SUPPLEMENT TO THE HISTORY of UNITED STATES ARMY ENGINEER DISTRICT FAR EAST

1976 to 1977

U.S. ARMY CORPS OF ENGINEERS
FAR EAST DISTRICT

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by

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SEOUL, KOREA

March 1979

PREFACE

People are the major component of the Far East District story, their combined efforts and deeds comprise the history; words simply record it. The successful accomplishment of the District's assigned mission throughout the two years recorded here, not unlike its previous 18 years, was of course, dependent upon the support and cooperation of the entire construction industry, including architects, engineers, building contractors, manufacturers and a vast army of skilled construction workers.

This bi-annual supplement to the Far East District's historical records of 1957-1975 has not attempted to review all of the District's wide-ranging operations but simply provides an overview of significant construction and design activities which occurred during the years 1976 and 1977. The author sincerely hopes this supplement will aid the reader in understanding the recent history of the District.

Knowing little about the Corps of Engineers, I undertook this project on 22 November 1977. The research phase required extensive travel throughout the Republic of Korea. Each day was filled with new and exciting experiences and all with whom I came in contact received me generously and with much patience. Their oustanding cooperation and earnest assistance made the effort truly a learning experience.

I hope my words impart the essence of their knowledge and role in the Far East Engineer District's continuing history.

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CHAPTER I
INTRODUCTION

The U.S. Army Engineer District, Far East (FED) is an operating component of the U.S. Army Engineer Division, Pacific Ocean (POD), functioning under direction of the Office of the Chief of Engineers (OCE).

Responsibility for designing projects and administering contracts for architectural and engineering services, construction, and maintenance and repair in support of U.S. Forces Korea, has constituted the District's major activities.

FED was activated in June 1957 by OCE General Order No. 11 with headquarters in Seoul, Korea. The District was tasked initially with responsibility for planning, design, and construction contracting.

During the twenty years of its existence, FED has met diverse challenges from fluctuating total annual workload caused by ever-changing national and international events. From the time of its establishment, most of FED's work has involved a wide variety of construction programs in Korea: from mountaintop sites to harbor complexes, from housing developments to underground facilities, from the crash program of the trans-Korea pipeline complex to the creation of whole compounds. The District's history has been marked by great diversity. While FED's work has been related directly to the needs of national defense in support of U.S. forces in Korea, the size of the District has fluctuated throughout the years in accordance with world and national events.

The political environment in northeast Asia in which the District operates, is strategically significant to American foreign policy and defense. Korea represents a major United States free world policy commitment. Sitting astride traditional invasion routes between the Asian mainland and the islands of Japan, Korea stands as the only bulwark of freedom in the entire northern Asiatic mainland. Thus, FED is an unique District in that it functions totally within a tactical environment, working in support of the United States presence on the Korean peninsula.

In spite of the signing of an armistice on 27 July 1953, Korea is still without real peace. The increasing disregard by north Korea for peace in northeast Asia and its contempt for the provisions of the armistice, reached a peak in 1968. Two events—the Blue House raid and the seizure of the USS PUEBLO—brought a rapid reaction, countering the potentially dangerous threat from the north.

A massive $102 million FY68 supplemental military construction program was launched to meet the increased tactical, logistical, and administrative needs of U.S. forces in Korea. The District's responsiveness and its execution of projects in support of the U.S. forces 1968 crash programs exhibited the viability of the District. Again, FED has responded to the challenges and succeeded.

Beginning in the early 1970's, the Nixon administration approached Peking in an effort to normalize its diplomatic ties. Partially, as a result of the Peking-Washington communique, the U.S. Government promulgated a long range plan to withdraw its ground forces from southeast Asia. However, the U.S. effort to initiate multilateral negotiation aimed at reducing tension on the Korean peninsula has not been totally successful. Since 1973 the number of intentional DMZ violations by north Korea has increased significantly. The most recent serious incidents were the August 1976 axe murder of two U.S. officers during a tree trimming detail at Panmunjom; and the shooting down of an unarmed U.S. CH-47 helicopter, with the loss of three soldiers in July 1977.

In early 1977, the Carter administration announced a gradual phase-out plan for U.S. ground troops from Korea. A corollary of the U.S. troop withdrawal plan was the emphasis American strategy placed on air power as a substitute for ground forces. Thus, changing U.S. administration policy has continued to present FED with an ambitious program in support of the Air Force. FED anticipates greater construction placement during the initial stages of the drawdown by a new requirement for unit consolidations at various residual force installations and strengthening of the U.S. Air Force in Korea.

The next three chapters depict the new era of challenge experienced by the District. Over the past few years, the critical shortage of adequate troop housing throughout Korea became a most serious issue. Soldiers assigned in Korea were still living and operating in temporary quonset huts which had been constructed during the Korean War era. Living and working conditions were poor, substandard, and deplorable. This prevalent condition of troop housing continued to be a major concern for Eighth United States Army (EUSA). A variety of workloads evolving from the urgent requirement by commanders to improve troop housing, and their desire to replace the old quonset huts, constituted the District's major activites during 1976-1977.

Chapter II describes the major projects designed and constructed by the District, and Chapter III discusses the resulting changes in the District's administration and staff according to its increasing workload. Chapter IV summarizes the challenges these projects have presented to FED. Throughout, the terms "FED" and "the District" are both used interchangeably, to refer to the Far East Engineer District. Monetary amounts shown for various contracts refer to the dollar value of the initial award.

CHAPTER II
THE PROJECTS
1976-1977

During the years 1976 and 1977 (FY76-78), the Far East District's (FED) work placement totalled nearly $60 million, which was almost a threefold increase over the $21 million figure of the previous three years (FY73-75). EUSA's Military Construction, Army (MCA) program also increased, from $2.2 million in FY75 to approximately $13.6 million for FY77.[1]

The major element of FED's construction during the period has been troop housing, initiated in FY76 as the relocatable barracks/latrine program. The District's second major workload was the implementation of a massive Operation and Maintenance, Army (OMA) funded upgrade program to improve existing barracks, latrines, and mess halls. The District's third function was the execution of additional Urgent Minor Military Construction, Army (UMMCA) and maintenance and repair projects throughout Korea.

Most of the projects handled by FED during this period involved improvement and replacement of troop housing and related facilities. As the most rapid means of providing urgently needed troop housing space, the FY76 MCA multi-million dollar relocatable program was launched in March 1976, utilizing 2d Engineer Group troop labor for construction during the period 1 April to 1 December 1976.

In the FY76 MCA program, "relocatable" consisted of three buildings in an "H" configuration with two 24×48 foot barracks buildings resting on concrete pads and connected by a 12×24 foot latrine unit sitting on concrete footers. The barracks are divided into four rooms with a central hallway. Each room can house up to three soldiers.

The four installations selected for the FY76 program of 240 buildings were Camp Casey (118 buildings at nine sites), Camp Stanley (38 buildings at two sites), Camp Red Cloud (38 buildings at two sites), and Camp Humphreys (46 buildings at three sites).[2]

In October 1975, a two day conference was held at the Pacific Ocean Division (POD) to finalize the FY76 program. Agencies participating in the conference were FED, POD, EUSA, U.S. Army Troop Support Command (TROSCOM), and Office of the Chief of Engineers (OCE). At the meeting, the agencies involved decided that (a) TROSCOM would procure the relocatable buildings using competitive negotiation procedures, (b) EUSA engineer troops would erect the buildings while contractors would do sewage treatment plants and overhead electrical distribution work, (c) FY76 procurement specifications would be essentially the same as a FY75 OPA purchase except for minor revisions, (d) a 15 June 1976 delivery date of the buildings in Korea must be met, and (e) FED would do the design work for the latrines and the site adaptation.[3]

On 5 March 1976, a procurement contract for 240 pre-engineered buildings was awarded to the Trail Boss Corporation, Ft Worth, Texas, through the government purchasing agent, TROSCOM, at a cost of approximately $2.7 million.[4] The District provided the design for the latrines and the sites and prepared to give high priority support in development of the program.

The District separated the program into four task oriented contracts. The first contract, for utility installations at four locations (76-C-81, $289,375), was awarded to the Korea Machinery and Construction Company on 9 March 1976.

The same day witnessed the award of a relocatable latrine fabrication contract (76-C-79, $800,063) to a joint venture of the Sun Kyong General Construction and Jin Duk Industrial Companies. This contract provided for approximately 120 12×24 foot latrine modules, and subsequently, 22 modifications were added to the contract which made it one of the largest contracts let by the District in FY76. FED finalized the contract in December 1976 at a revised amount of $1,154,158.

Two subsequent contracts called for site preparation at Camp Casey and Camp Stanley. Site preparation at Camp Red Cloud and Camp Humphreys was done by engineer troops.

According to a Memorandum of Understanding between FED and 2d Engineer Group, the engineer troops' efforts in the FY76 relocatable program would be controlled, monitored, and supervised by FED.[5] Simultaneously, by General Order No. 8 dated 1 April 1976, the District opened its Relocatable Project Office at Uijongbu to direct the program. This office was authorized a strength of two officers, three noncommissioned officers (NCO), and four Korean Nationals.[6]

A principal adverse factor which hindered the FY76 relocatable program from providing urgently needed troop housing, arose when delamination of the building panels was discovered while unpacking shipping crates in Korea on 13 August 1976. Upon further examination it was also noted that shipping damage had occurred in some instances, that hardware shortage existed to some

1. USAEDFE Total Workload 1973-1978; USAEDFE Construction Work Placement Chart; ENJ Memorandum For Commander In Chief, Subject: Courtesy Call, MG Robert C. Marshall, Deputy Chief of Engineers, 4 November 1976, p. 2; Interview: Joseph E. Matthieu, 25 January 1978.
2. USAEDFE Relocatable PO Reports, 1976-1978; FED Fact Sheet, 15 September 1975, Subject: Troop Housing Program; USAEDFE Construction Progress Report Indexes 1976-1978.
3. POD Memorandum For Record, 27 October 1975, Subject: FY76 Relocatable Program Meeting on 21-22 October 1976 at POD; POD Fact Sheet, Subject: Korea Relocatable Building Program, 22 November 1977, p.3.
4. FED Memorandum For Record, 28 December 1976, Subject: Chronological Review of the FY76 Relocatable Program; POD Fact Sheet, 23 November 1977, Subject: Relocatable Program In Korea; TROSCOM Message to FED, March 1976, Subject: A Notice of Contract Award to Trail Boss; Msg, EUSA GEN Stilwell to DAEN-MCC-A (LTG Gribble), March 1976.
5. Memorandum of Understanding between FED and 2d Engineer Group, 28 January 1976.
6. U.S. Army Engineer Division, Pacific Ocean, General Orders No. 8, 1 April 1976; Interview, Captain Thomas W. King, 23 January 1978.

extent, and that electrical building materials did not meet the U.S. national electrical code. However, the most serious problem was the panel delamination. Some panels were found to be delaminated upon arrival in Korea, while others delaminated during and after building erection. This panel delamination essentially destroyed the structural integrity of the building. Consequently, in August 1976, construction ceased while the problem was thoroughly investigated and a solution sought by FED and POD.[7]

Panel delamination not only had a significant impact on the integrity of the whole FY76 relocatable program, but also created an extreme hardship on troop housing for the 2d Division as result of contining temporary dislocations. Because of land area limitations, many old quonsets in the 2d Division area had been demolished to allow for construction of the new FY76 relocatable barracks. Division soldiers were forced to live in remaining overcrowded buildings. This was expected to be only a temporary measure, until FY76 relocatable construction was completed. However, anticipated replacement of these overcrowded billets by the FY76 relocatable program did not completely materialize, once delamination was discovered in a significant number of the panels.

In the interim, priority was placed on erection of 49 H's, utilizing the faulty panels, in order to provide housing for the troops through the winter period. Plans called for replacing the faulty panels the following spring (1977) with reconstructed panels, as well as completing the remaining 140 buildings. Troops of the 44th Engineer Battalion spent the fall of 1976 erecting the 490 H's which were turned over to the 2d Division as a temporary means of easing their acute housing shortage.[8]

In February 1977, the Relocatable Project Office moved to a renovated building at the FED Compound in Seoul. The office was reorganized with an increased staff of 3 officers, 1 DA civilian employee (DAC), and 17 KN's, in order to manage the delayed FY76 relocatable program, upgrade the FY75 relocatable barracks, and initiate the FY77 relocatable program.[9]

As replacements for the structurally unsafe Trail Boss panels, POD and FED decided to employ locally made panels, constructed under Corps contracting, using strict quality control procedures. FED and POD designed a replacement panel that could be fabricated by a local manufacturer. Many test panels were built under the direct supervision of the Design Branch and tested by the Foundations and Materials Branch FED. The fabrication processes for the panels were thoroughly tested to insure they met strict tolerance standards. The basic concept for the new exterior wall panel called for four light gage metal channels for each frame, with 3/8 inch plywood on either side and an outer skin of embossed aluminum attached to the plywood sides. On 3 June 1977, FED designated The Dong Sung Gun Gi Manufacturing Company as the contractor to reconstruct the panels for 240 buildings at a cost of $673,063 (77-C-85).[10]

In July 1977, the 802d Engineer Battalion, 2d Engineer Group, was tasked with the erection of one pre-production model at Camp Red Cloud for evaluation of the new panels and construction procedures.[11] The building consisted of a concrete masonry unit (CMU) corridor, room partitions from salvaged Trail Boss interior panels, and exterior panels procured locally from the Korean manufacturer. The overall impression of all personnel involved was that the modified building was excellently designed and structurally sound.

At last, the long awaited rebuilding of the FY76 relocatable barracks program began with the awarding of a contract of $225,050 (77-C-107) to the Shin Il Engineer Company on 11 July 1977. The work involved constructing CMU corridors for relocatable barracks at various locations.

With the requirement to erect a maximum number of modified FY76 relocatable buildings during CY77, the occupants again faced a move necessitated by the tearing down and rebuilding of 49 H's previously constructed. Unfortunately, the tight housing situation at 2d Division required delay in tearing down existing buildings until the last possible moment. Finally, EUSA and FED decided to construct 20 of the FY75 buildings which were in storage, on existing FY76 pads, prior to any tearing down of the 49 H's. This provided a faster response to the housing shortage. Two vertical construction platoons of the 44th Engineer Battalion built the 20 buildings (FY75 OMA). Having thus partially relieved the immediate housing shortage for the 2d Division, the rebuilding of FY76's relocatable barracks began. During the period June-December 1977, troops of the 2d Engineer Group reconstructed 76 H's, using the Korea manufactured panels.[12]

Since March 1976, the District has supervised the erection of 240 units of relocatable barracks and 120 units of latrines at Camps Casey, Stanley, Red Cloud, and Humphreys 18 months behind the originally scheduled completion date, with an approximately $2 million cost escalation to $11,814,000. from the originally programmed $9.8 million. Anticipated for completion in the first half of CY78, these 240 relocatable barracks will significantly raise the soldiers' standard of living.[13]

The construction of relocatable barracks continued in

7. Construction Progress; POD Message to HQ DA, January 1977, Subject: FY76 Relocatable Buildings for Korea; EUSA Memorandum for Chief of Staff/Commander In Chief, 4 March 1977, Subject: FY76 MCA Relocatables.

