Proposal for Professional Architectural & Engineering Services

Craig City School District



MRV ARCHITECTS, PC

1420 Glacier Ave. #101 Juneau, AK 99801 907.586.1371 paul@mrvarchitects.com CONTACT: Paul Voelckers, President

USFS Forestry Research Lab, Southeast Alaska's First LEED Gold Certified Building.

"From the initial interview process, our community knew MRV was a perfect match... their experience and guidance assisted the community with developing a project to suit our needs and felt like our own."

CATHY SHERMAN, DIRECTOR, THE CORDOVA CENTER

Cover Letter

Craig Schools Selection Committee,

MRV Architects is pleased to propose on design services for the Craig City School District RFP. Our team has been working with the School District extensively over the past five years. We believe we bring project experience, staff capability, and consultant expertise to provide timely and cost-effective services for the Craig City School District.

MRV Architects is a Juneau-based firm, with a focus on architectural design and planning. We are one of the State's most stable architectural practices, with a consistent size and focus since our founding in 1954 by Linn A. Forrest. Over time, the firm has varied in size between five and twelve individuals, depending on work load and the Alaskan economy. At present, we have seven employees, including three architects registered in the State of Alaska.

MRV design projects are focused in Southeast Alaska and the maritime Alaskan coast, with recent projects stretching from Ketchikan to Kodiak. Our practice is committed to striking a best balance in our buildings between first cost, longevity, operating efficiency, and appropriateness to setting.

Over the course of our firm history, MRV has designed and constructed more public schools than any other project type, followed by libraries, cultural centers, public housing, and private developments.

MRV Architects and our consultant team individuals are Juneau-based, with extensive experience throughout Southeast and Maritime Alaska on a variety of relevant educational design projects. Our team will draw from individuals that have a decade or more of experience with MRV on successful school projects.

Our commitment: As we explain in the following materials, we believe successful projects arise from the strong relationship established between the District, the community, and the consultant team. We pledge to bring the energy, enthusiasm, and skills to provide condition surveys and recommended upgrades for the Craig schools to set them on a successful track for future funding and improvements.

We look forward to working with you.

Sincerely,

Paul Voelckers

President, MRV Architects.

Contact: paul@mrvarchitects.com;

907-586-1371

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Zane Jones, Vice President, MRV Architects. zane@mrvarchitects.com

PART 1



Mt. Eccles Elementary, Cordova, MRV Architects

MRV Company Profile

Craig City School District (CCSD) is selecting a partner to design school improvements for the next five years. That critical decision will be based on the judgement of the selection committee on which firm will be the most effective partner for CCSD. We hope that the following materials illustrate MRV's relevant professional skill set. More importantly, we want to communicate a sense of who we are, and our commitment to partnering with Craig School District for the most effective outcome on new design projects.

History and Experience: MRV Architects is a Juneau-based firm, with a focus on architectural design and planning. We are one of the State's most stable architectural practices, with a consistent size and focus since our founding in 1954 by Linn A. Forrest.

MRV is finishing a five year CCSD term contract, with a recent focus on the design of renoations and approaches to both the Middle School and the Elementary School.

We believe MRV Architects can demonstrate the greatest dollar value of completed school projects in southeast Alaska, with the following partial list of major schools in the last two decades: Juneau/Douglas High School renovations and expansions, new Thunder Mountain High School, Sitka High School renovations and expansions, Craig High School, Harborview Elementary School, Baranof Elementary School, Ketchikan High School (JV), Dzantiki' Heeni Middle School (JV), and Mt. Eccles (Cordova) Elementary School.

Design Process and Philosophy: More important than volume of school experience is the process MRV Architects would offer to the Craig School District. Although that skill set involves many attributes, we emphasize the following five components in our professional design process.

<u>Communication:</u> Our first commitment is to establish an open and inclusive communication flow between the District, school staff, and our MRV project team, creating an opportunity for strategic thinking and planning. We can help solidify project ideas with initial feedback on costs, timelines, and alternatives.

Related, we believe our focus on listening and partnering extends to the community at large. We are skilled at helping engage the community in conversations on possible projects, and build local consensus over both the need and proposed project solution. We are convinced that successful projects have their origins in the community, with the architect offering a support role to shape those needs into built reality.

Conceptual Option Sketching: MRV Architects places a premium on the early development of conceptual design options. This allows us to present a range of choices, and develop pro/con narratives and cost estimates as appropriate to give decision-makers information needed for an informed decision. We find that multiple design options are a very effective tool to use with the community, offering an open exploratory process, and one that provides



Navigation tab from 360 imaging from Craig Schools Condition Survey. MRV Architects



MRV and Dalhberg Design overseeing Rainbow Builders preparing slab for moisture vapor emissions and alkalinity tests. Testing results called for moisture mitigation measures for Riverbend Elementary in Juneau.



Ketchikan High School Renovation, (JV)

an engaging way for the public to offer comments, and build a record of support.

We also find the development of multiple conceptual options strengthens the application process with the State DEED approval process, illustrating a careful review of choices before selecting a preferred direction.

At a practical level, expending the initial time to develop a range of general design choices pays substantial dividends later, when a project moves into more detailed design and engineering. This helps prevent back-tracking and loss of efficiency, because initial homework was accomplished.

<u>Energy-Conscious Design:</u> MRV is a leading practitioner of best weather detailing for the Southeast Alaskan environment, with a particular focus on the building envelope and creating very high thermal efficiency.

A well-done building envelope, coupled with good mechanical and electrical systems, will offer decades of relatively trouble-free operation, with resultant cost savings that are gained by both efficiency and a low-maintenance exterior. Although not necessarily appropriate for every project, MRV has designed a number of LEED-certified projects, including Harborview Elementary School in Juneau, and the Gold-certified USFS office building and laboratory in Juneau. This is a program administered by the United States Green Building Council, the leading National organization establishing sustainable building performance.

Examples of our projects, in sections following will illustrate completed building examples that are regionally-appropriate in their detailing, and achieve some of the highest tested energy efficiencies of any projects in southeast Alaska.

<u>Design for Setting and Community:</u> We believe that MRV design projects are marked by beauty and grace, and become as a source of pride in their local communities. To achieve this architectural success, we identify and incorporate design features which flow from the special qualities of the site, including view and natural daylight.

Where possible, we integrate regionally-appropriate materials, such as the local stone facing used on Craig High School, or exterior yellow cedar wall planks for the Walter Soboleff Cultural Center. We want our buildings to express Southeast Alaska, and celebrate our unique setting and communities.



