APPENDIX A - Educational Specs

Soldotna Schools

Feasibility Study

06.26.25

EXECUTIVE SUMMARY

We believe that instruction should drive construction, and any plans to adjust, renovate, or build a school building or campus should undoubtedly result in a facility that meets individual school, districtwide, and community goals for teaching and learning, now and into the future. This document is intended to define strategies for planning physical facilities to accommodate multiple schools in Soldotna, Alaska.

Educational facility planning is inherently a conversation that integrates education and architecture. The planning and design teams collaborate with each other and with school and borough leadership to explore how the educational mission and goals can be supported by physical facilities. Specifically for the effort illustrated herein, the collaborative process included integrated insights from the architectural firm of MCG Explore Design and BrainSpaces as the educational facility planning consultant. Together with school, district and borough leadership, staff, and faculty, the team facilitated, explored, synthesized and developed the spatial parameters for the school programs included in this assignment:

- Soldotna Elementary School (SES)
- Redoubt Elementary School (RES)
- Soldotna Montessori Charter School (SMCS)
- River City Academy (RCA)
- Connections Home School (Connections)

Project Description & Rationale

In combination, shifting demographics, aging facilities, evolving educational needs, available funding, and ever-increasing operational expenses drive the need to define space needs for these five school programs and their projected student enrollments.

Once space needs were defined, strategies for accommodating these needs were explored. Each of the current facilities housing these schools represent moderate to significant physical and spatial challenges. Thus, options for relocating schools to more appropriate facilities were explored.

Two existing facilities were identified as potentially appropriate locations of the five school programs:

- Redoubt Elementary School building
- Soldotna Prep School building (currently unoccupied by students)

These two buildings are located on adjacent properties, offering potential campus-like benefits such as shared parking and/or bus loops.

The **Feasibility Study** (feasibility of converting these two existing buildings into effective environments for the five targeted programs) was **explored in parallel with the development of the Educational Specifications** (aka Ed Specs).

The Assignment

As noted, the assignment included the exploration and documentation of space needs for five individual educational programs in the Soldotna area of the Kenai Peninsula Borough and School District for the purposes of developing a Feasibility Study to accommodate all programs into two existing adjacent buildings.

During the process, it was determined that space for the Connections Home School program would be more appropriately located separately from the other four schools. While space needs for Connections Home School were developed (and are included in the Ed Specs), this program is not included in the Feasibility Study for which this Ed Spec document is an appendix.

The assignment also included an exploration of whether facilities could support a relocation of 6th grade students from both Redoubt and Soldotna Elementary Schools into Skyview Middle School, which currently houses grades 7 and 8 only. For the purposes of the Ed Specs, projected enrollments for **6th graders remain in the elementary schools** and do fit (can be accommodated) in the designated existing buildings as illustrated in the Feasibility Study.

Note that IF the decision is made to relocate 6th grade students to Skyview, they can be reasonably accommodated due to the removal of River City Academy from its current location in Skyview.

Locations of School Programs & Enrollments

While it is unusual for an Ed Spec to indicate the site locations of various programs across a school district, the uniqueness of the assignment along with the parallel Feasibility Study process dictated several "what-if" scenarios to be explored.

The Study illustrates various scenarios explored during the process. It is notable that space requirements also varied among the scenarios considered. For example, an option to locate Redoubt Elementary and Soldotna Elementary students in two separate facilities required square-footage for two libraries vs one combined library. Space requirements included in these Ed Specs are for the selected/documented Feasibility Study solution only.

The Feasibility Study proposes to locate SMCS and RCA in the existing (renovated) Redoubt building, and to combine enrollments from RES and SES into the existing renovated Soldotna Prep Building. The location of space for Connections Home School is to be determined.

Thus the following project parameters group PK-6 enrollments for SES & RES into one line item, referred to as simply "Elementary".

Project Parameters

Projected Enrollments[1]

- Elementary (PK-6): 560 to 580 students
- SMCS (K - 6): 164 students
- RCA (7 - 12): 80-90 students
- Connections: +/- 100 students on-site

Class Sizes[2]

- PreK Classrooms: 15 students
- Kinder Classrooms: 20 students
- Grades 1-6 Classrooms: 24 students
- SpEd Classrooms: 10 students
- RCA Classrooms: 15 students

Net Building Areas[3]

- Elementary (PK-6): 63,000 net square feet
- SMCS (K - 6): 18,000 net square feet
- RCA (7 - 12): 15,000 net square feet
- Connections: 15,000 net square feet

(1) Elementary includes students from both Redoubt and Soldotna ES
(2) Average number of students per classrooms for planning purposes.
(3) Refer to the Facilities Master Plan for projected Gross Building Areas.

Ed Spec Document Structure & Use

This document describes how the missions and goals of the subject schools can be supported by physical facilities. Detailed information included herein is intended to document user needs and to assist the design team in accommodating these needs during building design phases.

Ed Specs should be used in conjunction with current District and Borough standards and guidelines such as those for technology, design, and building performance, and with all applicable codes and regulations, including ADA, and are not intended to supersede any such requirements. Where guidelines noted herein are in conflict with these requirements, the applicable guidelines, codes and regulations shall govern. Where guidelines noted herein cannot be or are not planned to be incorporated into a building design, the design team should inform the project representative to discuss and/or determine acceptable alternatives.

The content of this document is intended to align with the Alaska Department of Education & Early Development (AKDEED) requirements outlined in the Guide for Developing Educational Specifications. To avoid redundancy with the Feasibility Study however, some of this information may be found within the body of the Feasibility Study report to which these Ed Specs are attached. This includes items such as diagrammatic adjacencies, technical/MEP requirements, cost and funding information, and the like.

ACKNOWLEDGEMENTS

For this project, space planning, programming and project visioning all occurred in concert with the facilities feasibility and master planning efforts. The multi-faceted team collaborated to discover and then translate the stakeholders' visions into facilities ideas and solutions. Thus, the development of this Educational Specification document represents a collaboration among several individuals, teams and firms.

Diverse perspectives of both the client's leadership and stakeholder teams and the planning and design teams contribute to the actionability of the ed specs and the facilities master plan.

Planning & Design Team

MCG Explore Design
- Cara Rude, Project Manager
- Michael Carlson, Architect
- Evelyn Rousso, Architect

BrainSpaces
- Amy Yurko, Educational Facilities Planner

Steering Committee
Ben Hanson, KPB IT Employee / IT Director
C.O Rudstrom, Community Member
Kelli DeRaeve, Community Member
Kevin Lyon, KPBSD Planning and Operations Director
Kelli Creglow, KPBSD Employee
Krista Aurthur, Retired School District Employee / Teacher
John Hedges, KPB Purchasing & Contracting Director

Kenai Peninsula Borough
- Tim Sher, Project Manager

School Representatives
- John DeVolld, Soldotna Montessori Charter School
- Doug Hayman, Connections Home School Program
- Shea Nash, River City Academy
- Austin Stevenson, Soldotna Elementary School
- Shonia Werner, Skyview Middle School
- Jason Williams, Redoubt Elementary School

Steering Committee Worksession

Student artwork at Soldotna Montessori

Additional Participation & Insights
During the process, all current schools included in this assignment were toured and evaluated. In most cases, two open-invitation staff meetings were conducted at each school to gather ideas and insights from teachers and staff, including topics that ranged from space and operational needs, to school culture and identity, to traffic challenges during drop-off and pick-up times. The planning and design team wishes to thank these and all participants for your passion for your schools and for your willingness to offer ideas to enhance educational environments for your school communities.

Actionable Results
The parallel efforts of Feasibility Study and Ed Spec development allowed the project leadership committee and planning/design team to explore and create coordinated and actionable tools, which the school district and borough can use to move the project(s) forward.

PHYSICAL & EDUCATIONAL CONTEXTS

The **Kenai Peninsula Borough School District** is located in Southcentral Alaska and serves over 8,500 students from 17 unique communities. Of the 42 schools within the District, the five schools included in this assignment are among those located in the Central Peninsula area.

- Redoubt Elementary School (RES)
- Soldotna Elementary School (SES)
- Soldotna Montessori Charter School (SMCS)
- River City Academy (RCA)
- Connections Home School (Connections)

Above: District Map locating schools addressed in this document

Above: Local Map of schools addressed in this document

Soldotna Elementary

Current Enrollment: 265
Grade Levels: PK - 6

Soldotna Elementary School currently serves PreK through 6th grade learners in a generally traditional model elementary organized by grade and including an individual teacher for each classroom. Unique aspects of the program include schoolwide common time for math instruction so that students may be organized by proficiency and need. Project-based learning and team teaching at the upper grade levels are encouraged.
The school also offers Pre-School Special Services Program, Title 1, gifted (Quest), PE and music programs.

