

PATHWAYS INNOVATION CENTER / ROOSEVELT HIGH SCHOOL

Casper, Wyoming

“ It doesn't matter where you're from – we're in this together. Everyone has their individual talents. We're Pathways and we're really proud of this school. ”

Pathways Student

A COMMUNITY VISION

“ Education is designed to prepare children for a distant and unbelievable future. Our strategy is to create learning environments that encourage creativity, engaging activities and insightful dialogue. These spaces would allow for the advanced technology necessary to prepare children for success in a world we cannot yet imagine. To change. To morph. To innovate. To lead by design. To pioneer. To modernize. To TRANSFORM. ”

Charter for Natrona County High Schools, which came out of a visioning process with community members, students, parents and district administrators.

Executive Summary

When Natrona County high school students entered their academy labs last August at Pathways Innovation Center, the district’s new career-focused academy, they were welcomed with stacks of unopened boxes filled with new state-of-the-art equipment. Their first assignment? Set up the equipment and their labs so they could start exploring, creating and collaborating on projects that sparked their interests.

The assignment set the stage for what district leaders, teachers, students and the community envisioned for the school: a place for innovation and student empowerment. Programming was born out of years of planning to create an environment where students pursue their passions, earn credits toward graduation, prepare for life after high school – whether college or a trade career – and have a say in their educational experience.

Open to 11th and 12th graders attending the district’s three high schools – Kelly Walsh, Natrona and Roosevelt – Pathways connects academics with real-world experiences in a wide range of fields, including engineering, arts and media, health science, agriculture and business. Students spend half their day at their home high school and the other half at Pathways working on academy-based projects.

The academies feature innovation labs, designed to reflect professional work settings and contain industry standard equipment to provide practical learning and experience, as well as the opportunity to earn certifications in specialized fields. Students oversee every aspect of the projects -- from ideation to prototyping to execution -- under the guidance of caring and motivating teachers, called mentors.

In addition to setting up the labs, students research and obtain the appropriate city and state licenses needed to operate them. Students in the Creative Arts, Communications and Design Academy (CACD), for example, are managing the photo and media labs, ordering and providing supplies to fellow students. “They have ownership and are showing us how to do things,” says Molly Voris, a coach and mentor in the CACD Academy. “Everyone has their own specialty within each academy and they are showing their growing confidence.”

The centerpiece of Pathways is a two-story, 5,000-square-foot fabrication hall which was inspired by private sector facilities, including aerospace giant Boeing Airlines, where engineering, design and fabrication teams work together under one roof. The open, glass-lined industrial space, which features an overhead crane, is designed to inspire collaboration across academy disciplines.

TWO SCHOOLS, ONE BUILDING

Pathways resides on a 38-acre campus that is shared with Roosevelt High School. As the district’s alternative high school, Roosevelt provides a rigorous, highly personalized learning experience, where students are held accountable and staff tirelessly work to ensure they don’t fall through the cracks. Located on the east side of the campus, Roosevelt follows a holistic, wellness-focused, brain-based academic intervention model. Students and staff break during every class period for five minutes of exercise and a “brain break,” which provides focus and supports classroom engagement.

“This has become a place of happiness for many kids who have struggled.”

CHAD SHARPE,
Pathways Principal

While two different schools, they share a main entry and common spaces, and Roosevelt students are encouraged to participate in the Pathways academy program. The schools are connected by a metaphorical bridge, a space where students exhibit projects, engage with other students or mentors, and host community events.

While there was some initial hesitancy by parents during the design charrette about housing Pathways and Roosevelt under one roof, student participants eased their concerns and expressed enthusiasm for sharing the campus and learning together through Pathways. “The relationship that has developed between Roosevelt and Pathways has been overwhelmingly positive,” says Chad Sharpe, Principal of Pathways. “We’ve really watched students grow in this facility – there’s no separation between the schools.”

What’s been most profound for the community has been witnessing the students’ ownership, pride, leadership and rising confidence. When visitors arrive on campus, they can get a cup of coffee at the café, which is managed and run by students. Or, they can purchase lunch made by the culinary team before observing students engaged in their advanced projects, which range from large-scale projects by the construction and welding team in the fabrication hall to research conducted in science labs by the bio-medical team.

For many students in Natrona County, the opportunities available to them at Pathways and Roosevelt have given them optimism for their future. “This has become a place of happiness for many kids who have struggled,” says Sharpe.

“The building is simplistically elegant. It beautifully fulfills what we need it to accomplish.”

CHAD SHARPE,
Pathways Principal



Scope of Work and Budget

38

TOTAL ACRES

126,075

TOTAL SQUARE FEET, NEW CONSTRUCTION

500

STUDENT CAPACITY:
PATHWAYS INNOVATION
CENTER

220

STUDENT CAPACITY:
ROOSEVELT HIGH SCHOOL

JUNE

10

2016
COMPLETION

\$42.5

MILLION:
TOTAL PROJECT
COST

\$38.5

MILLION:
CONSTRUCTION
COST



The new Natrona County School District campus includes two high schools under one roof. Roosevelt High School and Pathways Innovation Center strive to engage students and provide innovative, personalized educational opportunities that will prepare them for success beyond graduation, whether it's moving on to college or highly-skilled trade careers.

To achieve this mission, the district and community challenged the architecture team to design a facility that didn't resemble a traditional high school. They envisioned a place that would be an innovative model for learning and inspire students to think and act differently so they are equipped to adapt to a changing world.