Thunder Mountain High School, Juneau, MRV Architects



Walter Soboleff Building, Sealaska Heritage Institute, Juneau, AK, MRV Architects



Icy Strait Point Development, Hoonah, MRV Architects

"While there are other competent architects in our Southeast Alaska community, I have found none that manifest the degree of project ownership and pride of accomplishment that MRV Architects have demonstrated."

MILT LUDDINGTON, RETIRED MUNICIPAL ENGINEER, CITY OF SITKA

<u>3D Imagery & Computer Modeling:</u> Finally, MRV Architects is committed to the highest level of professional and technical proficiency in our condition surveys and design documents. From the initial site visits MRV embraces current best technology. We utilize a 360 camera to photograph each room in 360 degrees. This allows our to have full photo documentation of each space. As concerns arise we not only have a photograph, we have a 360 image to "step into" as if we are standing in the room. MRV has already carried out this step in the Craig Middle and Elementary School and has a visual catalog of every room in those buildings, reducing the need for site-visit verifications.

Similarly, MRV collaborates with our engineer team using "Autodesk Revit," 3-D computer modeling program that represents the highest standard of performance and system integration. MRV has been using Revit on all projects for fifteen years, with great efficiency.

Revit modeling has several advantages to the Owner and design team. First, it allows the development of early perspective drawings of the project, assisting in visualization for the users and the community. We can develop "fly-arounds" to really create a sense of the final project configuration. Second, an accurate 3-D modeling of the building is used by the full consultant team, particularly structural and mechanical engineers, to coordinate for conflicts during the design phase, and thus limiting the amount of change orders due to coordination problems in the field.

Lastly, MRV uses Twinmotion rendering software for best in class visualization and graphic renderings.

Ownership and Organization: MRV Architects is a professional corporation, licensed by the State of Alaska. Paul Voelckers, AlA, is President of MRV Architects, and Zane Jones AlA is Vice President. Both individuals are actively involved in project management and contractual issues.

MRV Architects maintains \$1,000,000 in Errors and Omissions coverage, and all standard coverages for Worker's Comp, automobile, and other insurance concerns. MRV has been in continuous practice as a professional corporation for sixty five years, and has an enviable record of successfully completed projects.

"Since our first project together, we have come to expect a commitment to quality that raises each project above the ordinary. MRV staff have a passion for getting-it-right that results in unique and fitting solutions to each project design."

CHRIS KOWALCZEWSKI, PROGRAM MANAGER, THE FORAKER GROUP

Juneau Douglas High School Renovation

Sub-Consultant Company Profiles

MRV Architects is proposing consultants as part of our team to provide mechanical, electrical, structural, and civil design tasks, as needed. We are also comfortable working with other consultants if desired by Craig Schools, based on familiarity or efficiency from the Owner's perspective.

Our proposed consultants include <u>RESPEC Engineers</u> for mechanical, electrical and site/civil engineering; <u>PND Engineers</u> for structural engineering. Each firm has performed dozens of engineering projects as part of MRV teams over the decades, including the majority of the MRV school projects profiled.



Mechanical, Electrical, and Site/Civil Design Firm Qualifications

RESPEC has provided Southeast Alaska with a full range of civil engineering, land surveying, mechanical engineering, and electrical engineering services since 1969. We have also provided other specialized technical services in the community, such as geotechnical investigations, laboratory testing on soils, concrete, asphalt materials, project inspection, construction administration, services. Our team members combine practical engineering experience with long-term local knowledge, ensuring that projects are completed efficiently, on schedule, and within budget. RESPEC South Coast employees have school experience throughout Southeast Alaska and in the Craig School District as well as other schools in Prince of Wales Island communities including Klawock and Hydaburg.



Sealaska Heritage Institute Instructional Arts Campus. Image of weaving and sewing studio. MRV Architects 2022







P D Structural Design Firm Qualifications

PND Engineers, Inc., is a dynamic engineering firm with more than 120 fulltime employees, nearly half of whom are licensed engineers or surveyors with offices in Juneau, Anchorage, Seattle and Houston. With a professional staff of 51 registered professional engineers, three professional land surveyors, 28 civil engineers-in-training, and 23 staff engineers in our offices, we can easily complete projects on time and within schedule. PND is well qualified to provide high quality engineering services over a diverse range of disciplines. Our Juneau office employs 21 local residents, including 8 registered professional engineers. PND provides service to clients throughout Southeast and Coastal Alaska.

Since 1979, PND's engineers have provided experience on a wide variety of projects including planning, site surveys, geotechnical investigations, site development, roads, utilities, sediment sampling, permitting, site design and structural design for schools, housing, office, recreational facilities, industrial plants, and storage facilities. PND prides itself on providing cost-effective engineered solutions to coastal communities in remote locations.



Thunder Mountain High School Masterplan, MRV Architects



Cordova Center, MRV Architects

PART 2

MRV Relevant Experience In Southeast & Maritime Alaska



The following information profiles a number of relevant Southeast Alaskan projects, including new schools, school renovations, and similar projects like libraries.

MRV has experience with school projects at all costs and sizes, ranging from the \$60,000,000 Thunder Mountain High School in Juneau to simple classroom upgrades. We are excited to partner with the Craig City School District on new needs from simple to large and complex.

Kaxdigoowu Héen Elementary Condition Survey and Emergency Flood Damage Repairs (Formerly Riverbend Elementary)

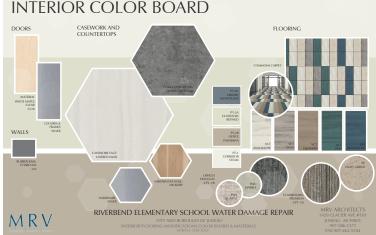
Contact: Jeanne Rynne - Juneau City Architect (907) 586-0800 Ext. 4186 Elizabeth Pisel-Davis, Principal - Kaxdigoowu Héen Elementary. (907) 723-1891

This project for the Juneau School District was ultimately a successful school upgrade despite the tragic flood. MRV was under contract conducting a condition survey regarding recurring flooring issues when a winter cold snap froze and burst water pipes, flooding the school. When flood damages occurred, the MRV scope increased dramatically, with results needed under an emergency schedule. MRV was able react quickly to produce phased documents allowing school to return to limited operations immediately, and with repairs happening over the summers of 2022 and 2023.

Phase I focused on flooring and wall damages. The early condition survey identified the need for a moisture mitigation system in the slab. The entire school flooring was removed and a full Ardex MC Rapid Set epoxy coating was applied. New contemporary flooring was installed throughout, reflecting the "river" theme of the school. Wall damage repairs included color matching color matching existing discontinued materials, and blending new oak trim with old for a seamless appearance.

Phase II focused on doors and casework. New doors and hardware were updated to current education codes and standards. Construction was completed in the summer of 2023.