"Soldotna Elementary students will be engaged, creative, innovative, and compassionate. They are challenged to excel in their educational journey with confidence and competence to become intellectually, physically, and emotionally fit."

The Library at Soldotna Elementary

Redoubt Elementary

Current Enrollment: 320
Grade Levels: PK - 6

Redoubt Elementary School offers a caring learning environment for all its students. With a strong PBIS framework, the school is proud of the positive school climate where teachers and learners are supported and valued. Student opportunities include Title 1 services and a strong network of dedicated teachers.

"Redoubt is dedicated to providing meaningful and relevant opportunities that foster a love for learning, committing to help students become intellectually, physically, and emotionally fit."

A classroom space at Redoubt Elementary

Soldotna Montessori Charter School

Current Enrollment: 164
Grade Levels: K - 6

Soldotna Montessori Charter School currently shares facilities with Soldotna Elementary. The program offers a unique, hands-on learning experience focused on individual pacing, mixed-age classrooms, and self-directed learning. It emphasizes practical life skills and academic studies through specially designed materials and a carefully prepared environment. In mixed-age classrooms, students work at their own pace and follow their own interests, guided, but not dictated by the teacher.

"Our mission is to create kind, confident, self-reliant learners who are globally aware and impactful in and beyond their community. We enrich students' academic excellence, social and emotional learning based on the philosophy of Dr. Maria Montessori."

A portable classroom used by Soldotna Montessori

River City Academy

Grade Levels: 7-12
Current Enrollment: +/- 80
Projected Enrollment 90-100

River City Academy values the growth and development of each student, celebrating their unique strengths and talents. In our supportive small school environment, we prioritize cultivating Cognitive Skills, growth mindset, content mastery, and Habits of Success. Through personalized guidance and intentional Mentoring, we empower students to excel academically, overcome challenges, and find success in areas that were once difficult. We foster a love for learning, equipping students with the tools to apply their education effectively in the real world while valuing their input and active participation in shaping their own educational journey.

"River City Academy values student growth and unique strengths. We focus on Cognitive Skills, growth mindset, and success habits. Through mentoring and teaching until mastery, we help students overcome challenges and apply their learning in the real world."

The Learning Commons at RCA (formerly the Skyview Library)

Connections Homeschool

Grade Levels: PK-12
Current Enrollment: +/- 1,200

Connections is the only homeschool program designed specifically for Kenai Peninsula families. As part of the Kenai Peninsula Borough School District, Connections' students have access to classes at neighborhood schools and are able to participate in neighborhood school sports and other co-curricular activities.

Focus for families, staff, and students is on student success using a multitude of curriculum choices and variable pacing options in order to meet the goals directed by family values.

"The purpose of Connections Homeschool Program is to serve as the voice of homeschool education in KPBSD communities, provide individualized education options, and support parents as their children's primary teachers."

The Multi-Purpose Commons at Connections Homeschool

Soldotna Prep

Grade Levels: NA
Current Enrollment: NA

The Soldotna Prep Building has seen multiple uses since its construction. Formerly housing 9th grade students, the school was closed in 2019. After closure, 9th grade students joined 10th, 11th and 12 grade students at the adjacent Soldotna High School. High school athletics programs continue to use the building's gymnasium.

Since its closure, the building has been maintained and supports a variety of uses such as for meetings, professional development and training, offices, etc.

The Gymnasium in the Soldotna Prep building

ENROLLMENT PROJECTIONS

Space needs for a school facility are driven by enrollments. Along with activity programs and electives, the number of students to be accommodated within the school building(s) inform the sizes of spaces such as cafeterias and libraries and the quantities of spaces such as classrooms.

Current and projected enrollments supplied by the District serve as a basis for determining the design capacity for each school. For the purposes of this Feasibility Study, target enrollments were determined for each grade level, allowing the team to "right-size" the types, sizes and quantities of spaces.

In the chart shown on this page, "Current" enrollments indicate student counts from school year 2024-2025, and "Projected" enrollments indicate estimates for school year 2029-2030. Targets determined by the steering committee for the purposes of this Feasibility Study are shown in red text.

Note that the capacity of a facility may be somewhat fluid, depending on how the spaces are used. For example, if the use of a regular education classroom for 24 students changes to support special education self-contained program of 10 students, then the overall capacity of the school would be reduced by 14 students. Another example, if say 10 regular classrooms for 24 students each were loaded with 30 students each, then capacity would increase by 60 students.

Enrollment Data	Soldotna ES (PK-6)			Reboubt ES (PK-6)			SMCS (K-6)			Skyview (7-8)			RCA (7-12)		
	Current	Projected	Study	Current	Projected	Study	Current	Projected	Study	Current	Projected	Study	Current	Projected	Study
Grade Levels	24-25	29-30	Targets	24-25	29-30	Targets	24-25	29-30	Targets	24-25	29-30	Targets	24-25	29-30	Targets
PK	8	0*	20	18	0*	20									
K	34	30	30	32	38	40	20	20	20						
1	40	38	40	42	38	40	24	24	24						
2	31	30	30	46	37	40	24	24	24						
3	42	31	30	45	38	40	24	24	24						
4	33	26	30	44	40	40	24	24	24						
5	39	35	40	40	32	40	25	24	24						
6	31	40	40	54	42	40	23	24	24						
7-8										342	410	410	26	22	30
9-12													52	44	60
TOTALS	258	230	260	321	265	300	164	164	164	342	410	410	78	66	90

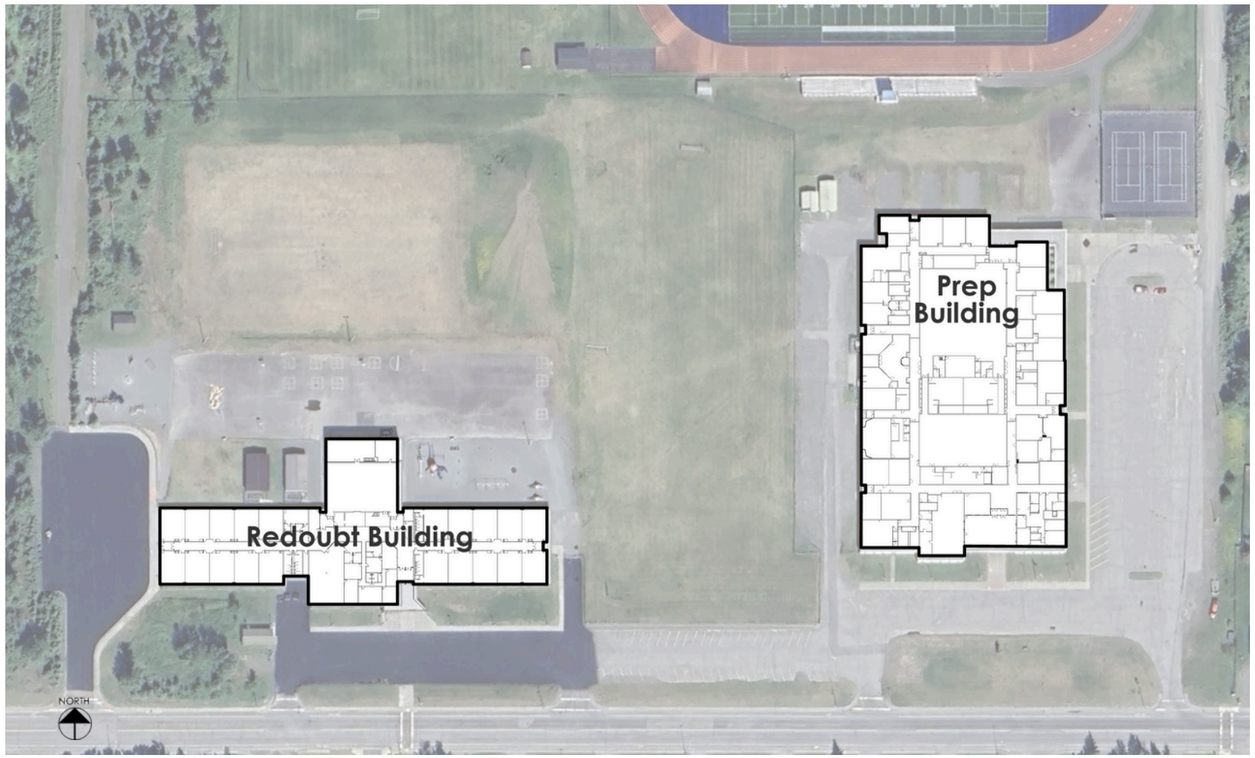
*PK Enrollments were not included in Referenced Enrollment Projections

Note: RCA enrollments are limited by space constraints.

