

2014 Exhibition of School Planning and Architecture Career & Technical Education Center

University of Alaska Anchorage
Kenai Peninsula College

UAA/KPC Career & Tech Center



Site Planning & Context



Welcome & Celebrate

Community Environment

Located in the heart of Alaska's Kenai Peninsula, oil exploration and production have been a cornerstone of the local economy for more than half a century. Responding to community needs, UAA's Kenai Peninsula College (KPC) has evolved into Alaska's premier education and training facility serving the oil and gas industry. With the construction of the new Career and Technical Education Center the college finally has a physical facility that matches the quality and ambition of this nationally recognized program.



Campus Connections



Community Environment continued

The bulk of the existing campus buildings were built in the 60s, 70s and 80s. They were inwardly focused and linked in a linear campus fronted by a sea of parking, with an appearance and feel more like a shopping mall than an institution of higher learning. Beginning with master planning in 2005 the campus envisioned breaking the box by converting parking areas to student spaces and surrounding them with engaging contemporary buildings. The Career & Technical Center advances that vision by boldly turning perpendicular to the existing campus buildings and bisecting the existing parking areas. Together with MCG's MAPTS Industry Training facility and a future Cultural Building they create a new center of gravity for the campus focused on dynamic outdoor social and learning spaces.



Learning Environment

KPC serves a wide variety of student and industry needs providing everything from 4 year degree programs to short industry training refresher courses in process technology. An important criterion for the college was that the new facility reflects as closely as possible the actual working environments they were preparing students for. In collaboration with industry partners, a unique suite of labs and simulators were developed for hands-on learning with electronic and hydraulic components, linked to provide interactive real world experiences.

Real World Learning

Learning Environment continued

The process tech simulator, the focal point of the facility is housed in a dramatic glass enclosure that fronts the future quad, proudly displaying the program's exciting, active learning. Coupled with technology rich classrooms and a variety of social learning areas this facility provides a dynamic mix of learning spaces that are the hallmark of progressive college campuses.



