

**University of Alaska Deferred Maintenance, Renovation,
Repair and Equipment**

FY2020 Request: \$9,000,000
Reference No: 45326

AP/AL: Appropriation

Project Type: Deferred Maintenance

Category: University

Location: Statewide

House District: Statewide (HD 1-40)

Impact House District: Statewide (HD 1-40)

Contact: Michelle Rizk

Estimated Project Dates: 07/01/2019 - 06/30/2024

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Brief Summary and Statement of Need:

The University of Alaska (UA) is responsible for maintaining facilities and infrastructure across the state. UA continues to be good stewards of these valuable assets, while exploring ways to reduce its facilities footprint and long-term operating costs. UA has over 400 facilities, with an average age of 33 years, an inflation-adjusted value of \$3.9 billion, and a deferred maintenance/renewal & repurposing (DM/R&R) backlog in excess of \$1 billion.

Funding:	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	Total
1197 AK Cap Inc	\$9,000,000						\$9,000,000
Total:	\$9,000,000	\$0	\$0	\$0	\$0	\$0	\$9,000,000

<input type="checkbox"/> State Match Required	<input type="checkbox"/> One-Time Project	<input type="checkbox"/> Phased - new	<input type="checkbox"/> Phased - underway	<input checked="" type="checkbox"/> On-Going
0% = Minimum State Match % Required		<input type="checkbox"/> Amendment	<input type="checkbox"/> Mental Health Bill	

Operating & Maintenance Costs:

	<u>Amount</u>	<u>Staff</u>
Project Development:	0	0
Ongoing Operating:	0	0
One-Time Startup:	0	0
Totals:	0	0

Prior Funding History / Additional Information:

- Sec1 Ch19 SLA2018 P11 L26 SB142 \$2,000,000
- Sec1 Ch1 SLA2017 P19 L21 SB23 \$5,000,000
- Sec1 Ch38 SLA2015 P17 L24 SB26 \$3,000,000
- Sec1 Ch18 SLA2014 P78 L29 SB119 \$12,000,000
- Sec1 Ch18 SLA2014 P78 L32 SB119 \$2,503,000
- Sec1 Ch18 SLA2014 P79 L4 SB119 \$4,270,000
- Sec1 Ch18 SLA2014 P79 L7 SB119 \$500,000
- Sec1 Ch16 SLA2013 P97 L24 SB18 \$30,000,000
- Sec1 Ch17 SLA2012 P152 L3 SB160 \$450,000
- Sec1 Ch17 SLA2012 P152 L10 SB160 \$37,500,000
- Sec1 Ch5 SLA2011 P117 L30 SB46 \$2,000,000
- Sec1 Ch5 SLA2011 P118 L18 SB46 \$87,500,000
- Sec4 Ch43 SLA2010 P14 L18 SB230 \$37,500,000
- Sec1 Ch15 SLA2009 P37 L4 SB75 \$3,200,000

Project Description/Justification:

University of Alaska

**FY2020 Priority Deferred Maintenance (DM) and Renewal and Repurposing (R&R) Projects
State Appropriations (in thousands of \$)**

The University of Alaska (UA) is responsible for maintaining facilities and infrastructure across the state. UA continues to be good stewards of these valuable assets, while exploring ways to reduce its facilities footprint and long-term operating costs. UA has over 400 facilities, with an average age of 33 years, an inflation-adjusted value of \$3.9 billion, and a deferred maintenance/renewal & repurposing (DM/R&R) backlog in excess of \$1 billion. UA requests \$50 million in FY2020 for deferred maintenance/renewal & repurposing as follows:

- UAA Main Campus 13,100.0*
- UAA Community Campuses 3,100.0*
- UAF Main Campus 28,000.0*
- UAF Community Campuses 2,500.0*
- UAS Main & Community Campuses 3,000.0*
- SW Statewide 300.0*

Priorities and cost estimates shown below may need to be changed to accommodate emergency maintenance projects not listed, actual project costs, and other considerations.

UAA Main Campus

Priority	Project Title	Projected Cost	Location	HD
1	Regulatory Compliance, Safety Improvements, and Code Upgrades	\$1,000.0	Anchorage	17-I
2	Campus Building Envelope & Roof Systems Renewal	\$1,000.0	Anchorage	17-I
3	Campus Exterior Infrastructure and Signage Renewal	\$1,300.0	Anchorage	17-I
4	Campus Building Interior & Systems Renewal	\$1,745.0	Anchorage	17-I
5	Consortium Library Old Core Mechanical Upgrades	\$5,530.0	Anchorage	17-I
6	EM1 and EM2 Mechanical	\$525.0	Anchorage	17-I
7	Campus Access/Security Modernization Phase 1	\$2,000.0	Anchorage	17-I

UAA Regulatory Compliance, Safety Improvements, and Code Upgrades

(GF: \$1,000.0, NGF: \$0.0, Total: \$1,000.0)

UAA requires significant and ongoing investment in existing buildings to maintain them for safe occupancy in compliance with regulation, code and safety improvements. One priority target for these funds is the replacement of expired Tritium Emergency Exit signs across campus with LED Emergency Exit signs. This effort impacts almost all of our existing facilities, and improves safety for all community members accessing UAA's campus.

UAA Campus Building Envelope & Roof Systems Renewal

(GF: \$1,000.0, NGF: \$0.0, Total: \$1,000.0)

This project will address campus-wide deferred maintenance and renewal and renovation requirements for building envelope and roof systems. It will include roof repair and replacement, doors, windows, vapor barriers, siding, weatherization, insulation, and other building envelope issues. One priority project would address the Wells Fargo Sports Complex roof system, which was built in 1977, is beyond its useful life, and is in need of renewal. This facility supports student recreation, Hockey, and other student support services. Another high priority roof is the Cuddy Hall roof, which supports our culinary arts program and holds multiple campus and public events.