CAMPUS CONTEXT

The Feasibility Study Report proposes to relocate SMCS and RCA to the existing (renovated) Redoubt building, and to combine enrollments from RES and SES into the existing renovated Soldotna Prep building. (The location of space for Connections Home School is to be determined.)

Both facilities are single-story buildings, however, the Prep building includes mechanical mezzanines above a portion of the ground floor. Both buildings require technical upgrades and plan modifications to support the proposed program placements. Additional details for both existing buildings are included in Appendix B: Facilities Assessments.

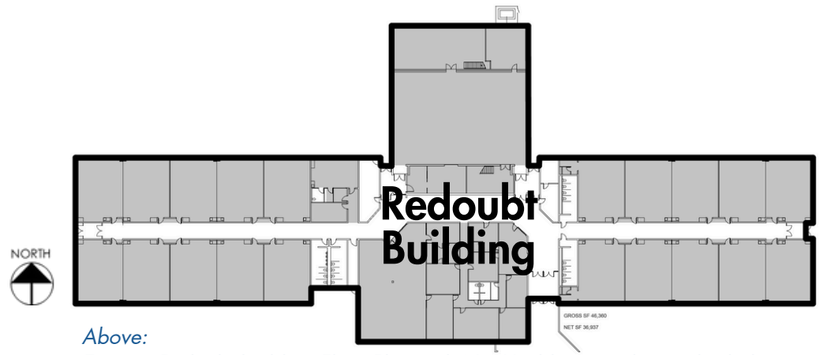


Above: Existing buildings to house relocated programs are located adjacent to each other. Soldotna High School is just north of the Prep Building.

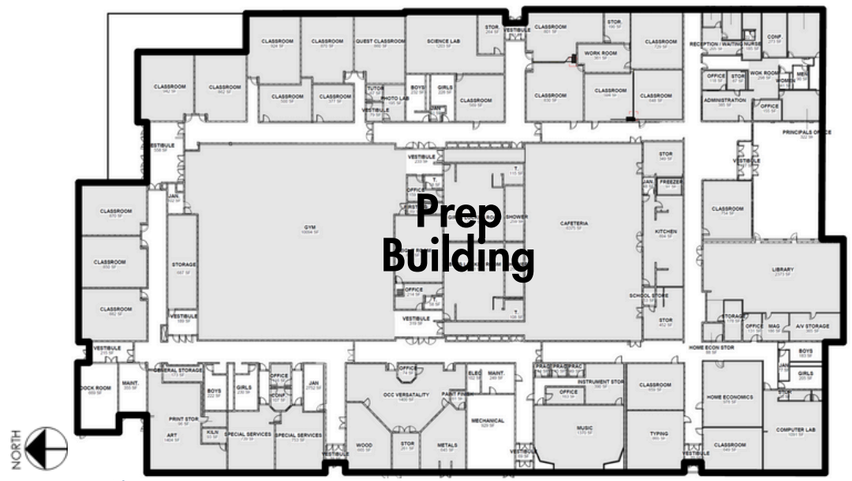
Building Areas

Existing building areas, calculated by MCG from floor plans supplied by the District, are shown rounded for clarity. Area for mechanical mezzanines at Prep are not included.

Building	Net Area	Gross Area
Redoubt	37,000 nsf	46,500 gsf
Prep	56,000 nsf	80,500 gsf



Above: Existing Redoubt building Floor Plan with Net Usable Area shown shaded in gray.



Above: Existing Prep building Floor Plan with Net Usable Area shown shaded in gray. (Note that this floor plan is rotated in graphics associated with the FMP)

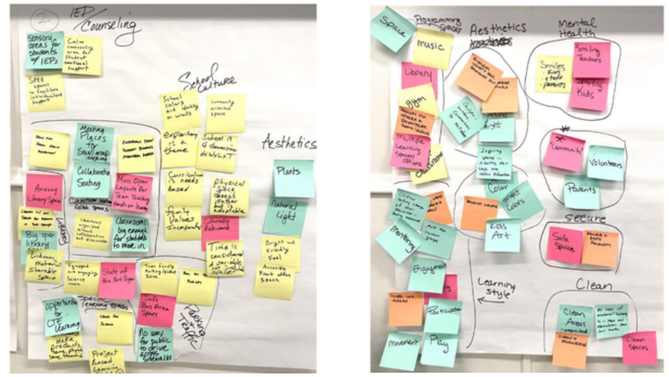
VISION

The District's 2022-2027 Strategic Plan serves as a cornerstone for the vision for the project. While all Core Values and Priorities are referenced, Priority Five: Organizational and Resource Management is of key significance. It reads: *"Organizational and Resource Management represents the conscious commitment to align the district as one team, unified in a singular commitment to support all schools, students, and families, and build a culture of continuous improvement centered on designing equitable systems for school and instructional improvement."*

Additional details can be found on the District's website: https://kpbsd.org/

Guiding Principles

Throughout the process, ideas and insights were gathered from stakeholders. While these ideas ranged from wide, over-arching goals to ideas about specific elements of design, several common themes emerged upon which all could agree. These themes were translated into a collection of Principles which are intended to guide the development of the planning and design solution.



Example of Participant Worksheets from Stakeholder Workshop #2

Students feel safe and nurtured,
allowing them to thrive academically, socially, and emotionally.

Flexibility optimizes functionality
Adaptability accommodates shifts in enrollments, space needs, programs, and learning over time.

Positive environments invite participation
The school is a supportive environment where students and their families feel welcome and valued.

Community connections support student success
School communities identify with and feel connected to their school and are proud to support it.

Innovation promotes continuous improvement
The best interests of each student is continuously supported.

Learner needs are prioritized
Teaching and learning are individualized, engaging, and effective for students at all levels.

Identity builds belonging
Aesthetics are important, and each school's identity is evident in the building design(s).

SPACE REQUIREMENTS

Space Planning Parameters are intended to define physical considerations for environments to support teaching, learning and school operations. Detailed information included herein is intended to document user needs, complete the Feasibility Study to which this Appendix is attached, and to assist the design team in accommodating these needs during building design phases.

This section of the Ed Specs includes a range of both broad and detailed planning and design parameters organized by school, and including categories common to all subject schools.

A - Core Learning & Special Education Spaces
B - Instructional Activities (such as PE, Art, Library, etc.)
C - Offices & Support Spaces
D - Common Areas (such as food services, multi-purpose room, etc.)
E - Building Service Areas (square-footages for most of these spaces are typically included within the design team's grossing factor)

The chart on the right **summarizes** space needs for each of these categories and for each school program included in this assignment. Full charts of space requirements for each school / program are included on the following pages.

The chart also tallies the enrollment capacities for each program. It is important to note that capacity numbers recognize estimated utilization rates and average class sizes which if adjusted will alter the these totals. For example, classrooms with 20 students each will result in fewer student capacity than those same classrooms loaded with 25 students each. For the purposes of the Feasibility Study, standards and averages supplied by the District were used to achieve the calculations shown.

Individual programs are detailed on the following pages.

SCHOOLS / PROGRAMS	AREA & CAPACITY	
1.00 SOLDOTNA-REDOUBT ES	Net S.F.	Capacity
1-A Core Learning & SpEd	35,000	560
1-B Instructional Activities	17,000	0
1-C Offices & Supports	4,000	0
1-D MPR / Commons	6,000	0
1-E Building Services (Gross Areas TBD)	1,000	0
	63,000	**560**
2.00 Not Used	Combined with Category 1.00	
3.00 SMCS	No Change	Capacity
3-A Core Learning & SpEd	9,000	164
3-B Instructional Activities	6,500	0
3-C Offices & Supports	1,800	0
3-D MPR / Commons	700	0
3-E Building Services (Gross Areas TBD)	0	0
	18,000	**164**
4.00 RIVER CITY ACADEMY	No Change	Capacity
4-A Core Learning & SpEd	4,000	45
4-B Instructional Activities	6,500	45
4-C Offices & Supports	1,500	0
4-D MPR / Commons	3,000	0
4-E Building Services (Gross Areas TBD)	0	0
	15,000	**90**
5.00 CONNECTIONS (Off Campus Location TBD)	No Change	Capacity
5-A Core Learning & SpEd	1,200	30
5-B Instructional Activities	6,000	60
5-C Offices & Supports	3,200	0
5-D MPR / Commons	4,600	0
5-E Building Services (Gross Areas TBD)	0	0
	15,000	**90**

Anatomy of a Space Program

The diagram below identifies the components of information included for each school.
Bold space titles indicate "teaching spaces" or classrooms, while plain text indicates spaces needed to support teaching and learning in those spaces.

