

2019 CAMPUS MASTER PLAN

UAF™
UNIVERSITY OF ALASKA FAIRBANKS

Provisionally approved by the UA Board of Regents June 2019

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CHANCELLOR'S MESSAGE



Daniel M. White, Chancellor

UAF has come a long way from the small agricultural college established in 1917. We are a world leader in Arctic research. We are an economic and educational engine in Alaska's economy. We are a university that celebrates and supports the Alaska Native people who have called this land home for millennia. As we charge forward, UAF does so with the strong desire to be a home for diversity of all kinds.

As we begin our second century, we are focused on growing our enrollment, achieving Tier 1 research status and modernizing the student experience. To grow enrollment in key academic programs and continue as a world leader in Arctic research, we must invest in the campus infrastructure and create the educational experience that our future students are seeking.

This master plan provides a strategic approach to facilities improvements. In the short term, the plan focuses on high return projects to reduce our footprint and maximize efficiency within our existing buildings. UAF has some of the oldest facilities in the UA system, but with renovations, some of these facilities can continue to serve UAF well. In the longer term, we seek to develop new student housing to support a thriving campus residential environment and provide new facilities for our more robust research programs.

The plan is the result of a rigorous data-driven process that began in April 2018 with a detailed analyses of current facility conditions, classroom utilization and enrollment trends. The analysis based its long-term campus needs on the Board of Regents' goals for enrollment and research expenditures in 2025. Comprehensive interviews with current students helped shape the vision of a student-focused campus community with revitalized student housing and student support facilities.

Ultimately, all of the referenced projects support one or more of the University of Alaska System's 2025 goals, UAF's accreditation core themes, and UAF's strategic goals. This plan is ambitious, but when thoughtfully executed, it will transform UAF and prepare it for our next century.

Daniel M. White
Chancellor

Cover Photo:

An aerial image of campus overlooking the intersection of University Drive and Alumni Drive. The new Engineering and Learning Innovation Facility sits prominently on the top of the hill. West Ridge is visible in the distance.

Photograph by JR Ancheta

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Denali dominates the horizon behind UAF's West Ridge in this early morning photo taken with a 400mm lens from a subdivision near the Fairbanks campus.

Photograph by JR Ancheta



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EXECUTIVE SUMMARY



EXECUTIVE SUMMARY

Introduction

UAF's 2019 Campus Master Plan is one of the core documents guiding the physical development of the campus to support the university's mission of teaching, research and public service. This master plan is the culmination of a yearlong research and planning process. It reflects UAF's role as an international research institution and as a university offering academic programs ranging from occupational endorsements and associate degrees to doctorates, through both the main Fairbanks campus and online programs (the eCampus).

This master plan focuses on UAF's main campus in Fairbanks. The six community campuses —Bristol Bay (Dillingham), Chukchi (Kotzebue), Interior Alaska (Fairbanks), Kuskokwim (Bethel), Northwest (Nome) and the Community and Technical College (Fairbanks)—each have separate master plans.

Situational Analysis

As this master plan took shape, the landscape surrounding higher education in Alaska changed. State funding growth is unlikely, and more cuts are possible. In the face of this change, UAF has completed this plan with a sense of optimism tempered by realism.

The goals for this master plan were derived from the University of Alaska System Goals and Measures for 2018-2025, as adopted by the Board of Regents in November 2018. In this planning effort, UAF adopted the system goal of increasing enrollment by 55% and research by 46% by 2025.

UAF has launched a strategic initiative designed to grow enrollment. While we expect positive results as soon as this summer, they are not projected to be on pace to reach the regents' goals.

We nevertheless have opted to complete this master plan using the original data analysis, rather than delay and restart in an attempt to reflect the latest realities.

UAF must have a plan to retain its excellence. The previous plan has expired, and a new one is required as a matter not only of policy but also of prudence.

A plan, by its nature, is aspirational. This plan therefore provides a foundation for understanding how, why and where UAF should grow.

UAF MISSION STATEMENT

The University of Alaska Fairbanks is a Land, Sea, and Space Grant university and an international center for research, education, and the arts, emphasizing the circumpolar North and its diverse peoples. UAF integrates teaching, research, and public service as it educates students for active citizenship and prepares them for lifelong learning and careers.



UAF students cheer for the Nanook hockey team.

Photograph by JR Ancheta



UAF students participate in an outdoor class, taking advantage of the Alaskan landscape.

Photograph by JR Ancheta

Strategic Alignment

This Campus Master Plan was developed to support the University of Alaska system's 2025 goals, UAF's accreditation core themes and UAF's strategic goals. Each project in this plan supports at least one of these goals/themes:

UA System Goals

- Contribute to Alaska's economic development;
- Provide Alaska's skilled workforce;
- Grow our world class research;
- Increase degree attainment; and
- Operate more cost effectively.

UAF's Core Themes

- Educate undergraduate and graduate students and lifelong learners;
- Research to create and disseminate new knowledge, insight, technology, artistic and scholarly works;
- Prepare Alaska's career, technical and professional workforce;
- Connect Alaska Native, rural and urban communities by sharing knowledge and ways of knowing; and
- Engage Alaskans through outreach for continuing education and community and economic development.

UAF's Strategic Planning Goals

- Modernize the student experience;
- Solidify our global leadership in Alaska Native and Indigenous programs;
- Achieve Tier 1 Research status;
- Transforming UAF's intellectual property development and commercialization enterprise;
- Embrace and grow a culture of respect, diversity, inclusion and caring; and
- Revitalize key academic programs, from occupational endorsement to Ph.D.

The implementation matrix in the appendix shows how each project identified in this master plan aligns with these goals and themes. The matrix also identifies potential funding sources to pursue for each project.

The Future Campus

Strengthening the campus spine along Yukon Drive will help integrate various groups within the campus community, creating a vibrant link between research, academics and student life. Through a combination of renovations and new construction, classroom and research improvements will support modern teaching pedagogies and learning styles. Older residential facilities will be replaced with modern and vibrant suite-style and apartment housing, with gathering spaces and green areas to strengthen the sense of community on campus. Modern facilities maximize access to natural daylight for students, faculty and staff, particularly critical during Alaska's long winters.

Campus Master Plan Vision and Goals

This master plan addresses UAF's instructional, research, and student life needs through the lens of physical and financial stewardship of the environment and system resources. Specific goals for this plan are:

- Enhance UAF's strong academic, research, and service programs;
- Provide facilities to strengthen the student experience and integrate with research;
- Celebrate the unique campus identity and diverse community;
- Improve the campus curb appeal; and
- Improve the physical environment; address outdated and under-performing space for enhanced student, staff and faculty experiences.

Implementation

The master plan focuses on future campus growth and the projects necessary to support and achieve the desired enrollment growth. By envisioning the campus 7-10 years in the future, the master plan helps position the university to make strategic investments and decisions in support of an overarching vision. The implementation strategy seeks to set reasonable intermediate goals that can align projects with achieved growth. Each phase and the projects therein address particular components of growth and the campus transformation. An exact implementation schedule is intentionally excluded to allow for flexibility in programming and funding sources.



The aurora creates a dynamic display behind the UAF Murie Building on West Ridge.

Photograph by JR Ancheta



The aurora borealis shimmers across the night sky above the new Engineering and Learning Innovation Facility on campus.

Photograph by JR Ancheta

Dynamic Document

The Campus Master Plan is a dynamic document that results from an ongoing process of addressing both existing and anticipated conditions, desires, programs and space demands. It will be used in guiding, developing and evaluating capital funding needs; designing and constructing new facilities; and enhancing the built and natural campus environments. It is designed to accommodate changing needs.

UA Board of Regents' Policy

This master plan adheres to UA Board of Regents policy P05.12.050 (Campus Master Plans). Required components are included in the following sections:

Projected Enrollment: Chapters 1, 2
Current Inventory of Facilities: Chapter 1, Appendices B and F
Projected Facility Needs: Chapters 1, 2, 3, 4
Land Acquisition and Disposal: Chapters 2, 3, 4
Campus and its Surroundings: Chapters 2, 3, 4
Investment Priorities: Chapters 3 and 4
Guidelines for Construction: Chapters 2, 3, 4, and Appendix C

Additional detail on the required components is included in Appendix A.



The northern lights dance over the top of campus on Nov. 20, 2017. Photo taken from the roof of Gruening.

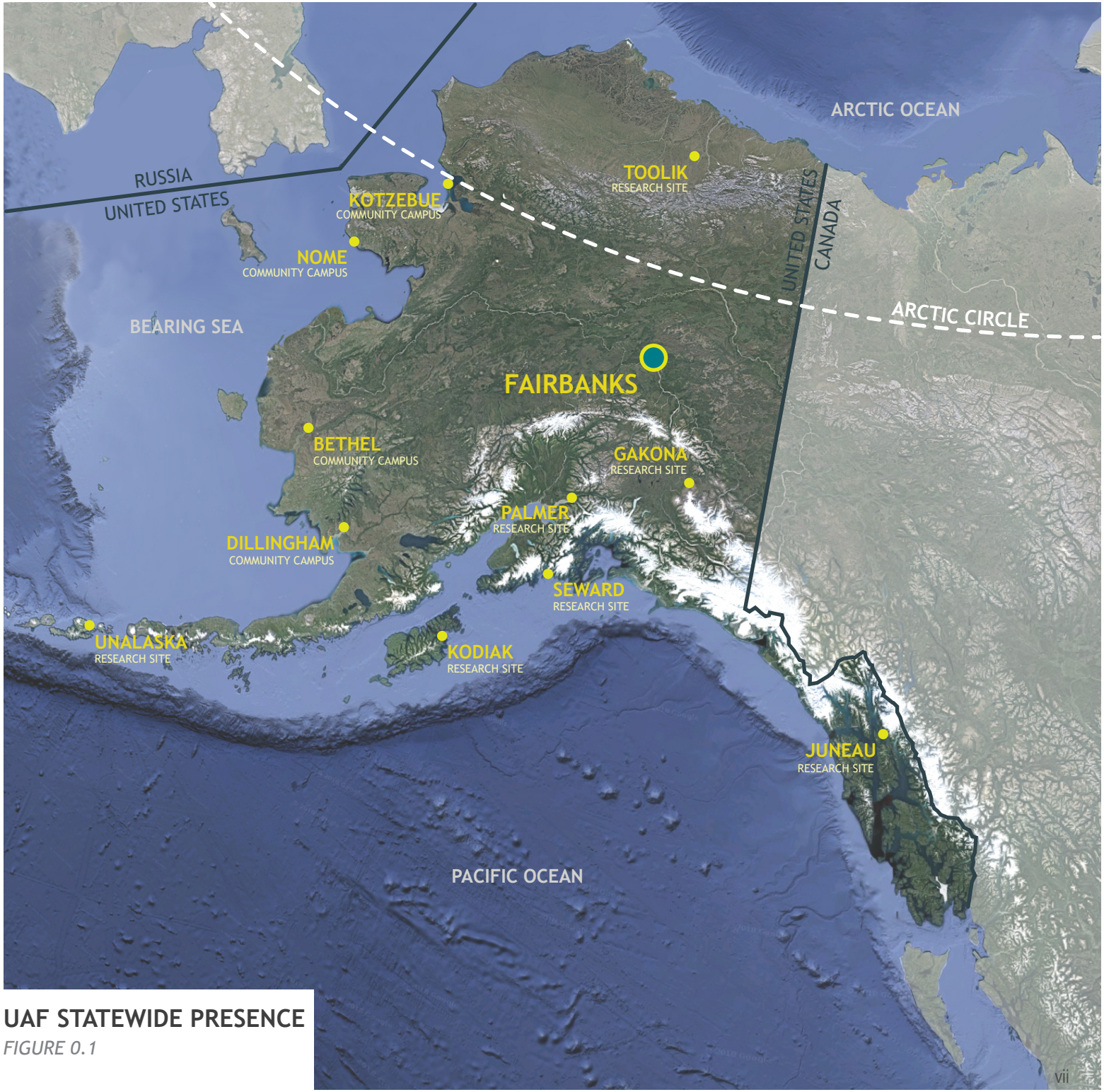
Photograph by JR Ancheta

UAF STATEWIDE PRESENCE

FIGURE 0.1

NOT TO SCALE

THE UNIVERSITY OF ALASKA FAIRBANKS



UAF STATEWIDE PRESENCE

FIGURE 0.1

In this fall aerial view of campus, the new Combined Heat and Power Plant is visible at center-left, while the new Engineering and Learning Innovation Facility (center-right) overlooks the Facilities Services' complex in the foreground.

Photograph by JR Ancheta



1

EXISTING FACILITIES CHALLENGES

CAMPUS INTRODUCTION

Community Context

The Golden Heart City, as Fairbanks is known, serves as the urban hub for this region. Fairbanks, Alaska, is the largest, northernmost city in the U.S. The Fairbanks North Star Borough (FNSB), approximately the size of the state of New Jersey, has approximately 7,460 square miles of land within its boundaries. Current population of the borough is roughly 100,000, which includes two military installations, Ft. Wainwright (U.S. Army) and Eielson Air Force Base. This is within the context of Alaska's Interior, which stretches from the Brooks Range in the north to the Alaska Range in the south, and from the U.S.-Canada border in the east to the edge of coastal tundra regions in the west. It is a vast area characterized by small communities, expansive tracts of wilderness, and limited or sometimes no road access.

The University of Alaska Fairbanks is the flagship institution of the university system, established in 1917. It has the unique distinction of being a Land, Sea and Space Grant institution, with a primary mission of teaching, research and service. UAF also contributes significantly to the Fairbanks community through both public service and its variety of cultural spaces. It is considered by many to be the intellectual and cultural hub of Alaska's Interior.

Location

The campus property comprises nearly 2,250 acres, of which approximately 10 percent is fully developed. The campus is located on a hilltop overlooking the Alaska Range and the vast Tanana Valley to the south, making it highly visible to the community. The acreage that is not fully developed is characterized by special-use areas, including the Agricultural and Forestry Experiment Station (AFES) and North Campus, a boreal forest that is primarily used for outdoor instruction, research and recreation.

Climate

Fairbanks' sub-Arctic climate is characterized by long, cold winters and short, mild summers. The diverse annual temperature ranges and variable daylight levels— +80° F days in July with nearly 24 hours of daylight and occasionally -50° F days in January with extended twilight—provide a compelling environment in which to study, live and work. The climate is arid with annual precipitation of roughly 11 inches. The ground is generally snow covered for roughly six months each year (October through March).



A campus aerial looking south over West Ridge. The unique Fairbanks landscape is seen beyond campus. The Alaska Range is visible in the distance.

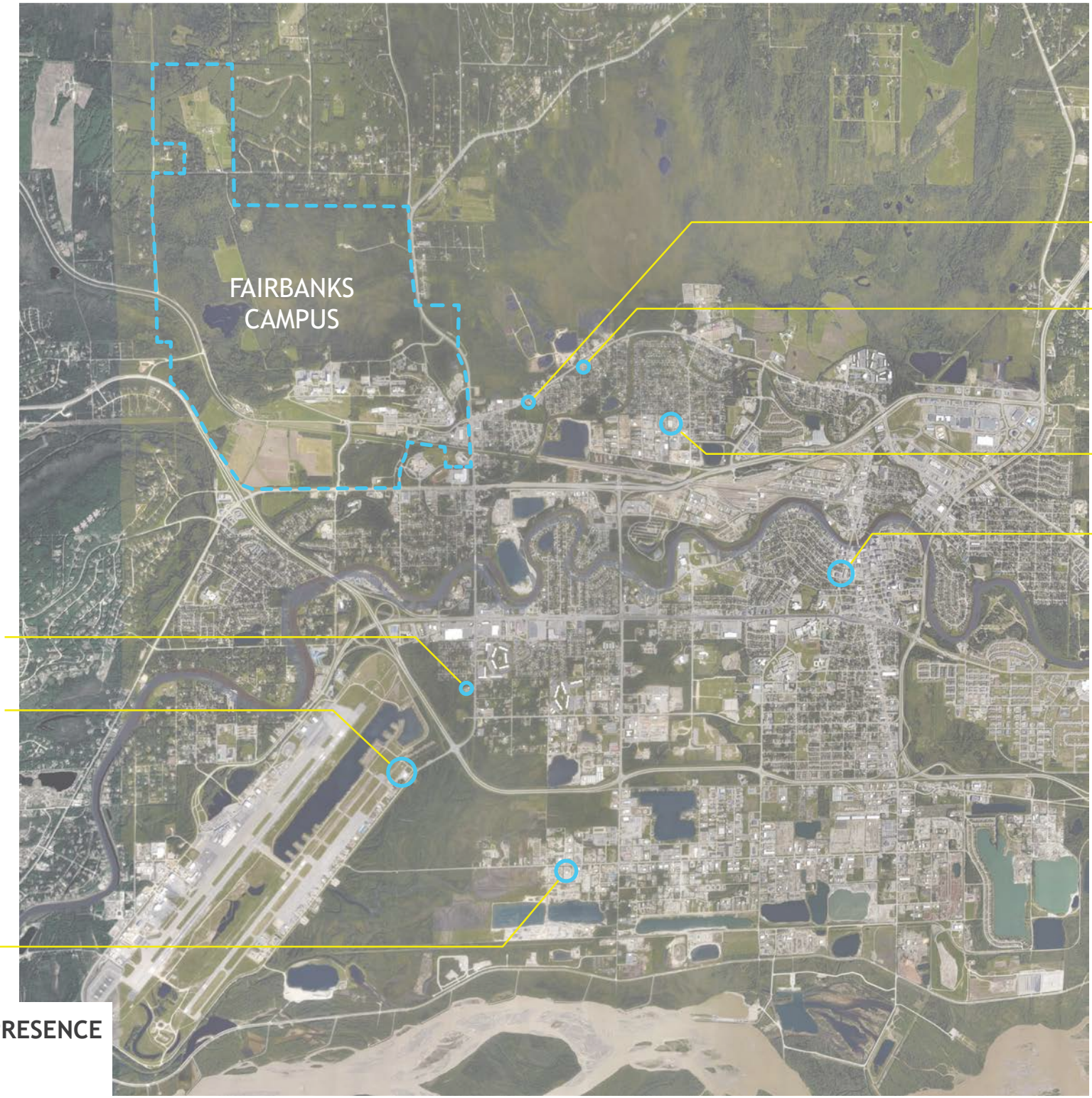
Photograph by JR Ancheta

FAIRBANKS PRESENCE

FIGURE 1.1



THE UNIVERSITY OF ALASKA FAIRBANKS



FAIRBANKS PRESENCE

FIGURE 1.1

LAND

Land Use

The Land Use diagram (figure 1.2) illustrates the extent of the campus and outlines the various land uses. Disposal of existing land or acquisition of additional land should not be necessary to implement this Master Plan.

Campus Core + View Sheds

The campus core, the area in the university's primary facilities are concentrated, occupies approximately 229 acres of a total 2,250 acres. Bounded by Tanana Loop, the campus core sits on a ridge top with views across the Tanana Valley to the Alaska Range. The campus can be seen at a significant distance from the highway and approach roads and it has a considerable visual presence in the community. Development has been limited in the view sheds to the east and south to maintain clear views to and from the campus.

An administrative decision in the late 1960s to locate research separately from the academic core, along with the site's topography, has led to the present east-west alignment of the campus. A nearly mile-long distance separates the facilities on Core Campus from those on West Ridge. An elevation difference of approximately 200 feet further increases the sense of separation.

Facility Support

The southeast corner of campus houses facility support, including the heat and power plant and the Facilities Services operations. The physical constraints of roadway and railroad boundaries present both development and aesthetic challenges at the eastern gateway entrance.

Special Use Areas

On the northern boundary of campus, the Large Animal Research Station (LARS) facilities allow students and researchers to study the high-latitude biology of ungulates. The North Campus area (approximately 1,300 acres) is representative of Interior Alaska with soils, topography, plants and wildlife typical of a boreal forest. The North Campus includes



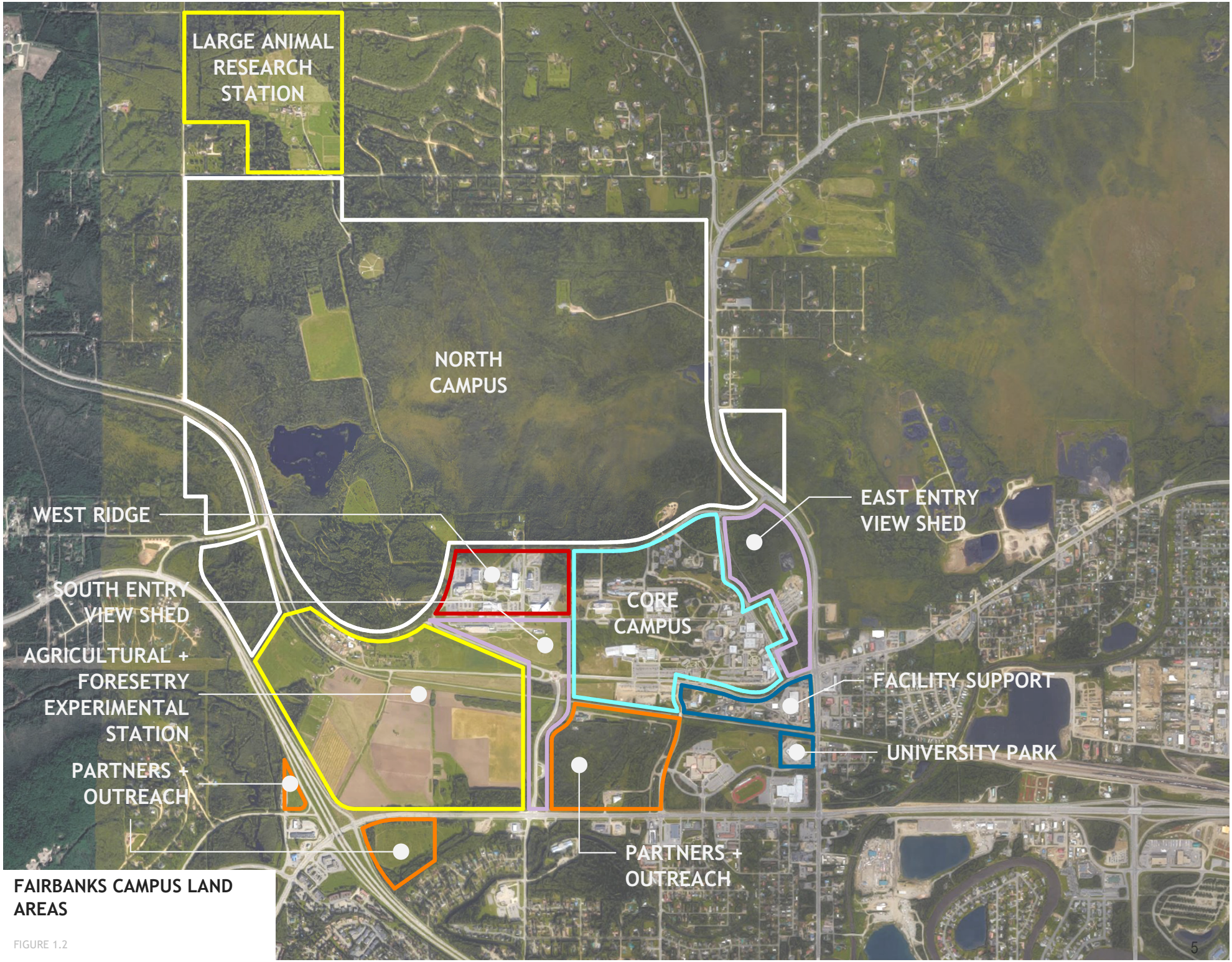
Wood Center Addition
Photograph by George Rishmawi

FAIRBANKS CAMPUS AREAS

FIGURE 1.2

0 1000 2000 4000

THE UNIVERSITY OF ALASKA FAIRBANKS



FAIRBANKS CAMPUS LAND AREAS

FIGURE 1.2

outdoor research and instructional areas as well as an extensive system of recreation trails available to the public year-round. The Agricultural and Forestry Experiment Station (AFES) located southwest of the campus core and contains crop and forest land, laboratories and greenhouses for research and demonstration. The Georgeson Botanical Garden is also located in this area. These special-use areas limit expansion of the core campus to the west and north.

Partners + Outreach

UAF partners with public entities and community organizations in a variety of ways on the Fairbanks campus and at remote research sites. The Fairbanks North Star Borough School District and Cold Climate Housing Research Center both lease UAF land south of the railroad tracks for their facilities. The State of Alaska Division of Public Health and National Weather Service lease space within UAF buildings, providing opportunities for synergy and collaboration with UAF researchers. Partnerships with community organizations bring visitors to campus for major events including the Fairbanks Shakespeare Theater, Fairbanks Summer Arts Festival, Fairbanks Symphony, Festival of Native Arts and Opera Fairbanks. Partnerships at research sites include the Alaska Department of Fish and Game, National Aeronautics and Space Administration, National Science Foundation, and National Oceanographic and Atmospheric Administration. These are just a few examples of UAF's on-site partnerships.

Off-Campus Facilities

Several facilities are located off campus, including the Administrative Services Center on College Road and University Park Building on University Avenue. In addition to university-owned buildings, off-campus leases exist throughout the Fairbanks area and support a variety of university activities. UAF has been working to reduce these off-campus leases and move programs back to the main campus.

Community Land Use Planning

The campus of the University of Alaska Fairbanks is located outside of the city of Fairbanks and within the Fairbanks North Star Borough (FNSB), a regional government with community planning authority. The campus edges are bounded by the Parks Highway, Yankovich Road, University Avenue, Geist Road, and Farmers Loop. The University will continue to work in coordination with the FNSB and other planning agencies relative to any land use decisions that would affect university operations or campus edges. The FNSB's Regional Comprehensive Plan guides land use throughout the borough, and the Fairbanks Metropolitan Area Transportation System oversees Alaska Department of Transportation and Public Facilities (ADOT/PF) projects that have potential to affect campus lands.



A statue of the university's first president, Charles Bunnell, stands in Cornerstone Plaza, with the Bunnell Building to the right of the flag and the New Engineering Learning and Innovation Facility to the left.

Photograph by George Rishmawi





Rocket statue near Elvey Building on West Ridge (top); Statue of Nanook outside of the SRC/Patty Center (top)

Photographs by George Rishmawi

INTRODUCTION TO CAMPUS FACILITIES

As described in the 2010 Campus Master Plan (CMP), space quality and quantity remain a considerable challenge for UAF today. The following section will demonstrate the distribution of space use on campus, the condition of UAF's buildings, utilization of instructional spaces, and the quantity of space need. The analysis presented was prepared with three goals in mind — 55% enrollment growth, 46% research expenditure growth, and an improved student experience. These goals were derived from the University of Alaska System Goals and Measures for 2018-2025. As the landscape surrounding higher education in the State has changed, the enrollment goals are above the actual experienced enrollment at UAF. However, they provide a foundation for understanding how and where UAF could strategically grow.

The campus faces a significant array of space quality issues with its current building stock, stemming from deferred maintenance and an average building age of nearly 39 years. Space quality issues on campus can often exacerbate the perceived need for space from a user standpoint because poor space is often underused. As a result, it is critically important to understand the relationship between space quality and additional space demands. In order to understand these issues, we examine building conditions in this section—delving into deferred maintenance, the facilities condition index, primary building use, and other qualitative issues.

Quantitatively, the Space Analysis shows that UAF had a surplus of space for Fall 2017—but in order to meet the 2025 Goals, that surplus is quickly reversed and becomes a significant deficit. There are several space categories that show small scale needs in Fall 2017, with Research Laboratories accounting for the largest need overall in that scenario. In 2025, however, nearly every category shows a deficit of space. The exception is in instructional space. Due to a combination of factors such as underutilization, increased online enrollment, and quality issues, there is more than enough space in both classrooms and class laboratories to meet the 2025 targets. The context of this surplus is critically important—much of the space above the recommended amount, especially in classrooms, is of poor quality. Therefore, significant investment is required to maximize the use of this space, especially as enrollment grows.

PRIMARY BUILDING USE

The Building Use diagram demonstrates the primary use of each existing building on campus. The use types are sorted into five distinct groups: instruction/research/study, student life and general use, student housing, recreation and athletics, and office and facility support. The diagram illustrates patterns of use across the campus.

Instruction, Research, Study

The majority of instructional and study focused buildings are concentrated in the core of campus. Research buildings are concentrated on West Ridge. The Reichardt Building, along Yukon Drive, links the core of campus and West Ridge programmatically.

Student Life and General Use

The hub of student life is the Wood Center. The 2014 addition to the Wood Center added dining space to replace Lola Tilly Commons, which concentrated the student life experience to the center of Core Campus. Dining options and general student space are generally limited on West Ridge by comparison.

Housing

Housing is concentrated in the northeast corner of campus, along Kuskokwim Way and North Chandalar Drive and moving towards Tanana Loop. A small pocket of housing near Lola Tilly Commons was the original core of housing at UAF but now feels isolated. The renovated Wood Center provides convenient access to the primary undergraduate housing areas on campus. However, Hess Village and Cutler Apartments are relatively segregated from the core academic and student life facilities on core campus.

Recreation and Athletics

The Student Recreation Center and Patty Center house the main facilities for recreation and athletics, respectively. The SRC/Patty Center is located off of Tanana Loop at the base of a hill. The hill presents accessibility issues for students walking from housing areas and the West Ridge. Convenient and plentiful parking provide easy access for commuter students, residential students with vehicles, faculty/staff, and community members.

Office and Facility Support

Facilities for administrative office and physical support are scattered throughout the campus and in off-campus buildings.

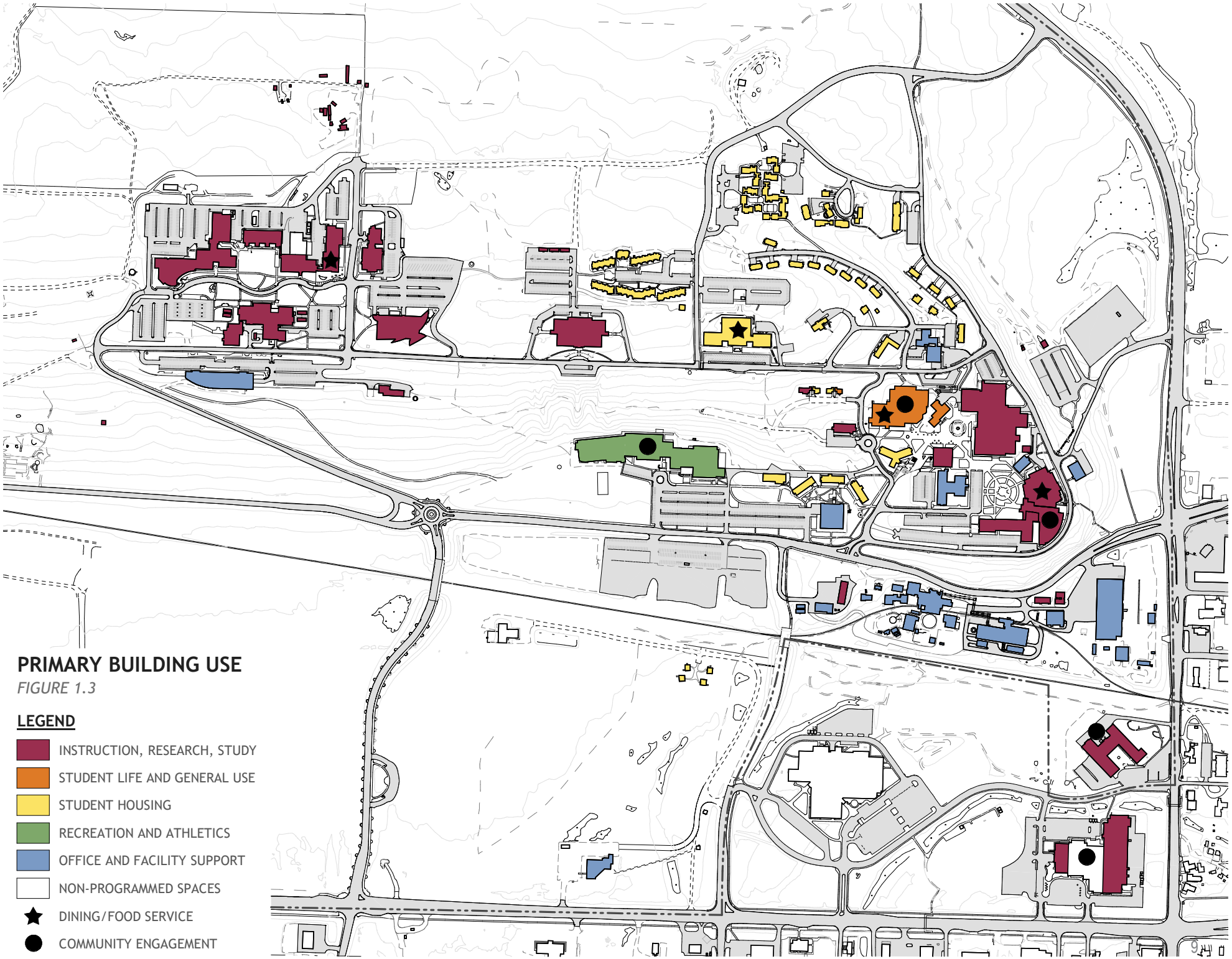
UAF's leadership and some support functions are concentrated in Signers' and Eielson. Some support units (including human resources, financial services, and institutional analysis) are located in the off-campus Administrative Services Center on College Road. Office spaces to support adjacent instructional, research, and student services functions are co-located with those departments across campus.

The Atkinson Power Plant, Facilities Services building, and the new Combined Heat and Power Plant encompass the hub of campus facility support space.

PRIMARY BUILDING USE

FIGURE 1.3





PRIMARY BUILDING USE

FIGURE 1.3

LEGEND

- INSTRUCTION, RESEARCH, STUDY
- STUDENT LIFE AND GENERAL USE
- STUDENT HOUSING
- RECREATION AND ATHLETICS
- OFFICE AND FACILITY SUPPORT
- NON-PROGRAMMED SPACES
- DINING/FOOD SERVICE
- COMMUNITY ENGAGEMENT

BUILDING CONDITIONS

The Building Conditions diagram (figure 1.4) represents an assessment of the current condition of each facility on the UAF campus. The assessment was developed with input from Facilities Services and grounded in the Deferred Maintenance/Facilities Condition Index data provided by the university (figures 1.5 and 1.6). The assessment includes five condition groups, from best condition to worst:

- Maintenance + Repair: buildings requiring regular maintenance and upkeep.
- Renewal + Replacement—Investment Needed: systematic repairs and replacements are necessary to extend building life and retain functionality.
- Major Revitalization: buildings requiring large scale renovations.
- Adaptive Reuse: buildings no longer suited to their current use. These buildings are structurally sound and are good candidates for repurposing.
- Demolition: buildings past their useful life.

Residential Facilities

Facilities dedicated to housing suffer from major deferred maintenance and inefficient space-use; thus, the single-family homes on North Chandalar Drive, the houses on Copper Lane, and the cluster of housing around Lola Tilly are all proposed for demolition. The MBS housing complex and Harwood require major revitalization. Cutler Apartments, Hess Village, and the housing on Columbia Circle are generally in better condition. Walsh was recently renovated, while Wickersham, Stuart, and Chancellor's House are all in relatively good condition.

Research Facilities

Several research facilities on West Ridge are either in the Demolition, Adaptive Reuse, or Major Revitalization categories. Temporary research structures near Arctic Health, O'Neill, and Irving II are all slotted for removal. Irving II is past its useful life and proposed for demolition. O'Neill no longer adequately supports research programs and is proposed for repurposing, while Arctic Health, Elvey, and Irving I are all in need of major revitalization. Other facilities on West Ridge fall in the Maintenance + Repair category including Murie, Reichardt, Akasofu, West Ridge Research Building, and Bioscience Research and Diagnostic Building. Duckering falls into Renewal + Replacement.



Rasmuson Library
Photograph by George Rishmawi

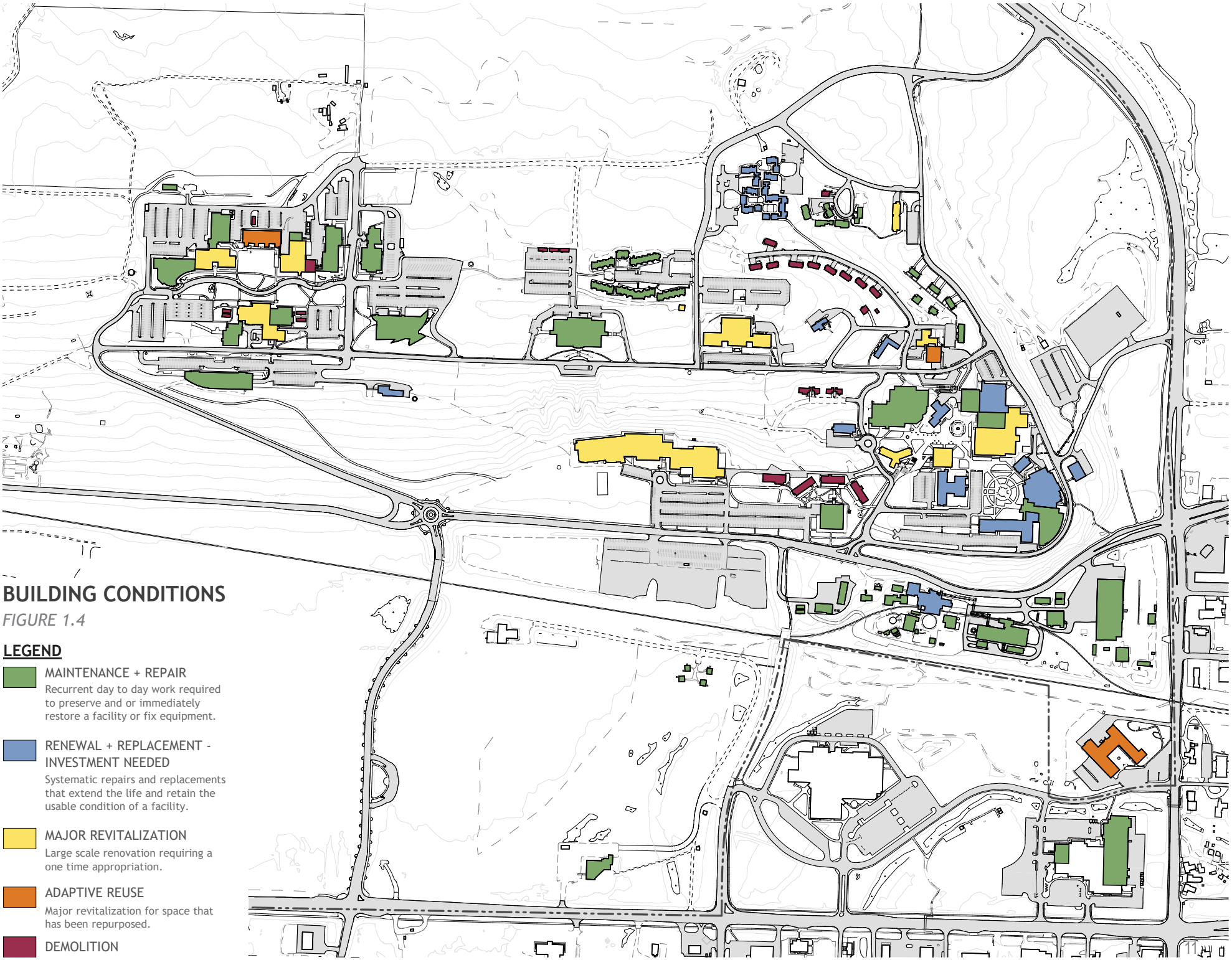


Bunnell Building
Photograph by George Rishmawi

BUILDING CONDITIONS
FIGURE 1.4



THE UNIVERSITY OF ALASKA FAIRBANKS



BUILDING CONDITIONS

FIGURE 1.4

LEGEND

MAINTENANCE + REPAIR
Recurrent day to day work required to preserve and or immediately restore a facility or fix equipment.

RENEWAL + REPLACEMENT - INVESTMENT NEEDED
Systematic repairs and replacements that extend the life and retain the usable condition of a facility.

MAJOR REVITALIZATION
Large scale renovation requiring a one time appropriation.

ADAPTIVE REUSE
Major revitalization for space that has been repurposed.

DEMOLITION

Instructional Facilities

The majority of buildings on the core campus—where instructional facilities are generally concentrated—are either in the Maintenance + Repair or Renewal + Replacement categories. This includes Chapman, Fine Arts, Duckering, and Bunnell. A major exception here is Rasmuson Library, which is programmed in such a way that it is difficult to use it effectively given the trends for library and study spaces today. Gruening and the Fine Arts Complex are dated and require significant updates. Toward West Ridge, both Murie and Reichardt contain instructional space and are in the Maintenance + Repair group. The University Park building, outside of the campus core, is also in need of adaptive reuse. Facilities needing investment must have their deferred maintenance issues addressed or they will continue to deteriorate.

Student Life and General Use Facilities

The hub of student life on campus is the Wood Center—where it is important to note that there is not a consistency of experience. The ballroom, pub, and recreation spaces in the old portion of the building appear dated. However, the 2014 addition is in the Maintenance + Repair group. A number of other critical student life and student services buildings are in that group or Renewal + Replacement, including Brooks, Eielson, and Constitution Hall. On the other side of the spectrum, Hess Commons, Student Recreation Center, and the Patty Center are in need of major revitalization.



O'Neill Building on West Ridge
Photograph by JR Ancheta

DEFERRED MAINTENANCE BY BUILDING USE

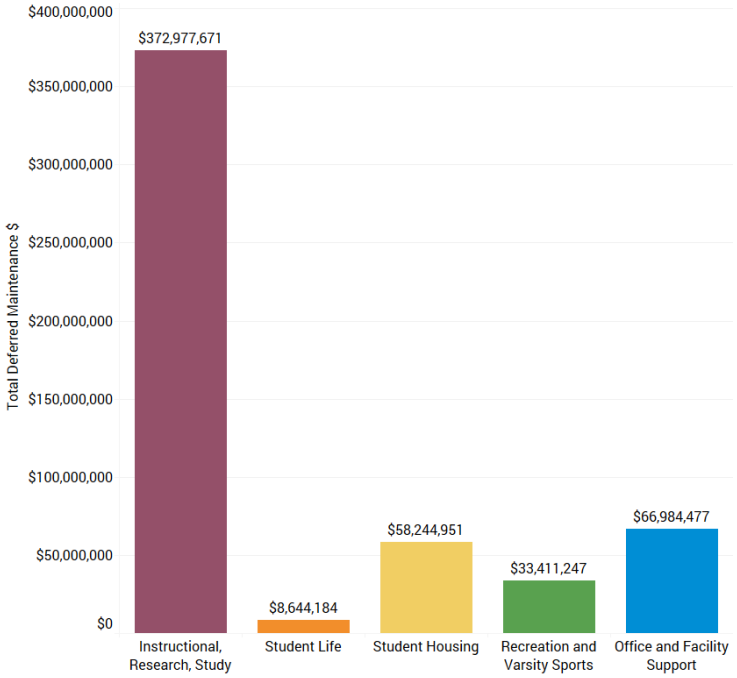


Figure 1.5

Total Deferred Maintenance by Primary Building Use

This graphic displays the total amount of deferred maintenance, in dollars, for each of the five use types laid out in the building primary use diagram. Deferred maintenance is defined as maintenance, system upgrades, or repairs that are deferred to a future budget cycle or postponed until funding becomes available.