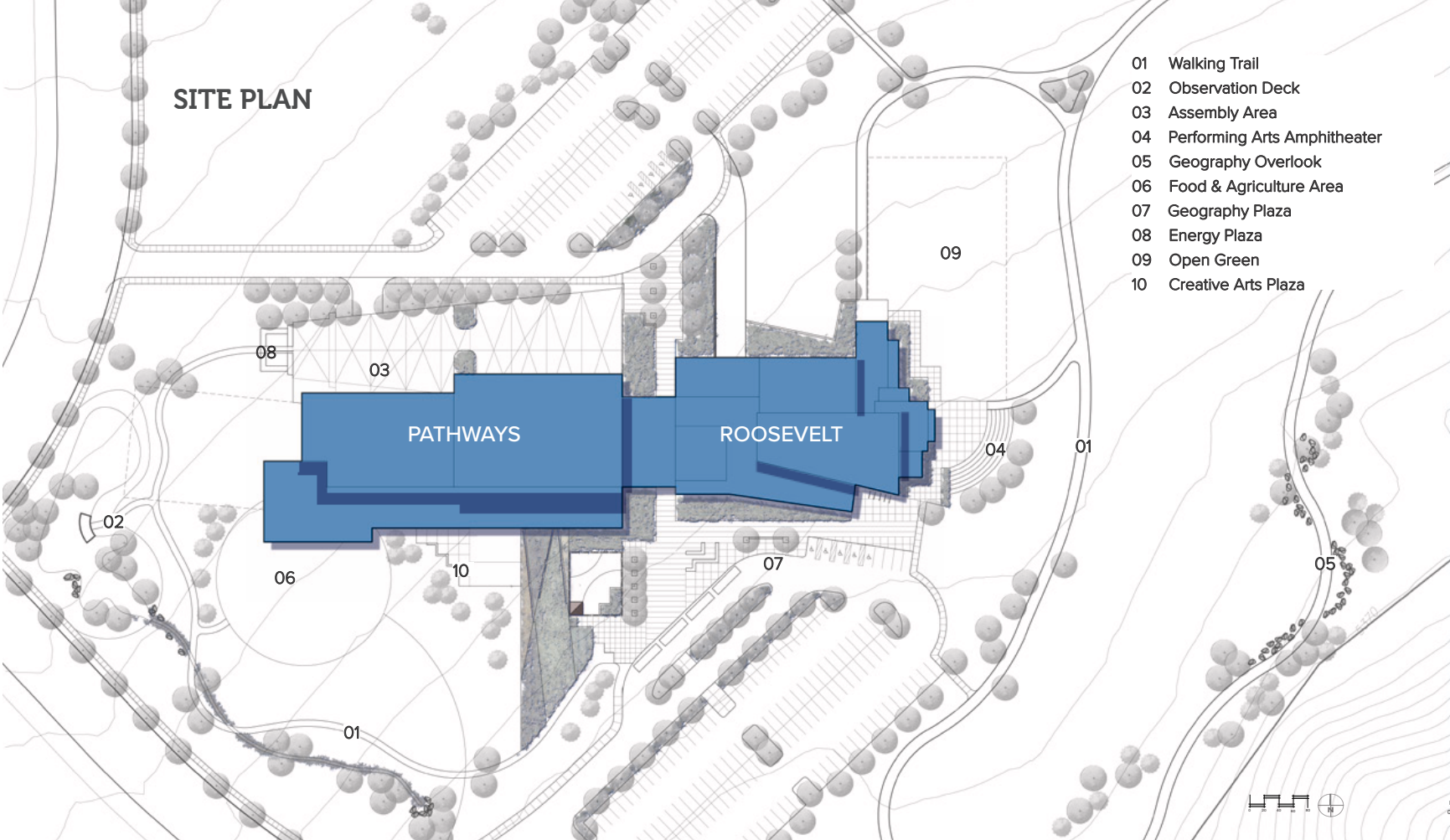
The design of the facility needed to accomplish the following:

- Support the idea of transformation, engage and connect learners with their future.
- Be an environment where transformation is encouraged and new ideas are incubated, not thwarted.
- Encourage creativity and engagement with others.
- Allow students to change, morph, innovate, lead, pioneer, modernize and transform.

The building's design reflects teaching methods utilized at each school. As one moves west from Roosevelt into Pathways, spaces open up and the interior infrastructure becomes visible to stimulate creativity, design and encourage students to "think outside the box." There are fewer hallways and defined spaces in Pathways to encourage collaboration. The architecture's clean lines and industrial aesthetic are intentionally designed to inspire creativity and serve as a teaching tool.

The building is deliberately oriented so that the long dimensions of the building face north and south. Large glass curtain walls are designed throughout, providing beautiful and inspiring views of the surrounding landscape.

Floor-to-ceiling glass garages in the central fabrication hall encourage students to stretch their imaginations and think flexibly. The space, which is large enough to build homes and solar-powered airplanes, is designed to encourage teams from all academies to collaborate and interact through glass-walled academy labs. The "floating blue box" overlooking the hall is intended for informal learning and its cool, crisp color encourages exploration and fabrication.



PROJECT HIGHLIGHTS

- 5,000-square-foot industrial fabrication hall in Pathways is at the center of the academy labs and intended to foster innovation, fabrication and collaboration across academies.
- Academy labs feature advanced technology and equipment to encourage students to create innovative design and fabrication projects.
- Industrial, open infrastructure is visible and intended to stimulate creativity, design and inspire students to "think outside the box."
- Inventive learning settings, including wellness-focused and agile spaces at Roosevelt, and glass-enclosed academy

labs at Pathways, stimulate engagement, collaboration and excitement for student projects.

Ubiquitous and flexible technology is a significant component of the campus' design. Academy labs feature:

- CNC lathe machines, plasma cutters, industrial prototypers, 3D printers and high-tech automotive trainers.
- Live video streaming takes place in each lab is broadcast to various locations throughout the school.

- In the blue "think tank" overlooking the fabrication hall, advanced technology allows students to virtually connect with industry experts around the world.
- Art and communications students have access to 2D and 3D technology, and Hollywood-standard film and TV labs.
- Students have access to Adobe Suite, AutoCAD, Revit and other technical software used to design video games, websites, apps and computer programs.

“ The relationship that has developed between Roosevelt and Pathways has been overwhelmingly positive. We’ve really watched students grow in this facility – there’s no separation between the schools. ”

CHAD SHARPE,
Pathways Principal

PROJECT SCHEDULE



MAY 3-5, 2011
Charrette 1



NOVEMBER 7, 2012
Boeing Precedent
Ah-Ha! Moment



APRIL 17, 2014
Ground Breaking



NOVEMBER 14, 2014
Denver USGBC Green
Schools Summit
featuring Pathways/Roosevelt



AUGUST 31, 2016
First Day of School

OCTOBER 15, 2009
Completion of
2020 Vision

MAY 24-26, 2011
Charrette 2

SPRING 2012
Project Receives
State Funding

OCTOBER 20, 2012
Project Scope
Redefined by State of
Wyoming

APRIL 8, 2012
Programming
Starts

SEPTEMBER 4, 2013
Schematic Design

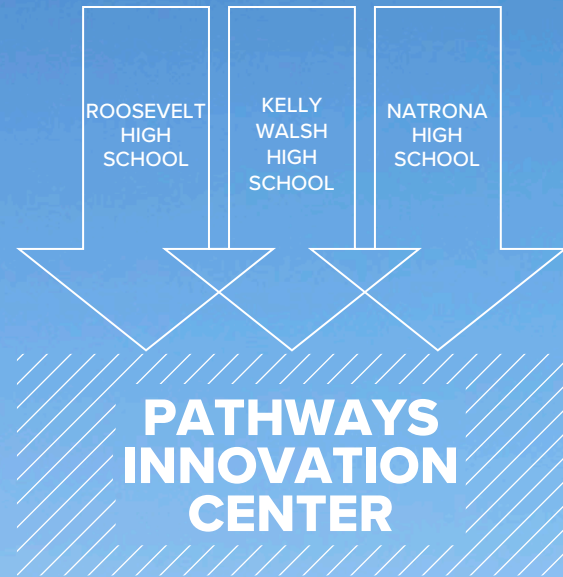
JANUARY 16, 2014
Design
Development

MAY 27, 2014
Construction
Documents

NOVEMBER 12 & 13, 2014
Furniture Selection
Summit

MAY 25 & 26, 2017
First Pathways &
Roosevelt Class
Graduation

THE SHARED VISION



THE SHARED SPACE

PATHWAYS INNOVATION CENTER

A NEW EDUCATIONAL ACADEMY

Individualized, career-focused learning to prepare students for the 21st Century

+

ROOSEVELT HIGH SCHOOL

NATRONA COUNTY'S ALTERNATIVE HIGH SCHOOL

The district's alternative high school featuring a wellness-based curriculum

TRANSFORMING THE IMAGE OF A HIGH SCHOOL

The facility's architecture makes a striking appearance in Casper, which has a distinctly western feel. It sets a different precedent for design, elevating the stature of education and inspiring students to achieve. It also creates high level of curiosity from the community on the creativity that's happening inside its walls.