Spatial Adjacencies

Since the Ed Specs were developed in conjunction with the Feasibility Study, spatial adjacencies are represented in the Floor Plans included in the report. No additional adjacency diagrams were developed.

How Many / How Big = Quantity x Size

School or Component

Subcategory

Individual Spaces

1.0 SOLDOTNA-REDOUBT ELEMENTARY VERSION 2.6

1-A Core Learning & SpEd	Qty.	Net S.F.	Total Net S.F.	NOTES
.01 **PRE-K Classrooms** (with restrooms)	2	900	1,800	
.02 **KINDER. Classrooms** (with Restrooms)	4	900	3,600	
.03 **GRADES 1 - 5 Classrooms**	15	900	13,500	classroom groupings by grade-level were requested
.04 **GRADE 6 Classrooms**	3	900	2,700	
.05 Learning Commons / Activity Area	7	600	4,200	
.06 Shared Storage / Book Rooms	2	200	400	
.07 Resource Classrooms	4	400	1,600	
.08 **SpEd Intensive Needs Classrooms**	6	900	5,400	may be used as additional PreK classrooms if needed
.09 Intensive Needs Restrooms & Supports	3	100	300	
.10 Specialty Programs (Intervention, Kenaitze, Behavior, etc.)	2	400	800	
.11 Behavior Program Restroom	1	50	50	
.12 Speech Therapy / ELL Instruction	1	250	250	
.13 Small Conference / Small Group Room	2	100	200	
.14 Sensory Room	1	200	200	
.15 Student Restrooms	4	200	gross area	
.16 Faculty Restrooms	4	100	gross area	
			35,000	

1-B Instructional Activities	Qty.	Net S.F.	Total Net S.F.	NOTES
.01 **Art/Science Activity Lab**	1	1,200	1,200	
.02 Storage / Prep	1	100	100	
.03 Kiln Room	1	100	100	

All areas are shown as NET square-footages. GROSS square footage is determined during design. Slight variations are expected to accommodate architectural layouts within existing structures.

These are miscellaneous notes taken during the process and/or added to clarify the intent of a given space.

Above:
Excerpt from a space requirement spreadsheet illustrating the types of information included. The full programs of space needs for each school are included on the following pages.

Space Requirements for
SOLDOTNA - REDOUBT ELEMENTARY

The Feasibility Study resulted in a plan to relocate both Soldotna and Redoubt elementary students into a single building, Soldotna Prep. Thus space requirements for these two school is also shown combined.

1.0 SOLDOTNA-REDOUBT ELEMENTARY — VERSION 2.6

1-A Core Learning & SpEd	Qty.	Net S.F.	Total Net S.F.	NOTES
.01 **PRE-K Classrooms** (with restrooms)	2	900	1,800	
.02 **KINDER. Classrooms** (with Restrooms)	4	900	3,600	
.03 **GRADES 1 - 5 Classrooms**	15	900	13,500	classroom groupings by grade-level were requested
.04 **GRADE 6 Classrooms**	3	900	2,700	
.05 Learning Commons / Activity Area	7	600	4,200	
.06 Shared Storage / Book Rooms	2	200	400	
.07 Resource Classrooms	4	400	1,600	
.08 **SpEd Intensive Needs Classrooms**	6	900	5,400	may be used as additional PreK classrooms if needed
.09 Intensive Needs Restrooms & Supports	3	100	300	
.10 Specialty Programs (Intervention, Kenaitze, Behavior, etc.)	2	400	800	
.11 Behavior Program Restroom	1	50	50	
.12 Speech Therapy / ELL Instruction	1	250	250	
.13 Small Conference / Small Group Room	2	100	200	
.14 Sensory Room	1	200	200	
.15 Student Restrooms	4	200	gross area	
.16 Faculty Restrooms	4	100	gross area	
			35,000	

1-B Instructional Activities	Qty.	Net S.F.	Total Net S.F.	NOTES
.01 **Art/Science Activity Lab**	1	1,200	1,200	
.02 Storage / Prep	1	100	100	
.03 Kiln Room	1	100	100	
.04 **Music Classroom / Performance Platform**	1	1,200	1,200	
.05 Instrument Storage Room	1	200	200	
.06 **Gymnasium**	1	9,500	9,500	
.07 P.E. Office	1	100	100	
.08 PE Equipment Storage	1	350	350	
.09 Motor Skills / OT/PT	1	400	400	near child find office
.10 Adaptive PE Equipment Storage	1	50	50	may be within cabinets / movable storage units
.11 **Library / Media Center**	1	2,500	2,500	
.12 Library Technology / STEM Learning Lab	1	600	600	
.13 Librarian's Office	1	100	100	
.14 Library Workroom / Storage	1	150	150	
.15 IT Equip. / Media Server	1	150	150	
.16 IT Office / Help Desk	1	100	100	
.17 Media Production / Recording	1	200	200	
			17,000	

1-C Offices & Supports	Qty.	Net S.F.	Total Net S.F.	NOTES
.01 Security Vestibule	1	200	200	
.02 Entry Lobby / Check-In / Waiting Area	1	300	300	
.03 Reception / Secretary	1	300	300	
.04 Parent / Community Center	1	300	300	
.05 Principal's Office	2	150	300	
.06 Small Conference / Opportunity Room	1	100	100	
.07 Main Conference Room	1	300	300	
.08 Storage / Workroom	1	300	300	
.09 Lost & Found Alcove	1	50	50	
.10 Child Find Office / Outreach	1	120	120	
.11 Student Services Offices (Psych, Counseling, Etc.)	3	120	360	
.12 Small Group Room	1	100	100	
.13 Nurse Office	1	120	120	
.14 Infirmary / Treatment	1	200	200	
.15 Restroom / Changing / Shower	1	100	100	
.16 Storage / WD	1	50	50	
.17 Staff Breakroom	1	600	600	
.18 Staff Restrooms	4	50	200	
			4,000	

1-D MPR / Commons	Qty.	Net S.F.	Total Net S.F.	NOTES
.01 MPR / Dining Commons (or Use Gym)	1	4,000	4,000	
.02 Table/Chair Storage	1	300	300	
.03 After School Program Storage	1	100	100	
.04 Kitchenette (after school activities)	1	250	250	
.05 School Store	1	100	100	
.06 Merchandise Storage	1	50	50	
.07 MPR Restrooms	2	300	gross area	
.08 Food Services Kitchen & Supports	1	800	800	
.09 Kitchen Support Spaces	2	200	400	
			6,000	

1-E Building Services (Gross Areas TBD)	Qty.	Net S.F.	Total Net S.F.	NOTES
.01 Receiving	1	400	400	
.02 Central Building Storage	1	300	300	
.03 Custodial Closets (qty. TBD)			gross area	
.04 Custodial Office/Storage	1	100	100	
.05 Outdoor Storage	1	200	200	
.06 Mechanical Rooms			gross area	
.07 Additional Gross Areas TBD During Design			-	
			1,000	

Totals for **SOLDOTNA-REDOUBT ELEMENTARY**	Total Net S.F.
NET AREA TOTAL:	**63,000**

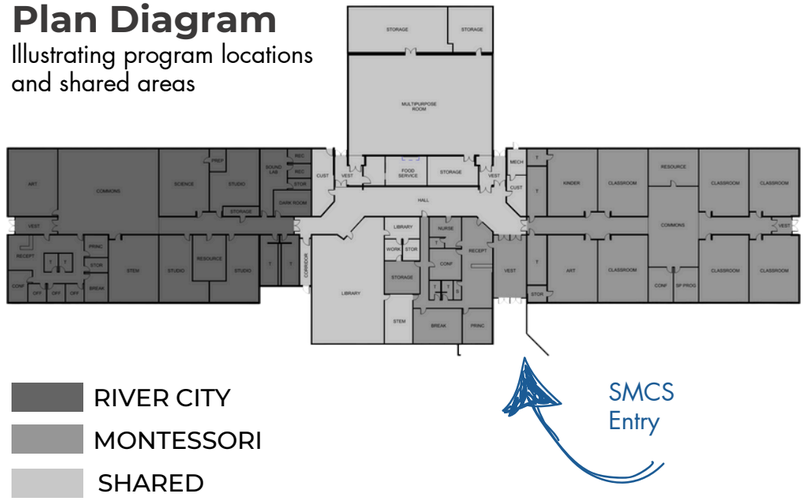
Space Requirements for SOLDOTNA MONTESSORI CHARTER SCHOOL (SMCS)

The Feasibility Study resulted in a plan to relocate SMCS into the Redoubt building, along with River City Academy. Several spaces such as the Gym/MPR are expected to be shared - scheduled to be used at different times - by both programs.

