KALTAG
Health Clinic

Alaska Rural Primary Care Facility
Code and Condition Survey Report

July 23, 2001

I. EXECUTIVE SUMMARY

Overview

The Kaltag Clinic was constructed in 1994. Although the clinic is relatively new, it is significantly undersized and a new clinic should be constructed to replace it. The building is conventional 2x6 wall/trussed roof construction on a post and pad foundation. It has a functional floor plan in which patients entering the building are segregated at the point of entry with the receptionist placed in the center of the building. Exam rooms are isolated near the back, yet still accessible by the staff.

The existing site does not have room for more than a modest addition. The costs of moving, renovating and adding on to this clinic would be nearly equal to the cost of a new clinic.

Renovation and Addition

The existing clinic is 1125 s.f. and would require an addition of 875 s.f. to meet the 2000 s.f. minimum area recommended by the Alaska Rural Primary Care Facility study. The field investigation revealed that the building is bounded on three sides by tight property lines. If renovation/addition were proposed there would only be room on the site for about 500 s.f., a larger addition would crowd adjacent buildings more than would be acceptable. Setbacks, although not enforced in communities, provide needed fire separation. For consistency, the report assumes that the entire addition would be constructed. The addition/renovation proposed would cost 87% of the cost of a new clinic.

New Clinic

Because the cost of renovation and addition is more than 75% of the cost of new construction, a new clinic of at least 2000 s.f. should be built to replace the existing clinic. Alternative sites were not identified by the community during the site investigation. A new site would have to be identified if a new clinic is desired for this community.

II. GENERAL INFORMATION

A. The Purpose of the Report

ANTHC has entered into a cooperative agreement with the Denali Commission to provide management of the small clinic program under the Alaska Rural Primary Care Facility (ARPCF) assessment, planning, design, and construction. The purpose of the Code and Condition Survey Report is to validate the data provided by the community in the Alaska Rural Primary Care Facility Needs Assessment and to provide each community with a uniform standard of evaluation for comparison with other communities to determine the relative need among the communities of Alaska for funding assistance for the construction of new or remodeled clinic facilities. The information gathered will be tabulated and analyzed according to a set of fixed criteria that will yield a priority list for funding. Additionally, the relative costs of new construction vs. remodel/addition will be evaluated to determine the most practical and cost effective means to bring the clinics up to a uniform standard of program and construction quality. The information provided in this report is one component of the scoring for the small clinic RFP that the Denali Commission sent to communities in priority Groups 1 and 2.

B. The Assessment Team

The survey was completed on June 7, 2001. The field inspection for this village was completed by John Crittenden, AIA, Architects Alaska, and Ralph DeStefano, PE, RSA Engineering. Dan Williams, ANTHC, and Charles Woodley, Tanana Chiefs Conference made introductions and conducted meetings with the users. Team members who assisted in the preparation of the report included Stephen Schwicht and Ian VanBlankenstein of NANA/DOWL, project managers for the survey team, and Jay Lavoie of Estimations, Inc.

C. The Site Investigation

The format adopted is similar to the "Deep Look", a facility investigation and condition report used by both ANTHC and the Public Health Service, in maintaining an ongoing database of facilities throughout the country. Facilities are evaluated with respect to the requirements of the governing building codes and design guidelines. Building code compliance, general facility condition, and program needs have been evaluated. This written report includes a floor plan of the clinic and a site plan indicating the existing clinic site. Additional information gathered during the site investigation that is referred to in the report, which includes sketches of building construction details, a building condition checklist, and proposed plans for village utility upgrades, are not included with this report. This information is available for viewing at ANTHC's Anchorage offices and will be held for reference.

III. CLINIC INSPECTION SUMMARY

A. Community Information

The community of Kaltag has a current population of 230 as published in the 2000 U.S. Census. It is located 75 miles west of Galena in the Nulato Recording District. It is a part of the Doyon Regional Corporation. Refer to the attached Alaska Community Database prepared by the Alaska Department of Community and Economic Development in Appendix C.

B. General Clinic Information

The Kaltag Clinic was constructed in 1994. It is a building provided by Independent Lumber Company using plans which were prepared by an architect. The building is a small rectangular gable roofed structure sitting on wood creosoted piling and glued laminated beams. The building is in good shape and is well maintained. The exterior is freshly painted. The foundation system appears to be holding level. The building is approximately 1125 s.f. in size, which makes it 875 s.f. less than the ARPCF minimum of 2000 s.f. for a medium-sized clinic.

