McCOOL CARLSON GREEN
ARCHITECTURE • INTERIOR DESIGN • SPACE PLANNING

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Jon Wunrow, Representative
Organized Village of Kasaan

Jon,

Thank you again for the opportunity to propose and to negotiate for the professional services contract to develop a statewide prototype clinic and the Kasaan Clinic specifically as the first built prototype. We at McCool Carlson Green are pleased to have been selected and to proceed with finalizing our scope and fee.

In the past few weeks we have focused with our team on refining the process that we originally conceived as a prototype kit of parts. I believe we have distilled the original proposal to its essential core and we have maintained the initial commitments made in the original response to the RFP to provide an innovative clinic prototype that contributes to community health and viability. The attached fee summary is the result of our efforts.

We consider the attached documents to be an agreed upon scope. We are validating the scope and costs with the Deign Team to reach a final agreement on costs. These fees are an refined estimate and will be validated with the consultants when final scope is accepted. If there are changes/reductions in the attached documents, please let us know immediately so we revise scope with the consultants one last time.

Best Regards,

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Primary Care Clinic Prototype Executive Summary – Process and Approach

Process Items:

The Prototype (Phase A) – 20-24 weeks

- Process: Information Gathering
- Prototype Program/Space Components
- Prototype Building/Technical Components
- Prototype Assembly
- Major Review Meeting

Prototype Placement In Kasaan (Phase B) – 12-16 weeks

- Kasaan Prototype Placement Teleconferences
- Design Implementation and Construction Documents
- Review & Feedback Assimilation to Prototype

Summary:

The Prototype design process is iterative; the project is organized into two periods, open schematic design and design development, so that the design team can simultaneously research, interview stakeholders, and develop a kit of parts (design choices) for essential clinic functions combined with building design solutions. The design team will first identify a set of Program/Space design variables that capture the essential medical elements and associated space needs. The design team will also identify a set of Building/Technical variables for clinic placement in various regions of the State. Each part (choice) will be refined over the course of design. Here are two examples of the open iterative process:

> Example 1: Prototype Program/Space Component Development Example: Feedback: After series of interviews, designers identify tele-medical treatment as a key function that needs to be defined in terms of spatial characteristics: During an interview of a Community Health Aide, the aide mentions that the telemedicine cart could only be used in a room that has power, a dedicated internet link, phone, privacy, and enough space for the cart, the aide, and the patient on a exam table, and in cases of pediatric patients, space for a parent. The aide reports that the patient connection to the cart works best with open space on both sides of the exam table and has this idea: Could the cart be recessed into the head of the exam table area so it could be used to serve more than one treatment area without moving it? Design Response: The design team either builds this into the design or generates a clinic program option for the tele-medical cart placement based on this information.
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> Example 2: Prototype Technical Component Development Example: Feedback: The solar energy consultant on the project notes that for buildings in most, but not all, of Alaska, orientation with an East-West ridgeline will save a percentage of building heating costs particularly in the months of March and April, except in locations where the prevailing wind counters the effects of the sun during these months. Design Response: This piece of information is built into the prototype component "Building Orientation" so buildings in areas that can benefit from this effect are designed accordingly.

Prototype Program/Space Components

The interior design scheme for the clinic will be comprised of a set of configurable parts organized around aspects of the clinic provider's duties and key primary care functions. Flexibility of clinic operation will be key so that the clinic is not overdesigned to the point of being rigidly non-functional. Each reconfigurable part will be defined by a physical arrangement of an area or unit of the clinic function such as a dental treatment pod, or behavioral health pod. Each functional task will be analyzed for the need for sound privacy and walls on a permanent or temporary basis, so that the clinic internal scheme as a whole responds to defined program needs. One walled space may include pods for many treatment functions organized to take place in different sequences or schedules.