Refer to the diagram below and/or the Feasibility Study floor plans for illustrations of potential co-location of these programs.

Plan Diagram

Illustrating program locations and shared areas



3.0 SMCS — VERSION 2.6

3-A Core Learning & SpEd	Qty.	Net S.F.	Total Net S.F.	NOTES
.02 **Kinder Classroom**	1	1,000	1,000	
.05 **Montessory Classrooms**	6	1,000	6,000	
.06 Learning Commons / Activity Areas	3	300	900	
.07 Shared Storage	1	100	100	
.08 Resource Classrooms	1	500	500	+/- 8
.11 Specialty Programs (intervention, Quest, etc.)	1	250	250	2-3 interventionists, Quest (8-10),
.14 Small Conf / Small Group Room	1	250	250	small groups & presentations
.19 Student Restrooms	2	200	gross area	
.20 Staff Restrooms	2	50	gross area	
			9,000	

3-B Instructional Activities	Qty.	Net S.F.	Total Net S.F.	NOTES
.01 **Art/Science Activity Lab**	1	1,000	1,000	Art, STEM, Music, etc.
.02 Storage / Prep	1	100	100	
.03 Kiln Room	1	50	50	
.04 **Gymnasium / MPR**	1	2,700	2,700	SHARE with RCA (SF shown @ 60%)
.05 PE Equipment Storage	1	300	300	
.06 **Library / Media Center**	1	2,000	2,000	
.07 Library Workroom / Storage	1	150	150	
.08 IT Equip. / Media Server	1	200	200	
.09			-	
.10			-	
			6,500	

3-C Offices & Supports	Qty.	Net S.F.	Total Net S.F.	NOTES
.01 Security Vestibule	1	100	100	
.02 Reception / Secretary	1	200	200	
.03 Principal's Office	1	150	150	
.04 Main Conference Room	1	200	200	
.05 Storage / Workroom	1	150	150	
.06 Lost & Found Alcove	1	50	50	
.07 Student Services Offices (Psych, Counseling, Etc.)	1	150	150	
.08 Small Group/Conf Room	1	100	100	
.09 Nurse Office	1	120	120	
.10 Restroom / Changing / Shower	1	80	80	
.11 Staff Breakroom	1	300	300	
.12 Staff Restrooms	2	100	200	
.13 Storage / WD			-	rare use of current shared space
			1,800	

3-D MPR / Commons	Qty.	Net S.F.	Total Net S.F.	NOTES
.01 MPR / Commons	0		-	currently eat in classrooms may use Gym/MPR combo
.02 Food Services Kitchen & Supports	1	400	400	
.03 Commons Storage	1	200	200	
.04 Kitchenette	1	100	100	
			700	

3-E Building Services (Gross Areas TBD)	Qty.	Net S.F.	Total Net S.F.	NOTES
.01 TBD / Shared			-	
			0	

Totals for **SMCS**	Total Net S.F.	NOTES
NET AREA TOTAL:	**18,000**	

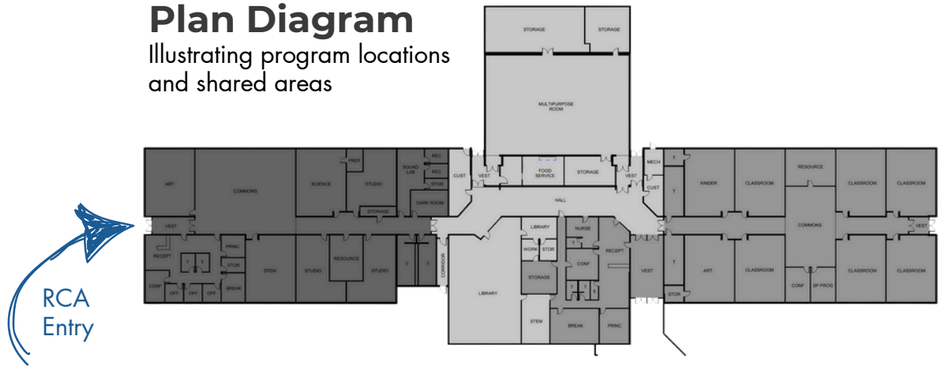
Space Requirements for RIVER CITY ACADEMY (RCA)

The Feasibility Study resulted in a plan to relocate River City Academy into the Redoubt building, along with SMCS. Several spaces such as the Gym/MPR are expected to be shared - scheduled to be used at different times - by both programs.

Refer to the diagram below and/or the Feasibility Study floor plans for illustrations of potential co-location of these programs.

Plan Diagram

Illustrating program locations and shared areas



4.0 RIVER CITY ACADEMY — VERSION 2.6

4-A Core Learning & SpEd	Qty.	Net S.F.	Total Net S.F.	NOTES
.01 **Core Learning Studios**	3	800	2,400	
.02 **Science Lab**	1	1,000	1,000	
.03 Science Prep/Storage	1	100	100	
.04 Resource Learning	1	500	500	openable to a core classroom, and/or dividable space
			4,000	

4-B Instructional Activities	Qty.	Net S.F.	Total Net S.F.	NOTES
.01 **Art / Cuinary Applied Learning Lab**	1	1,500	1,500	4 kitchen stations, adjacent to commons
.02 **STEM / Technology Lab**	1	1,500	1,500	
.03 **Fitness / Wellness / PE**	1	1,800	1,800	SHARE Gym with SMCS (SF shown at 40%)
.04 PE Storage	1	300	300	
.05 Storage for Instructional Activities	3	200	600	1 per Lab
.06 Applied Learning Mini-Lab (Dark Room)	1	300	300	screen printing +/ 4-5 students
.07 **Sound Lab / Digital Music**	1	300	300	sound/video studio
.08 Recording Booths	2	75	150	
.09 Sound Equipment Storage	1	50	50	
			6,500	

4-C Offices & Supports	Qty.	Net S.F.	Total Net S.F.	NOTES
.01 Security / Entry	1	100	100	
.02 Secretary / Reception	1	220	220	include a safe behind a closed/lockable door
.03 Principal Office	1	150	150	looking into the commons
.04 Conference Room	1	200	200	not attached to commons area
.05 Student Services Offices	3	110	330	psych, counselor, speech, etc.
.06 Staff Lounge	1	200	200	easy access from secretary, school store,
.07 Workroom	1	200	200	
.08 Secure Storage	1	100	100	
			1,500	

4-D MPR / Commons	Qty.	Net S.F.	Total Net S.F.	NOTES
.01 Learning Commons	1	2,000	2,000	possibly also used for lunch, presentations, gatherings
.02 Commons Kitchenette / Coffee Service	1	200	200	possibly a café/store
.03 Small Group Rooms	2	100	200	
.04 Individual Restrooms	8	50	400	2 may be designated for faculty
.05 Outdoor Equipment Storage	1	200	200	skis, volleyball, etc.
			3,000	

4-E Building Services (Gross Areas TBD)	Qty.	Net S.F.	Total Net S.F.	NOTES
.01 TBD / Shared			-	
			0	

Totals for **RIVER CITY ACADEMY**	Total Net S.F.	NOTES
NET AREA TOTAL:	**15,000**	

Space Requirements for CONNECTIONS HOMESCHOOL PROGRAM

During the assignments, it was determined that space for the Connections Home School program would be more appropriately located separately from the other four schools. While space needs for Connections Home School have been developed as shown at right, these spaces are not included in the Feasibility Study plans.

Note that Connections is operated from three locations throughout the Borough, however the spaces on this page illustrate requirements for the Soldotna location only.

