. (Reserved)

Premium:

4. (Reserved)

Best Practice/Lessons Learned

- A. (Reserved)

Weight Room

Baseline:

1. Provide space and amenities for XXX.
2. Provide from among the following features for this educational space:

System	Features
Planning Factors	Typical XXXsf; minimum XXXsf
Spatial Elements	Ceilings: Xft +/-, rectangular configuration

System	Features
Finishes	Floor: carpet; Ceiling: acoustic tile; Walls: paint
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	One tilt/turn operable unit per space preferred
Specialties	8lf whiteboard, 8lf tack board, window coverings
Plumbing	None required
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	As calculated for code compliance
Lighting	Pendant or drop-in indirect, provide dimming
Power	110v duplex for code compliance; 110v quadplex at each data port
Special Systems	Phone/intercom head end systems, synchronized clock; duplex data port (2)
Equipment/Furnishings	TBD

Provisional:

3. (Reserved)

Premium:

4. (Reserved)

Best Practice/Lessons Learned

- A. (Reserved)

Locker Room

Baseline:

1. Provide space and amenities for XXX.
2. Provide from among the following features for this educational space:

System	Features
Planning Factors	Typical XXXsf; minimum XXXsf
Spatial Elements	Ceilings: Xft +/-, rectangular configuration
Finishes	Floor: carpet; Ceiling: acoustic tile; Walls: paint
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	One tilt/turn operable unit per space preferred
Specialties	8lf whiteboard, 8lf tack board, window coverings
Plumbing	None required
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	As calculated for code compliance
Lighting	Pendant or drop-in indirect, provide dimming
Power	110v duplex for code compliance; 110v quadplex at each data port

System	Features
Special Systems	Phone/intercom head end systems, synchronized clock; duplex data port (2)
Equipment/Furnishings	TBD

Provisional:

3. (Reserved)

Premium:

4. (Reserved)

Best Practice/Lessons Learned

- A. (Reserved)

Nurse

Baseline:

1. Provide space and amenities for XXX.
2. Provide from among the following features for this educational space:

System	Features
Planning Factors	Typical XXXsf; minimum XXXsf
Spatial Elements	Ceilings: Xft +/-, rectangular configuration
Finishes	Floor: carpet; Ceiling: acoustic tile; Walls: paint
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	One tilt/turn operable unit per space preferred
Specialties	8lf whiteboard, 8lf tack board, window coverings
Plumbing	None required
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	As calculated for code compliance
Lighting	Pendant or drop-in indirect, provide dimming
Power	110v duplex for code compliance; 110v quadplex at each data port
Special Systems	Phone/intercom head end systems, synchronized clock; duplex data port (2)
Equipment/Furnishings	TBD

Provisional:

3. (Reserved)

Premium:

4. (Reserved)

Best Practice/Lessons Learned

- A. (Reserved)

Kitchen/Food ServiceBaseline:

1. Provide space and amenities for XXX.
2. Provide from among the following features for this educational space:

System	Features
Planning Factors	Typical XXXsf; minimum XXXsf
Spatial Elements	Ceilings: Xft +/-, rectangular configuration
Finishes	Floor: carpet; Ceiling: acoustic tile; Walls: paint
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	One tilt/turn operable unit per space preferred
Specialties	8lf whiteboard, 8lf tack board, window coverings
Plumbing	None required
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	As calculated for code compliance
Lighting	Pendant or drop-in indirect, provide dimming
Power	110v duplex for code compliance; 110v quadplex at each data port
Special Systems	Phone/intercom head end systems, synchronized clock; duplex data port (2)
Equipment/Furnishings	TBD

Provisional:

3. (Reserved)

Premium:

4. (Reserved)

Best Practice/Lessons Learned

- A. (Reserved)

Student StoreBaseline:

1. Provide space and amenities for XXX.
2. Provide from among the following features for this educational space:

System	Features
Planning Factors	Typical XXXsf; minimum XXXsf
Spatial Elements	Ceilings: Xft +/-, rectangular configuration
Finishes	Floor: carpet; Ceiling: acoustic tile; Walls: paint
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	One tilt/turn operable unit per space preferred
Specialties	8lf whiteboard, 8lf tack board, window coverings

System	Features
Plumbing	None required
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	As calculated for code compliance
Lighting	Pendant or drop-in indirect, provide dimming
Power	110v duplex for code compliance; 110v quadplex at each data port
Special Systems	Phone/intercom head end systems, synchronized clock; duplex data port (2)
Equipment/Furnishings	TBD

