

2016 EXHIBITION OF SCHOOL PLANNING AND ARCHITECTURE

Moffat PK-12 School

Category: New Construction

Moffat Consolidated School District 2
Moffat, Colorado



MOFFAT PK-12





Rural communities thrive with local support and involvement. Therefore, the school was designed to allow direct community use for funerals, dinners, adult sports, and other public gatherings. The library is connected to the community by providing a public room with separate exterior access to allow individuals and groups to meet within the facility. The commons has a large rolling door to open into the gym for providing additional seating during large community events. The gym and locker rooms were also designed with the community in mind. They can be used by student and adult sports leagues and other outside organizations. Also, the Wood Shop and Metal Shop have external access and allow the community to conduct adult education classes without accessing the entire facility.

A COMMUNITY SPOT



The design process included multiple community meetings including a meeting where the community used building blocks to identify priorities for the building based on the communities preferences. The outcome of this process was a building adapted to the harsh environment of the San Luis Valley including utilization of passive solar strategies for heating and cooling. Adapting the building to protect the occupants from the harsh climate including extensive wind studies did not hamper the building from capitalizing on incredible views and connect to the outdoor environment and classrooms from the 300 days of sunshine. Because the community around Moffat is very small and well connected, the new school facility provides an “anchor” to the community for many public activities.

COMMUNITY PRIDE



LEARNING COMMUNITIES

The diverse student population of Moffat comes from a variety of backgrounds and beliefs which were reflected in the planning and design of the new school. Moffat PK-12 is arranged in age-specific “Learning Communities” that utilize shared facilities to promote and separate age appropriate “Academic Neighborhoods,” grade transitions and internal zoning. The psychological impact of “moving up” is critical in a consolidated school, so a clear demarcation between age groups was created by having the middle school and high school students on the upper level of the building.