School and Community Engagement

Located in the foothills of west-central Wyoming, Casper has 65,000 residents and is the state's second largest city. Nicknamed "Oil City," it has a rich western heritage and relatively stable economy that is supported mainly by the oil and gas industries.

As Natrona County School District leaders began the planning process to rebuild its three overcrowded and aging high schools, their goal was to improve graduation rates. At the same time, however, there was growing concern within

the community that students weren't adequately prepared for life after graduation.

Starting in 2009, the district began an ambitious visioning process with the goal of creating a secondary educational platform intended to reinvent the high school experience for all of its students and position future generations for success in life. Educational experts challenged stakeholders, which included students, parents, teachers, school administration, community members, and representatives from the state

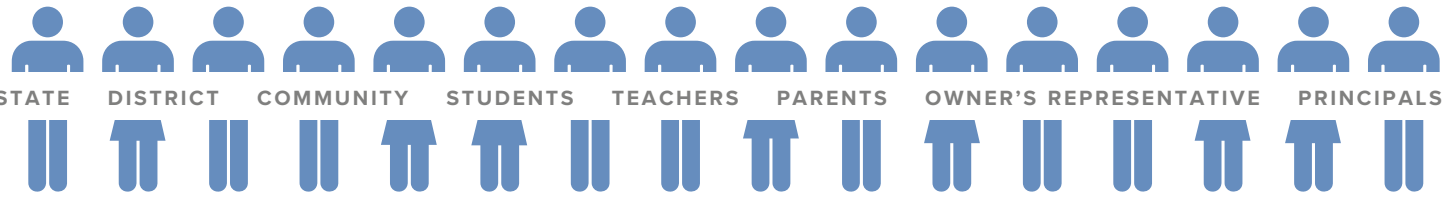
of Wyoming, to envision what a 21st Century learning environment should look like, and what they thought needed to happen to make Natrona County's schools relevant, engaging and successful.

The result was "Path to 2025," which was driven by the profile of a 2025 graduate. Participants considered the graduate profile as they looked at the future of learning and how best to accomplish that vision. This drove the design and programming of the learning environments for all of the district's high schools.

Profile of a 2025 Graduate:

- Independent Lifelong Learning
- Digital Age Literacy
- Inventive Thinking
- Effective Communications
- High Productivity
- Healthful Living
- Stewardship

STAKEHOLDERS



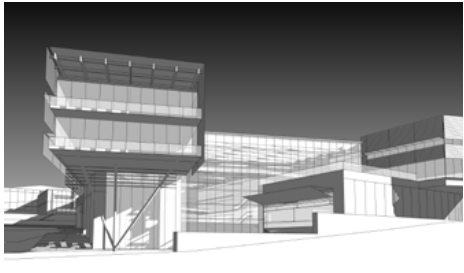
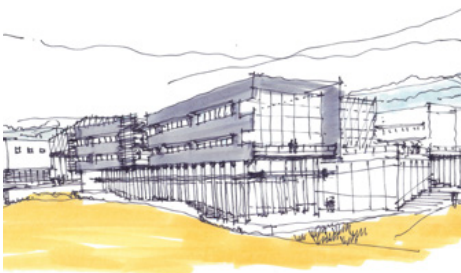
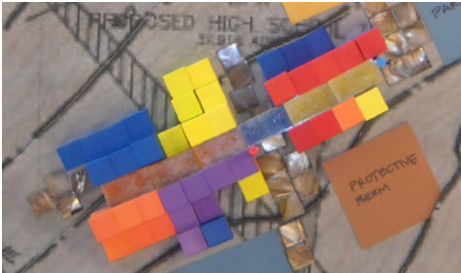
COMING TOGETHER TO CREATE A SHARED VISION

Following the Vision 2025 plan, the architecture team held two, three-day comprehensive design charrettes to provide solid program direction. Stakeholders included students, parents, teachers, school administration and community members. They addressed specific needs and broader goals of the community as well as more ambitious visions for the project. This process resulted in one overall shared vision and four guiding principles.

Students from the district's three high schools were actively engaged in the planning process of the Pathway

academies as well as design details. For example, they were instrumental in designing a coffee bar, which introduced them to the hands-on work they would be doing at Pathways.

After the charrette process was completed, the design team held an open house for the community to showcase renderings, physical and animated modeling, and presented an engaging video to allow viewers to experience a 'day-in-the-life' at Pathways and Roosevelt.



EVOLVING CHALLENGES INTO OPPORTUNITIES

PHYSICAL

Due to budget restraints, the original footprint of the campus needed to be reduced. The design team maximized the building's efficiency by having the schools share one main entry and combine student common spaces. What started as a design challenge resulted in a more inclusive and engaging campus.

CULTURAL

During the initial stages of the visioning process, parents voiced concern that students from the three high schools wouldn't be able to come together and learn at Pathways due to tense rivalries. Student representatives in the charrette disagreed and endorsed Pathways, expressing their excitement for the opportunity to learn and collaborate with students from different schools.

COMMUNITY PARTNERS

Casper-area businesses and organizations have been supporters of the academy programs. A business round table was held early in the visioning process and was intended to capture the community's input on the future of business not only in Wyoming, but also nationally and internationally. Several members of the business community then met with the visioning committee to

discuss opportunities for collaboration between the school system and community.

In addition to serving as mentors in the academies, they commission student projects and offer internships. This resulted in meaningful partnerships and allowed students to build skills and experience in presenting and collaborating across disciplines.

“ Our quality of life in Natrona County depends on the quality of education we provide for our students. ”

“ To strengthen our community and our economy we must instill a creative, innovative and even entrepreneurial spirit in our youth. ”

Project beliefs in Natrona County Schools' Path to 2025



GUIDING PRINCIPLES

Four guiding principles resulted from the charette process and served as a roadmap for the design and programming at the high schools:

A Culture of Empowerment

- Shared ownership of learning settings
- Personalized learning settings
- Services distributed to serve students
- Celebration of student achievement
- Safe and nurturing environments

Inventive Learning Settings

- Flexibility to support differentiated learning and teaching; spark curiosity
- Variety of settings to serve diverse needs; more "learning by doing"
- Furnishings that are adaptable and agile
- Ubiquitous and flexible technology

Meaningful Community Partnerships

- Welcoming and appropriate space for mentorships
- Lifelong learning opportunities
- Stewardship of our planet and its resources
- Service to our community

Collaborative Learning Communities

- Professional work settings
- Relationship-based learning settings
- Global connections
- Transparency

Educational Environment

ROOSEVELT HIGH SCHOOL: VISION

At Roosevelt High School, success is the only option. The alternative high school is committed to engaging real-world learning through strong relationships, high expectations and a safe, structured learning environment.