UAA Campus Exterior Infrastructure and Signage Renewal

(GF: \$1,300.0, NGF: \$0.0, Total: \$1,300.0)

The UAA campus is over 40 years old and many of the buried utilities, fire hydrants, waterlines, drainage infrastructure, roads, trails, sidewalks, parking areas, curbs and gutters are part of the original construction or have been impacted by construction, repair and renovation projects over the years. The buried piping is beyond its useful life, which has resulted in increased failures primarily on west campus. This has resulted in water shutdowns, building closures, and sinkholes due to corrosion and piping failures. Additionally, the aged surfaces have resulted in uneven surfaces, lack of adequate sidewalks and other deficiencies that pose a safety hazard or are increasingly susceptible to additional damage. The safe, reliable and continued business function dictates the need to upgrade and repair the infrastructure and surfaces to maintain a safe and effective environment for students, staff and the public. Additionally, this project improves the campus user experience by improving upon the wayfinding signage.

UAA Campus Building Interior & Systems Renewal

(GF: \$1,745.0, NGF: \$0.0, Total: \$1,745.0)

Many of the original buildings on the UAA campus were constructed in the early- to mid-1970s and the building systems are beginning to fail, are no longer adequate for the current demands, and require replacement or upgrading. The mechanical, electrical and HVAC systems in particular fall into this category. Replacement parts for many of these systems are no longer available. The older systems are very expensive to operate due to their low efficiencies. Replacement of these systems would allow for increased energy efficiencies and better environmental control throughout the building. This project will replace failing piping, inadequate electrical systems, inefficient lighting, boilers, fans, deficient vav boxes and upgrade the building automation system controls. One of our immediate priorities is the Eugene Short Hall (ESH). ESH is one of our most heavily scheduled classroom facilities on west campus impacting multiple programs, and houses the University Police Department, Parking Services, and the Department of Health, Physical Education & Recreation.

UAA Consortium Library Old Core Mechanical Upgrades

(GF: \$5,530.0, NGF: \$0.0, Total: \$5,530.0)

The original HVAC systems consist, for the most part, of equipment over 46 years old located within the four central building cores. The boilers, main supply/exhaust fan units, heating/cooling coils, galvanized piping and humidification systems have all reached the end of their useful life. Major component parts are no longer available for these units. Heating system piping and coils are filled with sedimentation. Control systems are no longer able to properly regulate airflow resulting in irregular temperatures and conditions within the building. The 2004 library addition contains newer HVAC systems with different control and delivery systems that have resulted in incompatibilities

between the two systems and has affected the efficiencies of both systems. The Library supports all programs on campus, and is a cornerstone of UAA’s partnership with Alaska Pacific University.

UAA EM1 and EM2 Mechanical

(GF: \$525.0, NGF: \$0.0, Total: \$525.0)

The energy modules (EM1, EM2) were constructed in 1977 and provide heating and cooling services for a number of campus facilities. The energy module boilers, pumps and piping systems are over 40 years old and have been failing due to age, corrosion and fatigue. Many of these failures have occurred during the winter months when additional stresses are placed on the systems due to increased heating demands and environmental impacts. These failures further impact other systems, thus driving up the associated costs. Emergency repairs are very expensive and have a severe impact on students, faculty and staff working in the buildings served by these modules. EM1 is the current priority, which serves the Wells Fargo Sports Center and the Student Union.

UAA Campus Access/Security Modernization Phase 1

(GF: \$2,000.0, NGF: \$0.0, Total: \$2,000.0)

Concerns raised by faculty and staff based on the rise of active shooter incidents nationwide, prompted a review of the university's ability to secure buildings, classrooms, and other facilities manually or automatically in the event of any incident that would require persons on UAA campuses to shelter-in-place. Initial review of the level of effort involved to upgrade all room entrances with appropriate locking mechanisms and automation revealed a multi-year, multimillion-dollar effort. This project is developed to fully assess the level of effort, design a plan of execution, and implement the first increment of security measures for the highest priority facilities and/or spaces. Follow-on phases will be developed and identified based on the planning and design efforts of this project. This project will support access and security for the entire UAA main campus, impacting all programs and improving safety and access for the entire UAA Community.

UAA Community Campuses

Priority	Project Title	Projected Cost	Location	HD
1	Prince William Sound College Student Housing Reroof (2 Units)	\$196.0	Valdez	9-E
2	Prince William Sound College Campus Renewal	\$181.7	Valdez	9-E
3	Kodiak College Campus Renewal	\$611.7	Kodiak	32-P
4	Matanuska-Susitna College Campus Renewal	\$943.6	Palmer	11-F
5	Kenai Peninsula College Campus Renewal	\$958.0	Soldotna	30-O
6	Prince William Sound College Multipurpose Training Room Reconfiguration	\$150.0	Valdez	9-E
7	Kenai Peninsula - Kachemak Bay Campus Renewal	\$59.0	Homer	31-P

UAA Prince William Sound College Student Housing Reroof (2 Units)

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(GF: \$196.0, NGF: \$0.0, Total: \$196.0)

The three student housing units were originally constructed in 1966 and completely renewed between 2008-2010. Roofing was not completed on two of three student-housing units and these facilities are showing damage from ice damming and resultant leakage. The third building roof was replaced, has a different orientation, and is not showing signs of damage or leakage. In 2014, a professional assessment was complete offering a number of options to rectify the problem. Most of the problem is attributed to the low slope (2:12), lack of correct ventilation, and lack of adequate insulation in the existing building roofs. The most appropriate and permanent solution, but most costly, is to build a 6:12 roof truss system over top of the existing roof and add insulation or potentially replace the roof from the wall top plate up, to include new trusses, decking, insulation and metal roofing appropriate for the heavy snow loads and long winters of Valdez.