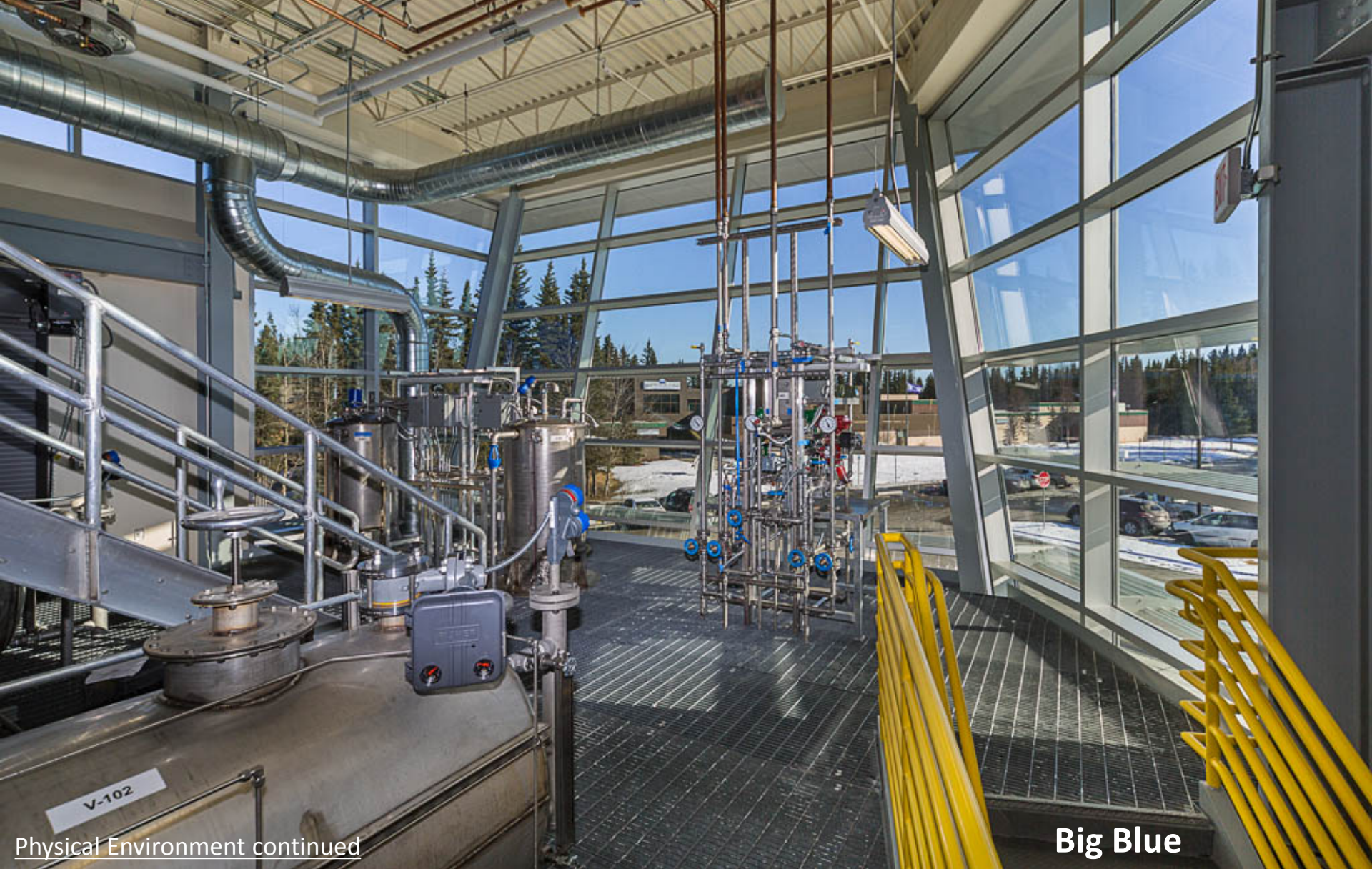


The Building Teaches

Physical Environment

Responding to the college's goals the design aesthetic is intentionally industrial. Exposed structure, piping and electronics mirror actual working environments and are used as teaching tools by faculty. Communications, boiler and fan rooms are oversized for use as teaching spaces and have windows into the main entry lobby. Sustainability features, such as sun shading, motorized windows for natural ventilation, displacement ventilation system and sensor controlled LED lighting are a visible and active part of the learning environment. Additionally, heat recovery ventilators, radiant floor heating, condensing boilers and a thermal envelope with R-40 walls make this one of the most energy efficient buildings in UAA's inventory.





Physical Environment continued

Big Blue

The process tech simulator dubbed 'Big Blue' provides an element of educational theater where active learning is viewed both from within and without the building. Carefully modulated natural light floods the space and adjacent lobby areas. A companion project included the addition of KRCs first on-campus housing complex located to the west of the Center. The Career/Tech Center provides a pedestrian link, both inside and outside that connects the new housing to the main campus.

Social Learning

Planning Process

The project concepts were developed through a series of lively workshops involving key instructors, maintenance and UAA personnel. The initial workshop was a 2 day charrette that established the basic program and design concepts. A notable aspect of our team was the participation of an experienced industry representative that worked with UAA to build a unique 2-story process tech simulator tailored to the current successful programs. This dynamic collaborative process helped UAA get comfortable with the building's intervention into the existing parking lot and provided support for the creation of the campuses first landmark building.



Industrial Sophistication

Planning Process continued

Interface with UAA continued through the detailed design process where we explored ways to make the building systems more legible and usable for educational purposes.