AVERAGE FACILTIES CONDITION INDEX BY BUILDING USE

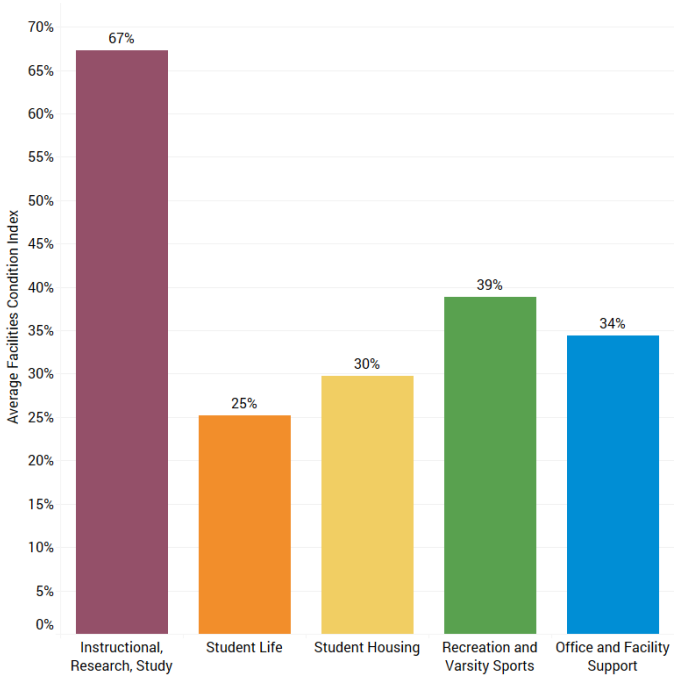


Figure 1.6

Average Facilities Condition Index by Primary Building Use

This graphic demonstrates the average facilities condition index for each of the five use types in the building primary use diagram. Facilities condition index is the total deferred maintenance divided by the current replacement value and is done on a building-by-building basis. An FCI of 0.65 or higher triggers discussion on whether a facility should be considered for demolition or major renovation, depending on its value to the program it houses.

SPACE ANALYSIS INTRODUCTION

The Space Analysis detailed in this section builds upon the work completed for the 2010 CMP and includes a comprehensive analysis of all assignable space on the UAF campus. This analysis provides the baseline assumptions that will inform development of future concepts. Space types were examined and evaluated as part of the space needs analysis using industry recognized metrics and campus-wide stakeholder feedback.

The space needs study for the CMP classified each space on campus into a set of space categories, informed by Council for Educational Facilities Planners International (CEFPI) guidelines and the Master Plan team's experience. Each space category was analyzed using current, classification-specific metrics informed by CEFPI standards, peer institutions, UAF space standards, and national trends in higher education as defined by organizations such as Society for College and University Planning (SCUP), National Intramural and Recreational Sports Association (NIRSA), Leadership in Educational Facilities (APPA), National Science Foundation (NSF), National Institute of Building Sciences (NIBS) and others. These metrics then help to determine whether a space surplus or a space deficit exists. Space categories are typically considered in relative balance when an identified need or surplus is within +/- 10% of the total existing ASF (assignable square feet). ASF is used to derive space needs outcomes due to national standards for space categorization such as FICM (Facilities Inventory and Classification Manual). However, these ASF totals are converted to GSF (gross square feet) using a grossing factor of 1.8 when planning for implementation of the master plan.

DLR Group prepared two space needs scenarios for UAF. The first is a baseline scenario for the size and scope of the institution in Fall 2017. The second scenario details space needs to meet the UA Board of Regents' growth targets for the year 2025. Students would grow from 5,115 FTE in Fall 2017 to 8,011 FTE in 2025, and research expenditures would increase by 46%. (See Figure 1.7 for a summary of space surpluses or deficits at UAF for each scenario, factoring in space in poor condition buildings).

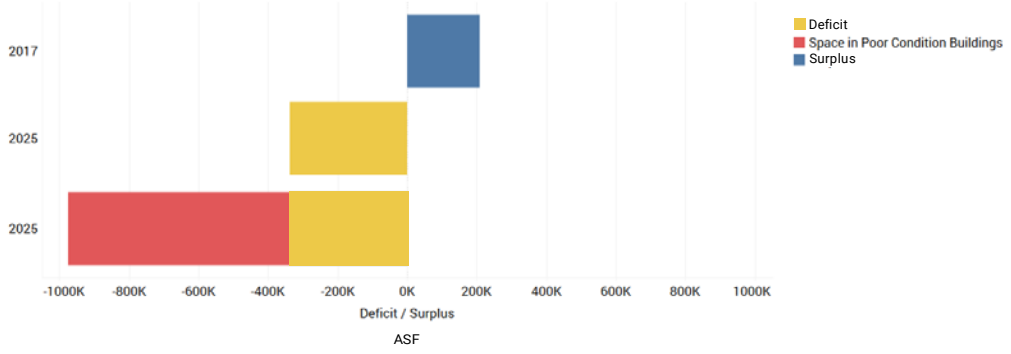


Figure 1.7

Overall Space Needs Outcomes

The graphic demonstrates the overall outcomes of the space analysis. While there is a surplus of space in 2017, that surplus becomes a deficit in 2025 given the enrollment and research targets. Taking into account space in poor condition buildings, that deficit more than doubles.

INSTRUCTIONAL SPACE UTILIZATION

Instructional Space Utilization refers to the use of classrooms and class laboratories for academic coursework. There are several key metrics that impact instructional space utilization. Informed by national standards and UAF goals, these metrics are:

- Weekly Room Hours/Room Utilization: the number of hours per week that an instructional space is in use for academic coursework on average. Room Utilization represents this is a percentage.
- Seat Utilization: the percentage of seats that are filled when an instructional space is in use.
- Weekly Seat Hours: the average number of hours per week that a seat is in use in a given instructional space. This metric combines Weekly Room Hours and Seat Utilization.
- Weekly Student Contact Hours: the number of class contact hours a class is scheduled to meet per week multiplied by the number of students in the class.
- ASF per Station: the amount of assignable square footage per student seat on average in the room.

Figure 1.8
2017 Instructional Space Utilization

	Classrooms		Class Laboratories	
	Target	UAF Average	Target	UAF Average
Weekly Room Hours	32	18	20	13
Room Utilization	80%	45%	50%	33%
Seat Utilitzation	75%	45%	80%	64%
ASF per Station	25 ASF	18 ASF	75 ASF	45 ASF
Weekly Seat Hours	24	8.1	16	8.3

The classroom spaces at UAF, on average, fall well short of these metrics. When taking classroom capacity into account, there are several trends worth nothing. First, as is common in institutions across the country, seat utilization peaks in the smallest sized rooms and follows a downward trend as the number of seats increase. The opposite is true of room utilization (weekly room hours)—this typically peaks in the larger sized rooms and decreases as the number of seats decreases. Each of these trends holds true on UAF's campus. (Figure 1.9 demonstrates Room and Seat Utilization by Capacity)

In order to meet the utilization targets, UAF will need to adjust its use of instructional space and the way it is scheduled. The most impactful metric to target for UAF is seat utilization. That means moving chairs out of overcrowded rooms, being more intentional about scheduling course sections into appropriately sized rooms, or some combination thereof. As discussed in the Analysis by Category section below, there is more than enough classroom space on campus to accommodate the current course load. While quality of space is a critical factor to consider as well, the quantity of space exists. The relationship between quality and quantity of space is discussed in more detail in the Analysis by Category section.

The use expectations for Class Laboratories are different from Classrooms in several ways. First, the expectation for weekly room hours is significantly lower. This is to allow for student access outside of scheduled course hours – students need to use the specialized equipment in these spaces for project work. Further, there is more significant prep and tear down time in lab spaces. In order to balance this lower weekly use, and to acknowledge the significant cost of building and maintaining this space, the seat utilization expectation is higher. Finally, ASF per Station is naturally higher to account for equipment in the room, larger work spaces for each student, and additional support space. It is also important to note, especially in the case of ASF per Station, that these metrics are intended to serve as averages. An engineering lab may have as many as 150 ASF per student station, whereas a computer lab for the business administration program may only have 30-35 ASF per student station.

Regarding capacity, breaking out the class laboratories by groups based on seat count reveals the same trend as in classrooms. Seat utilization rates start out high for smaller labs and drop as labs get larger, while the opposite is true for room utilization. (Figure 1.10 demonstrates this relationship). In the case of labs, there are several capacity groups that meet either the room utilization target or the seat utilization target – but none of the capacity groups meet both targets.

Comparing UAF's averages to the expectations detailed above, lab utilization is closer to the identified targets than classroom utilization. While UAF is performing better in its labs than in its classrooms, seat and room utilization averages do still fall short of the target metrics. Again, this is indicative of the surplus in class laboratory space on the campus.



UAF students participate in important research projects run by faculty leading their fields.

Photograph by JR Ancheta



As the leading Arctic research institution, UAF hosts ground-breaking research initiatives. Undergraduate and graduate students gain invaluable experience under skilled faculty.

Photograph by JR Ancheta

Figure 1.9
Classroom Utilization by Capacity

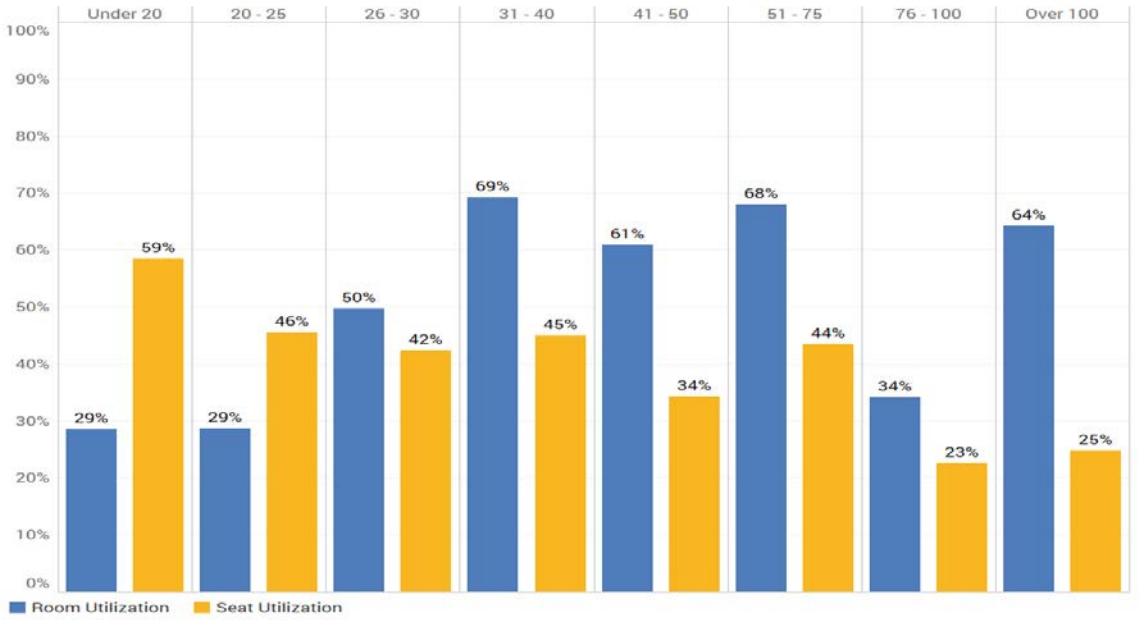
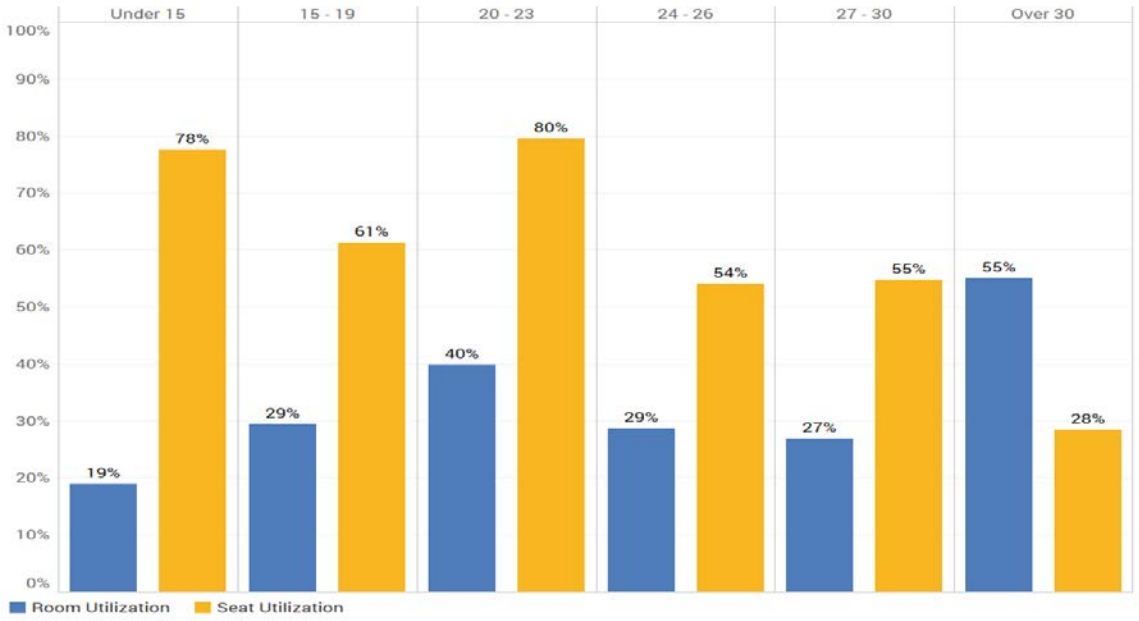


Figure 1.10
Class Lab Utilization by Capacity



ANALYSIS BY CATEGORY

Classrooms

The approach to classroom analysis took into consideration many variables that included: seat utilization, weekly room hours, weekly seat hours, weekly student contact hours, and building condition. At a high level, classroom use at UAF falls below national standards for utilization. Both the room utilization and the seat utilization average are below national targets. There are several potential explanations for this, the most likely being the poor quality of many UAF classroom spaces and the expansion of online coursework.

Space Type	Existing ASF	Guideline ASF	Surplus/Deficit
Classrooms	85,669	36,071	49,598

2025 ASF	2025 Surplus/Deficit
56,471	29,198

While it is critical to understand the quantitative implications of UAF's classroom space surplus, the analysis also considered the quality of classroom spaces. Over one-third of the classroom space on campus is housed within buildings that scored in the lowest three categories in the building condition assessment shown in the previous section (referred to as space in poorly rated buildings throughout this section). These spaces should be targeted for renovation or repurposing. If all of the classroom space in poor condition buildings were taken offline for renovation, UAF would still be able to operate its current course load within the remaining classroom spaces; however, this assumes a considerable increase in utilization.

While the underuse of classrooms is a concern, this also presents an opportunity for UAF. The infrastructure to increase in-person instruction on campus currently exists and would not require the construction of additional classroom space to accommodate UAF's strategic growth targets. From a quantity standpoint, the institution would be able to add course sections into existing classroom space as student growth is realized – however, quality issues must be taken into consideration as well. Once the student population grows beyond the capacity of UAF's classrooms in higher quality buildings, the University will be forced to either use its classroom space in poor buildings or make significant investments to bring those classroom spaces up to modern standards.

Class Laboratories

For many of the same reasons discussed above for classrooms, there is a surplus of space in class laboratories. Quality issues do have some impact the experience and perception of this surplus for faculty and students (roughly 15% of class laboratory space is in poor

Space Type	Existing ASF	Guideline ASF	Surplus/Deficit
Class Laboratories	99,938	33,938	66,000

2025 ASF	2025 Surplus/Deficit
53,130	46,808

buildings) though this is relatively low in comparison to some other space categories. It is also important to acknowledge that there appears to be overlap in use between class laboratories and research laboratories, which has the potential to inflate the surplus of space artificially.

As is typical of institutions with a significant class laboratory footprint, the seat utilization rate of UAF's class labs is nearly 20% higher than that of its classrooms. While this is encouraging, the seat utilization rate still falls below national standards for this type of space. Seat utilization is a logical metric to target for improvement, as class laboratory space is specialized and therefore represents significant capital investment to build and maintenance costs throughout its lifespan. As such, the institution should aim to use these spaces as efficiently as possible.

The quantity of space in class laboratories allows the institution to expand its teaching to accommodate the student growth identified in the UAF strategic goals. There is still a significant surplus of space in the growth scenario. This surplus could enable the institution to renovate and modernize outdated lab spaces strategically and could also potentially supplement the research laboratory need with targeted renovations. It is important to consider that the costs of renovating this type of space, especially older laboratories that were not built to be flexible, is high. Also critical to this conversation, as in classrooms, is that as the student population grows towards 2025 targets UAF will be forced to either use its labs in poor condition buildings as is or renovate them.

Open Laboratories

Space Type	Existing ASF	Guideline ASF	Surplus/Deficit
Open Laboratories	41,335	47,562	(6,227)

2025 ASF	2025 Surplus/Deficit
74,460	(33,125)

Open laboratory space accounts for academic laboratories that support instruction but are not scheduled for coursework. Examples of open laboratories include music practice rooms, maker spaces, and open-access computer labs. Regarding quantitative need, there is a small proportional shortage of space in open laboratories at the baseline year. This need grows significantly moving forward to the 2025 scenario.

Quality of space has a relatively low impact in the context of this type of space, as roughly 15% of the campus' open laboratory space is in poor condition buildings. As pedagogies continue to move towards hands-on and activity-based models, open laboratory space will continue to be a critical support space for students.

Research Laboratories

Space Type	Existing ASF	Guideline ASF	Surplus/Deficit
Research Laboratories	266,836	287,440	(20,604)

2025 ASF	2025 Surplus/Deficit
392,290	(125,454)

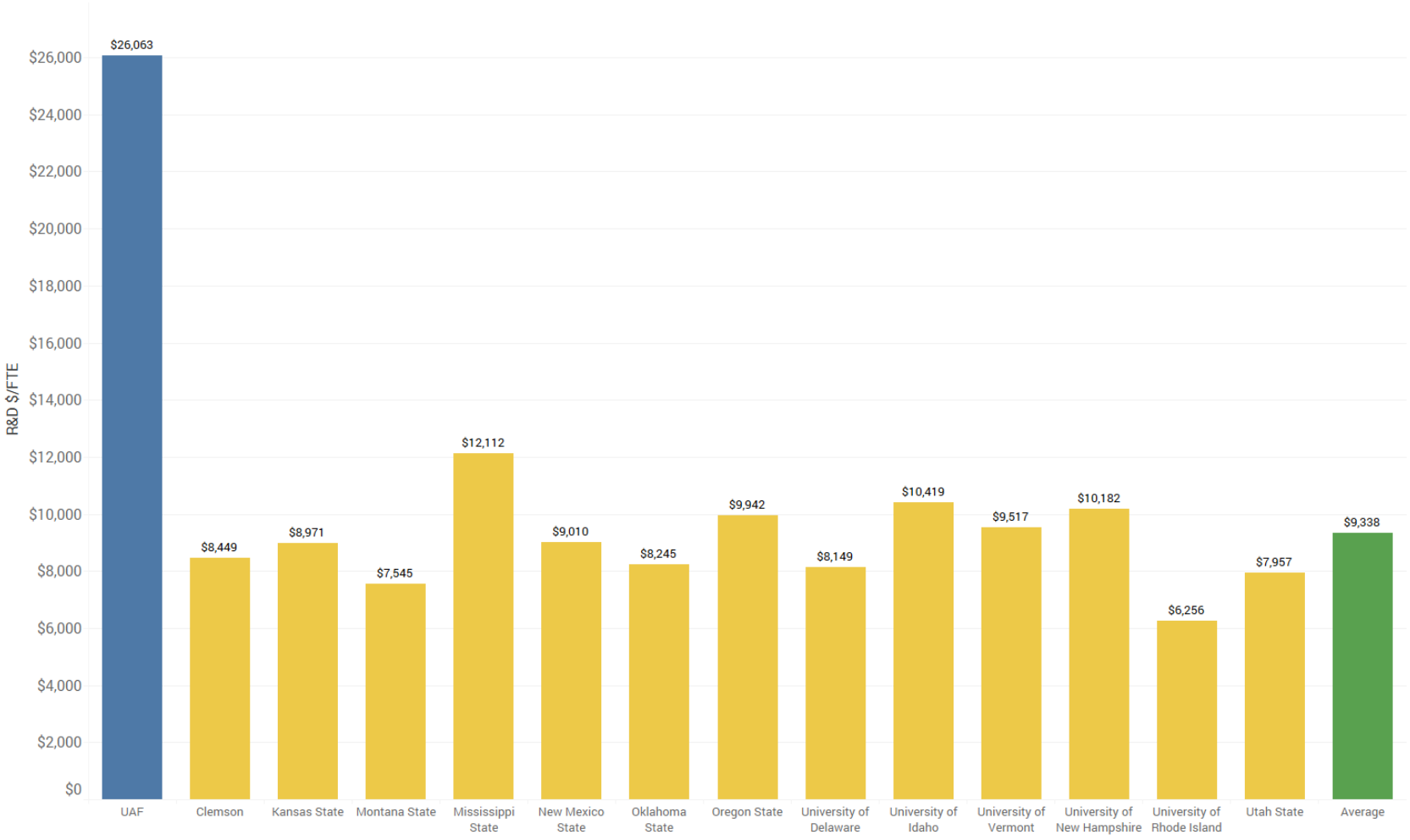
Space in research laboratories is a crucial topic for UAF. Research laboratory space at UAF is the third largest category behind offices and student housing, respectively. The relationship between research productivity and student FTEs is unique at UAF. Amongst its research peers UAF has by far the largest Research & Development (R&D) Expenditures per student FTE ratio, more than double the next highest institution and almost three times higher than the average of its peers. (Figure 1.11 demonstrates this relationship). Despite this high productivity, research laboratories are among the most impacted by space quality, as nearly 30 percent are housed in buildings listed in poor condition. This significant footprint of low-quality space combined with the current deficit of space presents a difficult challenge for the institution.

Research laboratory space need is built on a module-based system, informed by metrics from the Whole Building Design Guide (a program of the National Institute for Building Sciences). Each PI is assigned an allotment of space based on discipline and grounded in the module-based system. This also includes storage space for research, so any field equipment, preparation space, or instrumentation space is accounted for in these metrics as well. In the baseline year, research laboratories account for the greatest quantity of space need across all categories. Projecting forward to the 2025 scenario, that remains true as the amount of space need in research laboratories is more than three times larger than any other category. Growing the research enterprise at UAF by 46% will require a significant expansion of facilities. The growth projections assumed that the distribution of research space types would remain relatively constant throughout this growth. In essence, the ASF to R&D expenditures ratio that currently exists at UAF was maintained, so that space in research laboratories grew in concert with the expected growth in expenditures. As mentioned in the class laboratories section, one possibility to supplement this need is to continue to use class laboratories as dual-purpose spaces.

Offices

The largest space category on UAF's campus is Office space. This is not an uncommon finding, as most institutions of a similar size and scope to UAF have 20-30% of their total space in offices; UAF currently sits at 21%. The space needs analysis approaches offices

Figure 1.11
R&D Expenditures per Student FTE
Research Peer Group Comparison



by evaluating the office, conference, and service needs for each employee based on their job function and title. Each employee is then assigned a square footage allotment, and these are summed to provide a full picture of the office need for the campus. ASF allotments ranged from 40 ASF per Student Employee to 445 ASF for the Chancellor (400 ASF for an office, 20 ASF for service space, and 25 ASF for conference space). (Figure 1.12 shows all of the allotments by job function). The outcomes of the space needs analysis for offices show a significant surplus of space in the baseline year, which is balanced in the 2025 scenario. Space categories are typically considered in relative balance when an identified need or surplus is within 10% of the total existing ASF. In this case, there is still a small surplus of office space in 2025. However, this surplus represents less than 5% of the total office space on campus.

Layering quality of space into the analysis, just over 31% of the space in offices lands in buildings that were poorly rated in the building condition analysis. As offices are the largest single space category in the analysis, this accounts for a considerable quantity of space. Due to the surplus of space mentioned above, UAF would be able to update and renovate where appropriate in the short term, using existing underused space as flex space. UAF should use the opportunity provided by this space surplus to ensure that office policies are being enforced or developed where appropriate (i.e. elimination of dual offices) and to right-size office spaces where they may be too large for current functions.

Job Type	Office ASF	Service ASF	Conference ASF
Student Employees	40	0	0
Graduate Assistants, Termporary Staff, Term Instructors	60	0	0
Professor Emeritus	70	0	0
Admin Specialist	100	20	25
Research Associate, Post Doc, Visiting Scholar, Non-Exempt Staff	120	20	25
Assistant Professor, Associate Professor, Professor, Clinical Faculty, Research Faculty, Exempt Staff	140	20	25
Associate Dean, Associate Vice Chancellor, Director, Executive Officer, Vice Provost	180	20	25
Dean	200	20	25
Provost, Vice Chancellor	300	20	25
Chancellor	400	20	25

Space Type	Existing ASF	Guideline ASF	Surplus/Deficit
Offices	437,197	366,685	70,512

2025 ASF	2025 Surplus/Deficit
418,534	18,663

Figure 1.12
Office Space Allotments

Library and Study

Space Type	Existing ASF	Guideline ASF	Surplus/Deficit
Library and Study	124,709	131,218	(6,509)

2025 ASF	2025 Surplus/Deficit
158,284	(33,575)

Due to the condition of Rasmuson Library, quality of space is a significant issue in this space category. Poorly rated buildings account for roughly 83% of the nearly 125,000 ASF of library and study space – the majority of which is in Rasmuson. This quality gap likely exacerbates the perception that there is a lack of study space on campus. It is important to note that Rasmuson is not inherently a poor building – it simply needs revitalization to align it with modern trends for student study spaces.

For the baseline scenario, the analysis shows a deficit of library and study space. This deficit is primarily in student study space, as UAF physical collections are not planned to grow significantly. The gap increases considerably with the impact of additional students in the 2025 scenario. Student study space remains the focus of this space need.

Recreation and Athletics

Space Type	Existing ASF	Guideline ASF	Surplus/Deficit
Athletics	35,215	40,000	(4,785)

2025 ASF	2025 Surplus/Deficit
60,000	(24,785)

Space Type	Existing ASF	Guideline ASF	Surplus/Deficit
Recreation	72,155	68,832	3,323

2025 ASF	2025 Surplus/Deficit
105,426	(33,271)

Athletics space is directly supporting intercollegiate, competitive sports, while Recreation is the same type of space that is identified for general student use. Nearly all the space for both for Intercollegiate Athletics and for Recreation is in the Patty Center and the Student Recreation Center respectively. Each of these buildings was categorized as needing a major revitalization in the building condition assessment. Space quality is a critical concern from the perspective of both Athletics and Recreation moving forward – though potentially more so for Athletics, as the Patty Center is 30 years older than the Student Recreation Center.

Quantitatively, Athletics is showing a deficit of space in both the baseline scenario and the 2025 scenario. Recreation is in relative balance for space in the baseline scenario, with a significant need for space in the 2025 scenario. The need identified here is directly related to the growth of the student population.

Other Special Use

Space Type	Existing ASF	Guideline ASF	Surplus/Deficit
Other Special Use	75,622	71,343	4,279

2025 ASF	2025 Surplus/Deficit
93,075	(17,454)

This category includes several spaces for specialized uses – examples include media production spaces, armory space, demonstration space, and greenhouses. This type of space is in relative balance for the baseline year. However, this balance becomes a deficit in 2025. The deficit is due to the growth in students and thus requirements for

more space to support expanded programs. Layering in space quality, roughly 20% of the space in this category falls in buildings that rated poorly.

Student Space

This category accounts for space primarily used by students for socializing, dining, and holding meetings, and events. This space type is in relative balance at the baseline year and shows a deficit for the 2025 scenario based on growth per the UAF strategic goals. Roughly 17% of student space on campus is in buildings that rated poorly. This relatively low amount of poor space reflects the recent investment in student-focused spaces such as the Wood Center.

Space Type	Existing ASF	Guideline ASF	Surplus/Deficit
Student Space	124,805	118,905	5,900

2025 ASF	2025 Surplus/Deficit
161,330	(36,525)

Student Housing and Other Housing

The second largest space type on the UAF campus, Student Housing accounts for over 330,000 ASF. Other Housing accounts for an additional 30,000+ ASF – this is housing space held by units that are outside of UAF Student Services. While Student Housing is overall the second largest space category, it has the most space in poor quality buildings. Further, by far the largest portion of space rated as Demolition, the worst possible rating in the building condition assessment, is Student Housing space. As UAF aspires to attract more students to its Fairbanks campus, the quality of housing space is a critical factor in decision making for students. Housing quality will be a critical piece moving forward as the institution looks to meet its strategic goals for 2025.

Space Type	Existing ASF	Guideline ASF	Surplus/Deficit
Student Housing	332,418	297,263	35,156

2025 ASF	2025 Surplus/Deficit
372,300	(39,882)

The Other Housing category is in relative balance for both scenarios. Student Housing shows a significant surplus in the baseline year. However, this surplus becomes a deficit in the 2025 scenario. While there are empty beds currently, a focus on attracting residential students in the future would more than fill the current housing space.

Space Type	Existing ASF	Guideline ASF	Surplus/Deficit
Other Housing	32,258	32,258	0

2025 ASF	2025 Surplus/Deficit
32,258	0

Exhibit and Assembly

Existing space in this category includes performance spaces in Fine Arts and Theatre, exhibit space in the Museum of the North, gathering space in Hess Village Community Center, etc. This category is in relative balance at the baseline year. However, this becomes a deficit of space in the 2025 scenario. Concerning space quality, this is one of the few categories that is impacted relatively little by condition issues. The vast

Space Type	Existing ASF	Guideline ASF	Surplus/Deficit
Exhibit and Assembly	57,286	59,612	(2,326)

2025 ASF	2025 Surplus/Deficit
86,510	(29,224)

majority of buildings that house this type of space landed in the top two categories in the building condition assessment. Exceptions to that rule include Salisbury Theatre and the Wood Center Ballroom.

Physical Support and Other Service

The distinction between physical support space and other service space is the function each serves. Physical support is serving a central function for the University, while other service space are spaces that are explicitly serving departmental needs. Regarding physical support and service space, UAF is a unique case. Due to the conditions of the environment and other unique physical challenges of the campus, these two categories are significantly larger than a typical metric might predict.

Space Type	Existing ASF	Guideline ASF	Surplus/Deficit
Physical Support	221,746	205,484	16,261

2025 ASF	2025 Surplus/Deficit
244,122	(22,376)

Space Type	Existing ASF	Guideline ASF	Surplus/Deficit
Other Service	113,345	113,345	0

2025 ASF	2025 Surplus/Deficit
145,082	(31,737)

Concerning space need, physical support and service space categories show a relative balance in the baseline year and a deficit of space in the 2025 scenario. Physical support space is impacted relatively minimally by poor space quality, with less than 5% of their space falling in poorly rated buildings. The other service category, on the other hand, has about 17% of its space in such buildings.

Student Health and Other Health Care

Student Health space includes spaces for medical care that are explicitly intended for student use, while other health care space may support a research enterprise or other campus entity. The space in Student Health primarily falls in the Whitaker Building. This building rated among the three low-quality categories as part of the building condition assessment. In relation to space quantity, these are the two smallest space categories in the analysis. While the Other Health Care category is in relative balance both at the baseline year and in 2025, Student Health space shows a deficit in both scenarios. This deficit grows proportionately with the projected student growth for the second scenario.

Space Type	Existing ASF	Guideline ASF	Surplus/Deficit
Student Health	1,601	3,964	(2,363)

2025 ASF	2025 Surplus/Deficit
6,205	(4,604)

Space Type	Existing ASF	Guideline ASF	Surplus/Deficit
Other Health Care	3,935	3,935	0

2025 ASF	2025 Surplus/Deficit
3,935	0

CONCLUSION

Overall, the Space Analysis shows that UAF has a surplus of space for Fall 2017. However, in order to meet the 2025 Strategic Goals, that surplus is quickly reversed and becomes a significant deficit. There are several space categories that show small scale needs in Fall 2017, with Research Laboratories accounting for the largest need overall in that scenario. In 2025, however, nearly every category shows a deficit of space. The most significant exception to this rule is in instructional space. As discussed above, due to a combination of factors such as underutilization, increased online enrollment, and quality issues, there is more than enough space in both classrooms and class laboratories to meet the 2025 targets. The context of this surplus is critically important – much of the space above the recommended amount, especially in classrooms, is of poor quality. Therefore, significant investment is required to maximize the use of this space, especially as enrollment grows (Figure 1.13).

Space Quality impacts not only the space categories mentioned above, but nearly all space types on the UAF campus. Campuses across the country are faced with incredible challenges in deferred maintenance, and UAF is no different. Areas that are student facing and student focused are especially impacted by quality issues on this campus – Student Housing, Student Health, and Library & Study Space are among the three categories with the highest share of space in poor buildings. In order to successfully attract and retain students from across the state of Alaska and the lower 48, UAF must prioritize solving these quality issues.

The outcomes of the Space Needs Analysis reveal a number of challenges, as well as some potential opportunities and solutions. UAF can leverage its surplus of instructional space. The class laboratory space surplus could be used to supplement the large deficit in research laboratory space, especially if spaces are renovated in a strategic way for this purpose. Class laboratory spaces are already serving double duty, and it's logical for UAF to continue this trend as the demand for some of these spaces from an instructional standpoint is low. Again, though, these renovations would carry significant cost. On the classroom side, these spaces can be used in a number of ways. UAF could strategically update and renovate its classrooms in centrally located buildings that are underused – these renovations can facilitate their use as instructional spaces, meeting spaces, study spaces, or flexible multi-purpose spaces.

Regarding overall quantity of need, one space type looms over the rest – Research Laboratories. This space category alone accounts for more than 30% of the total need identified in the space analysis. Quality issues in buildings such as O'Neill, Irving II, and others make this more challenging. In order for UAF to maintain and improve upon its position as a premier research institution, this is an issue that must be addressed. Researchers at UAF are already performing incredibly efficiently, as evidenced by the peer comparison of R&D Expenditures per Student FTE. To meet the UAF Strategic Goals, additional space is critical.

Figure 1.13

Overall Space Needs Outcomes

The Space Needs Outcomes are driven by the enrollment goals, derived from the University of Alaska System Goals and Measures for 2018 - 2025. As the landscape surrounding higher education in the State has changed, the enrollment goals are above the actual experienced enrollment at UAF. However, they provide a foundation for understanding how and where UAF could strategically grow.

Space Type	Existing ASF	Guideline ASF	Surplus/Deficit	2025 ASF	2025 Surplus/Deficit
Classrooms	85,669	36,071	49,598	56,471	29,198
Class Laboratories	99,938	33,938	66,000	53,130	46,808
Open Laboratories	41,335	47,562	(6,227)	74,460	(33,125)
Research Laboratories	266,836	287,440	(20,604)	392,290	(125,454)
Offices	437,197	366,685	70,512	418,534	18,663
Library and Study	124,709	131,218	(6,509)	158,284	(33,575)
Athletics	35,215	40,000	(4,785)	60,000	(24,785)
Recreation	72,155	68,832	3,323	105,426	(33,271)
Other Special Use	75,622	71,343	4,279	93,075	(17,454)
Exhibit and Assembly	57,286	59,612	(2,326)	86,510	(29,224)
Student Space	124,805	118,905	5,900	161,330	(36,525)
Student Health	1,601	3,964	(2,363)	6,205	(4,604)
Other Health Care	3,935	3,935	0	3,935	0
Student Housing	332,418	297,263	35,156	372,300	(39,882)
Other Housing	32,258	32,258	0	32,258	0
Other Service	113,345	113,345	0	145,082	(31,737)
Physical Support	221,746	205,484	16,261	244,122	(22,376)
Total	**2,126,070**	**1,917,855**	**208,215**	**2,463,412**	**(337,343)**

Cornerstone Plaza is a central green space within the core campus. Buildings frame views of the surrounding mountains and landscape.

Photograph by JR Ancheta



2

THE FUTURE CAMPUS



THE FUTURE CAMPUS

Introduction

The master plan addresses UAF's instructional, research, and student life needs through the lens of physical and financial stewardship of the environment and system resources. Diagrams highlighting building use, open space, and circulation and parking demonstrate key elements of the physical campus.

Goals

In coordination with the Core Cabinet and UAF campus leadership, the master planning team established goals to drive and direct the campus transformation planning process. The following goals were established to guide the 2019-25 master plan:

- Enhance UAF's strong academic, research, and service programs
- Provide facilities to strengthen the student experience and integrate with research
- Celebrate the unique campus identity and diverse community
- Improve the campus 'curb appeal'
- Improve the physical environment; address outdated and under-performing space for enhanced student, staff, and faculty experiences

Projected Enrollment

The CMP is being completed in a time of change: funding sources and budget projections are at risk of severe cuts, new leaders are transitioning into their roles, and higher education programs and resources are adapting to changing norms. This future campus was based on projected enrollment growth of 55%, as outlined in the UA Board of Regents' goals. This represents an increase in projected enrollment from 5,115 FTE in 2017 to 8,011 FTE in 2025.

Concurrent with the development of this master plan, UAF has undertaken a strategic enrollment initiative, with results expected early summer 2019. Reflecting the changing landscape for higher education in Alaska, initial projections from that plan are more conservative than regents' goals, projecting 7,273 FTE or 37% growth by 2025. This projection assumes 2.5% annual growth in new first-year enrollment, 2% annual growth in new transfer enrollment, 2% annual growth in graduate enrollment, 1% increase in student retention and persistence at each student level, and no change in non-degree students.

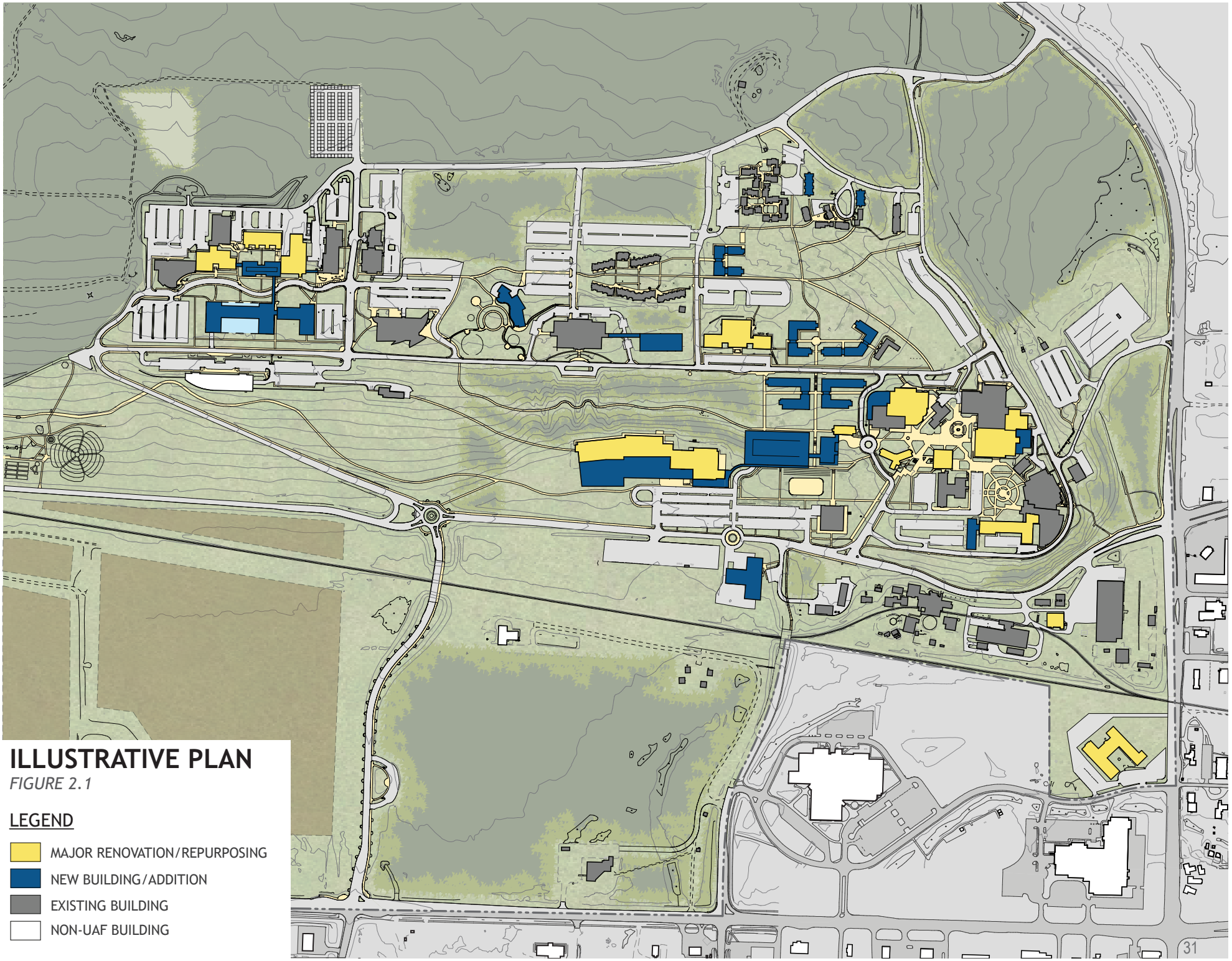
For both the 2025 regents' target and the draft projected enrollments, UAF has space deficiencies in several categories, the majority within research and lab space. Surpluses currently exist in academic, student housing, and office space. To fully and accurately understand the campus' space needs, however, the condition of existing space must be considered; a significant amount of existing space is underperforming, outdated, and not useful for consideration in campus growth strategies. In addition, regardless of growth projections, investment in improvements to aging facilities is critical to retaining both students and faculty researchers. This implementation plan addresses the phasing of the projects to position UAF for sustainability and growth.

ILLUSTRATIVE PLAN

FIGURE 2.1

0 350 700 1400

THE UNIVERSITY OF ALASKA FAIRBANKS



ILLUSTRATIVE PLAN

FIGURE 2.1

LEGEND

- MAJOR RENOVATION/REPURPOSING
- NEW BUILDING/ADDITION
- EXISTING BUILDING
- NON-UAF BUILDING

BUILDING USE

The Long-Term Building Use plan illustrates the recommended development locations and building use across campus. Developments are designated by a primary building use but may contain spaces outside of the primary use category. For instance, mixed residence hall facilities may contain primarily student housing, but also contain student life spaces and some academic spaces. Research facilities may contain research laboratories, classrooms, and associated administrative spaces.

Supporting Academics + Research

Classroom improvements will support modern teaching pedagogies and learning styles. By renovating existing classrooms and constructing new facilities, UAF can update its academic facilities across campus.

West Ridge remains the central hub of research activities on the Fairbanks campus. However, the master plan encourages an eastward expansion of research facilities to connect the research community with the larger academic community. UAF is known for providing research opportunities for undergraduate students, and further integrating research and academics further enhances that opportunity.

Strengthening the campus spine along Yukon Drive by developing strategic sites with specific programs will help integrate various groups within the campus community. Research, academic, student life, and student housing facilities along Yukon Drive create a vibrant link between West Ridge and the Lower Campus and enhances the pedestrian experience on campus.