Prototype Building/Technical Components

The building's operation scheme and the building itself will be comprised of a set of parts that are configurable based on essential differences of buildings in different climates and conditions of Alaska. One example of a "part" is the floor assembly with a specific insulation value geared to the climate in which the part is to be sent. These are independent of the program of the building and the choices are geared to impact the performance of the building (operation cost and overall building integrity). Efforts will be made to keep the quantity of variables to a cost and performance justified number. Some options, such as wood fired-boilers or other mechanical components, may have implications for training and building maintenance. Options will take into account variables including: Site foundational conditions, renewable energy resources, weather and building envelope, ventilation, snow load, etc. In addition, the prototype will contain technical information about efficiencies of the building that arise when a set of components is assembled on a specific site. Renewable energy consultants will develop a set of "intelligent" mechanical components that contain information about a site so that buildings built, for example, in areas with viable wind energy sources, can take advantage of that source early in design and integrate these options into the mechanical system.

Prototype Assembly Analysis

With a compartmentalized process, some members of the team will need to be reviewing and assessing the clinic as a whole to determine if the design is meeting overall goals for cost, and to ensure the design is considered for labor, transport, constructability and other holistic features. To the extent possible, goals for the overall building will also be compartmentalized as features of each part in the kit.

Process: Information Gathering and Major Review Meeting

The process is designed with an initial period (11 weeks) of parallel component design and review. Initially the team will develop a list of programmatic and technical components for the prototype by conducting research and phone interviews during this time. After approval of this initial list, different aspects of the clinic can be developed in parallel and reviewed individually without need for major revisions to the whole.

Travel

Phase A will include a single major review meeting, to be held in Anchorage midway through the phase after enough information is developed to allow meaningful choices, for the purpose of giving an overview of the elements in the kit of parts.

Cost Control

The design will include Integrated Cost Control, a process by which stakeholders and the design team can set priorities for standard of quality and price for each building part. The clinic's cost is managed to by having a fixed number of parts in the building kit, and by having an order-of-magnitude cost established for each. For example, the building envelope will be identified along with a maximum cost. Reviewing all of the components and their associated costs will allow cost priorities to be made. Also, options that would benefit the building, such as triple–paned windows or a solar-thermal storage tank or a heat recovery connection to an adjacent building, but may not fit within the base clinic funding can be easily assessed for funding from other sources.

Options

A primary value added option is a software or web-based interface for prototype deployment. We developed a concept for this option by looking at a number of online tools for non-technical design of buildings by users and interactive narrated online tours of building components and options. Clutch Media and MCG would work together to produce an interface that enables prototype planners make choices about the components in a clinic, operation costs, and construction cost management using animations, illustrations, and a click-able map of choices.

At this early point in design, we do not yet know the precise scope of an interface for clinic placement. The fee presented is a not-to-exceed amount and is based on Clutch Media's past experience in developing user choice interfaces. Examples of Clutch Media's work can be found at clutchmedia.com, a range of illustrative examples of narrated schemes and online design tools can be found here:

Narrated building and options tour (listening and clicking):
http://paulsmiths.ctpprojects.com/tour.html

Narrated How To Use the prototype sample:
http://www.pediatriccareonline.org/prepared/PCOTourV4b/PCOTourV4b.html
Silent How To Use sample:
http://www.cebs.org/Tour/2008/OSGtour_v2C.html

Non-guided kit guide (learning, clicking and exploring options, then choosing and using tools to generate documents):
http://www.midamericanenergy.com/wind/html/resource5.asp

Interface Options can include:

- **Coordinated Video Technology**
  Utilizing two distinct but coordinated video windows (one for the tour guide and the other for depicting the content he/she is discussing) will allow the client to augment, expand or remove and replace the current tour guides, without requiring expensive video

production. When the client would like to replace a tour guide, they simply shoot a new tour guide in a neutral interview-style setting, pull that video into the Tours MultiMedia Engine, and using the content management system, re-sync the content sequence to the guide video. Since the new guide may mention new things or speak at a different rate, the CMS allows the client to interweave new content video as well, and work to create a presentation where the tour guide and content video windows are precisely coordinated. Best of all, this approach allows the client to reuse and recycle b-roll video footage of content and scenes without that material becoming immediately dated.