UAA Prince William Sound College Campus Renewal

(GF: \$181.7, NGF: \$0.0, Total: \$181.7)

The Growden-Harrison building, housing the majority of Price William Sound Colleges academic programs, was originally built shortly after the 1964 earthquake as an elementary school and was added onto in a piecemeal fashion in the following years. This has resulted in aging mechanical, electrical, HVAC systems that are currently undersized for the facility and part of the system is known to contain asbestos This request prioritizes the replacement of the original building supply piping.

UAA Kodiak College Campus Renewal

(GF: \$611.7, NGF: \$0.0, Total: \$611.7)

The buildings on the Kodiak Campus were constructed in the early to mid-1970's. The original windows suffer from worn seals that cause air infiltration. The mechanical and electrical systems are in need of renewal to meet the increased student demand and increased use of new technology. Roofing repairs are required, specifically for the campus center. Parking lot lighting repair and upgrades are required for improved energy efficiency, security and safety. This is a campus wide effort benefiting a majority of programs offered at the Kodiak College.

UAA Matanuska-Susitna College Campus Renewal

(GF: \$943.6, NGF: \$0.0, Total: \$943.6)

This project will address campus-wide deferred maintenance issues and renewal and renovation requirements for the Mat-Su campus. The buildings on the Mat-Su campus are 15-40 years old and their roofs need to be replaced. With several of MSC's buildings reaching 35-40 years of age, it is prudent to plan for the replacement of building components during the next few years. Boiler systems in this region are an essential component. The boilers range in age from 1979 to 1994, and upgrades (with the oldest first) would allow for greater cost savings through energy efficiency as 80% efficiency boilers would be replaced with 95% efficiency boilers. The original doors and hardware are still in use across the campus with some units being over 40 years old and heavily used. As these units wear, energy leaks are created within the buildings, which increases the cost of operation, and wear on other systems, resulting in an unbalanced environment within the buildings. This project will upgrade the door hardware with access control security, which will resolve the air balancing, improve energy efficiency and provide increased security and safety of our students.

UAA Kenia Peninsula College Campus Renewal

(GF: \$958.0, NGF: \$0.0, Total: \$958.0)

The Kenai River Campus includes four buildings built between 1971 and 1983. Each building is of different quality having been constructed using different construction methods, materials, and energy efficiencies. With the exception of some painting and the Ward building renewal in 2005, the exteriors of these buildings have not been upgraded since they were built.

- A number of roofs are at or have exceeded their life cycle at the Kenai River Campus. Some roofs contain asbestos products, which will require some abatement prior to replacement.

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- The original methods of construction included single pane windows, door glass, and aluminum store fronts that do not block the cold and increase utility costs and extreme campus-user discomfort during the extreme winters.
- Many of the entrances are not covered and allow the buildup of ice and snow at the critical slip/trip points.
- The air handling equipment and associated ductwork in these buildings cannot supply the quantities of air required by current mechanical standards. The university needs to replace the heat plant and air handling equipment for these facilities prior to a catastrophic failure results in an emergency replacement.

UAA Prince William Sound College Multipurpose Training Room Reconfiguration

(GF: \$150.0, NGF: \$0.0, Total: \$150.0)

To improve space utilization and promote more space flexibility, this project ultimately will renovate the existing space and remove outdated functions that are no longer supported. Additionally, a major priority is the mechanical system, which will be replaced as part of this project. This space will be used by various academic programmatic uses.

UAA Kenai Peninsula College – Kachemak Bay Campus Renewal

(GF: \$59.0, NGF: \$0.0, Total: \$59.0)

A significant portion of the Pioneer Hall campus building was originally built in 1988 as a post office. The roof, mechanical, and electrical systems are original and are in need of updating. This request will continue the renewal of the mechanical systems with updated hydronic piping. This facility provided to the community academic instruction, special interest calls, and vocation/workforce development.

UAF Main Campus

Priority	Project Title	Projected Cost	Location	HD
1	Fairbanks Campus Building Interior & Systems Renewal	\$14,700.0	Fairbanks	5-C
2	Building Envelope & Roof Systems Renewal	\$3,100.0	Fairbanks	5-C
3	Regulatory Compliance	\$4,650.0	Fairbanks	5-C
4	Campus Infrastructure & Sign Renewal (Exterior)	\$6,450.0	Fairbanks	5-C

UAF Fairbanks Campus Building Interior & Systems Renewal

(GF: \$14,700.0, NGF: \$0.0, Total: \$14,700.0)

The interior systems projects address buildings' mechanical, electrical and HVAC systems to increase efficiency and reduce maintenance costs. Due to the age of UAF buildings, most projects have asbestos removal aspects and require upgrades to current codes and standards.