“ It means opportunity – the best chance to learn in the best setting. The new school is exquisite! ”

SHAWNA TRUJILLO,
Roosevelt Principal

ROOSEVELT HIGH SCHOOL 2020 GOALS

95%

GRADUATION
RATE

100%

ELIGIBILITY FOR
HATHAWAY
SCHOLARSHIP**

HIGHEST
PERFORMING
ALTERNATIVE SCHOOL
IN WYOMING

100%

OF STUDENTS
HAVE A POST-HIGH
SCHOOL PLAN

95%

ATTENDANCE
RATE

NON-NEGOTIABLES:

- UNRELENTING FOCUS ON HIGH SCHOOL GRADUATION AND FUTURE GOALS
- POSITIVE BEHAVIOR
- PERSONAL WELLNESS
- POSITIVE, HEALTHY RELATIONSHIPS
- ACADEMIC EXCELLENCE

** WYOMING'S HATHAWAY SCHOLARSHIP: Every Wyoming middle and high school student is automatically eligible for the Hathaway Scholarship. By maintaining a certain GPA, test scores and class requirements throughout high school, they can use the scholarship to pay for tuition at the University of Wyoming or a Wyoming community college.

HEALTHY MIND, HEALTHY BODY

Roosevelt High School's curriculum is based on a “healthy mind, healthy body” model, which combines exercise with focused classroom instruction to improve student achievement. The school has a full-size gymnasium and large exercise facility featuring the latest equipment and a span of windows.

Building relationships between staff and students is also an integral piece of Roosevelt’s program. In 2006, the school initiated a breakfast program where students and teachers gather at the start of each day for breakfast and small group discussions. The program, which was previously held at the local Boys and Girls Club, is able to continue in Roosevelt’s new amphitheater-style student commons.



PHYSICAL ACTIVITY IS A VITAL COMPONENT OF ROOSEVELT'S CURRICULUM



STUDENTS AND STAFF MEET EACH MORNING FOR BREAKFAST AND SMALL GROUP DISCUSSIONS.



STUDENTS WORK ON ACADEMY PROJECTS IN FLEXIBLE LEARNING SPACES.



TEACHER COLLABORATION IS IMPORTANT TO STUDENT LEARNING.

EMPOWERING ALTERNATIVE LEARNERS

Roosevelt High School provides its students with a supportive, personalized learning atmosphere with services to help students succeed. Like Pathways, Roosevelt’s overarching goal is to empower its students at school as well as life beyond high school.

Due to budget cuts, the district decided to reduce the campus footprint and connect Roosevelt with Pathways. Already the administration, teachers and students are seeing a more inclusive and engaging campus. By sharing a common building and having the same opportunities to learn hands-on, career-focused skills as the other district students attending Pathways, student confidence builds and success is more likely to happen in learning – and in life.

“ We have designed spaces that push students and teachers to think and act differently while they learn.”
SHAWNA TRUJILLA
Roosevelt Principal

A BRIDGE TO THE COMMUNITY

Pathways and Roosevelt are connected by the Media Bridge – a collaboration space that is also intended to symbolize the building’s educational approach and connection to the community. The Bridge is designed to be a flexible space for students to collaborate on projects and presentations and meet with mentors in person or virtually. In January, Pathway’s Creative Arts, Communications and Design Academy (CACD) held an Art Walk in the space, and invited the community to see student artwork, hear presentations and experience their excitement firsthand.



PATHWAYS INNOVATION CENTER: VISION

Pathways Innovation Center is open to 11th and 12th graders attending the district's three high schools – Natrona County, Kelly Walsh and Roosevelt. Pathways is aimed at connecting academics with real-world experiences in a wide range of fields, including engineering, arts and media, health science and business.

Career exploration is at the core of Pathways Innovation Center, and each of the four academies feature an innovation lab with state-of-the-art industrial equipment and technology. Labs are designed to reflect professional

work settings, providing hands-on experience with the latest technology and introducing students to a variety of career paths to spark their curiosity or guide them in developing a passion in a specific field.

Community experts work closely with academy teams by mentoring students and assisting them on projects. In many of the academies, students can earn college credit or industry-standard accreditations and certifications in professions such as welding, automotive technology, culinary arts and nursing.

PATHWAYS INNOVATION CENTER: GOALS

The Academies in Natrona County will provide the following outcomes for our students:

- Increased graduation rates
- Increased student academic performance and achievement
- Close academic achievement gaps across system
- Improved 21st Century focus and readiness
- Successful smaller learning communities within large high schools
- Increased career-focused counseling
- Expanded connections with business and industry partners

PATHWAYS INNOVATION CENTER'S ACADEMIES





HEALTH SCIENCES AND HUMAN SERVICES

Caregiving

Early Childhood Development

Nursing

Pharmacology

Sports/Medicine

Pre-Occupational Therapy

Pre-Physical Therapy

Fire Science

English/Language Arts

Psychology

Sociology

HSHS



CACD

CREATIVE ARTS, COMMUNICATION AND DESIGN

Production Arts

Visual Arts

Digital Media Arts

Color Theory & Design

Photography

Sculpture

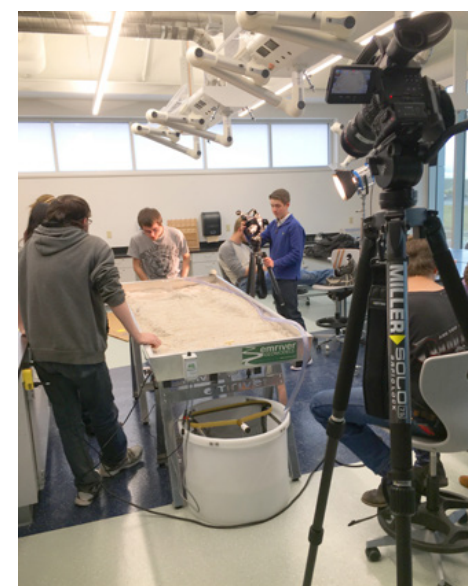
Computer-Aided Arts

Web Design

Graphic Design

Film/TV Production

Graphic Technology



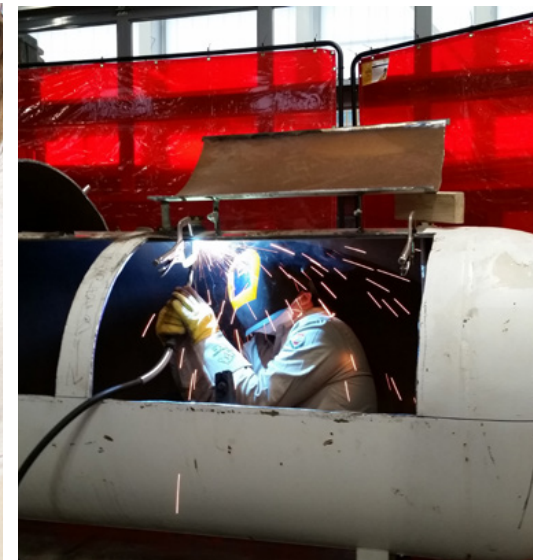


ARCHITECTURE, CONSTRUCTION, MANUFACTURING AND ENGINEERING

Woodworking
Welding
Engineering

Robotics
Auto Service
Cabinetmaking

Robotics Engineering
Electronics/Electricity
Biotechnology



BUSINESS, AGRICULTURE AND NATURAL RESOURCES

Business
Marketing
Sports & Entertainment
Nutrition

Food Service
Culinary Arts
Agriculture
Natural Resources

Veterinary Science
Horticulture
Food Science





“The design of the building is extremely well thought out and encourages a different type of interaction. It’s a place for discovery and celebration.”