5.0 CONNECTIONS (Location TBD) VERSION 2.6

5-A Core Learning & SpEd	Qty.	Net S.F.	Total Net S.F.	NOTES
.01 **Learning Labs / Large Meeting Room**	2	600	1,200	combinable into 1 large space
			1,200	

5-B Instructional Activities	Qty.	Net S.F.	Total Net S.F.	NOTES
.01 **Science Lab**	1	1,000	1,000	Learning Labs
.02 Science Prep/Storage	1	100	100	
.03 **Applied Learning Lab**	1	1,200	1,200	with Kitchenette
.04 Practical Arts Storage	1	200	200	
.05 **Art Studio**	1	1,000	1,000	
.06 Art Storage (supplies, materials)	1	100	100	
.07 **Producer/Composer Lab**	1	600	600	independent / team projects
.08 Sound Studio	1	300	300	
.09 Recording Booth	2	50	100	
.10 Storage	1	100	100	
.11 **Wellness / Fitness Room**	1	1,200	1,200	drinking fountain
.12 Storage	1	100	100	
			6,000	

5-C Offices & Supports	Qty.	Net S.F.	Total Net S.F.	NOTES
.01 Storefront / Vestibule	1	100	100	
.02 Welcome & Waiting Area	1	150	150	
.03 Reception / Check-In	1	100	100	
.04 Director's Office	1	150	150	
.05 Administrative Offices	5	120	600	
.06 Open Office Workstations	8	50	400	
.07 SpEd Support Office (2 staff)	1	200	200	
.08 Main Meeting Room	1	500	500	
.09 Small Meeting Rooms	2	100	200	
.10 Staff Workroom	1	150	150	
.11 Breakroom / Kitchenette	1	300	300	
.12 Technology Office	1	100	100	
.13 IT Storage / Workroom	1	150	150	
.14 Office General Supply Closet	1	100	100	
.15 Staff Restrooms	2	50	gross area	access near breakroom
			3,200	

5-D MPR / Commons	Qty.	Net S.F.	Total Net S.F.	NOTES
.01 **Learning Commons / Cooperative Learning**	1	3,000	3,000	
.02 Commons Storage Room	1	100	100	
.03 Lending / Check-out Area	1	200	200	
.04 Curriculum Storage	1	400	400	storage may be combined into one space
.05 Materials Storage	1	400	400	
.06 Equipment Storage	1	400	400	
.07 School Store / Vending Area	1	100	100	
.08 Restrooms	2	150	gross area	
.09 Single Restroom / Lactation Room	2	50	gross area	
			4,600	

5-E Building Services (Gross Areas TBD)	Qty.	Net S.F.	Total Net S.F.	NOTES
.01 TBD			-	

Totals for **CONNECTIONS (Location TBD)**	Total Net S.F.	NOTES
NET AREA TOTAL:	**15,000**	

DESIGN CONSIDERATIONS

This section of the ed specs includes loose considerations to keep in mind while planning school facilities and campuses. They are not intended to direct any particular design solution, but instead to illustrate ideas, considerations and options for the planning and design of school facilities.

Considerations for planning and design are organized along the following categories:

- Site & Campus Planning
- Building Design
- Educational Environments

Above:
Example of an elementary school learning park.

SITE / CAMPUS PLANNING

Elementary school sites should accommodate a variety of amenities including outdoor physical education and environmental learning programs; automobile and bicycle parking stalls; access roads for fire, trash and deliveries, bus and parent drop-off areas; and pedestrian walkways. Planning and building codes dictate building setbacks, area of landscaping, number of street entryways and ratio of required parking stalls to occupants. Site issues including topography, drainage, pedestrian and vehicular traffic, bus drop-off and pick-up areas, service entry, and safety of playground areas must be thoughtfully addressed by the design team of architects and engineers. The following additional considerations should be considered:

Placement of Building Entries & Access Points

- Building entries should be clearly identified and easy for visitors to find and access. The design of entries should celebrate the school's identity through architectural form as well as color and graphics.
- Building entries are key components of a school's security and access control. Supervision of entries is recommended, and direct access to the school's main administrative offices is essential.
- Community access to parts of the building that involve after-school extended learning should be clear and distinct. Location of these extended-use areas of the school should be convenient to event and/or evening parking.
- Additional building entries may be provided to facilitate the rush of students during arrival and dismissal times, from bus areas and parent drop offs.
- Access for deliveries, trash pick up and other services should be provided separately from the school's public entry.

Site Signage

The purpose of site signage is to identify the school to the public; however, it should also instill pride of belonging in its students, staff and community. At minimum, it should include the name and address of the school. It can also include the school logo/mascot and school colors. Signage must conform to local sign ordinances as applicable. Signage should be easily visible and clearly identifiable when entering or driving by the school site and should have adequate lighting to promote visibility during the daytime and at night. It should be located near the main vehicular entrance to the site without interfering with vehicular or pedestrian traffic.

Site & Campus Panning
continued

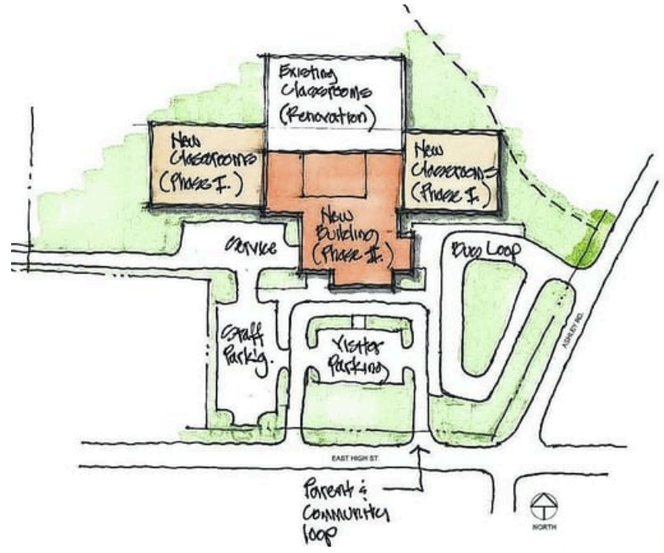
Accessibility
Entry to a school campus, movement through its buildings, as well as engaging with a school's site amenities should be accessible to people of all abilities. Schools and school site designs should aim to be accessed, understood and used to the greatest extent possible by all people regardless of their age, size, ability or disability.

Traffic Flow
- Parent drop-off, bus loading areas, and parking should be separated to allow students to enter and exit the school grounds safely.
- Buses should avoid passing through parking areas, unless a barrier is provided that prevents vehicles from backing directly into the bus loading area.
- Parent drop off area should be adjacent to school entrance and physically separate from bus area and parking.
- Vehicle traffic patterns should not interfere with foot traffic patterns. Pedestrians should not have to pass through driveways to enter school.
- Parking stalls should be located so vehicles do not back into bus or loading areas. Island fencing or curbs should be used to separate parking areas from loading areas.

Site Utilities
Locations of site and building utilities should allow easy access for maintenance and operation of equipment without disrupting educational activities.

Delivery and Service Areas
Areas are used for deliveries, trash removal, and other essential services required to support the operation of the school. Consolidate these areas where possible and locate just outside the support area of the building. Visual screening from the predominant areas of the site and major approaches is suggested. Consider physical enclosures for trash receptacles and space for a local recycling program. Delivery and service areas should be located to provide vehicular access that does not jeopardize the safety of students and staff.

Site Safety
- Site layout strategies for enhancing visibility include providing ample views of the campus from surrounding streets and homes to facilitate passive surveillance; providing adequate lighting for all parking and pedestrian areas; and providing security lighting around buildings and in parking lots.
- Zoning the site for various activities and users can be achieved through thoughtfully placing a variety of fences, bollards, landscaping, fields, pathways and/or other site amenities.
- Enhance visibility by using low-height shrubs and other landscaping to deter blind spots and hiding. For example, bushes next to the building are often kept lower than 3'.



Example of a site plan that distinguishes various modes of vehicular traffic.

Site & Campus Panning
continued

Playfields and Outdoor Activity Areas

- Adequate physical education and age-appropriate play areas should be available for the planned enrollments as well as for after school activities and community uses.
- Supervision of play fields should not be obstructed.
- Include accessible pathways and allow smooth flow among play areas.
- Include a combination of accommodations for structured activities and flexible open areas for spontaneous ones. Opportunities should include physical play, creative play, and nature play.
- Include adaptive play equipment for inclusivity and accommodation of students with special needs.
- Consider quiet zones such as benches, reading nooks, sensory gardens, etc. to accommodate a range of learner profiles.

Above:
Example of an elementary school site that includes a variety of outdoor activity areas.

Outdoor Learning

School grounds can provide students with hands-on outdoor learning experiences and promote enhanced awareness of the interdependence of the natural and human environments. A school's grounds include potential educational spaces where concepts taught within the school building can come alive to students. Outdoor learning spaces can include pathways; play structures; amphitheaters, gardens; planters; seating areas; dramatic play areas; wooded and natural features; covered pavilions and porches; and of course, PE fields. School grounds should also include outdoor spaces that are adaptable to many types of activities. The purpose of these spaces is to connect and engage the learners with the natural environment, further their health and social skills, and increase awareness of natural resources.