UAF Fairbanks Campus Building Interior & Systems Renewal			
Building Name and Project Title	Year Built	Building Purpose/Function	Estimated Total Project Cost
Bartlett Hall: Plumbing replacement	1970	Student Housing	\$ 9,955,000
Moore Hall: Plumbing replacement	1966	Student Housing	\$ 500,000
Cutler Apartment Complex: Fire alarm compliance upgrades	1985	Student Housing	\$ 995,000
Moore-Bartlett-Skarland (MBS): Fire alarm control panel replacement	1966/70/64	Student Housing	\$ 700,000
Utilities: Six inch water line stabilization		Infrastructure	\$ 150,000
Skarland Hall: Elevator Replacement	1964	Student Housing	\$ 200,000
Campus wide aged restroom renovations: U Park Building	1957	Academic	\$ 250,000
Campus wide aged restroom renovations		Infrastructure	\$ 275,000
Gruening Building: First floor refurbishment	1973	Academic	\$ 350,000
Bunnell Building: First floor refurbishment	1959	Academic	\$ 500,000
Constitution Hall: Elevator concept planning	1955	Student Services	\$ 200,000
Lena Point Juneau Center: Additional restroom installation	2008	Research	\$ 155,000
Administrative Services Building: Interior refurbishment	1985	Administrative	\$ 350,000
Emergency repairs reserve fund			\$ 120,000
		TOTAL	\$ 14,700,000

The descriptions below are the highest priority projects within this request:

Bartlett Hall Plumbing Replacement:

The 48-year-old plumbing in one of UAF’s busiest residence Hall is actively failing and needs to be replaced. Over the last two years, the lateral drain lines running between the fixtures and main drain system failed approximately eleven times, leaking domestic waste onto students from ceilings in both the shower and toilet rooms, and required emergency repairs. Repairs often required that the restrooms and showers be taken off line and unavailable to students living in that Hall. The leaks can only be repaired on approximately 10 percent of the system by selective demolition of the ceiling spaces. Ninety percent of the plumbing is inaccessible, yet is still susceptible to leaks.

This project will completely demolish and replace the failing plumbing lines within Bartlett Hall. During the project, the restrooms will be reconfigured to better meet the needs of today’s students.

Moore Hall Plumbing Replacement:

Moore Hall is 52 years old and has the original plumbing, similar to Bartlett Hall. The plumbing has held up slightly better than Bartlett, but has begun to fail in the last year leaking domestic waste from the ceilings in the restrooms. Already this academic year, the plumbing has failed twice, requiring the facilities to be closed to students for repairs. This project will be similar to the Bartlett project with a complete plumbing replacement. This request will allow design to begin to reveal the full scope of the issue and develop concept plans for replacement.

Cutler Apartment Complex Fire Alarm Compliance Upgrades:

The Cutler Apartment Complex houses up to 240 residents and is the most popular student housing on campus. The fire alarm system for the Complex is not compliant with modern code, as the alarms are not interconnected within each block of apartments. This is a serious safety issue and must be addressed as

soon as possible. The project requires full replacement of the fire alarm control panel, detectors, annunciation, and wiring.

MBS Fire Alarm Control Panel Replacement:

The Moore-Bartlett-Skarland complex houses up to 786 students during the academic year and is used as summer housing for camps and the State Forestry firefighters. The existing Fire Alarm Control Panels (FACP) and associated detectors in the complex are outdated and the manufacturer, Siemens Industries, no longer supports or carries parts for it. Two of the FACPs in the complex have failed this academic year. Because new spare parts are no longer available, replacement parts to keep the residential complex operational were pulled from dwindling stock kept within Facilities Services. This project will replace all the FACPs and detectors in the complex.

UAF Building Envelope & Roof Systems Renewal

(GF: \$3,100.0, NGF: \$0.0, Total: \$3,100.0)

Projects within this category includes roof repairs and replacements, doors, windows, vapor barriers, painting, siding, weatherization, insulation, foundations, and other building envelope issues. High performing building envelopes are critical to protect a building’s interior finishes and structural integrity. The following projects address the roofs and windows in UAF’s inventory that are in the worst condition.

UAF Building Envelope & Roof Systems Renewal			
Building Name and Project Title	Year Built	Building Purpose/Function	Estimated Total Project Cost
Window replacement at Kodiak	1991	Research	\$ 300,000
Administrative Services Building: Roof replacement	1985	Administrative	\$ 415,000
Cutler Apartment Complex: 400 block roof replacement	1985	Student Housing	\$ 785,000
Eielson Building: Window replacement	1940	Administrative	\$ 1,050,000
Signer's Hall: Window replacement	1931	Administrative	\$ 550,000
		TOTAL	\$ 3,100,000

Window Replacement at Kodiak:

The original, 27 year old, wood framed window system on the southeast side of the Kodiak FITC building has failed, allowing significant water intrusion into the building’s wall cavities. Many of the windowsills and much of the interior gypsum board is mildewed and failing. The severe saltwater, wind, and sun exposure has also ruined the exterior wood siding and compromised the exterior thermal envelope on this side of the building. This project will demo this exterior wall and install a new storefront system on the first floor of the building, increasing energy efficiency and protecting the interior finishes and equipment.

Administrative Services Building Roof Replacement:

The Administrative Services building’s 33-year-old roof is poorly insulated and not vented. The building experiences severe ice damming and leaks to the interior. The asphalt shingles are worn out. This project will replace the roof with a ventilated asphalt shingle roof system, add insulation to increase energy efficiency and install new gutters.

Cutler Apartment Complex 400 Block Roof Replacement:

The Cutler Apartment complex 400 Block was constructed 33 year ago and has the original roof. The building experiences leaks into student living quarters on a regular basis and has been patched multiple times over the last five years. Some of the roof structural members are rotted due to the on-going leaks. The

project will replace the roof and failed structural members and increase insulation value. Project also includes demo of clerestories over bathrooms to mitigate mold and mildew issues in each building.

Eielson Building Window Replacement:

The Eielson Building, built in 1940, has the original single pane, double hung wood framed windows. The building is very inefficient and costly to heat because of the window system. Many windowsills are dry rotted from moisture intrusion. Project will replace the 168 exterior windows with energy efficient fiberglass windows.