Floor Slab Testing Flood Damage

Interior Design Colorboard

Craig Middle School Renovation:

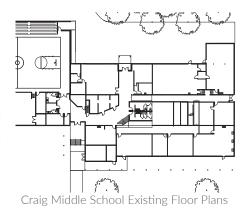
Contact: Chris Reitan, Superintendent 907-826-3274

MRV Architects and the design team has worked with Craig School District on renovations to Craig Middle School. Currently, the project is waiting for funding increases from the Stae and DEED to reflect recent cost increases. The granting application has ranked 2nd in the State of Alaska for funding.

The MRV team worked with school staff to perform a needs and condition survey. The team prioritized critical building issues, such as ADA access and supervision, then worked through conceptual options to find a solution that accomplished the most within a limited budget.

The preferred design was able to leave the majority of the structure in place, and only revising non-bearing partitions. Consolidating inefficient spaces allowed the team to create a new central commons area, providing improved circulation and visual control of the school from one desk. We recaptured blocked clerestory windows to flood the central Commons with natural daylight. To make the Commons a gathering place, we took the existing problem of varying floor heights and created playful seating features that link the lowered and raised portions of the building, while solving ADA access needs.

Our engineer team worked closely with school maintenance to prioritize mechanical and electrical needs. Every item was pursued with maintenance and efficiency in mind, without losing site of Craig City Schools long term goals.





New floor plan showing new entries and commons



Craig Middle School visualization rendering for new commons area

Craig Elementary School HVAC, ADA, Security & Fire Upgrades

Contact: Chris Reitan - Craig School District Superintendant (907) 826-3274

The original school was constructed in 1982. The initial condition survey identified major deficits in ventilation (no ventilation exists in the building) ADA deficiencies in multiple restrooms, no fire suppression system, and a lack of security controls. MRV and RESPEC engineers presented multiple options including life cycle costing. Even though the majority of the project is mechanical and electrical upgrades and addition of a "sick room" and ADA restrooms near the admin area allowed MRV to reconfigure the Admin area to allow more visibility of entries and establish a central commons area for students.

MRV and the engineer team worked closely with SERRC to provide multiple options for the school district that met DEED criteria for funding. The finished design documents include a new ventilation and fire suppression system. MRV and engineer team worked closely with existing spaces and structure to provide the lowest impact possible to the building.







Interior Renders Of New Admin



UAS, New Dining Room exterior facade, Mourant Building, MRV Architects

University of Alaska Southeast

Contact: Nathan Leigh, Project Manager, UAS facilities, 907-796-6480

MRV is currently underway on a series of projects for the University of Alaska Southeast that reflect smaller-scale architectural design and improvements to existing buildings, as a function of new fiscal constraints.

Projects include the Mourant Building on the Juneau campus, housing the student cafeteria and administrative offices. The project added new energy-efficient windows building-wide. The completed building enjoys a substantial improvement in the quality of the spaces, and a new energy efficiency improvement.

Another project is the Soboleff Building, an instructional building for arts on the UAS Campus. Work has been completed on improvements to the ceramics room, as well as a new space for a Native Arts program, including the addition of power tools and venting.

Craig High School Commons

Craig High School Interior

Craig High School

MRV Architects designed the Craig High School, completed in 2001. The new site provided a commanding vista, with Southwest views of the forested marine setting, with ample parking, sports fields, and safe drop-off and pickup.

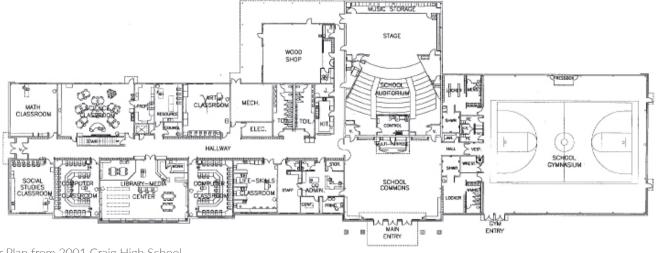
The 45,000 sq.ft. school is centered on the Commons space, supporting student and community use of the auditorium, classroom wing, and adjoining gymnasium complex. The light-filled Commons captures the view, and provides a hub for student activities. The classroom wing is anchored by the central library space, providing a focus of learning activities.

The school construction incorporated local materials, including greenstone used for the exterior wainscoting. The school features gable detailing and timber-frame overhangs to celebrate the forest setting. The school planning included a partial second floor growth opportunity, with second-story dormers for future classroom expansion.

MRV current President Paul Voelckers functioned as a project design architect, along with Project Manager and PIC Richard Ritter. The project was recipient of a CEFPI design merit award.



Commons and Entry



Floor Plan from 2001 Craig High School

Classroom Before



Classroom After



Harborview Elementary School Renovation

Contact: Deb Morse, Former District Facilities Manager, 907-364-3775

This project for the Juneau School District accomplished a comprehensive upgrade and expansion to a 1954 elementary school. The project had a total construction budget of \$8,000,000.

The old school building had a poorly-accessible gymnasium, added in the 1960's, and had to use a shared library that was located in an adjoining older facility. Another major short-coming was lack of a controlled and secure entry, and major short-comings in student accessibility, building-wide. Finally, the building was dark and dingy, with uninviting classrooms and hallways.

Several conceptual options were developed for review by the District Steering Committee, and for the community at large. The selected option was then designed further to produce plans and renderings of the new facility. This material was then used for a successful bond election campaign by the District.

The completed design addressed major organizational short-comings, with a new, contemporary school environment. A central element of the school was creation of a new inviting Entry and associated Commons, which did not previously exist. The new Commons was coupled with a cafeteria, and expanded music and arts spaces. Another key step was the addition of a centralized elevator that provided convenient ADA access to all levels of the school.

The upgrade included a major focus on energy efficiency, and was developed as a LEED-certified project, the first for the Juneau School District. The project included major expansions in window size, coupled with triple-glazing. Classrooms included automatic light dimming, working with the much-increased natural daylight in all the classrooms.



Mt. Eccles commons

Expanded out-door play area



Semi-subterranean gym facility

Mt. Eccles School Renovation and Addition

Contact: Jim Nygaard, School Superintendent (now with Valdez, AK), 907-831-1236

The Cordova Elementary school, originally constructed in the 1950s, has been renovated twice by MRV Architects, once in 1992 to add new windows and ventilation systems, then more comprehensively in 2012 to refurbish all portions, and add a major addition. The 2012 project was divided into two contracts, split into a renovation portion, and new construction portion. The project had a total cost of \$9,000,000.