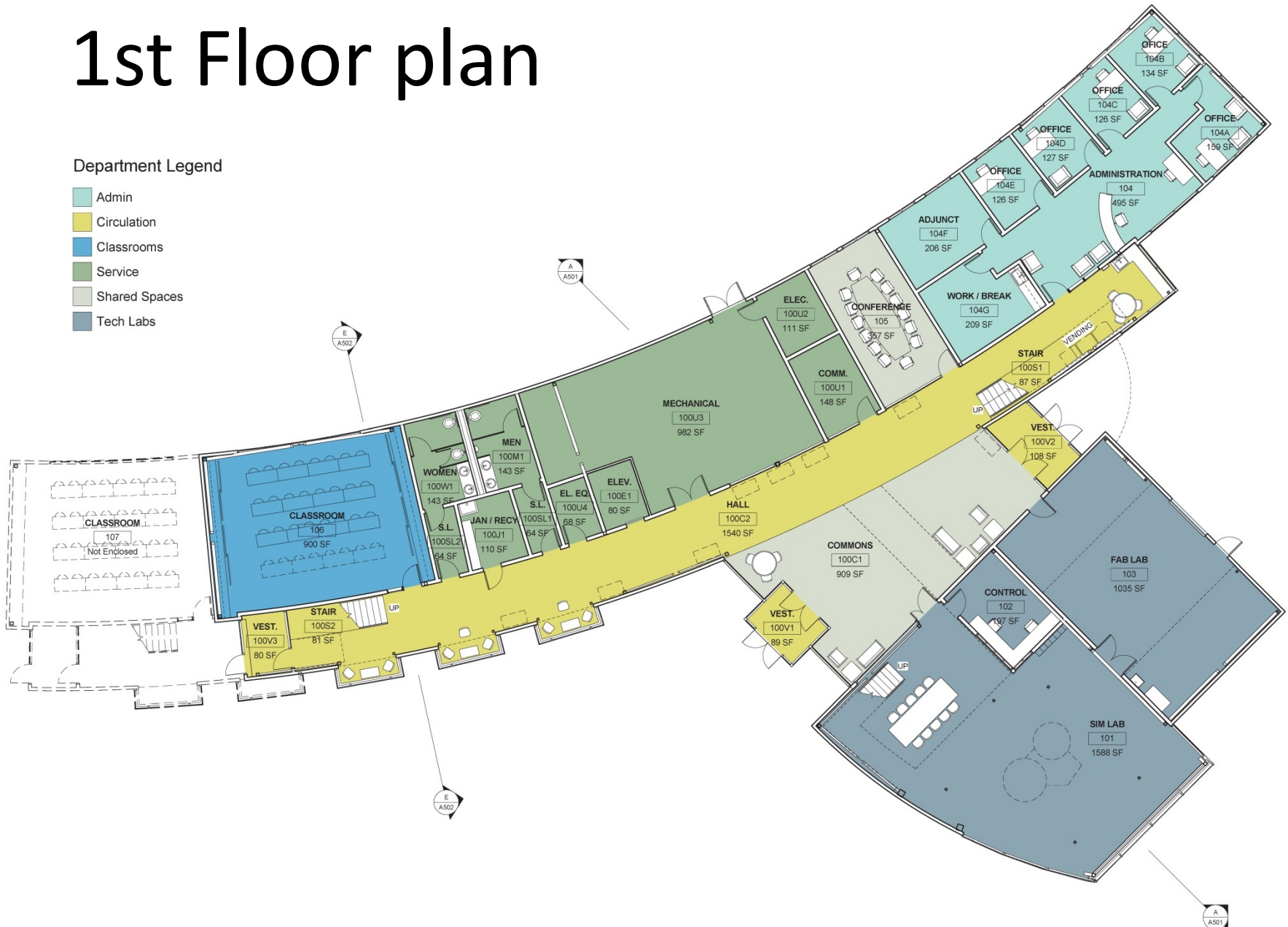
Initial Master Planning was completed in 2010 with kickoff of the design process in April 2011. Workshops continued through May/June with Schematic Design completed July 2011. Construction was completed on time for the fall 2013 semester.



