ALASKA DISTRICT ENGINEERS, 1946—1975

Col. James D. Lang
1 May 46 - 8 Apr 48

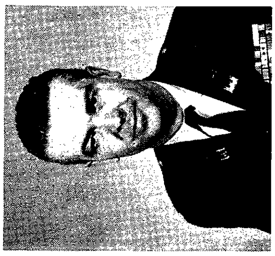
Col. William E. Potter
9 Apr 48 - 11 Apr 49

Col. Lyle E. Seeman
12 Apr 49 - 26 Jun 52

Col. Louis H. Foote
27 Jun 52 - 30 Apr 54

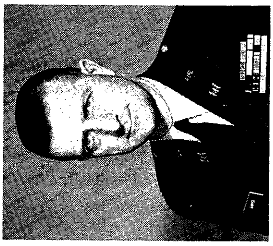
Col. Carl Y. Farrell
1 May 54 - 30 May 56

Col. Pierre V. Kieffer, Jr.
23 Aug 56 - 30 Jun 58

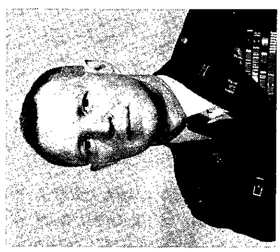


Col. William C. Gribble, Jr.
1 Jul 58 - 30 Jun 60

Col. Christian Hanburger
1 Jul 60 - 18 Dec 62



Col. Kenneth T. Sawyer
19 Dec 62 - 22 Aug 64



Col. Clare F. Farley
23 Aug 64 - 2 Aug 67

Col. Ernest L. Hardin, Jr.
3 Aug 67 - 19 Jul 70

Col. Amos C. Mathews
20 Jul 70 - 29 Jun 73

Col. Charles A. Debelius
8 Aug 73 - present

(G. O. 6)

GENERAL ORDERS)
NO. 6)

ARMY SERVICE FORCES
OFFICE OF THE CHIEF OF ENGINEERS
WASHINGTON 25, D. C.
9 April 1946

Subject: Establishment of the Alaskan District

1. By Authority of the Secretary of War and effective 10 April 1946, a new district to be known as the Alaska District is established with headquarters at Anchorage, Alaska, under the jurisdiction of the Division Engineer, North Pacific Division.

2. The Alaska District will have jurisdiction over all military construction and military real estate functions for which the Chief of Engineers has a direct responsibility within the territorial limits of Alaska.

3. The Seattle District, North Pacific Division, will, until further notice, continue to be responsible for the supervision of civil works functions of the Chief of Engineers in Alaska.

BY ORDER OF THE CHIEF OF ENGINEERS:

CHAS. G. HOLLE
Colonel, Corps of Engineers
Executive Officer

WAR DEPARTMENT, OFFICE OF CHIEF OF ENGINEERS
OFFICIAL COPY

(G. O. NO. 12)

GENERAL ORDERS)
NO. 12)

DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
Washington 25, D. C.
27 September 1949

SUBJECT: Transfer of Civil Works Functions from Seattle District to Alaska District

1. Effective 1 July 1949 the District Engineer, Alaska District, will be responsible for all civil works activities in Alaska and such activities are transferred from the District Engineer, Seattle District, to the District Engineer, Alaska District.

2. Until the Alaska District attains organizational sufficiency, as determined by the Division Engineer, North Pacific Division, civil works functions which would normally be performed by that district may continue to be performed in the Seattle District on a reimbursement basis.

3. The Division Engineer, North Pacific Division, will arrange for the transfer of civilian personnel, property, records and funds. The Chief of Engineers will arrange for the transfer of any military personnel which may become necessary as a result of the reassignment of functions directed in paragraph 1 above.