Provisional:

3. (Reserved)

Premium:

4. (Reserved)

Best Practice/Lessons Learned

- A. (Reserved)

Category D – Supplementary**Circulation****Corridors/Vestibules/Entryways & Stairs/Elevators**Baseline:

1. Provide space and amenities for XXX.
2. Provide from among the following features for this educational space:

System	Features
Planning Factors	Typical XXXsf; minimum XXXsf
Spatial Elements	Ceilings: Xft +/-, rectangular configuration
Finishes	Floor: carpet; Ceiling: acoustic tile; Walls: paint
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	One tilt/turn operable unit per space preferred
Specialties	8lf whiteboard, 8lf tack board, window coverings
Plumbing	None required
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	As calculated for code compliance
Lighting	Pendant or drop-in indirect, provide dimming
Power	110v duplex for code compliance; 110v quadplex at each data port
Special Systems	Phone/intercom head end systems, synchronized clock; duplex data port (2)
Equipment/Furnishings	TBD

Provisional:

- 3. See Section 0711 Passenger Elevators for use of ramps in-lieu-of elevators

Premium:

- 4. (Reserved)

Best Practice/Lessons Learned

- A. (Reserved)

Utilities/Maintenance

Mechanical/Electrical

Baseline:

- 1. Provide space and amenities for XXX.
- 2. Provide from among the following features for this educational space:

System	Features
Planning Factors	Typical XXXsf; minimum XXXsf
Spatial Elements	Ceilings: Xft +/-, rectangular configuration
Finishes	Floor: carpet; Ceiling: acoustic tile; Walls: paint
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	One tilt/turn operable unit per space preferred
Specialties	8lf whiteboard, 8lf tack board, window coverings
Plumbing	None required
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	As calculated for code compliance
Lighting	Pendant or drop-in indirect, provide dimming
Power	110v duplex for code compliance; 110v quadplex at each data port
Special Systems	Phone/intercom head end systems, synchronized clock; duplex data port (2)
Equipment/Furnishings	TBD

Provisional:

- 3. (Reserved)

Premium:

- 4. (Reserved)

Best Practice/Lessons Learned

- A. (Reserved)

Supply Storage & Receiving Areas

Baseline:

- 1. Provide space and amenities for XXX.

2. Provide from among the following features for this educational space:

System	Features
Planning Factors	Typical XXXsf; minimum XXXsf
Spatial Elements	Ceilings: Xft +/-, rectangular configuration
Finishes	Floor: carpet; Ceiling: acoustic tile; Walls: paint
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	One tilt/turn operable unit per space preferred
Specialties	8lf whiteboard, 8lf tack board, window coverings
Plumbing	None required
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	As calculated for code compliance
Lighting	Pendant or drop-in indirect, provide dimming
Power	110v duplex for code compliance; 110v quadplex at each data port
Special Systems	Phone/intercom head end systems, synchronized clock; duplex data port (2)
Equipment/Furnishings	TBD

Provisional:

3. (Reserved)

Premium:

4. (Reserved)

Best Practice/Lessons Learned

A. (Reserved)

Custodial

Baseline:

1. Provide space and amenities for XXX.

2. Provide from among the following features for this educational space:

System	Features
Planning Factors	Typical XXXsf; minimum XXXsf
Spatial Elements	Ceilings: Xft +/-, rectangular configuration
Finishes	Floor: carpet; Ceiling: acoustic tile; Walls: paint
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	One tilt/turn operable unit per space preferred
Specialties	8lf whiteboard, 8lf tack board, window coverings
Plumbing	None required
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	As calculated for code compliance

System	Features
Lighting	Pendant or drop-in indirect, provide dimming
Power	110v duplex for code compliance; 110v quadplex at each data port
Special Systems	Phone/intercom head end systems, synchronized clock; duplex data port (2)
Equipment/Furnishings	TBD

Provisional:

3. (Reserved)

Premium:

4. (Reserved)

Best Practice/Lessons Learned

- A. (Reserved)

Other Building Support (Telecom)

Baseline:

1. Provide space and amenities for XXX.
2. Provide from among the following features for this educational space:

System	Features
Planning Factors	Typical XXXsf; minimum XXXsf
Spatial Elements	Ceilings: Xft +/-, rectangular configuration
Finishes	Floor: carpet; Ceiling: acoustic tile; Walls: paint
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	One tilt/turn operable unit per space preferred
Specialties	8lf whiteboard, 8lf tack board, window coverings
Plumbing	None required
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	As calculated for code compliance
Lighting	Pendant or drop-in indirect, provide dimming
Power	110v duplex for code compliance; 110v quadplex at each data port
Special Systems	Phone/intercom head end systems, synchronized clock; duplex data port (2)
Equipment/Furnishings	TBD

Provisional:

3. Provide dedicated space for telecom rooms. Avoid co-locating racks in electrical or mechanical rooms.
4. Use 2-post racks unless equipment needs call for a 4-post.
5. Provide cable runway over racks for routing cabling.
6. Limit number of telecom rooms to minimum required per standards for size of the building.

7. Locate telecom room in central area of building where possible to average cable lengths.
8. Electrical panel serving the telecom room should have surge protection. Provide rack-mounted UPS for essential systems.
9. Coordinate with Mechanical for cooling needs.
10. Locate utility service entrance in Main Telecom Room where possible.
11. Size room large enough to allow for fire alarm, access control, intrusion detection, DDC, and other similar systems to be located in the room.
12. Provide one circuit per rack, with a larger circuit provided to the main rack with UPS.
13. Use multi-connection KVM units instead of fixed monitors/workstations.
14. Install a paging speaker and telephone in the room.

Premium:

15. Central UPS systems.
16. Air conditioning if temperatures are not excessive in rack cooling systems.

Best Practice/Lessons Learned

- A. (Reserved)

Restrooms/Toilets

Baseline:

1. Provide space and amenities for XXX.
2. Provide from among the following features for this educational space:

System	Features
Planning Factors	Typical XXXsf; minimum XXXsf
Spatial Elements	Ceilings: Xft +/-, rectangular configuration
Finishes	Floor: carpet; Ceiling: acoustic tile; Walls: paint
Doors	Interior for code compliance; hardware, see <i>Safety & Security at Classrooms</i>
Windows	One tilt/turn operable unit per space preferred
Specialties	8lf whiteboard, 8lf tack board, window coverings
Plumbing	None required
Heating/Cooling	As calculated for code compliance
Ventilation/Exhaust	As calculated for code compliance
Lighting	Pendant or drop-in indirect, provide dimming
Power	110v duplex for code compliance; 110v quadplex at each data port
Special Systems	Phone/intercom head end systems, synchronized clock; duplex data port (2)
Equipment/Furnishings	TBD

Provisional:

3. (Reserved)

Premium:

4. (Reserved)

Best Practice/Lessons Learned

A. (Reserved)

4. HIGH PERFORMANCE FACILITIES

The Alaska DEED encourages high-performance schools for Alaska communities. A high-performance school is designed to conserve natural resources, save money, and improve the overall health and well-being of students, staff, and community. Emphasis is placed on low-impact site design, reduced impact on local infrastructure, energy efficiency, water use reduction, non-toxic materials, waste management, indoor air quality, efficient operations, and community engagement.

High performance school design principles can be broken into three general areas of emphasis:

- Integrative design process
- Human health and comfort
- Demand reduction

These principles are woven throughout this document as both required strategies and suggestions for premium strategies. Resources on high-performance school design are included at the end of this section to provide further guidance to project teams.

A. Integrative Design Process

One of the key ingredients to creating a high-performance school is to conduct an integrative design process. The integrative design process is a collaborative approach that includes the full team in decision-making from project inception through design, construction, and commissioning. The process focuses on a whole-systems design approach: recognition that all the components of the building work interdependently and affect the performance of one another.

A few key steps to implementing an integrative design process include:

- Set sustainability goals with the owner at project inception.
- Conduct a full team meeting at the beginning of each project phase.
- Include high-performance design principles as an agenda item at all project meetings.
- Incorporate life cycle costs and operating costs into the project decision-making process.

Buildings are often budgeted on first costs alone. Life cycle costing takes a more integrated approach, factoring in energy savings over time, durability and reduced maintenance of systems and materials, and enhanced occupant health and productivity. High performance design principles place emphasis on looking at the building as a whole over time to minimize energy use, maximize cost savings, and create comfortable and healthy spaces for the occupants.

B. Human Health and Comfort

Learning environments have a huge impact on student performance, health, and overall well-being. High performance schools can provide high quality indoor air and thermal, visual, and acoustical comfort. Emphasis is placed on daylight in classrooms and views to the outdoors, HVAC and lighting controls, non-toxic materials, enhanced filtration, carbon dioxide sensors, cross-contamination prevention, natural ventilation, and increased outdoor airflow rates in mechanically ventilated spaces.