LONG-TERM PLAN:
PRIMARY BUILDING USE

FIGURE 2.2

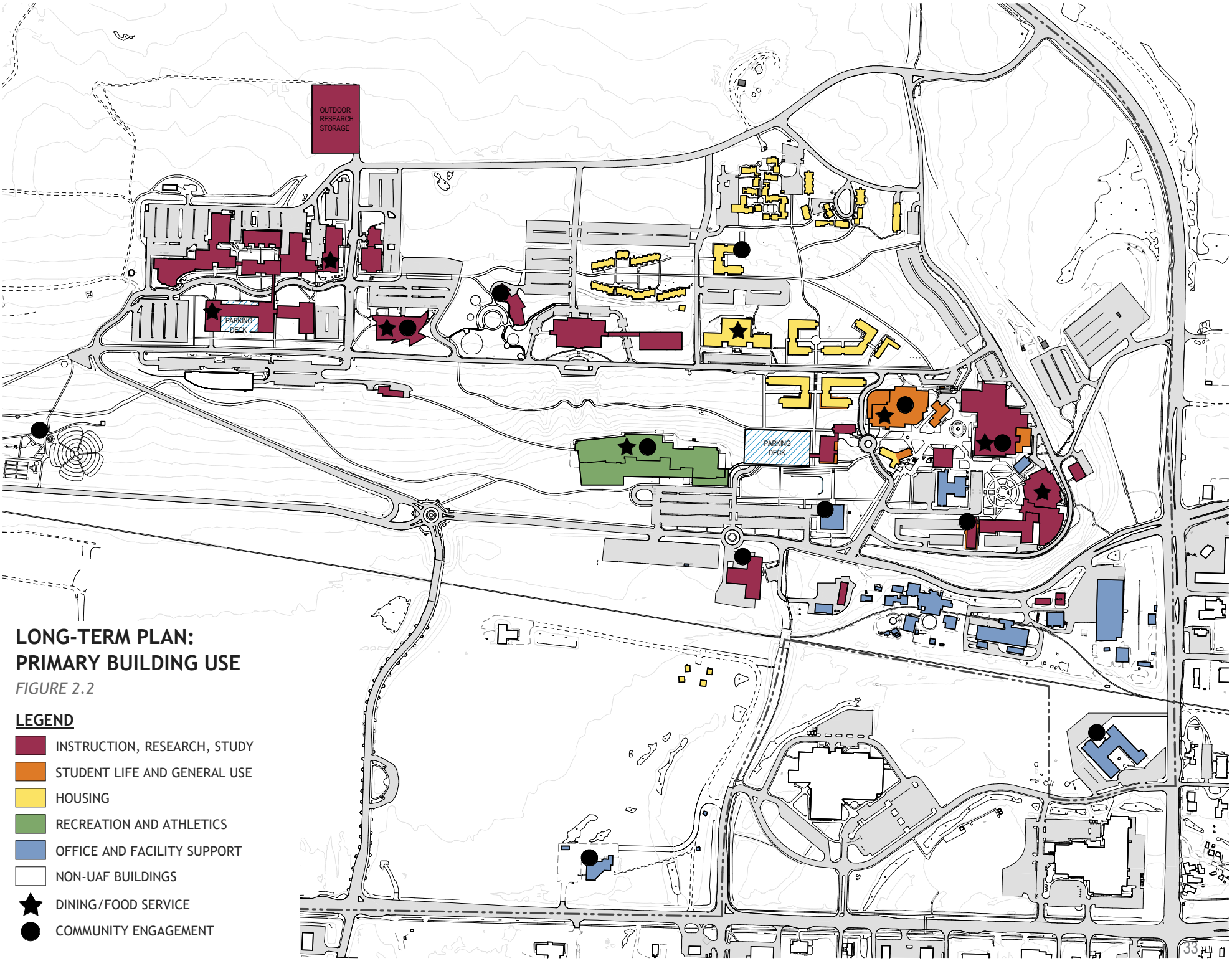


Supporting Student Life

The master plan supports a recreation and reimagining of housing on campus. Antiquated housing buildings and small, individual residential-scale buildings, such as the duplexes along North Chandalar drive and the Lower Campus residence halls, are removed. In their place, new housing communities in modern, vibrant facilities are created. Housing is concentrated along Yukon Drive and helps link the core campus with Cutler Apartments and West Ridge. New buildings will support apartment and suite-style housing, in addition to traditional student housing. Gathering spaces and open green areas are incorporated into the plan to support community activities and recreation.

Within housing and academic facilities, additional student life space is planned. Lounges, study space, and student gathering areas will be incorporated to help create vibrant living and learning communities. The redevelopment of the library into a learning commons offers a great opportunity to add new collaborative study spaces for students. Providing enhanced accommodations for student clubs and organizations and Honors House will improve the student experience and help foster a strong student community on campus.

Within all facilities on campus, access to daylighting and views is critical. Students, faculty, staff, and administrators crave access to sunlight during the winter months. All groups also support capitalizing on the stunning southern views towards the Alaska Range. All facilities also need to support interactions between students and between students and faculty. Vibrant mixed-use facilities support that goal.



LONG-TERM PLAN: PRIMARY BUILDING USE

FIGURE 2.2

LEGEND

- INSTRUCTION, RESEARCH, STUDY
- STUDENT LIFE AND GENERAL USE
- HOUSING
- RECREATION AND ATHLETICS
- OFFICE AND FACILITY SUPPORT
- NON-UAF BUILDINGS
- DINING/FOOD SERVICE
- COMMUNITY ENGAGEMENT

OPEN SPACE

The Long-Term Open Space diagram illustrates the overall, recommended structure of open space on campus. The diagram addresses issues of campus identity and branding, pedestrian access and connections, and opportunities to support learning and community development. Existing conditions are carefully considered and modified in order to positively enhance the open spaces on campus.

Supporting Academics

Open space on campus is integral to the learning environment on campus. The interpretive landscape that extends from West Ridge to the new North Chandalar commons provides a campus greenway supportive of learning about the natural environment, cultural and historical elements and plantings, and Troth Yeddha'. Alaska is a unique landscape and environment that offers students, faculty, and staff exciting opportunities to learn and grow community.

Supporting Student Life

The student experience on campus is significantly impacted by open space. UAF's campus supports extensive trails for use at all times of the year, sport and recreation fields, outdoor gathering spaces, and viewsheds. Connections between open space, student housing, and academic buildings helps strengthen the relationship between the building environment and the grand, unique Alaskan environment.

Supporting Pedestrian Travel

Open spaces like the expansive interpretive landscape create enjoyable, safe pedestrian corridors through campus that are separate from vehicular circulation. By improving pedestrian circulation paths with improved lighting, safety features, and trails, the campus becomes easier and more enjoyable to traverse while also being more environmentally sustainable. Creating links between major open space elements like the Botanical Gardens, the interpretive landscape, Centennial Plaza, and the North Chandalar Commons supports pedestrian movement through campus and also encourages exploration. Pedestrian circulation through campus offers unique opportunities to experience views of the Alaska Range and other defining elements of the Alaskan landscape.

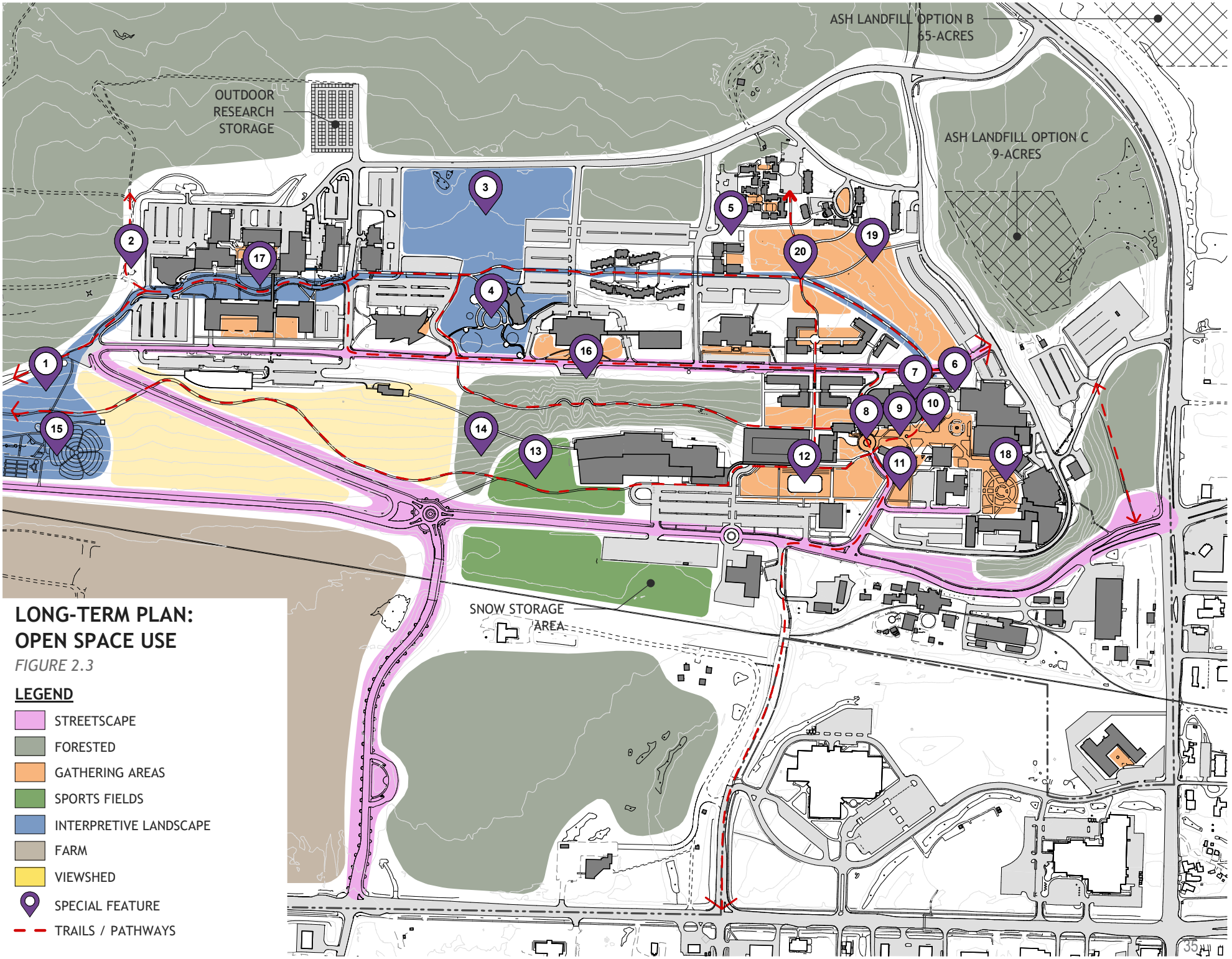
SPECIAL FEATURE LEGEND

1. BOTANICAL GARDEN OVERLOOK
2. SKI HUT
3. SHAKESPEARE THEATRE
4. TROTH YEDDHA' PARK
5. INTERPRETIVE PLAYGROUND
6. STUDENT SCULPTURE GARDEN GROVE
7. WOOD CENTER DECK
8. LOWER CAMPUS CROSSROADS
9. OUTDOOR CHESS BOARDS
10. FOUNDERS PLAZA / LOWER CAMPUS SCULPTURE COMMONS
11. CAMPUS GATEWAY COMMONS
12. OUTDOOR ICE RINK / AMPHITHEATRE
13. CLIMBING WALL
14. SKI SLOPE
15. CHILDREN'S GARDEN AND MAZE
16. ALASKA RANGE OVERLOOK
17. WEST RIDGE COMMONS
18. CONSTITUTION PLAZA
19. TANANA LOOP COMMONS
20. TANANA COMMONS CROSSROADS/OVERLOOK

LONG-TERM PLAN: OPEN SPACE USE

FIGURE 2.3

0 350 700 1400



LONG-TERM PLAN: OPEN SPACE USE

FIGURE 2.3

LEGEND

- STREETSCAPE
- FORESTED
- GATHERING AREAS
- SPORTS FIELDS
- INTERPRETIVE LANDSCAPE
- FARM
- VIEWSHED
- SPECIAL FEATURE
- TRAILS / PATHWAYS

CIRCULATION + PARKING

The Long-Term Circulation + Parking diagram illustrates modifications and enhancements to vehicular circulation through campus. Key elements of the plan include the introduction of structured parking on campus and traffic calming and safety measures at major intersections.

Supporting Access

The master plan incorporated the intended completion of Tanana Loop, which is currently being engineered. Providing this paved road will help connect different sections of campus in a logical and safe way.

Major intersection improvements are planned at South Chandalar Drive and Alumni Drive and at Tanana Loop and the SRC/Patty Center/New Police and Fire Station. Re-engineering these roadways and intersections will improve vehicular and pedestrian safety by improving visibility and calming traffic. As enrollment grows and activity on campus increases, improvements to these intersections are critical.

The plan recommends new campus landmarks and wayfinding to improve the visitor experience to increase brand awareness while on campus. These features will be incorporated at major intersections and can include welcome signs, campus maps, logos, and other relevant information for visitors and guests to the campus. In conjunction with these improvements, the creation of a consistent streetscape will define the vehicular path and ease navigation through campus while also increasing safety.

Supporting a Pedestrian Environment

Continuing to redevelop Yukon Drive to create a strong pedestrian spine will invigorate the pedestrian experience and further strengthen the connection between West Ridge and Core Campus. The new construction along Yukon Drive will help develop the vibrant sense of community and activity along this key campus axis. Refinement and expansion of open space along Yukon Drive supports the preservation and celebration of views from Yukon Drive to the southern open expanses.

Balancing vehicular public access and student, faculty, and staff access to the Core Campus against pedestrian access is a challenge. Many key programs and facilities that draw guests to campus require easy vehicular access and parking. That need must be met while continuing to support a pedestrian campus experience. Additional shuttle access and public transit options could help limit conflicts between pedestrians and vehicles.

Continuing to widen sidewalks and separate pedestrian and vehicular circulation remains a top priority. The recent enhancements to Yukon Drive serve as a successful precedent.

Supporting Parking

The plan recommends both structured parking and enlarged surface parking lots on campus. Structured parking is recommended near the SRC/Patty Center and Chapman Hall to serve the needs of students living on Core Campus, guests vising the core campus, and faculty, staff, and administrators. Additional structured parking is recommended with the redevelopment of the Arctic Health site—allowing for critical parking capacity for researchers on West Ridge. Surface lot expansions are planned in West Ridge, at the proposed Troth Yeddha' Indigenous Studies Center, and north of the performing arts venues. Balancing parking needs with open space and pedestrian circulation remains a challenge.

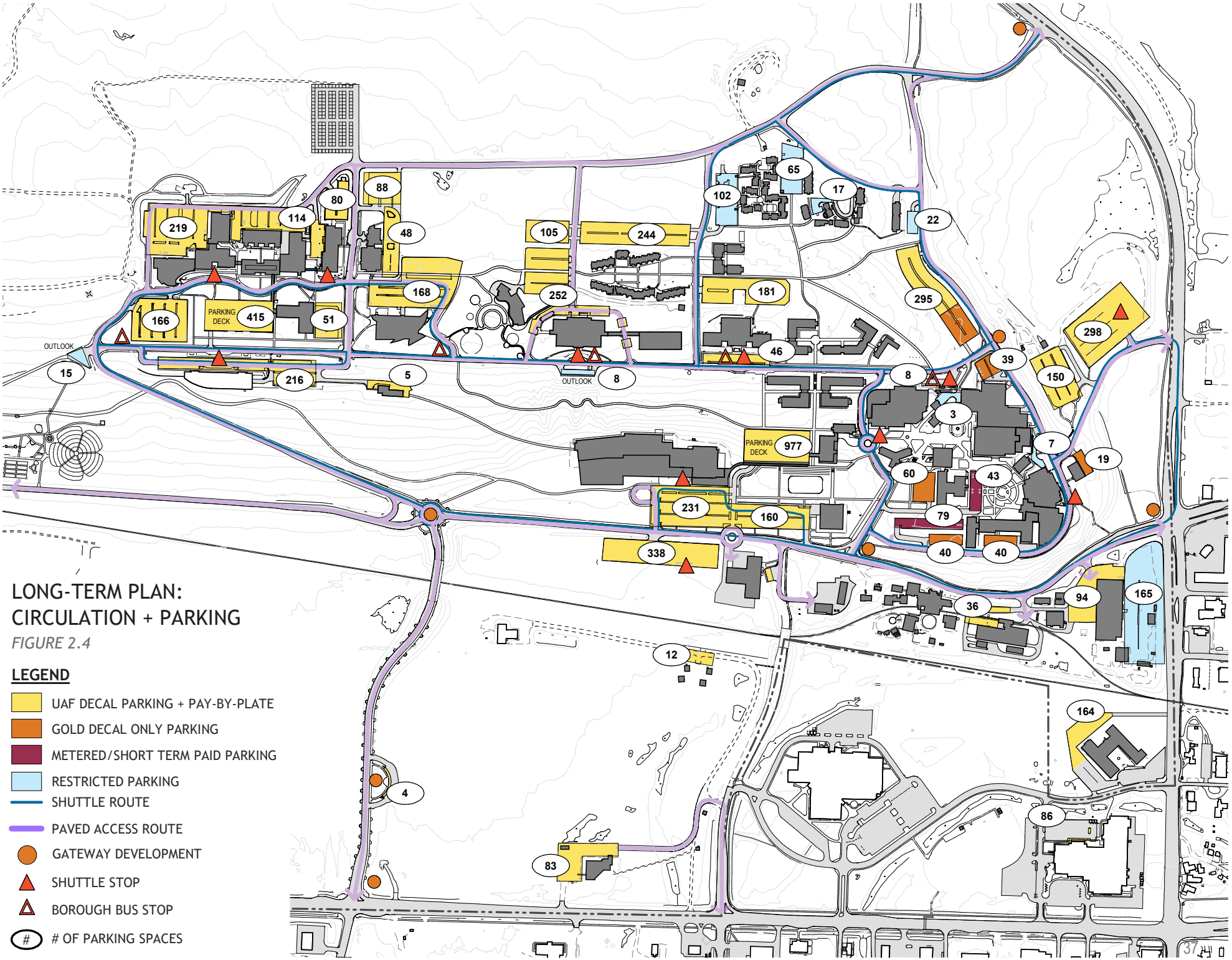
Campus parking policies need careful, routine study to determine means to minimize traffic and parking within the core campus, while maintaining safe and convenient access to campus for all community members.

LONG-TERM PLAN: CIRCULATION + PARKING

FIGURE 2.4



THE UNIVERSITY OF ALASKA FAIRBANKS


LONG-TERM PLAN:
CIRCULATION + PARKING
FIGURE 2.4
LEGEND
UAF DECAL PARKING + PAY-BY-PLATE
GOLD DECAL ONLY PARKING
METERED/SHORT TERM PAID PARKING
RESTRICTED PARKING
SHUTTLE ROUTE
PAVED ACCESS ROUTE
GATEWAY DEVELOPMENT
SHUTTLE STOP
BOROUGH BUS STOP
OF PARKING SPACES
PARKING DECK
OUTLOOK
15
219
114
80
88
48
166
415
51
168
216
5
105
244
252
8
102
65
17
22
181
46
295
298
39
150
3
977
7
19
60
43
231
160
79
40
338
36
94
165
12
164
4
83
86

Students add finishing touches to the 2016 steel bridge model in the Duckering Building.

Photograph by JR Ancheta



3

IMPLEMEN-TATION



IMPLEMENTING THE PLAN

Introduction

The implementation section outlines the strategies to realize the vision set forth in the Future Campus. A series of detailed actions accompanies the drawings illustrating immediate, short-term, mid-term, and long-term priorities. Immediate actions are necessary to support recruitment, retention, and stable growth. With the success of immediate actions, additional phases will be implemented. An exact implementation schedule is intentionally excluded to allow for flexibility in programming and funding sources.

Matrices link projects to specific UA System Goals, Accreditation Themes, UAF Strategic Goals, and Master Planning Goals, in addition to potential funding sources. Important governing bodies, administrators, and policies are represented through the goals. As such, the goals influenced which projects were introduced and guided the prioritization process.

It is important to note the context in which the CMP is being completed: funding sources and budget projections are at risk of severe cuts, new leadership is transitioning into their roles, and higher education programs and resources are adapting to changing norms. Therefore, the implementation of this plan is dependent on the stated governing conditions.

Planning for the Future

The master plan focuses on future campus growth and the projects necessary to support and achieve the desired enrollment growth. The implementation strategy seeks to set reasonable intermediate goals that can align projects with achieved growth. By envisioning the campus 7-10 years in the future, the master plan is a flexible and adaptable framework that helps position the university to make strategic investments and decisions in support of an overarching vision.

Phasing

The implementation plan categorizes projects into four phases of development. Each phase and the projects therein address particular components of growth and the campus transformation. As improvements are made to campus that attract and retain students, increasing enrollment will require additional projects to initialize to support them. A great synergy exists between campus improvements, enrollment growth, and project phasing.





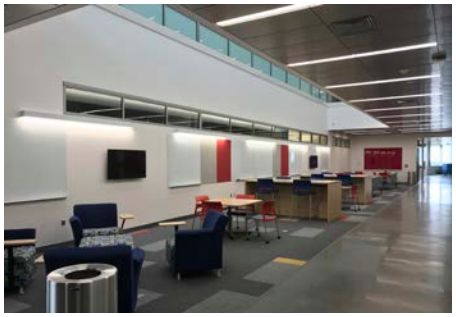




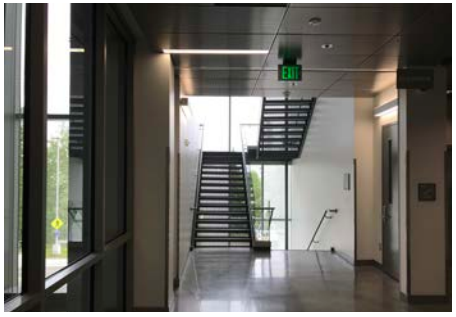
Photos of modern exemplar construction on UAF's campus.

Photos by Ancheta and Rishmawi









Photos of modern exemplar construction on UAF's campus.

Photos by Ancheta and Rishmawi

- Immediate: This phase addresses immediate and critical needs for the campus that should be completed within 1-2 years. Projects in this phase focus on improving operating and cost efficiencies while modernizing key buildings and programs. Strategic investments position the campus for future development.
- Short-Term: This phase addresses campus needs within 3-5 years. Projects continue to enhance the campus by removing antiquated facilities, improving campus open space and circulation, and new construction that strategically supports attracting new students and encouraging enrollment growth.
- Mid-Term: This phase addresses campus needs within 5-10 years. These projects emphasize removing outdated student housing, renovating and repurposing key buildings to modernize the student experience, and new construction that provides new campus housing. These projects continue providing the necessary resources to retain and recruit new students.
- Long-Term: The phase addresses campus needs from 10 years in the future and beyond. With campus enrollment increased significantly, numerous new construction projects provide resources and amenities needed to support the campus community. These projects propel UAF into the future as a leading-edge research institution.

Potential Funding Sources

The master plan identifies potential funding sources for various projects. The designations are intended as a strategic guide to help focus fundraising, marketing, capital campaigns, and budgeting; they do not represent commitments to any single funding source. All options should remain viable while exploring funding sources to achieve the goals of the master plan. The following funding sources should be explored.

- Capital Request: Funding requests made to the state through the UA system.
- Public-Private Partnership (P3): A funding option where the university partners with a third-party developer to realize a project.
- Private Giving: Funding through donations, bequests, and endowments made by alumni, corporations, or individuals.
- Deferred Maintenance: Funds designated to improve the condition of campus facilities.
- Other: Other funding options available to UAF in pursuit of realizing master plan goals.

Design Guidelines

Campus design guidelines highlight the expectations for future construction and development on campus. The existing campus character and existing buildings continue to influence and guide campus development in conjunction with the character expressed in recent campus construction. As the campus is developed, great care should be taken to respect the campus history, respect the diversity of the campus community, and reflect the principles and ideals of the institution.



The four lower dorms are planned for demolition. Photo by JR Ancheta.



A duplex residence on Chatanika Drive that is planned for demolition. Photo by JR Ancheta.



Rasmuson Library and Gruening Building help frame Centennial Plaza. All are intended to be renovated. Photo by George Rishmawi.



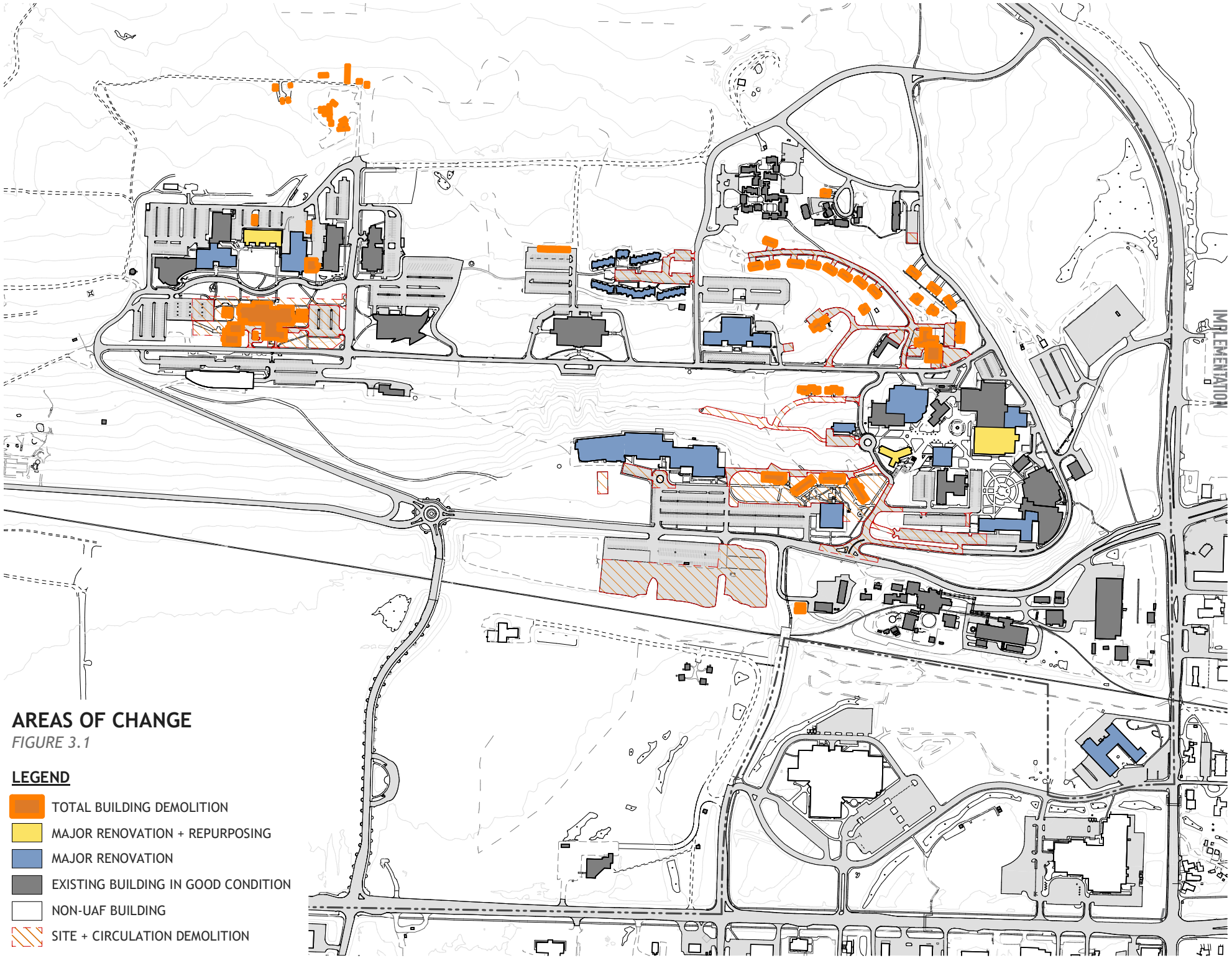
West Ridge research facilities are planned to be updated and modernized. Photo by JR Ancheta.

AREAS OF CHANGE

FIGURE 3.1

0 350 700 1400

The Areas of Change diagram illustrates in one diagram the significant building renovations, additions, demolitions, and site + circulation changes proposed throughout all phases of the master plan.



AREAS OF CHANGE

FIGURE 3.1

LEGEND

- TOTAL BUILDING DEMOLITION
- MAJOR RENOVATION + REPURPOSING
- MAJOR RENOVATION
- EXISTING BUILDING IN GOOD CONDITION
- NON-UAF BUILDING
- SITE + CIRCULATION DEMOLITION

IMMEDIATE PRIORITIES

Buildings

Reduce Footprint

B1. Demolish Nordic House
B2. Demolish Colville Street House
B3. Demolish Copper Lane Housing
B4. Sell ATCO Trailers - Facilities
B5. Sell ATCO Trailers - Reichardt
B6. Sell ATCO Trailers - West Ridge

Renovate / Repurpose / Reassign

B7. Sell/Lease Aurora Warehouse
B8. Sell/Lease Administrative Services Building
B9. Duckering Backfill
B10. Portions of Irving I and II for Toolik Field Station
B11. Constitution Hall
B12. Rasmuson Library
B13. Patty Center Ice Upgrades

Construct / Occupy

B14. Fire + Emergency Services Training + Education Facility
B15. Deer Yard Improvements

Open Space

Construct / Occupy / Enhance

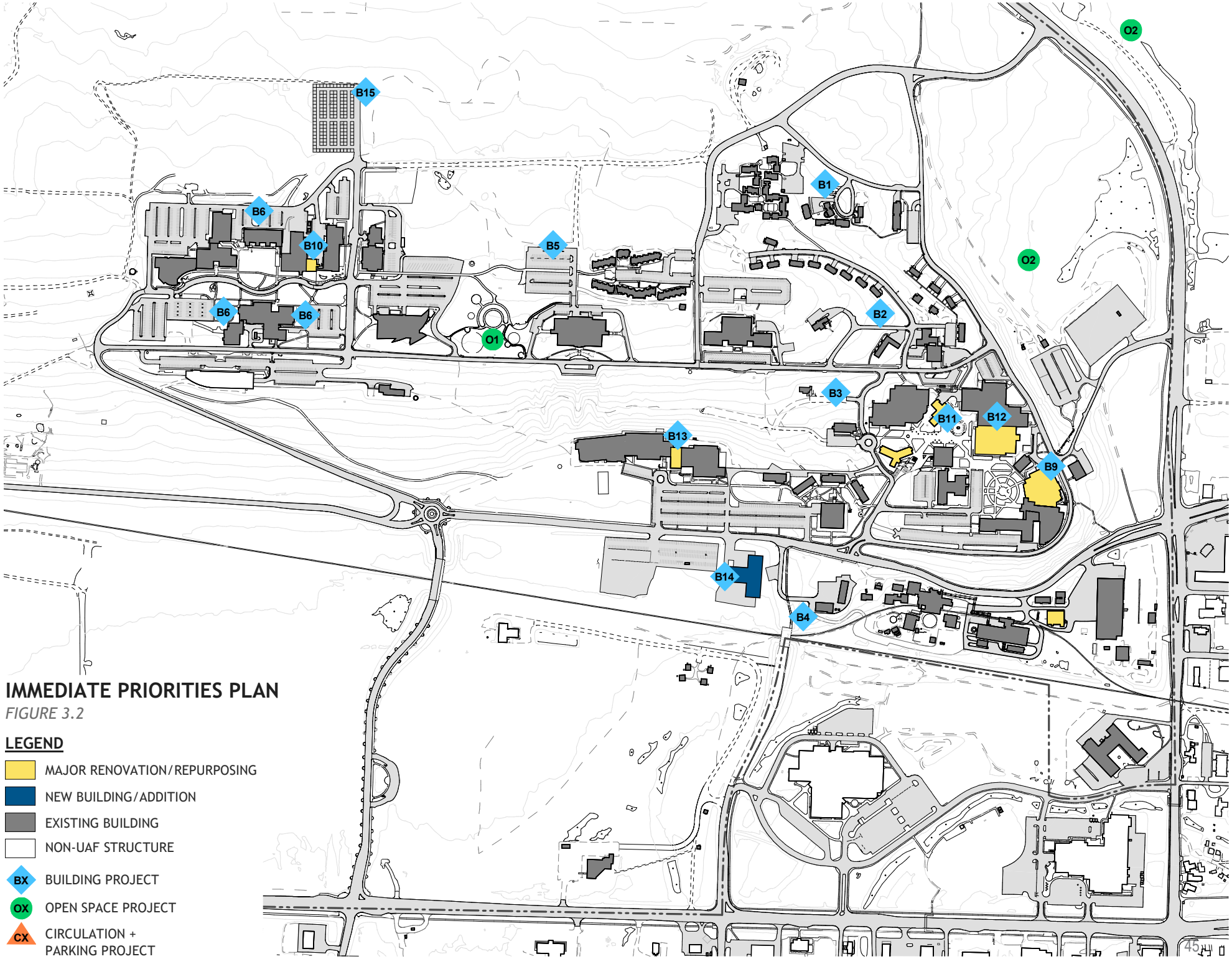
O1. Interpretive Landscape at Troth Yeddha' Park
O2. Coal Ash Disposal Site

IMMEDIATE PRIORITIES PLAN

FIGURE 3.2



THE UNIVERSITY OF ALASKA FAIRBANKS



IMMEDIATE PRIORITIES PLAN

FIGURE 3.2

LEGEND

- MAJOR RENOVATION/REPURPOSING
- NEW BUILDING/ADDITION
- EXISTING BUILDING
- NON-UAF STRUCTURE
- BX BUILDING PROJECT
- OX OPEN SPACE PROJECT
- CX CIRCULATION + PARKING PROJECT

SHORT-TERM PRIORITIES

Buildings

Reduce Footprint

B1. Demolish Lathrop Hall
B2. Demolish Honors House

Renovate / Repurpose / Reassign

B3. Moore Hall
B4. Bartlett Hall
B5. Wickersham Hall (Student Organizations + Honors Program)

Construct / Occupy

B6. Troth Yeddha' Indigenous Studies Center
B7. Museum Conditioned Storage
B8. Museum Field Staging and Storage
B9. Yukon South Student Housing 1
B10. Yukon South Student Housing 2
B11. Core Campus Parking Garage

Open Space

Construct / Occupy / Enhance

O1. Campus Gateway - Geist at Thompson
O2. Centennial Square Commons
O3. Botanical Gardens Enhancements (Parking, Select Demolition, + Accessibility)
O4. Enhance Koyukuk to North Chandalar Housing Accessible Pedestrian Spine

Circulation + Parking

Renovate / Repurpose / Reassign

C1. University Park Surface Parking
C2. Troth Yeddha' Indigenous Studies Center Parking

Construct / Occupy

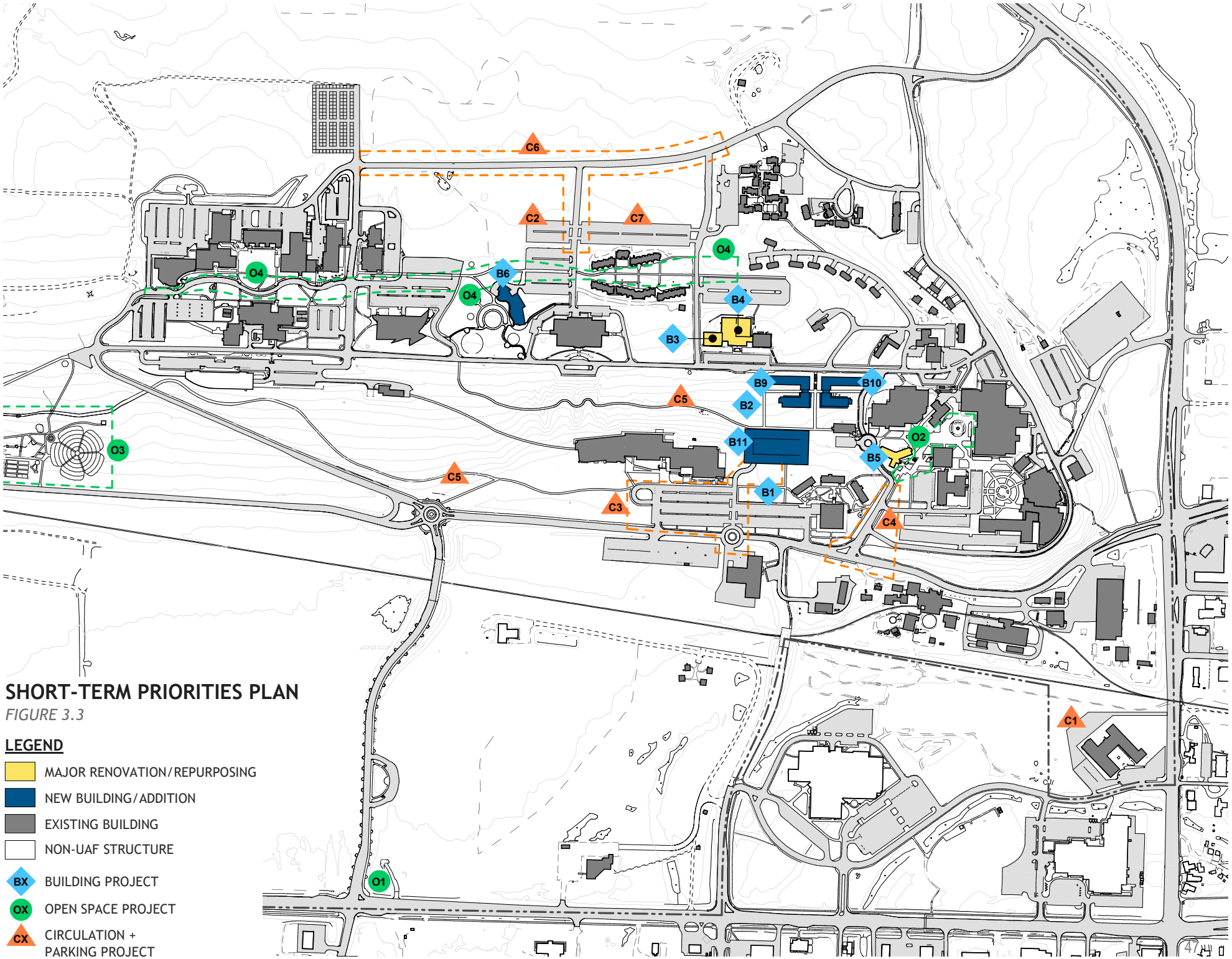
C3. Patty Center Parking, Circulation, + Traffic Improvements
C4. South Chandalar Drive Improvements
C5. Trail Improvements (Lighting + Anti-slip)
C6. North Tanana Loop Completion
C7. Cutler Apartment Complex Parking Relocation

SHORT-TERM PRIORITIES PLAN

FIGURE 3.3

0 350 700 1400

THE UNIVERSITY OF ALASKA FAIRBANKS



SHORT-TERM PRIORITIES PLAN

FIGURE 3.3

LEGEND

- MAJOR RENOVATION/REPURPOSING
- NEW BUILDING/ADDITION
- EXISTING BUILDING
- NON-UAF STRUCTURE
- BX — BUILDING PROJECT
- OX — OPEN SPACE PROJECT
- CX — CIRCULATION + PARKING PROJECT

MID-TERM PRIORITIES

Buildings

Reduce Footprint

B1. Demolish Whitaker (Fire + Police/Student Health Center)
B2. Demolish Chatanika Drive Housing
B3. Demolish McIntosh Hall
B4. Demolish Nerland Hall
B5. Demolish Stevens Hall
B6. Demolish Faculty Housing at North Chandalar
B7. Demolish Chancellor's Residence

Renovate / Repurpose / Reassign

B8. Bunnell Building
B9. Gruening Building
B10. Wood Center (1972 Portion Only)
B11. Elvey Building
B12. O'Neill Building
B13. Salisbury Theatre
B14. University Park

Construct / Occupy

B15. Non-traditional Housing + Early Childhood Education and Childcare Center
B16. SRC Expansion/ Patty Center Complex Connector
B17. Yukon North Student Housing 1
B18. West Ridge North Building (South of O'Neill)

Open Space

Construct / Occupy / Enhance

O1. Campus Gateway - Yukon at North Tanana
O2. Campus Gateway - Alumni at South Tanana
O3. Chapman Commons
O4. Outdoor Ice Rink
O5. Streetscapes Along Major Roads
O6. Childcare Outdoor Areas

Circulation + Parking

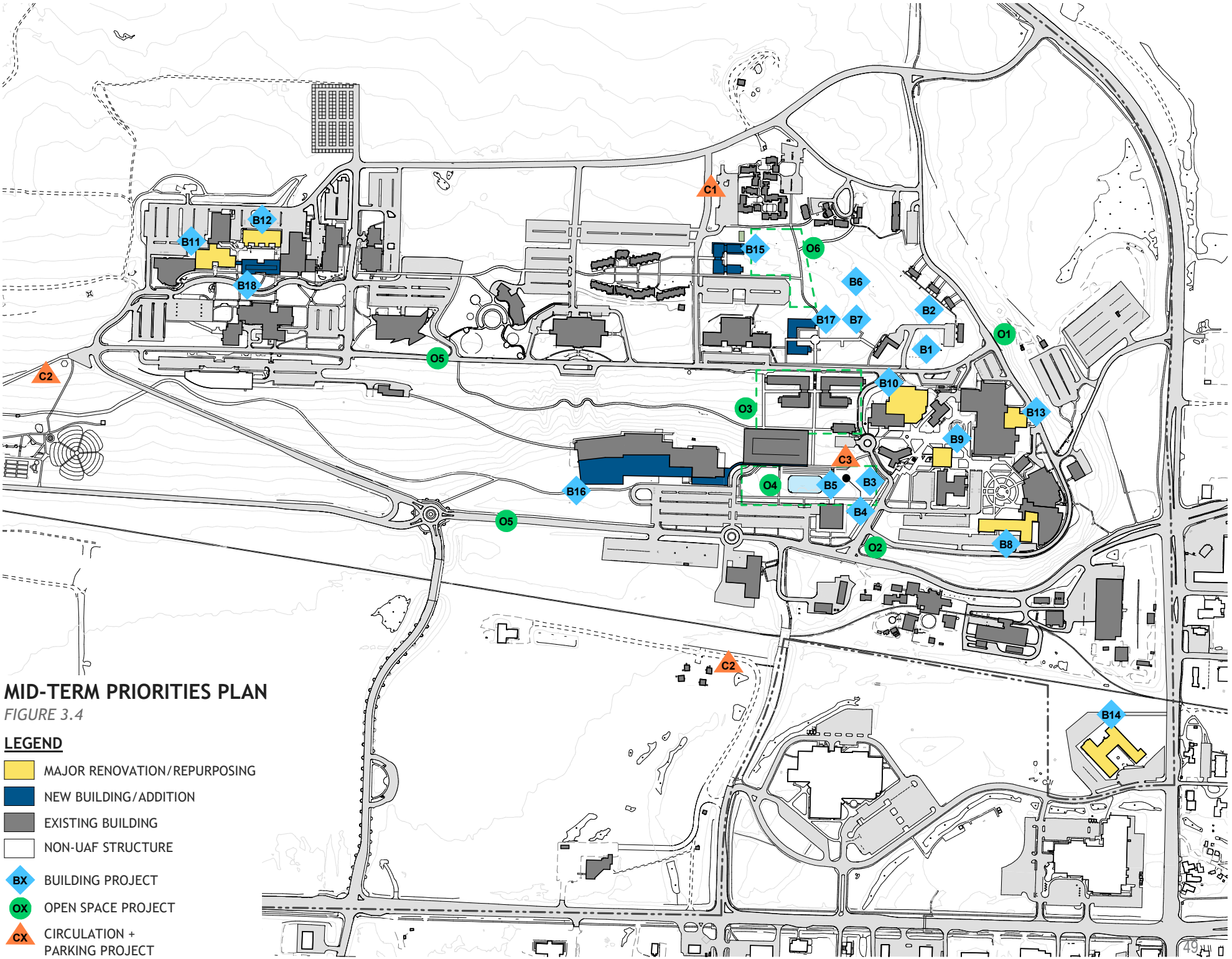
Construct / Occupy

C1. Hess Village Surface Parking
C2. Trail Improvements (Lighting + Anti-slip)
C3. Pedestrian Walkway Connector (Patty Center to Wickersham)