8. Unit History: 44th Engineer Battalion, 1 March 1978, p.9; Interview, King.

9. Interviews; King, Edgar N. Moon, 24 January 1978.

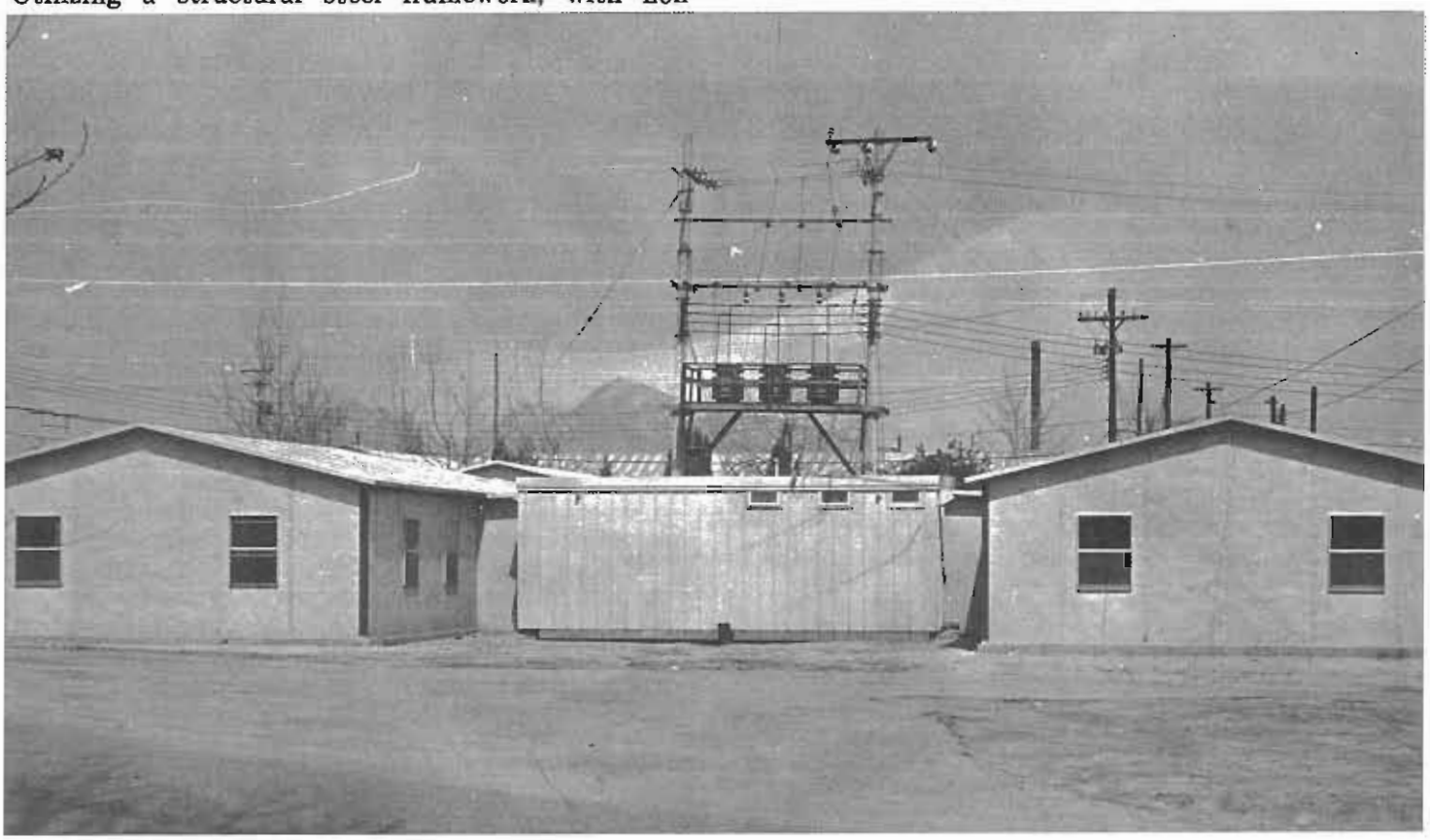
10. Contract Register; Construction Progress; FED MFR 8 October 1976, Subject: Meeting with BG Junot to Discuss FY76 Relocatable; POD Memorandum, 23 November 1977, Subject: Korea Relocatable Building Program-FY75 OPA and FY76 MCA; Interviews, King, Captain Ronald P. Harper, 9 March 1978, and Moon.

11. Unit Histories: 802d Engineer Battalion, 1 March 1978.

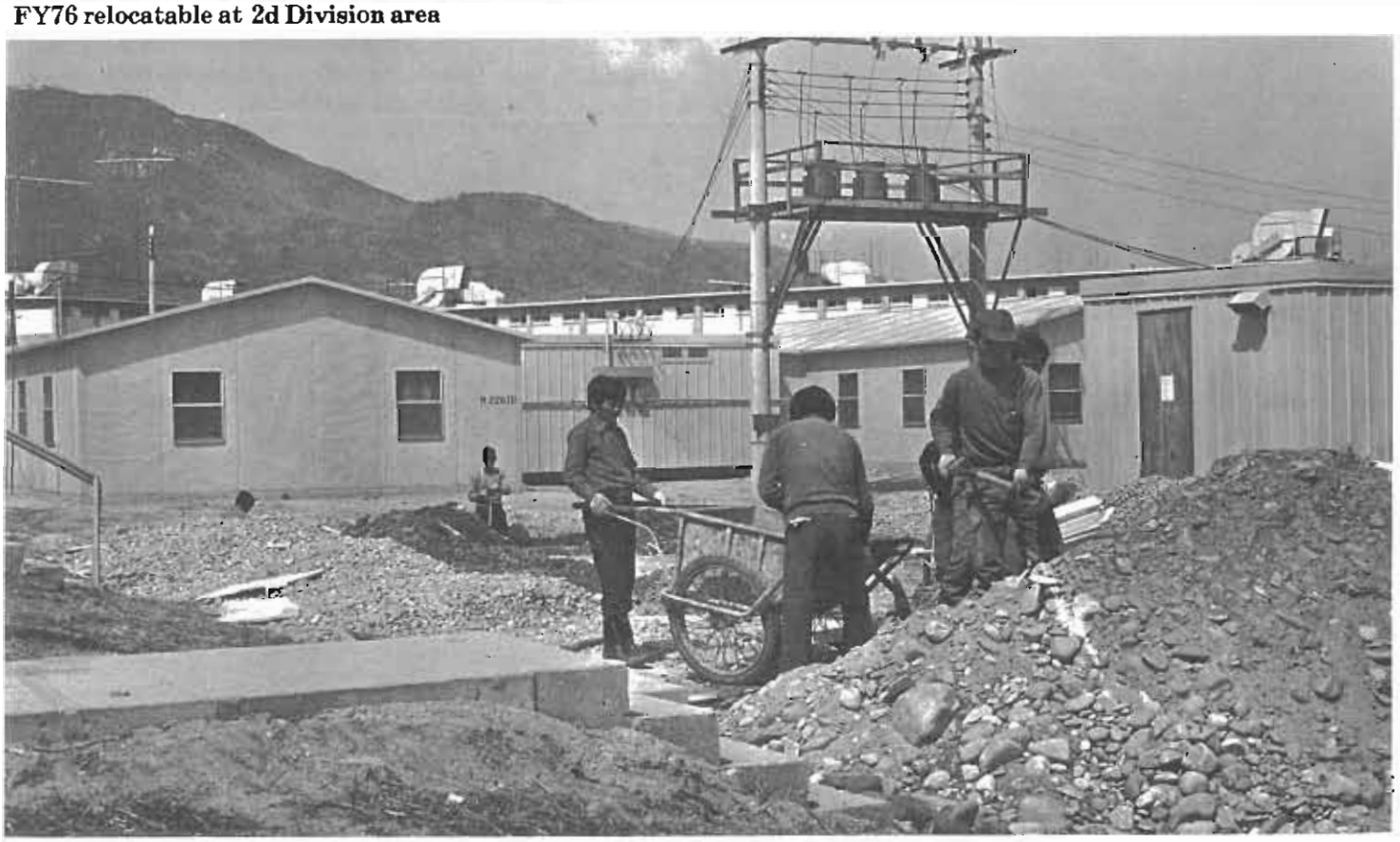
12. Construction Progress; POD Fact Sheet, 22 November 1977, Subject: Relocatable Barracks Program, Korea; Relocatable PO Report; 44th and 802d Unit Histories; Interviews, Kim, Ki Song, 22 January 1978, Kim, Si Chung, 31 March 1978; Letter, BG Maurice D. Roush, POD Division Engineer to LTG John W. Morris, Chief OCE, 14 June 1977, p.1.

13. Construction Progress; POD Fact Sheet, 4 October 1977, Subject: Relocatable Barracks Program, Korea; 4 October 1977, p.1; Interviews, Harper, King, Kim, Ki Song, and Kim, Si Chung.

the FY77 troop housing program with a new concept of a two story configuration, with overall dimensions of about 30×120 feet including latrine, laundry, and storage room. Utilizing a structural steel framework, with non-loadbearing CMU interior wall partitions and with sturdy wall and roof insulated panels procured in Korea, the two story building can house a maximum of 48 men.[14]



FY76 relocatable at 2d Division area



14. FED MFR, 20 January 1977, Subject: FY77 Relocatable Barracks Design; USAEDFE Slide Presentation, 30 June 1976, Subject: FY77 MCA Relocatable Specifications presented by Edgar N. Moon.

In August 1977, FED awarded the contract (77-C-76) for fabrication of 50 FY77 relocatable barracks to a joint venture of the Han Il and Je Il Construction Companies at a cost of $1,631,713.

The contract for constructon of a pre-production model FY77 relocatable barracks at Yongsan went to the Dai Shin Construction Company in November 1977 (77-C-72), and the notice to proceed on ten other buildings at Camp Coiner, Yongsan, and K-16 airfield followed in December 1977. On 29 September 1977, the Jin Hung Industrial Company received a similar contract for the construction of seven two story buildings for the Army Security Agency (ASA) at location 177. The remaining FY77 relocatable barracks had been held in abeyance for almost a year awaiting EUSA rejustification of the scope and sites in consonance with the troop withdrawal planning. The remaining 32 units of the FY77 relocatable buildings will eventually go to Yongsan/Coiner/K-16 (10), Camp Humphreys (6), Camp Henry (6), Camp George (1) and Camp Walker (9).[15]

Equally dramatic as these relocatable programs was the initiation of the OMA upgrade program for upgrading existing substandard barracks, latrines, and mess halls throughout Korea.

The long range relocatable barracks program gave EUSA only incremental relief. In the meantime, many existing facilities either were not scheduled for replacement or would not be replaced until future years, when they would have reached an intolerable level of maintenance.

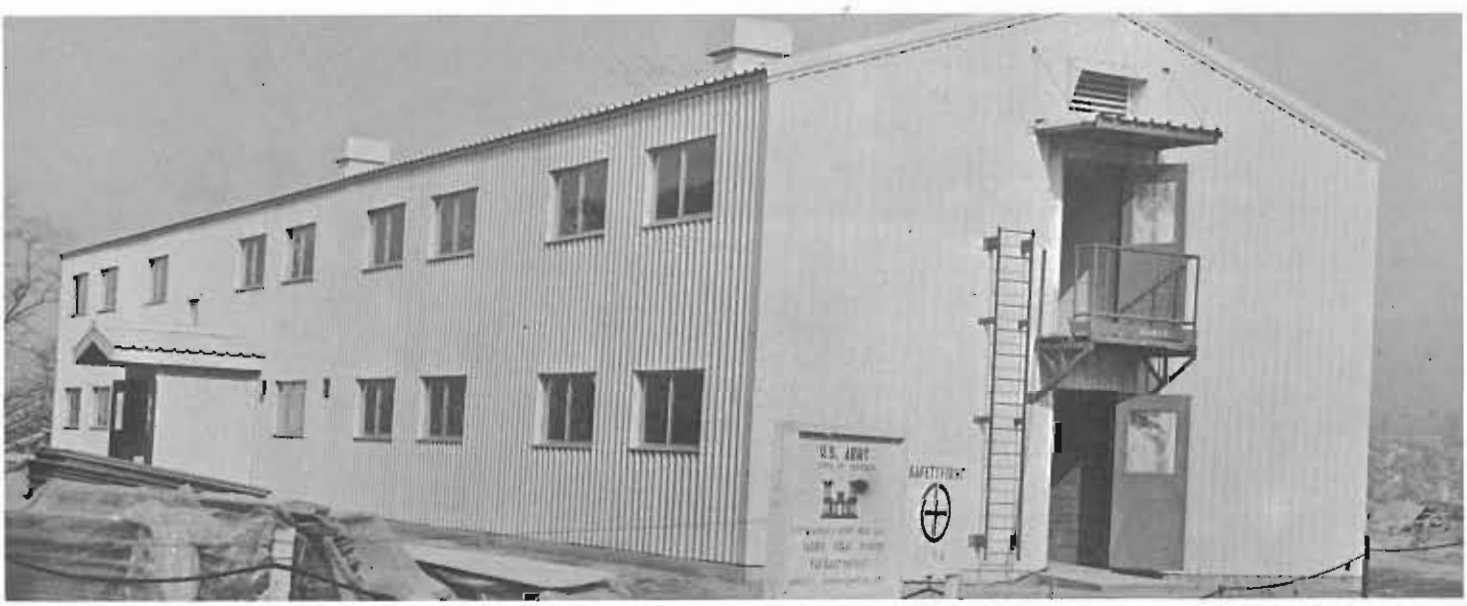
Given primary command interest under Major General Morris J. Brady's tenure as 2d Infantry Division Commander, and his desire to maintain and improve living conditions for the soldiers, the OMA upgrade program in support of the 2d Division gained high priority. Partially to manage this massive program, the Facilities Engineer Support Section was created in the FED Engineering Division on 2 December 1976.[16]

FED segmented the bulk of the $9.4 million FY77 OMA upgrade program into increments according to geographical location. The Camp Casey area was divided into three separate contracts in order to provide manageable contract packages.[17]

A 64 building contract at Camp Pelham, awarded 11 March 1977, marked the beginning of the upgrade program. The Asia Construction Company completed the 64 buildings in November 1977, at a cost of $598,750 (77-C-52). Simultaneously, 43 buildings at Camps Essayons and Sears (77-C-66), 165 buildings at Camp Casey I, II, III, (77-C-125, 65, 190), 88 buildings at Camps Howze and Stanton (77-C-70), 53 buildings at Camp Garry Owen (77-C-73), 63 buildings at Camps Liberty Bell and Greaves (77-C-89), 90 buildings at Camp Hovey (77-C-111), and three buildings at Camp Stanley (77-C-188) were contracted for upgrade.