A unique feature of the new school design is the addition of the gymnasium as a below-grade space on three sides. The school site was very tight, with almost no play space for students.

To solve this, the grade was carefully excavated back into the hillside, allowing the addition of the gymnasium to align with the existing main floor. The roof of the gymnasium was then developed as a student play surface, more than doubling the level playground area available for students.

A new entry to the school was developed between the renovation and new addition, creating an expanded and attractive Commons space, new kitchen, and new spaces, including a stage and classroom, to support music.

The project, which re-built the entire school to a like-new condition, was the 2013 recipient of the Len Mackler award as the most successful school project in the State of Alaska.



Mt. Eccles Elementary School Renovation and Addition, recognized as the most successful school project in Alaska. in 2013.

Thunder Mountain High School

Contact: Deb Morse, Director of School Facilities (retired), 907-723-8727

This \$60,000,000 new high school for Juneau, located in the Mendenhall Valley, provided a comprehensive four-year high school with several unique organizational aspects. The 170,000 sq.ft. high school, completed in 2009, is designed for a student capacity of 1,050, and offers a full curricula, including classrooms, science labs, multi-use computer labs, library, auditorium, gymnasiums, music and art suites, and support spaces.

The school's design team, which included Fanning Howey Architects, was strongly influenced by beautiful Mendenhall Valley site. A river metaphor organized the site and parking configuration, with a flow to the primary entry. The entry and adjoining free-form Commons space provides extensive southern exposure, with inviting covered exterior space and landscaping for student use.

The northern side of the building is focused on the library, with dramatic views of the Mendenhall Glacier and surrounding mountains. Finally, each of the academic wings is capped with a smaller "academic commons" with views overlooking the Mendenhall River. These smaller Commons spaces provide a flexible space and socializing atmosphere, an important element that provides a more intimate scale for each of the four academic quadrants, and a key contributor to student success.

The project includes a high-quality auditorium space, with excellent acoustics, site lines, and technical capacities. This space included special bond funding, above DEED funding levels, to support both student and community use as a performing arts center.



Thunder Mountain Auditorium



Thunder Mountain Academic Commons



Thunder Mountain High School is located along the Mendenhall River, with dramatic views up the valley



Thunder Mountain Library



Juneau-Douglas High School Renovation

MRV designed a comprehensive renovation of this 1950s 212,000sf school. The project was constructed in four phases, while occupied by students. Work was completed in 2002. Renovations included an entirely new exterior envelope including metal-panel siding, a new window system, and interior finish upgrades throughout.

The project features a new two-level atrium space extending the full width of the school from the main entry to a new stairway connecting all three levels of the building. During the programming and scoping phase, a significant focus for the District were the needs to promote student pride in the school, and to make the school much more inviting and open.



Baranof Elementary School Renovation, Sitka

This project consisted of comprehensive renovations to an existing elementary school in Sitka, Alaska. The building, sized at 44,000 sf, was initially constructed in the late 1950's as a single-story wood-framed superstructure.

MRV was involved with an initial programming phase that involved staff, parents, and administrators. This helped us define the scope of the project, budget goals, and phasing strategies. A very important step for the feel and appearance of the school was the addition of new expanded windows throughout, including the addition of upper clerestory windows to maximize daylighting in the classrooms

Site work included a new parent drop-off zone, bus zone, and temporary parking near the entry.



Sitka High School Renovation

This comprehensive renovation to the existing 100,000 square-foot Sitka High School rebuilt virtually all portions of the school.

The largest change was the creation of a new entry and associated central commons, shown left. The renovation also included asbestos abatement, new classroom finishes and modifications, new lighting throughout, a new science wing, a new mechanical ventilation system, exterior finish upgrades, and roof upgrades.

MRV Architects received an Award of Merit for this project from the Alaska Chapter of the School Facilities Association, CEFPI.

Craig Public Library Conceptual Study

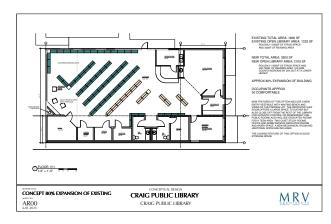
Contact: Patricia Gardener - Craig Public Library Director - library@ craigak.com. (907) 826-3281

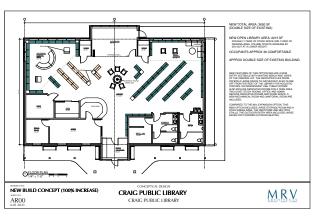
MRV performed spatial analysis and conceptual design options for the Craig Public Library. The primary goal of the project was to determine whether the existing Craig Public Library should be expanded, or if a new facility would should be pursued.

MRV used the Foraker Group Pre-D Toolkit to determine the square footage needed for book stack count and library needs outlined in the Library's strategic plan. It was determined that approximately an 80% expansion in square footage was desired. Ultimately, this proved difficult with the existing facility so an completely new facility was conceptually designed for the public to react to.

The new concepts include addressing new library ADA requirements and contemporary technology needs. The concepts focus on open visibility from the circulation desk for improved staffing efficiency, and a open and safe facility. The expanded footprint allows for increased programming and public use.

The study was completed in 2023.







CRAIG PUBLIC LIBRARY CONCEPTS OWNER: CITY OF CRAIG DATE: 6.1.2023

NEW FACILITY CONCEPT RENDER





Sub-Consultant Relevant Experience



Mechanical and Site/Civil Design Consultant Experience

Craig Pool Renovation

RESPEC (PDC at the time) provided mechanical engineering design and construction services for Craig pool renovations. The existing pool structure was a metal building with lap pool, leisure pool, and spa pool. Mechanical systems upgrades were comprehensive, including replacement of air-handling units, locker and toilet room exhaust fans, pool area heat recovery ventilation unit, propane fired backup boilers with primary heating connection to an adjacent bio mass boiler plant, plumbing systems, hydronic plate frame heat exchangers for domestic hot water and for heating each of the three pools, sprinkler systems, pool piping systems, DDC controls with connection to bio mass boiler system.

RESPEC design scope also included rebuilding the pool chemical treatment system. Challenges included existing long-standing high humidity issues that had damaged the building. Total project cost was \$2.1 million.



In 2007, RESPEC provided mechanical engineering for the school renovation in Hydaburg. The work included modifications and renovation to the existing heating plants, ventilation systems, plumbing systems, and automatic controls system in the elementary school, high school, and gymnasium. Construction services were provided including submittal review and inspections.