1st Floor plan

Department Legend

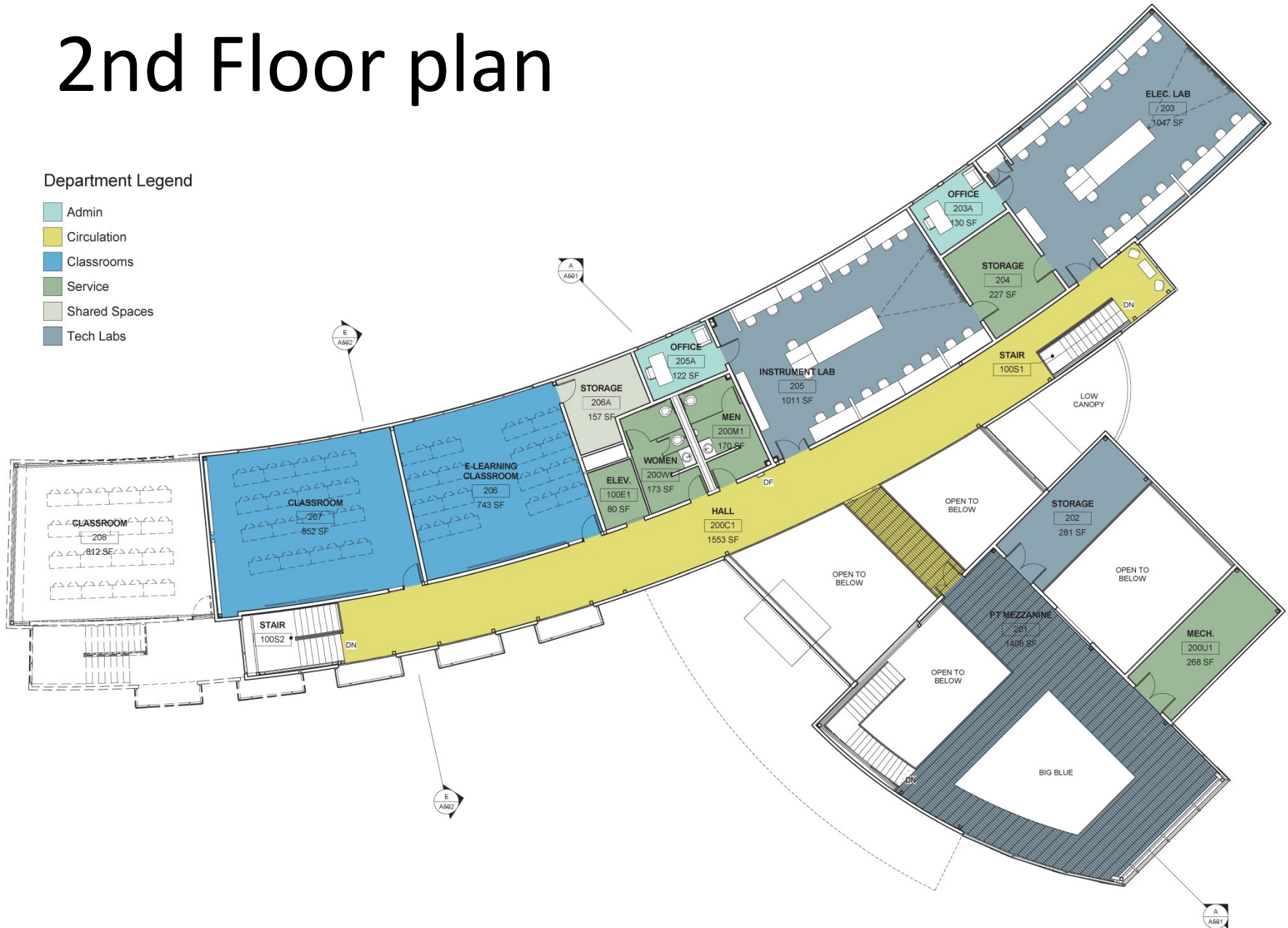
- Admin
- Circulation
- Classrooms
- Service
- Shared Spaces
- Tech Labs



2nd Floor plan

Department Legend

- Admin
- Circulation
- Classrooms
- Service
- Shared Spaces
- Tech Labs



Exhibition of School Planning and Architecture

Project Data

Submitting Firm :	McCool Carlson Green Architects
Project Role	Architect
Project Contact	Michael Carlson
Title	Principal Architect
Address	421 W 1 st Ave Suite 300
City, State or Province, Country	Anchorage, Alaska
Phone	907-563-8474

Joint Partner Firm:	Dialog
Project Role	Process Tech Planning
Project Contact	Tom Sutherland
Title	Principal Planner
Address	
City, State or Province, Country	Edmonton, Alberta
Phone	

Other Firm:	Spiral Design
Project Role	Interior Design
Project Contact	Cathy Kerr
Title	Principal Interior Designer
Address	1338 West 15 th Ave
City, State or Province, Country	Anchorage, Alaska
Phone	907-349-9804

Construction Firm:	Blazy Construction
Project Role	Builder
Project Contact	
Title	General Contractor
Address	
City, State or Province, Country	Soldotna, Alaska
Phone	

Exhibition of School Planning and Architecture

Project Details

Project Name	KRC Career & Technical Education Center
City	Soldotna
State	Alaska
District Name	University of Alaska Anchorage
Supt/President	Gary Turner
Occupancy Date	August 2013
Grades Housed	Higher Ed
Capacity(Students)	200
Site Size (acres)	6
Gross Area (sq. ft.)	16,000
Per Occupant(pupil)	80
gross/net please indicate	1.4
Design and Build?	no
If yes, Total Cost:	
Includes:	
If no,	
Site Development:	\$1.2 M
Building Construction:	\$6.9 M
Fixed Equipment:	N/A
Other:	
Total:	\$7.1 M