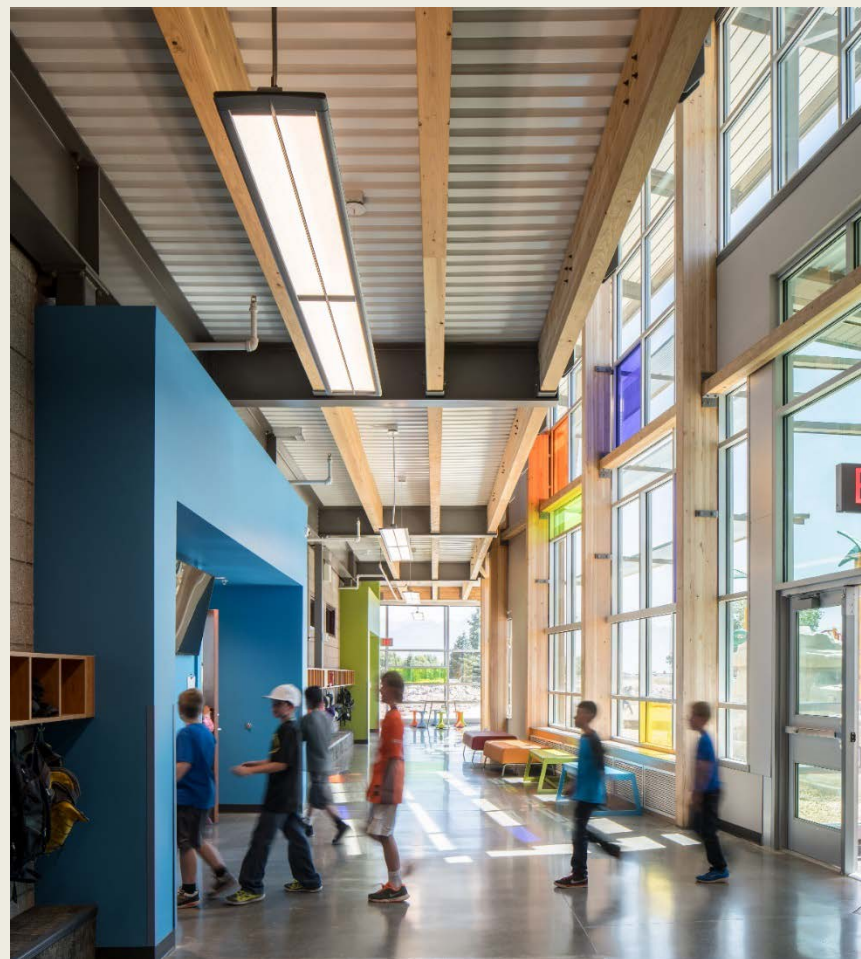


Daylit circulation spaces allow for student collaboration on both levels of the building but now, elementary students can properly “graduate” to a different area of the school. Circulation spaces have educational functions and grade level appropriate technology along with identifiable separate color scheme with brighter, primary colors on the elementary level and softer colors on the upper floor.

BREAK-OUT AREAS

Colorful glazing on the windows also makes the interior learning environment of the school engaging and warm.

The District desired an educational environment where learning could happen anytime, anywhere. Therefore, the energized corridors between classrooms and the outdoor learning environment provide flexible spaces where students can learn and be engaged at all hours of the day. The corridors are also a space that the students can own with large break-out areas and furnishings that allow them to have personal and larger informal group interaction. The elementary areas also have “kid-sized” doors that give the students a sense of ownership. To bring learning outdoors, a science patio, located above the administrative offices, gives middle and high school students and teachers space to experiment and learn outside of the classroom.



THE SOCIAL HUB

There is also an Art Patio located on the north side of the building that opens up opportunities for art students to capture the outdoors.

The District also desired flexibility of space within the school to meet the needs of students with a variety of learning abilities and capacities. To accommodate small fluctuating class sizes, individual classrooms have folding partitions to expand as needed. This helps to create intuitive and flexible learning environments that allow teachers to educate students in combined grade groups or separately. There are also open, flexible computer spaces within the corridors that allow for individual, group, or classroom learning.



The main entry stair has an elevated platform that serves as a social hub and impromptu educational space with access to technology.

To accommodate future changes in educational approaches and to connect students to the outside world, additional technology was implemented throughout the school.

A TREASURE IN THE COMMUNITY



One of the District's main goals for the project was to create a sustainable, high-performing school. To accomplish this, LEED standards were implemented and the school was certified LEED Silver after completion. The sustainable school has exposed polished concrete floors and CMU block that are designed to absorb the heat from the south glazing, which helps to regulate the seasonal temperatures. It also has large thermal curtains that expand over the glazed walls to help retain the stored heat during cold nights. Tubular daylight devices, light shelves, and clerestory windows allow for ample daylight and limit the need for artificial light. Radiant slabs are used in the educational and administration areas to comfortably and efficiently provide heat.

To protect students from the harsh winds in play areas, a wind analysis was conducted during design to optimize the placement and type of wind breaks. The analysis showed that earth berms were the most effective type of wind break for this area. Large expanses of south-facing windows take advantage of the 300 days of sunshine and warm the building with thermal gain from the sun. The large amount of windows not only helps to heat the building in cooler months, but are protected from too much heat gain in the warmer months because they have shading devices to protect from the sun on hot days.

THE GRAND ENTRANCE



To ensure student safety and security, the school was designed with a single controlled building entry vestibule that can be locked. The entry gives controlled building access through the office administration area and allows for a controlled check-in process after 8:30AM. Students have consistent and direct supervision from staff and teachers because of the simple corridor design throughout the building. Also, students feel a sense of security inside of the school because of the appropriate zoning and separation of ages. To provide safety in external areas, there is direct access to the playground from the classroom corridor.

A SECURE ENTRY



A NATURAL CONNECTION

With the help of the DAG, Moffat PK-12 uses regionally inspired materials and forms. The metal panel exterior of the building was designed to protect inhabitants from the harsh climate of the area and to reflect the simple regional architecture. Inside, exposed glulam wood structure gives the facility a natural connection and warmth. The chosen interior color strategies also give a sense of identity to each individual age group.

The new Moffat is located adjacent to the existing facility, which allowed it to remain fully operational during construction. Classrooms are located on the north side of the building to reduce heat gain and to give ample amount of daylight. The school also has sloping roofs which prevents heavy snow and ice from building up and minimizes the amount of maintenance for school staff.