BY ORDER OF THE CHIEF OF ENGINEERS:

CRAIG SMYSER
Lt. Col., Corps of Engineers
Executive

DEPARTMENT OF THE ARMY
OFFICIAL COPY
OFFICE OF THE CHIEF OF ENGINEERS

THE ORIGINAL CAST

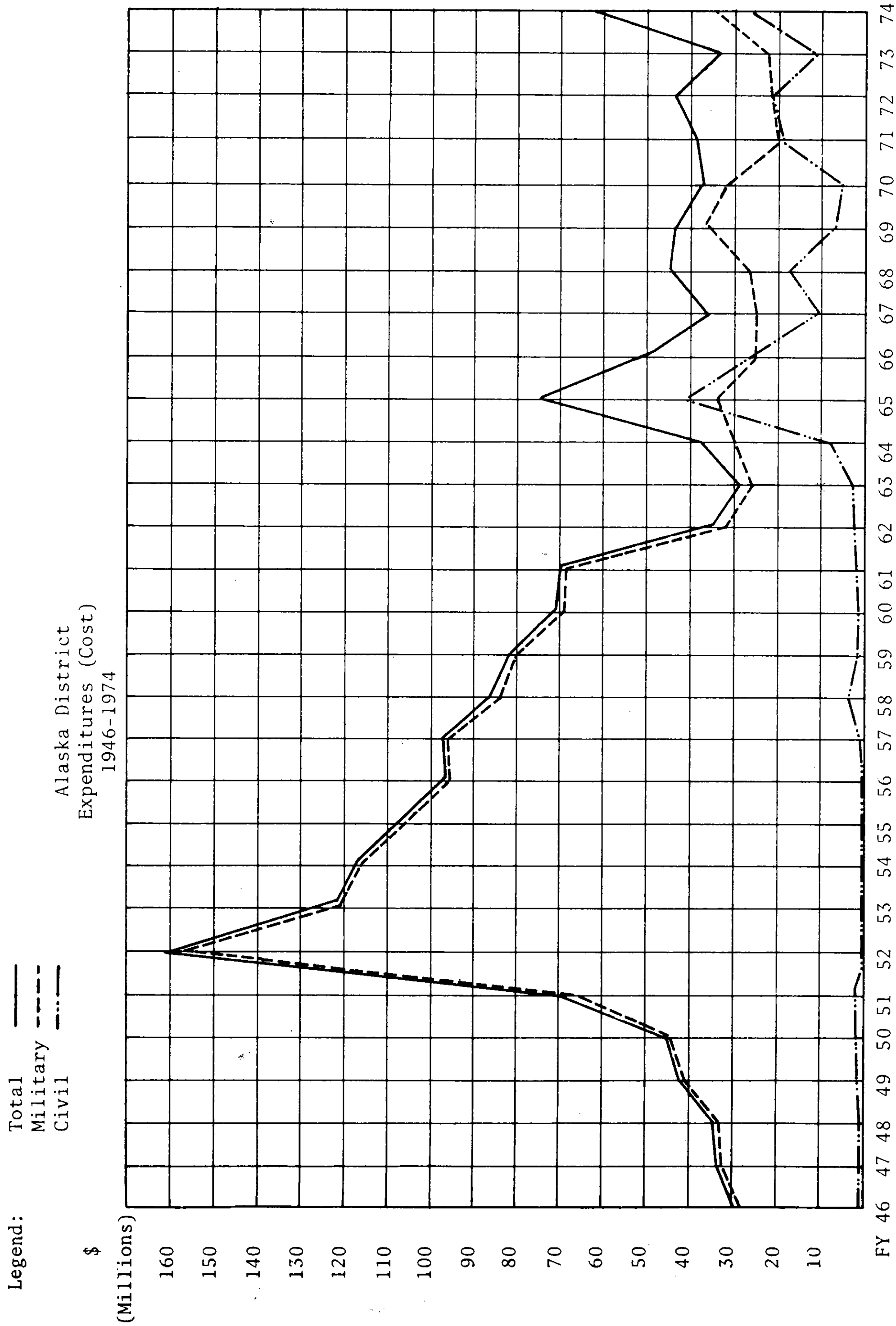
These are the pioneer employees of the Alaska District who joined the organization in the summer of 1946:

Abbott, Charles
Abbott, Stella V.
Adams, Louise
Ames, Marshall
Anglin, Edith
Aue, Warren
Balhiser, Charles K.
Bennett, Winifred
Boyd, Dorothy
Boyd, Ernest
Boyd, Richard
Brandes, Allan
Brighton, Lawrence
Brittain, Larry
Brix, William S.
Brown, Mercedes
Cange, Joe
Casey, Phyllis
Coolidge, Don
Cronin, Daniel V.
Cutting, Sandy
Dagleish, John
Day, Barbara
Day, Larry
Downing, Richard
Fowler, Douglas
Frazier, Vinita
Glennen, Edward
Gridley, Maria B.
Gridley, Herb
Guisti, Charles
Hazen, Buckley
Hill, William
Hinshaw, Joe
Holmes, Louis
Houston, James
Johnson, Bud
Klindt, Kathleen
Kreitlow, Edwin J.
Lang, James D., Col
Lockhart, Virginia
Longacre, John
Longmire, Andrew
Loss, Aurora L.
Lubking, Gene
Lyle, Parker
Lyle, Robert E.
Margetts, Tom
Martin, Lloyd
McAnerney, John
McCaskey, Kenneth
McCutcheon, Phyllis
McLaughlin, Helen
Moats, Harold H.
Moore, James D.
Moody, Ralph
Morgan, Ellis
Moss, Richard O.
Nicholls, David J.
Nock, Selwyn P.
Olson, Sidney C.
Paine, Leroy
Palmer, Al
Palmer, Pat
Parent, Christopher
Payne, Spencer
Peterson, Loyd H.
Prescott, Robert B.E.
Ratteree, Everett
Rice, Charles, Maj.
Rood, Sidney C.
Roos, Chester A.
Ross, Chester
Rutledge, Robert
Ryan, A. A., Major
Saxon, Kay
Schubert, Leo
Smith, Edward
Smith, Leland
Straub, Henry
Swindler, Tony
Taylor, Arthur O.
Taylor, Florence
Tinkey, Earl
Wardlaw, F. Artensia
Wardlaw, James C.
Whitsett, Menon W., Lt Col
Wieman, Elton
Wilcox, Grace
Wilcox, Willard O.
Wilson, Ted
Van Sickle, Norman
Zoble, Barnie

CIVIL WORKS PROCESSING

The Corps of Engineers does not initiate civil works studies or projects. These always begin in some form with the using public -- a local interest that identifies a need within the Corps' jurisdiction and responsibilities. The life history of a normal project may be briefly summarized -- local interests ask; Congress authorizes, and the Corps acts. In some cases (projects under special continuing authorities), the Congressional authorization is given in a blanket form to be exercised at the discretion of the Chief of Engineers within the specific terms of reference of the appropriate statute. However, the triggering mechanism still remains the same -- public request for desired improvements. The general process by which civil works improvements are implemented is shown in the following illustration.


THE MECHANISM
A LOCAL PROBLEM DEVELOPS...
THE COMMUNITY ASKS FOR HELP...
PUBLIC WORKS COMMITTEE
CONGRESS AUTHORIZES AN INVESTIGATION...
DISTRICT ENGINEER CONDUCTS MEETINGS
STUDY BEGINS
NEEDS
ECONOMICS
ENGINEERING
ENVIRONMENTAL
LATER HEARINGS
REVIEW BY BOARD
MILEPOSTS ARE REACHED...
THE PRESIDENT
Bill
The President
CONGRESS AUTHORIZES PROJECT AND PRESIDENT SIGNS BILL...
STOP
WAIT FOR MONEY
CONGRESS APPROPRIATES FUNDS...
DESIGN BEGINS...
MORE MEETINGS ARE HELD, A LOCAL GUARANTEE IS MADE, AND CONSTRUCTION STARTS


Alaska District
Expenditures (Cost)
1946-1974
Legend:
Total
Military
Civil
$
(Millions)
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
FY 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74

PERMAFROST

Permafrost, by general non-technical definition, is "permanently frozen ground," or "a permanently frozen layer of soil, subsoil, or other deposit, sometimes including the bedrock." Hard as concrete and as impermeable as hard clay or rock, it is at times interspersed with ice lenses--deposits of pure ice.