Signer’s Hall Window Replacement:

Similar to the Eielson Building, Signer’s Hall (built in 1931) has the original single pane, double hung, wood framed windows. The building is very inefficient and costly to heat because of the window system. Many windowsills are dry rotted from moisture intrusion. Project will replace the 53 exterior windows with energy efficient fiberglass windows. Project will also replace the east entry doors with new storefront systems.

UAF Regulatory Compliance

(GF: \$4,650.0, NGF: \$0.0, Total: \$4,650.0)

Complying with regulations including building and life safety codes, the Americans with Disabilities Act and Title IX is a top priority at UAF. Remaining in compliance requires an on-going effort to modify and upgrade exterior hardscapes, elevators, building passageways, toilet and locker rooms, signage and security infrastructure.

UAF Regulatory Compliance			
Building Name and Project Title	Year Built	Building Purpose/Function	Estimated Total Project Cost
Patty Center: Pool refurbishment (phase 1)	1957	Student Services	\$ 2,000,000
Atkinson Power Plant: Continuous opacity monitoring device replacement for boiler #3	1964	Infrastructure	\$ 650,000
Community & Technical College (CTC): Paint booth renovation	2005	Academic	\$ 2,000,000
		TOTAL	\$ 4,650,000

Patty Pool Refurbishment (phase 1):

Patty Pool is used extensively by the UAF swim team, private Fairbanks area competitive teams, West Valley High School swim team and the public. The pool deck does not have sufficient air supply and exhaust to meet code requirements for adequate air exchange. Maintenance personnel and pool staff maintain a safe environment during pool use through manual monitoring of the indoor air quality and limiting use of the pool. Both processes require additional staffing and operating funds to protect the users of the pool. Work includes replacing the pool deck ventilation system to meet current required number of air exchanges.

Atkinson Power Plant Continuous Opacity Monitoring Device Replacement for Boiler #3

The Continuous Opacity Monitoring (COM) devices are required by the Alaska Department of Environmental Conservation to ensure proper combustion within UAF’s coal fired power plant. COM devices measure the presence and concentration of particulate matter in the power plant’s exhaust system and allow regulatory agencies to determine if the plant is operating within prescribed limits. The COM device for the existing UAF power plant, boiler #3, does not operate properly and must be

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replaced. This project will install a new device and modify the existing stack ducting to meet the installation requirements.

Community & Technical College (CTC) Paint Booth Renovation:

Renovate a portion of the CTC hangar to accommodate a Federal Aviation Authority (FAA) required instructional paint booth. Includes structural modifications, electrical, and mechanical upgrades to the hangar.

UAF Campus Infrastructure & Sign Renewal (Exterior)

(GF: \$6,450.0, NGF: \$0.0, Total: \$6,450.0)

The exterior infrastructure projects address the campus roadways, trails, parking, sidewalks, plazas, outdoor lighting, and utility systems to address safety hazards and improve student life.

UAF Campus Infrastructure & Sign Renewal (Exterior)			
Building Name and Project Title	Year Built	Building Purpose/Function	Estimated Total Project Cost
Utilities sewer upgrade	1972	Student Housing	\$ 2,600,000
Core campus district cooling/heating loop and pedestrian access		Infrastructure	\$ 500,000
Core campus district cooling/heating loop and pedestrian access: Lower campus chilled water supply		Infrastructure	\$ 150,000
West Ridge district chilled water		Infrastructure	\$ 350,000
Moore-Bartlett-Skarland (MBS): Exterior lighting	1966/70/64	Student Housing	\$ 320,000
Pathway Lighting Upgrades		Utilities	\$ 60,000
MEFEC-Septic tank replacement	1979	Infrastructure	\$ 150,000
Elvey Building: Walking deck damage repair	1970	Research	\$ 150,000
modernization		Research	\$ 300,000
Wood Center east entry safety upgrades		Infrastructure	\$ 150,000
Eielson north and south entry repair	1940	Administrative	\$ 75,000
MacLean Inupiat House: ADA ramp repairs	1997	Student Housing	\$ 140,000
Convert feeders from 4KV to 12KV		Utilities	\$ 500,000
Bunnell parking lot head bolt heater outlet replacement	1959	Academic	\$ 500,000
Parking lot repairs		Infrastructure	\$ 100,000
O'Neill Building: Exterior stair replacement	1973	Research	\$ 85,000
Multiple failing fuel tanks replacements across state: Seward Marine Center	1976	Research	\$ 250,000
Multiple failing fuel tanks replacements across state: campus wide fuel tank replacement		Infrastructure	\$ 60,000
Rasmuson Library: Entry snow melt study	1970	Student Services	\$ 10,000
		TOTAL	\$ 6,450,000

The descriptions below are the highest priority projects within this request:

Utilities Sewer upgrade:

The sewer between the Hess Village apartment complex and UAF's main sewer line relies on a lift station to operate. The lift station is original to the complex (constructed in 1972) and is a continual maintenance issue. Project will install a new gravity sewer line from Hess Village lift station to the main line along North Chandalar. Project will eliminate the need for the high maintenance lift station and the long thin-walled steel force main.

Core Campus District Cooling/Heating Loop and Pedestrian Access:

The UAF campus core chilled water distribution system is undersized for the current need. Project will replace (2) 6" chilled water lines under the pedestrian access route between Signer's Hall and the Rasmuson library with (2) 12" lines to meet the heating and cooling demands of core campus. The pedestrian route is crumbling concrete and is a potential tripping hazard. It will be replaced in accordance with the 2014 Campus Core Access Plan.