C. Program Deficiency Narrative

The health care program has already outgrown the building. The existing program consists of two large equally sized exam rooms, a lunch/break room, a small office area, a large waiting room, and utility and storage rooms. The building has a good layout which isolates the exam rooms from the public, creating an environment where privacy can be maintained. Several key components which are missing or insufficient due to inadequate space are the trauma room, administrative space, and an itinerant sleep room.

The following table illustrates a comparison between the current actual square footage (SF) and the 2000 s.f. minimum area recommended by the Alaska Rural Primary Care Facility study for a Medium Clinic:

Table 1 – ARPCF Clinic Area Comparison

Purpose/Activity	#	Existing Net SF	#	ARPCF Medium	Difference
Arctic Entry	1	60	2	2 @ 50=100	40
Wait/Recep/Closet	1	216	1	150	-66
Trauma/Telemed/Exam	1	120	1	200	80
Office/Exam	1	120	1	150	30
Admin./Records	1	75	1	110	35
Pharmacy/Lab		-	1	80	80
Portable X-ray		-		-	-
Spec. Clinic/Health Ed./Conf.		-	1	150	150
Patient Holding/Sleep Room		-	1	80	80
Storage	1	30	1	100	70
HC toilet	1	55	2	2 @ 60=120	65
Janitorial Closet		-	1	30	30
Total Net Area				1270	
Mechanical Room		30		147	117
Ancillary/Morgue				30	30

The Kaltag Clinic has a gross floor area of 1125 s.f. To comply with the ARPCF minimum of 2000 s.f. for a Medium clinic the building requires an expansion of approximately 875 s.f.

An analysis of the existing building's program functions follows. Please also refer to the floor plan in Section H:

- **Arctic Entries**: A comfortable ramp leads to a large entry. Doors are 3 foot wide. The back door is in a short hallway and does not have a vestibule. Both landings are unprotected from the roof's drip line.

- **Waiting:** The waiting area is much larger than needed. It could be enclosed to obtain additional office area.

- **Trauma/Telemed/Exam:** The exam rooms are long enough, but are restricted in width to about 9 feet which is too narrow when working with a trauma patient.

- **Office/Exam:** Two 9' x 14' exam rooms provide the clinical care for the clinic. They are well situated in the clinic and are adequate for normal exams.

- **Administration/Records:** The 75 s.f. provided for these office activities is not sufficient for the staff, the computer equipment, and the file storage needed.

- **Pharmacy/Lab:** This occurs within the two exam rooms.

- **Specialty Clinics:** No space provided.

- **Patient Holding/Sleep:** None provided in the clinic.

- **Storage:** A small storage (4' x 5') room keeps the main medical/medicinal supplies. It is well organized but much smaller than is needed.

- **HC Toilet Room:** The toilet room is adequate for accessible use.

- **Janitor Closet:** None provided.

- **Ancillary Spaces:** There are no ancillary spaces in this clinic.

D. Architectural/Structural Condition

The existing building is in excellent shape and is well maintained. There are a number of design deficiencies and construction issues which affect the clinic's overall condition and serviceability. The two exit landings and stairs are located directly under the drip line of the roof. This issue has been addressed in a current funding request, however, the results of that request are not known. There are, additionally, some humps appearing in the floor directly over the beam lines. This issue is addressed in the deficiency listing that follows. Generally, the building is performing as designed and the foundation system appears to be holding relatively level. A small amount of the existing floor space (4%) would be affected by a remodel or addition.

E. Site Considerations

The current site is conveniently located near utilities, the school, and other community services. Adding to the clinic at the existing site poses some very real restrictions in that the building is bounded on two sides by property lines already too close and on the third side by the street providing access to the entry. Therefore, only one side has the potential for expansion. The maximum that could be added to the side of the building would be about 500 s.f. which would leave the clinic still about 375 s.f. less than the ARPCF minimum of 2000 s.f. This is further addressed in the program deficiency write-up that follows. If remodeling is considered a favorable option then the building would have to be relocated to another site.

Site utilities include village water, sewer, power, and telephone service directly to the building.

F. Mechanical Condition

Heating and Fuel Oil: Two Monitor stoves provide heating for the clinic. One stove is located in the waiting area and the other is located in an exam room. This heating system is inadequate for heating the clinic uniformly since each unit provides only a single, highly variable zone of heating. The nature of this heating arrangement is such that rooms without the heaters where privacy or security is required will rapidly cool below the comfort zone and could also lead to freezing of plumbing and/or medications. Fuel for the waiting area Monitor stove is stored in a 55-gallon drum and a 100-gallon fuel tank, which are piped together and located adjacent to the building. Fuel for the exam room Monitor stove is stored in a 55-gallon drum located adjacent to the building. The existing are not UL listed, vented, or properly supported and need to be replaced. There are plans to replace the existing fuel tanks with two new 300-gallon tanks.

