CHIGNIK LAKE
Health Clinic

Alaska Rural Primary Care Facility
Code and Condition Survey Report

July 23, 2001

I. EXECUTIVE SUMMARY

Overview

The Chignik Lake Clinic is reported to have been constructed in 1978. Overall, the structure is in poor to fair condition due to extreme climatic conditions and heavy use. The building has been added onto to provide an office area and ambulance barn, however the clinic has outgrown its current space. The lack of adequate space for medical supplies and the absence of a trauma room prevent the staff from providing the level of care needed on a daily and emergency basis.

Renovation and Addition

The existing clinic is approximately 800 s.f. and would require an addition of 1200 s.f. to meet the 2000 s.f. minimum area recommended for a medium clinic by the Alaska Rural Primary Care Facility study. The floor plan layout would require the remodel of approximately 25% of the interior space. The cost of required renovations and code upgrades, combined with the cost of a new addition equal 173% 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. A new site had not yet been selected by the community at the time of the clinic survey, however it appears that multiple sites are available with access to utilities and of adequate size to accommodate the new structure.

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 conducted on June 6, 2001 by John Biggs, AIA, Architects Alaska and Bill Henriksen, PE, RSA Engineering. Randy Muth of ANTHC and Andrea Horn of Bristol Bay Area Health Corporation were the team escorts. Randy made introductions and conducted the village briefings. 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 Chignik Lake has a current population of 145 as published in the 2000 U.S. Census. It is located 474 miles southwest of Anchorage in the Aleutian Islands Recording District. It is a part of the Bristol Bay Native Corporation. Refer to the attached Alaska Community Database prepared by the Alaska Department of Community and Economic Development in Appendix C for additional community information.

B. General Clinic Information

The Chignik Lake Clinic was constructed in 1978. This building is approximately 800 s.f. in size with a garage addition and is constructed of conventional frame walls, floor, and roof. The building has one main entry at the waiting area and one secondary exit at the exam room. In general, the clinic is not ADA accessible at multiple locations, including the entries, the interior change in floor level of approximately 24", the toilet room, the door widths, and the door hardware. In addition, the building lacks adequate storage and trauma facilities, which decreases its ability to serve the community effectively.

C. Program Deficiency Narrative

The main programmatic deficiency pertains to lack of handicapped access throughout. The floor of the office area is approximately 24" below the level of the adjacent waiting area. It does not appear feasible to make this area accessible unless new floor framing is provided to be level with the main building floor. The building lacks a ramp entry at the main entrance, the second exit ramp is not accessible, and handrails/guardrails at both exits do not comply with code requirements. In addition, the toilet room lacks accessible clearance, the fixtures do not comply with ADA, and the interior doors are not 36" wide to meet ADA.

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		-	2	2 @ 50=100	100
Wait/Recep/Closet	1	179	1	150	-29
Trauma/Telemed/Exam		-	1	200	200
Office/Exam	1	173	1	150	-23
Admin./Records	1	206	1	110	-96
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	86	1	100	14
HC toilet	1	32	2	2 @ 60=120	88
Janitorial Closet		-	1	30	30
Total Net Area		-		1270	-
Mechanical Room		-	1	147	147
Morgue		-	1	30	30

The Chignik Lake Clinic has a current gross area of 800 s.f. This would require a gross building area expansion of approximately 1200 s.f. in order to meet the 2000 s.f. minimum requirements for a Medium clinic.

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

- **Arctic Entries**: None provided.
- **Waiting:** The waiting area is large, however, it serves as a circulation space for the entire building, which decreases its overall usefulness.
- **Trauma/Telemed/Exam:** None provided.
- **Office/Exam:** The exam room is small but functional.

- **Administration/Records:** The administrative area is located in an area approximately 24" below the main floor area. This area is made inefficient by the long, narrow proportions of the space.

- **Pharmacy/Lab:** None provided.

- **Specialty Clinics:** Not applicable.

- **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 lacks adequate accessible clearance as well as accessible fixtures.

- **Janitor Closet:** None provided.

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

D. Architectural/Structural Condition

The clinic building is approximately 800 s.f. with a 12'-6" x 28' shed addition for vehicle storage. The building is a wood frame structure. The foundation is 12" diameter wood pilings supporting 8x8 solid timber beams. These have been placed directly on the ground surface which is comprised of volcanic ash mixed with organics. The floor joists are 2x6's at 24" o.c.. The walls are 2x6 framing sided with T-111 siding. The ceiling is plywood supported by 2x4 framing, spanning between bearing walls. The roof is 2x4 rafters with metal roofing over plywood decking.

Structurally, the building structure appears to be light and inadequate for the environmental conditions. The staff noted that when large vehicles pass by on the adjacent road, the entire building vibrates. The roof appears to be sagging due to snow loading. The ceiling sags indicating insufficient framing support. The floor lacks rigidity due to the 24" joist spacing, and the staff noted that portions of the subfloor have been replaced due to rot. The building is in need of a new roof and reinforcement at the floor and foundation.