Goals and Objectives

KPC Career Tech Center

- **Attract and Retain Students:** enhance KPC's enrollment by providing facilities comparable or superior with similar institutions nationwide
- **Support Career and Technical programs:** Provide space and equipment to adequately serve KPC's current programs and projected future growth
- **Attract and Retain Qualified Faculty & Staff:** Create comfortable work environments and exciting educational and gathering spaces that will draw faculty to the facility and programs.
- **Provide Flexible Teaching Spaces:** replace outmoded or nonexistent labs and other teaching spaces to support current and future career and technical education programs.
- **Enhance Campus Image and Feel:** be a catalyst for the development of a campus quad by introducing improved pedestrian and vehicular circulation patterns and aesthetics.
- **Be a good neighbor:** develop projects responsibly in concert with nearby property owners and key stakeholders
- **Build sustainable facilities:** create cost effective projects that minimize KPC's long term maintenance and operation costs.

Particular to the Career Technical Center:

- Site
 - Development of a "Quad/Central" green to further the master plan
 - Pedestrian access between buildings, career tech as a waypoint between the existing campus buildings and proposed student housing
 - Revised vehicular circulation and parking. Break up the large sheet of asphalt.
- Utilities
 - Promote efficient use of all community utility resources
- Instructional Spaces
 - Spaces with flexibility to meet the changing requirements
 - Electrical and data distribution and future capacity.
 - Building systems as instructional lab pieces.
 - Utilidor distribution spaces, open ceilings?

Goals and Objectives as they are being prepared for the revised Strategic Plan for Kenai Peninsula College. The new plan is being developed in parallel with the accreditation model. Items particular to Career Tech are highlighted.

KPC Core Themes

Core Theme #1 Teaching and Learning

- Students achieve their academic, workforce, professional and/or self-enrichment goals.
- Offer enhanced and expanded programs that meet both the current and future student needs.

Core Theme #4 KPC Community

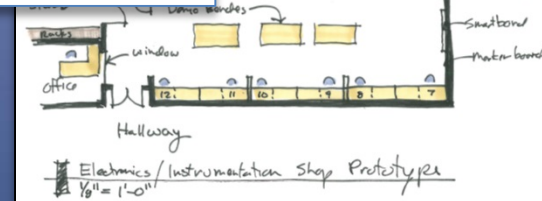
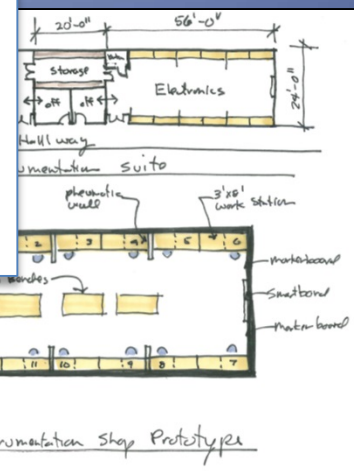
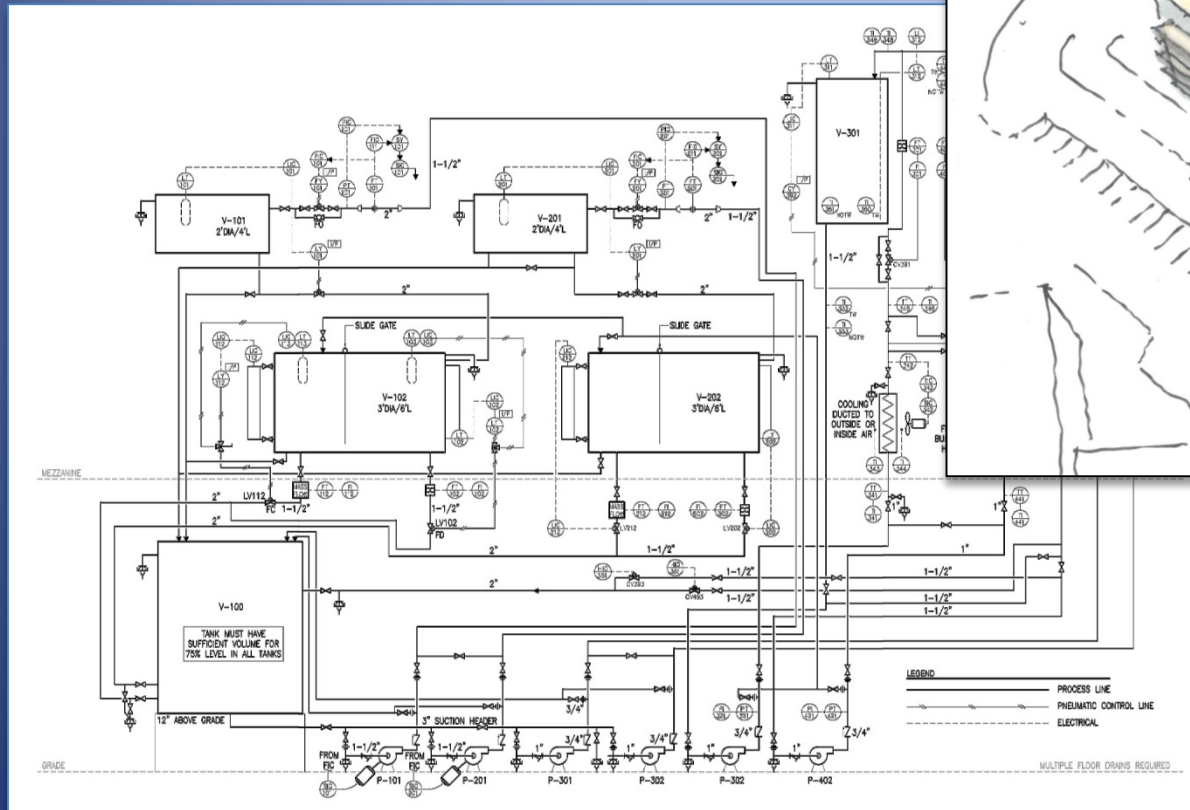
- Provide the best equipped, aesthetically pleasing and environmentally responsible facilities in the state.
- Integrate cutting edge technology to optimally support College function and growth.