Example of play equipment encouraging learners to explore sound and music.

Example of an outdoor garden for young learners.

BUILDING DESIGN CONSIDERATIONS

Designing school buildings involves much more than aesthetics—it requires a thoughtful blend of safety, flexibility, accessibility, developmental appropriateness, and sustainability. The process should begin with understanding that the space should not only support learning but also foster a sense of safety, creativity, and well-being for young children. An effective school design is one that merges educational needs with the developmental characteristics of the children it will serve. Every corner, hallway, and classroom plays a role in shaping their experience.

A well-designed school is a space where safety, creativity, inclusivity, and environmental consciousness converge. The school becomes a second home, a place where children not only acquire knowledge but also grow socially, emotionally, and physically. Each thoughtful detail —from the layout to the materials—helps create an environment that nurtures young learners and empowers them to reach their full potential.

Following are considerations for school planning and design. By designing spaces that reflect these principles, we give students not just the tools to succeed academically but also the environment to thrive in all aspects of their development.

Safety & Security

School safety is a crucial concern for students, educators, and the community. It encompasses various aspects, including physical security measures, behavioral support, and fostering a positive school climate. Additionally, incorporating principles of Crime Prevention Through Environmental Design (CPTED) can help create a safer and more positive learning environment.

Imagine walking through the doors of your newly renovated schools. The first thing you notice is the welcoming atmosphere. Bright, warm colors greet you, and there's a sense of calm that permeates the space. The entryway is carefully designed with a secure vestibule, ensuring that only authorized individuals can access the school beyond this point. The layout is intuitive, with clear sightlines from the main office to hallways, classrooms, and outdoor areas. This ensures that teachers and staff can easily monitor children at all times, enhancing safety.

These and other security measures give everyone—staff, students, and parents—a sense of security while maintaining a child-friendly atmosphere.

Key Design Considerations include:

Clear Sightlines

- Open hallways and wide spaces allow staff to easily monitor student behavior and potential threats.

Controlled Access

- Implementing multiple layers of security at entry points, such as vestibules and electronic locks, can deter unauthorized access.

Safe Havens

- Designing classrooms with hidden areas or windowless rooms can offer students a secure place to take refuge during active shooter situations.

Natural Surveillance

- Maximizing visibility through natural lighting and strategically placed windows can deter negative behaviors and promote a positive environment.

Emergency Planning

- Incorporating emergency procedures into the design, such as clear evacuation routes and designated meeting points, can help ensure a safe response to incidents.

Mental Health

- Designing spaces that support the social and emotional needs of students, such as quiet zones or counseling offices integrated into the student community, can help create a more supportive environment.

Flexible Spaces

- Incorporating flexible spaces where teachers and students can take ownership and adapt the environment to their needs can create a more collaborative and engaging learning environment.

Community Engagement

- Involving students, parents, and staff in the design process can help ensure that the school is a place where everyone feels safe and welcome.

BUILDING DESIGN CONSIDERATIONS

continued

Designing for the Needs of Young Learners

Imagine as you walk through your newly renovated schools, you see that every aspect is designed with children in mind. The furniture is appropriately scaled—desks, chairs, and even the sinks in the bathrooms are just the right height. Classrooms feel cozy, with soft colors and soft materials, creating a calming space for children to focus on their work.

But it's not just about the furniture. The school is designed to be flexible. Walls are movable, allowing teachers to reconfigure classrooms depending on the activity—be it a hands-on science project, a group discussion, or a quiet reading session. The school also includes a variety of spaces for different kinds of learning. The library is open and bright, inviting children to read, explore, or collaborate on group projects. Adjacent quiet spaces offer quiet places for reflection, one-on-one tutoring, or student services.

To design a school that effectively meets the needs of young learners, focus on creating a learning environment that is flexible, engaging, and inclusive. This includes incorporating elements like multi-purpose spaces, flexible seating options, and biophilic design, while also considering the developmental stages of the children served. Ideas and considerations follow.

Flexible and Multi-Purpose Spaces:

Classrooms

- Transform classrooms into highly flexible spaces that can be easily reconfigured to support different learning activities, whether it's small group work, individual study, or large group instruction.

Outdoor Spaces

- Integrate outdoor learning areas, such as gardens, outdoor labs, or recreational spaces, to provide opportunities for hands-on learning and exploration beyond the traditional classroom.

Collaboration Zones

- Design spaces where students can easily gather for collaborative projects and discussions, fostering a sense of community and teamwork.

Engaging and Inclusive Design:

Natural Light and Biophilic Design

- Maximize natural light and incorporate greenery into the learning environment to reduce stress, improve focus, and boost overall well-being.

Age-Appropriate Materials and Resources

- Ensure that materials and resources are readily accessible to students of all ages and abilities, considering their developmental stages and learning styles.

Universal Design for Learning (UDL)

- Implement UDL principles to create a learning environment that is accessible and engaging for all students, regardless of their abilities.

Student-Centered Design:

Involve Students in the Design Process

- Consider involving students in the design process, seeking their feedback and preferences to create a learning environment that is truly student-centered.

Create a Sense of Ownership

- Encourage students to feel a sense of ownership and responsibility for their learning environment by displaying their work and creating spaces where they can express their creativity.

Provide Comfortable and Flexible Seating

- Offer a variety of seating options, such as rolling chairs, wobble stools, and comfortable seating areas, to accommodate different learning preferences and needs.

Consider the Emotional Environment:

Calm and Safe Spaces

- Create spaces where students can retreat and take a break when they need to, such as a cozy corner or reading nook, to support their emotional well-being.

Spaces for Connection

- Designate areas for students to connect with teachers, parents, and other students, fostering a sense of community and belonging.

Minimize Distractions

- Consider the impact of visual and auditory distractions on student learning and make adjustments accordingly.

BUILDING DESIGN CONSIDERATIONS
continued

Spaces That Inspire Collaboration and Creativity
Learning environments should offer outlets for creative expression, collaboration, and both structured and unstructured learning.

School spaces can be designed to foster collaboration and creativity by incorporating flexible layouts, diverse seating options, and interactive elements. These design elements encourage student engagement, promote hands-on learning, and support the development of critical thinking skills. Additionally, integrating technology, fostering a positive learning climate, and creating opportunities for reflection can further enhance creative learning.

The following elements help support an educational culture where creativity and collaboration are embedded in daily experience.

Importance of the Learning Commons Spaces
The heart of the school isn't just the classrooms, but the common areas designed to foster collaboration and creativity. The learning commons areas for each grade level are open areas for children to gather for group activities, working on science experiments, building models, or engaging in project-based learning. Visibility from adjacent classrooms enables supervision of these spaces.

Flexible Classrooms
- Flexible classroom layouts, with adaptable furniture and moveable walls, allow for a variety of learning activities and group configurations.

Diverse Seating
- Offering a range of seating options, like bean bags, floor cushions, and adjustable desks, caters to different learning preferences and encourages movement and interaction.

Interdisciplinary Spaces
- Studios, innovation labs, and cross-functional rooms blur subject boundaries and promote integrated, project-based learning.

Collaborative Zones
- Designated breakout areas, shared commons, or makerspaces encourage students to brainstorm, prototype, and co-create.

Interactive Spaces
- Incorporating interactive walls with whiteboards or chalkboards, and digital tools for collaboration, can facilitate idea generation and knowledge sharing.

Informal Social Areas
- Lounges, nooks, and casual seating encourage peer dialogue, unstructured interaction, and community building.

Technology Integration
- Seamless access to digital tools within physical spaces supports media-rich collaboration and innovation.

Open and Transparent Environments
- Glass walls and open sightlines create a sense of connection and promote spontaneous interaction and shared learning. "Learning on Display"

Positive Learning Climate
- Creating a supportive, inclusive, and engaging learning environment where students feel safe and comfortable taking risks is crucial for fostering creativity.

Reflection and Visualization
- Encouraging students to reflect on their learning, share their ideas, and visualize goals can promote deeper understanding and creative thinking.

Outdoor Learning
- Incorporating outdoor learning spaces and activities can provide a change of scenery and stimulate different forms of creative expression.

Teacher-Student Collaboration
- Creating opportunities for teachers and students to work together, share ideas, and learn from each other can foster a collaborative culture.

BUILDING DESIGN CONSIDERATIONS
continued

Facilities as a Learning Lab
Every square foot of a school building and its grounds can be seen as an educational opportunity. Giving students an understanding of how the school building works and how it fits into their broader community can foster their sense of ownership and engagement with their learning environment. The recommendation is for the Design Team to develop a theme/brand that can tie the schools, the community, and the educational missions together.