Since May 1977, over 600 units of upgraded bachelor enlisted quarters (BEQ's), bachelor officer's quarters (BOQ's), latrines, and mess halls have been completed by a total of 17 contracts, costing over $10 million. Among the contractors involved in this OMA upgrade program were Jin Duk, Asia Construction, Poong Lim, Tae Heung Corporation, A Chung, Sam Wha Construction, Sun Shin, Sun Kyong Construction, and Il Kwang Industrial Company. The amount of the individual contracts ranged from $100,000 for the lowest, to the largest contracts (77-C-70, 89) exceeding $1 million.[18]

The overall OMA upgrade program was developed in two phases, of which Phase I comprised 2d Division installations. The remaining long-term installations were integrated into Phase II, and a projected cost of $32



A two-story relocatable building, Yongsan

15. Interview, Captain Kenneth R. Moser, 1 April 1978.

16. POD Permanent Orders 17-1, 2 December 1976.

17. FED Fact Sheet, 10 March 1977, Subject: EUSA Facilities Plan: EUSA MFR, 30 December 1976, Subject: Briefing for MG Brady, CG 2d Inf Div; FED Sequence of Events: OMA Upgrade Program for 2d Inf Div, 15 April 1977, Interviews, Captain Michael A. D'Amico, 23 March 1978, Captain Donald E. Needham, 23 March 1978. USAEDFE Northern PO Reports, 1976-1978.

18. Ibid.

million for both phases was promised by the Department of the Army (DA). FED continued with the design of Phase II OMA upgrade projects and prepared to award a series of contract packages as soon as funds, and EUSA's residual force installation planning, became firm. Changes in the list of buildings to be upgraded continued to impede FED's progress for much of FY77, but were recognized as essential to keep the plans for future troop disposition current.

Aside from the relocatable and OMA upgrade programs, other projects pertaining to the 2d Division consisted of the cold storage warehouse, self-service facility, and infiltration gallery (water supply). Between December 1975 and August 1976, the Dae Won Enterprise Company completed the cold storage project (76-C-68, $235,416). Designed by the Architect-Engineer (A-E) firm of Daniel, Mann, Johnson, and Mendenhall (DMJM), the facility replaced the cold storage warehouse which had burned down in March 1975. A joint venture of Poong Lim and Dae Won received the contract for the infiltration gallery which provided the water supply to the 2d Division area. The construction took place between June 1976 and August 1977.

Work in the Camp Humphreys area continued to be primarily MCA and UMMCA type projects during this period. Camp Humphreys received most of the educational and recreational facilities during this timeframe. The community facility, the post gymnasium, and theater were built to stateside standards because of the installation's essentially permanent status as a rear echelon supply and maintenance post in Korea. The quality of this construction was especially noteworthy. The construction of a concrete masonry block community facility (a two story adult education center and a one floor library) was selected as FED's outstanding project of the year for 1976. The contractor started the construction in March 1975 and completed it in December 1976.[19]

In September 1977 the post gymnasium at Camp Humphreys was inspected and accepted by the Area Facilities Engineer (AFE) without a single construction deficiency. Designed by DMJM, the construction of the gymnasium, which houses a basketball court, two handball courts, and a weight and taekwondo room, was awarded to Seo Il Industrial Company (76-C-126, $426,041).[20]

The two largest projects at Camp Humphreys went to the Dai Shin Construction Company (76-C-119, $1,121,784) for the operations building addition and power upgrade projects, and to the Hyup Woo Industrial Company, Ltd. (76-C-121, $971,486) for the construction of a 60 man BOQ for the Army Security Agency (ASA) at location 177. Between July 1976 and September 1977, FED supervised the construction of the operations building addition and power upgrade projects. Lyon Associates, Inc. designed the projects, and the costs of construction of the electronics maintenance building and the installation of generators and power upgrade of the secondary system totalled almost $2.4 million after 14 modifications were added to the original contract.

OMA upgrade & repair troop facilities at 2d Division area

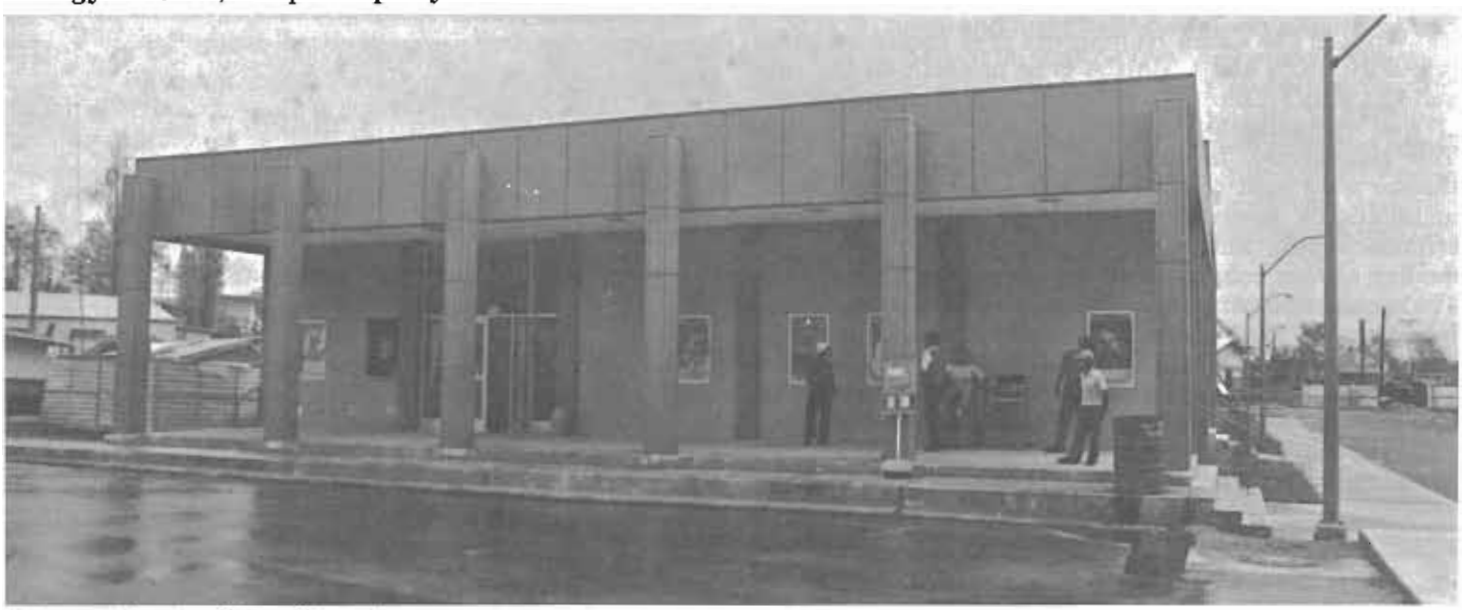
The FY76 MCA 60 man BOQ for ASA at location 177 was delayed in construction mostly because of changing using agency requirements. The Arlington Hall, Virginia location of ASA headquarters posed obvious geographical limitations and serious restrictions in the timely transmittal of documents.[21] Designed by Lyon Associates, Inc., the construction of the nearly $1 million project took place between 1 July 1976 and September 1977. This BOQ is likely to be the last CMU, centrally airconditioned living quarters, constructed in Korea for the Army.

19. Contract Register; Construction Progress; USAEDFE Central PO Report, 1976-1978; Interview, Harper and Moon.

20. Ibid.; Letter, COL Robert M. Bunker, FED District Engineer to BG Roush, POD Division Engineer, 2 December 1977, p.6.

21. Interview, Captain Robert J. Wrentmore, 22 March 1978; Letter, COL Ames S. Albro, Jr., FED District Engineer to BG Maurice D. Roush, POD Division Engineer, 5 March 1976, p.2.

Post gymnasium, Camp Humphreys



500 seat theater, Camp Humphreys

Operations building at Camp Humphreys

Centrally air conditioned 60 man BOQ at Camp Humphreys

Between September 1976 and on into 1978, the District supervised the construction of a motor maintenance shop, runway and approach lights, and a theater readiness monitoring facility addition at Camp Humphreys; antenna safety lighting and a maintenance hangar at the ASA facilities in the Camp Humphreys area.

In Seoul, the District's work primarily involved three large projects totalling $3 million in the 1976-77 period—the renovation of the Seoul Military Hospital, in addition to the Armed Forces Korea Network (AFKN) building, and alteration of the Automated Multi-Media Exchange (AMME) facility—which fell into a combination of UMMCA and OMA funds. More than $1.5 million was involved in the renovation of the Seoul Military Hospital alone. The remaining $1.5 million was associated with small construction, upgrade, renovation, and utility related works such as the Seoul House upgrade, Naija Hotel renovation, the installation of ceiling insulation for 300 units of family houses in Yongsan, and other projects described below.

The Seoul Military Hospital project went to the Dai Shin Construction Company. The work, which began in early 1977, included painting of interior walls and ceilings, as well as the outside of the building and installation of wiring, air conditioning, a new boiler system, a piped in oxygen system, and a new sprinkler system. Like many other renovation projects, complications developed regularly, such as the necessity to complete work in stages so that the hospital could remain functional. As the using agency remained flexible, the project progressed smoothly among the contractors, hospital staff, and patients. Completion of the renovation is expected in August 1978.[22]

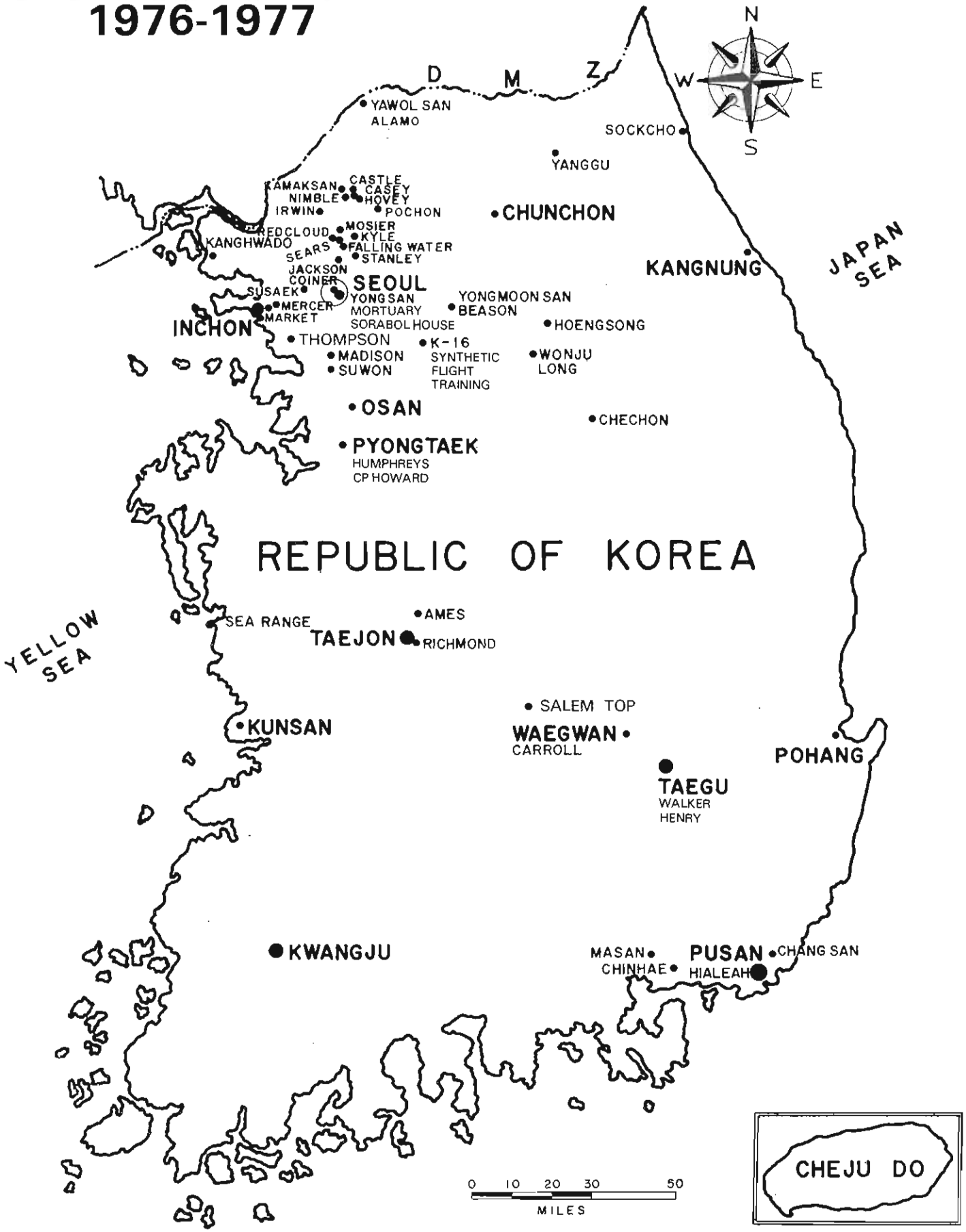
The AFKN addition project faced a similar problem of preventing interference with AFKN's radio and television broadcasts while the construction was ongoing. Designed by an A-E firm, Trans—Asia Design Associates, the construction of this command interest project (76-C-102, $221,735) was awarded to the Dai Shin Construction Company, Ltd. on 23 June 1976. FED supervised the addition of 3,800 square feet of working space to the existing AFKN building.[23] This work, which included a two story addition to the network's existing structure, was designed to house working areas for color TV conversion equipment. Other work areas included an expanded studio, film library, administrative office, maintenance TV production area and meeting space. Construction was largely finished by July 1977. The project also entailed installation of accoustical tile on the TV studio ceiling, and an expansion of the latrine. When the new building was almost completed, AFKN decided to renovate its old building for color TV production. This change in design forced FED to work under an extremely tight schedule in order to meet AFKN's planned premiere color broadcast scheduled for 4 July 1977. In spite of the problems encountered by changing plans and work added to the original contract, the project was completed on time.[24]

Alteration of the AMME terminal (76-C-207, $391,414), designed by Telescopic Engineering, Inc., also received the attention of the District during this period. A joint venture of the Suh Rim Construction and Sam Il Enterprise Companies completed the conversion of the old warehouse to a sophisticated, automated message center which required a new sub-floor, walls, and ceiling; raising part of the floor to accommodate the communication equipment; and installing an air conditioning generator, switch gear, and electrical distribution system. The completion date was extended to July 1978 due to late receipt of government furnished material (GFM) from Continental United States (CONUS).[25]

In Camp Market, the contract for the AG printing plant project (76-C-83, $127,000) was awarded to the Suh Rim Industrial Company in March 1976. This project

22. Contract Register; Construction Progress; Interviews D'Amico and Wrentmore.
23. Contract Register; Construction Progress; Northern PO Report; Interviews, Wrentmore, Stars & Stripes, 25 July 1976.
24. Ibid.
25. Contract Register; Construction Progress; Interview, Wrentmore; Letter, COL Albro to BG Roush, 29 May 1976, p.1.