MID-TERM PRIORITIES PLAN

FIGURE 3.4

0 350 700 1400



MID-TERM PRIORITIES PLAN

FIGURE 3.4

LEGEND

- MAJOR RENOVATION/REPURPOSING
- NEW BUILDING/ADDITION
- EXISTING BUILDING
- NON-UAF STRUCTURE
- BX — BUILDING PROJECT
- OX — OPEN SPACE PROJECT
- CX — CIRCULATION + PARKING PROJECT

LONG-TERM PRIORITIES

Buildings

Reduce Footprint

B1. Demolish Arctic Health Research Building
B2. Demolish Irving II
B3. Demolish Walsh Hall
B4. Demolish North Tanana Duplexes (3 Buildings)

Renovate / Repurpose / Reassign

B5. Chapman Building Renovation
B6. Irving I

Construct / Occupy

B7. Chapman Building Addition
B8. Rasmuson Library Addition
B9. West Ridge South Building 1 (East of AHRB)
B10. West Ridge South Building 2 (West of AHRB)
B11. West Ridge South Building 2 Subterranean Parking *(*part of circulation + parking)*
B12. Murie + Irving I Connector
B13. Bunnell Building Addition
B14. Reichardt Research Building Addition
B15. Wood Center Addition
B16. Yukon North Student Housing 2
B17. Hess Village New Housing (3 Buildings)

Open Space

Construct / Occupy / Enhance

O1. North Chandalar Commons
O2. North Chandalar Courtyard
O3. Arctic Health Quad

Circulation + Parking

Renovate / Repurpose / Reassign

C1. Bunnell Surface Parking Modifications
C2. Koyukuk Limited Access Drive
C3. Arctic Health East Surface Parking
C4. MBS Parking - Eastward Expansion

Construct / Occupy

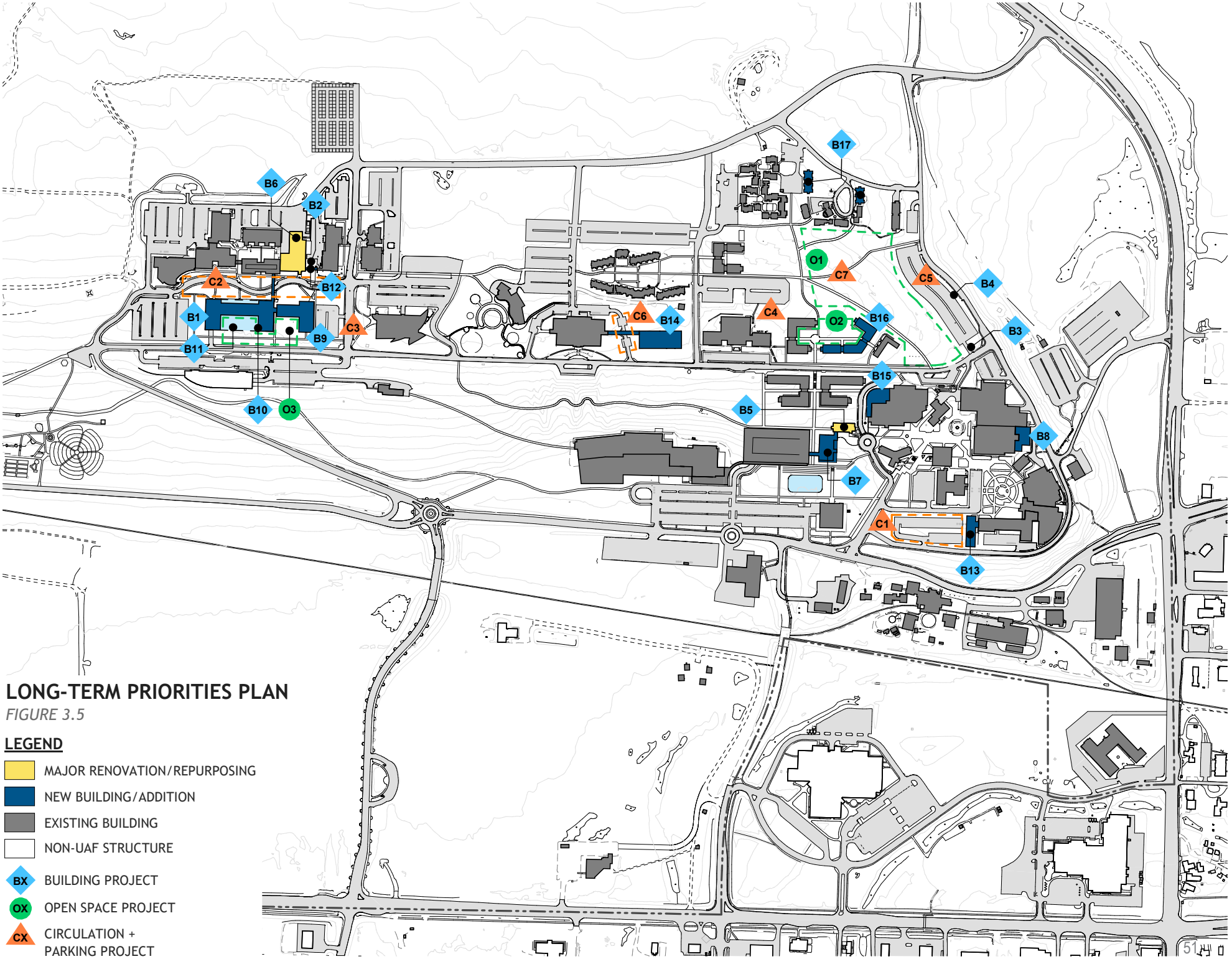
C5. Walsh Surface Parking
C6. Accessible Parking Spaces at Reichardt Addition
C7. Trail Improvements (Lighting + Anti-slip)

LONG-TERM PRIORITIES PLAN

FIGURE 3.5

0 350 700 1400

THE UNIVERSITY OF ALASKA FAIRBANKS



LONG-TERM PRIORITIES PLAN

FIGURE 3.5

LEGEND

- MAJOR RENOVATION/REPURPOSING
- NEW BUILDING/ADDITION
- EXISTING BUILDING
- NON-UAF STRUCTURE
- BX BUILDING PROJECT
- OX OPEN SPACE PROJECT
- CX CIRCULATION + PARKING PROJECT

MASTER PLAN GOALS

UA Goals

- A Contribute to Alaska's economic development
- B Provide Alaska's skilled workforce
- C Grow our world-class research
- D Increase degree attainment
- E Operate most cost-effectively

Funding Source descriptions can be found on P.41 of the report.

Accreditation Themes

- A Educate undergraduate students and lifelong learners
- B Research: Create and disseminate new knowledge, insight, technology, artistic and scholarly works
- C Prepare Alaska's career, technical and professional workforce
- D Connect Alaska Native, rural and urban communities by sharing knowledge and ways of knowing
- D Engage Alaskans through outreach for continuing education and community and economic development

UAF Stragetic Goals

- A Modernize the student experience
- B Cement global leadership in Alaska Native and Indigenous programs
- C Achieve Tier 1 research status and share new knowledge
- D Transfrom UAF's IP development and commercialization enterprise
- E Embrace and grow a culture of diversity, inclusivity, safety, and caring
- F Revitalize key academic programs from occupational endorsement to PhD

IMMEDIATE GOALS + ACTIONS MATRIX

UAF PLANNING ACTIONS: IMMEDIATE

		UA Goals					Accreditation Themes					UAF Strategic Goals						Master Planning Goals							Potential Funding						
		Economic Development	Skilled Workforce	World-class Research	Degree Attainment	Cost Efficiencies	Educate	Research	Prepare	Connect	Engage	Modernize	Indigenous	Tier 1 Research	IP/Comm	Respect/Caring	Key Academic Programs	Enhance Programs	Student Experience	Campus Identity	Curb Appeal	Physical Environment	Capital Request	P3	Private Giving	Deferred Maintenance	Other
BUILDINGS																														
Reduce Footprint:																														
B1.	Demolish Nordic House				+		+					+										■				■				
B2.	Demolish Colville Street House				+		+					+										■				■				
B3.	Demolish Copper Lane Housing				+		+					+										■				■				
B4.	Dispose of ATCO Trailers - Facilities				+	■						+									■	■				■				
B5.	Dispose of ATCO Trailers - Reichardt				+	■		+						+							■	■				■				
B6.	Dispose of ATCO Trailers - West Ridge				+	■		+						+							■	■				■				
Renovate/Repurpose/Reassign:																														
B7.	Sell/Lease Aurora Warehouse					■																■				■				
B8.	Sell/Lease Administrative Services Building					■																■				■				
B9.	Duckering Backfill	■		■								■		■			■	■	■			■				■				
B10.	Portions of Irving I and II for Toolik Field Station			■				■										■												
B11.	Constitution Hall						■					■				■		■	■							■				
B12.	Rasmuson Library	■			■		■					■					■	■	■			■				■	■			
B13.	Patty Center Ice Upgrades					■					■	■							■	■		■				■	■			
Construct/Occupy:																														
B14.	Fire + Emergency Services Training and Education Facility		■		■		■		■			■				■		■	■				■							
B15.	Deer Yard Improvements			■				■										■			■						■			
OPEN SPACE																														
Construct/Occupy/Enhance																														
O1.	Interpretive Landscape at Troth Yeddha'			■				■		■	■					■	■	■	■	■	■									
O2.	Coal Ash Disposal Site					■																■					■			

NOTE: Projects designated with a "+" indicate a project that needs to be completed as preparation for a future project that meets that theme/goal

Master Planning Goals

A Enhance UAF's strong academic, research, and service programs

B Provide facilities to strengthen the student experience and integrate with research

C Celebrate the unique campus identity and diverse community

D Improve the campus 'curb appeal'

E Improve the physical environment; address outdated and under-performing space for enhanced student, staff and faculty experiences

SHORT-TERM GOALS + ACTIONS MATRIX

UAF PLANNING ACTIONS: SHORT-TERM



BUILDINGS		
Reduce Footprint:		
B1.	Demolish Lathrop Hall	
B2.	Demolish Honors House	
Renovate/Repurpose/Reassign:		
B3.	Moore Hall	
B4.	Bartlett Hall	
B5.	Wickersham (Student Organizations + Honors Program)	
Construct/Occupy:		
B6.	Troth Yeddha' Indigenous Studies Center	
B7.	Museum Conditioned Storage	
B8.	Museum Field Staging and Storage	
B9.	Yukon South Student Housing 1	
B10.	Yukon South Student Housing 2	
B11.	Core Campus Parking Garage	
OPEN SPACE		
Construct/Occupy/Enhance		
O1.	Campus Gateway - Geist at Thompson	
O2.	Centennial Square Commons	
O3.	Botanical Garden Enhancements (Parking, Select Demolition, + Acessibility)	
O4.	Enhance Koyukuk to North Chandalar Housing Accessible Pedestrian Spine	
CIRCULATION + PARKING		
Renovate/Repurpose/Reassign		
C1.	University Park Surface Parking	
C2.	Troth Yeddha' Interpretive Center Parking	
Construct/Occupy		
C3.	Patty Center Parking, Circulation, + Traffic Improvements	
C4.	South Chandalar Drive Improvements	
C5.	Trail Improvements (Lighting + Anti-slip)	
C6.	North Tananan Loop Completion	
C7.	Cutler Apartment Complex Parking Relocation	

NOTE: Projects designated with a "+" indicate a project that needs to be completed as preparation for a future project that meets that theme/goal

MID-TERM GOALS + ACTIONS MATRIX

UAF PLANNING ACTIONS: MID-TERM



BUILDINGS

Reduce Footprint:		
B1.	Demolish Whitaker (Fire + Police/Student Health Center)	+
B2.	Demolish Chatanika Drive Housing	
B3.	Demolish McIntosh Hall	
B4.	Demolish Nerland Hall	
B5.	Demolish Stevens Hall	
B6.	Demolish Faculty Housing at North Chandalar	
B7.	Demolish Chancellor's Residence	
Renovate/Repurpose/Reassign:		
B8.	Bunnell Building	
B9.	Gruening Building	
B10.	Wood Center (1972 Portion Only)	
B11.	Elvey Building	
B12.	O'Neill Building	
B13.	Salisbury Theatre	
B14.	University Park	
Construct Occupy:		
B15.	Non-Traditional Housing + Early Childhood Education and Childcare Center	
B16.	SRC Expansion/ Patty Center Complex Connector	
B17.	Yukon North Student Housing 1	
B18.	West Ridge North Building (South of O'Neill)	

OPEN SPACE

Construct/Occupy/Enhance		
O1.	Campus Gateway - Yukon at North Tanana	
O2.	Campus Gateway - Alumni at South Tanana	
O3.	Chapman Commons	
O4.	Outdoor Ice Rink	
O5.	Streetscapes Along Major Roads	
O6.	Childcare Outdoor Areas	

CIRCULATION + PARKING

Construct/Occupy		
C1.	Hess Village Surface Parking	
C2.	Trail Improvements (Lighting + Anti-slip)	
C3.	Pedestrian Walkway Connector (Patty Center to Wickersham)	

NOTE: Projects designated with a "+" indicate a project that needs to be completed as preparation for a future project that meets that theme/goal

LONG-TERM GOALS + ACTIONS MATRIX

UAF PLANNING ACTIONS: LONG-TERM



BUILDINGS

Reduce Footprint:		
B1.	Demolish Arctic Health Research Building	
B2.	Demolish Irving II	
B3.	Demolish Walsh Hall	
B4.	Demolish North Tanana Duplexes (3 Buildings)	
Renovate/Repurpose/Reassign:		
B5.	Chapman Building Renovation	
B6.	Irving I	
Construct/Occupy:		
B7.	Chapman Building Addition	
B8.	Rasmuson Library Addition	
B9.	West Ridge South Building 1 (East of AHRB)	
B10.	West Ridge South Building 2 (West of AHRB)	
B11.	West Ridge South Building 2 Subterranean Parking (**part of circulation + parking*)	
B12.	Murie + Irving I Connector	
B13.	Bunnell Building Addition	
B14.	Reichardt Research Building Addition	
B15.	Wood Center Addition	
B16.	Yukon North Student Housing 2	
B17.	Hess Village New Housing (3 Buildings)	

OPEN SPACE

Construct/Occupy/Enhance		
O1.	North Chandalar Commons	
O2.	North Chandalar Courtyard	
O3.	Arctic Health Quad	

CIRCULATION + PARKING

Renovate/Repurpose/Reassign		
C1.	Bunnell Surface Parking Modifications	
C2.	Koyukuk Limited Access Drive	
C3.	Arctic Health East Surface Parking	
C4.	MBS Parking - Eastward Expansion	
Construct/Occupy		
C5.	Walsh Surface Parking	
C6.	Accessible Parking Spaces at Reichardt Addition	
C7.	Trail Improvements (Lighting + Anti-slip)	

NOTE: Projects designated with a "+" indicate a project that needs to be completed as preparation for a future project that meets that theme/goal



A composite image showing the sun rising and setting over the Alaska Range looking south from the Reichardt Building.

Photograph by JR Ancheta

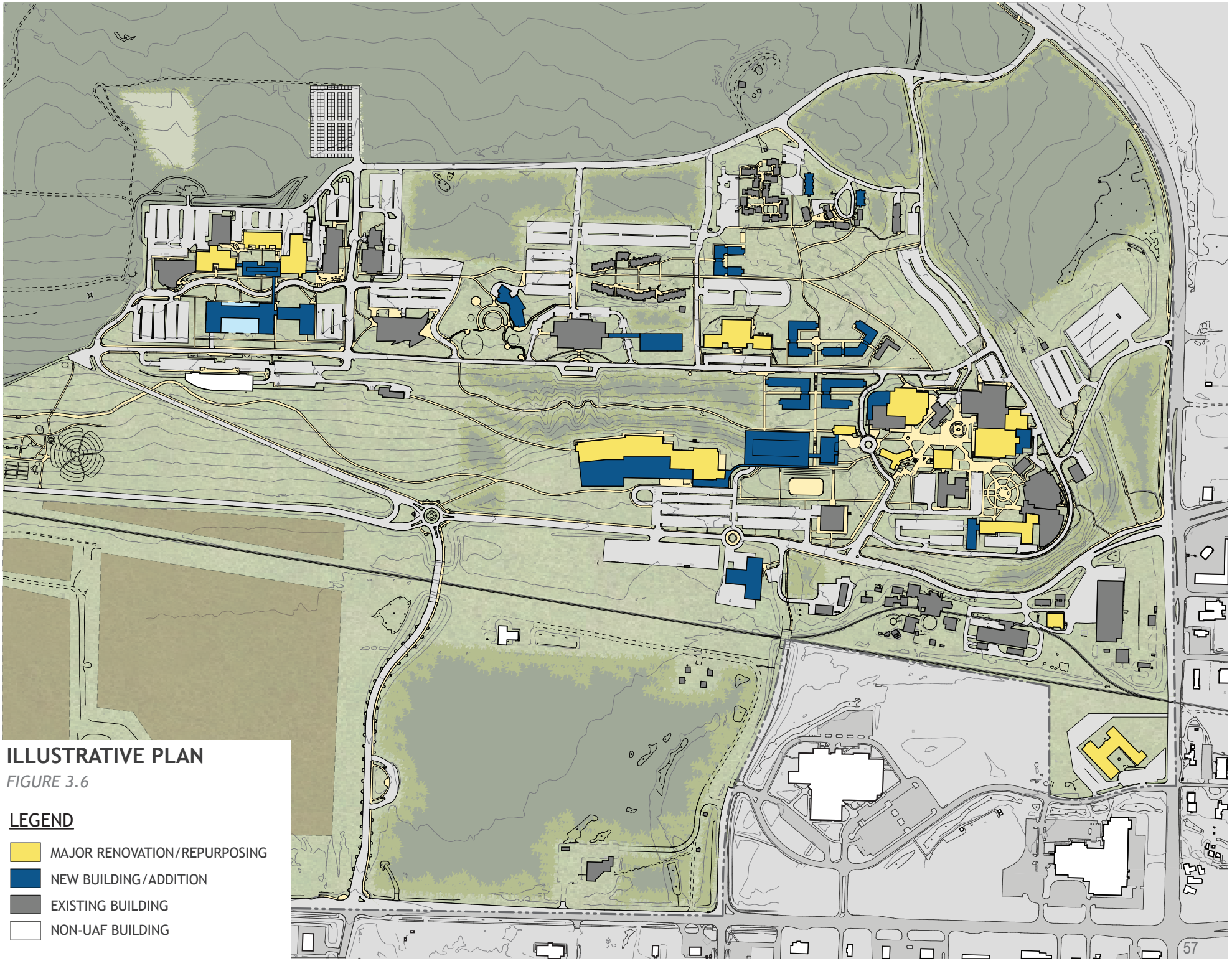
ILLUSTRATIVE PLAN

FIGURE 3.6

0 350 700 1400

The Illustrative Plan represents the transformed campus upon the realization of all master plan projects and goals.

THE UNIVERSITY OF ALASKA FAIRBANKS



ILLUSTRATIVE PLAN

FIGURE 3.6

LEGEND

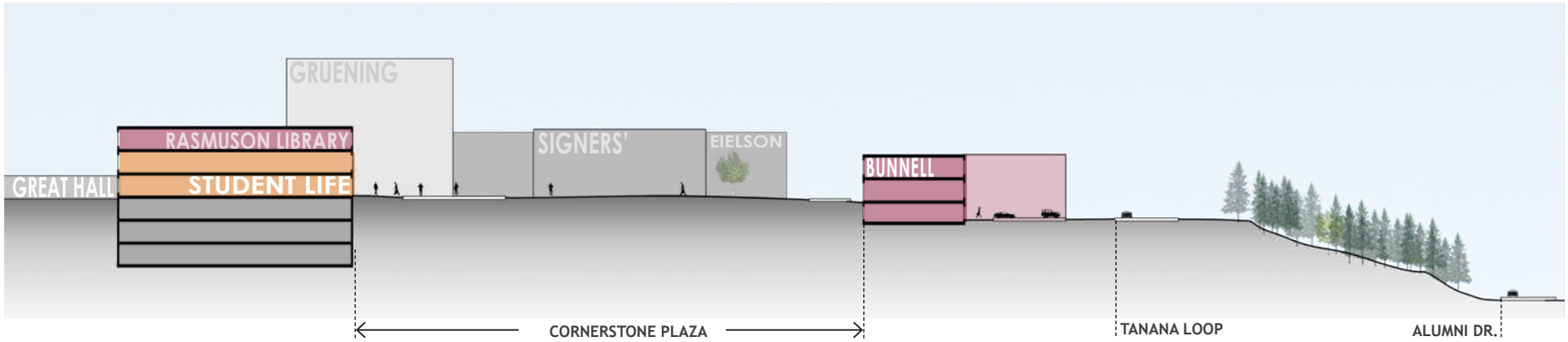
- MAJOR RENOVATION/REPURPOSING
- NEW BUILDING/ADDITION
- EXISTING BUILDING
- NON-UAF BUILDING

SITE SECTIONS

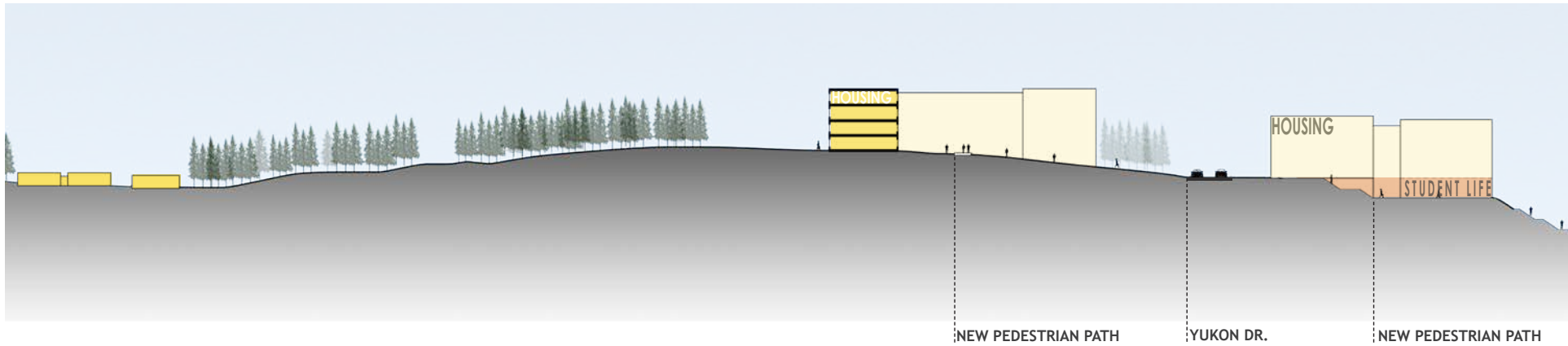
MAP LEGEND

- INSTRUCTION, RESEARCH, STUDY
- STUDENT LIFE AND GENERAL USE
- HOUSING
- RECREATION AND ATHLETICS
- OFFICE AND FACILITY SUPPORT
- STRUCTURED PARKING
- EXISTING BUILDINGS
- NON-UAF BUILDINGS

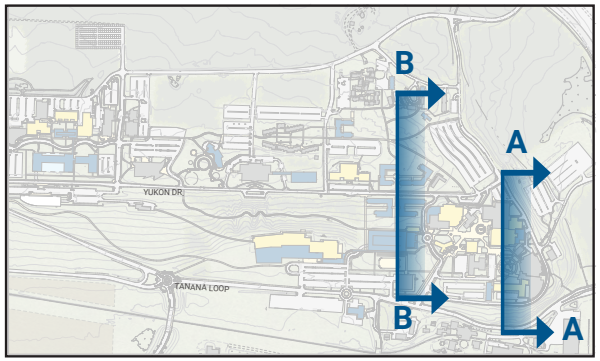
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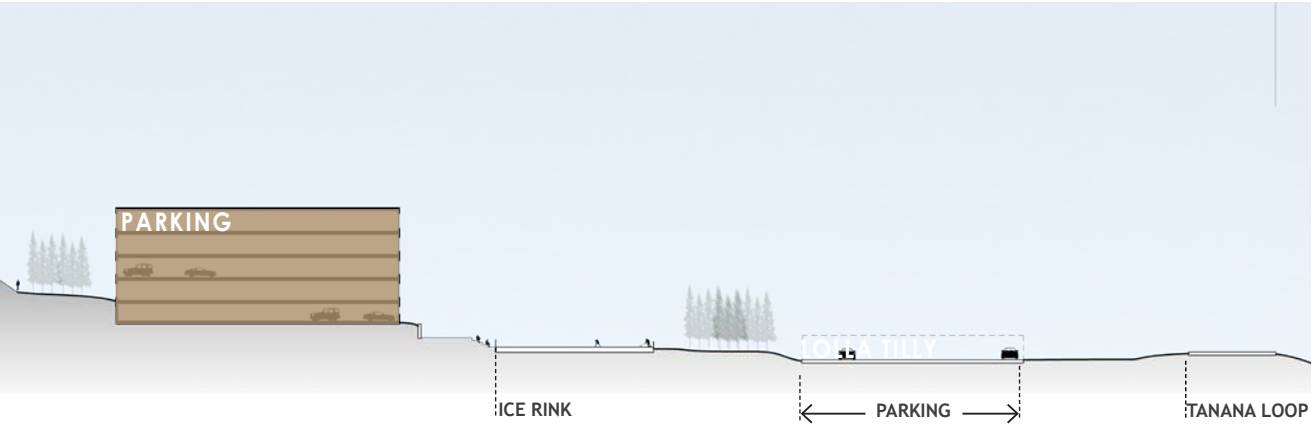


Section B



CAMPUS SECTION KEY PLAN





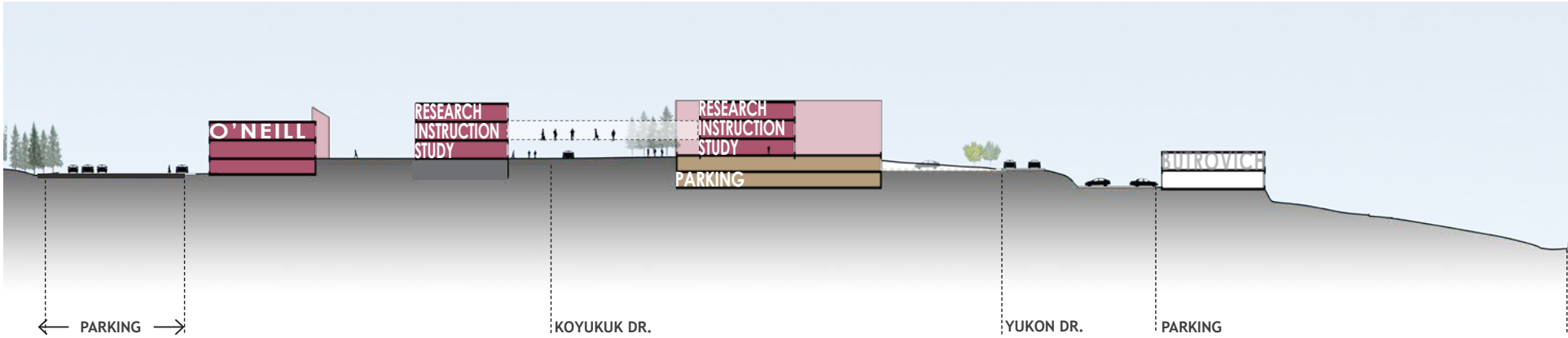
GRAPHIC SCALE
0 40 80 120 160

SITE SECTIONS

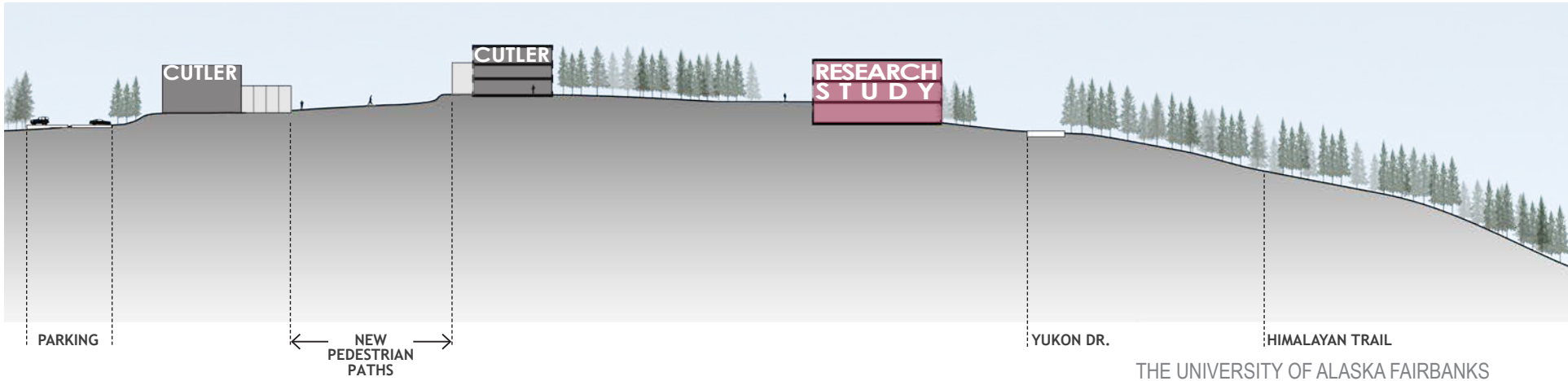
MAP LEGEND

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- RECREATION AND ATHLETICS
- OFFICE AND FACILITY SUPPORT
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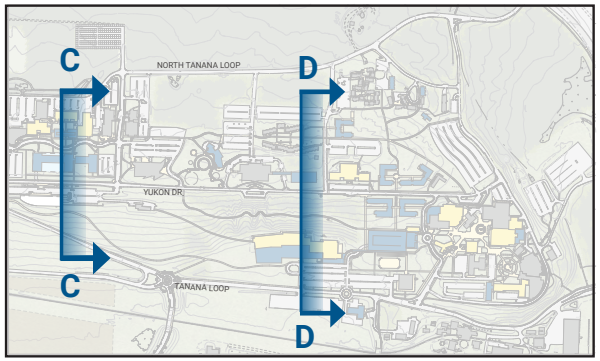
Section C



Section D

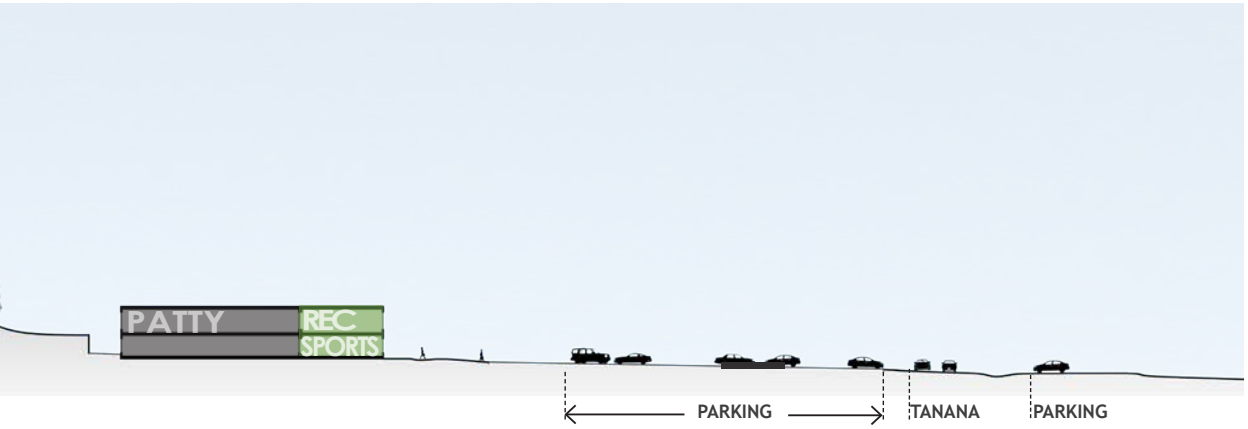


CAMPUS SECTION KEY PLAN





TANANA LOOP



GRAPHIC SCALE

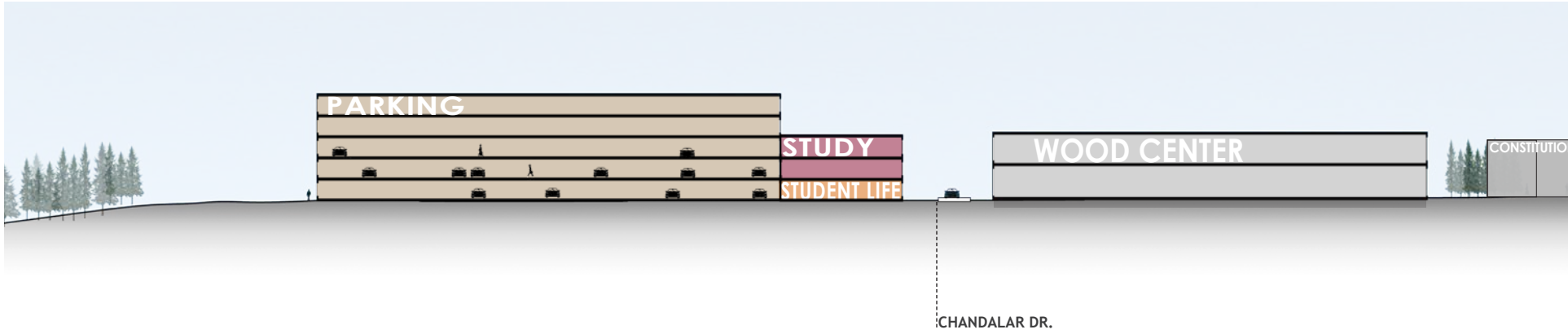
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SITE SECTIONS

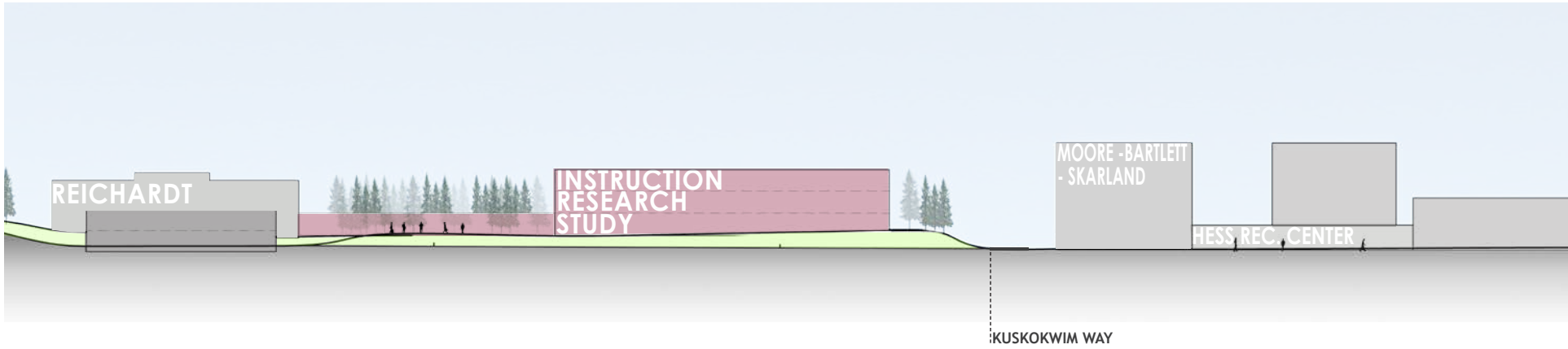
MAP LEGEND

- INSTRUCTION, RESEARCH, STUDY
- STUDENT LIFE AND GENERAL USE
- HOUSING
- RECREATION AND ATHLETICS
- OFFICE AND FACILITY SUPPORT
- STRUCTURED PARKING
- EXISTING BUILDINGS
- NON-UAF BUILDINGS

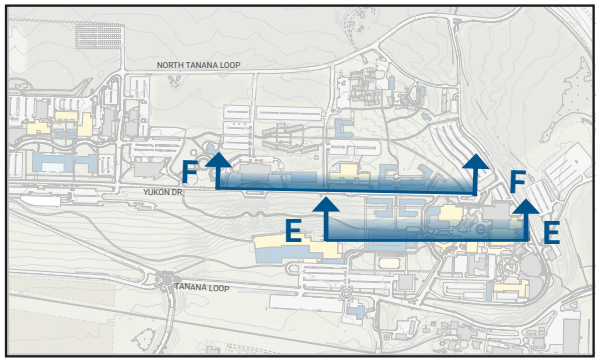
Section E

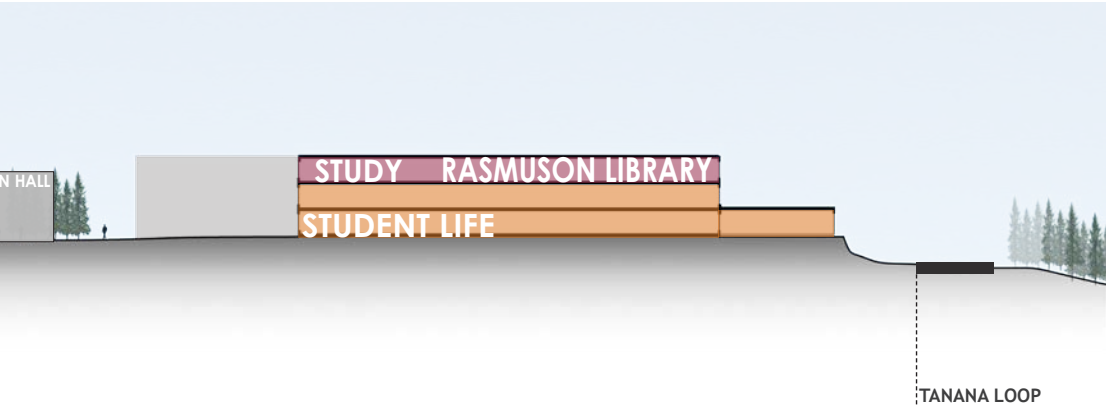


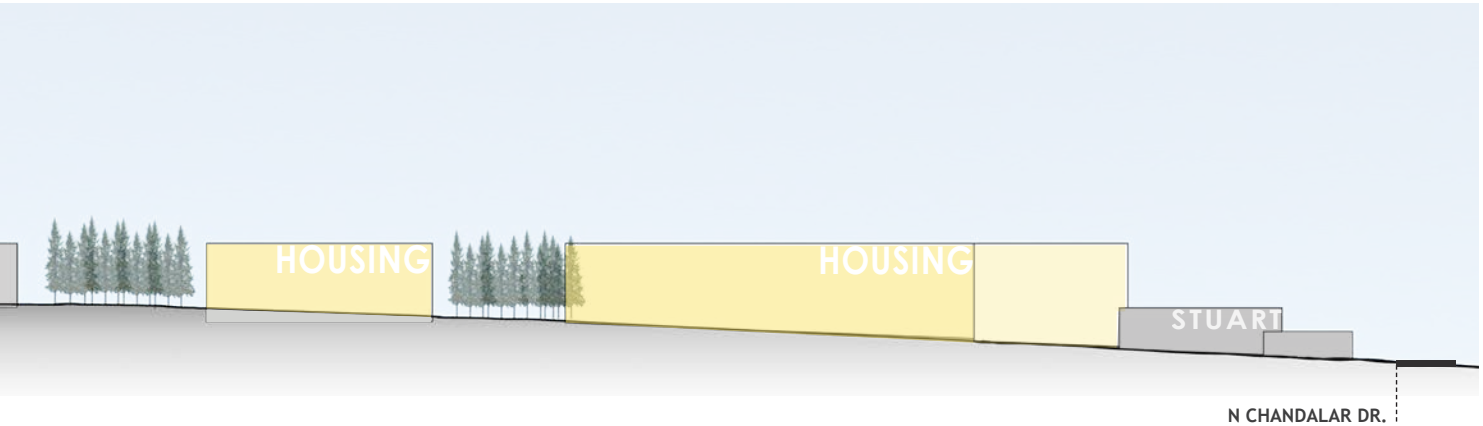
Section F



CAMPUS SECTION KEY PLAN







GRAPHIC SCALE
0 40 80 120 160

An aerial photo of the West Ridge research area of campus. The master plan re-envisions the buildings that line Koyukuk Drive and will help propel UAF to Tier 1 research status.

Photograph by JR Ancheta



4

RESEARCH SITES



INTRODUCTION

The University of Alaska Fairbanks conducts world-class research across a broad range of topics. UAF's high-latitude location provides access to a variety of environments unique to the North and helps distinguish UAF as a leading Arctic research institution. West Ridge, on the Fairbanks campus, serves as the hub of UAF's research programs. However, numerous external research sites throughout Alaska host specialized research initiatives and programs.

Chapters 1 (Existing Facilities Challenges), 2 (Future Campus), and 3 (Implementation) review the current conditions of research facilities the Fairbanks campus and propose strategic projects to help UAF expand and enhance its research programs to Tier 1 status. Within the following section, summary overviews of UAF's remote research sites are presented. Research functions and programs, existing facilities challenges, plans for future growth, and planned capital improvements are outlined for each site. Some research sites have adopted Long-Range Facilities Plans, which are referenced for additional information.

Several research sites are explored within the following section:

- Seward Marine Center
- Agricultural + Forestry Experiment Station
- Toolik Field Station
- Poker Flat Research Range
- High-Frequency Active Auroral Research Program
- Lena Point Fisheries Facility
- Kodiak Seafood + Marine Science Center

The Toolik Field Station, as seen from the opposite shore of Toolik Lake. The station offers researchers facilities ranging from laboratories to community space.

Photograph by Mike Abels



SEWARD MARINE CENTER

The Seward Marine Center (SMC) is a marine research and support facility operated by the UAF College of Fisheries and Ocean Sciences and is the home port of R/V *Sikuliaq*. SMC is approximately 130 miles south of Anchorage in Seward, the nation's farthest north deep-water port connected by road, rail and air to mainland transportation systems and services. R/V *Sikuliaq* is a 261-foot oceanographic ice-capable research vessel owned by the National Science Foundation and operated by CFOS as part of the University National Oceanographic Laboratory System (UNOLS) research fleet.