CHAD SHARPE
Pathways Principal



CUTTING-EDGE SOFTWARE AND TECHNOLOGY ALLOW STUDENTS TO VIRTUALLY CONNECT WITH INDUSTRY LEADERS AROUND THE WORLD.



STUDENTS WORK TOGETHER ON LARGE-SCALE PROJECTS IN THE FABRICATION HALL, INCLUDING A FULL-SIZE CABIN THAT WILL BE AUCTIONED OFF AT THE END OF THE SCHOOL YEAR.

COLLABORATIVE LEARNING COMMUNITIES

Collaborative learning communities are at the core of Pathway’s mission and are incorporated throughout the design.

Students are encouraged to team up on projects with peers in their own academy as well as across academies. Academy labs are glass-walled, providing transparency and stimulating synergy, and serve as incubators for idea exploration and prototyping.

Projects transition out of the labs and into the adjacent fabrication hall, a massive open commons space that is designed to create a conversation among academic

disciplines, including construction, woodworking, metals, welding, robotics, arts and furniture making.

In addition to the academy labs, informal meeting spaces and lounges are threaded throughout the building. Banquettes and areas with flexible furniture that can be rearranged, provide spaces for students to meet with team members and mentors as they build presentations.

Conference rooms are equipped with the latest technology, allowing students to give digital presentations to peers, mentors and community partners. It also allows them to teleconference with industry experts located around the world.

REAL-WORLD EXPERIENCE

Pathways academy labs are designed to reflect professional work settings, introducing students to a variety of fields intended to spark their curiosity or guide them in developing a passion in a specific career.

From setting up equipment and managing labs to creating, leading and presenting projects, the academies are student-driven environments. “Students manage every aspect of the labs, know all of the equipment, and have had to get the proper licenses to operate the labs,” says Molly Voris, coach of the CADE Academy. “They are

getting the hands-on experience, skills and confidence they need to move forward.”

For example, culinary arts students create a lunch menu for students and staff each day and also do catering for school events and community gatherings. They also obtained food handling and safety licenses necessary to run a restaurant facility.

INVENTIVE ENVIRONMENTS FOR SPECIALIZED LEARNING

Academy labs are designed to be innovation spaces, providing hands-on, applied learning experiences in a myriad of career paths. Surrounding the fabrication hall, they house advanced technology and manufacturing equipment that allow students to work on projects before bringing them into the fabrication hall for final assembly or display.

Glass walls and overhead garage doors are used to promote transparency and collaboration. Labs are adjacent to a striking floating glass-enclosed blue “think tank,” which overlooks the hall and is intended for informal learning.

Examples of equipment include:

- Hospital-standard equipment so students can become certified nursing assistants
- Modern kilns, open studio spaces and digital and video production labs
- Latest software and technology related to careers in architecture, robotics, auto-service, welding and carpentry
- State-of-the-art culinary kitchens, information technology, bio-technology, wildlife biology and accounting

“Our mentors are amazing. They support, encourage and push us every day. They have helped us become comfortable in our environment. We want to do this. We want to succeed.”

Pathways Student





“There’s a lot of collaboration going on with the other kids. To see everyone come together, get along and produce something is very cool.”

Pathways Student

Physical Environment

FABRICATION HALL: A SPACE FOR CELEBRATION

At the center of the academy labs is a 5,000-square-foot fabrication hall, a space intended to inspire creativity, innovation and collaboration. The industrial space is large enough for students to construct projects ranging from a pre-fabricated house to a solar-powered airplane, and is meant to inspire collaboration across academy disciplines.

The space features a large overhead crane and is inspired by Boeing’s aerospace facility in Redmond, Washington, where engineering, design and fabrication teams collaborate under one roof. Similar to Boeing, where aircrafts are built in large hangars with overlooking offices and meeting spaces, Pathway’s academy labs, learning studios and group spaces overlook the hall and are intended to promote collaboration through proximity and visibility.

The hall has 16-foot-high, custom fabricated overhead glass garage doors that fully open. The doors, designed to complement the look of the adjacent curtain wall, lift up to allow raw materials to be delivered into the space and then leave as transformed projects. The large doors were

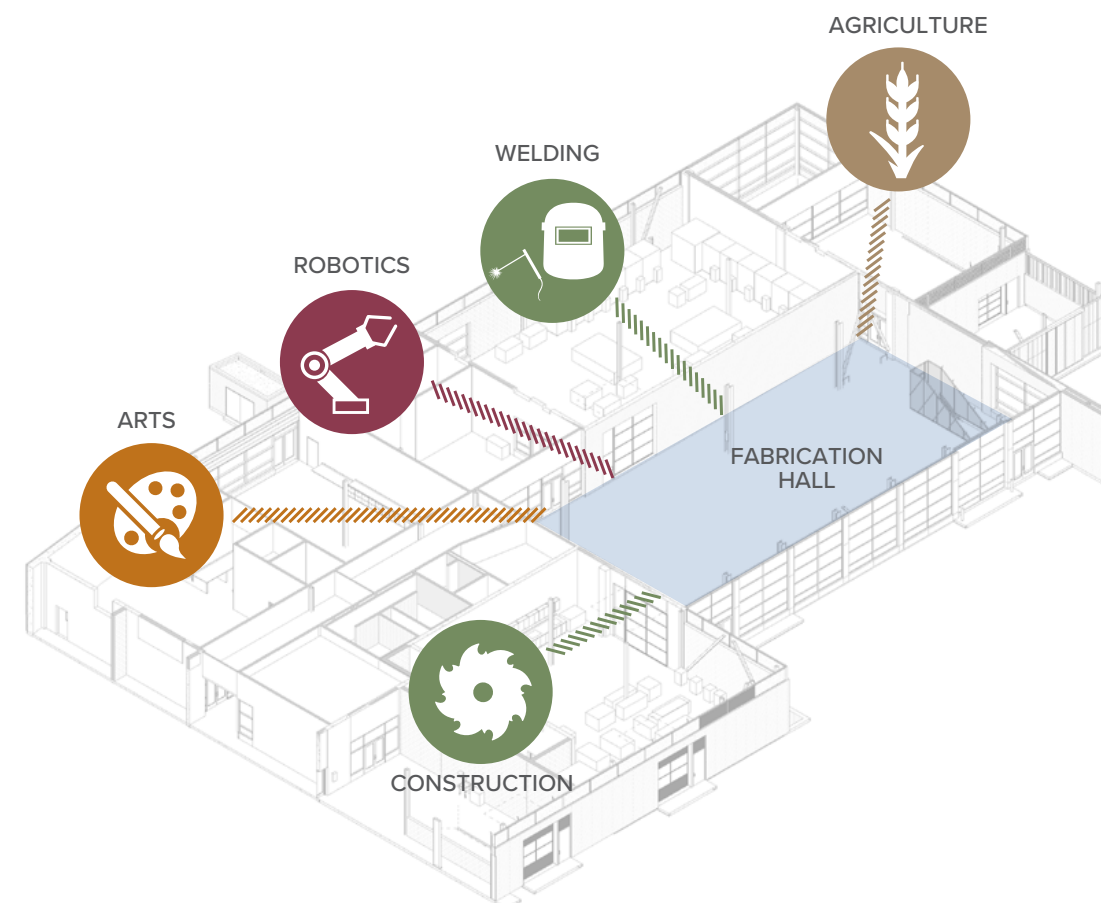
critical to the design and encourage students to stretch their imaginations to create advanced design and fabrication projects while also extending the learning beyond the footprint of the building.