West Ridge District Chilled Water:

The West Ridge of the UAF campus does not have a complete chilled water system to provide adequate and redundant heating and cooling to the research and statewide facilities or the State of Alaska Virology Lab. This funding will complete the concept level documents and cost estimates for a 3-phased implementation of a district-chilled water system.

Moore-Bartlett-Skarland Exterior Lighting:

The MBS complex is UAF's residence hall for freshman and sophomore students, as well as the Residence Life offices. Access from the designated parking area to the complex is very dark and poses a safety and security issue for students, staff and faculty. The project will replace inadequate exterior lighting and bring up to appropriate levels.

Pathway Lighting Upgrades:

The path and stairway runs up a forested steep hill between the physical plant and the new engineering building and is a popular route for pedestrians to enter campus. It is very dark and a potential safety hazard. The project will install energy efficient with LED fixtures to increase safety.

MEFEC-Septic Tank Replacement:

The critical pumping and electrical equipment within the Matanuska Experiment Farm and Extension Center's sewer system aeration tank is failing. The equipment is located in a wet well and confined space, which poses a hazard to anyone working on it. Additionally, the equipment is required to be explosion proof and it is not. The project will eliminate the hazardous set up by replacing the failing equipment with a new 6,000-gallon septic tank and tie it into the existing leach field.

UAF Community Campuses

Priority	Project Title	Projected Cost	Location	HD
1	Fairbanks Campus Building Interior & Systems Renewal	\$14,700.0	Fairbanks	5-C
2	Building Envelope & Roof Systems Renewal	\$3,100.0	Fairbanks	5-C
3	Regulatory Compliance	\$4,650.0	Fairbanks	5-C
4	Campus Infrastructure & Sign Renewal (Exterior)	\$6,450.0	Fairbanks	5-C

UAF Rural and Community Campus Renewal

(GF: \$1,600.0, NGF: \$0.0, Total: \$1,600.0)

The UAF Rural projects are prioritized to reduce energy costs, ensure reliable distance education, address safety concerns, and reduce expensive unplanned maintenance issues. These projects include College of Rural and Community Development (CRCD) facilities at Bristol Bay Campus, Chukchi Campus, Kuskokwim Campus, Northwest Campus, Interior Alaska Campus, and the Brooks Building. Energy costs in rural Alaska are much higher than in urban areas.

UAF Rural and Community Campus Renewal/CRCD			
Building Name and Project Title	Year Built	Building Purpose/Function	Estimated Total Project Cost
Bristol Bay Campus - Margaret Wood Building: Fire alarm upgrades	2010	Administrative	\$ 235,000
Kuskokwim Campus - Sackett Hall Building: Envelope replacement	1984	Student Housing	\$ 1,050,000
Kuskokwim Campus - Fire alarm system	1995	Student Services & Administrative	\$ 155,000
Kuskokwim Campus - Vocational Tech Building	1980	Academic	\$ 23,500
Rural fuel tanks		Infrastructure	\$ 136,500
		TOTAL	\$ 1,600,000

Bristol Bay Margaret Wood Building Fire Alarm Upgrades:

The fire alarm control panel and detection devices are well past their expected life. In order to comply with current fire life safety code the system needs to be replaced.

Kuskokwim Campus:

Sackett Hall Building Envelope Replacement:

- The thermal envelope system and exterior siding of Sackett Hall is approximately 35 years old and original to the construction of the building. The building is difficult to heat and is energy inefficient due to the leaky envelope. This project will completely replace the siding and thermal envelope to increase energy efficiency and comfort to residential students.

Fire Alarm System:

- The 20-year-old fire alarm system in the heavily frequented Yup'ik Museum, Library and Cultural Center is near the end of its expected service life. This project will replace the fire alarm control panel and detection devices in order to comply with current fire life safety codes.

Vocational Tech Building:

- The building's 1000A Main Electrical Distribution Panel is susceptible to damage from overhead piping. The project will relocate the piping as needed to protect the panel.

Rural Fuel Tanks:

Repaint all rural campus fuel tanks. Fix any code deficiencies associated with the fuel piping from the tanks.

UAS Main & Community Campuses

Priority	Project Title	Projected Cost	Location	HD
1	Novatney Roof replacement	\$500.0	Juneau	34-Q
2	Replace Soboleff ceramics studio overhead door	\$55.0	Juneau	34-Q
3	Banfield Hot Water Tank Replacement	\$50.0	Juneau	34-Q
4	Demolish & Repurpose Fitzgerald House	\$50.0	Juneau	34-Q
5	Pedestrian Guardrail Replacement - Phase 2	\$200.0	Juneau	34-Q
6	Facilities Services Parking Lot Lighting - Phase 1	\$60.0	Juneau	34-Q
7	Pave Facilities Services Parking Lot - Phase 1a	\$50.0	Juneau	34-Q
8	Housing Lodge Fuel Tank Replacement	\$130.0	Juneau	34-Q
9	Egan Library Siding Repair & Paint	\$100.0	Juneau	34-Q
10	Landscape Hendrickson Hill	\$45.0	Juneau	34-Q
11	Technical Education Center Welding Lab Fire Alarm Panel Replacement	\$75.0	Juneau	34-Q
12	Sitka Atrium Skylight Replace/Repair	\$100.0	Sitka	35-R
13	Facilities fuel shed & tank replacement	\$225.0	Juneau	34-Q
14	Technical Education Center Welding Lab HVAC System Upgrades	\$100.0	Juneau	34-Q
15	Auke Way Sidewalk Guardrail	\$250.0	Juneau	34-Q
16	Pave Maritime Center Parking Lot	\$300.0	Ketchikan	36-R
17	Replace Egan Building American Flag Pole	\$6.0	Juneau	34-Q
18	Paint the Scheffield Bridge	\$6.0	Juneau	34-Q
19	Hendrickson Annex Exterior Painting	\$40.0	Juneau	34-Q
20	Housing Apartments Fuel Tank Replacement	\$403.0	Juneau	34-Q
21	Student Recreation Center Security Cameras	\$75.0	Juneau	34-Q
22	Clean and Tighten all Egan Library electrical connections	\$25.0	Juneau	34-Q
23	Evaluate Mourant HVAC System	\$20.0	Juneau	34-Q
24	Student Recreation Center Exterior Lighting for Parking & Building	\$135.0	Juneau	34-Q