Benefits of high-performance schools can include improved student performance, increased student health, reduced student absentee rates, and greater staff satisfaction.

Baseline:

1. Low water consumption plumbing fixtures.
2. Provide third-party commissioning starting at project concept design.
3. Design heating and cooling systems to meet the requirements of ASHRAE 55 Thermal Comfort in Buildings (latest edition).
4. “Right sizing” of HVAC equipment based on development of building massing and envelope. May require multiple iterations as building layout changes during design.
5. Avoid operating independent heating and cooling systems simultaneously. Utilize HVAC systems that will redistribute heat while also providing cooling, such as variable refrigerant flow (VRF) systems.
6. Design variable output HVAC systems to adapt to varying building heating and cooling demands.
7. Utilize low temperature heating and cooling systems, such as in-floor radiant.
8. Use high-efficiency HVAC equipment.
9. Provide building occupants with individual access to building temperature controls.
10. Minimum MERV-13 filtration on all ventilation systems.
11. Demand control ventilation, with carbon dioxide (CO₂) sensors installed in spaces with high occupant density.

Provisional:

12. Best practices include providing green spaces, open spaces, and shared community spaces in the building; reusing and recycling materials during construction and occupancy; and creating an environment that is a community teaching tool for high performance building and sustainable living.
13. Consider using energy modeling and iterative design to reduce building energy consumption by 5% over ASHRAE-90.1 (current version).
14. Consider providing more than ASHRAE 62.1 minimum outdoor air rates. This may not be appropriate for all locations in Alaska.
15. Consider using the building control system to monitor indoor air quality and adjust ventilation rates to mitigate contaminants such as CO₂ and VOCs.
16. Consider providing a building flushout post construction.

Premium:

17. Provide on-going commissioning of the facility every 5 years.
18. Consider utilizing grey water reclamation systems for use with flushing plumbing fixtures.
19. Consider on-site harvesting of renewable energy such as wind and solar.
20. Provide static and/or dynamic educational displays describing the sustainable features of the facility.
21. Provide a display showing instantaneous and aggregate building water and energy consumption.

C. Demand Reduction

High-performance schools are designed to reduce demand on energy and natural resources, to optimize the performance of building systems, and to reduce the overall operating costs of the school. Emphasis is placed on energy efficient mechanical systems, high-performance envelope design, low-flow water fixtures, renewable energy systems, lighting and daylight controls, and energy efficient equipment and appliances.

As part of an integrative design process, energy modeling and commissioning will confirm that all systems and components are integrated to achieve optimum results and are installed and operated as designed. One strategy may offset another. For instance, daylight sensors may cost more up front as an individual strategy, but once energy savings and associated reduced mechanical loads are considered, the team may realize that they can save money by selecting a smaller mechanical system.

Practices to optimize systems integration and increase efficiency include energy modeling and building commissioning. Design-phase energy modeling is a tool to use early and throughout the design process to test a variety of energy efficiency measures to determine the best way to align systems and components. Commissioning also offers an opportunity to make adjustments in the field and to train occupants on how to use the systems, improving efficiency even further.

Employing high-performance principles such as demand reduction, energy efficiency, and system optimization results in climate appropriate solutions, buildings that have low-to-no impact on local infrastructure, and an overall reduction in the project's carbon footprint.

D. High-Performance Certifications

High-performance building certification systems such as the United States Green Building Council (USGBC) LEED for Schools Rating System can provide detailed guidance on implementing high performance school design strategies.

Although DEED recognizes the value of building certifications by a third-party organization, the State will not participate in costs associated with these certifications.

Premium:

1. Green Building Certification: Register the project with the USGBC LEED Rating System and obtain LEED for Schools certification.
2. Educational Display: Provide a permanent display, building signage, digital dashboard, or building tour that describe the high-performance features of the school.

3. Carbon Footprint Reporting: Calculate the school’s carbon footprint. Include a greenhouse gas inventory and opportunities to reduce greenhouse gas emissions.
4. Climate Action Plan: Develop and implement a climate action plan to raise awareness of the school community’s carbon footprint and engage students, staff, and the community in reducing that carbon footprint.
5. Performance Benchmarking: Track the school’s energy use over time, using a tool such as the US EPA’s Energy Star Portfolio Manager