The space has been used for a variety of large-scale projects, from construction and welding projects to paintings. Members of the community have been invited to see some of the amazing projects students have been working on. “Community members have come in and can’t believe this is a high school,” Voris says.

The massive panes of glass in the fabrication hall produce a visually stunning space, flooded with natural daylight. Inside, views to the surrounding soft prairie landscape provide a juxtaposition to the interior’s hard surfaces. Viewed from the exterior, the fabrication hall beautifully illuminates at dusk, showcasing to the community the space and the stimulating work taking place inside.

ACADEMIES CONVERGE ON FABRICATION HALL

Pathways academy labs converge on the fabrication hall, which is intended to stimulate collaboration, creativity and innovation among the different academies.



A COMMUNITY-FOCUSED SCHOOL

In addition to working on student-driven academy-based projects, local businesses and organizations commission student work, allowing them to gain valuable community engagement skills and experience.

Pathways students partnered with the local YMCA to design and fabricate a donor board for its new facility. The process included ideation, prototyping, pitching, facilitating, presenting and building.

Students in the Academy of Creative Arts, Communication and Design (CACD) designed and presented to the YMCA. After agreeing on a design, students in the Architecture, Construction, Manufacturing and Engineering Academy (ACME) worked together to make the individual pieces, engrave names and install the three-dimensional pieces.



THE PATHWAYS STUDENT DESIGN TEAM PRESENTED THREE OPTIONS FOR A DONOR BOARD TO YMCA'S LEADERSHIP.

“ The opportunity to create the donor wall was unique and something that will be in the community for years.” ”
Pathways Student



PATHWAYS INNOVATION CENTER LEARNING STAIRS

“ Because there is so much glass, everything is exposed. There’s a lot of activity and it’s exciting to see what other people are working on. ”

Pathways Student



FLEXIBLE EDUCATIONAL ENVIRONMENTS

A variety of flexible learning and collaboration spaces are incorporated throughout the building and intended to encourage engagement, serve diverse needs and spark curiosity and creativity.

All learning environments open up to allow for small and large-group teaching and engagement. Tables, chairs and whiteboards are on wheels for rearrangement, and tables can be flipped up for efficient storage. Staff and students use the commons area each morning for breakfast gatherings, and also hold small group and one-on-one meetings with mentors and students. The Black Box Theater is used for presentations and performances and can be opened to the outdoors with arena-style seating.

An abundance of glass walls and windows throughout not only provide transparency, but are intended to be written on, allowing students and mentors to brainstorm projects and prepare for presentations. Commons areas and the bridge connecting Roosevelt and Pathways allow students to exhibit their completed projects and have been used several times for community open houses.

Presentation stairs are located in both buildings, allowing mentors, students and community members to hold large presentations or performances. A genius bar is located at the top of the stairs, providing space for students to work on laptops.

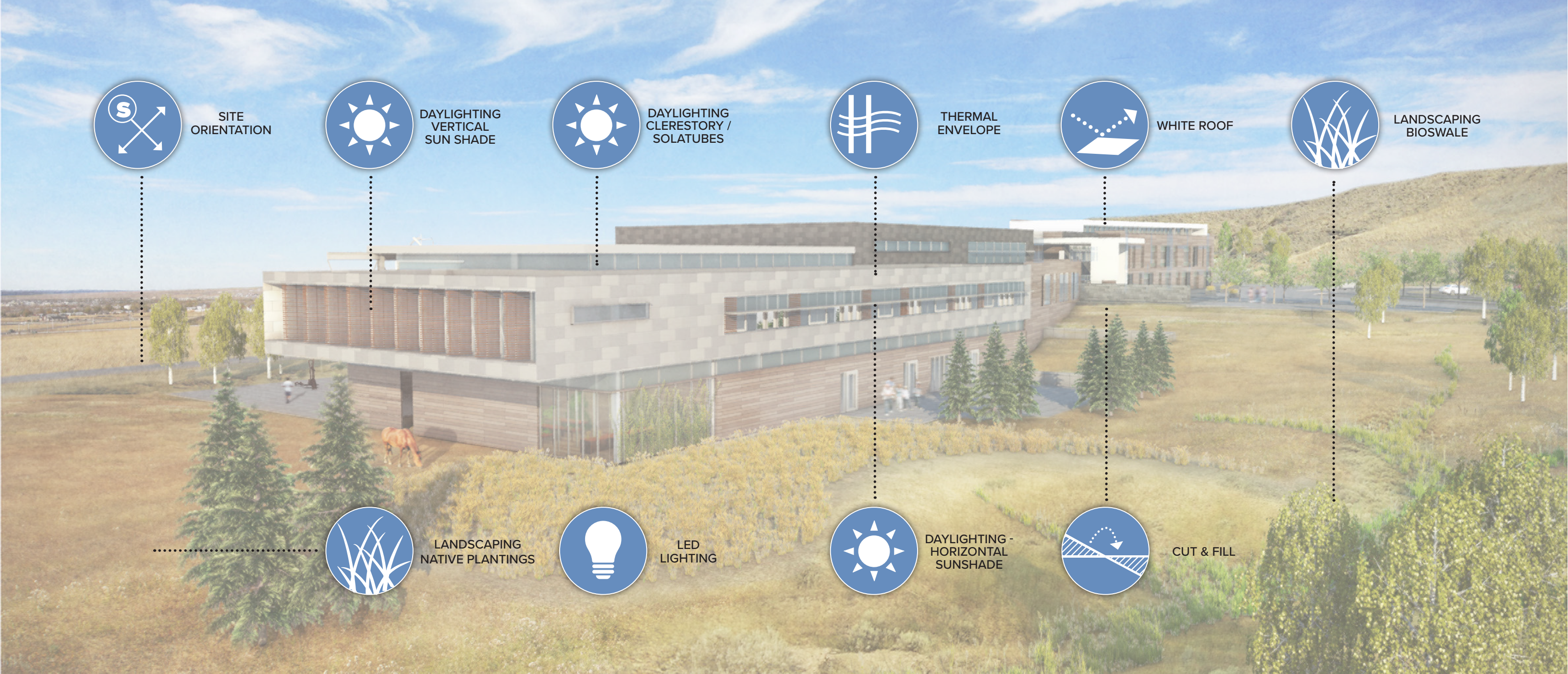
TRANSPARENT LEARNING

All Pathways academy labs and conference rooms are glass enclosed, providing barrier-free environments to encourage innovation. The glass walls allow students to visually interact and see what classmates are working on in other academies.