Core Theme #5 Public Square

- Offer public programs and partnerships that meet both current and future needs of our local and global community.

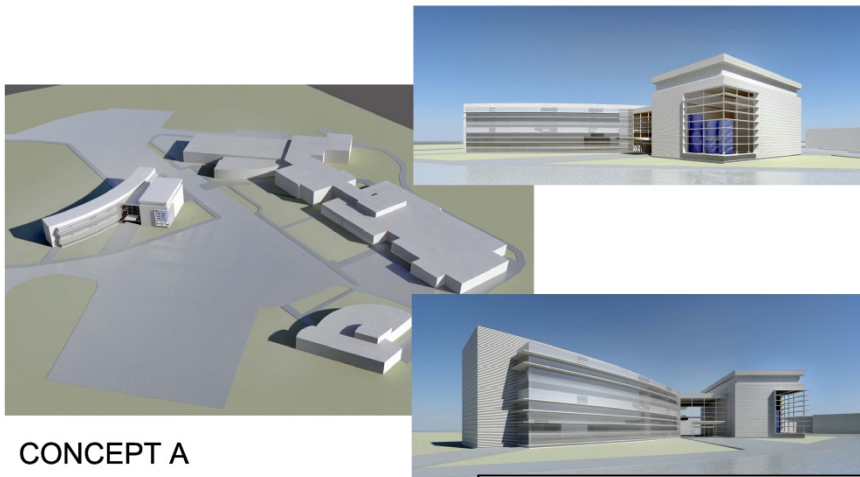
Goals and Objectives

Overall goals were translated into core themes that guided the planning and design process from start to finish. The college's ambitions included attracting significant participation by industry partners, nurturing potential donors and employers for their graduating students.