This project involved renovation of an existing school built in 1968. The project was broken into three phases to allow construction during the summer, with a total project cost was \$17 million. Each phase encompassed approximately \$5.6 million in construction. Regular work sessions with stakeholders and CBJ project management were key to the project's success. Regular meetings continued through construction, with project team members available to resolve questions quickly. The building was renovated within the existing 50,000-sf footprint to comply with State of Alaska DEED reimbursement requirements. The sustainable design achieved LEED certification. The heat system comprises ground-source heat with a loop field of 42 wells adjacent to the building. Energy optimization design was provided to determine R values for the exterior enclosure and efficient mechanical and electrical systems.



Craig High School Library, MRV Architects

Kodiak High School Renovation and Addition

RESPEC recently completed the mechanical and electrical engineering design for this 114,000-sf addition and 59,000-sf renovation. New and renovated spaces include the high school library, food service. gymnasium, classrooms, and administrative offices. Most central ventilation systems and all central heating plant systems were completely replaced. PDC completed a programming/concept investigation of both ground source heat pumps (GSHP) and oil-fired boilers to find the most energy-efficient and cost-effective system. Based on site suitability and life-cycle cost, high-efficiency oil-fired boilers were selected. The system's heating water pumps will be controlled to match actual demand. Ventilation equipment will be controlled to reduce design maximum air flow based on indoor air quality monitoring. Where ventilation air flow cannot be reduced, heat recovery airto-air heat exchangers will be used.



Natural light reaches a teen reading nook in the Sitka Public Library Renovation.







Structural Design Consultant Experience

PND prides itself on providing cost-effective engineered solutions to coastal communities in remote locations. We have provided structural and civil site engineering on many schools in the past two decades, including assessing existing conditions, providing structural designs for renovations and additions, seismic retrofits, and roof strengthening. Our professional roles also include assistance with construction administration and inspections.

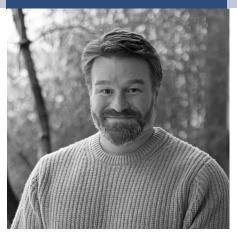


in the Cordova Center, MRV Architects

Specific school projects relative to the Craig School District include design work for virtually every district in Southeast, including the Annette Island School District, the Ketchikan School District, the Prince of Wales Island Vocational Education Center, the Klawock School District, the Wrangell School District, Southeast Islands School District, the Petersburg School District, The Chatham Straight School District, The Juneau School District, the Haines Borough School District, and the Hoonah School District.

PND Engineers are familiar with the wet, maritime environment, the local anticipated wind, snow and seismic loads, and the logistical constraints that contractors face when building here. We are very familiar with working conditions in Craig and have worked on the harbor, pool building, and private building projects.

PART 3



PROFESSIONAL REGISTRATION: Architect, Alaska, No. 117779 USGBC LEED GA

EDUCATION

Masters in Architecture, Arizona State University BA Literature, Utah State University

> Certificate in Fundamentals of Arctic Engineering, University of Alaska

AFFILIATIONS

Juneau Historic Resource Advisory Committee, Chair 2013-Present

American Institute of Architects Young Architects Forum 2024-Southeast Section Chair- 2017, 2018

Juneau Jazz and Classics Board of Directors, Chair 2013-Present

Juneau Commission on Stainability Former Board Member 2016-2017

ORCA Adaptive Snowsport Program
Juneau Volunteer

Association For Learning Environments Member.

American Planning Association Member

AWARDS

Grant Recipient Alaska State CLG grant, to attend National Alliance for Preservation Commissions 2018 conference

Staff Qualifications, Resumes

Zane Jones, AIA, LEED Green Associate Project Manager, MRV Architects - Design and Production

Zane Jones joined MRV for a summer in 2011 and returned to MRV in 2012 after completing his M.Arch degree. Coming from a background in construction, Zane has valuable hands-on experience. Beginning around 2000, he worked his way from construction laborer, to draftsman, to architect. This in-field experience has given Zane a deep appreciation of construction detailing. He enjoys working closely with contractors on details in order to ensure quality and aesthetics. This reputation is why Zane was requested to work closely with Dawson Construction contractors on designing their new office facility in Juneau.

Zane has actively managed projects since joining MRV. He became a firm partner in 2022 taking over many of MRV's general management roles. He serves as a point of contact from early designs through final CA and completion of projects.

Outside of the office, Zane takes part in multiple community organizations related to preserving and caring for the built environment. He is the chair of Juneau's Historic Resource Advisory Committee, where he oversees project reviews for cultural and historical significance. He was an active member of Juneau's Commission on Sustainability, and helped review and contribute to the Juneau Energy Plan and Climate Action Plan. During winter you can find Zane having a wonderful time volunteering with Juneau Adaptive Ski Program ORCA.

Currently, Zane is point of contact project architect on many MRV projects. He oversees projects from conceptual design through construction administration. He is currently project architect on Craig Schools Major Renovations, Ketchikan Revilla and Gravina Uplands Airport Improvements. He is leading conceptual design studies for multiple education facilities for Tlingit & Haida Central Council, and Kethcikan Indian Community.

Relevant Projects:

- Craig Middle School Improvements
- Craig Elementary School Improvements
- Craig City Schools Emergency Generator Upgrades
- Riverbend Elementary Condition Survey & Flood Damage Repairs
- SHI Instructional Arts Campus, Juneau
- Capitol School Park & Playground Upgrades (Juneau)
- Hala Cafe in Hydaburg
- Sitka Public Library Expansion
- Cordova City Center
- Marine Exchange of Alaska, Juneau
- USFS PNW Research Lab, Juneau
- DOT Ketchikan Revilla Uplands Passenger Waiting Accommodations
- CBJ Way-Finding Project (new downtown Juneau signage)
- Kodiak Library
- SHI Walter Soboleff Building, Juneau
- UAS Pugh Residence Hall, Juneau
- Tlingit & Haida Early Education Facility Modules
- Juneau Housing First
- Icy Strait Point Phase I Development Project
- Bethel Permanent Supportive Housing

REFERENCES

JEANNE RYNNE - Juneau City Architect (907) 586-0800 Ext. 4186 BRIAN TEMPLIN - Craig City Administrator 907-826-3275

ELIZABETH PISEL-DAVIS, PRINCIPAL - Kaxdigoowu Héen Elementary. (907) 723-1891





PROFESSIONAL REGISTRATION: Architect, Alaska, No. 6536 USGB, LEED Accredited Professional

EDUCATION

Masters in Architecture, Harvard University, Graduation with Honors

Bachelor of Arts, English Literature, Whitman College

AFFILIATIONS

Juneau Planning Commission Vice-chair 2014- present

Juneau Heat Smart Board Board Member 2018-present

Juneau Arts & Humanities Council Board, 2004-2011 Board President, 2009-2010

Juneau Economic Development Council, 1997-2003 Board Chairman, 2003

Council of Educational Facilities Planners Intn'l Alaska Chapter Board of Directors 2002-2003

PERSONAL AWARDS

The Kumin Award, The American Institute of Architects Alaska Chapter, 2018

CEFPI Len Mackler Award 2012

Excellence in Education Award, Juneau School District, 1999

Paul Voelckers, AIA, LEED AP

President, MRV Architects - Principal-in-Charge

Paul brings to his work a talent for listening to his clients and turning their desires into highly functional and beautiful design projects. He has been with the firm since 1981, and excels at leading multi-disciplinary teams through a collaborative design process to deliver notable, timely projects. He has extensive experience in planning, programming, site analysis, conceptual design, construction documents, and contract administration.