- **Content managed guided virtual tours**
  Distinct guided virtual tours allow the client to develop presentations aimed at different prospective constituencies, or in this case different areas of interest. Guided tours may feature any number of guides, any type of media, infinite tour stops, multiple media items per stop, as well as related items and links. Utilizing guides to tell the story of a building (prototype) gives the client flexibility in the future to add new tour guides devoted to particular aspects of the building, or even native-language speaking tour guides for users whose primary language is not English.

- **Content managed interactive map**
  The interactive building map is a powerful tool for creating and maintaining audience-specific maps and providing immediate access to any location on in a building. As an added convenience to visitors, the map is fully searchable, and custom layers allow clients to highlight particular locations.

- **Deep Linking**
  Deep linking to the tour or map in any village gives the clients the capability to provide specific experiences to particular visitor groups.

- **Environmental Background Imagery**
  The building tour features a complex array of background imagery that is fully content managed, providing the college with yet another way to shape the character of each guided tour experience.

- **Dynamic Branding Bar**
  Gives the client freedom to change the tour branding in lockstep with institutional identity updates. New logos and taglines can be inserted at any time to keep the tour consistent with new branding initiatives.

- **Content Managed Calls To Action**
  Allows the client to control persistent calls to action, the icons and text that represent them, the locations to which they link and the creation of new calls to action.

- **Independent Media Player**
  The Building Tours Independent Media Player gives clients an opportunity to reuse their wealth of tour content *outside* the tour interface. Using the MultiMedia Engine content management system, the client can assemble and publish infinite numbers of unique collections of videos, photos, slideshows, and more.

- **Burn To CD-ROM**
  Burn to CD-ROM capability permits the client to burn the entire presentation to cross-platform CD-ROM or create a cross-platform ISO disk image for large runs of CDs.

Outline of Key aspects of Phase A:

1) Phase A: Prototype Kit of Parts Design through 65% design deliverable

    a. Schematic Design (11 weeks)
        i. Rigorous cost analysis, update of Denali Benchmark Report, used to establish target costs (Mark Foster and Assoc.)
        ii. Program/Space Component Development (McCool Carlson Green (MCG), Medical Consultants)
        iii. Building/Technical Component Development (MCG, Energy Consultants, CCHRC)
        iv. Assembly Analysis (MCG, Summit Consulting, Builders Choice Inc.

    b. Major Review Meeting (1 week)
        i. Meeting (Agnew Beck and Assoc.)
            1. Participants
                a. Owner representatives such as OVK
                b. Clinic employees/providers such as OVK Community Health Aide
                c. Facility management representatives from regional health corporation to receive prototype clinics
                d. ANTHC
                e. Denali Commission
            2. Tasks
                a. Review list of components
                b. Review component definitions/functions
                c. Set associated costs based on examples and targets

    c. Design Development to 65% (12 weeks)
        i. Refine target costs (Mark Foster and Assoc.)
        ii. Program/Space Component Documents (McCool Carlson Green (MCG), Medical Consultants)
        iii. Building/Technical Component Documents (MCG, Energy Consultants, CCHRC)
        iv. Assembly Specs/Documents (MCG, Summit Consulting, Builders Choice Inc.)

    d. Compilation of all prototype component parts into (Minimum) a printed binder designed as a user interface. Option for web-interface (See FAQs for further description).

<u>Prototype Placement In Kasaan (Phase B) – 12-16 weeks</u>

Placement of a prototype clinic in Kasaan (Phase B) would be the first edition of the Prototype Process product from Phase A.

Travel and Meetings

The initial step for Phase B are a kick-off and technical site visits and two stakeholder teleconferences. The primary purpose of the site visit is to review prototype concepts, assess constructability concerns onsite, observe the existing Kasaan Clinic. The purpose of the teleconferences is to go through the prototype process and to solidify a design and costs.

Design Completion

Design Completion is the last major period of clinic design and as an option could be executed by a design-build contractor and consultants or by a design firm. There are several options for Design Completion. Below is an outline of Phase B which proposes Design Implementation and Construction Documents by MCG.

Prototype Refinement

At the end of the Kasaan Clinic placement design effort, the Prototype team will reconvene with the client and stakeholders to review and assess the prototype process, and to recommend any changes, general or technical, to improve the process. Recommended changes will be incorporated into the prototype process and deliverable.