UAS Novatney Roof Replacement

(GF: \$500.0, NGF: \$0.0, Total: \$500.0)

The Novatney building roofing system has reached the end of its useful life and needs to be replaced. This project will replace the existing roof system with a new EPDM roof system with a 40-year life. If the roof is replaced before it substantially fails, the work can be completed without disrupting the programs in the building.

**University of Alaska Deferred Maintenance, Renovation,
Repair and Equipment**

**FY2020 Request: \$9,000,000
Reference No: 45326**

UAS Admissions, Registrar, Financial Aid, Student Accounts, Vice Chancellor of Enrollment Management and Student Affairs are all housed in the Novatney Building. These UAS programs would be adversely impacted if the roof system fails.

UAS Replace Soboleff Ceramics Studio Overhead Door

(GF: \$55.0, NGF: \$0.0, Total: \$55.0)

The UAS Ceramics Studio is housed in room 107 of Soboleff Building. This room use to be a mechanics shop and includes an overhead garage door. This door lets a lot of heat escape from the building and has been a frequent problem with being unsecured at night allowing unauthorized access into the Soboleff building. The overhead door is not needed for the ceramics program and should be replaced with pair of man-doors.

This project will replace the garage door with a glass wall and electronic locking exit door. This will save energy, allow more light into the room and increase the security of the building.

UAS Banfield Hot Water Tank Replacement

(GF: \$50.0, NGF: \$0.0, Total: \$50.0)

Facilities staff opened up the hot water tank in Banfield Hall and found that some of the interior cement lining has come off the tank. Without this lining, this tank will fail in a couple of years and leave all of the UAS students living in this building without hot water for showers and leave the building without heat. This project will replace the hot water tank with a new hot water system that is more efficient and reliable.

UAS Demolish & Repurpose Fitzgerald House

(GF: \$50.0, NGF: \$0.0, Total: \$50.0)

The Fitzgerald house was purchased by UA because of its proximity to the UAS campus. The house is used only for storage and is attracting homeless trespassers. This project will demolish the structure and open up some area for landscape development.

UAS Pedestrian Guardrail Replacement - Phase 2

(GF: \$200.0, NGF: \$0.0, Total: \$200.0)

Existing pedestrian guardrails along the outside second story walkways fronting Auke Lake are made from wood, is expensive to paint, has a large flat top that is always covered in bird droppings and the openings do not meet current building codes. This project will install new railings that are constructed of more durable materials with lower maintenance costs. This is a campus infrastructure project and effects the mission of all UAS departments and programs.

UAS Facilities Services Parking Lot Lighting - Phase 1

(GF: \$60.0, NGF: \$0.0, Total: \$60.0)

Facilities Services has some exterior floodlights attached to the building that provide limited illumination for the facilities yard. This project will install new light poles in the yard that will meet national illumination standards and improve the safety of staff and security of UAS property. Phase 1 will light the half of the yard that is paved. This is a campus infrastructure project and effects the mission of all UAS departments and programs.

UAS Pave Facilities Services Parking Lot - Phase 1a

(GF: \$50.0, NGF: \$0.0, Total: \$50.0)

In FY18 UAS was able to take advantage of DOT&PF highway impacts to the facilities parking lot and have the parking lot re-graded so it becomes more usable for, parking, laydown and work area. FY18 funds were not sufficient to include asphalt pavement. This project will pave half of the parking lot near the building. This is a campus infrastructure project and effects the mission of all UAS departments and programs.

UAS Housing Lodge Fuel Tank Replacement

(GF: \$130.0, NGF: \$0.0, Total: \$130.0)

**University of Alaska Deferred Maintenance, Renovation,
Repair and Equipment**

**FY2020 Request: \$9,000,000
Reference No: 45326**

Housing Lodge fuel tank is 35 years old, supplies the Lodge's emergency generator, has reached the end of its useful life and needs to be replaced before it starts leaking. This project will replace the existing fuel tank with a new double wall fuel tank with innersitieral monitoring to further protect UAS from a fuel leak that could contaminate ground water.

UAS Egan Library Siding Repair & Paint

(GF: \$100.0, NGF: \$0.0, Total: \$100.0)

Egan Library exterior siding has started to deteriorate in some places. Project will evaluate siding and determine if can be repaired and re-painted, North Wall is the most damaged. This project may be phased to accommodate funding. The Egan Library houses the library, learning center, screening room Writing Center, CELT and community Evening at Egan lecture series.

UAS Landscape Hendrickson Hill

(GF: \$45.0, NGF: \$0.0, Total: \$45.0)

Pedestrians currently walk down the steep slope next to the Soboleff Building. This trail is not maintained and could be a safety issue. This project will install barrier landscaping to encourage pedestrians to use the stairs. This is a campus infrastructure project and effects the mission of all UAS departments and programs.

UAS Technical Education Center Welding Lab Fire Alarm Panel Replacement

(GF: \$75.0, NGF: \$0.0, Total: \$75.0)

The UAS Technical Education Center (TEC) welding lab is an older building set just north of the main TEC building. TEC welding lab fire alarm panel is no longer supported and showing signs of failure. If the fire alarm breaks, there is no way to repair it without a complete replacement. This would require canceling welding classes for 6 months until the new alarm could be installed. This project will replace the existing alarm panel.