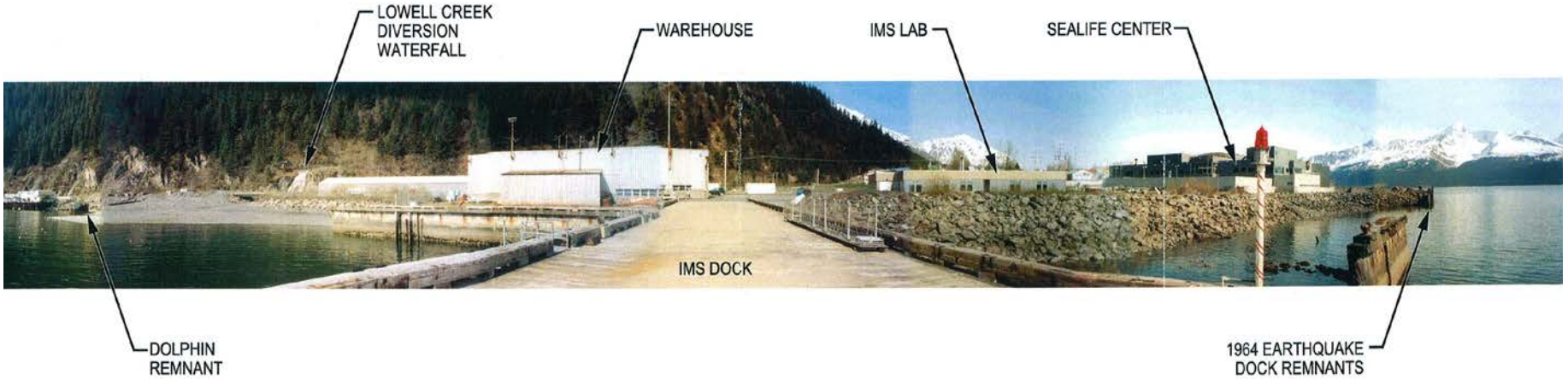
For more than 40 years, SMC has supported shore- and ship-based operations, research and instruction that take advantage of Resurrection Bay's unique gateway to Pacific arctic and subarctic ecosystems.

SMC and R/V *Sikuliaq* contribute significantly to UAF's ability to study the severe impacts of climate change in Alaska's rapidly changing high-latitude ecosystems. These facilties support Alaska's Blue Economy and research within the Arctic as well as the subarctic North Pacific. Research, instruction and training programs conducted at SMC inform critical policy decisions that impact state and national health, security, resiliency and socioeconomic systems. CFOS researchers working through SMC partner with the Alutiiq Pride Shellfish Hatchery, Alaska SeaLife Center, Alaska Vocational Technical Center, Peninsula College, Alaska Native Tribal councils and local schools.

UAF academic and research programs depend on SMC shore-side facilities to house, stage, mobilize and demobilize their expeditions. There is a 4-plex apartment unit for visiting scientists and students.

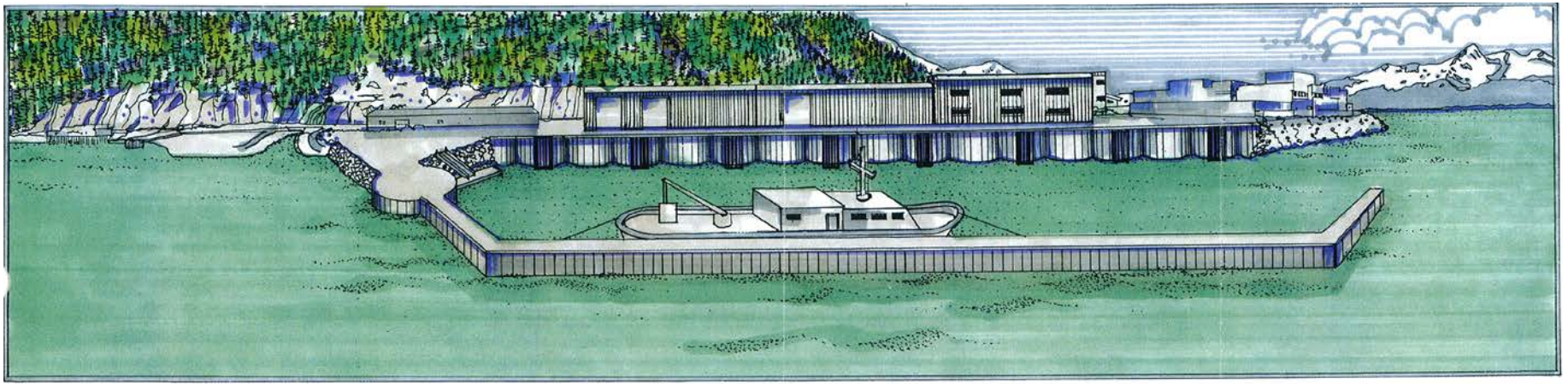
Marine engineers have determined SMC's infrastructure is near the end of its life expectancy and will not provide a return on investment with renovation, repurposing or expansion efforts. To support future Arctic Ocean observing, prediction and scientific breakthroughs, and to renew and capitalize on existing infrastructure and adjacencies, modern forward-looking shore-side facilities are needed. CFOS proposes the construction of a new warehouse, machine shop, office support space and laboratory, instructional and meeting spaces to directly support research, instruction and operations, as well as a new pier, capable of year-round servicing and berthing of R/V *Sikuliaq*.

See Appendix E for more detail on proposed improvements to the Seward Marine Center.



An annotated image of the existing dock and shoreline at the Seward Marine Center

Image from the 2003 SMC Conceptual Plan



A rendered image of potential improvements at the Seward Marine Center.

Image from the 2003 SMC Conceptual Plan

AGRICULTURAL + FORESTRY EXPERIMENT STATION

Researchers associated with the Agricultural and Forestry Experiment Station (AFES) focus on creating knowledge and solving problems in agriculture and forest sciences. The station includes the Matanuska Experiment Farm and Extension Center and the Fairbanks Experiment Farm.

Matanuska Experiment Farm and Extension Center (MEFEC)

Located in Palmer, the Matanuska Experiment Farm and Extension Center (MEFEC) is a working research farm and also home to the Mat-Su/Copper River Cooperative Extension Service. The MEFEC is in the process of shifting its primary focus to the outreach and teaching portion of its mission while at the same time continuing its stewardship of its land assets to accommodate future agricultural and climate change research needs.

This shift in focus will require the MEFEC to reduce its deferred maintenance backlog, repurpose and renovate selected buildings to support an increased outreach program and potentially perform major upgrades of the MEFEC's utilities infrastructure. Well considered, limited strategic land sales and natural resource extraction at the MEFEC property is proposed to occur in order to fund these upgrades. Generated revenue from these endeavors would be reinvested back into the MEFEC and possibly other UAF Agricultural and Forestry Experiment Stations (AFES).

The MEFEC model of co-locating extension services with AFES sites, something that is advantageous to the University, may be applied in the future to other AFES campuses.

See https://www.uaf.edu/fs/uaf2019masterplan/ for the complete MEFEC Long-Range Plan.

Fairbanks Experiment Farm

The Fairbanks Experiment Farm (FEF) is part of the Agricultural & Forestry Experiment Station. The farm is located on West Tanana Drive on the UAF campus and includes 260 acres of cropland and 50 acres of forest land for research and demonstration projects. The Georgeson Botanical Garden is also located on the farm.

Facilities at the farm include a barn, a grain handling facility, a small stationary sawmill used to cut rough lumber for farm structures, feed mill, maintenance shop, combination greenhouse and agronomy lab, visitors' center, two residences and several storage facilities. UAF is reviewing FEF facilities for operational efficiencies and potential footprint reductions.

The FEF long-range plan is in development and expected to be complete in spring 2020.

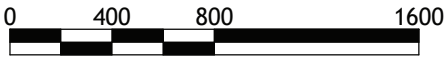


Image of the Matanuska Experiment Farm and Extension Center

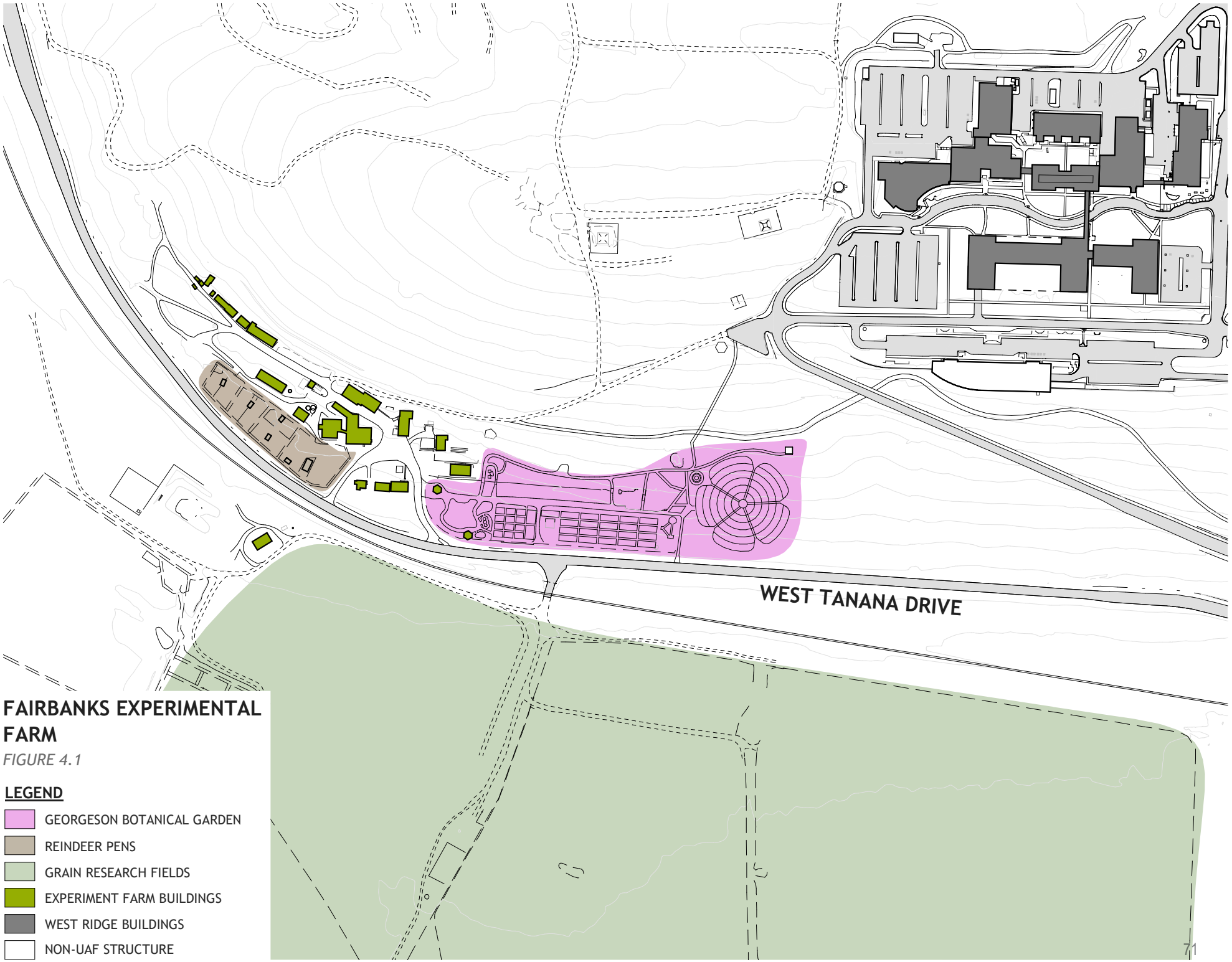
Photograph by Lounsbury + Associates

FAIRBANKS EXPERIMENTAL FARM

FIGURE 4.1



THE UNIVERSITY OF ALASKA FAIRBANKS



FAIRBANKS EXPERIMENTAL FARM

FIGURE 4.1

LEGEND

- GEORGESON BOTANICAL GARDEN
- REINDEER PENS
- GRAIN RESEARCH FIELDS
- EXPERIMENT FARM BUILDINGS
- WEST RIDGE BUILDINGS
- NON-UAF STRUCTURE

TOOLIK FIELD STATION

As interest in global warming and climate change intensifies, credible, long-term scientific observations and research conducted at Toolik Field Station (TFS) will provide unique insights and answer transformative science questions regarding the rapidly changing climate of the arctic. These changes will have profound consequences for life and land use in the region and TFS offers unique access for integrated environmental monitoring and research to understand how arctic terrestrial and aquatic ecosystems will respond to these changes and how these changes will impact interrelated atmospheric and hydrological systems around the planet.

TFS will be maintained, augmented, and upgraded as a research support and infrastructure hub based on both available funding and the requirements of research awards made through the National Science Foundation's (NSF) competitive process as well as research funded by other United States and international organizations, as appropriate.

The 2018 Toolik Long-Range Facilities Plan (LRFP) provides a framework to transition from the current state to an upgraded station that meets the vision of the Institute of Arctic Biology, NSF, and the needs of the user community while maintaining the unique characteristics of the Alaska region for research. The plan envisions new modular dormitories, a new laboratory, and a new washeteria and EMT facility, as well as an expansion of the waste heat distribution system. A new classroom and lecture hall is also under consideration.

The LRFP was developed using planning efforts that have been developed over a period of several years initiated by onsite-specific experience and data, projected science requirements, user experiences in various regions, and solutions from other polar programs. It is intended as a "roadmap" by providing recommendations for improvements and future developments prioritized into a four-year plan.

See https://www.uaf.edu/fs/uaf2019masterplan/ for the complete Toolik Long-Range Facilities Plan.





Images of the Toolik Field Station
Photographs by Mike Abels

POKER FLAT RESEARCH RANGE



An aerial image of the Poker Flat Research Range northeast of Fairbanks, AK

Photograph by Cheryl Berrong + Robert Valdez

Located approximately 30 miles northeast of Fairbanks, the Poker Flat Research Range recently celebrated the 50th anniversary of its first rocket launch and continues to provide research support both to UAF and the National Aeronautics and Space Administration (NASA). The range consists of 27 buildings, 7 miles of road, and downrange observatories in Fort Yukon, Alaska, and in Kaktovik, Alaska. The range underwent a major facility upgrade that spanned from 1992 through 2004. The facilities constructed as part of that upgrade are still in good to excellent condition, and continue to be well-maintained.

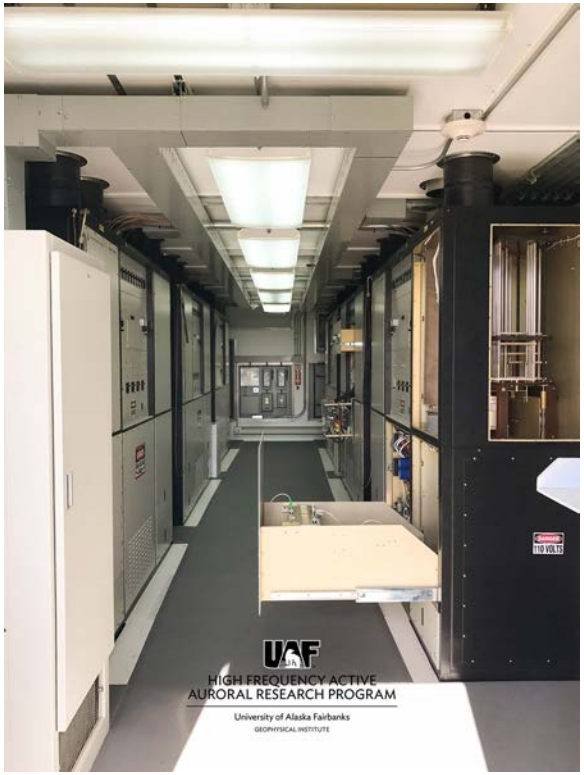
Future anticipated range-wide projects include demolition of multiple buildings that have reached the end of their lifespan, construction of a new multipurpose building, a new warehouse facility and a new launch facility. Installation of alternative energy producing equipment, such as wind turbines or solar panels, is being considered to offset electrical costs. Older range buildings that still serve a need will be renovated as needed.

HIGH-FREQUENCY ACTIVE AURORAL RESEARCH PROGRAM

Located in Gakona, the High-frequency Active Auroral Research Program (HAARP) is a scientific endeavor aimed at studying the properties and behavior of the ionosphere. Operation of the research facility was transferred from the United States Air Force to the University of Alaska Fairbanks in summer 2015, allowing HAARP to continue with exploration of ionospheric phenomenology via a land-use cooperative research and development agreement. The land that HAARP sits on still belongs to the USAF and UAF is currently working with the Army Corps of Engineers to complete the conveyance action.

Additions and renovations to any facilities at HAARP are unknown at this time but will be driven by needs that may arise from future research campaigns.





Images of the HAARP Research Facility in south-central Alaska

Photographs by Jessica Matthews

LENA POINT FISHERIES FACILITY







The Lena Point Fisheries Facility in Juneau houses CFOS fisheries faculty, staff and students. The facility contains research laboratories ranging from computer labs to wet labs with running seawater and tanks, and is co-located with the National Oceanic and Atmospheric Administration Ted Stevens Marine Research Institute. The facility promotes collaboration on fisheries and ocean science research, instruction, and outreach. The facility has been operating for 10 years and continues to provide excellent support to students, faculty and staff. Through a proactive preventative maintenance plan, the facility has maintained its "new building" appearance and functionality. The building spaces, though well used, do not feel overcrowded. Building modifications currently contemplated are limited to upgrades to the phone system and routine building equipment replacements and modifications to keep the building current with today's student experience. If future research needs require additional space, there is space exterior to the facility. Alternatively, because the facility is collocated near the Ted Stevens Marine Science Institute (TSMRI), cooperative-partnering possibilities may exist.

Images of the Lena Point Fisheries Facility
Top photograph by JR Ancheta;
Bottom two photographs by Todd Paris

KODIAK SEAFOOD + MARINE SCIENCE CENTER

The Kodiak Seafood and Marine Science Center (KSMSC) supports seafood processing training workshops and applied research to benefit Alaska's commercial fisheries and seafood processing industry. It includes a pilot seafood processing plant, supports research on ocean ecosystems, and is also host to undergraduate and graduate level CFOS classes. The Center is a 30 year-old facility and other than some deferred maintenance needs, such as replacement of interior finishes and a renovation of the thermal envelop system, is in good condition. Renovations to the building mechanical systems, while not necessary at this time, may be performed primarily for energy conservation benefits. Space currently exists in the facility to accommodate future research needs. CFOS is actively searching for new faculty based at Kodiak to advance fisheries and mariculture research, education and outreach. To optimize these new investments, and considering the age of the facility, it is anticipated that facilities improvements would be warranted at some point in the future as part of the Campus Master Plan.







Images of the Kodiak Seafood and Marine Science Center

Photographs (from top to bottom) by Laurinda Bodi, Christopher Sannito, and Laurinda Bodi

Rain falls over the Akosofu and Elvey Buildings on West Ridge in June 2018.

Photograph by JR Ancheta



Students and a faculty member prepare monitoring devices at the Fairbanks Experimental Farm.

Photograph by JR Ancheta



5
APPENDIX



APPENDIX A:
COMPLIANCE WITH BOARD OF REGENTS POLICY

Introduction

The University of Alaska Fairbanks Campus Master Plan addresses all content points outlined by the Board of Regents. According to Chapter 05.12—Capital Planning and Facilities Management, the purpose of a campus master plan is to provide an integrated framework for investment decisions that will ensure adequate facilities to support the campus community from academics and research to student life and beyond. The points are addressed in the planning as follows:

Projected Enrollment

Chapter 1—Existing Facilities Challenges: includes discussion of how current space issues impact enrollment and what facilities should be targeted for improvement.

- Existing space needs were analyzed to review how facilities are being used and to determine the condition of those facilities. The university's programs and initiatives impact the ability to attract and retain students, which in turn impacts the facilities the university needs.
  - Under-performing classrooms, class laboratories, and research space negatively impact UAF's ability to attract new students and researchers and creates a poor experience for students and researchers currently at UAF.
  - Programs and initiatives on campus are limited by the current quality of space and the lack of modern facilities and resources.

Chapter 2—Future Campus: presents enrollment projections according to UA system targets and considers UAF strategic goals for growth.

- Addressing UAF's needs in instructional, research, and student life space will be essential as the university aims to attract more students and retain the students already enrolled.
- Refreshing student housing on campus is essential. As student expectations rise, UAF's housing facilities continue to decline and age. Suite-style residence halls, apartments, and housing for visiting faculty and other non-traditional students are all necessary for UAF to be competitive with peer institutions.
- Redeveloping and expanding strategic areas of campus helps position UAF for growth and gives the university flexibility to meet changing student and research needs and desires. New programs and facilities will help position UAF to meet its enrollment goals and excel as a leading research university.

Current Inventory of Facilities

Chapter 1—Existing Facilities Challenges: includes discussion of space surpluses and deficits, facilities warranting continued investment, and facilities that should be considered for demolition.

- Existing space needs were analyzed and outlined in summary graphics illustrating space deficits and surpluses. The majority of space variance occurred in four categories: classrooms and class laboratories, research, offices, and student housing:
  - Classrooms and Class Laboratories: The space needs analysis found a large surplus on campus. The surplus was calculated using national metrics and considered modern teaching approaches. Under-enrollment and poorly performing space contribute the actual surplus but perceived deficit.

- Research: The space needs analysis found a deficit of research space. The calculated deficit, analyzed using ASF/principal investigator and ASF/dollar of research income, is consistent with feedback gathered from researchers. The limited and aging facilities prevent UAF from growing and improving its research capabilities.
- Offices: UAF's unique ratio of research to FTE contributes to an abnormally high office guideline of ASF/FTE. Current under-enrollment means more office space is available than needed to support the current student population.
- Student Housing: The under-enrollment on campus has led to an under-utilization of student housing on campus. A significant portion of student housing facilities on campus are currently dated and inefficient. Recruiting and retaining students may be hindered by the current housing facilities.

- A detailed study of space quality was also conducted. UAF's deferred maintenance backlog and quantity of poorly performing space in multiple categories impacts the university's ability to attract and retain students and researchers. The quality of space was critical in assessing deficits and surpluses on the campus.

- An analysis of building conditions based upon deferred maintenance, fit-to-program, and space type was conducted to help identify facilities in good condition, facilities needing significant investment, and facilities to consider for removal.

Appendix B: Existing Conditions

- Diagrams considering the types of open space available on campus, the use of those open spaces, and how circulation and parking are executed on campus were created to help UAF and the master planning team analyze the highest and best use of land and resources.

Appendix F: Space Analysis Diagrams

- Additional diagrams representing the full depth of space analysis are presented. These diagrams show a comprehensive summary of the current space needs on campus, space needs if enrollment goals are met, and space needs considering space quality.

Projected Facility Needs

Chapter 1—Existing Facilities Challenges: identifies space needs, deficits, and surpluses, on campus.

- Through space analysis and examination of the condition of current facilities on campus, strategic locations for new development have been identified based upon facility demolition and reinvestment.

Chapter 2—Future Campus: outlines a comprehensive vision of the future campus.

- Based upon enrollment goals and UAF's strategic goals, a new vision for the campus is presented, including the location for new facilities, open spaces, and circulation.
  - The Building Use diagram identifies how the plan will support academics and research campus through new facilities and target renovations to existing facilities. Student Life is also highlighted for improvement, particularly student housing. Proposed facilities address surpluses and deficits identified in the space analysis.
  - The Open Space Use diagram presents a holistic analysis of the campus and presents a refined vision for the best use of open space to support academics and student life and to emphasize pedestrian travel on campus.
  - The Circulation and Parking diagram demonstrates the master plan's vision for improving circulation throughout campus for vehicles and pedestrians. Wayfinding and branding is particularly important for potential students and visitors. Accommodating campus' parking needs through the introduction of structured parking is shown.

Chapter 3—Implementation: introduces a sequence of projects to meet campus needs as enrollment grows and additional facilities are needed to meet programmatic goals.

- A list of immediate projects needed to address significant space or facility challenges is presented. These projects strategically position the university for future projects, and aim to quickly help with recruitment and retention.
- Short-term, mid-term, and long-term projects show the facilities and programs that will be needed as campus grows.

Chapter 4—Research Sites: outlines the research sites located throughout Alaska that further UAF's mission, but also require investment and facility upgrades to continue supporting the research efforts being conducted at them.

- Each research site is addressed specifically with a vision and potential upgrades and new facilities needed for the site to continue growing and expanding research capabilities.
- Research sites with their own long-range plans or with their own extensive master planning efforts reference those plans for further information.

Land Acquisition and Disposal

Chapter 2—Future Campus: presents facilities, land use, and circulation and parking modifications and enhancements.

- The master plan identifies several off-campus facilities that could be sold. Those functions would be returned to UAF land holdings.

Chapter 3—Implementation: presents the sequencing and prioritization of projects, including the relocation facilities located within the Fairbanks community.

- The master plan identifies off-campus facilities identified to be returned to the main campus. The implementation plan identifies the relocation should happen in the near term.

Chapter 4—Research Sites: present the investments and facility upgrades necessary to support research efforts. The detailed long-range plans and master plans will identify strategic land acquisitions or disposals.

Campus and its Surroundings

Chapter 1—Existing Facilities Challenges: identifies the UAF campus' components and their relationship to the Fairbanks community.

- The Fairbanks Presence diagrams identifies the main UAF campus footprint. Off-campus facilities and programs are also identified and reveal UAF's strong presence within the Fairbanks community.
- The Fairbanks Campus Areas diagram identifies distinct programmatic and land-use areas within the campus. The campus encompasses many interesting topographic and land elements that are strategically used for programs.

Chapter 2—Future Campus: identifies improvements to land-use and campus circulation that will benefit students and the broader Fairbanks community.

- The Open Space Use diagram shows the creation of open spaces on campus that can be used by students and community members.
- The Circulation and Parking diagram highlights circulation improvements on campus that will enhance the student, faculty, and visitor experience on campus.
  - Additional roads, like the completion of North Tanana Loop will improve vehicular circulation.
  - Enhancements to the trail system will improve safety and accessibility.

Chapter 4—Research Sites: occupy sites across Alaska ranging from largely unoccupied lands to urban areas.

- The research sites interact with their local communities or act as their own isolated communities. Each location has its own unique challenges due to climate and topography.

Investment Priorities

Chapter 3—Implementation: outlines the priorities for capital projects across campus.

- The Phasing diagrams illustrate the general priorities for capital projects. Immediate projects address significant current challenges and positions the campus for future growth. The subsequent phases illustrate future facility development priorities as they become necessary to due growth and development.

Chapter 4—Research Sites: outline capital projects necessary for the continued growth and development of UAF research. Detailed information is included in referenced long-range plans and master plans.

Guidelines for Construction

Chapter 2—Future Campus: outlines the development proposed in the master plan for buildings and open space.

- The Building Use diagram indicates the general location, footprint, and purpose of new developments.
  - Research space is expanded on West Ridge and along Yukon Drive. New facilities will improve research and connect Core Campus with West Ridge.
  - Student housing is focused around Core Campus and creates a node of student life easily accessible to academic, research, and recreation spaces.
  - Additions to specific buildings in Core Campus add density and needed program space in the campus' academic hub.
- The Open Space diagram illustrates the location and type of open space on campus.
  - Campus streetscapes are proposed at the primary vehicular access routes through campus.
  - Gathering areas are focused around key academic and student housing nodes. These landscapes will support student life and enhance the campus culture with elements like public art.
  - Sports and fields are located near the existing sports and recreation complex. Additional recreation areas are indicated at Cutler Apartments and the North Chandalar student housing area.
  - The interpretive landscape—including the use of native plantings and interpretive elements such as sculptural design of pavement or furnishings—expresses the natural and cultural history of Alaska and connects areas across campus.
  - Viewsheds are areas that overlook special views unique to the campus that need to be preserved and celebrated.

Chapter 3—Implementation: identifies the key capital projects proposed in the master plan.

- The Phasing diagrams identify approximate gross square footage needs for capital improvement projects and proposed facilities.
- The Phasing diagrams identify key open space, wayfinding, and circulation improvements on campus.
- The site sections indicate the general scale of developments and their relationships to the existing campus.

Chapter 4—Research Sites: offer unique opportunities for design and open space throughout Alaska.

- The long-range plans and master plans identified for research sites indicate particular design and construction needs for facilities and open space.

Appendix C—Design Guidelines: indicate broad guidelines to assure a cohesive and consistent design language is followed throughout campus during project development.

- Guidelines for architectural design, scale, and style are included in Appendix C.
- Guidelines for sustainability and environmental considerations are included in Appendix C.
- Guidelines for landscaping and developed outdoor spaces are included in Appendix C.
- Guidelines for both signage on buildings and freestanding signage are included in Appendix C.

Content from Regents' Policy
Part 5 - Finance and Business Management
Chapter 05.12 - Capital Planning and Facilities Management
P.05.12.050. Campus Master Plans
https://www.alaska.edu/bor/policy/05-12.pdf

APPENDIX B: EXISTING CONDITIONS

SOIL CONDITIONS

The Soil Conditions diagram outlines three types of soils near the campus core: unfrozen, discontinuous permafrost and permafrost. In general, soil conditions pose significant constraints to campus development. While most of the campus core falls within the zone of generally unfrozen soils, discontinuous permafrost encircles most of the campus core. Within this area, intermittent areas of permafrost may be found amongst unfrozen soils. Permafrost conditions were encountered during construction of the Biological Research and Diagnostics Facility and Virology Lab, for example. Special measures were taken to address the frozen soils for building foundations and siting. Additionally, sinkholes routinely develop in the parking lots north of West Ridge buildings.

Frozen soils are located on the south and southwest of the campus core, as well as beyond the zone of discontinuous permafrost. Building construction within areas of discontinuous permafrost must be carefully considered and is not generally recommended. Building construction within the frozen areas should be avoided.



Students traverse arctic conditions during the winter months. Changing climate conditions influence the extent of permafrost.

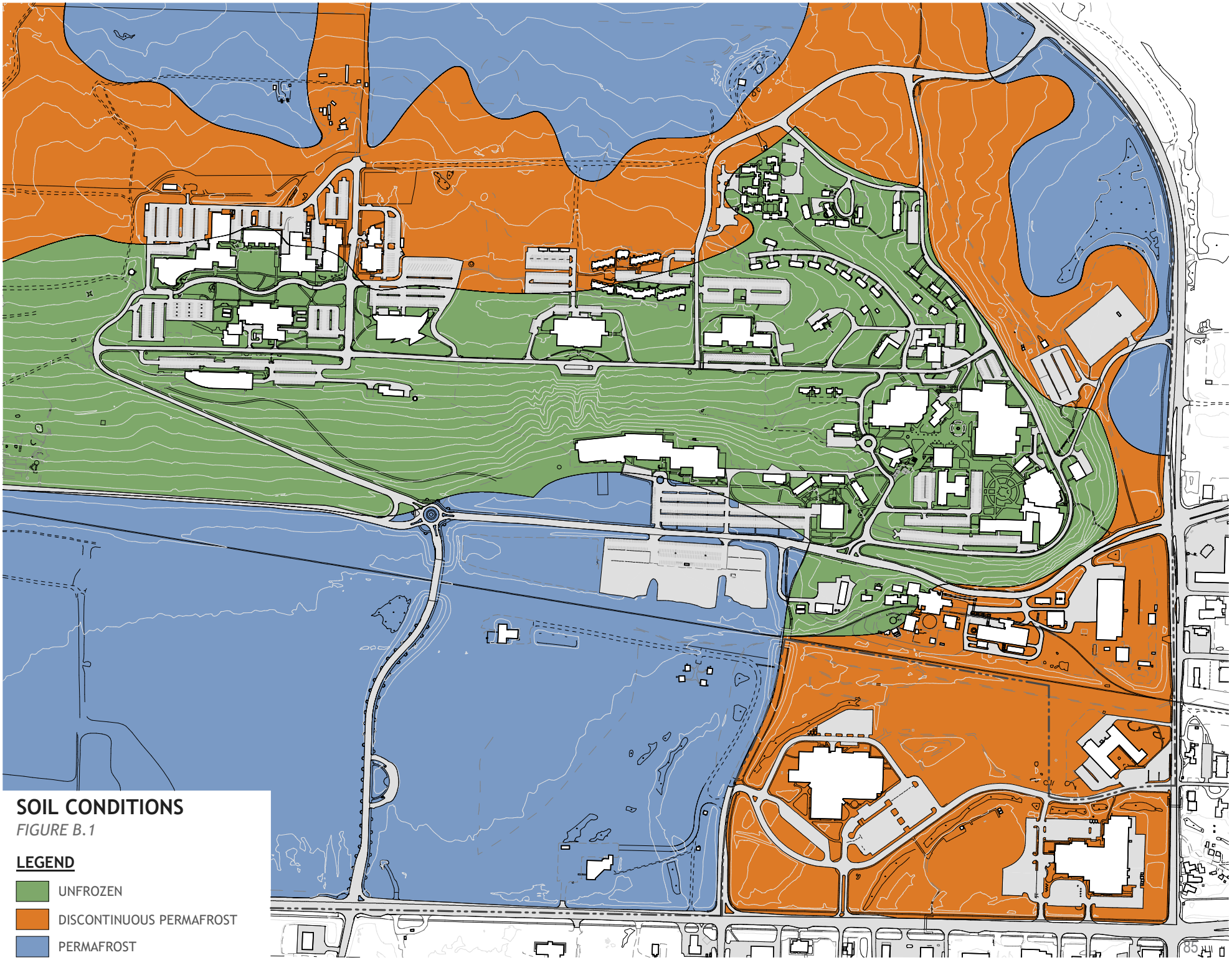
Photograph by JR Ancheta

SOIL CONDITIONS

FIGURE B.1

0 350 700 1400

THE UNIVERSITY OF ALASKA FAIRBANKS



SOIL CONDITIONS

FIGURE B.1

LEGEND

- UNFROZEN
- DISCONTINUOUS PERMAFROST
- PERMAFROST

OPEN SPACE

Two types of open space diagrams were developed to illustrate the character and use of campus open spaces: Open Space Use diagram and Open Space Type diagram.

Open Space Use

The open space use diagram illustrates the manner in which open spaces are used on campus.

Forest Research and Recreation

Located around the campus perimeter and core, this open space use is unique to UAF, providing examples of central Alaska's subarctic ecosystems within close proximity of research, academic, and residential facilities. The forest research and recreation area to the north of the campus core includes an extensive system of trails, dating from the 1930s, used by the campus and surrounding Fairbanks communities.

Gathering Space and Garden

Outdoor gathering spaces are often defined by surrounding buildings, hardscapes, maintained landscape plantings, and outdoor art installations. Many gathering spaces are found in the interior of the campus core and consist of formal and informal areas that support campus community gatherings. Outdoor gathering spaces include Constitution and Cornerstone Plazas on Lower Campus and West Ridge Plaza. Gardens consist of special areas on campus designated by special plantings and an emphasis on interaction with the natural environment. They provide opportunities for learning and recreation. Examples of gardens include the Botanical Gardens and the Fairbanks Community Garden.

Sports and Fields

Sports and fields are primarily located adjacent to the SRC/Patty Center at the core of campus. These large open spaces support recreational and competitive sport activities including soccer, skiing, climbing, and hockey.

Parkland

Troth Yeddha' is the only area formally recognized as a park. Consisting of an area between the museum and the Reichardt Building, Troth Yeddha' Park is intended as a gathering / interpretive space that celebrates Alaska Native culture and traditions.

Experimental Farm

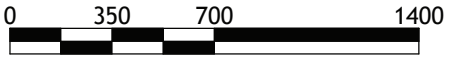
The experimental farm area is located south and west of the West Ridge. These farmlands support the academic and research efforts of UAF faculty and students. This land is home to the Agricultural and Forestry Experimental Station.

Gateway Landscape

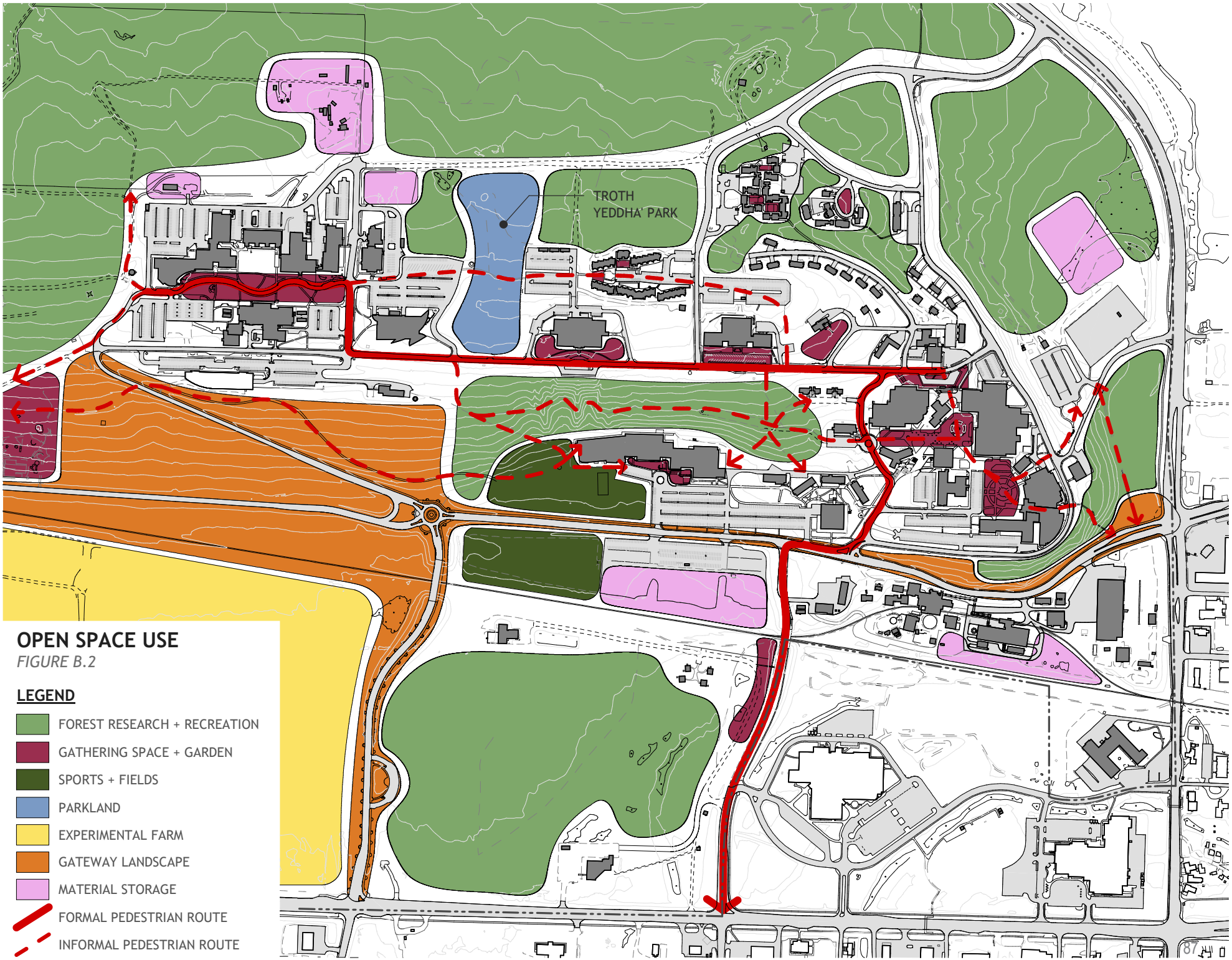
The gateway landscape, which most guests encounter when first visiting UAF, is located along the main roads to the south and east of the campus core. The landscape consists of roads and interrupted pedestrian paths, as well as the sloping hillside below the West Ridge viewshed.

OPEN SPACE USE

FIGURE B.2



THE UNIVERSITY OF ALASKA FAIRBANKS


TROTH
YEDDHA' PARK
OPEN SPACE USE
FIGURE B.2
LEGEND
FOREST RESEARCH + RECREATION
GATHERING SPACE + GARDEN
SPORTS + FIELDS
PARKLAND
EXPERIMENTAL FARM
GATEWAY LANDSCAPE
MATERIAL STORAGE
FORMAL PEDESTRIAN ROUTE
INFORMAL PEDESTRIAN ROUTE

Material Storage

Material storage areas are used by research, academic, and campus facilities personnel for outdoor storage of materials and supplies. These areas are generally not aesthetically pleasing because of their utilitarian nature.

Pedestrian Circulation

Formal pedestrian routes extend east-west from West Ridge Plaza, past the Museum of the North, and continuing along Yukon Drive to the campus core. The primary north-south pedestrian route begins at the Wood Center and travels south along Chandalar Drive, past the railroad tracks, to Geist Road. Many formal pedestrian routes are adjacent to primary vehicular thoroughfares and lack pedestrian-friendly landscapes, however the routes also pass through a variety of campus open spaces.

Informal pedestrian routes developed over time. These paths navigate the extreme elevation change between West Ridge and the Lower Campus. The existing campus network of pedestrian routes is ill-defined. Winter conditions, steep topography, poor lighting, and icy sidewalks create difficult walking conditions.

Open Space Type

The Open Space Type diagram designates five distinct types of open space on campus. The campus character is largely defined by the extreme topography, stunning views to the south, and expansive boreal forest.

Boreal Forest

The boreal forest open space landscape is located primarily along the north edge of the campus core. A smaller portion of this landscape is also located between the Alaska Railroad tracks and Geist Road, south of the campus core. The boreal forest, which gives the campus its unique Alaskan identity, is characterized by permafrost-dominated soils and expansive stands of spruce, birch, balsam poplar and aspen.

Managed Forest

Maintained forest landscape, characterized by coniferous and deciduous trees and managed undergrowth, is located to the interior of the campus core and includes habitat study areas and pedestrian paths through campus. Two large areas of maintained forest include the area north of the Cutler Apartments and between Yukon Drive and the recreation complex.

Maintained Lawn

Maintained lawn refers to landscape areas characterized by lawn and landscape plantings that require maintenance by Facilities Services staff. These groomed landscapes include:

- Large sections of maintained lawn located along Yukon Drive.
- The central open space along Koyukuk on West Ridge.
- Sports and recreation fields southwest of the recreation and athletics complex.
- Open space adjacent to major campus roads at the south and east edges of the campus core.

Rough Lawn

Rough lawn refers to the open space located on the slope south of West Ridge. This landscape consists of unmaintained grasses and other low-profile vegetation. Informal pedestrian trails and paths, used throughout the year, pass through this lawn.