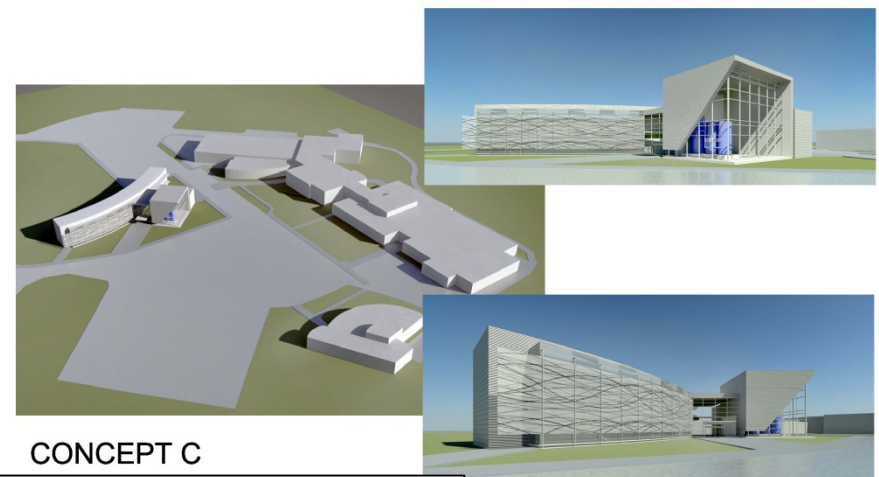
Programming & Concepts

The planning process fused highly technical program requirements with a creative process of exploration and discovery. Specialized consultants provided diagrammatic layouts of simulator spaces, translating the learning program into a road map for fabrication. Conceptual space layouts confirmed program data and sketches gave 3 dimensional form to the design committee's ideas.