UAS Sitka Atrium Skylight Replace/Repair

(GF: \$100.0, NGF: \$0.0, Total: \$100.0)

Sitka Campus main entry overhead skylight is showing evidence of leaks; maintenance has caulked leaky areas as a temporary solution. This project will provide a more permanent water seal around the skylight. All of the UAS programs in Sitka are housed in this one building.

UAS Facilities Services Fuel Shed & Tank Replacement

(GF: \$225.0, NGF: \$0.0, Total: \$225.0)

The facilities fuel shed and tanks were set up as a temporary facility more than 20 years ago. This project replaces them with something more permanent and appropriate. This is a campus infrastructure project and effects the mission of all UAS departments and programs.

UAS Technical Education Center Welding Lab HVAC System Upgrades

(GF: \$100.0, NGF: \$0.0, Total: \$100.0)

The Technical Education Center (TEC) welding lab is a small building just north of the main TEC building. This building housed all of the welding classes and programs at UAS. The existing HVAC system in the welding areas is an old type system. New welding shops use a different style of system that is better at keeping fumes away from the welder. This project would replace the existing welding ventilation system with a new modern system.

UAS Auke Way Sidewalk Guardrail

(GF: \$250.0, NGF: \$0.0, Total: \$250.0)

There are several sections of Auke Way sidewalk that have a retaining wall drop off that exceeds the 30" maximum required by code. This project will reduce that drop off when possible and install handrail/guard rail

when not. This is a campus infrastructure project and effects the mission of all UAS departments and programs.

UAS Pave Maritime Center Parking Lot

(GF: \$300.0, NGF: \$0.0, Total: \$300.0)

The existing parking at the KTN Maritime Center lot is gravel and potholes develop frequently that disrupt service, impede drainage and require maintenance. This project will install asphalt pavement in the parking lot. This building houses all of the UAS Maritime programs.

UAS Replace Egan Building American Flag Pole

(GF: \$6.0, NGF: \$0.0, Total: \$6.0)

The existing flagpoles at the Egan Building are all the same height. However, the American Flag Pole should be taller than all other poles. This project will replace the American flagpole. This is a campus infrastructure project and effects the mission of all UAS departments and programs.

UAS Paint the Sheffield Bridge

(GF: \$6.0, NGF: \$0.0, Total: \$6.0)

The Sheffield Bridge crosses Auke Creek. The paint on this bridge is being damaged by snowplows and needs to be repaired. This project will paint the bridge. This is a campus infrastructure project and effects the mission of all UAS departments and programs.

UAS Hendrickson Annex Exterior Painting

(GF: \$40.0, NGF: \$0.0, Total: \$40.0)

The exterior paint on the Hendrickson annex has reached the end of its life. This project will paint the building. The UA School of Education is housed in the Hendrickson Annex Building.

UAS Housing Apartments Fuel Tank Replacement

(GF: \$403.0, NGF: \$0.0, Total: \$403.0)

UAS Housing Apartment Unit fuel tanks are 35 years old, reached the end of their useful life, and need to be replaced before they start leaking. This includes Buildings: #JS 111-117 Housing Apartments A, B, C, D, E, F, and G. This project will replace the first five fuel tanks with new double walled tanks with leak detection monitoring systems. The remaining four fuel tanks will be replaced in a second phase of work as funding becomes available.

UAS Recreation Center Security Cameras

(GF: \$75.0, NGF: \$0.0, Total: \$75.0)

Currently there are no security cameras at the UAS Recreation Center / Army National Guard Readiness Center. In today's changing environment, security cameras are needed. This project will add cameras inside the major hallways and gym and in the outside parking lots.

UAS Clean and Tighten all Egan Library Electrical Connections

(GF: \$25.0, NGF: \$0.0, Total: \$25.0)

Electrical connections in the mechanical rooms can be come loose over time due to transformer vibrations. This project will inspect and tighten these connections in the Egan Library and classroom wing. Work will also include Arc-Flash Study and equipment life span estimate. The Egan Library houses the library, learning center, screening room Writing Center, CELT and community Evening at Egan lecture series

UAS Evaluate Mourant HVAC System

(GF: \$20.0, NGF: \$0.0, Total: \$20.0)

Facilities receives many complaints each year from staff in the Mourant Building saying the building is too hot and they end up propping open doors and windows to try and cool down. This project will first hire a

Mechanical Engineer to review the existing HVAC system to see if the existing HVAC building meets code, is properly balanced and recommend improvements, if necessary.

UAS Recreation Center Exterior Lighting for Parking & Building

(GF: \$135.0, NGF: \$0.0, Total: \$135.0)

The existing lighting system at the Recreation Center parking lot and exterior sidewalks are using old technology and is not evenly distributed across the site creating shadows and bright spots making it difficult to see walking surfaces during the winter months. This project will replace all of the exterior lights with new LED lighting system.

Statewide Services

Priority	Project Title	Projected Cost	Location	HD
1	Butrovich Building Repairs	\$300,000	Fairbanks	5-C

Butrovich Building Repairs

(GF: \$300.0, NGF: \$0.0, Total: \$300.0)

The Butrovich Building was constructed in 1988 and is the primary building housing most of UA's administrative functions and UAF's K-12 Outreach. The building components are showing signs of age, requiring increased maintenance as they reach their life cycle end. Over the next few years, many of the main mechanical systems will come due for replacement or refurbishing: HVAC components, plumbing, electrical, elevator upgrades and code corrections.