Cultivated Farm Field

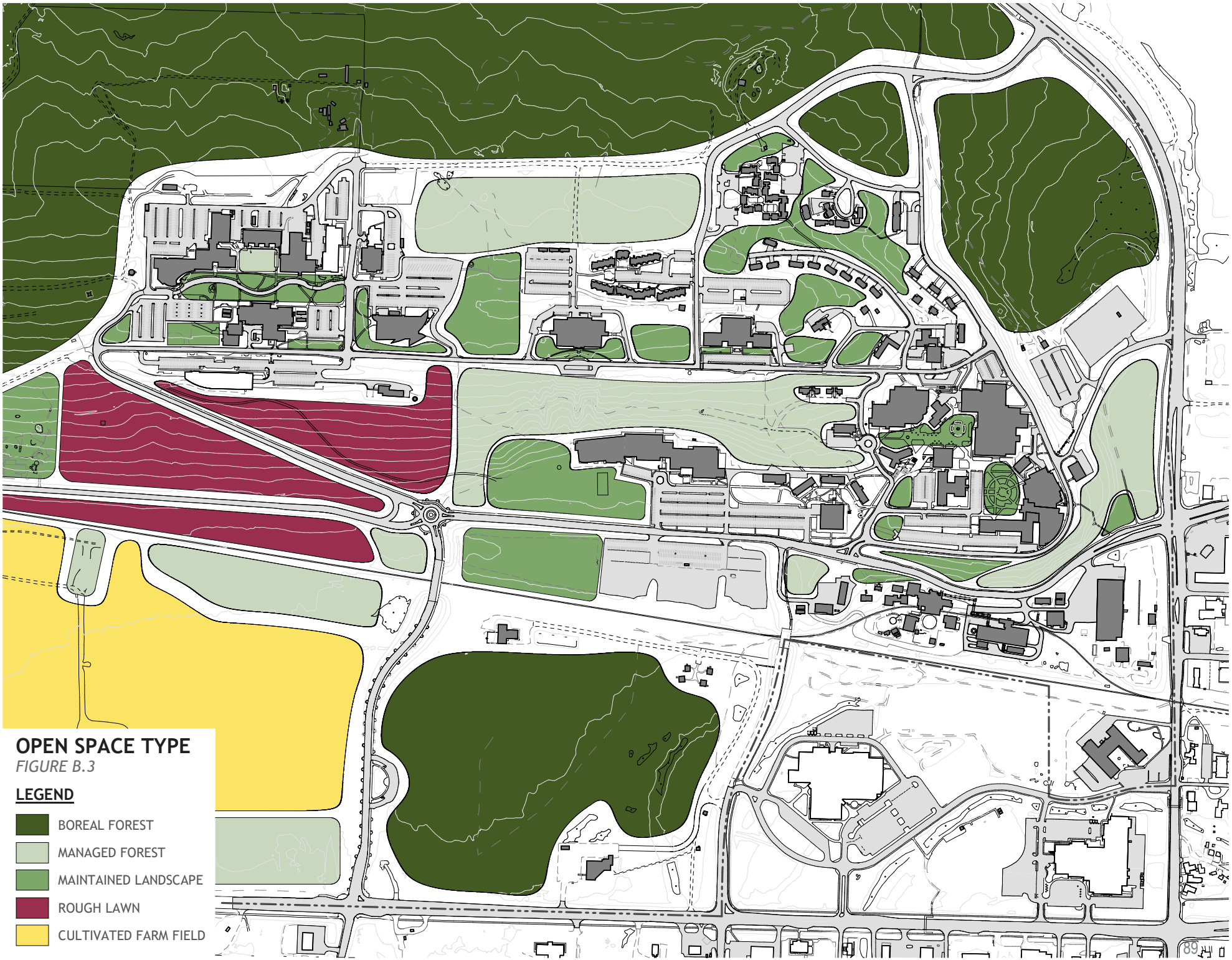
The cultivated farm field open space consists of the Agricultural and Forestry Experimental Station.

OPEN SPACE TYPE

FIGURE B.3



THE UNIVERSITY OF ALASKA FAIRBANKS


OPEN SPACE TYPE
FIGURE B.3
LEGEND
BOREAL FOREST
MANAGED FOREST
MAINTAINED LANDSCAPE
ROUGH LAWN
CULTIVATED FARM FIELD

CIRCULATION + PARKING

The Circulation and Parking diagram illustrates primary vehicular circulation routes and parking.

Roadways

Unrestricted access roads are located throughout the campus. On Lower Campus, the access roads lead to housing, academic and administrative buildings, and parking areas. On West Ridge, Koyukuk Drive winds through West Ridge Plaza. Yukon Drive forms the primary unrestricted access road that connects West Ridge and Core Campus. Tanana Loop extends around the campus perimeter from the west end of Yukon Drive to Farmers Loop on the east. Tanana Loop provides access to student housing and parking areas north of Yukon Drive.

Parking

Surface parking lots are scattered throughout core campus, West Ridge, and the campus perimeter. Campus currently has 4,729 parking spaces available. The many small lots in Core Campus inefficiently use campus land, are difficult to maintain, especially for snow removal, and detract from the safety and appearance of the pedestrian environment. Most of the Core Campus lots are within a 5 to 10 minute walking distance of academic buildings. However, difficult terrain and slopes, like near the lot off Taku Drive, increase walking time and add to the perception of distance.

Shuttle and Bus

The university operates an on-campus shuttle bus system which serves as a critical component of the campus circulation system given the dispersed layout of the campus and steep topography. Currently, four shuttle routes operate on campus. Routes run along Yukon Drive, Tanana Loop, and Alumni Drive. The shuttles help connect parking lots located at the campus perimeter with the core campus.

Primary shuttle stops are located in three locations:

- The Nenana shuttle station located in the Nenana parking lot south of the recreation and athletic complex.
- The Taku shuttle station located at the Taku parking lot east of Core Campus.
- The Transit Hub along Yukon Drive, northeast of the Wood Center.

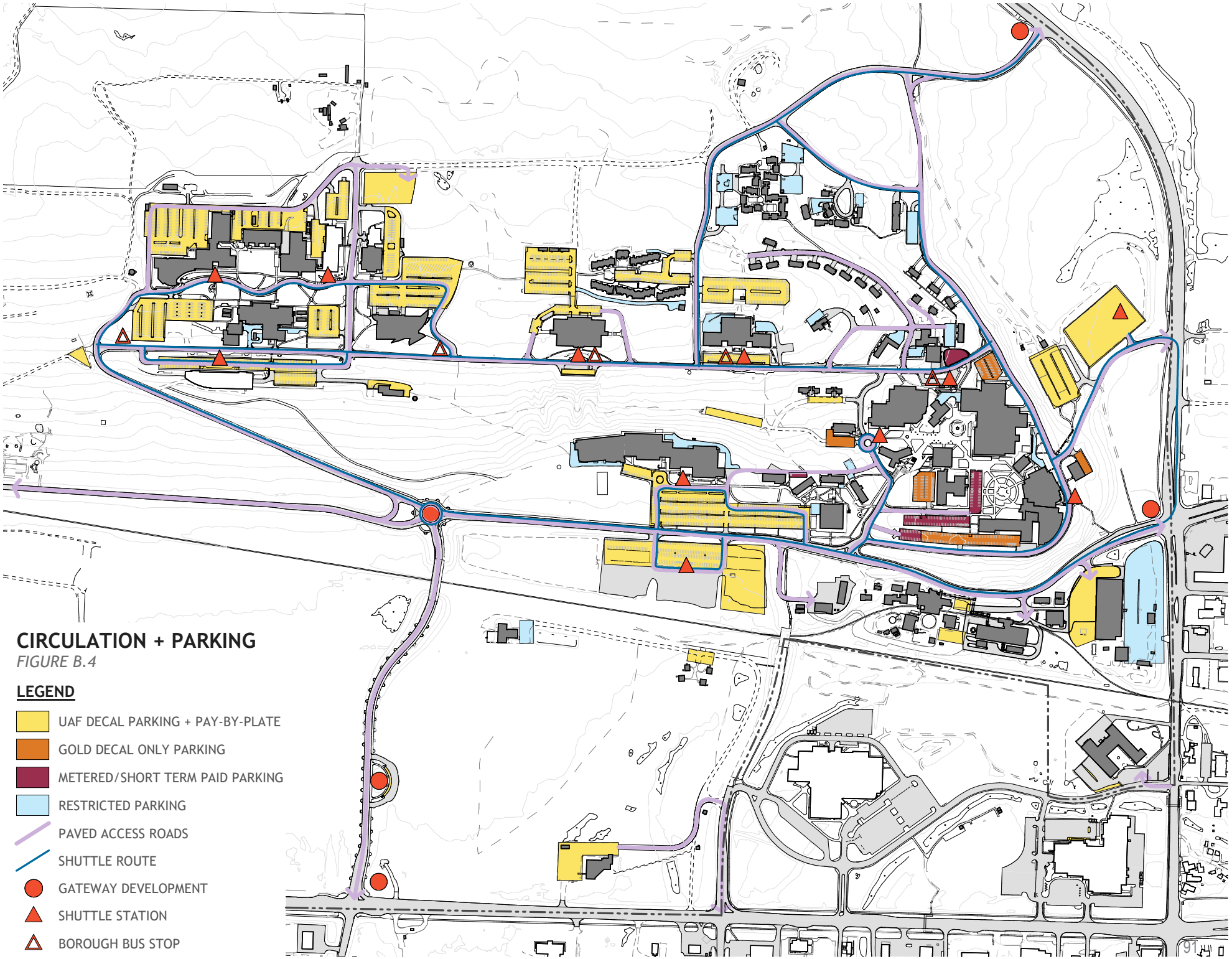
Stops for the Fairbanks North Star Borough bus system (MACS) are located at the Transit Hub and the perimeter of the campus at Geist Road and University Avenue.

CIRCULATION + PARKING

FIGURE B.4



THE UNIVERSITY OF ALASKA FAIRBANKS


CIRCULATION + PARKING
FIGURE B.4
LEGEND
UAF DECAL PARKING + PAY-BY-PLATE
GOLD DECAL ONLY PARKING
METERED/SHORT TERM PAID PARKING
RESTRICTED PARKING
PAVED ACCESS ROADS
SHUTTLE ROUTE
GATEWAY DEVELOPMENT
SHUTTLE STATION
BOROUGH BUS STOP

UTILITIES INFRASTRUCTURE

The Utility Network diagram illustrates the existing distribution of utility lines on campus. The underground utilidor system carries steam, condensate return, domestic water, chilled water (for Core Campus only), deionized water for laboratory use, compressed air, electrical distribution lines and communications cable. Campus is continuing to explore upgrades to utility systems and means to handle deferred maintenance. The recent construction of a new power generation plant south of the Core Campus is a key element in the larger infrastructure plan.

All development on campus must include utilities and infrastructure accommodations. The majority of utilities are run within the extensive underground utilidor system which is a proven, reliable method. Direct burying of utilities is challenging given the frozen soils conditions.

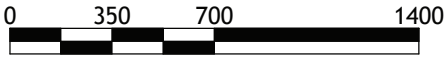
The campus continues developing a comprehensive storm drainage plan. Generally, a ditch and swale system, in combination with sewers, is used for site drainage. There are modest storm sewer systems for some building complexes and parking areas. Underground systems for site drainage must be carefully designed because storm inverts allow super cold air to freeze the lines, making them non-operational during surface thaws without substantial steam thawing of the pipes.

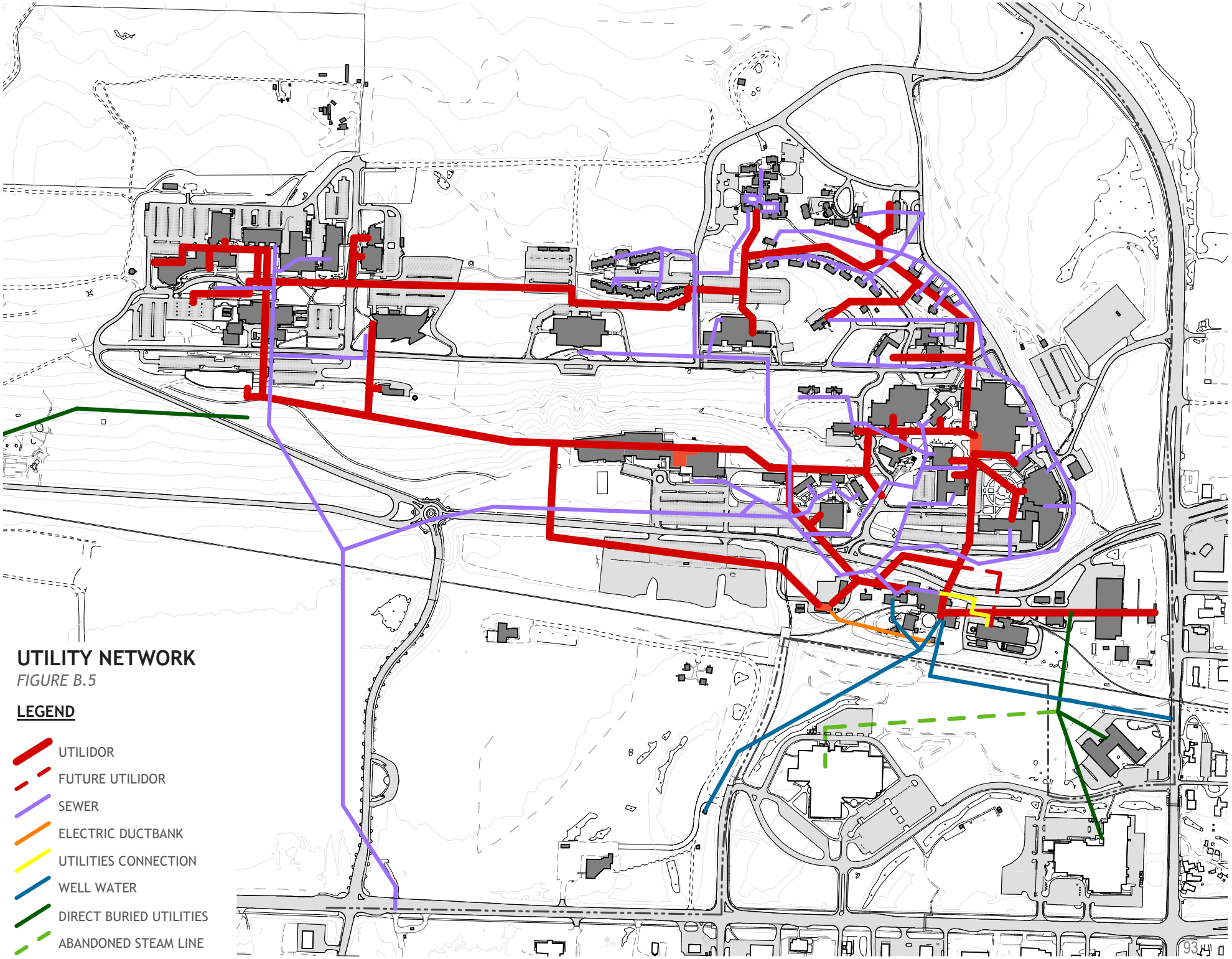
Campus storm lines empty onto hillsides or into retention ditches. The wetlands on the east side of campus are the receiving areas for storm water and melt water from Lower Campus. The roof drainage of many of the older buildings (1950s and 1960s) connect to the sanitary sewer lines and will have to be modified as they are renovated. Due to the lack of storm sewer access, a drywell system for the small winter flows is used in recent renovations. This type of system discharges large summer flows to surface swales. Natural filtration is a challenge on parking areas because of the tremendous melt water when the ground is still frozen and plants are dormant.

Drainage and contamination are also an issue in the areas used for dumping snow removed from roads and parking lots. The dirty snow leaves concentrations of debris and contaminants when it melts. Much of the gravel used to provide traction on icy roads is swept and reused in the next season. Currently, UAF uses vacant area south of the Nenana parking lot as a snow dump disposal site.

UTILITY NETWORK

FIGURE B.5

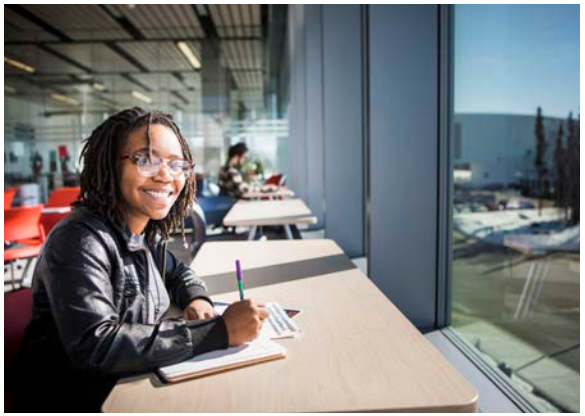



UTILITY NETWORK
FIGURE B.5
LEGEND
UTILIDOR
FUTURE UTILIDOR
SEWER
ELECTRIC DUCTBANK
UTILITIES CONNECTION
WELL WATER
DIRECT BURIED UTILITIES
ABANDONED STEAM LINE

APPENDIX C:
DESIGN GUIDELINES

Architectural Guidelines

- Develop a rational, unified design that supports the academic, research, and student life environment at UAF.
- Encourage design that is responsive to the specific site as well as the local and regional context.
- Encourage design that is responsible and practical in terms of initial and long-term costs and maintenance.
- Create neighborhoods that integrate research, teaching, and student life through mixed-use buildings.
- Ensure that new construction and renovations create compatible links between older and newer buildings, including exterior finishes, landscaping, and signage.
- Establish connectivity between buildings to enhance the campus experience and circulation while specifically unifying building functions as well as exteriors.
- Include gathering spaces in new and remodeled buildings to enhance the student life experience for residential and commuter students.
- Emphasize universal design principles to assure new construction and renovated buildings are accessible to all members of the campus community.
- Develop sustainable designs that reduce the environmental impact of the built environment.
- Maximize access to daylight and views to the exterior to provide building users with connections to the outdoors.



Buildings on campus should provide access to sunlight and views to the exterior. This study space in Murie Building is a great example.

Photograph by JR Ancheta



The new Engineering Learning and Innovation Facility adds modern, adaptable, and leading-edge research, study, and classroom space. The building fits the campus aesthetic comfortably.

Photograph by JR Ancheta.



A seating area outside of the Wood Center allows students to enjoy good weather, socialize, and interact with the landscape.

Photograph by JR Ancheta.



Open spaces on campus should encourage student gatherings, and be useful for various events throughout the academic year. Landscapes should support student learning.

Photograph by JR Ancheta

Landscape Guidelines

- Restore features of the indigenous natural environment and integrate ornamental species.
- Organize the landscape in a purposeful manner that conveys the history, location, culture, and educational mission of the university.
- Optimize seasonal and temporal beauty of the subarctic environment.
- Ensure the health, safety, and well-being of campus users.
- Utilize landscape features as a design element to mitigate inconsistencies between older and newer campus architecture.
- Create campus greenways and interconnected open spaces that constitute a series of formal, interpretive, and undeveloped landscapes.

Circulation + Parking Guidelines

- Provide access to residential and commuter students, and provide welcoming access to the broader Fairbanks community.
- Offer multi-modal access within the campus for pedestrians and bicycles, in addition to motor vehicles.
- Provide a balanced parking system for staff, faculty, students, and visitors.
- Create gateway entrances to campus with landmarks and integrated wayfinding.
- Enhance the public transit systems and campus shuttle system.

Exterior Lighting Guidelines

- Use energy efficient LED lighting systems.
- Use intelligent lighting control systems, like motion sensors, dimming controls, and daylight sensors.
- Reduce light pollution and glare through improved fixture design and installation.
- Provide ample lighting on pedestrian pathways for safety on campus.

APPENDIX D:
STUDENT ENGAGEMENT: EXECUTIVE SUMMARY

During the 2018 spring semester, DLR Group conducted a series of in-depth engagement activities with the student community on University of Alaska Fairbanks' campus. The University and planning team sought to include students' perspectives and document their voices in the master planning process. The planning team coordinated with University administration to develop targeted subject areas and relevant questions. While conducting the engagement, the team was positioned across campus—ensuring contact with a broad cross-section of the student population.

Through a mixture of casual personal interviews, small group discussions, and focus group sessions, DLR Group engaged with 115 students. The average conversation lasted over twenty minutes—resulting in meaningful, comprehensive dialog. The survey questions served as a road-map for the conversation, allowing significant flexibility to ensure DLR Group could dive deeper and gain a more complete understanding of students' responses.

Upon careful analysis and study of student responses, DLR Group synthesized significant trends that emerged from the data. The trends encompass the University's strongest characteristics and its challenges moving forward.

- Celebrate the strong campus community
- Celebrate strong academic programs + faculty
- Tell the story: Campus identity + brand
- Ensure natural light in all spaces
- Provide more gathering spaces + lounges
- Provide year-round outdoor activities + gathering spaces
- Update athletics + recreation facilities
- Improve food quality + variety; increase access
- Update student housing in a variety of styles

As the master planning process enfolded, the key trends guided the planning team efforts. Including the student community's voice throughout the planning process ensures that the final master plan reflects student aspirations, goals, and needs.

115
students interviewed:
person-on-the corner interviews, small focus groups, and student orgs

20
minutes:
average length of conversation

INSIGHT

DLR Group reached a broad cross-section of the campus community—talking with students on the Troth Yeddha' campus and the CTC campus in downtown Fairbanks. Students of different backgrounds, academic pursuits, and experiences provide a rich and detailed view of the student experience on campus.

INSIGHT

UAF is a strong, community-focused academic institution. Students frequently comment and highlight the unique community experience on campus.

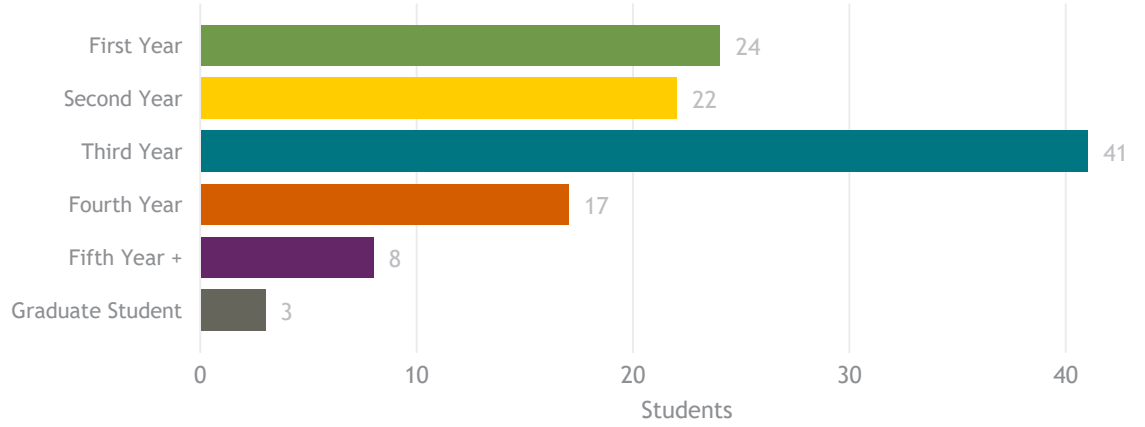
The residential component to campus-life significantly enhances the sense of community in both academic and social forums.

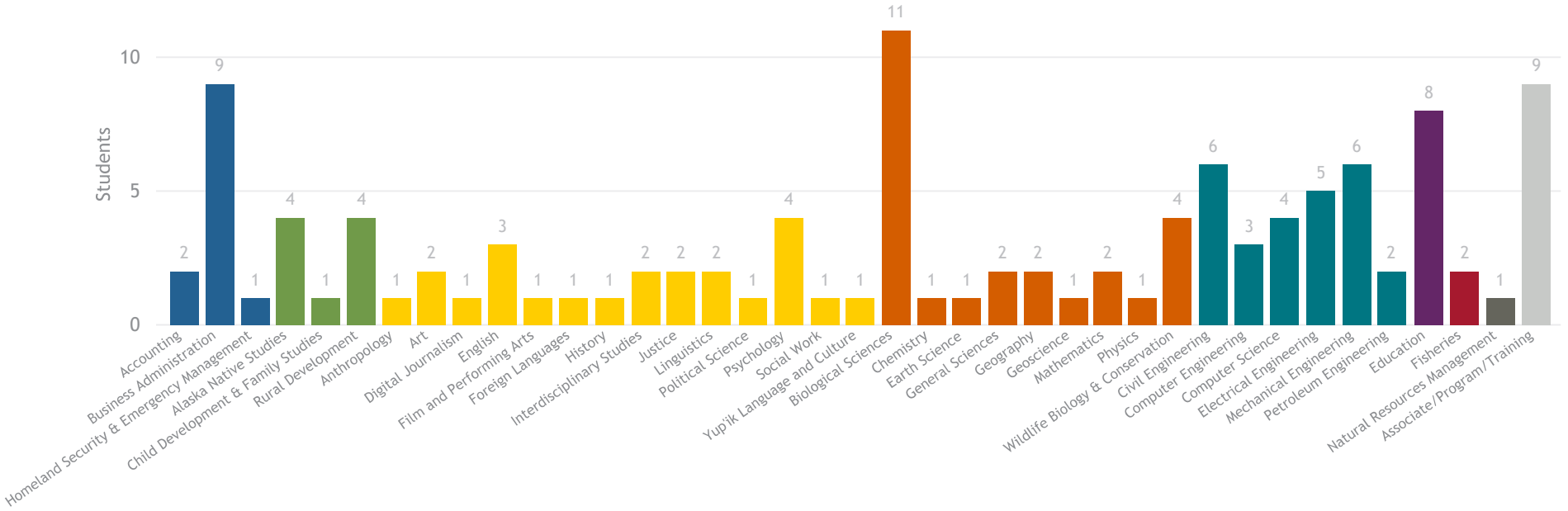
STUDENT PARTICIPANT DEMOGRAPHICS

ACADEMIC PURSUITS

- School of Management
- College of Rural + Community Development
- College of Liberal Arts
- College of Natural Science + Mathematics
- College of Engineering + Mines
- School of Education
- College of Fisheries + Ocean Sciences
- School of Natural Resources + Extension

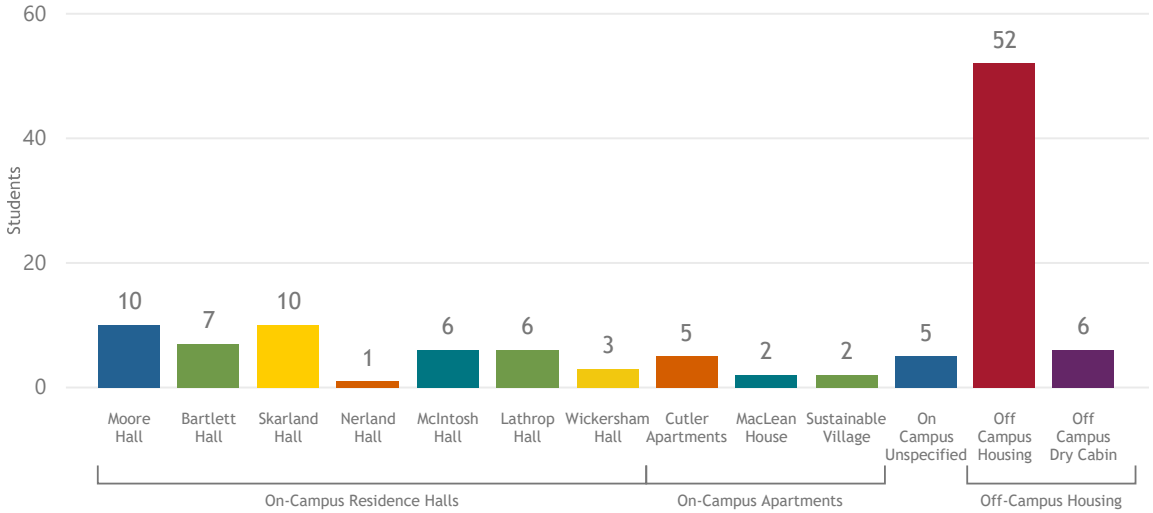
STUDENTS BY CLASS YEAR



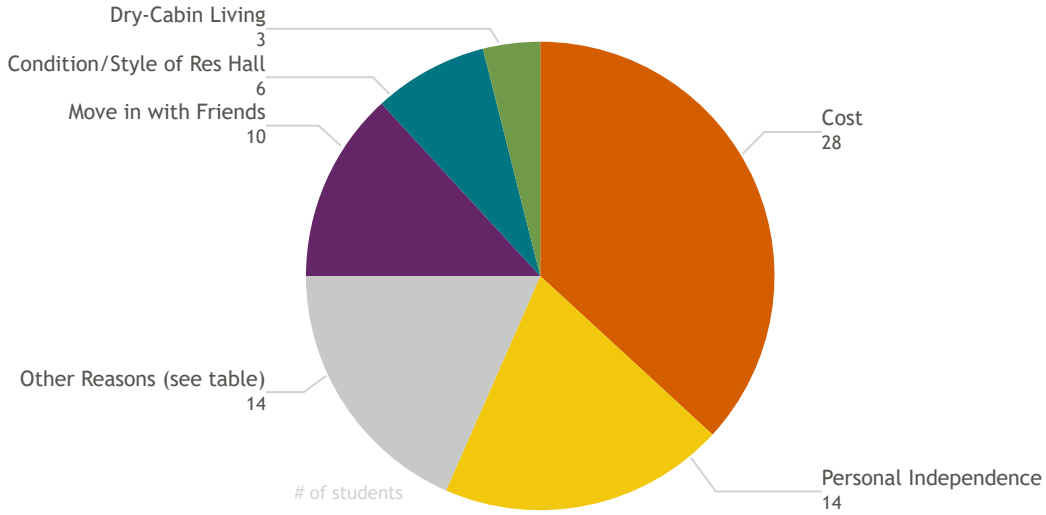


RESIDENCE LIFE

WHERE STUDENTS CURRENTLY LIVE



WHY STUDENTS MOVE OFF-CAMPUS



INSIGHT

The cost of living on campus—including meal plan, lodging, and related costs—is very high, in students' opinion.

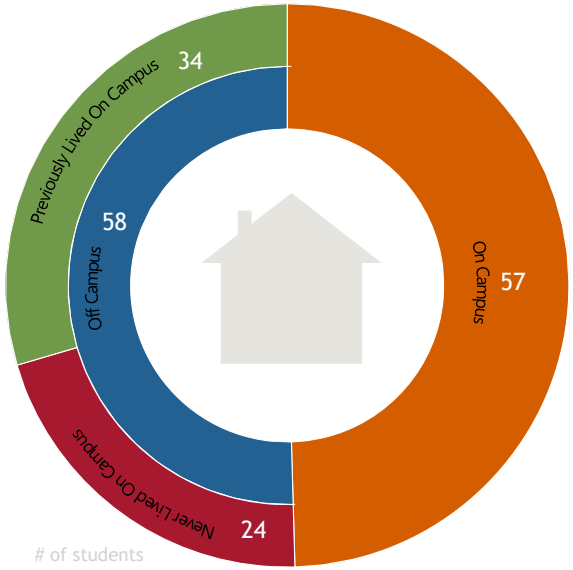
Students feel they can find a better value by moving off campus.

Other Reasons	Students
More freedom—too many rules	2
Never lived on campus	2
Wanted a dog	2
Issues with an RA	1
Local resident	1
Mandatory meal plan	1
Moved-in with significant other	1
Needed family housing	1
No solar panels	1
Participated in an exchange program	1
Thought it would be more enjoyable	1

STUDENT COMMENTARY

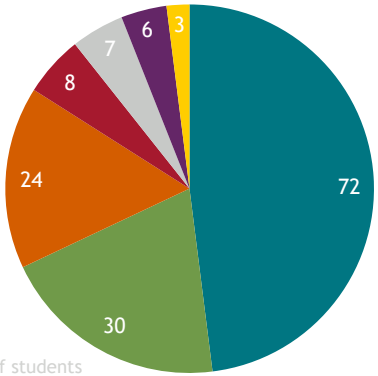
- Off-campus housing options are priced similarly to on-campus housing, but have significantly fewer restrictions.
- On-campus housing is not priced competitively compared to quality.
- More gender-neutral housing and diversity in housing are desired.
- Students want pet-friendly housing.
- Social/community spaces need to be included in each housing area.
- Students want access to daylight.
- Kitchens are highly desired—especially for international + diet-restricted students.
- Lower campus feels isolated.
- Sense of community has waned in residence halls as planned activities become less common.

ON/OFF CAMPUS BREAKDOWN



# of students

BEST CHARACTERISTICS OF EXISTING HOUSING

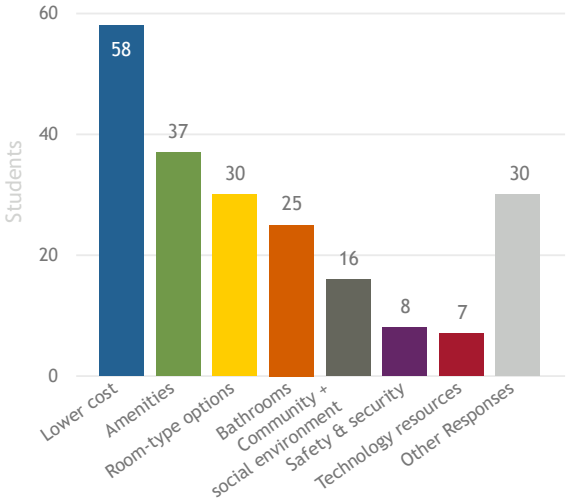


# of students

- Location/Proximity
- Community + Social Environment
- Amenities Provided
- Safety + Security
- Cost
- Facility Condition
- Other Responses

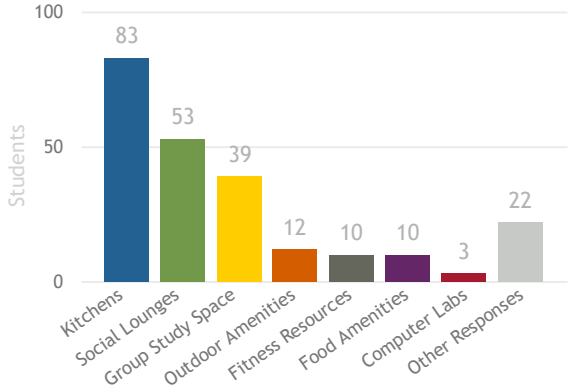
Other Responses	Students
Free laundry and internet	2
Exclusivity, more serious	1
Having a single room	1
Lounge activities by RA s	1
More quiet	1
Study/Social Lounges	1

DESIRED IMPROVEMENTS + UPGRADES TO CURRENT HOUSING



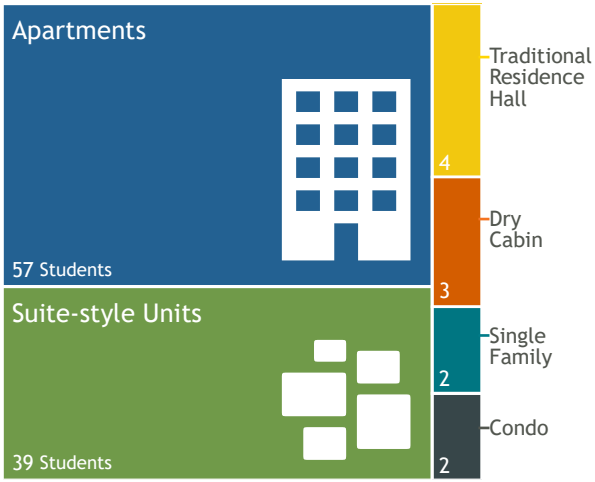
Other Responses	Students
Too many rules/Too restrictive	5
More kitchens	3
Larger rooms	2
Laundry facilities (more locations + machines)	2
More co-ed housing	2
Better activity advertising to increase participation	1
Dog friendly on-campus housing	1
Don't force meal plans	1
Game room	1
Improve facades; Air leaks are uncomfortable	1
Improved living rooms	1
More consistent/controllable heat	1
More family housing	1
More pianos in residence halls	1
More programs + activities	1
More solar panels	1
More sustainable housing	1
More windows	1
Old buildings make housing look less appealing	1
Use resident fees to update/improve the halls	1
Vending machines	1

DESIRED NEW HOUSING AMENITIES



Other Responses	Students
Laundry (convenient + many machines)	5
Access to natural light	4
Private/single-use bathrooms	3
Sustainable features	3
Designated parking areas	2
Allow pets	1
Extra storage for students	1
Individual/private study space	1
Provide community space in Lower Campus	1
Provide smoking areas on campus	1
Res halls w/ unique themes	1

PREFERRED NEW HOUSING STYLE



INSIGHT

Apartment + Suite-style housing are the most requested by students.

Students also want more private toilet/shower facilities.

Social + study lounges should be located within student housing facilities.

FOOD SERVICE

INSIGHT

The block meal plan is a disincentive to living on campus, doesn't meet student needs, and is viewed as a poor value.

INSIGHT

Arctic Java provides social and collaborative gathering space, plus fills many dining needs.

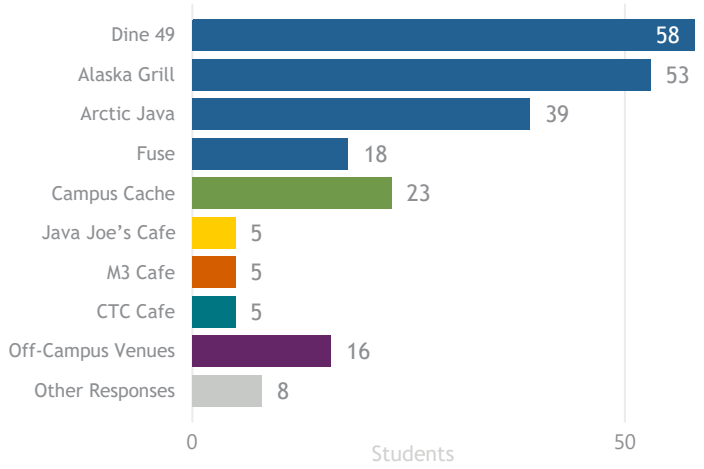
INSIGHT

Providing full food service on the West Ridge and locations closer to student housing would be popular and utilized.

Other Responses	Students
Cook/Eat at home	6
Bring own food	1
Pub at Wood Center	1

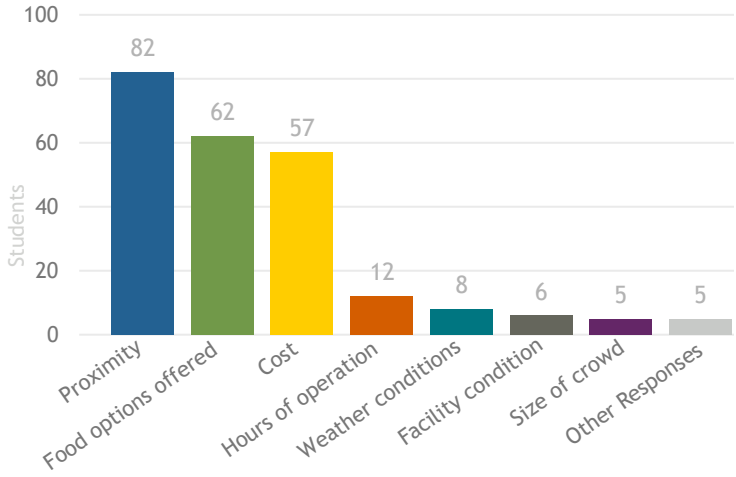
- Wood Center
- MBS Complex
- Engineering Building
- Murie Building
- CTC Building

STUDENTS PREFERRED FOOD VENUES

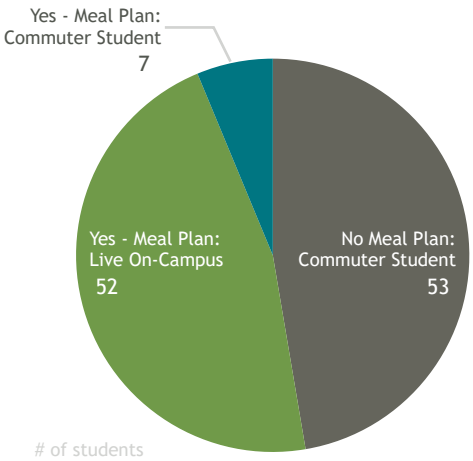


Other Responses	Students
Food quality	2
Meal plan restrictions	1
Size of portion	1
Social environment	1

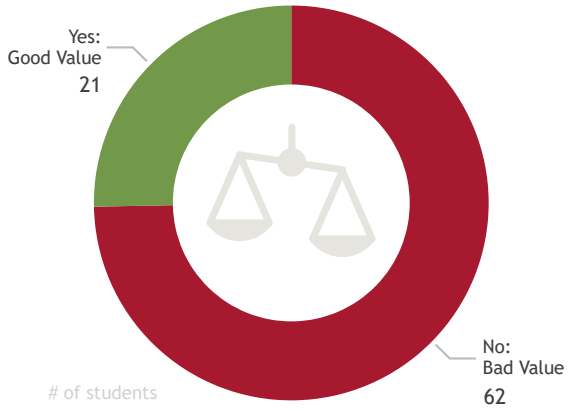
HOW STUDENTS CHOOSE A FOOD VENUE



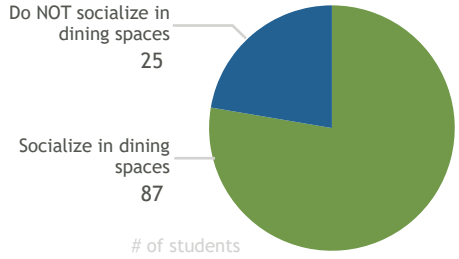
STUDENT MEAL PLAN ADOPTION



IS THE MEAL PLAN A GOOD VALUE?



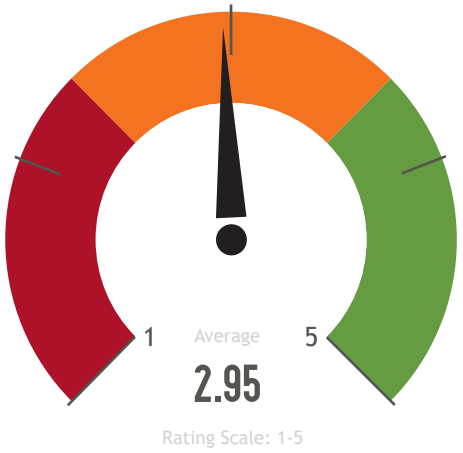
SOCIALIZING IN DINING SPACES



77.6%

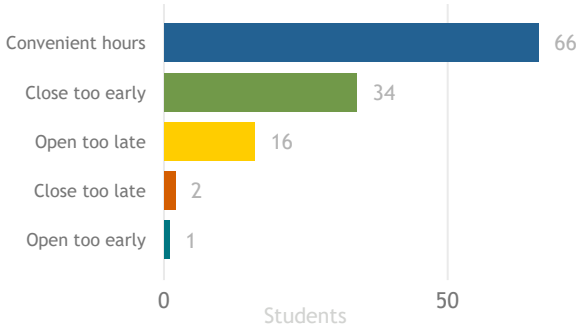
of students interviewed socialize in dining spaces on campus, emphasizing the importance of dining facilities with appropriate seating and operating hours.

DINING HOURS SATISFACTION



Rating Scale: 1-5

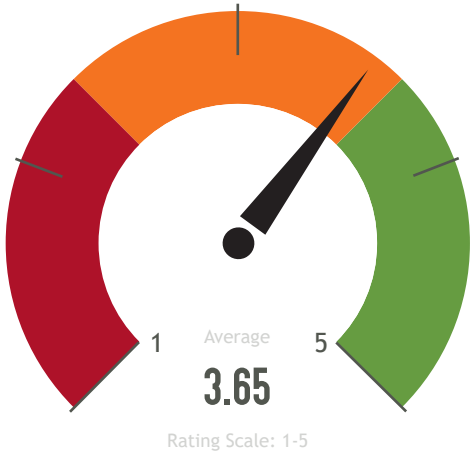
WHY?



STUDENT COMMENTARY

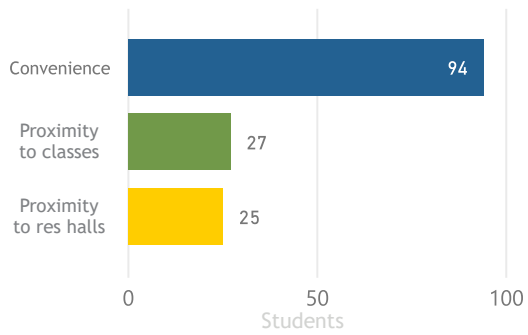
- Dining hours are inconvenient and too short on the weekends.
- Weekday dining service hours do not coordinate with evening classes.
- A 24-hour, on-campus food option is highly desired.
- 24-hour coffee + snack options near study areas would be popular.

DINING LOCATION SATISFACTION



Rating Scale: 1-5

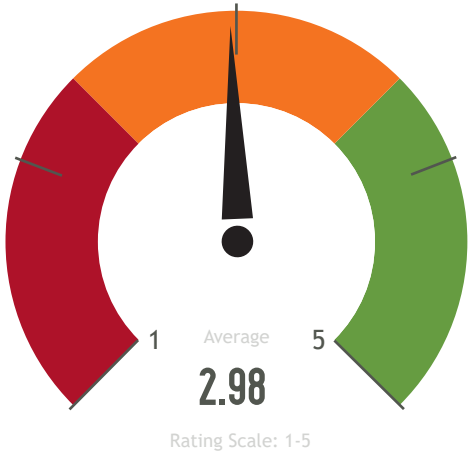
WHY?