The teaching tools listed here are suggested ideas.

Exposed Systems
- Engineering systems should be reinforced as fun learning tools and encourage students' interest in STEM fields.
- Include exposed structure or building systems, especially in gathering/assembly areas (i.e. interactive window opening into a mechanical room or building construction demonstration wall cut-out).
- Use appropriate exhibitry to relate systems to learning concepts (i.e. label/color code the piping and equipment and provide information on how these systems work with age appropriate concepts).

Environmental Learning
The design of a campus and its buildings may incorporate sustainable features to allow for learning opportunities to support its curriculum. For example, establishing a school waste reduction and recycling program provides an excellent opportunity for schools to conserve energy and natural resources, reduces pollution, preserves landfill space and offers a positive, hands-on educational experience for students, teachers and other school personnel. In addition, recycling and waste-reduction programs that actively involve students are educating the next generation on the value of caring for our environment and provide opportunities for leadership within the school and the community.

Another example is to incorporate alternative energy features such as solar and wind energy harvesting which can be used as active learning tools, reinforcing the school community's understanding of the use and wider potential of such resources. As with the recycling and waste-reduction programs, the use of alternative energy sources can actively exhibit the value of caring for our environment.

Exhibitry, Graphics & Signage
- The theme/brand for the school may be established through super graphics displayed at strategic locations such as the entrance, the commons, and access to individual grade-level groupings. The use of vinyl graphics is a very economical way of producing the effect with ability for later modifications.
- The theme/brand should be built into all signage both inside and outside the school.
- Use exhibitry to highlight sustainability features, technology and utility systems (i.e. exposed structure/systems, occupancy lighting, LID Bioswales, etc.).
- Exhibitry may be used to convey historical information, such as the history and traditions of the school, local heroes, or a time line of significant events at the school or installation.
- Plaques, signage and graphics should be visually appealing to the appropriate age group, relevant, encourage imagination, educational, and fun.

Energy Dashboard
An Energy Dashboard collects the real time data from the school's building systems to provide for real world learning opportunities while also providing student awareness of the environmental impact of their school. The dashboard could collect data such as electrical, water, and natural gas usage and then display it in conventional units of measure and/or an age appropriate conversion. The data should be tracked to show how consumption/production may change over time.

ENVIRONMENTAL ATTRIBUTES

Natural Light and Views
Research suggests that it is wise to provide an adequate amount of natural light and a sense of orientation (to interior and exterior elements) to promote health, well-being and focus for occupants within enclosed learning spaces. All learning spaces should have access to natural daylight. Borrowed light may be used if direct access to natural light is unavailable. Borrowed light and views through adjacent spaces also allow connectivity and supervision. Openings should ideally be equipped with shades to enable darkening of the environment for projection equipment or other situations in which substantial glare may interfere with activities. Interior window treatments may also allow some flexibility for privacy when views or overviews are not desired or required.

Artificial Lighting
Artificial lighting should be energy efficient, taking advantage of natural light as much as possible to achieve the required light levels throughout the day. Artificial lighting may be automated for increased energy efficiency, however lighting should also be able to be manually controlled for various activities. Fixtures should be able to provide uniform lighting at work surfaces and desks. Additional lighting should be planned for teaching areas, boards and/or displays.

Acoustics
Because environmental stimuli such as sound and noise can affect learning and behavior, good acoustical separation of spaces is essential. Wherever possible, spaces with divergent acoustical needs should not be located adjacent to each other (for example, a gymnasium and a library). Where the adjacency of these spaces is required to support the educational program, attention to acoustical separation is required.

The transmission of clear, distinguishable sound is important to learning. Current best practice standards and guidelines should be incorporated wherever feasible. American National Standards Institute (ANSI) in association with the American Standards Association (ASA) provides recommendations for acoustical standards for educational facilities. Acoustical designs of spaces should comply with ANSI/ASA recommendations for unoccupied background noise and wall sound transmission between rooms.

Color
Color is an important aspect of interior design and can enhance a child's perception of space. Color should be used judiciously and intentionally to support learning, wayfinding and school spirit.

Indoor Air Quality
According to the US EPA, the developing bodies of children might be more susceptible to environmental exposures than those of adults. Children breathe more air, eat more food and drink more liquid in proportion to their body weight than adults. Therefore, air quality in schools is of particular concern. Proper maintenance of indoor air is more than a "quality" issue; it encompasses safety and stewardship of your investment in students, staff and facilities. The design of HVAC systems should allow users access to and adjustment of their thermal environments. Thermostat controls for each unique activity space is suggested.

Materials and Maintenance
Finishes should be durable, sturdy and easily maintained to resist vandalism without appearing overly institutional. Finish materials should be selected in terms of wear and durability as well as for correct application, style, and placement. Hard permanent surfaces are usually more durable but less changeable, so care should be taken so avoid long-term material choices that clearly indicate a style or era of design and construction.

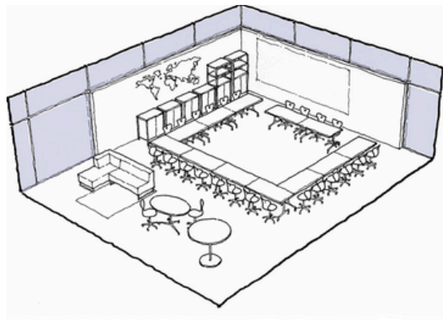
Power
Access to power outlets and data connectivity throughout the building should be located for flexible uses and varying distributions of technology and equipment.

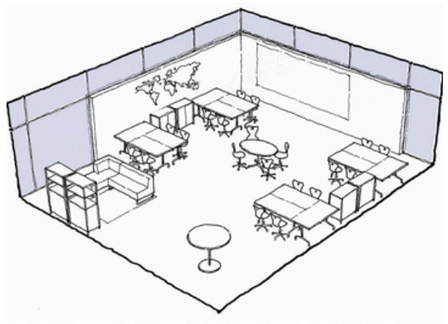
ENVIRONMENTAL ATTRIBUTES
continued

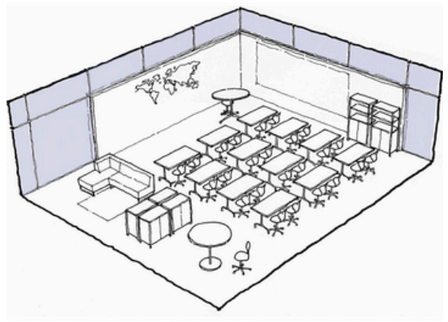
Furniture & Casework
In general, casework and furniture should be durable and sturdy to resist vandalism without appearing overly institutional. Modular, movable furniture is recommended where appropriate, and should be durable to withstand moving through a variety of floor surfaces, including uneven floor surfaces. Built-in casework such as storage and shelving should be included where movement of such is a concern, but wherever possible, kept to a minimum. In all cases, safety of students and staff should be considered.

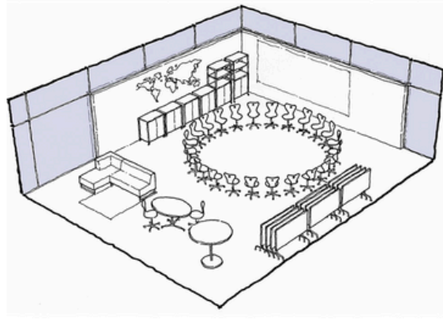
Furniture should be ergonomic and support a variety of sizes, weights and heights, and physical abilities of students and teachers. Adjustability should be easy and intuitive.

Learning Studios / Classrooms should include marker and tack surfaces or boards. These can even be applied to mobile storage cabinets for added flexibility.









Example of multiple classroom arrangements using a single "set" of furniture.

Technology
In conjunction with district-wide technology guidelines, the technologies outlined in this section should be considered.

Technology-supported student learning is part of the "new basics" required for participation in the Information Age. Technology, as a tool to support student learning, can give all students the chance to master basic skills in the core academic areas and opportunities to apply those skills in project based activities, using multiple forms of static and interactive media, to provide them with personal learning experiences that are meaningful to them.

Technology-based resources are used to enrich, clarify, reinforce, connect and support curriculum. Effective instructional practices incorporate varying media formats to expose a rich array of viewpoints and experiences, stimulate discussion, establish context and provide for individual learning styles. Teachers should be supported with professional development that focuses on integrating technology into their teaching and learning strategies in age and content appropriate ways.

What matters most are not the devices and the wiring themselves, but what teachers and students do with them.