Ventilation: The clinic has a heat recovery ventilation (HRV) unit for ventilation. The supply air is ducted through the HRV unit into the exam rooms and work areas. The exhaust air is then drawn out of the restroom and kitchen areas, through the HRV unit, and vented outside. The supply and exhaust air ducts are routed overhead to ceiling diffusers. The outside air and exhaust air are drawn in and vented through openings in the side of the building. The clinic occupants report that the HRV unit is not working well, indicating that there is to little airflow from the unit. While on site we found the remote control not wired and the unit's recirculation damper open, which would prevent outside air from ventilating the clinic. In addition to the HRV the clinic restroom also has an exhaust fan.

Plumbing: Cold water is provided to the clinic from the village water supply and hot water from an electrical hot water heater. A three-inch waste line leaves the building and flows to the village sewer system. The waste line is exposed under the building and is heat traced, but the insulation is falling off. It needs to be reinsulated or installed in a box utilidor below the building. The vent for the building is located at the side wall and is reported to freeze up in the winter it needs to be brought back into the building and protected from freezing so it will function effectively. Plumbing fixtures in the clinic include a toilet and lavatory in the restroom, neither meeting ADA requirements. The hot and cold water supplies on the lavatory faucets were reversed. There are also restroom type lavatories in the exam rooms and a kitchen sink in the nourishment area. Those should both be replaced with heavy sound deadened stainless steel sinks with wrist blade faucet handles (for sanitary purposes). There is no mop sink in the clinic and water for house keeping is provided through a hose connection from the lavatory in the restroom. This is a code and health problem since the system is not protected with a vacuum breaker and cross contamination can occur.

G. Electrical Condition

Power: 120/240-volt, single-phase power is provided to the clinic's electrical meter through an overhead service. A 100-amp breaker is provided after the meter and a 100-amp panel is provided inside the building. The service is fed with copper conductors. The system appears to be grounded correctly to a grounding rod located below the meter. The panel installation appeared neat and orderly except that there are two open knock-out covers missing that need to

be replaced. All 18 breakers in the panel were used, but there is capacity for a maximum of 20 breakers. All wiring from the panel was run in Romex or cable with copper conductors. The numbers of receptacles inside the building is appropriate, and receptacles located within 10 feet of the exam room sinks and the restroom sink are protected with GFCIs. One GFCI receptacle is located on the outside of the building.

Lighting and Emergency Fixtures: Florescent fixtures with double 4-ft. 35-watt F40 bulbs provide interior lighting. Lighting levels appear acceptable, although they were not measured. Incandescent fixtures at both entrances to the clinic provided exterior lighting. Two emergency light fixtures were provided in the clinic one near each exit. An exit sign was provided over the front door, but was missing over the back door. The fire alarm system consisted of pull stations at the entrances, a smoke detector in the hallway, a heat detector in the kitchen, and an inside and outside horn.

Telecommunications: The telecommunication system includes two phone lines serving the clinic. They do have Internet access, but a Telemed system had not yet been installed.

H. Existing Facility Floor Plan

See following sheet for the floor plan of the existing clinic.

J. Community Plan

Refer to the attached community plan for location of the existing clinic and the proposed location for the new clinic. If the existing clinic site is the preferred location or if a new site has not yet been selected, only the existing clinic location will be shown.

IV. DEFICIENCY EVALUATION AND COST ASSESSMENT

The attached deficiency reporting forms are based on Public Health Service form AK H SA-43. The forms are numbered sequentially for each discipline starting with **A01** for Architectural and structural deficiencies, **M01** for Mechanical deficiencies and **E01** for Electrical deficiencies.

A. Deficiency Codes

Deficiencies are further categorized according to the following PHS Deficiency codes to allow the work to be prioritized for federal funding, should that apply. Deficiency codes used in this survey include:

02 **Fire and Life Safety:** These deficiencies identify areas where the facility is not constructed or maintained in compliance with provisions of the state mandated building codes including the International Building Code, The Uniform Fire Code, NFPA 101, The Uniform Mechanical and Plumbing Codes and The National Electrical Code.

03 **Safety:** These deficiencies identify miscellaneous safety issues.

04 **Environmental Quality:** This addresses DEC regulations, hazardous materials and general sanitation.

05 **Program Deficiencies:** These are deficiencies which show up as variations from space guidelines established in the Alaska Primary Care Facility Facility Needs Assessment Project and as further evaluated through observation at the facility site and documented in the facility floor plans.