STUDENT COMMENTARY

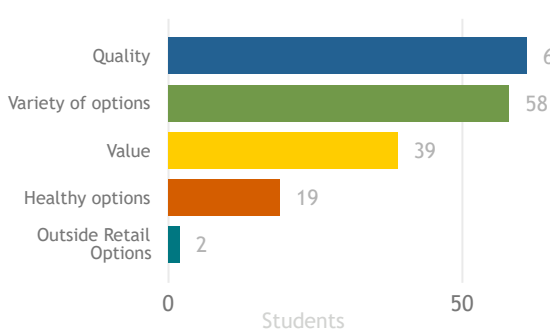
- Students desire full service, healthy food options on the West Ridge.
- The cafe in Murie building doesn't have long enough hours, nor has enough food options.
- Students miss having food available in the Arctic Health building.

FOOD SATISFACTION



Rating Scale: 1-5

WHY?



STUDENT COMMENTARY

- Food quality decreases after business hours and on the weekends.
- Retail food operations have left campus, but were very popular.
- A greater variety of affordable food options are sought by students.
- Vegetarian and other specific diets need more options and variety.

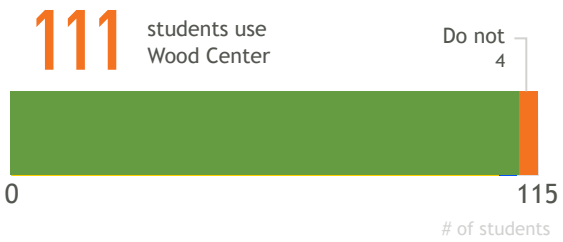
STUDENT LIFE

PREFERRED PLACES TO SOCIALIZE + HANGOUT

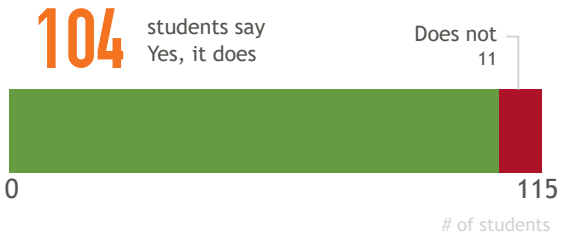


Other Responses	Students
Murie Building	5
New Engineering Building	5
Brooks Building	4
The Pub	4
Nook Lounge (Bunnell Bldg)	3
ROTC Lounge	2
Fine Arts Complex	1

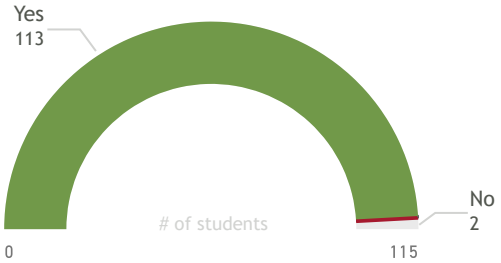
DO STUDENTS USE WOOD CENTER?



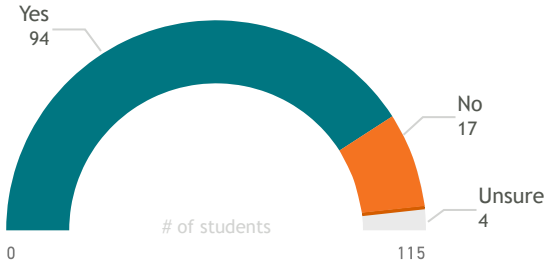
DOES THE WOOD CENTER MEET STUDENT EXPECTATIONS?



ARE STUDENT-FOCUSED SOCIAL SPACES IMPORTANT?



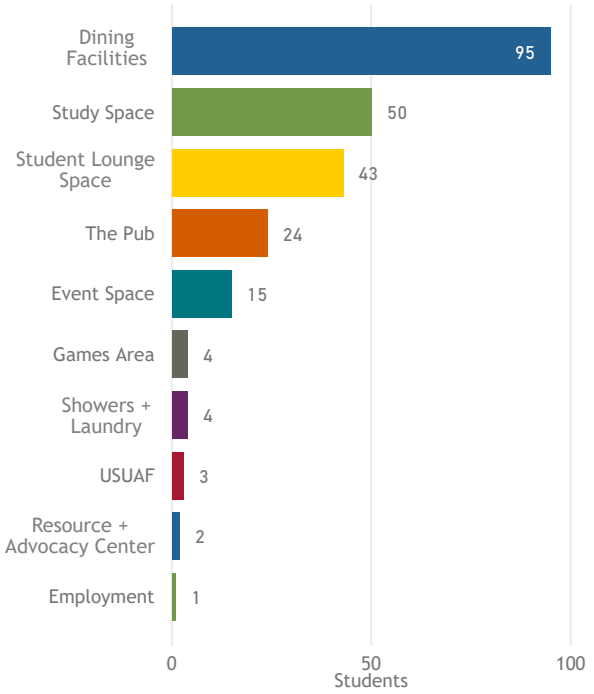
DOES CAMPUS HAVE ADEQUATE SOCIAL SPACE?



37.2%

of students interviewed consider the Wood Center as their primary or preferred social space on campus; by far the most popular space on campus

WOOD CENTER AMENITIES + RESOURCES USED BY STUDENTS



INSIGHT

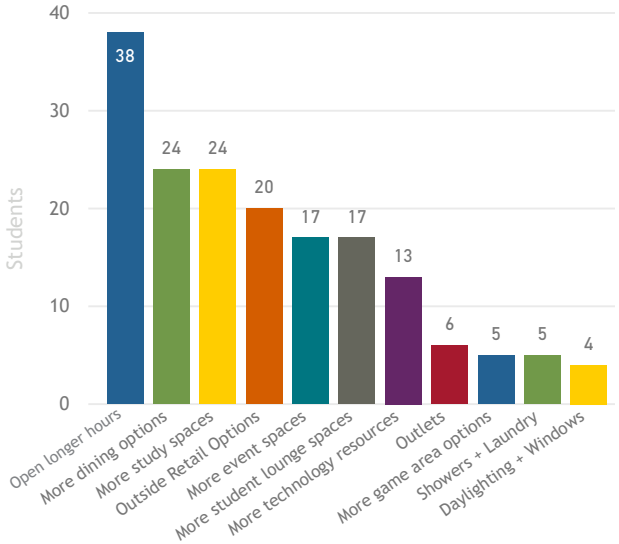
Students desire building access beyond the end of the business-day. Particularly in the Wood Center, longer building hours would provide considerable additional access to lounges and student resources.

A 24 hour social lounge/ study space would fulfill a need completely unfulfilled presently.

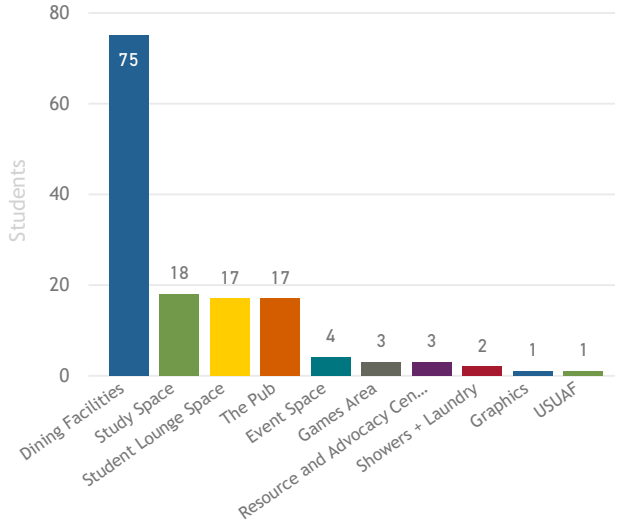
INSIGHT

The Wood Center renovation + addition continues to enhance the on-campus experience. Convenient dining, plentiful social gathering space, and abundant daylight make the Wood Center popular with students, and fulfills many student life requirements.

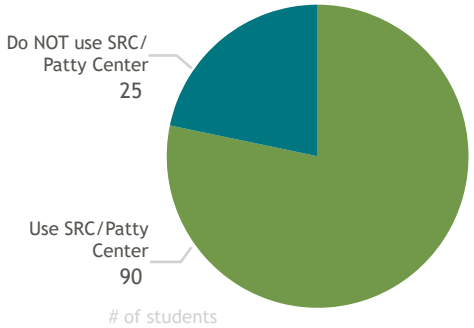
WOOD CENTER IMPROVEMENTS DESIRED BY STUDENTS



THE BEST WOOD CENTER AMENITIES



STUDENT USE OF THE STUDENT RESOURCE CENTER/PATTY CENTER



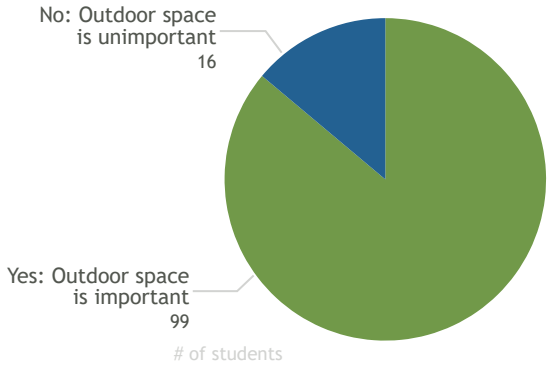
Preferred SRC Resources	Students
Rec/Fitness Classes	5
Workout and Fitness Resources	5
Swimming Pool	3
Intramural Sports	2
Weight Room	2
Climbing Wall	1

Problems at SRC	Students`
Update + enlarge lockerrooms; improve showers + privacy	6
Enlarge weight room + provide more equipment	5
Facilities and resources need to be updated	5
Pool is outdated + needs amenities like diving boards	2
Poor ventilation +physical comfort	2
Pool is over-scheduled + hard to access	1

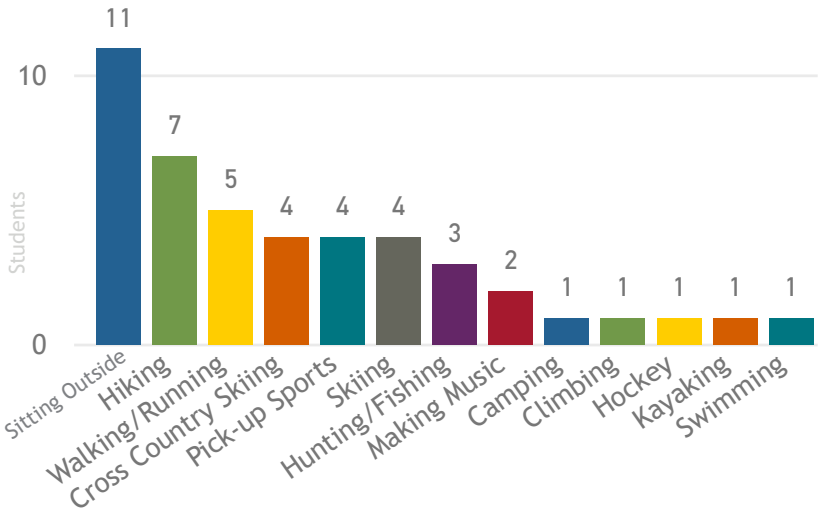
STUDENT COMMENTARY

- Too few resources are available; conflicts regularly occur between personal, intramural, and varsity user groups.
- Rec fees are prohibitively high.
- Facilities are aged + inadequate.
- Better marketing to students could increase program use.

IMPORTANCE OF OUTDOOR SPACE



FAVORITE OUTDOOR ACTIVITIES



STUDENTS' DESIRED NEW OUTDOOR AMENITIES

Activity	Students
Better/Additional Seating	8
Covered Outdoor Space	7
Dog Park/Area	5
Playground	5
Outdoor Sports Courts	4
Outdoor Hockey Rink	3
Winter Activities	3
Outdoor Cooking	2
Outdoor Study Space	2
Hammock Area	1
Organized Social Activities	1
Ski Hills	1

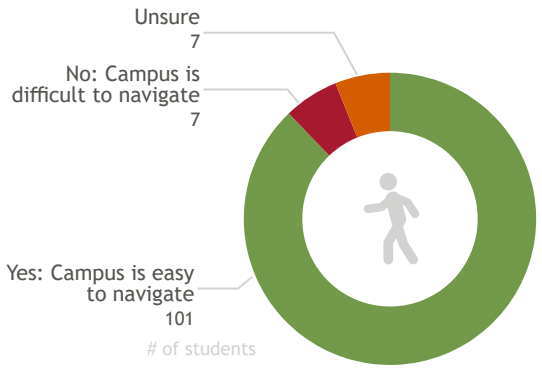
INSIGHT

Students crave outdoor amenities and reasons to be active outside.

Covered outdoor space would allow for semi-protected gathering space.

Providing fire pits, dog parks, and playgrounds would be very popular.

STUDENT PERCEPTIONS OF CAMPUS NAVIGATION



INSIGHT

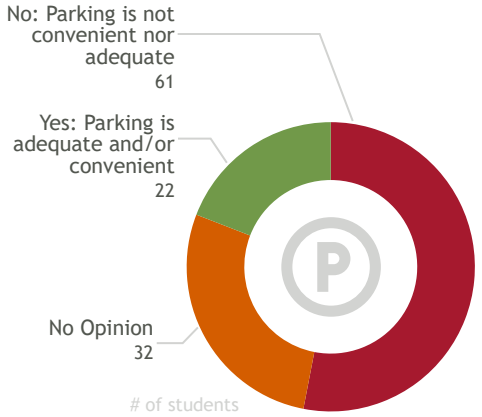
Shuttle service serves a pivotal role, but service is too infrequent and limited.

Better ice/snow removal on sidewalks + trails is essential.

More paved trails would help students move around campus.

Better campus signage is needed.

STUDENT PERCEPTIONS OF PARKING ON CAMPUS



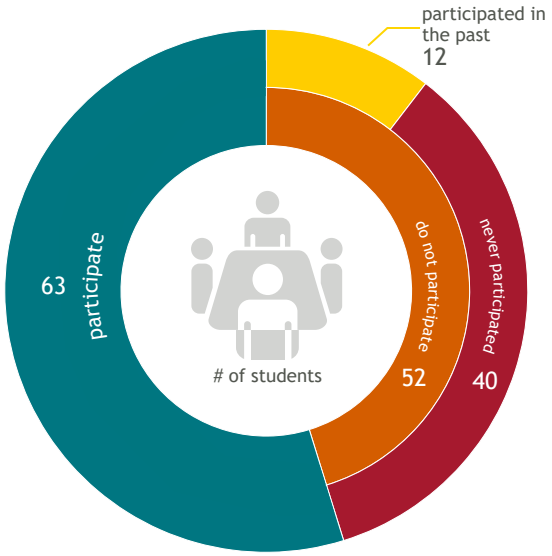
INSIGHT

More parking spaces are needed in convenient locations around academic buildings and residence halls.

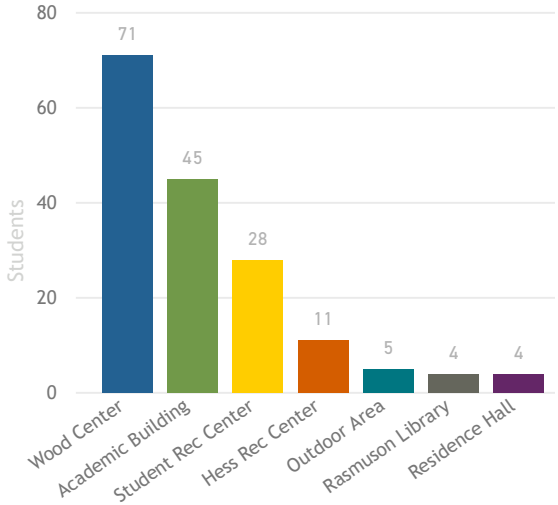
Permits are too expensive.

Permitted zones need to be clearly marked and identified.

CLUB/ORG STUDENT PARTICIPATION



CLUB/ORG MEETING LOCATIONS



INSIGHT

Wood Center is highly utilized for clubs, and requires additional meeting space to support them. It's central campus location is key.

CLUB/ORG PARTICIPATION LIST

Club/Organization	Students
Alaska Native Education Student Association	4
Chi Alpha	4
Native Student Union	4
Festival of Native Arts	3
Gender + Sexuality Alliance	3
Nanook Diversity + Action Center	3
Japan Alaska club	2
Pre-Medical Society (AMSA)	2
Active + Innovative Minds	1
* Alaska Space Systems Engineering	1
American Indian Science + Engineering Society	1
Associated Students of UAF	1
Brazilian Jiu-Jitsu Club	1
Catholic Student Association	1
* Chemistry Outreach	1
* Concrete Canoe	1
Cyber Security Club	1
French Club	1
Generation Action	1
Geoscience Club	1
Institute of Electrical Engineers	1
Inu-Yupiaq Dance Club	1
Model United Nations Alliance	1
* Nanook Traditions Board	1
National Society of Black Engineers	1
Pi Sigma Alpha (Political Science Honors)	1
Pre-Pharmacy Club	1
Pre-Veterinary Association	1
Simple Truth	1
Society of Physics Students	1
Society of Women Engineers	1
Student Ceramic Arts Guild	1
Sustainable campus action force	1
* UAF Presentation Society	1
UAF Sustainability Club	1

Athletic Organization	Students
Basketball	2
Cross Country Skiing	1
Hockey	3
Ski Club	1
Swimming Team	2
Tennis	1
Wrestling	1

* Starred clubs were unable to be verified as official UAF clubs or organizations.

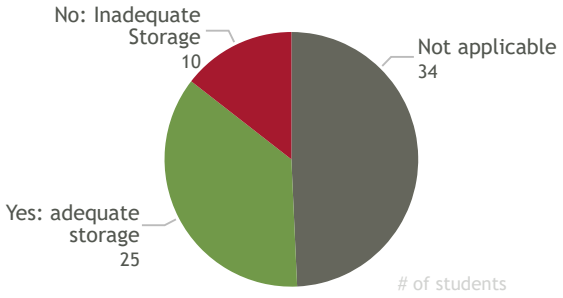
NEW CLUBS/ORGS STUDENTS WANT TO CREATE

Recommendation	Students
Dungeons and Dragons club	2
A capella group	1
Aleut language club	1
Biomedical engineering club	1
Boxing group	1
Choir group	1
Cooking club	1
Crochet club	1
Debate club	1
Entrepreneur assitance organization	1
Indigenous groups	1
International relations club	1
Intramural sports club	1
Liberal arts club (focus on poetry)	1
New student government	1
Outdoor activity clubs	1
Sexual violence prevention and general safety	1
Veterans support group	1

STUDENT COMMENTARY

- Athletic facilities do not adequately support club + rec sports.
- OrgSync is complicated + ineffective; students struggle with outreach + advertising through the platform.
- Scheduling rooms is difficult.
- Students don't realize clubs that interest them currently exist.
- Clubs/Orgs are popular, but participation is low.

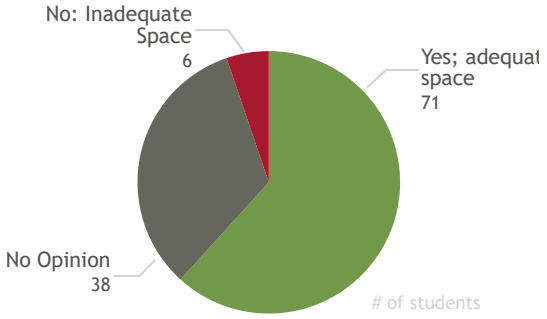
CLUB/ORG STORAGE SPACE



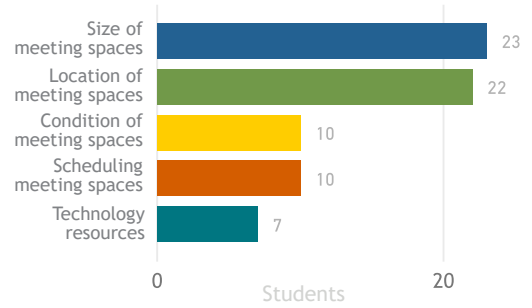
Why

Responses	Total
Access to storage	9
Size/amount of storage	9
Location of storage	2

CLUB/ORG MEETING SPACE

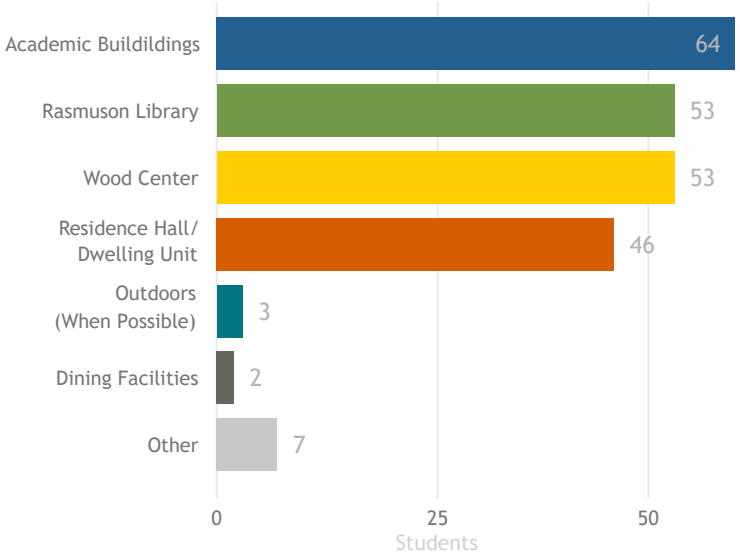


Why



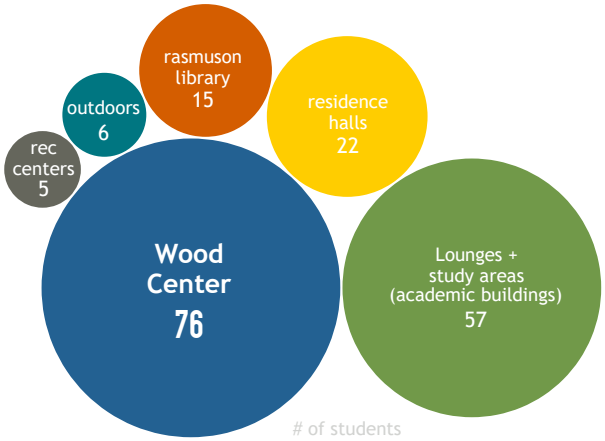
STUDENT ACADEMICS

WHERE STUDENTS STUDY

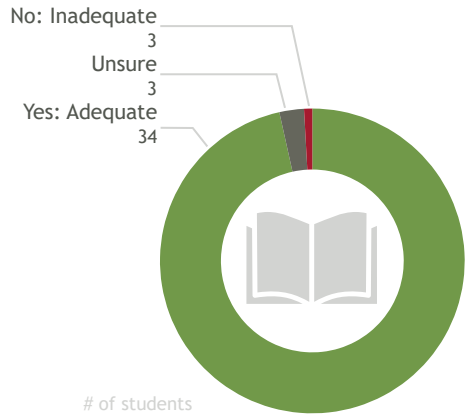


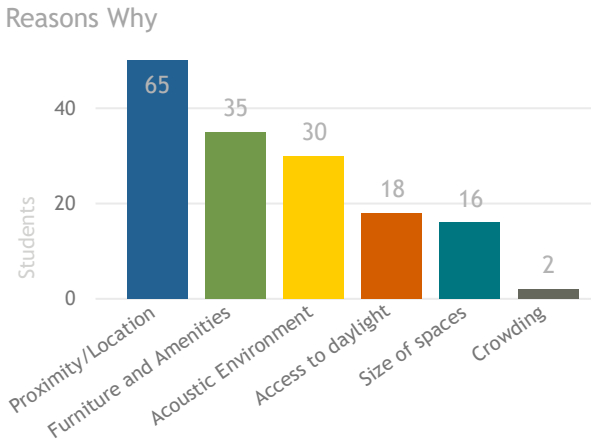
Other Locations	Students
Honors house	2
The Nook	2
Great Hall	1
KSUA Office	1
Pub	1

WHERE STUDENTS GO BETWEEN CLASSES



ADEQUACY OF STUDY SPACE





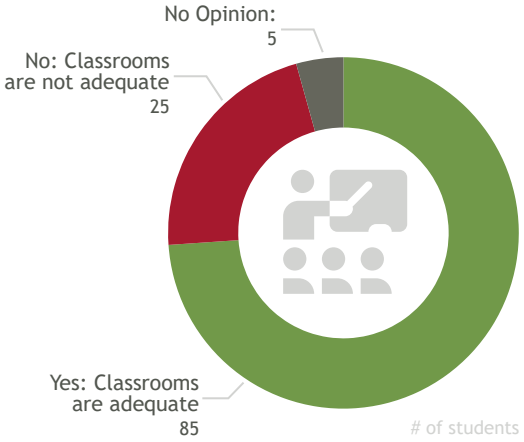
STUDENT COMMENTARY

- Classrooms, lounges, and the library all close too early.
- A 24-hour study space is highly desired.
- Many classrooms and labs lack access to daylight.
- Classrooms need updated seating, teaching resources, and power outlets.
- Students seek study spaces with a variety of seating and atmospheres to accommodate different study needs.

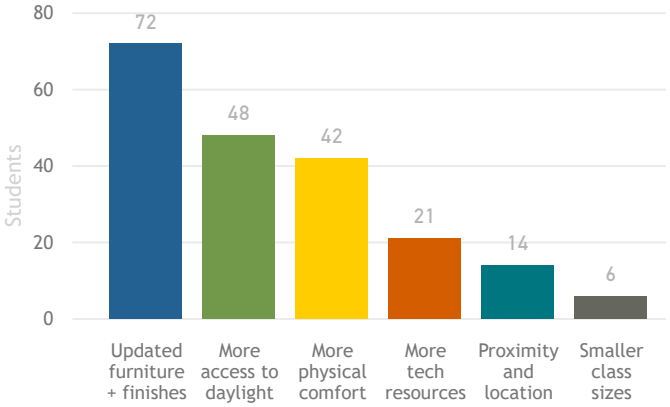
INSIGHT

Murie Building and Engineering Learning and Innovation Building are very popular with students. The buildings' abundant daylight, quiet study space, and comfortable furniture serve as a successful precedent.

CLASSROOM SATISFACTION



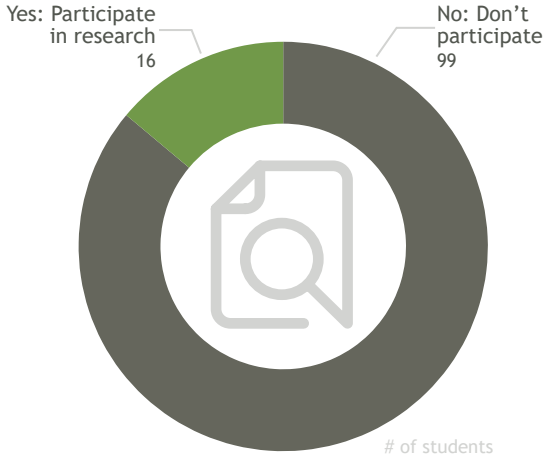
HOW TO IMPROVE CLASSROOMS



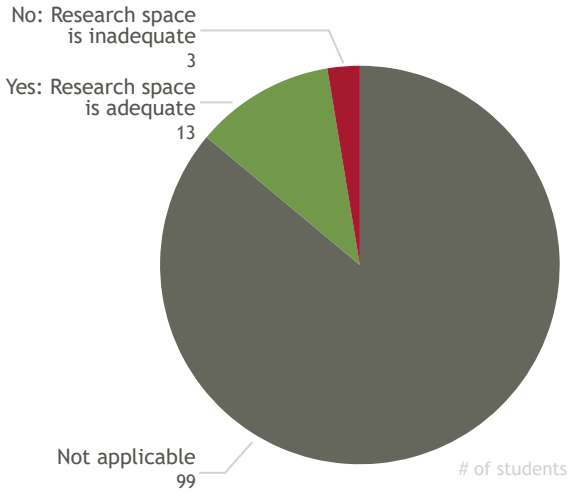
STUDENT COMMENTARY

- Access to daylight in research spaces is severely lacking currently.
- Research opportunities for grad and undergrad students is a major selling point for UAF.

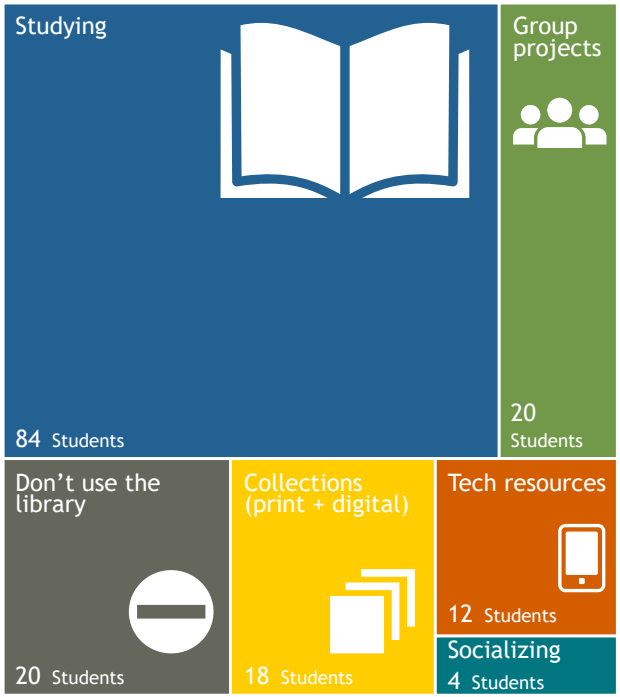
RESEARCH PARTICIPATION



RESEARCH SPACE ADEQUACY



HOW STUDENTS USE THE LIBRARY



Suggested Improvements

Suggestion	Students
Updated furniture, finishes, + lighting	8
24-hour Study space	7
Café	6
More daylight	5
Updated technology	5
Updated collections	2

STUDENT COMMENTARY

- Additional lounge and study space—with abundant daylight and views—would be highly utilized.
- The library feels dated and doesn't foster collaboration and modern learning.

INSIGHT

The library provides critical resources that students value. With additional investment, the library can more fully support student needs into the future.

INSIGHT

The library lacks daylight, a cafe, and modern study space. The space feels tired and dated. Student utilization could be increased with updates.

INSIGHT

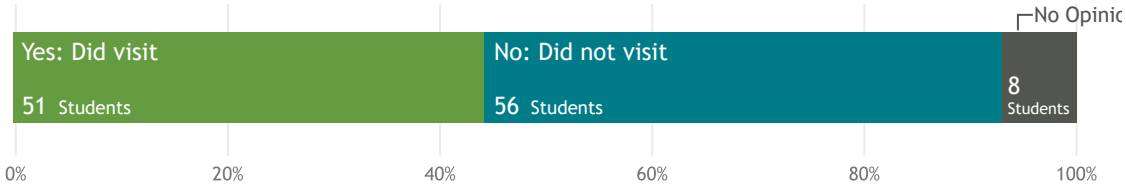
Located in the heart of the campus core, the library is well-positioned to be transformed into a modern, collaborative learning environment. Mixing academic, research, and student support programs could contribute to a thriving academic community on campus.

UAF HIGHLIGHT

INSIGHT

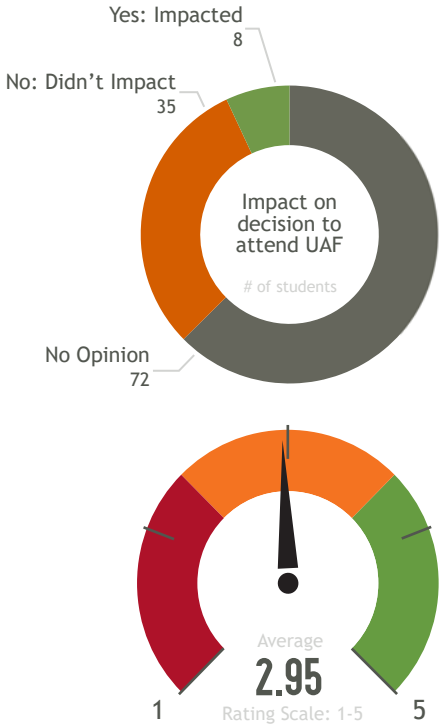
UAF's social space + student housing poorly compare to competitor institutions. Updates would improve the student experience.

STUDENTS VISITING UAF BEFORE ENROLLING

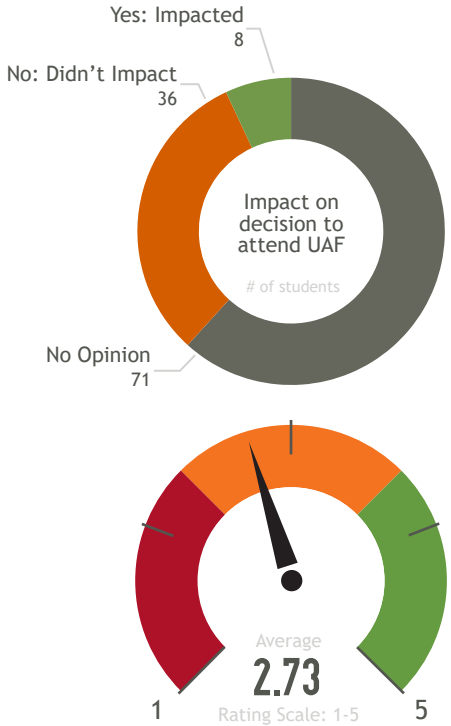


STUDENT COMPARISONS: UAF VS. OTHERS

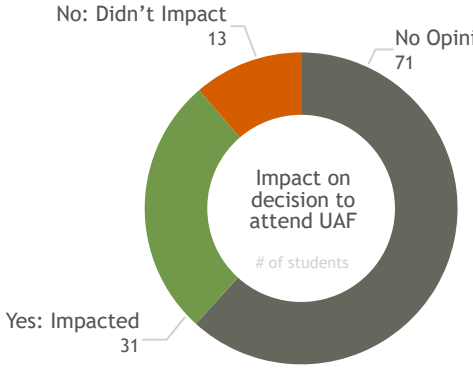
Social Space



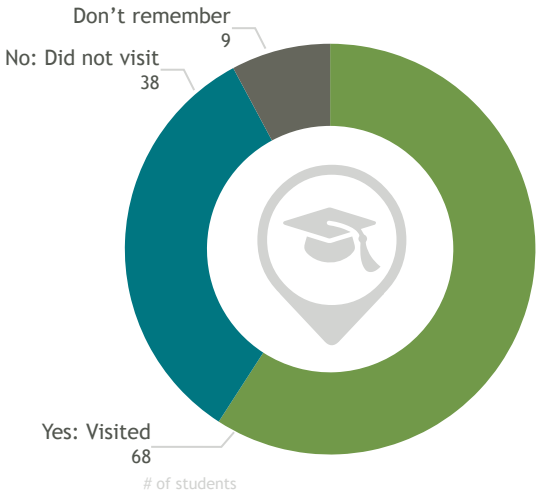
Student Housing



Academics



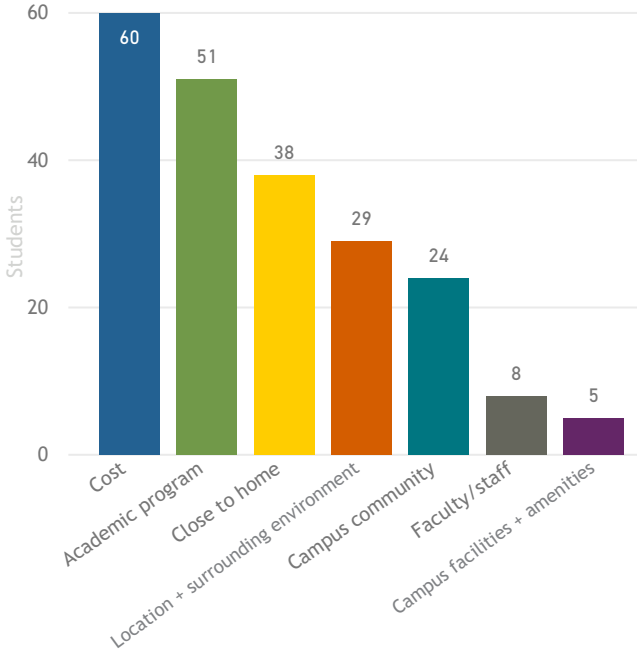
VISITING OTHER COLLEGES + UNIVERSITIES



Other schools + regions visited

University/Region	Students
UA Anchorage	17
Pacific Northwest US Region	8
Midwest US Region	5
Eastern US Region	3
Western Canada Region	3
Western US Region	3
UA Bethel	2
Hawaii, US	1
UA Jeaneau	1

REASONS STUDENTS CHOOSE UAF



INSIGHT

UAF attracts students because of its strong academic programs, affordable tuition + fees, unique location, and strong campus community.

Defining the UAF brand through these characteristics can define a campus brand + identity, which can be used to grow + retain enrollment.

INSIGHT

Some smaller community groups seek a more visible presence on campus. Particularly, ROTC + Alaska Native students would like to be located closer to central student life spaces, increasing their access, visibility, and integration into the larger community.

INSIGHT

The planning team incorporates the feedback, commentary, suggestions, and criticisms offered by students to assure their voices influence the 2025 Master Plan. Through the implementation of the master plan, UAF can adapt and react to its weaknesses, and emphasize and build upon its numerous strengths.

STUDENTS' FAVORITE THINGS ABOUT UAF

STUDENT COMMENTARY

- UAF has a strong campus community; students feel comfortable, accepted, and supported.
- Academic programs have strong reputations within Alaska and around the world.
- Faculty/staff have close relationships with students, serving as mentors + advisors, in addition to instructors.
- Outdoor activities + amenities attract many students.

STUDENT COMMENTARY

- Students appreciate the chance to participate in advanced, cutting-edge research, particularly as undergraduate students.
- UAF has strong programs, student groups, + support networks to help Alaska Native students.
- Fairbanks + the surrounding area offer a beautiful + exciting environment for students to study, live, and work.

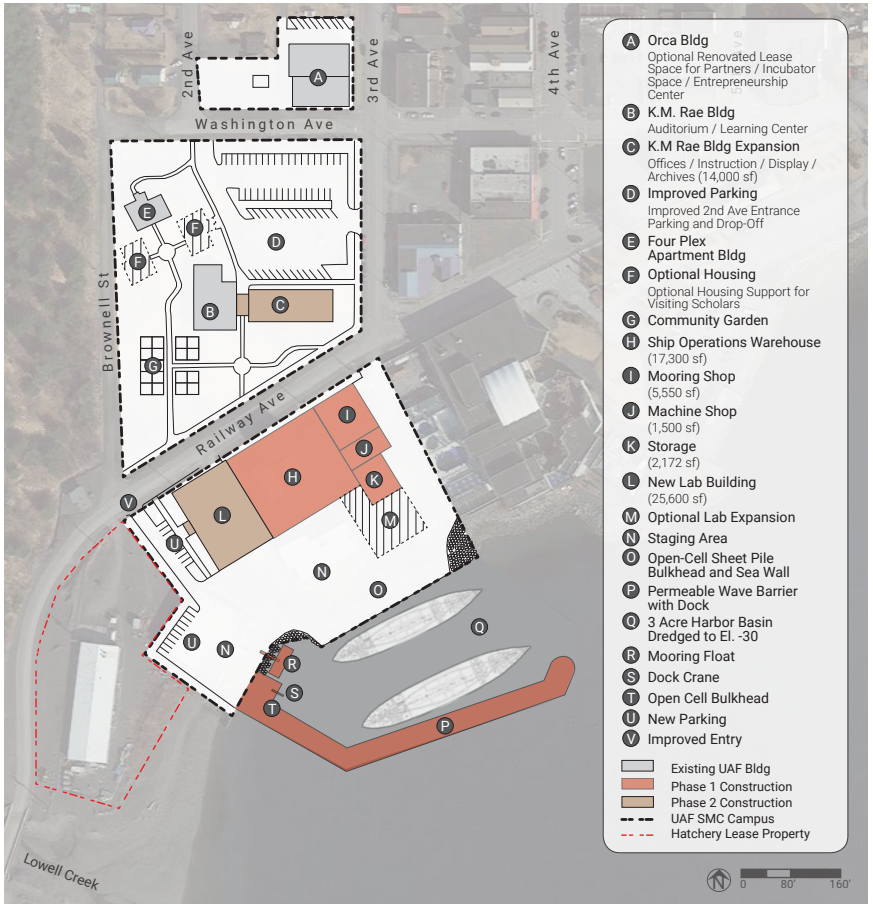
APPENDIX E:

SEWARD LONG-RANGE FACILITIES PLAN

Introduction:

For over 40 years the Seward Marine Center (SMC) has supported onshore and ship-based operations, providing a gateway to Pacific Arctic and Subarctic ecosystems. A strategic review of facilities has concluded that the highest return on existing property and investment requires redevelopment of the campus over time. Construction of modern forward-looking sea-side and shore-side infrastructure is needed to support future Arctic Ocean observing, prediction and scientific breakthroughs envisioned within UAF's College of Fisheries and Oceanic Sciences (CFOS). Reflective of the current goal to support Alaska's Blue Economy and support nationwide initiatives of Navigating the New Arctic, the proposed redevelopment strategies and phasing are coordinated with opportunities to achieve grant funding and capitalize on local partnerships. Future phases of redevelopment are envisioned to renew and transform laboratory, office, teaching and support facilities to modernize the entire SMC campus with appropriate infrastructure, access, staging area, and interior space for the next generation of research.

Climate change is pronounced in the Arctic and Subarctic regions, with unprecedented rates of change that are dramatically modifying the ocean-ice-atmosphere system. The impact of these changes on ocean physics, chemistry and biology will be severe. The large-scale multidisciplinary programs necessary to study these impacts will require the resources that SMC can provide: a regionally-positioned, scalable facility from which to stage ship-based operations, including service of emerging fixed and mobile autonomous observing platforms. SMC—the home port of R/V *Sikuliaq* and the nation's farthest north deep-water port connected by road, rail and air to mainland transportation systems and services—is the ideal location for such investment. Based on these considerations, the SMC facility review proposes construction of



Site plan of the renovated and expanded Seward Marine Center

Image from Seward Master Plan

a new pier capable of year-round servicing/berthing of *Sikuliaq*, along with new warehouse and shop facilities constructed to directly support efficient and effective high-latitude maintenance, operations and research.

In addition to hosting new activities for Navigating the New Arctic, and testament to the ideal synergies present at Resurrection Bay, SMC is the base of operations for the recently funded Northern Gulf of Alaska (NGA) LTER that continues two decades of multidisciplinary observations on the Subarctic Northern Gulf of Alaska shelf. The NGA-LTER relies heavily on SMC infrastructure for staging, mobilization and demobilization of its three annual oceanographic cruises.

UAF has already completed several cycles of facility analysis, planning and concept studies. The most recent facility review updates past analysis and further explores a detailed vision for campus improvements.

Background

Seward Marine Center (SMC) is located on a 13-acre campus at the head of Resurrection Bay. It is one of the primary docking facilities for visiting research vessels and the home-port of the $200M NSF-owned and UAF-operated Global Class R/V *Sikuliaq*, the only ice-capable research vessel in the University-National Oceanographic Laboratory System (UNOLS). SMC is also the base for a new NSF Long-Term Ecological Research (LTER) program in the Northern Gulf of Alaska (NGA-LTER).