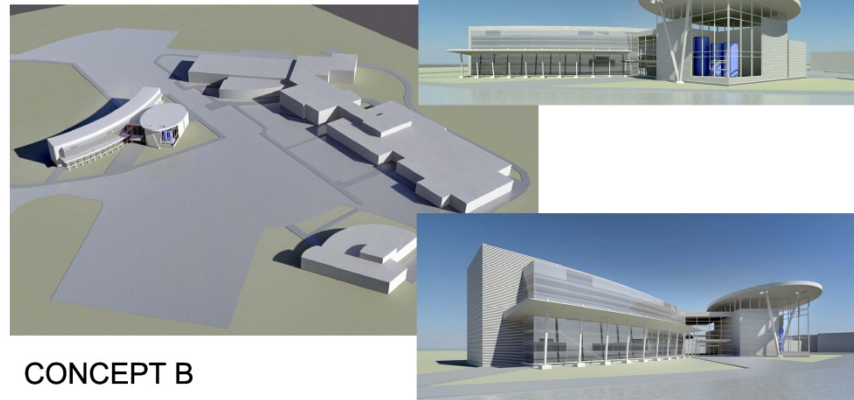
CONCEPT A

UAA KPC Career & Technology Center - Concept Design
May 3, 2011



CONCEPT C

McCool Carlson Green Architects
www.mcgalaska.com



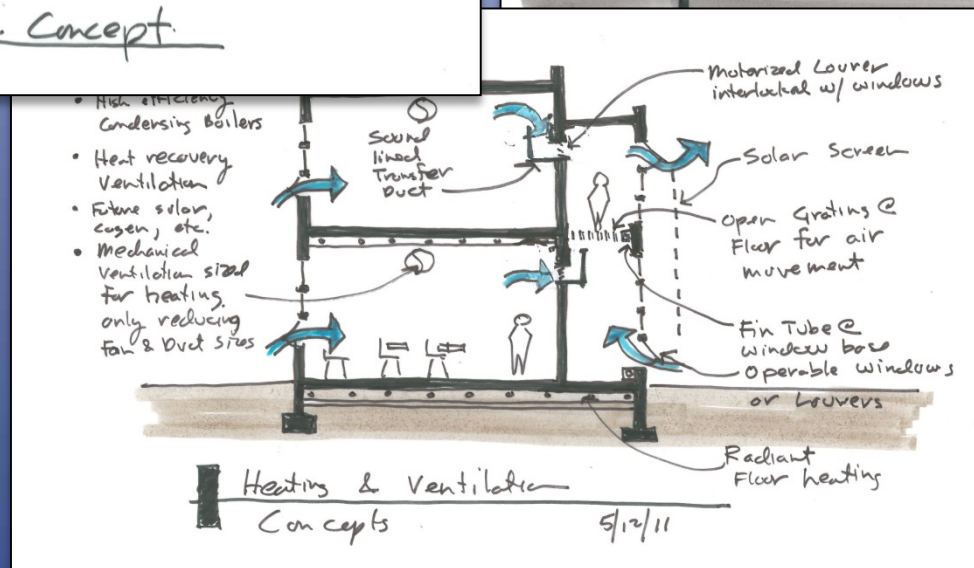
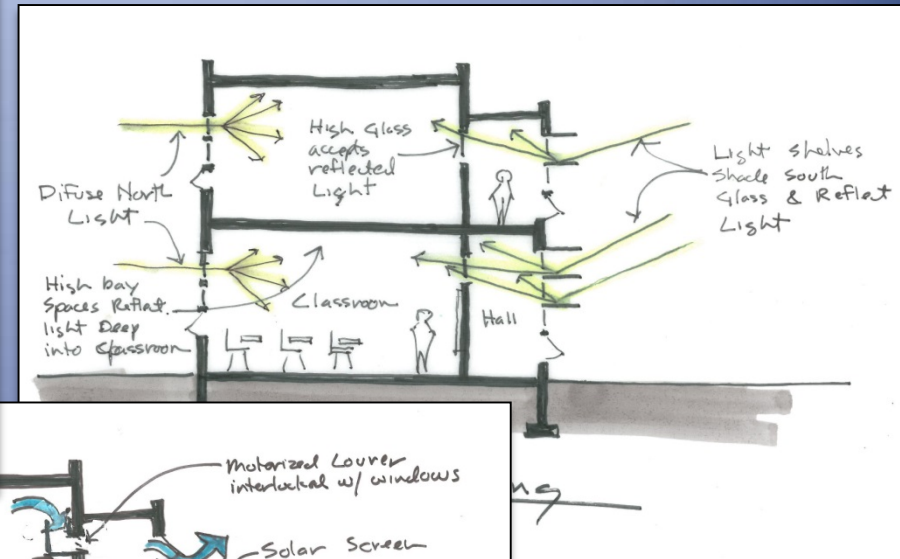
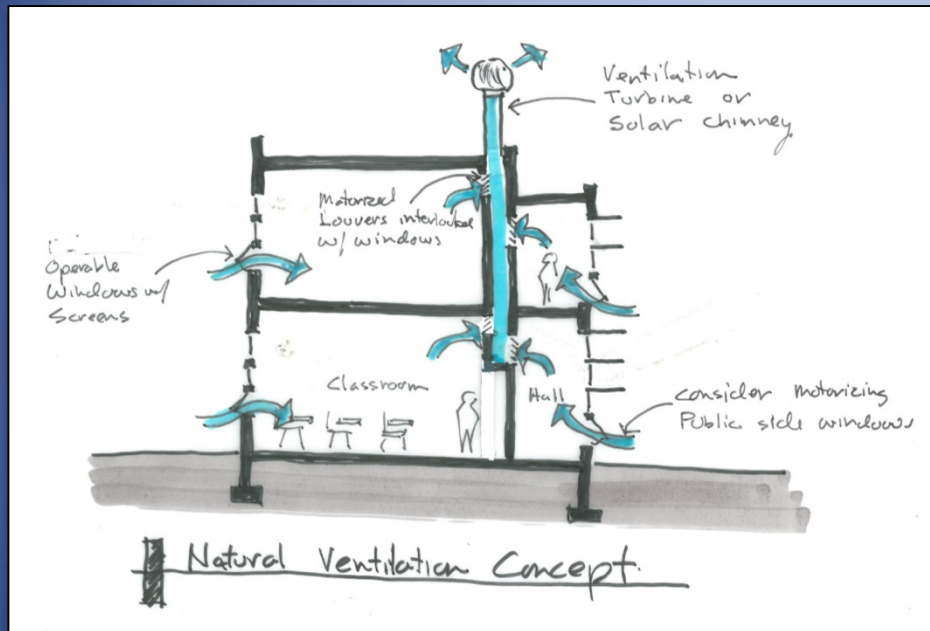
CONCEPT B

UAA KPC Career & Technology Center - Concept Design
May 3, 2011

McCool Carlson Green Architects
www.mcgalaska.com

Massing & Image

The tech center was expected to become the signature building on campus expressing the aspirations of a growing program. Careful analysis of building massing related to the existing structures and coordination with the master plan generated a two story structure that runs perpendicular to the main campus. Multiple exterior concepts explored the new campus identity and responded to the character of the campus programs and context.



Sustainable Design Concepts

Our sustainable design workshops explored a wide range of viable options for extreme cold climates. Drawing from the expertise of local agencies, UAA maintenance staff and the design team, innovative yet practical solutions evolved that focused on reducing energy consumption, improving the indoor environment and providing teaching opportunities.



Site Concepts

Responding to Alaska’s extreme weather conditions the Tech Center is a stepping stone that connects student housing to the main campus. The building shelters exterior pathways and seating areas from north winds while capturing the precious south sun in plaza areas. This microclimate strategy makes exterior gathering spaces usable virtually year round. It also provides an interior pathway giving students a chance to warm up as they hop from building to building.