Paul has a particular expertise in the design and management of complex projects, including many of the largest education facility projects in Southeast Alaska. He is passionate about incorporating community input into design solutions so that each project is perfectly suited for its users. Paul has navigated state education funding for decades, and understands the challenges of keeping projects supported and within budget. Paul is particularly skilled at finding value driven renovation solutions.

For the Wrangell City School District, Paul will act as Principal-in-Charge, heading the MRV Design Team. He will oversee every phase of projects and will be the contractual contact.

RELEVANT PROJECTS

- •
- Craig Middle School Improvements
- Craig Elementary School Improvements Juneau Douglas High School Renovations
- Sitka High School Renovation
- Thunder Mountain High School, Juneau
- Mt Eccles Elementary Renovation
- Ketchikan High School Renovation
- Harborview Elementary School Renovation
- SHI Instructional Arts Campus, Juneau
- STA Siginaka Building Improvements
- UAS Cyril George Language Center
- UAS Mourant Window Upgrade
- UAS Sitka Campus Entrance Upgrades
- UAS Soboleff Art Room Upgrades
- Tlingit & Haida Early Education Facility Modules
- Northrim Bank, Ketchikan
- Craig High School
- Cordova Center, Museum/Library/Theater/Admin
- Sitka Public Library Renovation
- Sealaska Heritage Institute Soboleff Center, Juneau
- USFS PNW Research Lab, Juneau
- Lemon Creek Breeze-In, Juneau
- Kodiak Library
- Icy Strait Point Planning, Hoonah
- SHI Arts Plaza, Juneau
- Juneau Housing First
- Haines Library
- Petersburg Library

REFERENCES

CATHY SHERMAN, DIRECTOR, Cordova Library & Museum, 907-424-6665 JEANNE RYNNE - Juneau City Architect (907) 586-0800 Ext. 4186 DEB MORSE,, FACILITIES COORDINATOR, Juneau School District, Retired, 907-364-3775



BRIAN NIELSEN, P.E., S.E. | PRINCIPAL ENGINEER

Project Role: Structural Project Manager





Mr. Nielsen is a licensed structural and civil engineer with 19 years of structural engineering experience specializing in building design. During his time at PND, he has worked on a variety of structural engineering projects including new building construction as well as additions and seismic retrofits. His background includes inspection and assessment of existing buildings, bridge and marine facilities, design of structural and light-gauge steel framing, timber, masonry and concrete structures. Brian has experience with contract and construction administration, bidding assistance, and onsite inspection. As a project manager, Mr. Nielsen leads and manages a wide variety of residential, commercial, industrial, and public facilities projects.

EDUCATION

M.S. Civil Engineering, 2004 Colorado State University

B.S. Civil Engineering, 2003 Colorado State University

REGISTRATIONS

Professional Civil & Structural Engineer: Alaska: AELT13703 & AELC11900

REFERENCES

Steve Merkel, SEARHC Senior Director of Facilities, 907.966.8409

Travis Miller, DOT&PF Project Manager, 907.465.8139

Steve Tada, Architect Associate, City and Borough of Juneau, 907.586.0800



Kodiak High School



Auke Bay School

SELECTED RELEVANT PROJECT EXPERIENCE

Craig Middle School, Craig, AK. Engineer of Record. Mr. Nielsen provided design phase services for a renovation of an existing 16,000 square foot one-story, 40-year-old timber-framed school building. The design included development of demolition and renovation plans to upgrade the facility to meet current needs. Condition assessment of the school building was also provided in 2013. Design is completed

Hollis K-12 School, Hollis, AK. Engineer of Record. Mr. Nielsen led the design of a new K-12 school in Hollis for the Southeast Island School District. The new 11,200 sq. ft. school was constructed using convention timber framing supported on a conventionally reinforced concrete foundation. Design accommodated the extreme wind loads anticipated at the site. PND provided construction administration and structural observations for the structural elements of the project during construction.

Naukati and Coffman Cove School, Prince of Wales Island, AK. Project Structural Engineer. Mr. Nielsen provided design and construction phase services for two separate timber-framed schools with gymnasium, classrooms and common spaces. Mr. Nielsen oversaw the construction phase services with included construction administration and structural observations for the structural aspects of the project.

Metlakatla High School, Metlakatla, AK. Mr. Nielsen provided inspection, assessment and design for the renovation to a 40-year old structural steel framed school building. He assisted in the planning phase by preparing preliminary lateral design on an accelerated basis. Design included renovation and seismic upgrades to the existing building.

Kodiak Middle School Seismic Improvements, Kodiak, AK. Project Structural Engineer. Mr. Nielsen performed inspection, assessment and design for seismic upgrades including lateral load resisting diaphragms and shear walls on a 55-year old timber-framed school building.

Auke Bay School, Juneau, AK. Lead Structural Engineer. Mr. Nielsen was the lead structural engineer for the renovation and retrofit to a 56,000 square foot two-story, 40-year old timber-framed school building. Construction services include submittal review, responding to contractor questions and structural observation.

Kodiak High School Renovation and Addition, Kodiak, AK. Lead Structural Engineer. Mr. Nielsen provided structural design of a four-story, steel braced frame classroom tower and music room addition, along with gravity and lateral analysis and design for extensive alterations and retrofit throughout the existing gymnasium, common areas, and educational wings. The school was designed to resist the loads of a major earthquake and the high-speed winds at the exposed site. The seismic loads are some of the highest in the United States. Construction services include submittal review, responding to contractor questions and structural observation.





KEVIN A. PUUSTINEN, PE

CIVIL ENGINEER

OVERVIEW

Kevin Puustinen has strong knowledge and experience with a broad range of civil design issues, including site development, utilities (including water, sewer, storm drainage), and civil structures. Kevin is routinely involved in solving facility siting and site development challenges. He is experienced in site grading, drainage, vehicular movement, parking and access layouts, and utilities. He has functioned as a civil engineer for dozens of assignments for municipalities, state and federal agencies, and private entities. Kevin was an employee of PDC Engineers, Inc., which RESPEC acquired in 2020.