FAR EAST DISTRICT CONSTRUCTION SITES 1976-1977



AFKN Building, Seoul

involved the renovation of an old building, so that the printing plant could be relocated to Korea from Japan. The work consisted of installing new partitions after removal of an existing wall; installing central air conditioning for the first floor; insulating walls and ceilings; adding heating ducts in the basement, and installing a one ton freight elevator in an existing shaft, as well as installation of three phase power and the printing plant equipment. Turnover to the using agency occurred in July 1977. The facility provides printing and publication for the U.S. forces in Korea and other military agencies in the Pacific. The relocation of the printing plant from Kawasaki, Japan to Korea resulted in an operating cost saving due to the lower labor rates in Korea. Numerous issues regarding the project were pursued prior to awarding the contract; among them were Facilities Engineers providing a portion of the construction materials; revising the contract for items to be procured locally; and renegotiation with a potential contractor due to cost overrun on the elevator installation. In spite of these problems, the contractor concluded the multi-funded project (UMMCA/OMA) basically according to schedule, although additional work continued after occupancy as more funds became available.[26]

Two other regular FY76 MCA projects, a flight simulator building at K-16 airfield and the dining facility at Camp Ames, were underfunded. Consequently, delays occurred while priority was determined and projects were reprogrammed. In June 1976, the Keong Il Enterprise Company received the contract (76-C-113) at K-16. The work went very slowly for several reasons, including a last minute change of siting after the contract was awarded and the requirement for a tightly scheduled occupancy date, which caused significant problems in negotiating a reasonable contract within the programmed amount. Designed by Telescopic Engineering, Inc., the work involved constructing the building on a pile foundation with concrete floor slab, heating, ventilating and air conditioning systems, erecting a CMU insulated wall and steel truss roof, connecting utilities and installing electric power lines. In May 1977, the contractor concluded the project at a cost of $300,417.[27]

Some of the other Army projects, besides the facilities at Camp Humphreys and Yongsan, were a dining facility addition (76-C-101, $214,583), construction of a rocket maintenance shop (75-C-74, $342,636) at Camp Ames, and a cold storage warehouse at Pusan.

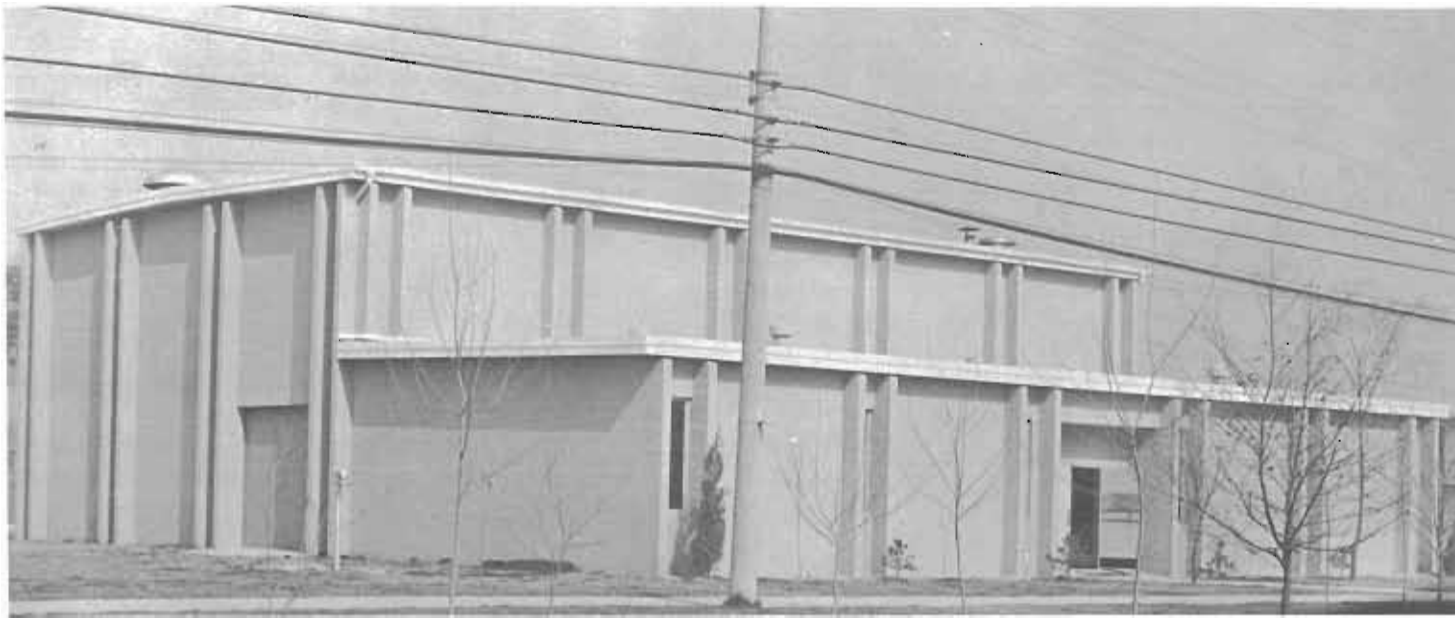
A joint venture of the Sam Il Enterprise and Sam Young Construction Companies received the contract award for construction of the rocket maintenance shop (76-C-153). Almost halfway through the construction, Sam Young Construction Company, the lead firm in the joint venture, went into bankruptcy. The termination of the contract had a great impact on the cost of the construction as well as imposing a compressed construction schedule. Eventually, Sam Il Enterprise Company took over the project as a supplemental agreement to its contract (75-C-74), with the estimated completion date rescheduled for May 1978.[28]

The District awarded the Pusan cold storage contract to a joint venture of the Ok Jin Industrial and Jin Hung Industrial Companies. The work, involving the conversion of the chill room into a freezer room and installation of a centralized control system, began in October 1975. In January 1977, a contract was awarded for the construction of a cold storage warehouse (77-C-23) at Pusan. The erection of a partially pre-engineered building, complete with a reinforced, insulated concrete floor, was awarded to a joint venture of the Tae Hung Engineering and Construction Corporation and Jin Hung Industrial Company, at a cost for both contracts of approximately $500,000.

26. Contract Register; Construction Progress; Northern Project Office Report; Interview, Wrentmore.

27. Contract Register; Construction Progress; Letters COL Albro to BG Roush, 5 March 1976, p.2., 29 May 1976, p.1., and 25 February 1977, p.4.; Interviews, D'Amico and Wrentmore.

28. Contract Register; Construction Progress; USAEDFE Southeast PO Report 1976-1978; Interview Ole P. Nielson, 13 February 1978; Letter, COL Albro to BG Roush, 25 February 1977, p.4.



Simulated flight training facility at K-16

The new cold storage warehouse, when completed in August 1978, will be joined to the existing portion constructed under FED supervision between 1960 and 1963.

In addition to these support facilities at Army posts, the District's activities also extended to mountaintop sites, construction of water lines and dining halls and the upgrade of communication facilities. The construction of water systems, including heating cables, hypochlorinator buildings and elevated water storage tanks at seven tactical (TAC) sites, was combined into one package (76-C-61) and awarded to the Shin Seung Construction Company at a cost of $243,935. Also, dining facilities at ten various TAC sites were consolidated into one contract and awarded to a joint venture of the You One Construction and Sam II Enterprise Companies. The majority of these sites, situated on virtually inaccessible mountaintops, required all material for construction to be transported by manual labor, which increased the construction costs. These mountaintop facilities are the backbone of the U.S. forces communications network in Korea.

Between January and June 1976, FED also undertook 57 tasks related to minor construction and repair projects totalling $3,893,481. This was more than a threefold dollar increase over the two preceding six month periods (Jan.-June 1975, nine tasks—$665,393; July-December 1975, 21 tasks—$1,252,090). During the FY76 transition quarter (a three month period resulting from the change in the fiscal year cycle to a 1 October-30 September period from the period 1 July-30 June cycle), the District's efforts continued, assigning 56 tasks, totalling nearly $4.1 million of various small upgrade and repair projects.[29]

RAPCON Facility, Osan

29. USAEDFE Document of Reimbursable Orders, 1976-1978; Interview, Joseph E. Matthieu, 25 January 1978; Letter, GEN Richard G. Stilwell, CG EUSA, to LTG John W. Morris, Chief of OCE, 28 July 1976, p.2.

FED has done work for the Air Force as well as the Army in Korea. Most of the AF projects were relatively small contracts and the effort was primarily directed toward repair and upgrade of existing facilities rather than initiation of new construction. Two major projects stand out during this period; the design and the construction of the radar approach control (RAPCON) facility (76-C-124) at Osan, and the replacement of a water tank complex (76-C-123) at Kunsan Air base.

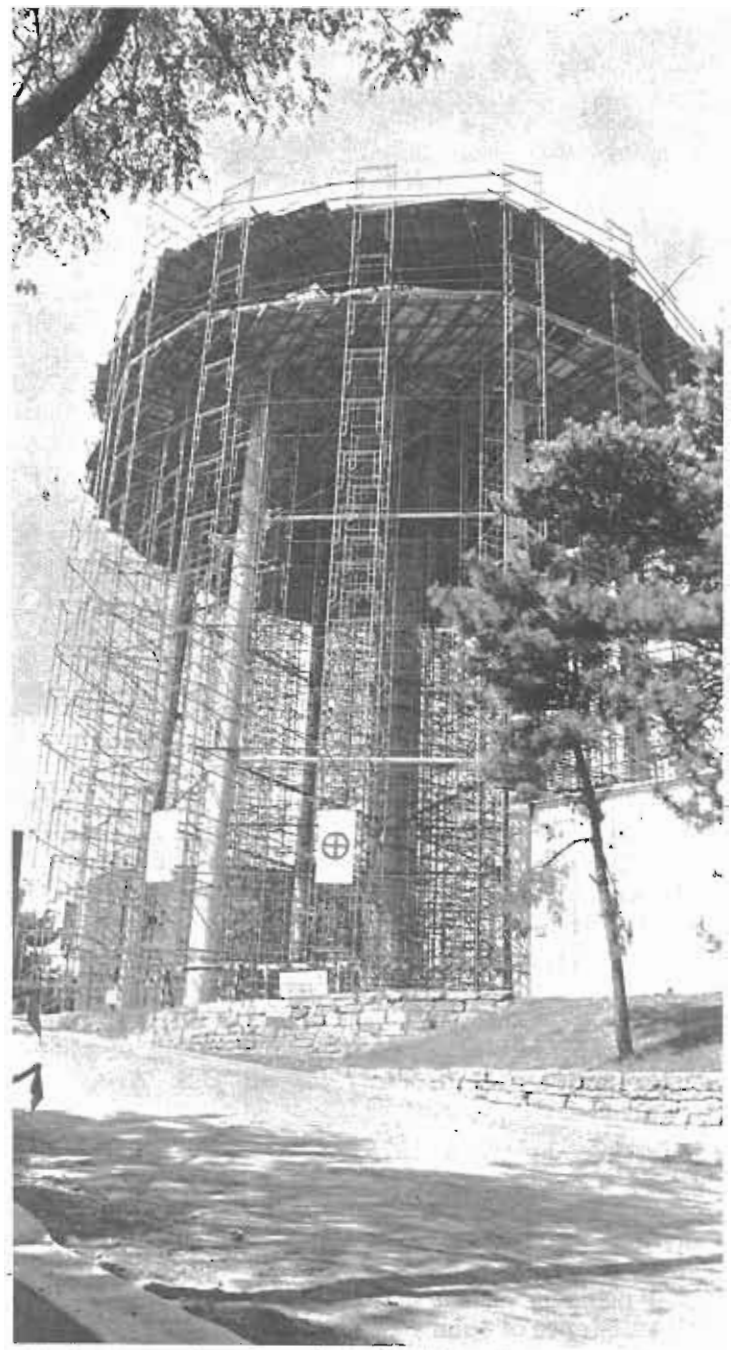
In Osan, the District supervised the construction of the RAPCON facility between 2 July 1976 and 5 October 1977. Designed by Adrian Wilson Associates, the project called for the construction of a one story, 6,500 square foot reinforced concrete, CMU and steel frame, fire-resistant building, complete with all utilities, including air conditioning. The project included construction of a 240 square foot reinforced concrete and CMU generator shelter, and installation of an underground cable duct. This $485,041 construction effort was awarded to the Suh Rim Industrial Company. The work also included the jacking and tunneling of a 36 inch diameter steel pipe under the taxiway and runway. This type of work called for unusual construction practices, unique skills, as well as endurance. Successful completion of this work demonstrated the ingenuity of the Korean contractors. The new navigational aids were necessary to improve the reliability of equipment and increase the safety of landing aircraft.[30]

The District handled the remainder of work at Osan Air Base in four separate contracts. The cost of these repair and upgrade contracts—the hangar, aircraft facility, various warehouses, buildings, and other miscellaneous work—totalled almost $2 million.

The relative importance of the project at Kunsan Air Base for the construction of the water storage tank complex represented a significant aspect of the gamut of FED activities. The finished structures display excellent workmanship and sensitivity to special requirements, and also demonstrate the current state of the art of a medium sized Korean contractor, the Korea Machinery and Construction Company. Lyon Associates, Inc. designed the project, and the $839,700 contract consisted of removal of the two existing 420,000 gallon above ground potable water storage tanks and replacement of two new welded steel 500,000 gallon above ground potable water storage tanks.[31]

At Kunsan, as at Osan, the effort was primarily directed to facilities repair and upgrade. Approximately $2.7 million total work was awarded by FED to eight separate contractors. Small 30×60 foot PASCOE pre-engineered buildings were constructed at the electronic countermeasures (ECM) facility (77-C-183) by the Kun Yang Enterprise Company and one was built in Little Inch (77-C-192) by the Kyung Jin Development Corporation. The major runway repair effort (76-C-123), carried out by the Korea Machinery and Construction Company during the vicious cold of the 1976-77 winter, showed the hardiness and toughness of the Korean construction workers.

Aside from Army and Air Force construction, the District continued to be tasked with the mission of deep well drilling by EUSA. The deep well drilling program, which sprang from the water shortage in the early 1960's, has been providing potable water for U.S. military forces since early 1965. The District's Foundations and Materials Branch provides design, construction, and maintenance of water wells for Air Force and Army installations as well as typographic construction surveys, foundation investigation, and extensive laboratory testing of all types of construction materials. However, the projected water well drilling program for FY78 has dropped off sharply from previous years, reflecting the lack of a definitive scope for the future of the EUSA water well drilling program. FED continues to provide maintenance service to 150 operating wells and also



Early stage of construction, 500,000 gallon water storage at Kunsan Air Base

30. Contract Register; Construction Progress; Central PO Reports; Interview, Harper.

31. Ibid; Contract File; Interview, Yi, Wan Sik, 13 February 1978.

500,000 gallon water storage tank, Kunsan Air Base

continues drilling of new water wells and planning to install pipelines and pumps in six locations. In addition to the water projects in Korea, the FED has provided drilling services and technical assistance to the Government of American Samoa during the period.[32]

Among the new fields into which the District's role has expanded during 1976 and 1977 were programs for development of comprehensive master planning, and identification and documentation of backlog of maintenance and repair (BMAR) for all U.S. Army installations.