Options

We have identified several value-added options for Clinic Placement in Kasaan, among them are options for renewable energy systems including a solar thermal array and a wood fired boiler.

Outline of Key aspects of Phase B:

2) Phase B: Prototype Placement in Kasaan: Parts Selection and Detailing, 100% design deliverable.

    a. Prototype Kick-off Teleconferences -
        i. Request for information from village
        ii. Collection of geotechnical and background information
        iii. Technical Site Visits
        iv. Post teleconference summary of decisions

    b. 95% Design Completion (10-12 weeks)
        i. Construction Documents
        ii. Cost Estimate
        iii. 95% Cost Review Meeting in Anchorage (1 week)
            1. Participants
                a. Owner representatives such as OVK as necessary
                b. Stakeholders as necessary
                c. Denali Commission as necessary

d. Design Team

2. Tasks
    a. Complete Review of Design Documents
    b. Review and accept cost and design.
    c. Discuss any changes

c. 100% Bid Documents Completion (1 week)

d. After Placement Written Review and Teleconference: Refinement of the Prototype Process incorporating lessons from the Kasaan Placement (2 weeks)

e. Option for Construction Services - TBD

Process Narratives: Prototype Frequently Asked Questions

What will the prototype design provide? What won't it provide? The prototype documentation will include both drawings and specifications with information for the owner to develop the project as a traditional Design/Bid/Build, Design/Build, or At-Risk Construction Management. A Cost range will be developed that will give the owner an order of magnitude to prepare necessary funding. In order to provide as much bid detail as possible within the prototype format, some components will be developed with all choices made and specific product features selected. Other components related to site design will be defined with sufficient performance and prescriptive specifications to identify site-adapted features and associated estimates on price. Intent for site specific details is to design, illustrate, and specify components needed to define quality, scope and performance and minimize contractor unknowns that impact price.

The prototype will incorporate construction management and contractor experience insights as well as constructability review to ensure that the design, schedule, budget, and project requirements do not pose an obstacle to bidder's ability to give the owner the best buy.

What level of completion are the prototype drawings when compared to construction drawings? The Prototype Architectural Drawings will be developed to Design Development stage of documentation including prototype options interoperability. The drawings will not be shop drawings or 100% documents. The engineering drawings will be more prescribed. The prototype deliverable will not be a complete Design Bid Build package. It will be a binder of documents, with forms that need data input, site configuration design and engineering to become a 100% complete design. The deliverables will be designed for the owner to advertise an RFP to take the documents from a 65% stage to a 100% stage with a varied project delivery method and talioing the prototype to the specific site and region.

Who owns the prototype design? The Denali Commission will own the deliverable and may deploy it as the Commission sees fit. The prototype kit of parts will be engineered and drawn with design information shown so that design and engineering professionals or contractors could check calculations, apply the design to a site, detail the design, and if necessary modify the parts in the kit to adapt to changing user requirements.

What contracting and solicitation options are there for deployment of prototype?

There are three Project Delivery options initially identified:

1) The Client (Denali Commission and invested stakeholder) provides all site data, makes prototype choices or hires a design firm to do so. A defined Clinic bid package with all choices made is prepared and released for bidding as a Design-Bid-Build project.
2) Design-Build – Client Provides Design Data: The Denali Commission/Client writes a Clinic RFP and identifies some general prototype options and incorporates general site information into the RFP. The Design Build contractor is responsible for technical configuration of the prototype, design, engineering and construction.
3) Design Build – Contractor Provides Design Data: The Commission/Client writes a Clinic RFP that leaves all prototype choices up to a Design Build or Construction Management at Risk contractor and the contractor is responsible for providing completed design, engineering, and construction of the prototype

choices to fit a specific site, with user/client input. At the Commission's request, the contractor may make preliminary prototype configuration choices using assumptions, price the assumed configuration, and then file a change order if the site conditions are different from assumptions. This allows the Contractor to flexibility to meet price and program.