PROJECT EXPERIENCE

Douglas Highway Water Main Replacement (Phases I and II), City and Borough of Juneau (CBJ), Juneau, Alaska. Kevin served as the lead design engineer on this project that replaced more than 1.6 miles of water main within the Douglas Highway Right-of-Way. Phase I construction of the project was substantially completed in 2019 and included the section of Douglas Highway between the Cordova Street intersection and David Street intersection. A new 16-inch high-density polyethylene (HDPE) water main was designed to replace two aged 10-inch water mains: one ductile-iron line served homes on the uphill side of the highway and one cast-iron line served homes on the downhill side of the highway. A total of 70 water services were replaced during Phase I. Phase II construction was completed in 2020. Phase II project limits continued from the David Street intersection and extended south to the Crow Hill Pump Station. This phase also included extending the 16-inch HDPE water main down Capital View Court to connect with an existing HDPE water main located within Second Street. An additional 48 water services were replaced in Phase II. Kevin was on a team that analyzed and prepared a design for refurbishing the existing Lawson Creek utility bridge to extend its design life and ensure that it would support the new 16-inch HDPE water main.

Columbia Boulevard, Poplar Avenue, and Mendenhall Boulevard Reconstruction, CBJ, Juneau, Alaska. Kevin was the lead design engineer on this valley street project that included Columbia Boulevard from Birch Lane to Mendenhall Boulevard, Poplar Avenue from Columbia Boulevard to Mendenhall Boulevard, and Mendenhall Boulevard from Columbia Boulevard to Poplar Avenue. This large street reconstruction project required extensive public outreach, including conducting two public meetings. Significant roadway profile issues were addressed to improve vehicle-ride quality and correct drainage deficiencies. Sidewalks were installed in strategic locations to facilitate safe pedestrian flow through the corridors. Construction on the first phase of this project is currently wrapping up with Phase 2 scheduled for completion in 2021.

Delta Drive Reconstruction, CBJ, Juneau, Alaska. This project reconstructed more than 1,000 feet of roadway and cul-de-sac. A key element of this project was the addition of a sidewalk for enhanced pedestrian safety. This street sees higher-than-usual pedestrian traffic as it primarily serves multifamily apartment units, with an additional 14-lot alternative residential subdivision planned in the near future. Another major improvement for this street was filling existing open ditches and installing an enclosed stormwater collection system, which also includes underdrains to control the high groundwater table common in this neighborhood.

Aspen Avenue Pavement and Drainage Improvements, CBJ, Juneau, Alaska. Kevin was the lead designer on this project and aided with the construction administration. The project reconstructed Aspen Avenue from the Duck Creek crossing east to the intersection with Mendenhall Boulevard, as well as all of Pinewood Drive. The design included completely replacing an aged sanitary sewer collection system and partially replacing the water distribution system. The streets were very flat with inadequate drainage and required careful layout of the storm sewer system and detailed grading to ensure a successful project.

TECHNICAL EXPERTISE

- / Site Civil
- / Site Modeling/Analysis
- / Site Grading
- / Water Distribution and Sewer Collection
- / Storm Drainage

EDUCATION

/ BS in Civil Engineering, University of Alaska Fairbanks, Fairbanks, AK (2003)

REGISTRATIONS & LICENSES

/ Professional Civil Engineer in Alaska, CE12474 (2010)

PROFESSIONAL MEMBERSHIPS

/ American Society of Civil Engineers (ASCE)

CERTIFICATIONS & TRAINING

 Alaska Certified Erosion & Sediment Control Lead (2022)

WORK HISTORY

- / RESPEC (2020-Present)
- / PDC Engineers (2003–2020)





STEPHEN J. BISHOP, PE

MECHANICAL ENGINEER

OVERVIEW

Stephen Bishop is a mechanical professional engineer and is responsible for assisting project engineers on condition surveys, site inspections, code research, design, and construction services support for mechanical engineering documents. He supports project engineering tasks, including designing mechanical systems consisting of the ductwork systems layout, piping plans and diagrams, engineering calculations, selecting equipment, reviewing submittal data, performing inspections, and assisting with project coordination for current projects. His construction services experience includes inspections of geothermal installations, radiant floor layouts, ventilation and exhaust layouts, testing and balancing, heating piping, and plumbing systems. Stephen was an employee of PDC Engineers, Inc., which RESPEC acquired in 2020.

PROJECT EXPERIENCE

Marie Drake and Dzantik'i Heeni School Controls Upgrade, City and Borough of Juneau (CBJ), Juneau, Alaska. Stephen was the design engineer for this project and provided construction administration (CA) services for the direct digital controls (DDC) replacement project and HVAC upgrades for both schools. Stephen provided the design for the automatic controls upgrade project, including replacing various fan systems, CA, and site inspections. The controls upgrade and HVAC replacement project at Marie Drake School was renovated over two summers and was completed in February 2021.

Bartlett Regional Hospital COVID-19 Laboratory, Juneau, Alaska. Stephen was the design engineer for the new COVID-19 laboratory at Bartlett Regional Hospital. The laboratory design included a new ventilation system with independent heating and cooling, plumbing systems, and integration with the hospital's existing DDC system. The laboratory became operational in early 2021.

Snow Removal Equipment Building (SREB) Phase 1B, Juneau International Airport, Juneau, Alaska. The Juneau International Airport SREB 1B addition is a single-lane vehicular wash system. The design included integrating a recirculating wash water system, radiant floor heating system, snowmelt, and integration with an existing low-temperature heating system and the existing building DDC system. Stephen was the mechanical design engineer and designed the mechanical systems and integration with the wash bay system.

Juneau International Airport Terminal Reconstruction, CBJ, Juneau, Alaska. The Airport Terminal Reconstruction project included a 28,500-square-foot demolition of an existing portion of the Juneau International Airport terminal originally constructed in 1948. A new, 23,500-square-foot, two-story addition to the existing terminal building was designed to replace the demolished portion. Renovations were also made to approximately 15,000 square feet of the existing terminal building to integrate with the new addition. Stephen is responsible for mechanical CA and the observation of this project. The terminal expansion is scheduled to be completed in early 2023.

Public Works Demuck Wash Bay, CBJ, Juneau, Alaska. The Public Works Demuck Washbay is a single-lane vehicular wash system. The design included integrating a recirculating wash water system, a radiant floor heating system, snowmelt, an electric boiler heating plant, and the digital controls system. Stephen was the mechanical design engineer and designed the mechanical systems in this project.