During World War II, when the Corps first became involved in military construction in the Interior, the properties and behavior of permafrost were not well understood. Some buildings, roads, paving, and underground utilities suffered accordingly. Throughout the fifties and sixties the subject was thoroughly explored by members of the Alaska District and studied in depth by specialists from other areas. In the early fifties, the Arctic Construction and Frost Effects Laboratory of the Corps' New England Division investigated the characteristics of permafrost. In more recent years, the subject has been examined by the Cold Regions Research and Engineering Laboratory, a Corps organization whose headquarters are at Hanover, New Hampshire. The Alaska District has received much assistance from both laboratories.

According to the U.S. Geological Survey:

". . . permafrost underlies about 20 percent of world's land surface and creates unique and severe construction problems in Arctic and sub-Arctic regions. In most areas of Alaska the ground has remained frozen for many thousands of years. A continuous zone of permanently frozen ground extends across the northern third of Alaska. A discontinuous zone covers much of the remaining part of the State. The permafrost layer ranges in thickness from a few feet in some places to more than 1,300 feet at Barrow." [1]

Oil exploration has indicated that the permafrost zone thickens to as much as 2,000 feet in some areas. [2]

The production, preservation, or dissipation of permafrost depends on a number of climatic factors such as solar radiation, sky radiation, back radiation, winds, vapor pressures, ambient temperatures, precipitation, and cloudiness. Also involved are properties of the surface, including vegetation, albedo, snow, and standing water. In addition, the condition of the permafrost is affected by physical properties of sub-strate components--texture, structure, density, specific heat, thermal conductivity and diffusivity thermal gradients.

The thawing of permafrost and the subsequent heaving and subsidence caused by frost action are responsible for the major engineering problems.

Disturbing frozen ground, even by making small changes such as removing vegetation, will commonly upset the delicate balance between freezing and thawing. When certain kinds of soil thaw, what was once land as solid as rock becomes a quagmire incapable of supporting any structure placed upon it. Once the delicate balance is upset, the thawing and frost action are virtually impossible to stop. [3]

Obviously, it is sound practice to avoid building on ground over permafrost, but where that cannot be avoided, special measures must be taken. The builder has three choices: 1) remove the offending layer (if it is not so thick as to be prohibitively costly) and replacing it with selected gravel; 2) maintain an insulating blanket of some material between the permafrost and the structure or its supports; or 3) deliberately build into the permafrost, taking steps to ensure that it remains frozen solid.

Some of the methods used by the Alaska District can be illustrated by examining the process of building a radar building and tower for the Air Force near Kotzebue, an Eskimo village situated north of the Arctic Circle. The subsurface around the site is composed of silt and ice--about nine parts of ice to one of silt. A thaw in this sort of foundation would naturally produce a complete washout.

The floor of the radar building was raised about 18 inches from the ground surface and set on refrigerated piling. This support is essentially a pile foundation with a refrigerated coil wrapped along the beam. The coil wrapping is used to freeze the subsurface adjacent to the buried piling to that degree necessary to support the required loads.