Between February 1975 and October 1975. FED initiated a major EUSA master planning program by preparing basic information maps for major Army installations throughout Korea. During the fall of 1976, the District was provided $1.2 million by EUSA to update master plans of various existing installations. With the TDY assistance of John Ball from POD, FED conducted extensive coordination with EUSA representatives to discuss the priorities and other requirements of the detailed plan. The program developed in two phases; Phase I for providing basic information maps and Phase II for analysis of existing facilities and utilities studies. The original schedule for accomplishment of these master planning documents was to extend over two calendar years. Master planning has been delayed because of scheduled redeployment and drawdown.

An additional task assigned FED was to identify and document all BMAR projects throughout Korea. These projects provided for the maintenance and repair work essential to the restoration of failed or failing facilities components so that they may be effectively used for their designated purposes. Meanwhile, FED found it necessary to combine the BMAR survey requirements with the master planning work and to cause the A-E teams involved to respond to the extra workload. Work began in early 1977 with the signing of contracts with a joint venture of the newly formed Korean and American A-E firms of Lyon Associates, Inc./You Shin Engineering Corporation and Telescopic Engineering, Inc./Jin Han Architects and Engineers for Phase I at Camps Casey, Hovey, Castle, Nimble, and Humphreys.

Meanwhile, an in-house master planning unit was organized in FED and staffed with one DAC and three KN engineers. Between September 1977 and January 1978, FED in-house forces were actively engaged in accomplishing Phases I and II requirements for K-16. As of late 1977, FED was preparing the Phase I basic information maps of Yongsan, K-16, Camp Humphreys, and Taegu, in that order, based on the EUSA provided list of the top six installations according to their restationing plans.[33]

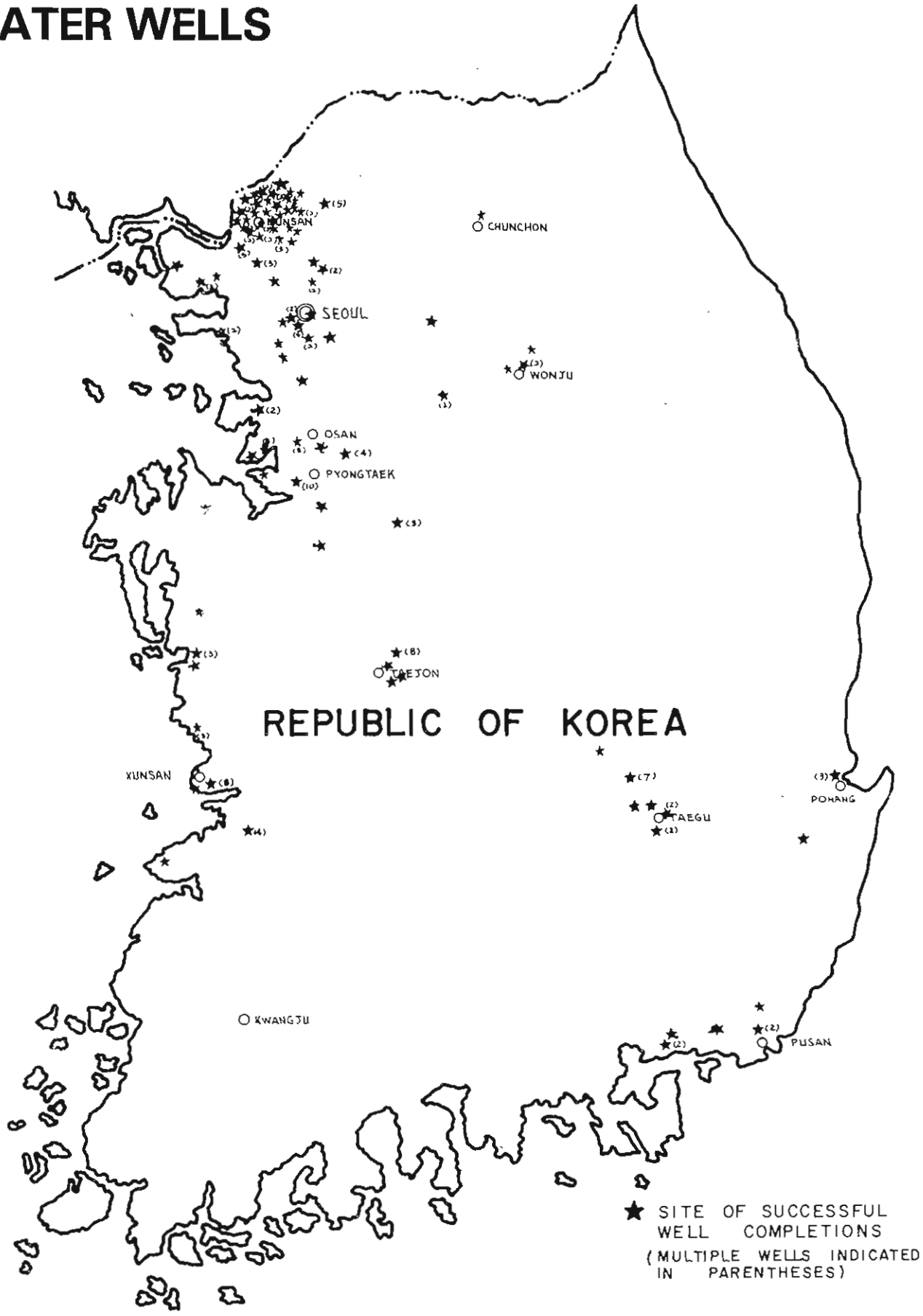
While the work performed—although not involved on a contractual basis—represented a fiscally smaller portion of FED's workload, these tasks have involved the District in a variety of interesting endeavors. With the recent urban development throughout Korea, the U.S. Government has been asked to relinquish several military installations, with the Republic of Korea Government constructing replacement-in-kind facilities on a quid-pro-quo basis. By agreement, the new facilities must meet the Corps of Engineers (COE) construction standards regardless of the condition of the relinquished facilities.

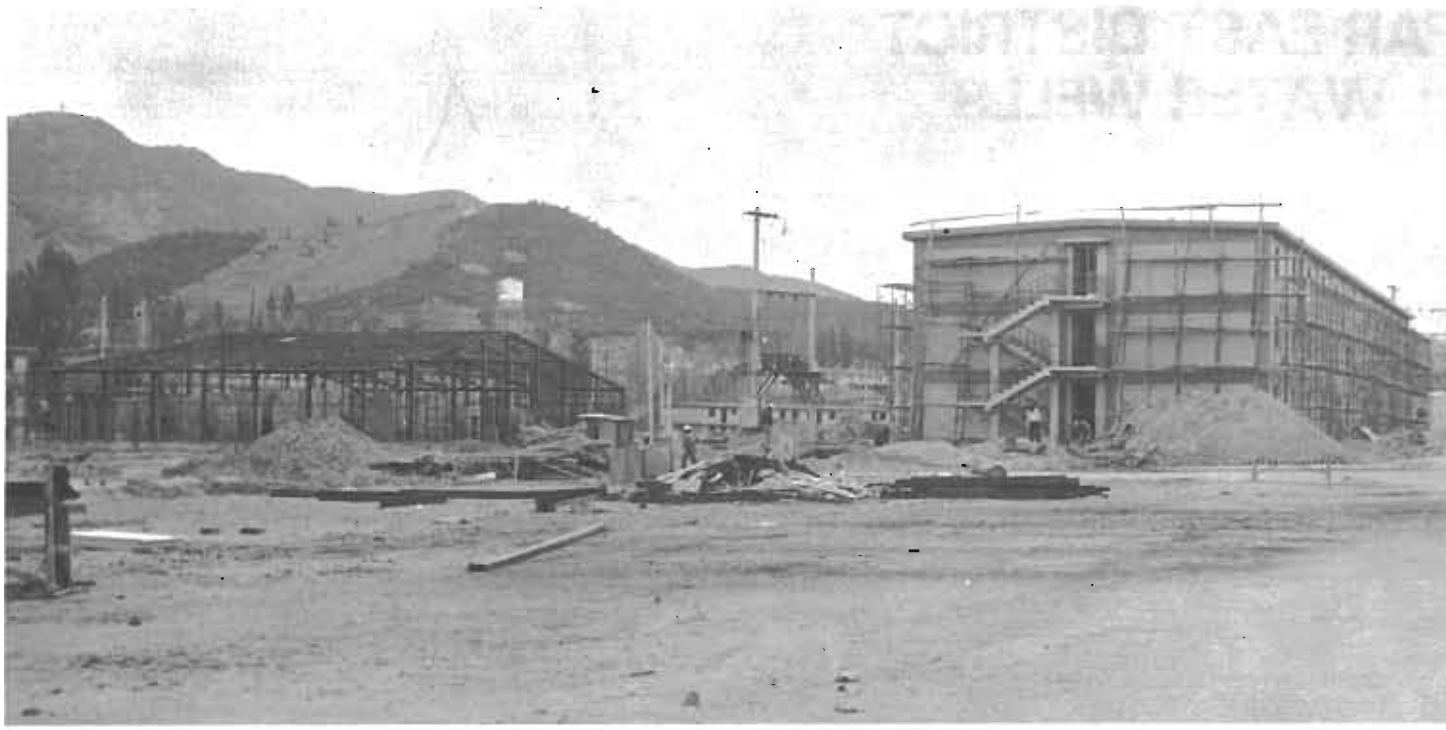
The first such project was the relocation of an entire Signal Battalion complex from an area adjacent to the rapidly expanding Kimpo International Airport to Camp Carroll. A contract valued at approximately $12 million was awarded to the Miryung Construction Company, Ltd., in December 1976, by the Ministry of Transportation (MOT). Designed by a Korean A-E firm, and applying FED's standards and technical specifications, the project was executed under the joint supervision of FED

32. Construction Progress; Interviews, Moon, Abner R. Williams, 22 March 1978; Letters, COL Albro to BG Roush, 25 August 1976, p.2.; 25 February 1977, p.3.; and COL Bunker to BG Roush, 2 December 1977, p.5.

33. Ibid.

FAR EAST DISTRICT WATER WELLS



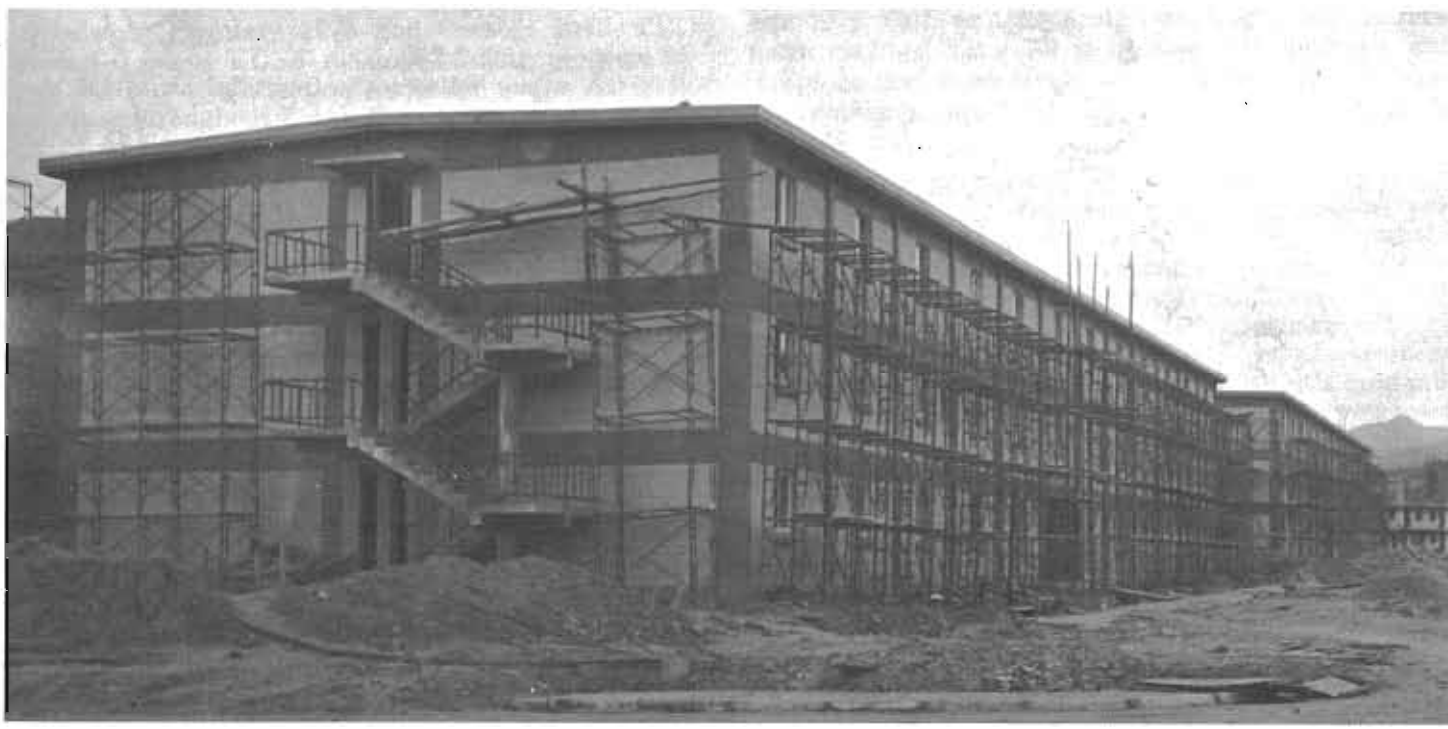


Construction underway for Signal Battalion near Camp Carroll (Kimpo quid-pro-quo)

and MOT. The development of a new Signal Battalion complex on an undisturbed, bare, hilly location near Camp Carroll, consisted of constructing a headquarters building, various maintenance buildings, BEQs, a BOQ, a mess hall and a boiler plant, totalling 25 buildings. In addition, an electrical system, a sewage system, and extensions to the water supply and distribution system, as well as roads and hardstands, have been completed. The expected occupancy date for the new complex is August 1978. FED's formal participation in the project was to review, in detail, design drawings and to oversee and ensure that the construction met U.S. standards. In fact FED found it necesssary to train both the inexperienced A-E firm and MOT in the use of U.S. standards of design and specifications-a challenging task.[34]

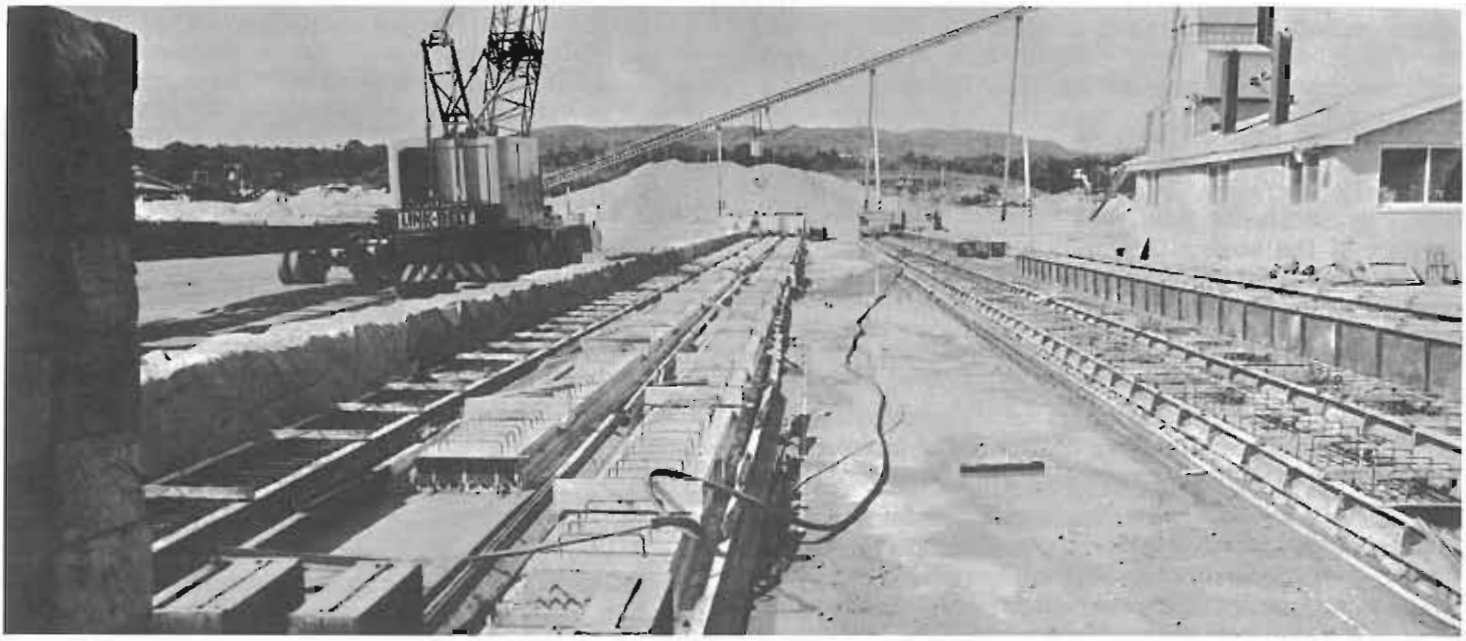
Equally important during 1976 and 1977 was FED's role in providing inspection for precast concrete work at the Hyundai Shipyard, Ulsan, Korea, on a reimbursable basis. This effort was undertaken in support of the Corps' Saudi Arabia effort.