Ideally, how is the prototype deployment managed? Ideally, a person on staff at the Commission or on contract with the Commission would gain experience and develop an area of expertise in prototype deployment and configuration. As an alternative option, MCG is proposing to provide a software or web based interface that is designed to guide a village administrator or other client representative through the process of configuring the prototype. The interface would be geared to a non-technical audience and would show real-time implications of building design on performance and operating cost. Interactive design menus would consist of 3 dimensional views of components, the constructed clinic, the site via Google Earth, renewable energy options, annual building performance data as it related to choices. The software would act as a tool to help in project planning. The benefit of the interface is that it would allow clinic owners to test out various options and choices before the clinic design is fixed. This is a contract option as a value-added service.

Are there conditions that would not be a good candidate for a prototype clinic? The prototype could be deployed to fit a number of village conditions. The prototype won't meet every conceivable clinic configuration. For example, the prototype could be deployed as a ground-level addition to an existing building. The prototype has a best case scenario in which it will be designed to fit and to optimize, however, the last 35% of design allows some flexibility. The prototype is not designed to be a new room within an existing building although it could be adapted for this purpose as part of the last 35% of design. Keys aspects of the prototype will be designed as essential elements include; prototype envelope as exterior walls, mechanical system as sized to heat and ventilate a standard-sized building, and building orientation to maximize passive solar energy that the building collects.

During the last 35% of design, how can we ensure the product meets the prototype cost estimate range? The prototype concept has its limits: There will be efficiencies designed into the prototype kit of parts that could be negated when misapplied. For example, if the prototype is designed with panelized walls and a contractor makes a decision to stick-build the walls, other components will be affected such as window and door details, barge shipping weight, construction schedule assumptions and cost estimate. The prototype will be designed with cost and performance parameters which, when exceeded, would require redesign of major components or would be a greater expense. Costs are always changing and the design/process of developing the prototype will utilize our current technologies, professional services and construction/logistics feedback/evaluation to close in on a clinic for a reasonable price. There are no guarantees; however we are using all the tools we have to reach that potential.

What level of owner input will be needed for villages that will be receiving a clinic? The prototype will be designed with user and owner input to best support of clinic functions from the beginning. However, after the completion of the prototype design, user/owner input is designed to be specific related to the choices developed in the prototype; other changes from 65% to 100% will be site specific. As intended for the Kasaan (OVK) Clinic, input will be focused to participation in (2) two to three hour teleconferences to run through the prototype options. Depending on level of involvement and procurement

method, this may vary depending on client needs. The first teleconference is for the purpose of going through the prototype options and outline needs for any additional data. The second meeting is for considering all technical data and finalizing choices. Telephone participants include ANTHC, Denali Commission, regional health corporation representatives, and village representatives.

What is a fair and reasonable price for any given prototype clinic? As part of the prototype development process, MCG cost estimators will configure two clinics for design conditions that represent the most technically challenging and the least technically challenging clinic design site conditions in terms of design and construction. These two estimates will establish a range within which clinic can reasonably be expected to fall based on the year a clinic is constructed; escalation can be applied from that year to establish some guidance for clinic built in the future. The clinic will also be analyzed from a Benchmark cost standpoint to assess range of reasonable cost across Alaska.

How will the prototype process be kept up to date to make this effort valuable?
The clinic placement process in villages after the initial Kasaan placement is likely to generate follow-up comments from clients, contractors, cost estimators, materials suppliers, construction workers, clinic staff, and others. These comments are invaluable and should be upward-reported to designers and funders and incorporated into a refined and up-to-date process.

MCG is proposing a web-based interface option that would guide clients through the prototype process as part of the prototype. The interface would also provide a format for collecting information and user feedback both actively (question and answer) and passively (tracking clicks on pages) about prototype usage. These comments could be available for other prototype users. Essentially, the interface adds value to the prototype process by including communication and management tools that allow the prototype to self-deploy and self-manage.

The interface would also query technical consultants to provide comments on the quality and relevance of prototype components. Over time, design and engineering professionals or contractors could report needed adaptations in calculations, field-modified details in the design, and component adaptations to maintain relevance with user requirements and the latest clinic protocols.

End of Executive Summary