Natural light floods into the labs through expansive windows and the adjacent fabrication hall, and is intended to improve productivity and inspire students with the views of the surrounding vast landscape. The large hall fosters collaboration across the academies and encourages expansive thinking. It features 16-foot-high glass garage doors, allowing students to bring large projects in and out of the facility and showcase their work to the community.

Conference rooms are also glass enclosed and include a blue “think tank,” which overlooks the hall and provides a striking design focal point in the space. It has been used for informal learning opportunities, meetings with mentors and distance learning.

“The students were able to Skype with an artist in Denver,” says Voris, the coach of the CACD Academy. “The students were able to ask questions and learn what life is like as an artist. Opportunities like this have empowered them, built their confidence and allowed them to see what life is like beyond high school graduation.”



SUSTAINABILITY

Sustainability was integral to the success of Pathways and Roosevelt High Schools. To support the diverse hands-on curriculum, many of the sustainable strategies implemented were designed to allow students to engage the architecture in a more intense way. From the various approaches to daylighting, to a sustainable landscape that embraces an experimental pedagogy, the building is an open invitation for students to continually assess and tend to the performance of the new campus.

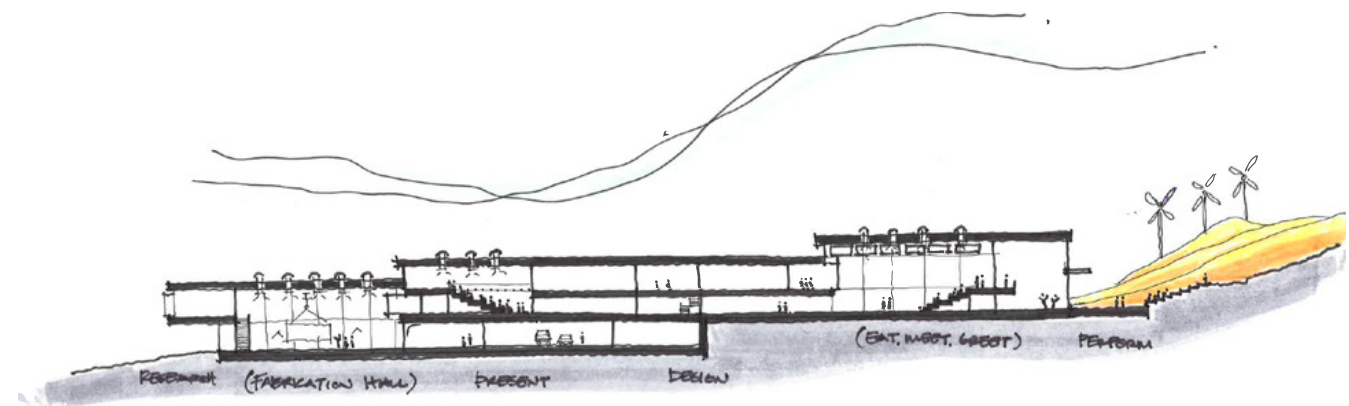
The design team utilized advanced benchmarking and target setting for energy use intensity. Strategies investigated and/or implemented were:

- All LED lighting with controls
- Destratification fans in all workshops
- Plug Load reduction

- Exterior vertical window shades at west facing glazing
- Decreased building wall infiltration
- High Performance glazing, tuned for each elevation

Special attention was given to daylighting in the building, with interior shading being the last option for unwanted glare. Extensive computer studies were conducted to model various sun conditions during the course of a day and year.

The building is intentionally oriented so that the long dimensions of the building face north and south. Horizontal and vertical sun shading devices were designed and engineered to reduce unwanted low-angle glare. In addition, special daylighting glass and light-diffusing glazing were used to direct natural light deep into the space.



FLOORPLANS



BEYOND THE SCHOOL'S FOOTPRINT: OUTDOOR LEARNING ENVIRONMENTS

Student-focused learning experiences move beyond the walls of the building to the outdoors. Roosevelt students continue their wellness and educational instruction on a half-mile path that winds through the foothills of an adjacent mountain and features learning and exercise stations. The school's black box theater features a large garage door and opens to an outdoor amphitheater, allowing students to hold theater, performances and other indoor and outdoor events.

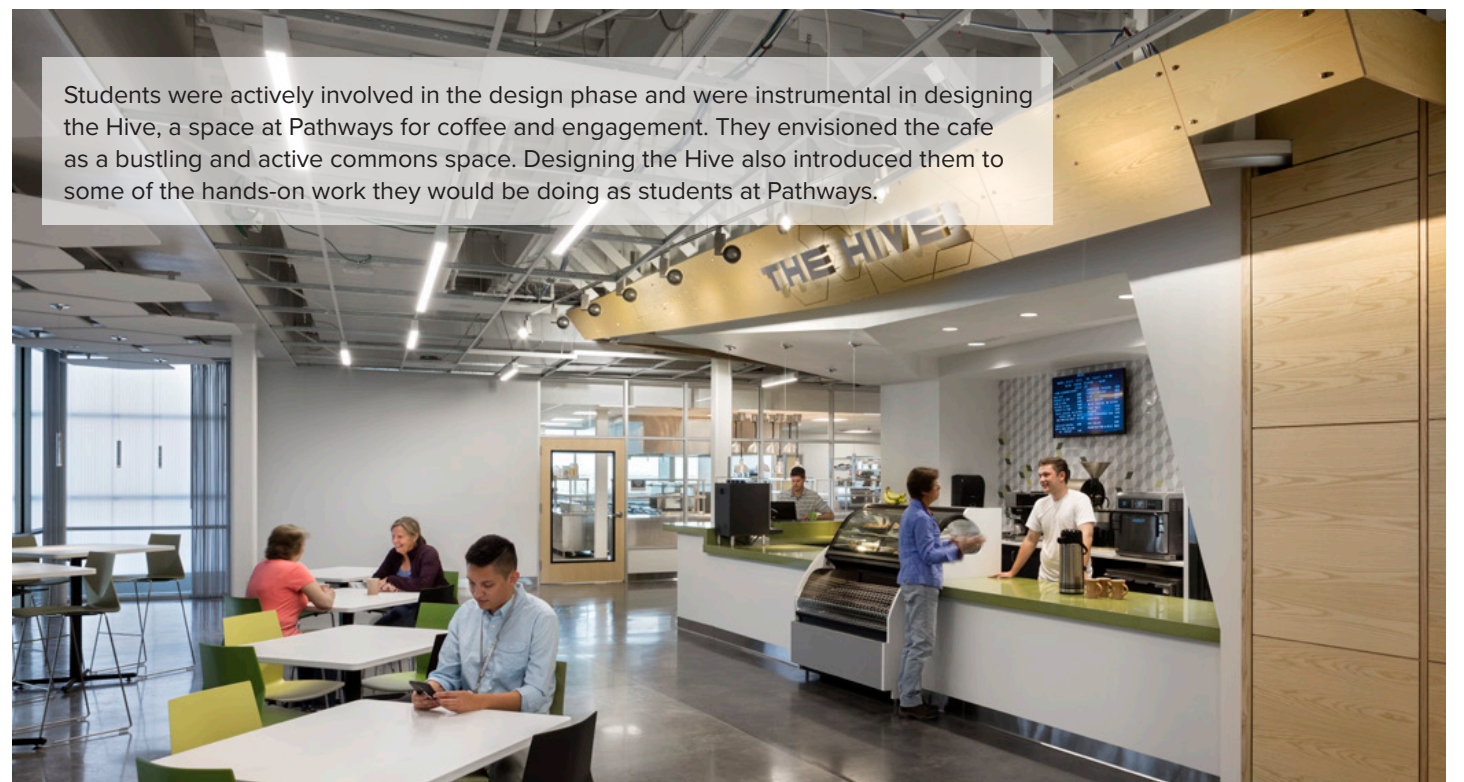
At Pathways, the 16-foot glass garage doors in the fabrication hall open to outdoor work spaces, allowing students to bring large-scale projects outside to work on or showcase to the community. Students in the agriculture academy are able to work with farm animals and horses in the school's paddock, and are growing demonstration and experimental gardens in large steel containers.