Over the past twenty years, the Far East District has



End view of BEQ under construction for Signal Battalion near Camp Carroll

34. Construction Progress; Interviews, Brass, Nielsen; Letters, COL Albro to BG Roush, 29 May 1976, p.3., 25 February 1977, p.2., 3 June 1977, p.5., and 2 December 1977, p.10; Southeast PO Reports, FED MFR's, Subject: Trip Report, 27 June 1977, p.1., Subject: Kimpo Quid Pro Quo, 16 November 1976, and Subject: Review of Shop Drawings and Material Submittals, Kimpo Quid Pro Quo, 9 August 1977.



Hyundai Shipyard, Ulsan. FED provided a quality assurance inspection for precasting of concrete work for use in Saudi Arabia

provided an impetus for developing Korea's construction industry. The result has been rewarding for both Korean contractors and FED. The extent of this impact has been recently demonstrated by the dramatic success of the Hyundai Construction Company, Ltd. in securing a $180 million construction project in the Middle East. This company, like many ROK firms, has gained its experience through many years of construction for FED.

Under a contract awarded by the Corps Middle East Division, the Hyundai Construction Company, Ltd. commenced construction of 24 miles of prestressed concrete piles, 10,000 concrete deck planks, and 850 concrete trench covers for an offshore oil facility in Saudi Arabia. The total volume of concrete for this work was over 17,000 cubic yards. Beginning in July 1976 and throughout 1977, FED provided liaison between Hyundai Construction Company, Ltd. and the Saudi Arabia District, and performed quality assurance inspections to ensure that the final product met the contract requirement.[35]

As the end of FY77 approached, July-September were busy months, resulting in a successful year-end program with the District being able to contract for all work requested by EUSA/USAF Korea. Because of using agency late releases of program funds, FED and POD were extremely pressed for time. Nonetheless, within a 30 day period, 20 new contracts, 14 supplemental agreements, and five additional work clause additions totalling approximately $10 million were awarded.[36]

Despite the perception of troop withdrawal, the FY78 construction placement increased to about $28 million. However, the placement programs were skewed to the early part of the fiscal year. The delayed FY76 relocatable program and, at the same time, late release of substantial funds for DOD programs, caused overlapping and slippage of projects into early FY78. In early FY78, FED was in the process of reducing a large backlog of contract administration work and initiating holdover projects from FY77. Samples of the latter includes dining facilities at Camp Casey; improvement of ammunition storage at Camps Ames, Howard, and Thompson; and the erection of 32 relocatable buildings and a dining facility at Camp Coiner.

The diversity of work characteristic of the District's entire history was especially noteworthy during 1976-77. The preponderance of the District's work during this period revolved around construction and improvement of troop housing and related facilities. The relocatable and OMA upgrade programs not only drew greater attention, but also tested the viability of the District. Although by fall of 1977, FED supervised the workload of $27 million worth of construction placement and 113 active projects, its staff had not grown proportionally. Despite the high demand on in-house resources to design and supervise a growing number of small projects at isolated and generally inaccessible locations, 80 U.S. Army and civilian personnel and 235 Korean Nationals handled the District's expanding workload.

Looking to 1978 and beyond, finalization of UNC/USFK/EUSA withdrawal planning and residual stationing—combined with a strong Air Force program, indicated that the future workload of FED would remain healthy for at least five years. Contrary to an external perception of a downward trend in workload, FED expected a significant increase in construction placement. Latest work projects showed average construction placements will be somewhere above $40 million annually for the next five years.

35. Construction Progress; Southeast PO Report; Interview, Nielson; Letter, COL Albro to BG Roush, 25 February 1977, p.4.

36. Interview, Brass; Letter, COL Bunker to BG Roush, 2 December 1977, p.2.

CHAPTER III
THE DISTRICT RESPONDS

The past twenty years of the Far East District's history have seen several increases in workload, followed by drastic decreases, in response to political developments in Southeast Asia. The fluctuating workload in support of the strong U.S. military presence in Korea during 1976 and 1977 prompted a shift of FED's attention, personnel, and organization.

From 1976 through 1977, District activity showed a rise as its total workload gradually increased from $8.3 million for FY75 to $28 million for FY78.[1]

During this period, FED underwent changes in its organization in addition to overall staff increases.

In early 1976, FED's Engineering Branch experienced a sudden increase in design workload projection for FY77-78 for approximately $65 million each year, while the previous two fiscal years reflected $20 million and $28 million of actual design placement.[2] The initiation of two major programs for relocatable barracks and OMA upgrade generated a significant portion of design workload increases. Also, contributing to these increases in design workload were a variety of minor construction, maintenance, and repair projects—the additional requirement by Congress to have MCA programs designed before the construction funds are appropriated, and the $1.2 million master planning and BMAR study.[3] To handle the increased workload most responsively, the District's immediate reaction was to request temporary duty (TDY) assistance from POD and the recruitment of temporary hire employees. There was some concern as to in-house ability to design the myriad of small OMA projects and concurrently to review the A-E work adequately. FED realized the need for contracting out more engineering work to A-E firms, and thus added KCK and Associates, Architects and Engineers, and Adrian Wilson Associates to FED's list of A-E firms.[4]

Among the steps taken by FED to adjust to this work expansion, was recruitment by the Engineering Branch of two project managers for the Program and Planning Section. In order to expedite and improve the response to field change requirements, the Technical Review and Modification Section was organized. This organizational change allowed the FED Design Section to concentrate on in-house design, and provided better support to the Army Facilities Engineers (AFE) and Air Force Base Civil Engineers (BCE) who required a fast reaction to their requirements for maintenance repair type projects.

At the same time, FED hired many Korean Nationals on a temporary basis, extended the workday for engineering personnel, and shifted an aviation officer into the newly-created Facilities Engineering Support Section, effective 17 November 1976.[5]

Meanwhile, POD provided groups of experienced people on 30 to 60 day TDY assistance visits to fill the gaps in various staff elements. These individuals, some of them branch or section chiefs or project engineers at POD, were integrated into the FED organization for mission accomplishment. Some of these engineers spent as many as five different TDY periods in Korea during the year. These individuals were not always used in general supervisory roles, but rather as active participants in the important troop facility upgrade program and BMAR study—difficult, frustrating and long overdue programs to improve troop living conditions.[6]

Within FED, most of the TDY effort was integrated into a new Facilities Engineering Support Section. Thus, POD and FED responded vigorously to an increase in FED workload, much of it in direct support of Army Facilities Engineers. This arrangement demonstrated flexibility in allocating duties among its various activities.

In November 1976, FED found it necessary to reorganize its Engineering Branch to meet accelerated MCA and OMA upgrade programs. Effective 1 February 1977, the reorganization of the engineering elements was directed by Permanent Order 5-1, dated 30 March 1977.[7]

The Branch was elevated to a Division level organization with a Design Branch, a Foundations and Materials Branch (replacing the Exploratory, Laboratory, and Survey Branch), a Technical Review and Modification Branch, and a Military Branch (replacing the Programming and Planning Section). Under the Military Branch, the Army/Air Force Section, the Facilities Engineering Support Section, and the Program Support Section were established.

The same permanent orders also authorized the elevation and reorganization of the Construction Branch to Division level, with a Supervision and Inspection Branch, a Contract Administration Branch, a Construction Service Branch, and four Project Offices.[8] The field

1. USAEDFE Total Workload, 1972-1978.
2. FED Fact Sheet, 5 November 1976, Subject: Additional Personnel; Interviews Major William R. Baker, 23 January 1978, LTC Ronald W. Brass, 12 January 1978, Arnold Ivener, 14 January 1978, and Edgar N. Moon, 24 January 1978; Letter, COL Ames S. Albro, Jr., to all FED Employees, 5 November 1976, Subject: Proposed Personnel Increases; FED Memorandum for Record, 13 December 1976, Subject: Justification for Personnel Increases for Engineering Branch, FED.
3. Ibid.
4. Interviews, Baker, Ivener, and Moon.
5. Ibid. POD Permanent Order 17-1, 2 December 1976.
6. Interviews, Baker, Brass, Ivener and Moon; EUSA Message MG Singlaub to MG Brady, CDR 2d Inf Div. March 1977, Subject: OMA Troop Housing and Repair Projects; ENJ Memorandum for: Commander In Chief, 19 April 1977, Subject: Courtesy Call, MG Robert C. Marshall, Deputy Chief of Engineers.
7. POD Permanent Order 5-1, 30 March 1977; Letter, COL Albro to Division Engineer, POD, 24 February 1977, Subject: Reorganization of Engineering Branch, FED.
8. Ibid.

construction reponsibilities were assigned to these project offices, organized on a geographical basis: the Northern Project Office, located at the FED Compound in Seoul, monitors all the construction north of Suwon; the Central Project Office at Osan directs projects from Osan south along the western coast; the Southeast Project Office in Taegu handles all construction south and east from Camp Ames; and a fourth, the Relocatable Project Office, headquartered originally in Uijongbu and later moved to the FED Compound in Seoul in February 1977, created on a functional basis to manage the multi-million dollar relocatable troop housing project at various locations.[9]

FED's responsibility to administer the relocatable barracks projects, and the acceptance of numerous small OMA, UMMCA, OMAF, and NAF projects, contributed to greater construction activity throughout 1976-1977. Thus, the Construction Division faced a severe manpower shortage. Personnel increases were considered to be essential, especially for field inspectors, administrative, and clerical staff, due to the widely dispersed geographic locations of construction of many small projects.[10]

The assistance of TDY personnel somewhat improved the District's ability to be responsive to customers' requirements in a timely and thorough manner, but only at a major increase in costs. Consequently, eight Department of the Army civilian (DAC), 40 Korean National (KN) spaces, and numerous positions on a temporary basis were authorized. In addition to this increase in personnel authorization, overtime support of the OMA upgrade program was authorized, to be increased to 15 overtime hours per person, as the workload dictated.[11]

The District's personnel authorization was increased based on increased workload, but there are still some permanent vacancies, many in key positions. At the same time, the United States announced its intention to withdraw ground forces from Korea. With this latter development, the recruitment of more qualified personnel became difficult and presented another major challenge to FED.

The District utilized TDY assignments, both to compensate for a shortage of permanent employees and to fill a temporary gap in its various staff elements. Throughout the latter half of FY77, FED benefited significantly from the various assistance visits made by members of the Corps.

FED thus responded to the increased workload through adjustment in its staff and its organization in support of U.S. Forces Korea.

9. See Appendix B for new organizational charts.

10. FED Memorandum for COL Ames S. Albro, Jr., 16 November 1977, Subject: Justification Construction Branch Personnel Increases; Letter, COL Robert M. Bunker, FED District Engineer, to BG Maurice D. Roush, Division Engineer, POD, 6 September 1977, p.3.

11. POD Message to FED, December 1976, Subject: FED Request for Manpower Space and Supporting Documents; FED Message to POD, May 1977, Subject: Upgrade Program, p.2.

CHAPTER IV
THE CHALLENGES

Between 1976 and 1977 the District experienced sharp increases in its workload. In supervising the variety of work during this period, the Far East District met and overcame many challenges. Keeping abreast with command emphasis in support of the total Army, the District's major construction activities were alleviating the shortage of and upgrading existing troop housing. Additionally, FED was tasked to manage a multitude of small projects, assist the engineeer organization in Eighth Army, and continue to accept small OMA funded projects, easing the burden on the Army's Facilities Engineer Activity, Korea (FEAK) and the Air Force Base Civil Engineers (BCE).

The majority of these projects were small and scattered throughout Korea, thus increasing manpower requirements, supervision, and administration costs. Many were characterized by constantly changing user agency requirements, lack of funding, and/or funding delays. The U.S. Government's stated troop withdrawal from Korea resulted in program instability. Other challenges, among areas of major concern during this period, were those associated with the procurement of offshore materials, the problem of retaining and recruiting qualified personnel, and inflation.

Near the end of the Korean war, the United States established semipermanent camps in strategic locations around the peninsula. The troops living at these camps were housed in quonset huts. Twenty five years later, however, many troops were still living and operating in these quonset huts, under deplorable conditions.

Various attempts to program new facilities through the military construction program had fallen short, as had other funding required to maintain the inadequate facilities. This was largely because many agencies of the U.S. Government foresaw no long term need for troops or troop facilities—in Korea.

The concept of the relocatable barracks grew from a desire to improve the long neglected troop living conditions in the Republic during a period when Congress would not allocate funds for permanent or semipermanent construction in Korea. In October 1974, General Richard G. Stilwell, Commander, United Nations Command/U.S. Forces Korea/Eight U.S. Army, presented the idea of relocatable barracks at a Department of the Army commander's conference. The relocatable concept, which allows flexibility within Korea as deployment postures change to meet contingencies, was well received.[1]

A start was made in FY75. EUSA procured 250 relocatable buildings and 125 latrine modules using Other Procurement Army (OPA) FY75 funds. FED was not involved in this procurement or the original erection of the buildings.