The SMC currently consists of:

- the D.W. Hood Laboratory, which opened in 1978 to provide 2,000 ft^2 of wet laboratory space with running seawater and an approximately equal amount of space for dry laboratories, two temperature-controlled rooms, offices, and a darkroom;
- a 4,800 ft^2 building that is used primarily for mooring operations and instrumentation;
- the K.M. Rae Building opened in 1982 has 6,400 ft^2 of space including offices and a 125-seat video-conferenced auditorium;
- a large office-warehouse complex of approximately 14,400 ft^2, which houses conference room, woodshop, and storage space for the storage of oceanographic cruise equipment and staging of cruise operations;
- a 1,500 ft^2 machine shop that is used for ship maintenance;
- a four-plex apartment building used to house visiting investigators and graduate students;
- a just-completed 40-ft aluminum coastal vessel for scientific sampling;
- administrative offices in the 9,975 ft^2 Orca building; and
- the home port and base of operation for *Sikuliaq* that includes a 150-ft dock, with an additional 100-ft of mooring dolphins to support ship and science mobilization operations.

SMC full-time staff consists of a director, a port engineer, a port captain, a *Sikuliaq* science support manager, a *Sikuliaq* financial manager, a facility/office manager, a procurement coordinator, a mooring technician, and a warehouse/science-support coordinator. Additionally, SMC provides offices for several marine technicians when they are not on *Sikuliaq*.

The shore station provides scientists utilizing *Sikuliaq* with facilities for pre- or post-cruise studies. Numerous UAF graduate students have employed these facilities for conducting thesis research.

In addition to SMC, the co-located Alutiiq Pride Shellfish Hatchery exists for research into shellfish mariculture and to rear spat for selling to shellfish farmers. Directly to the east of the SMC is the 23-year-old Alaska SeaLife Center, a $50 million modern facility dedicated to outreach and research on marine mammals and birds. Both the SeaLife Center and Shellfish Hatchery are non-University facilities with working agreements between all three entities. SMC and CFOS also envision continued collaboration with other key local partners and stakeholders, including the Alaska Ocean Observing System, the Alaska Vocational Technical Center (AVTEC), and the City of Seward.

The current warehouse is suffering from its configuration (limited bay size and length), location (tight to the dock with limited maneuverability or expansion room), age (64 years). Most critical, it still bears the incipient damage from the 1964 Good Friday earthquake, subsequent tsunami, ground-water flow, and recent floods from nearby Lowell Creek. Sediment underneath the warehouse is moving seaward as per a 2003 geotechnical

assessment, and the warehouse needs to be replaced on another area of the SMC campus. Damage from the 1964 earthquake and tsunami caused portions of the seawall, wharf, and warehouse to be ripped away immediately and set the stage for eventual subsidence and sediment loss. Lowell Creek is a known local problem—ever since the Army Corps of Engineers tunneled through the mountain to relocate the mouth of the creek in the 1930's, it regularly floods and causes sediment to block the bridge to Lowell Point Road. This sediment has also required the current SMC pier to be dredged periodically due to the sedimentation.

Locating a new warehouse on the higher ground currently occupied by the mooring and machine shops would provide a stable footing for the building foundation and move it away from the mouth of Lowell Creek. The new warehouse would also incorporate the mooring and machine shop functions and allow for better covered storage of research gear stowed at SMC. The new warehouse would also incorporate the current 7 offices and administrative space in the warehouse and mooring shop. This strategic co-location would provide ideal opportunities for multidisciplinary collaboration, efficient operations, new potable water piping, and upgraded internet access. By vacating the current warehouse and relocating the pier, significantly improved truck access and flexibility for multiple staging operations would be gained.

The current pier has exceeded its design life span of 35 years, is not long enough to allow *Sikuliaq* to moor securely and has been recently downgraded in its weight capacity. The concrete panels providing the dock surface have corroded to the point where truck tractor-trailer or crane use are not recommended, and heavy research gear. For example, the R/V *Jason*, must be loaded at a commercial pier in Seward where competition is fierce from cruise ships and barges. The facility review recommends a redesigned, 800-linear foot pier to protect the new dock and berthing area from Lowell Creek sediment, provide enough length for moorage lines to hold the ship securely, and mitigate the effect of southerly swells against ships and infrastructure. The desired result is a pier CFOS can safely and securely use year-round as well as attract additional partners, income, and externally funded grant funding.

Mission, Vision, Goals and Objectives

In response to self-study, community and state input, and national goals, CFOS has determined that Arctic research is a high priority given the accelerated changes occurring at high-latitudes that will reshape ocean-ice-atmosphere system and the Alaska culture and economy. Within the last two decades, both scientists and those who depend on its resources for subsistence have documented ongoing change in the Arctic Ocean. The impact of these changes on ocean physics, chemistry and biology are anticipated to be severe. Recent research shows:

- Thinner sea-ice and longer periods of open waters are leading to increased estimates of primary algal production.
- The productivity of zooplankton dependent upon this primary production has similarly increased, as well as the abundance of those species that feed upon them such as seabirds.
- Dramatic shifts in these predatory species are anticipated to occur at the expense of iconic marine mammal such as walrus
- Arctic Ocean warming are also leading to northward expansion of fishes. Now, the northward migration of species is seasonal and one-way but eventual new species are expected to establish resident populations at the expense of native species.

While some changes in the physical environment can be monitored remotely via satellites, they need to be supplemented with moored or mobile equipment that are deployed and serviced by ships to document subsurface conditions. At present, most changes in the chemical and biological components of ocean ecosystems can only be studied though ship-based observations. Thus, the study of these changes in the Arctic and the adjoining Subarctic (i.e. the Gulf of Alaska and Bering Sea) will require large and complex multidisciplinary efforts of field observations. Ships depend on their essential shore-side facilities to efficiently stage, mobilize and demobilize their expeditions. At minimum, these facilities include piers, warehouses of supplies/equipment, and shops to maintain the safe operation of vessels. Increasingly, a large part of cruise staging involves the assembly and/or refurbishment of oceanographic mooring or other observation equipment such as gliders, drones and AUVs. As example, since it began operations,

Sikuliaq has spent 36% of its underway days conducting mooring-associated operations.

For over 40 years the Seward Marine Center (SMC) has supported ship-based operations for R/V *Acona*, R/V *Alpha Helix*, and now R/V *Sikuliaq* and all have emphasized activities in Alaskan waters. SMC has supported regional, national and international seagoing efforts from both individual and large multidisciplinary projects. Examples of larger sea-going programs (often funded by NSF) include the Outer Continental Shelf Environmental Assessment Program (OCSEAP 1975-1981), Processes and Resources of the Bering Sea (PROBES, 1976-1982), Inner Shelf Transfer and Recycling (ISHTAR,1982-1988), Sound Ecosystem Assessment (SEA, 1994-1997), Global Ocean Ecosystem Dynamics (GLOBEC, 1997-2004), Bering Sea Ecosystem Studies (BEST, 2007-2010), and the Gulf of Alaska Project (2010-2013). SMC's ship support infrastructure has been used by a variety of state and federal agencies (NOAA, FWS, USGS, ADF&G) as well as international scientific partners (e.g. Japan). At present, it also serves as the base for the three annual cruises of the new Northern Gulf of Alaska LTER program that uses *Sikuliaq* as well as the USFWS vessel *Tiglax*. There is no other location in Alaska besides Seward connected by road and rail to a major city and international airport that can offer the necessary combination of dockside berthing, warehousing, and mobilization assets (including cranes and forklifts). While a vessel the size of *Sikuliaq* can technically tie-up at several other Alaskan ports (e.g. Juneau, Kodiak, Nome, Dutch Harbor), the logistics and cost of barging or airlifting cargo – as well as storage – make these locations less economic and efficient ports of call.

Within this context, it is important to remember that the initial design of *Sikuliaq* began with a regional vessel of ~180' length that grew as her design progressed. At 261', this Global Class vessel is now larger than the existing SMC pier is able to accommodate except during calm seas. This situation frequently necessitates unpredictable shifting of shore-side loading and offloading activities to a commercial pier over a mile away. In addition to wharf and transportation costs, use of an external pier greatly complicates and slows the mobilization and demobilization process since staged items need to be loaded on trucks and moved by road between SMC and the ship. Along similar lines, the size of *Sikuliaq* and complexity of her missions have stretched the capacity of the existing warehouse to accommodate their staging.

It is challenging to find straightforward solutions for the logical improvement and expansion of the SMC pier, warehouse and other support facilities:

- The current configuration of pier and warehouse are landlocked by laboratory, support facilities and adjacent partner facilities.
- The location and massing of existing structures inhibit modern operations, efficient shore-side support processes and partnerships, and collaboration.
- Consulting, engineers have determined that most of SMC's infrastructure is near the end of its life expectancy and will not provide a return on investment in renovation, repurposing, or expanding.

When all aspects of the site are considered (i.e. frequent flooding from storm-water run-off, aging seawall integrity, and gravel deposition from the nearby Lowell Creek Diversion Tunnel), previous studies have determined that the most cost-efficient solution is complete replacement of the existing structures (most of which are over 50 years old) with modern support facilities that can meet the needs of the larger statewide, national and international oceanographic research community for decades to come. These improvements and reinvestments will immediately benefit both UAF shoreside and *Sikuliaq* programs and operations. Looking to the future, these benefits will multiply as the need for modern and flexible regional port facilities increase. For example, in the past three years, the USCGC *Healy*, R/V *Kilo Moana*, NOAA Ship *Oscar Dyson*, and NOAA Ship *Fairweather* have docked in Seward and mobilized for projects. Cutters, research vessels, and survey vessels will all continue to compete for moorage with cruise ships at the Seward commercial pier and UAF can provide an attractive location for their investment.

The facility review first phase recommendations focus on the infrastructure required to directly support ship operations and its core activities: a new 800 linear foot pier with associated permeable breakwater and seawalls that enable year-round occupancy by *Sikuliaq*; a new warehouse with appropriate warm and cold

storage; and new shops for maintaining the vessel and staging mooring operations. A proposed new SMC pier design represents the largest portion of this investment. It must be designed to act as a breakwater behind which a protected harbor would be capable of housing *Sikuliaq* in combination with other research vessels currently in existence. The new SMC pier design would also eliminate an ongoing concern at SMC: the new orientation would protect the pier from large quantities of gravel that have typically been deposited during high flows of Lowell Creek that impinge on the current pier location, and have required periodic dredging at substantial cost.

To support this new vision over time as well as position the pier for more activity in the future, the facility review recommends future phases of SMC rejuvenation. This ongoing renewal and campus transformation will replace, repurpose or renovate all facilities and infrastructure to enable CFOS' expanded SMC goals to provide expanded access and quality to instruction, outreach, co-knowledge creation, research transfer, and broader community partnerships. Future phases will position SMC to be a leader in Alaska's "Blue Economy", integrating research, innovation and entrepreneurship. The study recommends new facilities that will include wet and dry laboratories, office spaces, and teaching/ educational facilities. SMC's vision to support Navigating the New Arctic and campus redevelopment plans have been rigorously tested to ensure that constructing any new buildings and infrastructure allows current facilities and access to remain operational until redevelopment is complete. The location of new facilities also allows flexible future expansion to retain critical adjacencies for successful programs.

Broader Impacts

Sikuliaq is used by a wide range of scientists from universities and agencies located throughout the state and the world. Investing in the SMC will support future scientific advances in rapidly changing high-latitude Arctic and Subarctic ecosystems critical to informing policy decisions that impact the health, security and socioeconomic systems of all Alaskans and the nation. For example, Alaskan waters yield the country's largest fisheries harvests while supporting both commercial and subsistence use of marine resources.

The proposed infrastructure changes will be the focal point for UAFs shore-based laboratory and teaching facilities located on the SMC campus. STEM instruction across all UAF post-secondary levels will benefit from modernized facilities. SMC will also be able to host programs of greater relevance for transdisciplinary research activities, community resilience, and Alaska Native partners and thereby increase the overall research potential of the SMC. In both of these teaching and research effects, SMC investment will support development of a diverse workforce and a more intensive, interdisciplinary experience. Seward-based partnerships with the Alutiiq Pride Shellfish Hatchery, the Alaska SeaLife Center, the Alaska Vocational Technical Center (AVTEC), Peninsula College, Alaska Native Tribal Councils, and local schools will yield direct experience with major field programs centered on *Sikuliaq*, sampling modalities, and shore-side operations. The SMC campus renewal will provide an Alaskan test-bed for new capabilities and innovation in fisheries, mariculture, and ocean sensing and technology to help grow Alaska's Blue Economy. These include Arctic and Subarctic ice navigation conditions, marine simulation, sail drones, gliders, autonomous underwater vehicles, ocean instrumentation, and other emerging technologies.

In addition, the proposed re-envisioning of SMC contributes to the citizen science and learning initiatives of the SeaLife Center and its more than 150, 000 annual visitors. By proximity, programs and direct viewing portals and platforms, the expanded SMC activities will dramatically increase visibility and understanding of state and national Arctic research initiatives. For over 20 years CFOS has hosted the Alaska Tsunami Bowl in Seward (part of the National Ocean Science Bowl), bringing together students and teachers from 20 high schools located across Alaska. The proposed expanded research and teaching complex will thus serve a broader community of young learners, including from Alaska Native communities.

Preliminary Execution Plan

The integrated redevelopment of SMC infrastructure is essential to provide a flexible and long-term location for sea-based research and transdisciplinary ocean observation. An initial investment in an elongated 800-linear foot pier with permeable wave barrier, mooring float, open cell bulkhead, staging area,

access area, warehouse/shop space and appropriate shore-side storage enables an invigorated platform for ship-based research operations. Loading, unloading, monitoring and observations can occur seamlessly if facilities are combined and reorganized for efficient materials management and the flow of research teams and support staff. Indoor and outdoor opportunities for collaboration are maximized, yielding cross-disciplinary thinking and approaches to problem-solving, analytics, data-gathering and security, and innovative interpretation. Redesign is also expected to result in more efficient use of built space.

Master Planning and Predesign: Previous studies along with this facility review for the proposed facility upgrades have included modeling of the new wave barrier and open-cell sea wall to ensure operational compatibility with *Sikuliaq*. The program of spaces (see table below) and infrastructure has been transferred to site plans and schematic design work, including a cost estimate.

The first phase of redevelopment could proceed in two distinct tracks: sea-side construction and shore-side construction. The first track, sea-side construction, includes updated bathymetry, underwater survey and demolition, dredging for the wave barrier, and the balance of design work for both sea- and shore-side facilities. Construction could commence for each element of work as quickly as design documents are completed and approved and seasonal weather is available. The second track, shoreside construction, includes construction of a new warehouse and mooring shop shore-side facilities, along with the open cell bulkhead (seawall). The could commence in concert with or after the first track is complete.

Site and Environment: The proposed campus redevelopment plan for improved infrastructure, staging operations, warehousing and shops makes highest and best use of the shore-side property UAF leases from the City of Seward. The new pier and facilities are relocated to stable long-term locations that align with existing city streets and shore-side infrastructure. They also enable improved access from other SMC facilities as well as smoother partnership operations with the adjacent hatchery and Alaska SeaLife Center. Reorienting and extending the pier will ensure resiliency in the face of Lowell Creek storm events from the west and significant wave action from the south. The extended dock, permeable wave barrier, and dredged harbor basin will provide future flexibility for accommodating multiple vessels of larger size and optimize interdisciplinary activities. Shifting supporting warehouse and shop facilities north towards the adjacent city street (Railway Avenue) will ensure the widest possible shore-side access for large equipment, cargo, and truck transport. In addition, it will provide a secure area toward the vessels and an appealing, branded image and identity toward the public. Clearly separated public and service access points also provide enhanced safety and security.

Cyberinfrastructure: In support of *Sikuliaq* shore-side operations, the SMC campus will have a designated Internet demarcation point and central network equipment data center room. All SMC facilities will be connected through new 10 Gbit Fiber Optic bundles in buried conduit – extending from the data center to each building – with weather proof network patch panel out on the dock to hard wire the vessel to the campus network. Centrally managed wireless access points and wireless coverage assessment will ensure adequate wireless coverage for the vessel, shore-side operations and staging and campus facilities. Each building will have VOIP phone systems edge switches throughout. A 100 Mbit Internet and UAF Campus connection with firewall will be managed by UAF Office of Information Technology (OIT). A video conference facility already exists in the Rae Building.

Major Equipment: New campus facilities are expected to house existing equipment along with new investments for expanded programs. SMC will continue to maintain or add:

- two forklifts at the warehouse, and a flat-bed one-ton truck;
- several complete CTD/rosette profiling systems beyond those dedicated to *Sikuliaq*: a SBE9/11 CTD on SBE32C rosette, a SBE25+ CTD on SBE32SC rosette, a SBE25 CTD on SBE55 rosette, a SBE25 CTD and an SBE19+V2 CTD;
- an Acrobat towed CTD system;
- a large inventory of mooring-based CTDs and associated sensors (fluorometers, transmissometers, nitrate sensors), several Hydrobios moored sediment traps, and associated anchors/flotation/hardware.
- several portable electric winches with 300-1000m of conducting cable and a large deep-sea hydrographic winch with 2000 m of multi-conductor cable;

- a glider shop, currently located at the Fairbanks campus, and several of its 6 Slocum gliders;
- and most other major equipment currently housed at SMC (e.g., MOCNESS, BoxCorers. Multicorer) that are technically assigned to the ship or belong to specific projects (e.g., Hydrobios Multinets).

Recommended Implementation and Phasing:

Calendar Year 2022

- *Sikuliaq* moors at new UAF pier (instead of paying for moorage at AKRR cruise ship pier)
- *Sikuliaq* spare parts are moved from old warehouse
- Old warehouse is demolished to provide greater laydown yard area and improved truck access to pier

CY2023

- UAF Facilities Services uses existing budget, staff, and contractors to provide continued maintenance and repairs to SMC buildings and pier
- *Sikuliaq* moors at new UAF pier with full suite of shore-side hookups (electrical, water, sewer, telephone, and internet) available
- Visiting vessels are permitted to dock at new UAF pier
- Science gear is accepted at new warehouse for mobilization aboard *Sikuliaq* and visiting vessels
- Laydown yard is used for mobilizing and demobilizing project gear

CY2024

- Routine *Sikuliaq* moorage and science mobilization & demobilization
- Visiting vessels mooring at UAF pier
- Science gear is accepted at new warehouse for mobilization aboard *Sikuliaq* and visiting vessels
- Laydown yard is used for mobilizing and demobilizing project gear
- Routine cathodic protection survey to ensure pier is not encountering aggressive wasting

CY2025

- Routine *Sikuliaq* moorage and science mobilization & demobilization
- Visiting vessels mooring at UAF pier
- Science gear is accepted at new warehouse for mobilization aboard *Sikuliaq* and visiting vessels
- Laydown yard is used for mobilizing and demobilizing project gear

CY2026

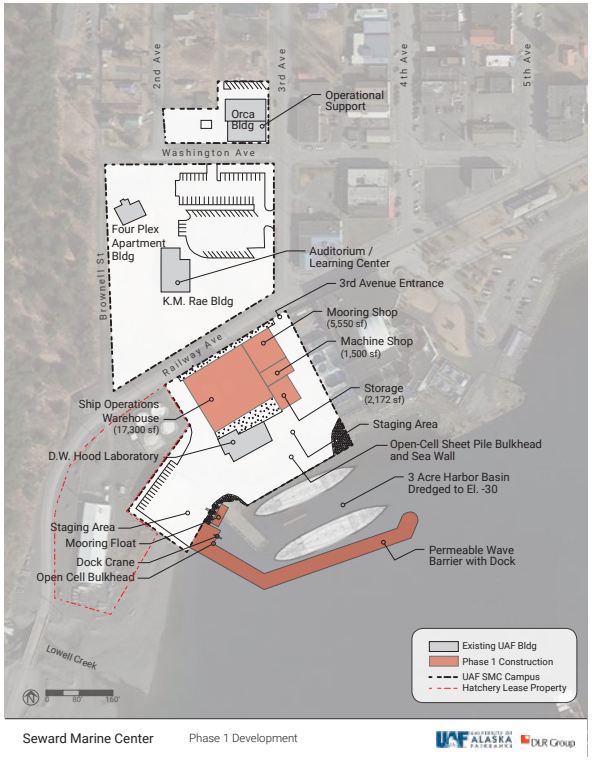
- Routine *Sikuliaq* moorage and science mobilization & demobilization
- Visiting vessels mooring at UAF pier
- Science gear is accepted at new warehouse for mobilization aboard *Sikuliaq* and visiting vessels
- Laydown yard is used for mobilizing and demobilizing project gear
- Routine cathodic protection survey to ensure pier is not encountering aggressive wasting

CY2027: Monitor growth in research external expenditures, programs and partnerships to assess feasibility of future phased improvements

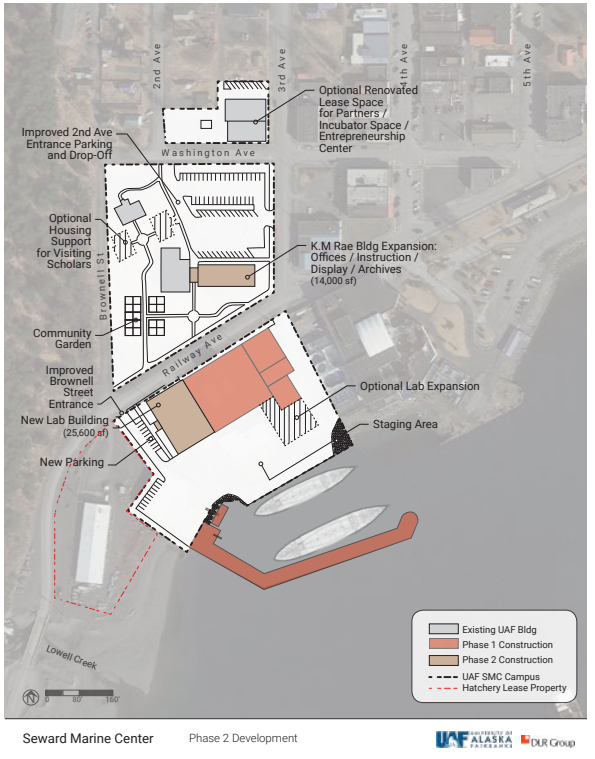
Preliminary Program Building/Space	Existing (sq-ft)	Proposed (sq-ft)
Warehouse	14,360	17,300
Machine Shop	1,500	1,500
Mooring Shop	4,850	5,550
Covered Storage	2,000	2,000
HazMat Storage	172	172
Total	**24,456**	**26,522**



Seward Master Plan Image 1



Seward Master Plan Image 2



Seward Master Plan Image 3

APPENDIX F:
SPACE ANALYSIS GRAPHICS

Figure F.1
R&D Expenditures per Student FTE
Aspirational Peer Group Comparison

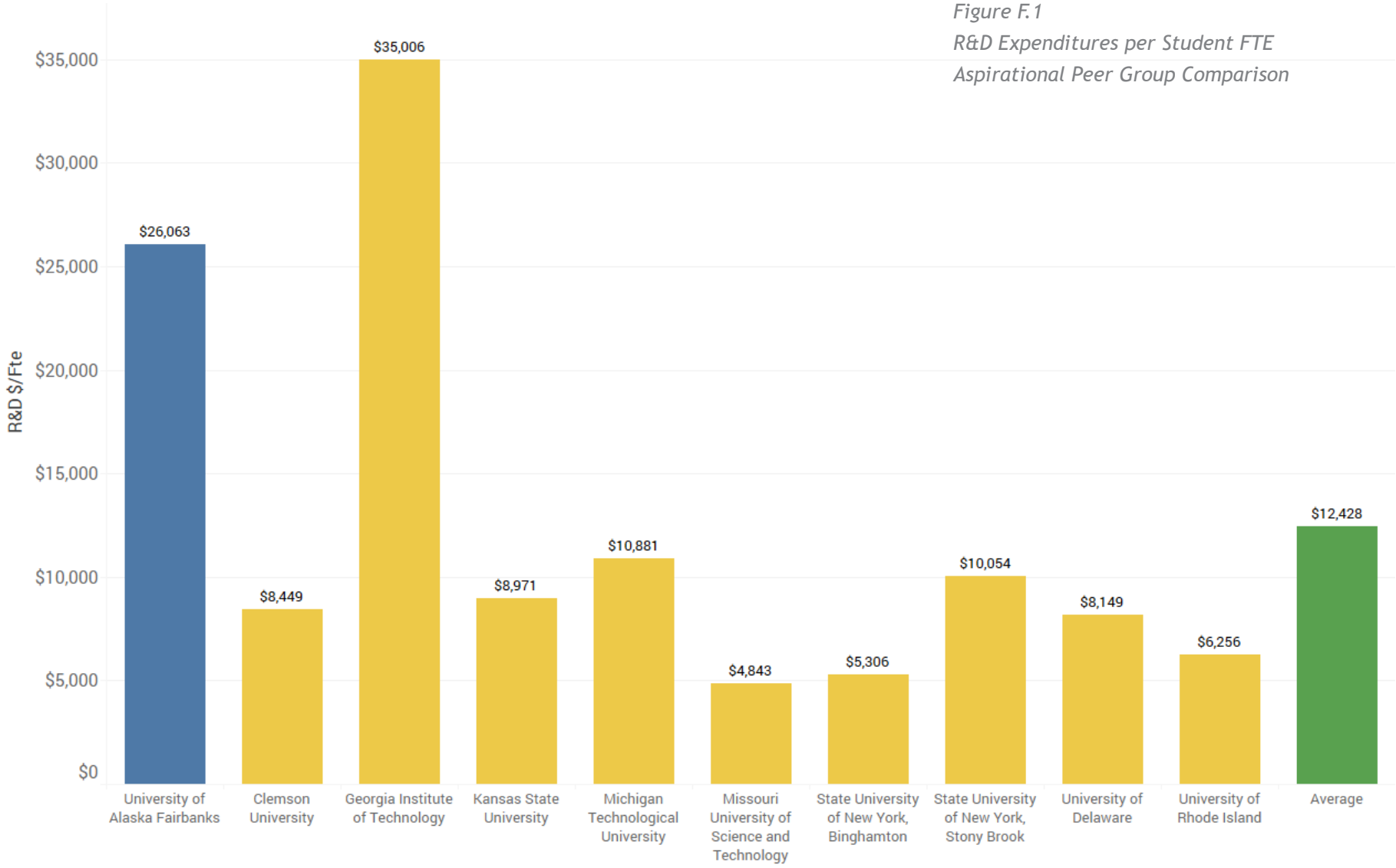


Figure F.2
Fall 2017 Space Needs by Type

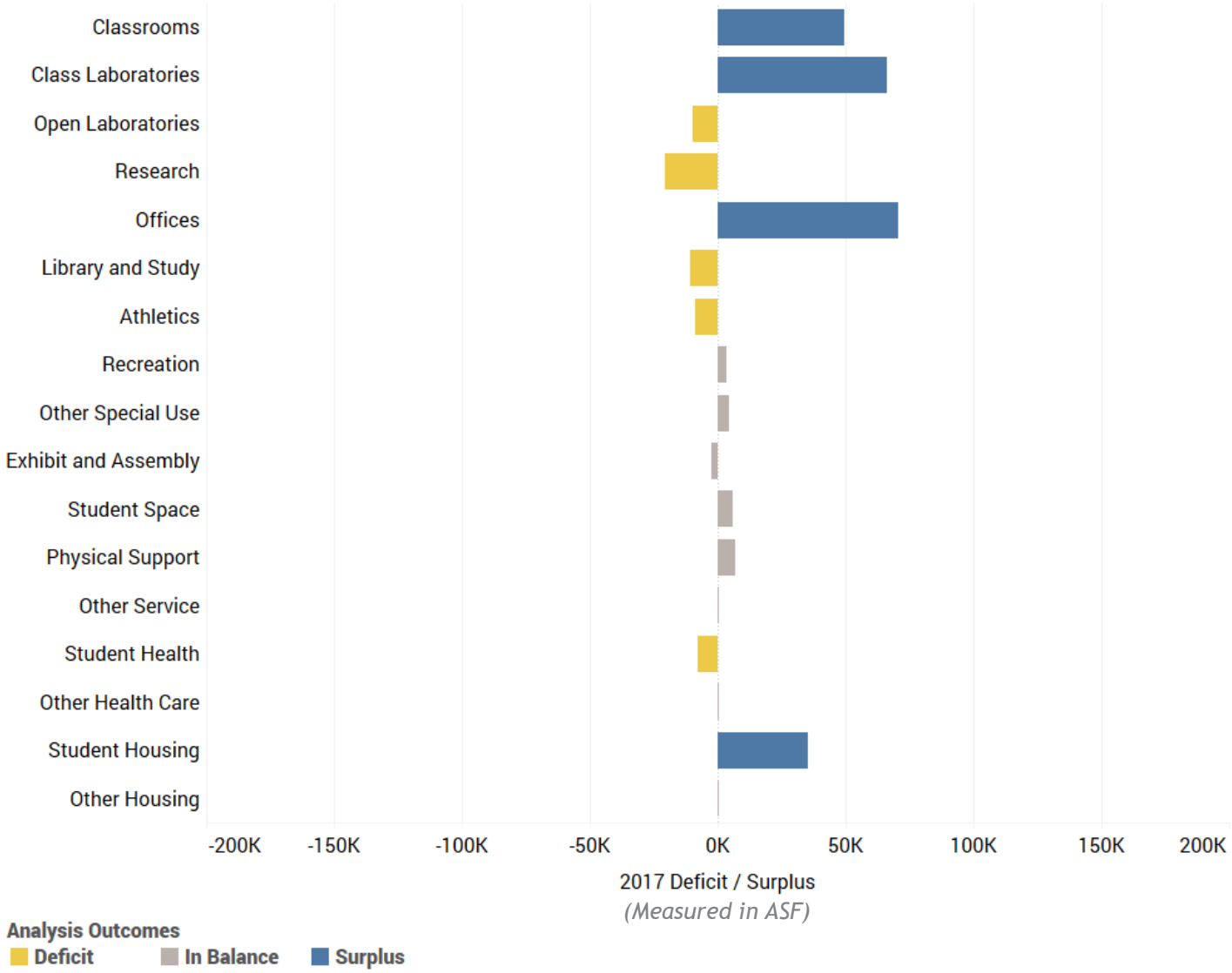


Figure F.3
2025 Space Needs by Type

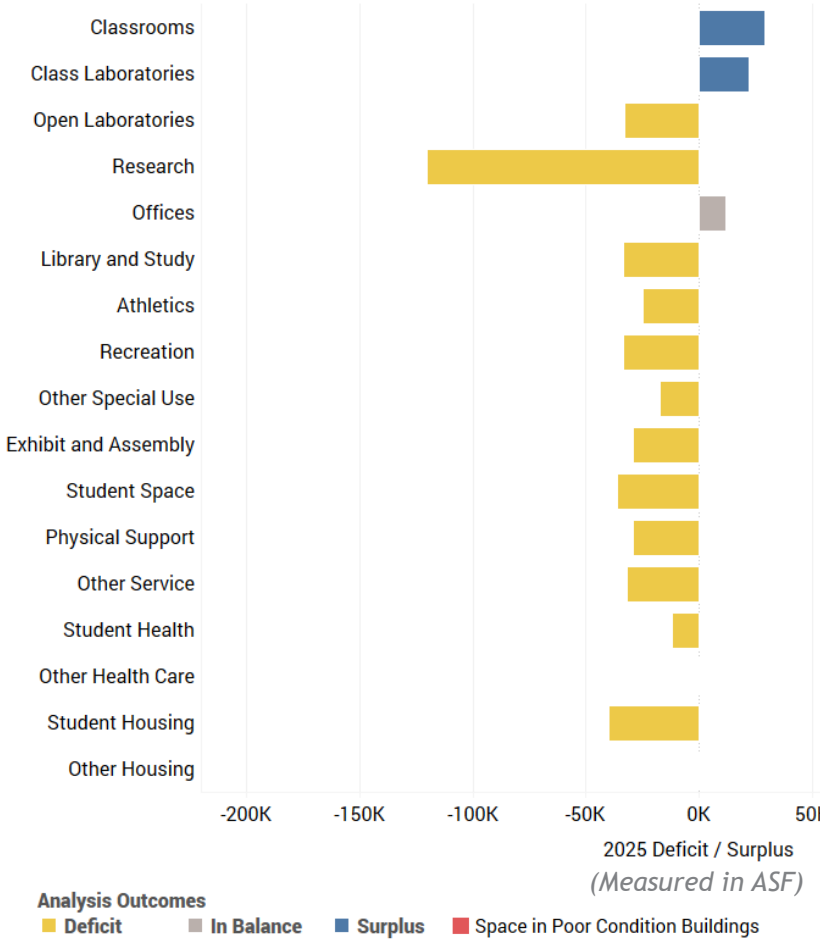
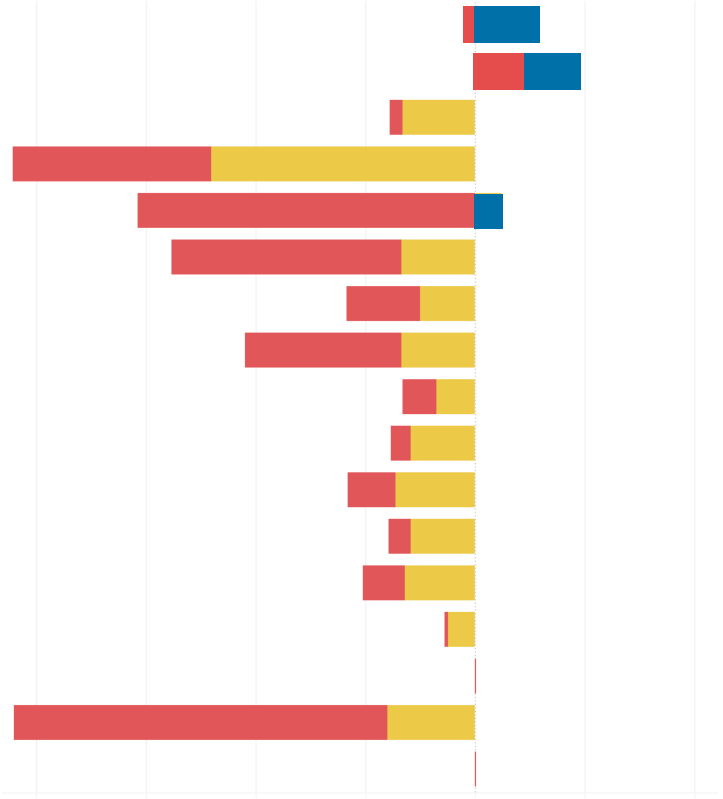


Figure F.4
2025 Space Needs by Type
Accounting for Impact of Poor Condition Space



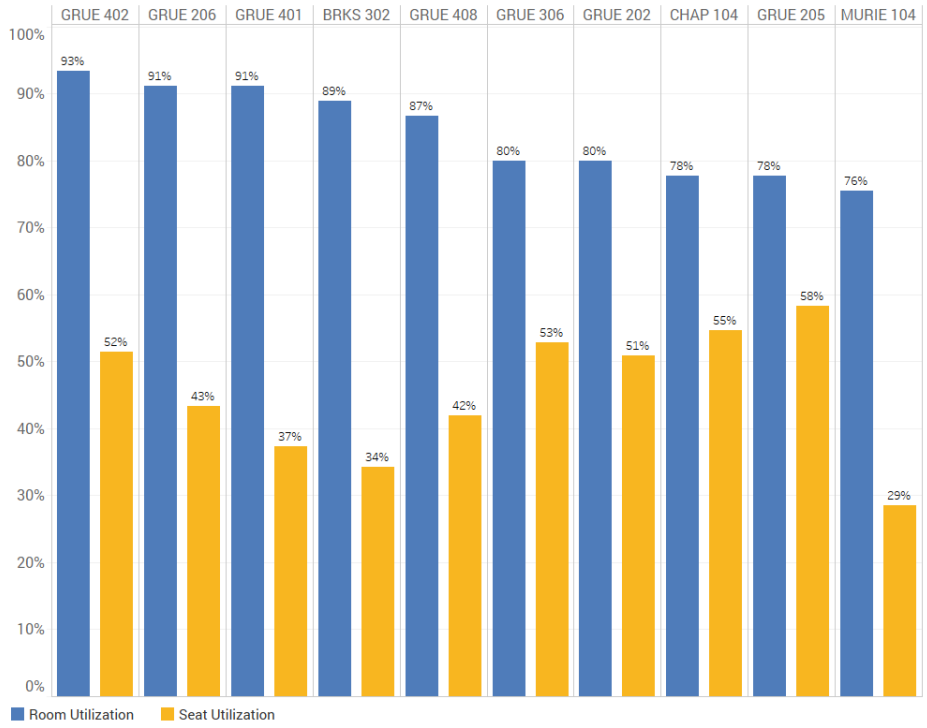


Figure F.5
Top 10 Classrooms by Overall Utilization

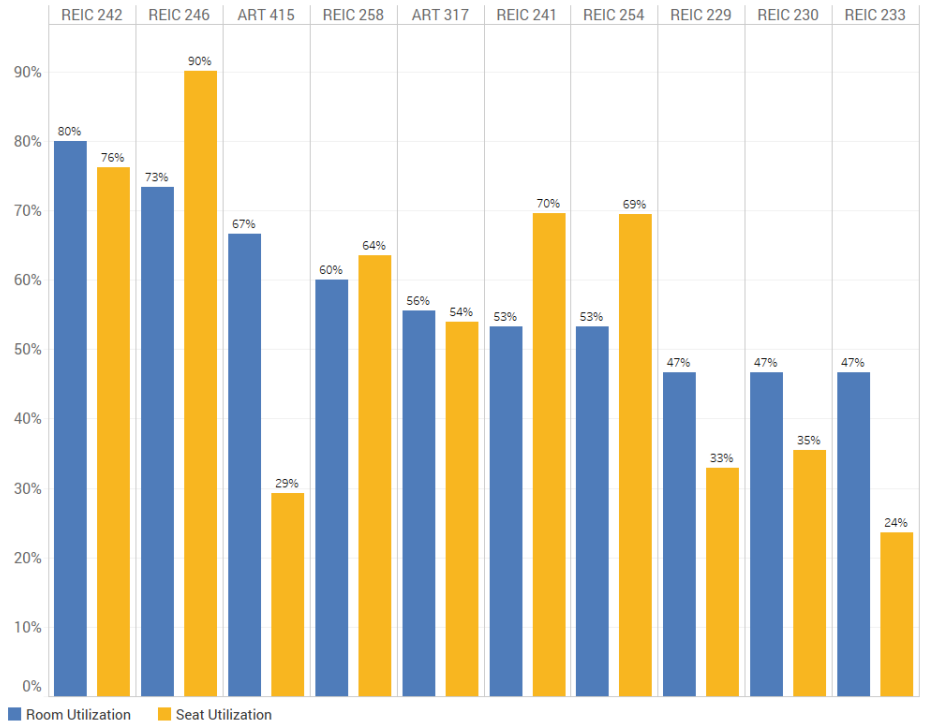


Figure F.6
Top 10 Class Laboratories by Overall Utilization

APPENDIX G:
SUPPORTING RESOURCES

In addition to the 2010 Campus Master Plan, several other plans supported development of specific areas of campus. These include, but are not limited to, the following plans.

University of Alaska Performance Goals - 2017

This set of goals from the University of Alaska System set out five major goals: increase degree attainment, provide Alaska's skilled workforce, grow our world-class research, contribute to Alaska's economic development, and operate more cost efficiently. These goals then had sub-targets within them for each of the system's institutions. These served as drivers for the Master Plan.

Patty Center Facilities Plan - 2015

On the Fairbanks and CTC campuses, approximately 5,400 students, and countless members of the surrounding community, are served by the Patty Center and Student Recreation Center facilities, subjects of this study. The Nanooks Department of Athletics is committed to instilling powerful goals and self-confidence in its student-athletes, helping them achieve distinction in the classroom, the community and in competition. The entire campus is encouraged to enjoy the benefits of the Department of Recreation, Adventure and Wellness (DRAW), which provides the University and surrounding community with opportunities to be active and healthy while embracing Alaska's unique natural treasures. The University, its Department of Athletics and DRAW are committed to having students reach their full potential while embracing Alaska, its wilderness and its outdoor lifestyle.

This Facilities Plan has been developed as a strategy to improve, expand and, in some cases, repair the existing Athletics and DRAW facilities to enable these commitments to be met in a manner consistent with the quality and intent of the mission of the University of Alaska Fairbanks' and those of each of the departments concerned.

Sustainability Master Plan - 2014

The Sustainability Master Plan was developed to further integrate sustainability across campus, as well as to support future improvements in UAF's scoring and rating under the AASHE STARS program. It is a product of input from across campus – including a Steering Committee, small group interviews, a campus survey and input from a range of subject matter experts.

UAF Fire Station Concept Design - 2014

The Whitaker Hall Replacement Fire Station concept design includes the conceptual requirements for a new integrated facility which will be shared between the Fire Department, Police Department and the Community and Technical College (CTC). While each department is separate, through programmatic synergies and the sharing of space, they are also linked together within a single building to provide a rich learning experience. Designed as a single phased facility, both capital and long-term operational savings will result.

Back cover:
An ice carving of the UAF mascot.
Photograph by JR Ancheta

West Ridge Deferred Maintenance Master Plan - 2014

To address the multiple challenges on West Ridge, an executive committee of faculty, staff, and students was formed, aided by the local consulting firm Bettisworth North Architects and Planners, to create a master plan for the deferred renewal on West Ridge. Facility audits were completed, departmental programming and research needs were assessed, and facility functionality was explored. The resulting plan is a comprehensive, multi-year approach to not only renew UAF's facilities but also improve space utilization and functionality and ensure UAF's position as a leader in research and discovery for Alaska and the Arctic.

Exterior Lighting Master Plan - 2013

The intent of this document is to establish guidelines for exterior lighting design on the University of Alaska, Fairbanks Campus. It is a companion document to the 2010 Campus Master Plan.

The campus master exterior lighting plan will strive to create a safe, environmentally responsible outdoor environment that supports the institutional mission at UAF. The plan seeks to utilize proven energy efficient lighting and control solutions to help reduce the carbon footprint of the university, foster a sense of responsible conservation and night sky preservation, and with public perception. The plan also endeavors to provide students with safe and comfortable outdoor environment by utilizing a common theme of well-placed and shielded luminaires to provide the right amount of light for the outdoor activities.

Salisbury Theatre Renovation and Multi-Use Reports - 2012/13

In January of 2012, University of Alaska Fairbanks selected the design team of BDS Architects and Auerbach Pollock Friedlander Theatre Consultants (APF) to develop a Program and Planning Report for the Renovation of the Fine Arts Building Salisbury Theatre. The Report is the first step in a process to address the many facility needs at the Salisbury. The goal of this report is to identify facility deficiencies that are affecting program delivery and building operation and to provide conceptual level solutions with costs.

The overall goal of the project is to provide appropriate facilities for contemporary university Theatre and Film programs within the Fine Arts building at UAF. The findings of the design team point to a facility that is in need of substantial renovation and upgrade. Currently the facility is not meeting the needs of the students or faculty to adequately deliver either Theater or Film programs.

Troth Yeddha' Concept Plan – 2013

The concept plan for the Indigenous Studies Center at Troth Yeddha' was critical in informing the shape of the building and the landscaping on the site of this upcoming landmark facility.

Icon Credit

nounproject.com icons from various artists were used throughout the creation of this document to aid in document navigation and to enhance the student engagement report.



DLR Group

Architecture Engineering Planning Interiors