E. Site Considerations

The existing clinic site is not the preferred site of the community. The existing site is located adjacent to the main village road. Site utilities including village water, sewer, power, and telephone service run directly to the building. A new site for a new building was undetermined at the time of the survey, however, it appears that multiple sites are available with access to village utilities and services. The main site consideration would regard site development to alleviate ground vibration by passing vehicles.

F. Mechanical Condition

Heating and Fuel Oil: Heating for the building is provided by a single Monitor 41 oil heater located in the office area at the lower level of the building. There have been complaints of an inability to control the temperatures of the exam room and storage room next to the exam room. Both rooms are separated from the area where the oil heater is located. A heating system needs to be selected for the clinic that provides heating to all rooms of the building. A single 55-gallon fuel tank located 4'-10" away from the building serves the Monitor heater. The tank is not U.L. listed or properly vented, is supported on an unstable wooden structure and none of the piping, valve or filter from the tank is properly supported. At the time of our visit we observed an active fuel leak at one of the fittings from the fuel pipe. The entire fuel system from the tank to the heater needs to be replaced and the new UL listed tank installed a minimum of 5 feet away from the building.

Ventilation: There is no mechanical ventilation for the clinic. The sources of ventilation for the occupied spaces are though operable windows. The clinic needs to be provided with a mechanical ventilation system and should not rely on operable windows alone. There is no exhaust serving the restroom.

Plumbing: Domestic water is provided from the village water system and hot water is provided from a 10-gallon electric water heater located in the exam room. The sewer service size for the building is 4", but there is no cleanout for the building. Plumbing fixtures in the clinic include a toilet and lavatory. There is a double compartment sink located in the exam room. The plumbing fixtures in the restrooms do not meet ADA requirements and there is not enough room to provide the ADA required access. There is no mop sink for the clinic, so the lavatory is used to fill the mop bucket. There was 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: A 120/240 volt overhead service is provided to the building with a 100 amp main disconnect provided at the meter. Grounding from the meter is provided to a grounding rod installed below the meter. The clinic is served by a single panel. The panel is a Sears panel with a 100 amp disconnect. It has room for 12 breakers with 9 – 15 amp breakers installed. Grounding has not been installed correctly in the panel. A number of grounds are connected together and other grounds have been clipped off at the panel. Service to the panel is provided with copper wires. All wire from the panel has been run in Romex. Considering the condition of the wiring in the panel, the age of the panel and the number of breakers in the panel the panel needs to be replaced. Staff in the clinic reported the breaker serving the receptacles and lights in the exam room trips often when many of the electrical devices are energized. Receptacles are provided throughout the clinic building, but the staff indicated they need additional receptacles in most areas of the building. The use of plug strips was noted in a number of locations. Receptacles in the restroom or next to the exam room sink were not GFCI

protected nor are the receptacles located in the garage/storage area. There were no receptacles on the outside of the building. There were a number of code issues associated with the electrical panel and wiring that are described in more detail in the Deficiency Evaluation and Cost Assessment forms.

Lighting and Emergency Fixtures: Interior lighting in the exam room is provided by surface mounted florescent fixtures using double circular lamps. There are no diffusers over the lamps. The remainders of the fixtures in the building are incandescent. The lighting levels in the building are low and all fixtures are in poor condition. Exterior lighting was provided with incandescent fixtures at the entrances only. The fixtures were in poor condition with no covers for the bulbs. Light fixtures inside the building and outside need to be replaced. There are no emergency light fixtures in the clinic. There is only a single exit sign for the exit from the exam room. It is a metal exit sign not an exit fixture. Three smoke detectors were installed in the building one in the waiting area, in the exam room and the office area. The ones in the exam room and the office area had dead batteries.

Telecommunication: Two phone lines serve the building, one for the local incoming line, and one for a fax line. There is no line for a modem. A Telemed system had been installed at this facility.

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 Chignik Lake 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 Chignik Lake	1.67*		
Adjusted Cost per s.f.		$444/ s.f.	

Total Project Cost of NEW BUILDING 2,000 x $444 = $888,000

- **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** $551,731 Renovation

Projected cost of remodeling work (See A02)
800 s.f. clinic @ 25% remodel = 200 s.f. $45,802 Remodel

Projected cost of building addition (See A01)
2,000 s.f. – 800 s.f. = 1,200 s.f. $602,226 Addition
Design 10%, Const. Contingency 10%, Const. Admin. 8% $335,933

Total Project Cost of REMODEL ADDITION **$1,535,692**

- **Ratio of remodel:new is $1,535,692 : $888,000 = 1.73X**

The cost of a remodel/addition for this clinic would cost 173% 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 Chignik Lake.

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