Holes for the piling were drilled 27 feet into the silty ice. Immediately, coil-wrapped steel H-pilings were placed in the holes which were then filled with a sand slurry. The refrigerant was started and permitted to run with the slurry with the result that the surrounding subsoil was frozen to about 25 degrees F., the average temperature of Kotzebue permafrost. Although it has not been necessary to operate the refrigerating machinery since the initial installation, it remains available in case of an unusual thaw that would threaten foundation stability. [4]

Near Bethel, three military installations were designed and built by the Alaska District between 1955 and 1960: an AC&W site, a White Alice station, and an ACS facility. The terrain here is composed of a silty sand under a layer of tundra material. The saturated fine-grain soils which contain numerous ice lenses are generally permanently frozen under a shallow layer of seasonal frost. The permafrost is of a marginal sort, varying in temperature from 0 to 15 feet in depth.

These conditions posed several problems which had to be tackled in a variety of ways. At the AC&W site, the construction was similar to that employed at Kotzebue. The White Alice tower foundations were prepared differently. A shallow blanket of material not susceptible to frost was placed over the construction area. A shallow auger hole was dug at each pile location down through the blanket to the original ground level. This hole was then filled with a mixture of one part bentonite (an absorbing material) to two parts sand by weight. Steel H-pilings were then driven to such depths that the penetration into permafrost was two to three times the average thickness of the active permafrost zone. The impervious mixture poured into the hole provided a protective ring which prevented concentration of water adjacent to the pile and improved frost conditions due to its latent heat capacity.

The third type of support used at Bethel was selected to withstand the lighter loads of an ACS operations building. Basically this foundation consisted of a spread footing with its top at the elevation of the permafrost surface. Trenches were excavated and backfilled quickly. The backfill consisted of an insulating layer of granular material to prevent degradation of the permafrost below the bottom of the excavation. The footing and support columns were designed with a shear connection to absorb the stresses imposed by seasonal frost action. Movement of the foundation is prevented by a combination of soil shear resistance, structure weight, and downward reaction of the frost heave pressures on the spread footing.[5]

The use of "freeze probes"--the Long Thermopile--has been described in the discussion of erosion control on the Yukon River at Galena. These have been used in other settings with the principal object of maintaining the permafrost in a frozen condition.

The District's Soils and Materials Division continues to probe the whole phenomenon of permafrost, seeking new and better methods of dealing with it in the most effective and economical way. Its experience with permafrost over the past two decades has been made available to the public where it has benefited State and local governments, other Federal agencies, and numerous private firms and individuals concerned with engineering, design, and construction in a northern environment.

Footnotes for Appendix G

1. U.S.G.S., *Permafrost and Related Engineering Problems in Alaska,* Professional Paper #678 (Washington, 1969).

2. British Petroleum--Alaska, "Permafrost," (a paper read at the Arctic Symposium, San Francisco, 3 Feb 71).

3. U.S.G.S., *Permafrost. . .,*

4. USACE, Alaska District, News Release, 5 Feb 72.

5. See the article by Col. W.C. Gribble, Jr., in *The Military Engineer,* (November-December, 1960), pp. 445-447.

DISTANCES BY AIR FROM ANCHORAGE

TO	MILES	TO	MILES
Adak	1,038	Kotzebue	491
Attu	1,324	London*	4,500*
Barter Island	572	McGrath	187
Bethel	349	Manila*	5,331*
Cape Lisburne	634	Miami*	4,049*
Cape Newenham	414	Moscow*	4,722*
Cape Romanzof	482	Nome	460
Chicago*	2,847*	Northeast Cape	559
Clear AF Station	193	Point Barrow	650
Cold Bay	532	Prudhoe Bay	551
Dutch Harbor	687	San Francisco*	2,006*
Fairbanks	228	Seattle	1,307
Fort Greely	270	Seward	64
Fort Yukon	355	Shemya	1,294
Galena	299	Skagway	576
Haines	561	Tok Junction	255
Homer	98	Tokyo*	3,460*
Juneau	531	Unalakleet	335
Ketchikan	693	Valdez	156
King Salmon	245	Washington, D.C.*	3,459*
Kodiak	216	Yakutat	331