TECHNICAL EXPERTISE

- / Medical Facilities
- / Educational Facilities
- / Commercial Facilities
- / Specialty Plumbing Systems
- / Heating and Ventilation Systems
- / Heat Pump and Alternative Energy Systems
- / Controls

EDUCATION

- BS in Mechanical Engineering, University of Alaska Fairbanks, Fairbanks, AK (2014)
- / MS in Mechanical Engineering, University of Alaska Fairbanks, Fairbanks, AK (2014)

REGISTRATIONS & LICENSES

/ Professional Mechanical Engineer in Alaska, ME156409

PROFESSIONAL MEMBERSHIPS

/ American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE)

HONORS & AWARDS

/ Tau Beta Pi – National Engineering Honor Society (2013)

WORK HISTORY

- / RESPEC (2020-Present)
- / PDC Engineers (2014–2020)





KYLE H. DRAPEAUX, PE

ELECTRICAL ENGINEER

OVERVIEW

With his 12 years practicing electrical engineering, Kyle Drapeaux has developed diverse experience with design and construction projects throughout Alaska. Kyle has acquired professional certification in Alaska as an electrical engineer and as a controls engineer. As an electrical engineer, his experience spans building construction, roadways, and marine facilities, including involvement with power distribution, lighting, communications, and alarm systems. His experience as controls engineer predominantly involves industrial systems. Kyle brings experience to the team for a diversity of project types involving electrical systems. The following project descriptions briefly illustrate his background of work for the City and Borough of Juneau (CBJ). He will provide his support to the CBJ as part of a team of engineers or for projects specifically addressing electrical systems. He will also provide planning, design, and construction support as required.

PROJECT EXPERIENCE

Water System SCADA Master Radio Relocation, CBJ, Public Works, Juneau, Alaska. When the site for the original tower supporting the water system's SCADA master radio was reallocated for use as a new park at the Gastineau Bridge, the master radio had to be relocated. The master radio communicated with several water system sites including water reservoirs, pump stations, and control valve vaults. With the project, a new site was determined and tested. Kyle assisted the CBJ staff determining the best site; testing signals from each of the remote sites using portable equipment. The equipment was ultimately relocated to the Cedar Park Pump Station in West Juneau.

Bagwell Electrical Panel Replacements, Juneau International Airport, Juneau, Alaska. Using a term agreement with the airport, the distribution and branch circuit panels inside the Part 121 bagwell were replaced. The panels provided 480-volt and 208-volt circuits supporting the passenger boarding bridges and equipment within the bagwell. The work included a careful as-built analysis and detailing due to the congestion of circuits surrounding the panels.

Downtown Parking Garage and Security Cameras, CBJ, Juneau, Alaska. In an effort to improve safety and security within the Downtown Parking Garage, Kyle assisted with planning and the eventual design for a surveillance camera system. The cameras were integrated with a network including switches, servers, and connection to the CBJ network.

SREF Sand/Chemical Fuel Island, Juneau International Airport, Juneau, Alaska. In 2019, Kyle provided design and construction services for a new electrical service and distribution to a fuel dispensing station. The sand/chemical building was a continuation of the SREF completion. Design included LED lighting, emergency shutdown, identifying hazardous locations, conduit seals, and a wireless radio network to relay the leak detection system to the SREF sand/chemical building network.

Ballot Processing Center, CBJ, Juneau, Alaska. A new small surveillance system for a new mail-in ballot processing center. This system will monitor the city staff while they count ballots to ensure that the ballots are processed correctly without being able to read the information on the paper ballots. This system will also provide live video data for public viewing during the counting of the ballots. The design documents were completed and ready to advertise for bidding mid-December 2021.

TECHNICAL EXPERTISE

- / Building Systems
- / Water Utilities
- / Marinas
- / Power Distribution
- / Lighting
- / Industrial Controls

EDUCATION

 BS in Mining Engineering, South Dakota School of Mines & Technology, Rapid City, SD (2011)

REGISTRATIONS & LICENSES

- / Professional Electrical Engineer in Alaska – 113867 (2016)
- Professional Control Systems Engineer in Alaska – 148935 (2020)

PROFESSIONAL MEMBERSHIPS

Institute of Electrical and Electronics Engineers

WORK HISTORY

- / RESPEC (2021–Present)
- / Haight & Associates, Inc. (2011–2021)

PART 4

2013 Recipient of Len Mackler Award for School Excellence

References

MRV Architects:

For references, see resumes and relevant project contacts.

RESPEC Engineers: Additional References

- Alan Steffert PE, City & Borough of Juneau Project Manager, 907.586.0800 Ext 4193, alan.steffert@juneau.gov <alan.steffert@juneau.gov>;
- Jeanne Rynne, City & Borough of Juneau Project Manager, 907.586.0800 Ext 4186, jeanne.rynne@juneau.gov <jeanne.rynne@juneau.gov>;
- Nathan Leigh, University of Alaska Southeast Director of Facilities Services, 907.796.6487, nleigh1@alaska.edu

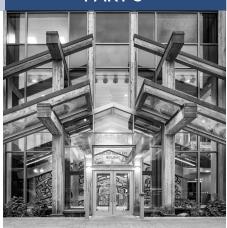
PND Engineers: References

For references, see resumes and relevant project contacts.



Tlingit & Haida Pre-K Southeast Alaska Module - Conceptual Rendering 2023

PART 5



Soboleff Center Entrance, Juneau, MRV

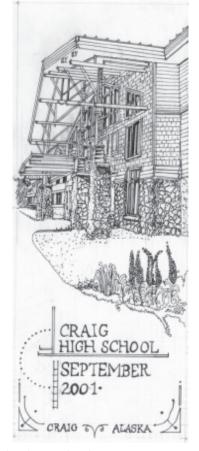
Ability to Perform

MRV Architects and our full consultant team have the capacity to immediately commence any planning and design services desired by the Craig School District.

The following information illustrates approximate level of design and production commitments for MRV and our consultants.

ARCHITECTS	1st Quarter 2024	2nd Quarter 2024	3rd Quarter 2024	4th Quarter 2024
MRV Architects	50%	40%	40%	30%
P. Voelckers	50%	30%	20%	20%
Z. Jones	50%	30%	30%	20%
S. Stekoll	70%	60%	50%	50%

	1st Quarter 2024	2nd Quarter 2024	3rd Quarter 2024	4th Quarter 2024
RESPEC	50%	40%	40%	30%
Puustinen	30%	30%	20%	20%
Bishop	50%	30%	20%	20%
Drapeaux	70%	60%	50%	50%



Archival MRV sketch, Craig



PND Engineers is currently finishing a number of contracts, with capacity opening up in January 2024 to assist with any projects for the Craig School District.