As a follow-on, DA included relocatable barracks in the regular FY76-77 Military Construction Army (MCA) programs. Required congressional approval was speedily obtained.[2] The FY76 relocatable program was a continuing improvement of troop barracks, as the FY75 program had demonstrated an ability to provide the soldiers a significantly better home.

The relocatable program has not, however, been without its share of problems. The FY76 relocatable program required that the preengineered buildings be procured and shipped to Korea within a ten month period and be erected by troop labor before winter.[3] Although the Army units providing the labor were engineer construction battalions, all personnel were not necessarily skilled in the construction trades required by the building design.

While the relocatable program sought to maximize the total amount of new troop housing, it also was subject to budget constraints, limiting total costs to those funds programmed for the project. Thus, a greater number of buildings could be procured by lowering the costs of each unit purchased, while preserving the relocatability feature as a ledge against salvaging part of the investment during any subsequent change in stationing of U.S. troops. This multiplicity of conditions added to the management challenges in design and construction of the total relocatable barracks program.[4]

The FY76 relocatable program for replacement of grossly substandard Korean War era quonsets first experienced major construction delays and cost overruns as a result of faulty building components. Virtually all of the alumium skinned honeycombed panels were improperly glued and thus lacked the structural stability and durability required by design. Numerous components were also damaged in transit due to inadequate packing.

The construction was first halted temporarily pending resolution of these problems. However, the panel delamination problem proved so severe that the Army terminated the contract by negotiated settlement with the Trail Boss Corporation, manufacturer of the building system, without taking delivery of the roof and siding panel components for the final 70 buildings.[5]

1. POD Memorandum for Record, 22 November 1977, Subject: Korea Relocatable Program-FY75 OPA and FY76 MCA; Msg, GEN Stilwell, CINCUNC/USFK/EA, to LTG Gribble, Chief of OCE, October 1974; FED Memorandum for Record, 1 June 1977, Subject: Chronological Review of the Highlights of the FY76 Relocatable Program from October 1974 thru July 1976; Interviews, Captain Ronald P. Harper, 9 March 1978, Captain Thomas W. King, 31 January 1978.
2. Ibid.
3. Ibid.
4. Ibid
   POD Fact Sheet, 23 November 1977, Subject: Relocatable Program in Korea.
5. Letter, COL Ames S. Albro, Jr., FED District Engineer, to Staff Judge Advocate, 25 August 1976, Subject: SJA Assistance for Far East District; POD Memorandum for: BG Junot, CG TROSCOM, 13 October 1976, Subject: FY76 Relocatable Barracks Program; Letters, BG Maurice D. Roush, POD Division Engineer to MG Burnell, OCE Dir Mil Const, 1 October 1976; Interviews, LTC Ronald W. Brass, 12 January 1978, Harper, and King.

FED became deeply involved in finding solutions to these difficulties in order to insure that the program was completed properly. The shipping damage and delamination of panels required unexpected replacement of prefabricated building components. Since the reconstruction of panels for the FY76 relocatables was of the utmost importance in order to avoid further delays in construction, FED immediately sought ways to regain momentum in the FY76 program. FED investigated the in-country repair option after the issue of various replacement options for the panels was discussed. Because the cost of buying and shipping new panels from the U.S. was almost equivalent to paying a Korean contractor to repair by hand, POD decided to go with a locally-made panel under a Corps contract and quality control procedures. FED and POD jointly designed a replacement panel for fabrication by a Korean firm. Between 20 March and 3 June 1977, numerous panels were built in accordance with the new specification and subjected to various critical testing under supervision and evaluation by FED. Various aspects of the design were finalized during the testing phase. One key element of this unique "K-panel" design was the maximum reuse of existing aluminum siding material in order to hold down costs. This combined POD and FED effort resulted in a timely redesign of the building panels, thus minimizing the delay in the final erection of relocatable buildings.[6]

On 25 March 1977, a fire destroyed a supply warehouse at Camp Market. At this facility, the 2d Engineer Group had been operating a supply warehouse to store and issue special tools, supplies, and building components in support of FY76 relocatable barracks program. The disastrous fire further hindered FED and troop efforts to complete the already delayed program.[7]

Throughout all phases of the program FED encountered numerous shortcomings such as material shortages, lack of specialized tools, funding limitations, as well as the constraint of user housing requirements. The impact of the delayed FY76 relocatable program upon availability of troop housing, particularly in the 2d Division area, posed major challenges for FED in terms of management. Many older buildings were torn down to make room for the new FY76 relocatable buildings and troops were doubled up awaiting the delayed construction. The overcrowded living conditions were further aggravated during the summer and fall of 1977, caused by an extensive repair and upgrade of the FY75 relocatables, plus an extensive OMA upgrade program in the 2nd Division area at the same time the FY76 relocatable program was being pushed to completion.

Another obstacle presented to FED was that the cessation of relocatable building construction necessitated finding storage space for electrical and architectural components of a highly pilferable nature. This problem was compounded by the need to inventory all of the buildings and fire damaged items, to identify shortages or damages, and to determine how and to what scope the program could proceed.

Despite the problems, the FY76 relocatable program proceeded and the quality of building was surprisingly good. Relocatables, so named because they were designed to withstand up to three moves in five years, were constructed in an extremely short time. Modern, sunny, light brown relocatables were popping up like mushrooms after a spring rain, amidst old, tired green quonset huts in forward areas. Ultimately, through intense management efforts, FED was able to complete the maximum possible scope of the FY76 relocatable barracks program with the least possible effect on cost and construction time. This outstanding achievement can only be credited to the tremendous efforts of all concerned. It was a frustrating, demanding, yet challenging and rewarding accomplishment for the Far East District.

As the saga of one story "H" configuration, relocatable barracks came to an end, FED's attention turned to the FY77 relocatable program.

Looking to further improvement and avoidance of the difficulties encountered with the honeycombed panel FY76 buildings, FED initiated a life cycle study for the FY77 relocatable construction technique. Captain Ronald W. Harper of FED travelled throughout the U.S. and Japan, visiting various manufacturers and users of relocatables, so as to evaluate the product from the vantage point of the actual experience of those who had used them.

Constrained land availability, and the value of providing a more durable product for FY77 relocatables, led to adoption of a two story configuration with a limited interior use of concrete block as the most desirable construction technique. Two major issues arose regarding the proposed plan for the FY77 relocatable program: acceptability of a two story building by the Office of the Chief of Engineers (OCE), and the use of limited CMU construction which represented a considerable departure from the originally approved relocatable concept. After a period of discussion, both concepts were approved by OCE. The use of non-loadbearing CMU walls was particularly significant in light of their similar use in the necessary modifications of FY75 and FY76 relocatables to make them "troop-proof".[8]

For the FY77 relocatable program, FED was given the mission of managing the entire program, from design through procurement and construction. The FY77 program was no exception to the general problem of cost overruns and changes in scope and siting experienced in previous years.

During this period one of the most critical areas affecting the District's operation was the procurement and supply of offshore materials. United States policy on International Balance of Payments (IBOP), as well as considerations of quality, cost, and availability of certain critical items, continued to provide challenges to FED supply personnel. Constraints on local procurement were such that many required items either were not available locally or did not meet the standards of U.S.

6. FED MFR, 18 October 1976, Subject: Meeting with BG Junot to Discuss FY76 Relocatables; Interviews, Arnold Ivener, 24 January 1978, Edgar N. Moon, 24 January 1978, King.

7. Message, GEN Vessey, CG EUSA, to LTG Marris, OCE, June 1977, Subject: Relocatable Barracks Construction; Interview, King.

8. MFRs, FED, 20 January 1977, Subject: FY77 Relocatable Barracks Design, 8 December 1976, Subject: Trip Report, Review of FY77 MCA Bachelor Housing Project; Interviews, Moon, King, and COL Robert M. Bunker, 15 February 1978; Briefing prepared for General Vessey, 7 October 1976, p.7.; Msg, GEN Vessey, CG EUSA, to MG Brady, CG 2d Inf Div, 1 September 1977, Subject: Visit of BG Roush.

specifications. This was especially true of electrical and mechanical items and plumbing fixtures.

The use of U.S. Government furnished material (GFM), although essential, had its drawbacks. Delay in shipments from the U.S. occasionally held up FED's construction projects. Administrative and geographical factors generally required 120 to 150 days to procure and ship the materials to Korea. This frequently placed the District in the position of delaying the actual construction period. The stocks of certain mechanical and electrical items were not abundant in the U.S. and further delays were caused by manufacturing time required to fabricate needed items. Lack of early funding from customers often limited the placing of advance procurement orders. The problems of incorrect ordering or shipment, losses in transit, and receipt of damaged materials were among continuing frustrations which plagued FED's procurement and supply functions. Funding problems were also compounded when delays in procuring these items from the U.S. increased the overall construction costs. Not only did the use of GFM have a critical impact on FED's construction progress, it also presented minor difficulties in maintaining on-hand stocks, some unavoidable deterioration, and pilferage.[9]

With a few exceptions, the procurement channel operated fairly effectively, even though it was difficult for users to accept order-ship-time of four to six months for most items, and the attendant delays in construction. The following extract from a letter by the District Engineer, vividly illustrates the situation faced by FED: "Government furnished material continued to provide, through time delays, the greatest irritation to our customers.— From experience we know that the customers will not accept 150 days procurement leadtimes without cries of Engineer Family incompetence."[10]

For the OMA upgrade program, for example, the procurement leadtimes of critical items caused great irritation to the using agency, particularly during the months between the approval of the OMA upgrade program and the actual start of construction. The OMA upgrade program gained a high priority in support of 2d Division in line with the Division Commander's desire to improve living conditions for the soldiers. Because of the urgent nature of the program in the light of extreme command pressure, every effort was made to accommodate command desires.

Bringing the OMA upgrade program on board required extraordinary effort on the part of FED as well as POD personnel. POD pursued an ambitious schedule of augmenting the FED with 1,400 man-days of TDY, beginning in October 1976, to assist in design.[11]

The most critical aspect of the whole program, however, remained FED's dependence on offshore procurement time. The procurement leadtime of 120 to 150 days created a delay in the start of construction which was unacceptable to the customer. On 26 December 1976, $85,000 was forwarded to FED for advance procurement of GFM for Phase I of the OMA upgrade program[12]

Meanwhile, FED developed a system of multiple channels for procurement of GFM: airlifting electrical supplies from U.S. at a significant increase in cost; using local purchases, in addition to the normal channel of ocean shipment through the San Francisco Liaison Office (SFLNO). A series of cost and timing estimates for each method was prepared and combined EUSA/FED decisions were made on separate procurement actions on an item-by-item basis. FED established a supply point using "hardware store" type procedures to receive, store, and issue materials to the contractors. Intensive management review has allowed for identification of possible problem areas in sufficient time to prevent construction delay, and has proven to be quite successful.[13]

With not enough in-house capability to handle the total scope of massive design requirements within an extremely compressed schedule, the District's dependency on A-E firms increased. For several months in late 1976, while the FED staff concentrated on attaining full operational strength and completing the design program, an unexpected complication arose. The Republic of Korea Government officials involved with the Status of Forces Agreement (SOFA), decided to withhold permission for continued Architect-Engineer contracts with U.S. invited contractors. These officials desired that all FED design awards go to local firms. FED's concern was not with the Korean firms' technical ability to produce quality designs using local standards, but rather a recognition that, without experience in the necessary U.S. Government methods and standards, these Korean firms would cause much delay in the USFK construction program during their learning phase.

The compromise, reached after much discussion at SOFA committee meetings, was that American A-E firms could work on the program in joint ventures with local A-E firms, thus precluding program delays while the local firms developed the requisite experience in U.S. methods.[14]

With this issue resolved (at least temporarily), the design work for a Republic of Korea-wide OMA upgrade program began. On February 1977, the Far East District

9. Interview, John M. Feyko, 23 March 1978; Letters, LTC Brass to Director of Plans Training and Security HQ USAGY, 7 December 1976, Subject: Request for Warehouse for the FY76 Relocatable Barracks Program, COL Bunker to BG Roush, 6 September 1977, p.6, BG Roush to LTG J.W. Morris, Chief of Engineers 15 September 1977, p.2.

10. Letter, COL Bunker, FED District Engineer to BG Roush, 6 September 1977, p.6.

11. Letter, MG Singlaub, Cofs EUSA, to MG Brady, CG 2d Inf Div, 19 April 1977, p.3; Interviews, Major William R. Baker, 23 January 1978, Brass, and Moon; Letters, COL Albro to BG Roush, 25 February 1977, p.2, BG Roush to LTG Morris, 14 June 1977, p.1.

12. EUSA Memorandum for Record, 30 December 1976, Subject: Briefing for MG Brady, CG 2d Inf Div; FED Sequence of Events: Repair and Maintenance Program for 2d Inf Div, 15 April 1977.

13. Ibid, MSG, May 77, FED thru SFLNO to POD, Subject: Upgrade Program; Interviews, Baker, Brass, and Moon; Letter, COL Bunker to BG Roush, 2 December 1977, p.2, and LTC Brass to BG Roush, 13 May 1977, p.1.

14. OCE Command Inspection of POD, 18 November 1976, 6 December 1976, Subject: Report to Chief of Engineers; Interview, Shin, Chae Ha, 17 January 1978; SOFA Instruction Files: Articles XV; Letters, COL Ames S. Albro, Jr, FED District Engineer, to Noh, Chin Sik, ROK Chairman, Ministry of Commerce and Industry, 6 October 1976, and 11 October 1976.

signed contracts with three joint venture A-E firms: Lyon Associates, Inc.,/You Shin Engineering Corporation; DMJM/Kaya Engineering Consultant Company, Ltd.; Telescopic Engineer, Inc./Jin Han Architects and Engineers.[15]

Making special efforts to respond to user needs both the FED in-house engineer staff, with TDY support from POD, and the three A-E firms initiated site investigations and field surveys for the purpose of identifying those facilities eligible for work under the troop facility upgrade program, with priority given to 2d Division area. This resulted in Phase I contract initiation on 11 March 1977

During the course of construction on the OMA upgrade projects, additional work was also identified. This resulted from unforeseen structural, mechanical, and electrical deficiencies incurred in almost every building as it was being dismantled, as well as frequent correction of work classification. These changes, together with the necessity for supervising and inspecting numerous contracts at scattered sites simultaneously, imposed a massive task and an ever present concern for all project engineers. Intense contractor, inspector, and customer coordination has proven to be the only effective way to resolve these daily issues without undue impact on daily contract operation.