ENGAGING CLASSROOMS

The views inside the school run adjacent to the mountains and were maintained throughout the school, including the corridor spaces. Key views were specially framed with windows to inspire and delight students, teachers, and staff. The wide open spaces within the building give the school a grandeur feeling.



NATURALLY-LIT LIBRARY



The new Moffat PK-12 School is located in the dispersed rural population of San Luis Valley, Colorado. In order to create a school that met the needs of the District and the rural community, the planning process involved a variety of people. Several groups gave valuable input into the design including the Client Design Committee, the Design Advisory Group (DAG), and the Community Design Committee, all consisting of District Administration, students, parents, School Board members, and community members. The Architect held a total of eleven DAG meetings to develop the goals, visions, space programming, and building design of the school, and regularly attended board and community meetings.

GRADE DEMARCATION

The Architect also led an open community design charrette that included creative ways for members of the community to provide input and feedback, such as using interactive 3D models that allowed them to envision a variety of layouts for the major building spaces onsite. Community feedback was one of the most important aspects of the planning process because it helped the Architect to learn what was important to the public, what constraints were on the site, and what the major goals and values of the community were.

Previously, Moffat struggled with low student motivation, aging facilities that created unequal access to technology and required substantial maintenance, and a lack of integration of the support for the Fine Arts Program.



REGIONAL MATERIALS



The school board continued to have a goal to continue to improve CSAP scores, encourage academic growth, and had seen a low migration to other districts. With these struggles at the forefront, the District wanted to focus on four key tenets: student achievement, resources, public engagement and technology. They created several goals to fit these tenets, including:

1. Design 21st Century educational environments that support academic excellence and achievement.
2. Ensure district-wide student safety, security and health.
3. Provide state-of-the-art regulation athletic fields and sports facilities.
4. Integrate proven, high-performing sustainable design principles into the design of the new school.
5. Honor values of stewardship, propriety and operational efficiency.
6. Encourage “life-long learning” through community access, local partnerships and global networks.
7. Promote a sense of “community” and “regionalism” by fitting the modern architecture of the new school building to the land, the people, their activities and the “place” of Moffat.
8. Support and enhance local commerce, development and exchange.

Keeping the goals and current struggles of the District in mind, the Architect, together with the DAG, reviewed the previously completed Master Plan and associated space programming in order to analyze for effectiveness in accordance with the updated curriculum and educational goals. Together they developed a building design from seven different options with multiple variations to create a school that would best fit the needs and goals of the District.

To keep all members of the planning team involved through all phases of the project, construction tours were given to students, teachers, staff, and community members. Also, the DAG was directly involved with material and finish selection during the early parts of construction.

With everyone's help, the new facility builds pride in students and staff for their school and boosts student achievement. With age-appropriate zoning, the school helps to build confidence in students and provides a safe environment for learning.