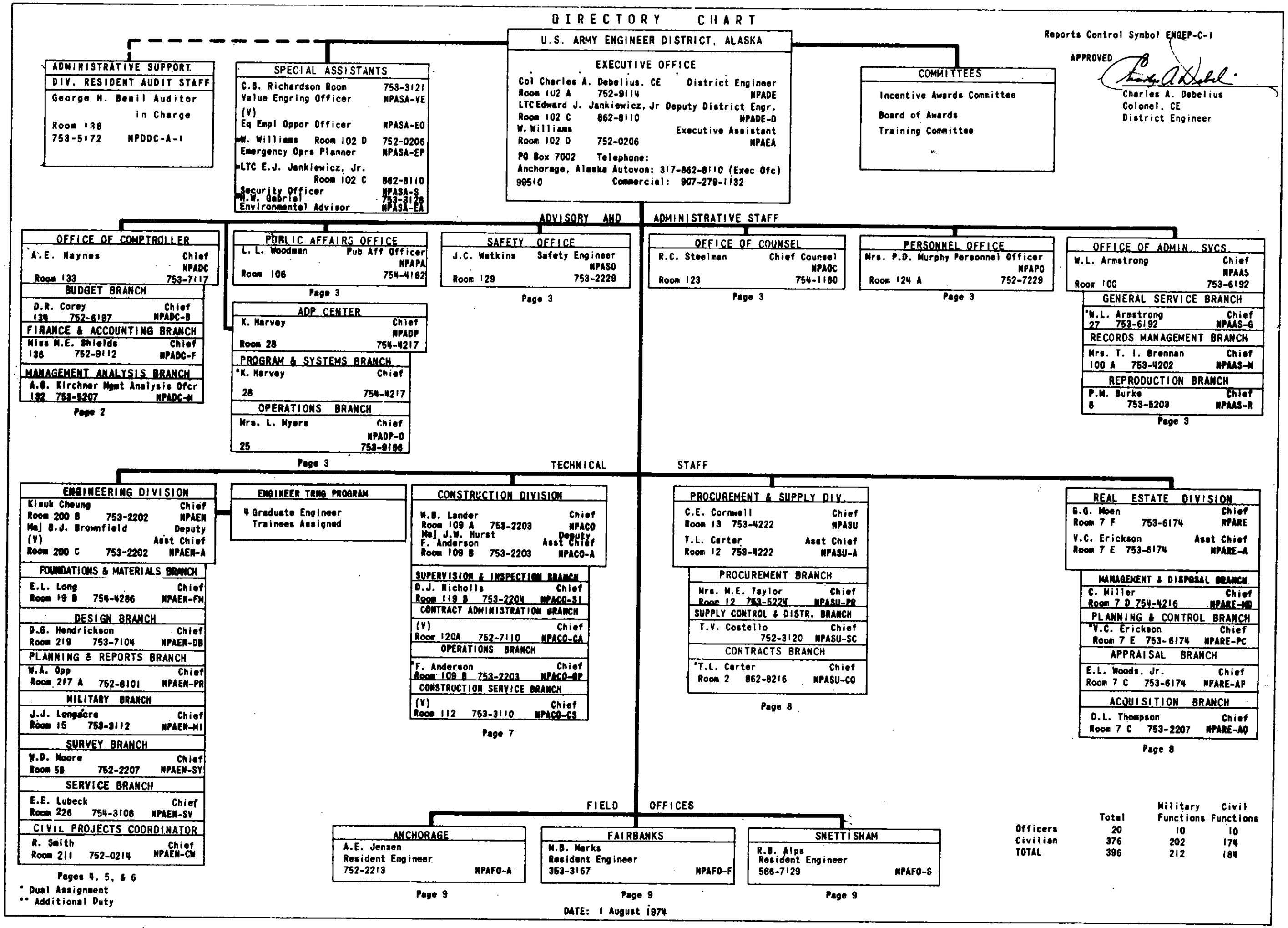
(Note * Via Great Circle Route)