“This has been seen as a huge opportunity for the community. Community members have come in and seen what the kids are doing here and can’t believe this is a high school.”

MOLLY VORIS,
Coach of the
CACD Academy

Results of the Process & Project



Students were actively involved in the design phase and were instrumental in designing the Hive, a space at Pathways for coffee and engagement. They envisioned the cafe as a bustling and active commons space. Designing the Hive also introduced them to some of the hands-on work they would be doing as students at Pathways.

ACHIEVING COMMUNITY GOALS

During the initial stages of the charrette process, parents voiced concern that students from the three district high schools wouldn't be able to come together and learn at Pathways.

“There was a lot of skepticism in the beginning,” says Pathways Principal Chad Sharpe. “The kids stepped up and were excited about these new opportunities.”

Students have been enthusiastic about the chance to collaborate with students from other schools. “I have friends here that I never would have had the opportunity

to meet, who have the same interests and passions,” says one student. “It doesn't matter where you're from, we're in it together. We're Pathways and we're really proud of this school.”

The community has been impressed by the student projects and positive energy felt throughout all of the academies. “We had a group of professionals visit and they were blown away by what they saw at the school,” says Sharpe. “The culinary students provided them an amazing lunch and they witnessed the student work that is being generated throughout the building.”

COMMUNITY PARTNERS



STUDENT EMPOWERMENT

The biggest achievement of Pathways and Roosevelt has been the ownership the students have felt in the facility and pride they have shown for their work. All academy programs and projects are driven by students with mentors providing guidance, but no lectures. This has had a dramatic impact on raising student confidence.

“They support, encourage and push us every day,” says a Pathways student. “They have helped us become comfortable in our environment. We want to do this. We want to succeed.”

Each morning at 7 a.m., a student in the Business, Agriculture, Natural Resources Academy arrives to open the school coffee shop, which she manages through the

program, putting together work schedules and training. She also manages the culinary arts lab, where she’s become knowledgeable on food handling and safety regulations. She and her fellow academy classmates researched and applied for the proper licenses necessary to run a professional culinary kitchen.

Veterinary science students also needed to learn the rules and regulations necessary for keeping farm animals and horses in the school’s paddocks.

“They are empowered by the what they are doing here and showing their growing confidence,” Voris says. “The maturity of the students is evident.”



STUDENTS IN THE HSHS ACADEMY HAVE AN OPPORTUNITY TO EARN THEIR CERTIFIED NURSING ASSISTANT (CNA) CERTIFICATION.



IN THE CACD ACADEMY, STUDENTS ARE EXPOSED TO THE LATEST FILM PRODUCTION EQUIPMENT AND HOLLYWOOD-STANDARD MAKEUP ARTISTRY.



FORTY-SIX CONSTRUCTION AND WELDING STUDENTS HAVE EARNED THEIR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 10-HOUR AUTHORIZATION CERTIFICATE.

SUCCESSFUL COLLABORATION

To the excitement of the community, the campus is being utilized as it was envisioned. In addition to the YMCA donor board project, unique student-driven collaborative projects are occurring across the academies.

- Welding students in the ACME Academy teamed up with culinary arts students in the BANR Academy to design and construct a smoker. The welding team also designed a trailer for the smoker so culinary students can bring the smoker to cater school and community events.

- Students across the academies have spent several months constructing a cabin in the fabrication hall that will be auctioned off to the community after an open house at the end of the school year. The project involved students from the woodworking, cabinet making, and engineering teams.
- A large component of the culinary program is the “farm-to-table” concept. The agriculture team is raising vegetables in the green house and chickens for eggs and poultry.

“ I enjoy working in a studio – it’s like being a real artist and we have all the materials we need. The windows and the light are amazing, and the views out to the mountains are inspiring. ”

Pathways Student





FIRST YEAR SUCCESS STORIES

46

STUDENTS
OSHA
CERTIFIED

47

STUDENTS
PROSTART
CULINARY
CERTIFIED

70

STUDENTS RECEIVED
BASIC LIFE SAVING
CERTIFICATION

WELDING STUDENTS
WILL TAKE THE

AWS

CERTIFICATION
TEST

AUTOMOTIVE STUDENTS
WILL TAKE THE

ASE

CERTIFICATION
TEST

NURSING STUDENTS
WILL TAKE THE

CNA

CERTIFICATION
TEST

ELEVATION OF TEACHING AND LEARNING

While there was initial uncertainty by some whether Pathways and Roosevelt would be successful, students, teachers and the administration are excited with the results they are seeing. “The move from theory to practice has been transformative,” Sharpe says. “For the most part, the theory about Pathways was right. The students participated in developing the courses and we’ve been incredibly impressed with their enthusiasm.”

For many students attending Pathways, this is the first time they’ve been engaged with learning and eager to be at school. Students in the construction, welding and auto programs, for example, are taking math and understanding it for the first time.

Students are building their resumes with advanced projects and gaining not only applied skills, but also important critical thinking and leadership skills. In addition to feeling prepared for life post-graduation, confidence has grown and they’re expressing hope for their future.

“I learned how to put together an artist statement and portfolio,” says a Pathways student in the CACD Academy. “This is something that I can present when I apply to college arts programs. I never would have known how to do this if I wasn’t here. Without this guidance, I would have been so unprepared.”



“ I think my favorite sight each day is the smiles on faces, the intensity and passion, the professionalism, and genuine interaction of mentors with mentees... and sometimes, the mentors are teenagers. ”

CHAD SHARPE,
Pathways Principal