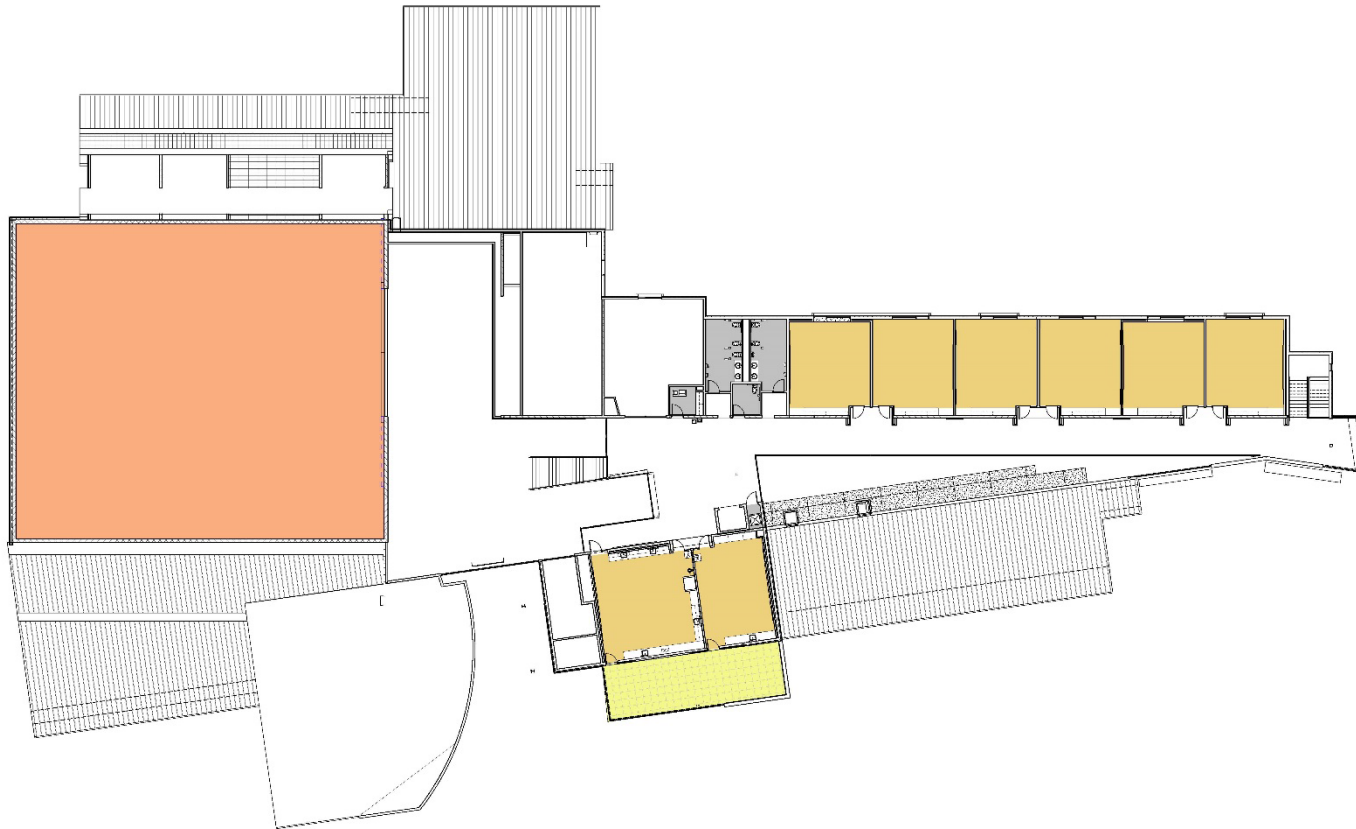
A PLACE FOR STUDENTS AND TEACHERS



FIRST FLOOR PLAN



SECOND FLOOR PLAN



EXHIBITION OF SCHOOL PLANNING AND ARCHITECTURE PROJECT DATA

Submitting Firm :	RTA Architects
Project Role	Architect
Project Contact	Doug Abernethy, AIA, A4LE
Title	Principal
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City, State or Province, Country	Colorado Springs, Colorado
Phone	719-471-7566

Joint Partner Firm:	
Project Role	
Project Contact	
Title	
Address	
City, State or Province, Country	
Phone	

Other Firm:	
Project Role	
Project Contact	
Title	
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City, State or Province, Country	
Phone	

Construction Firm:	Diesland Haslenden Construction
Project Role	General Contractor
Project Contact	Brian Hunt
Title	General Superintendent
Address	6950 South Potomac Street
City, State or Province, Country	Centennial, Co 80112
Phone	1-303-751-1478

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Project Name	Moffat PK-12 School
City	Moffat
State	Colorado
District Name	Moffat Consolidated School District 2
Supt/President	Kirk Banghart, Superintendent
Occupancy Date	August 2015
Grades Housed	Preschool – 12 th grade
Capacity(Students)	105 students
Site Size (acres)	642,962 gsf
Gross Area (sq. ft.)	48,880 gsf
Per Occupant(pupil)	465 sf/pupil
gross/net please indicate	
Design and Build?	
If yes, Total Cost:	
Includes:	
If no,	
Site Development:	\$3,626,822.00
Building Construction:	\$12,823,780.00
Fixed Equipment:	\$450,000.00
Other:	
Total:	\$16,900,602.00