MILES BY RAIL FROM ANCHORAGE

South to Seward	114
North to Fairbanks	356

MILES BY WATER FROM ANCHORAGE

Adak	1,151
Dutch Harbor	763
Juneau	751
Point Barrow	1,843
Seattle	1,428
Shemya	1,493


DIRECTORY CHART
U.S. ARMY ENGINEER DISTRICT, ALASKA
Reports Control Symbol ENGEP-C-1
APPROVED
Charles A. Debelius
Colonel, CE
District Engineer
EXECUTIVE OFFICE
Col Charles A. Debelius, CE District Engineer
Room 102 A 752-9114 NPADE
LTC Edward J. Jankiewicz, Jr Deputy District Engr.
Room 102 C 862-8110 NPADE-D
W. Williams Executive Assistant
Room 102 D 752-0206 NPAEA
PO Box 7002 Telephone:
Anchorage, Alaska Autovon: 317-862-8110 (Exec Ofc)
99510 Commercial: 907-279-1132
ADMINISTRATIVE SUPPORT
DIV. RESIDENT AUDIT STAFF
George H. Beail Auditor in Charge
Room 138
753-5172 NPDDC-A-1
SPECIAL ASSISTANTS
C.B. Richardson Room 753-3121
Value Engring Officer NPASA-VE
(V)
Eq Empl Oppor Officer NPASA-EO
W. Williams Room 102 D 752-0206
Emergency Oprs Planner NPASA-EP
LTC E.J. Jankiewicz, Jr. Room 102 C 862-8110
Security Officer NPASA-S
H.W. Gabriel 753-3128
Environmental Advisor NPASA-EA
COMMITTEES
Incentive Awards Committee
Board of Awards
Training Committee
ADVISORY AND ADMINISTRATIVE STAFF
OFFICE OF COMPTROLLER
A.E. Haynes Chief NPADC
Room 133 753-7117
BUDGET BRANCH
D.R. Corey Chief
134 752-6197 NPADC-B
FINANCE & ACCOUNTING BRANCH
Miss M.E. Shields Chief
136 752-9112 NPADC-F
MANAGEMENT ANALYSIS BRANCH
A.G. Kirchner Mgmt Analysis Ofcr
132 753-5207 NPADC-M
Page 2
PUBLIC AFFAIRS OFFICE
L. L. Woodman Pub Aff Officer NPAPA
Room 106 754-4182
Page 3
ADP CENTER
K. Harvey Chief NPADP
Room 28 754-4217
PROGRAM & SYSTEMS BRANCH
K. Harvey Chief
28 754-4217
OPERATIONS BRANCH
Mrs. L. Myers Chief NPADP-O
25 753-9186
Page 3
SAFETY OFFICE
J.C. Watkins Safety Engineer NPASO
Room 129 753-2228
Page 3
OFFICE OF COUNSEL
R.C. Steelman Chief Counsel NPAOC
Room 123 754-1180
Page 3
PERSONNEL OFFICE
Mrs. P.D. Murphy Personnel Officer NPAPO
Room 124 A 752-7229
Page 3
OFFICE OF ADMIN. SVCS
W.L. Armstrong Chief NPAAS
Room 100 753-6192
GENERAL SERVICE BRANCH
W.L. Armstrong Chief
27 753-6192 NPAAS-G
RECORDS MANAGEMENT BRANCH
Mrs. T. I. Brennan Chief
100 A 753-4202 NPAAS-M
REPRODUCTION BRANCH
P.M. Burke Chief
8 753-5203 NPAAS-R
Page 3
TECHNICAL STAFF
ENGINEERING DIVISION
Kiauk Cheung Chief
Room 200 B 753-2202 NPAEN
Maj B.J. Brownfield Deputy
(V) Asst Chief
Room 200 C 753-2202 NPAEN-A
FOUNDATIONS & MATERIALS BRANCH
E.L. Long Chief
Room 19 B 754-4286 NPAEN-FM
DESIGN BRANCH
D.G. Hendrickson Chief