07 **Disability Access Deficiencies:** The items with this category listing are not in compliance with the Americans with Disabilities Act.

08 **Energy Management:** These deficiencies address the efficiency of heating systems/fuel types and the thermal enclosures of buildings.

11 **Structural Deficiencies:** These are deficiencies with the fabric of the building. It may include the foundations, the roof or wall structure, the materials used, the insulation and vapor retarders, the attic or crawl space ventilation and the general condition of interior finishes. Foundation systems are included in this category.

12 **Mechanical Deficiencies:** These are deficiencies in the plumbing, heating, ventilating, air conditioning, or medical air systems.

13 **Electrical Deficiencies:** These are deficiencies with electrical generating and distribution systems, fire alarm systems and communications systems.

14 **Utilities:** This category is used for site utilities, as opposed to those within the building and may include sewer lines and water and power distribution.

B. Photographs

Each sheet has space for a photograph. Some deficiencies do not have photos. Photographs do not cover all areas where the deficiencies occur but are intended to provide a visual reference to persons viewing the report who are not familiar with the facility. Additional photographs of the clinic and the surrounding area are included in Appendix B.

C. Cost Estimate General Provisions

New Clinic Construction

- **Base Cost**

The Base Cost provided in Section VI of this report is the direct cost of construction, inclusive of general requirements (described below) and contingency for design unknowns (an estimating contingency) The base cost is exclusive of overhead and profit, mark-ups, area cost factors and contingencies. Material costs for the project are all calculated FOB Anchorage and labor rates are based on Davis Bacon wages, regionally adjusted to Anchorage. Transportation costs, freight, Per Diem and similar costs are included in the base costs. The Project Factors and Area Cost Factor are multipliers of the base costs.

General Requirements are based on Anchorage costs without area adjustment. It is included in the Base Cost for New Clinics. These costs are indirect construction cost not specifically identifiable to individual line items. It consists of supervision, materials control, submittals and coordination, etc. The general requirements factor has not been adjusted for Indian Preference.

The Design Unknowns Contingency is an estimator's contingency based on the schematic nature of the information provided, the lack of any real design, and the assumption that any project will encompass related work not specifically mentioned.

- **Project Cost Factors**

  Equipment Costs for new medical equipment has been added at 17% of the cost of new floor space.

  Design Services is included at 10% to cover professional services including engineering and design.

  Construction Contingency is included at 10% of the Base Costs to cover changes encountered during construction.

  Construction Administration has been included at 8% of the Base Costs. This is for monitoring and administration of the construction contract.

- **Area Cost Factor**

The Area Cost Factor used in the cost estimates for this facility is shown in Section VI of this report. The area cost factors are taken from a recent study completed for the Denali Commission for statewide healthcare facilities. The numbers are the result of a matrix of cost variables including such items as air travel, local hire costs, room and board, freight, fire protection equipment, foundation requirements, and heating equipment as well as contractor costs such as mobilization, demobilization, overhead, profit, bonds and insurance. These parameters were reconsidered for each village, following the site visit, and were modified, if necessary.

- **Estimated Total Project Cost of New Building**

This is the total estimated cost of the project, including design services. The construction contract will be work subject to Davis Bacon wages, and assumes construction before year-end 2001. No inflation factor has been applied to this data.

Remodel, Renovations, and Additions

- **Base Cost**

The Base Cost provided in the specific deficiency sheets is the direct cost of construction, exclusive of overhead and profit, mark-ups, area cost factors and contingencies. Material costs for the project are all calculated FOB Anchorage and labor rates are based on Davis Bacon wages, regionally adjusted to Anchorage. Most of the deficiency items do not constitute projects of sufficient size to obtain efficiency of scale. The estimate assumes that the projects are completed either individually, or combined with other similar projects of like scope. The numbers include moderate allowances for difficulties encountered in working in occupied spaces and are based on remodeling rather than on new construction costs. Transportation costs, freight, Per Diem and similar costs are included in the base costs. The General Requirements, Design Contingency and Area Cost Factors are multipliers of the base costs.

The cost of Additions to clinics is estimated at a unit cost higher than New clinics due to the complexities of tying into the existing structures.

Medical equipment is calculated at 17% of Base Cost for additions of new space only and is included as a line item in the estimate of base costs.

- **General Requirements Factor**

General Requirements Factor is based on Anchorage costs without area adjustment. The factor is 1.20. It is multiplied by the Base Cost to get the project cost, exclusive of planning, architecture, engineering and administrative costs. This factor assumes projects include multiple deficiencies, which are then consolidated into single projects for economies of scale. The general requirements factor has not been adjusted for Indian Preference.