Room 219 753-7104 NPAEN-DB
PLANNING & REPORTS BRANCH
W.A. Opp Chief
Room 217 A 752-8101 NPAEN-PR
MILITARY BRANCH
J.J. Longacre Chief
Room 15 753-3112 NPAEN-MI
SURVEY BRANCH
W.D. Moore Chief
Room 5B 752-2207 NPAEN-SY
SERVICE BRANCH
E.E. Lubeck Chief
Room 226 754-3108 NPAEN-SV
CIVIL PROJECTS COORDINATOR
R. Smith Chief
Room 211 752-0214 NPAEN-CW
Pages 4, 5, & 6
* Dual Assignment
** Additional Duty
ENGINEER TRNG PROGRAM
4 Graduate Engineer Trainees Assigned
CONSTRUCTION DIVISION
W.B. Lander Chief
Room 109 A 753-2203 NPACO
Maj J.W. Hurst Deputy
F. Anderson Asst Chief
Room 109 B 753-2203 NPACO-A
SUPERVISION & INSPECTION BRANCH
D.J. Nicholls Chief
Room 119 B 753-2204 NPACO-SI
CONTRACT ADMINISTRATION BRANCH
(V) Chief
Room 120A 752-7110 NPACO-CA
OPERATIONS BRANCH
F. Anderson Chief
Room 109 B 753-2203 NPACO-OP
CONSTRUCTION SERVICE BRANCH
(V) Chief
Room 112 753-3110 NPACO-CS
Page 7
PROCUREMENT & SUPPLY DIV.
C.E. Cornwell Chief
Room 13 753-4222 NPASU
T.L. Carter Asst Chief
Room 12 753-4222 NPASU-A
PROCUREMENT BRANCH
Mrs. M.E. Taylor Chief
Room 12 753-5224 NPASU-PR
SUPPLY CONTROL & DISTR. BRANCH
T.V. Costello Chief
752-3120 NPASU-SC
CONTRACTS BRANCH
T.L. Carter Chief
Room 2 862-8216 NPASU-CO
Page 8
REAL ESTATE DIVISION
G.G. Moen Chief
Room 7 F 753-6174 NPARE
V.C. Erickson Asst Chief
Room 7 E 753-6174 NPARE-A
MANAGEMENT & DISPOSAL BRANCH
C. Miller Chief
Room 7 D 754-4216 NPARE-MD
PLANNING & CONTROL BRANCH
V.C. Erickson Chief
Room 7 E 753-6174 NPARE-PC
APPRAISAL BRANCH
E.L. Woods, Jr. Chief
Room 7 C 753-6174 NPARE-AP
ACQUISITION BRANCH
D.L. Thompson Chief
Room 7 C 753-2207 NPARE-AQ
Page 8
FIELD OFFICES
ANCHORAGE
A.E. Jensen
Resident Engineer
752-2213 NPAFO-A
Page 9
FAIRBANKS
W.B. Marks
Resident Engineer
353-3167 NPAFO-F
Page 9
SNETTISHAM
R.B. Alps
Resident Engineer
586-7129 NPAFO-S
Page 9
Total / Military Functions / Civil Functions
Officers 20 10 10
Civilian 376 202 174
TOTAL 396 212 184
DATE: 1 August 1974

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556	62	2	1912
991	63	2	1915
1932	64	2	1917
179	67	2	1922
109	70	1	1927
113	70	1	1927
108	71	1	1929
208	72	1	1932
210	72	1	1932
228	72	1	1932
483	72	2	1932
33	73	2	1934
154	75	1	1937
249	75	1	1937
268	75	1	1937
547	75	3	1938
561	75	3	1938
702	76	3	1940
325	77	1	1941
54	82	1	1951
182	83	1	1953
414	83	2	1954
501	83	2	1954
465	83	2	1954
137	84	1	1955
34	85	1	1957
390	84	2	1957
99	86	1	1959
40	87	1	1961
455	87	2	1962
218	88	2	1964
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