- **Area Cost Factor**

The Area Cost Factor used in the cost estimates for this facility is shown in Section VI of this report. The area cost factors are taken from a recent study completed for the Denali Commission for statewide healthcare facilities. The numbers are the result of a matrix of cost variables including such items as air travel, local hire costs, room and board, freight, fire protection equipment, foundation requirements, and heating equipment as well as contractor costs such as mobilization, demobilization, overhead, profit, bonds and insurance. These parameters were reconsidered for each village, following the site visit, and were modified, if necessary.

- **Contingency for Design Unknowns (Estimating Contingency)**

The Design Unknowns Contingency is an estimator's contingency based on the schematic nature of the information provided, the lack of any real design, and the assumption that any project will encompass related work not specifically mentioned. The factor used is 1.15.

- **Estimated Total Cost**

This is the total estimated bid cost for work completed under Davis Bacon wage contracts, assuming construction before year-end 2001. This is the number that is entered in the front of the deficiency form. No inflation factor has been applied to this data.

- **Project Cost Factors**

Similar to new clinics, the following project factors have been included in Section VI of this report.

Design Services is included at 10% to cover professional services including engineering and design.

Construction Contingency is included at 10% of the Base Costs to cover changes encountered during construction.

Construction Administration has been included at 8% of the Base Costs. This is for monitoring and administration of the construction contract.

- **Estimated Total Project Cost of Remodel/Addition**

This is the total estimated cost of the project including design services, the construction contract cost for work completed under Davis Bacon wages and assuming construction before year-end 2001. No inflation factor has been applied to this data.

V. SUMMARY OF EXISTING CLINIC DEFICIENCIES

The attached table summarizes the deficiencies at the clinic and provides a cost estimate to accomplish the proposed modifications. If all deficiencies were to be addressed in a single construction project there would be cost savings that are not reflected in this tabulation. The total cost of remodel/addition shown in Section VI is intended to show an overall remodel cost that reflects this economy. Refer to Section VI for a comparison of remodel/addition costs to the cost of new construction. The specific deficiency sheets are included in Appendix A.

VI. NEW CLINIC ANALYSIS

The decision on whether to fund new clinic construction or a remodel/addition of the existing clinic is to be determined by comparing the cost of a new facility designed to meet the program requirements of the Alaska Rural Primary Care Facilities minimum area requirements with the projected combined cost of renovating, remodeling and adding onto the existing building to provide an equivalent facility. If the cost of the remodel/addition project is greater than 75% of the cost of constructing an altogether new facility then a new facility is recommended. That ratio is computed as follows:

- **The cost of a new clinic in Kaltag is projected to be:**

Base Anchorage Cost per s.f.		$183/ s.f.
Medical Equipment Costs @ 17%		$31
Design Services 10%		$18
Construction Contingency 10%		$18
Construction Administration. 8%		$15
Sub-total		$265/ s.f.
Area Cost Factor for Kaltag	1.46*	
Adjusted Cost per s.f.		$386/ s.f.

Total Project Cost of NEW BUILDING 2,000 x $386 = $772,000

- **The cost of a Remodel/Renovation/Addition is projected to be:**

Projected cost of code/condition renovations (From the deficiency summary)
90% of cost of code/condition improvement** $68,616 Renovation

Projected cost of remodeling work (See A04)
1,125 s.f. clinic @ 4% remodel = 50 s.f. $12,912 Remodel

Projected cost of building addition (See A05)
2,000 s.f. – 1,125 s.f. = 875 s.f. $442,747 Addition
Design 10%, Const. Contingency 10%, Const. Admin. 8% $146,797

Total Project Cost of REMODEL ADDITION **$671,072**

- **Ratio of remodel:new is $671,072 : $772,000 = 0.87X**

The cost of a remodel/addition for this clinic would cost 87% the cost of a new clinic, therefore, a new clinic is recommended for this community.

* The Area Cost Factor was refined by Estimations, Inc. in July 2001 based on information obtained during the site visit.

** The 90% factor represents economy of scale by completing all renovation work in the same project.

Appendix A: SPECIFIC DEFICIENCIES LISTING

Refer to the attached sheets for the listing of the individual deficiencies and the corrective action recommended.

Appendix B: GENERAL SITE PHOTOGRAPHS

The following sheets provide additional photographic documentation of the existing building and surroundings.

Appendix C: ADCED Community Profile

Refer to the attached document prepared by Alaska Department of Community and Economic Development profiling the community of Buckland.

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