One event directly affecting the role of FED in support of USFK during this period, was the announcement that American ground forces would be withdrawn from Korea over a four to five year period. The impact of the administration's pronouncement was immediate and felt by all elements of the District. DA issued instructions to halt all design programs, minor construction projects, and MCA construction programs. All the projects were required to be rejustified by EUSA in view of still evolving withdrawal strategy and to be resubmitted to DA for program reapproval.[16]

In the spring and summer of 1977, the future looked bleak for the District's Engineering Division and the resulting construction programs. Major activities in the Engineering Division were the OMA upgrade program, miscellaneous repair and maintenance projects, and year-end funded projects. Thus, FED in-house forces took over the OMA upgrade program because of the loss of workload as a result of the halt on all MCA funding for FY77-78-79 programs.[17]

The significance of the in-house design workload was that it resulted in invited A-E firms having not enough work to support their organizations during this time. This problem was of great concern in FED until the fall of 1977.[18]

Meanwhile the scope of the Phase I portion of the FY77 OMA upgrade program was reduced to ten installations from the originally planned 17. A number of projects previously having high priority dropped out and the priority on others was shifted, due to the impending withdrawal planning of U.S. ground troops from Korea. While 2d Division upgrade program continued on target for getting the Camp Pelham packages out to prospective contractors on 31 March 1977, difficulty was experienced in obtaining approval of the project from Assistant Secretary of the Army. The prospect of continued problems in this area was of great concern to all.[19]

Between the late summer and early fall of 1977, the design workload picked up somewhat, and work proceeded. However, the District was able to place few contracts because authorization and guidance remained unclear. The percentage of FED effort in support of OMA/OMAF requirements grew to almost 50 percent of total effort as a result of the demise of FY78 MCA programs. FED could not initiate the major portion of the FY77 MCA projects until January 1978.

Another significant change, which occurred during mid-1977 and having an impact on the District's operation, was a policy change regarding the contractor selection procedure. A change took place on 5 March 1977, from a competitive to a controlled single-source selection mode of procurement, which set a precedent for all future contracts.[20]

The environment of procurement irregularities among Korean contractors had long posed a problem and concern for all. Attention was intensified by U.S. news media reports of collusive bidding practices by Korean contractors which drew great U.S. congressional interest.

On 3 September 1976, a study of various alternative procedures for improving procurement operation was directed by the Secretary of the Army. The EUSA recommendation resulting from the study, was adoption of the controlled single source selection concept for procurement methods in Korea. This revised concept facilitated and enhanced U.S. control over the source selection process and minimized the possibility of contractor collusion prior to the contract award.[21]

15. Contract Register; FED MFR's, 20 April 1977 and 25 April 1977, Subject: Site Investigation for Repair and Upgrade of Troop Facilities; Interviews, Baker, Ivener, and Moon.

16. Letter, COL Albro to BG Roush, 25 February 1977, p.2; Interviews, Brass and Moon; Msg, MG Singlaub, EUSA CofS, to MG Wray, OCE Asst Chief of Engineers, February 1977 and March 1977.

17. Letter, LTC Brass to BG Roush, 3 June 1977, p.2; Interviews, Brass, and Moon.

18. Letter, LTC Brass to BG Roush, 3 June 1977, p.2; Interviews, Brass and Moon.

19. FED Sequence of Events: Repair and Maintenance Program for 2d Inf Div, 15 April 1977; FED Milestone for OMA Upgrade; Interviews, Baker and Moon.

20. OCE Command Inspection, Statement of Findings, 6 December 1976, Subject: Report to Chief of Engineers; DJ Fact Sheet, 26 October 1977, Subject: Exit Briefing of Mr. Ewell HQ DARCOM, Purpose: To inform the Chief of Staff of the comments and facts concerning the assessment of controlled single source selection process in Korea; POD msg, Division Engineer to DA, Wash, DC, November 1976, Subject: Procurement Authority and Procedure in Korea; Interviews, Brass and Shin, Chae Ha.

21. Ibid; Letter, COL Albro to Commander in Chief, UNC/USFK/EUSA, 11 November 1976, Subject: Procurement Irregularities in Korea.

A Sole Source Selection Board (SSSB), of which FED is a member, was established and the selection of contractors was placed in the hands of the board members for a six months initial trial period. On 5 March 1977, at the first meeting of SSSB, the site preparation and CMU erection contracts for the FY76 relocatable program were among the first contracts processed by the board.[22]

With the institution of the sole source contracting process in Korea, the accuracy and security of the government estimate has become paramount. This practice places exceptional reliance on the government estimate since the contractors proposal is no longer subject to any form of competitive check. FED has established a formal pre-screening and a selection board for the purpose of evaluating on a given project, the qualifications of potential contractors from among 28 contractors on the FED bidders list.[23] Thus far, FED has been successful in recommending selection of specific contractors to the SSSB.

During the past twenty years, the role of the Far East District has had an awesome impact on the Korean construction industry. FED introduced Korean contractors to modern construction management techniques and construction methods, and also encouraged Korean manufacturers to produce materials meeting U.S. standards. Through the years the once war-ravaged Korean economy has recovered, and the local construction industry has developed initially in large measure because of the District's presence. Skilled and experienced contractors, managers, engineers and laborers became plentiful, the bulk of adequate construction materials are now available on local markets, and heavy machinery and power tools are no longer rarities.

The extent of this impact has been demonstrated by Korean firms obtaining sizable construction contracts in the Middle East. Their overseas construction contracts mushroomed and drove Korean construction industry into a hive of excitement, for the scale of the program was thought beyond the imagination of most Korean contractors. The overseas construction industry grew from $200 million in 1974 to $3.5 billion in 1977.

However, the increasing presence of Korean firms and manpower in overseas areas has had a profound impact on construction development at home. Skilled workers and laborers were moving to overseas jobs which paid much higher wages, while the country itself was vigorously stepping up spectacular urban development. Many of the contractors and skilled personnel who served their apprenticeship with the District, departed to the international market, leaving less experienced individuals to take their place.[24]

As a result of these phenomena, in 1976-77, FED again faced a paucity of qualified Korean contractors possessing the managerial abilities and expertise to handle numerous jobs at diverse locations; and the contractors themselves experienced a large turnover of personnel. Defaulted contracts continued to present problems. The termination of the contract for the rocket maintenance shop at Camp Ames and one OMA upgrade contract at Camp Casey II, for example, had a severe adverse impact on construction schedule and resulted in cost escalation.[25]

When the District issues a notice to proceed, the contractor frequently falls behind schedule because of slow mobilization and an inexperienced labor force. Local contractors occasionally delay in ordering items from the U.S.; lack of sufficient work force delays construction starts. This tends to push the contractors behind schedule which requires FED's inspectors to maintain a close watch over construction progress. Because importing skilled labor from the cities proves costly, Korean contractors hire from the local labor market for construction work at remotely situated projects. This usually involves on-the-job training by FED inspection crews. FED has met this challenge as the daily task of training these newcomers in Corps' standards and methods, which has led to increasing Korean contractors' capabilities in every aspect of construction.

In addition to developing local contractor capability, the District sought to improve the contracting situation. The increased acceptance of smaller projects for design and construction, with an accompanying disproportionate increase in its cost of operation, became a significant challenge to FED. To enhance the desirability of projects to potential contractors, while at the same time reducing administrative costs, FED combined numerous small projects into one package—by task or by location. Examples of the most significant consolidated packages in 1976 and 1977 were the OMA upgrade program, relocatable barracks program, and construction of water lines and dining facilities at various TAC sites. FED also established a $300,000 target for consolidated construction contracts in support of the command OMA and OMAF programs.

In contract administration, FED has continued the periodic use of supplemental agreements where clearly within the purview of the Armed Services Procurement Regulations (ASPR). FED viewed the use of this procedure as necessary in order to accomplish small projects of an urgent nature, where the already mobilized and proven contractor could perform quality work more rapidly than a firm which was not yet under contract.

While this practice offers responsiveness of sole source procurement for the user agency, it created the problem of delaying physical and fiscal completion of military construction contracts, and received unfavorable comment in a 1977 U.S. Army Audit Agency report. The report criticized the lack of supporting documentation, particularly justification in contract files when noncompetitive supplemental agreements were used and lack of prior review and approval by the Division Engineer.[26]

FED has taken some positive steps to insure timely completion of work while closely guarding the incorporation of contract modifications and additional work

22. Contract Register; Letter, COL Albro to BG Roush, 25 February 1977, p.5.

23. Letter, LTC Brass to BG Roush 3 June 1977, p.2.

24. USAEDFE Central PO Reports, 1976-1978; Interviews, Harper, Ole P. Nielsen, 13 February 1978; Letter, COL Bunker to BG Roush, 27 February 1978, p.2.

25. USAEDFE Construction Progress Report Indexes 1976-1978; Letter COL Bunker to BG Roush, 2 December 1977, p.6.

26. U.S. Army Audit Agency, Western Division, Audit Report: WE-77-18, 18 May 1977, p.3.

clauses. At the same time, required documentation has been obtained and filed where appropriate.

The field of safety has also been of great concern to FED's supervisors. New methods of supervision have improved safety standards in the past two years by intensifying the safety training programs of both inspector and contractor personnel, and by reviewing and frequently revising safety manuals, both in English and Korean, to insure that all current safety doctrines have been included. Further, safety inspections in the field have been carried out on a regularly scheduled, weekly basis. As a result, the District's safety record showed no recordable accident for two consecutive years (1976-1977) despite the District's accumulation of more than half of POD's combined manhours of exposure.[27]

The field of personnel management presented one of FED's most difficult challenges during this period. Qualified Korean National engineers were in greater demand as FED strained to complete DOD required design schedules, plus an unusually large load of studies, surveys, well drillings, and maintenance projects.

The most serious trend has been the loss of Korean professionals, with long tenure, to local and overseas jobs.[28] During June and July 1977 such losses reached a critical stage when FED lost seven KN engineers from its Engineering Division.

Recruitment of personnel, both DAC and KN, has also worsened considerably during this period. The critical position of Chief, Estimating Section, for example, remained vacant from 1 September 1976 to 30 August 1977[29] One major factor contributing to the problem of recruiting and retaining highly qualified people is the perception of the apparent temporary nature of the job, due to the announced troop withdrawal and command manpower reductions.

As a result of the uncertainty, many current KN employees have begun actively seeking employment elsewhere, both overseas and domestically. Many of FED's highly skilled employees with long tenure have been leaving because FED salary rates are no longer competitive with the industry, and, at least perceptually, the greater employment security which private industry can offer. These trends resulted in a substantial loss of continuity and the learning curve problem associated with replacement, training, and personnel turnover. Convincing both present and potential employees of the long term viability of FED, even in light of the growing USAF program, has proven exceedingly difficult.

As one solution, FED has secured a 15-20% salary differential for KGS-11/12 KN engineers. Another consideration has been to give priority U.S. immigration preference to Korean Nationals in managerial and professional positions who have 15 or more years service with the U.S. Government.[30]

Meanwhile, FED has undertaken several training programs to educate and orient potential, young college graduates in order to compensate for losses of long time professionals.[31] FED has also drawn on other sources of labor, such as using aviators in dual capacities and utilizing TDY resources primarily from POD.

Transportation offered the District many challenges. Most projects were small and at dispersed locations, and travelling from one project site to another involved considerable time. The FED Aviation Office expedited movements of FED inspectors, scheduled periodic staff visits to individual construction sites at various stages of construction, and transported plans and paperwork between District headquarters and the numerous field offices. As a result, District field personnel could spend more productive hours on the job.

In September 1977, the Aviation Office received three major safety awards for accident-free flying. The awards covered the period 1 September 1974 to 31 August 1977. On 9 November 1977, FED had a highly successful visit from the Department of the Army Aviation Standardization Team. The purpose of the visit was to inspect flight operations, aviator standardization, aviation safety, and aviation maintenance of FED's Aviation Office. The Office passed all aspects of the inspection with flying colors.[32]

During 1976-1977, FED elements continued to coordinate through the Real Estate/Government Liaison Officer, Mr. Shin, Chae Ha, to acquire approval from the ROK Government for construction site selection, site expansion, and related investigations in connection with FED's construction projects.

In late 1969, a USFK decision to return all real estate functions in Korea to EUSA relieved FED of its real estate acquisition mission in Korea. FED established the Government Liaison/SOFA Office in order to insure a close relationship with its respective counterparts in the ROK Government. The Government Liaison/SOFA Office receives minutes of meetings of the joint committee under the Republic of Korea and the U.S. Status of Forces Agreement (SOFA), which has enabled FED to receive advance information of decisions taken by the SOFA committee on requests for turnover of lands and property which FED requires for construction purposes.[33]

Sung Ae Won Orphanage continued to be an unofficial project which received much attention from FED members. Each year, many visits were made to the orphanage by the engineers' wives of District employees. FED personnel have made regular contributions and donations to the orphanage to assist in the welfare of the children since 1957. For several months in 1977, the orphanage was engaged in renovation of a badly needed activity room which could accommodate approximately 100

27. OCE Command Inspection, Statement of Findings, Subject: Report to Chief of Engineers, 6 December 1976 and February 1977; Interview, Shin, Chae Ha.

28. Letter, COL Bunker to BG Roush, 6 September 1977, p.2, and 2 December 1977, p.2.

29. Letter, LTC Brass to BG Roush, 3 June 1977, p.4; Request for Recruitment of Personnel (Official Personnel Folder), 1 September 1976.

30. Letter, COL Bunker to BG Roush, 6 September 1977, p.2&3; Interview, Shin, Chae Ha.

31. Ibid.

32. USAEDFE Aviation Office Reports, 31 January 1978; Interview, Major Timothy J. Asher, 5 February 1978.

33. EIG, Exit Notes: Safety, 31 March 1977; Interview, Shin Chae Ha.

children at a time. A bath and kitchen facilities were added to the building with funds provided by FED members. The Christmas holiday gave the men and women of the District a chance to get closer to the children. The children were brought from the orphanage to the Seoul Civilian Club in the FED Compound for a holiday banquet. Santa Claus, with many gifts, brought much cheer to all.[34]

In 1976-77, Far East District directed much of its activity toward the improvement of the living and operational facilities for the troops. The soldier's housing needs in Korea became so apparent, and that need, coupled with command emphasis on customer satisfaction, led FED to accept many smaller projects from the Facilities Engineer Activity, Korea and Air Force Base Civil Engineer organizations. These projects were widespread and resulted in S&A costs far exceeding the Corps' rate of five percent.

The problems FED faced during the design and construction phases of the relocatable and OMA upgrade programs were not unexpected, considering the circumstances under which the programs were conceived and carried out.

In a 27 February 1978 letter, the District Engineer summarized the challenges facing FED personnel: "The challenge to provide responsive, professional support to U.S. forces on the Korean peninsula—particularly in the present environment of uncertainty—is unabated."[35]

The problems FED had to cope with were the unavoidable complications caused by the using agency's constantly shifting programs and resulting changes in criteria and siting. Also, delays and alteration in funding were common. Consequently, jobs had to be stopped when only partially designed, and numerous designed structures never reached the construction stage. The withdrawal announcement significantly affected FED because the completed designs for a vast number of projects were held in abeyance awaiting advertisement. The deferral prompted some projects to be revised, causing several cost overruns.

In addition, late release of the rejustified FY77 MCA program, overlapping the complete release of Phase I of the OMA upgrade program, caused a tremendous imbalance in District workload. The major portion of these jobs was pushed to early FY78, placing enormous demand on construction S&I resources.

With a continuous spiral in the price of construction materials and increases in salaries of construction workers, FED's particular concern has been to accomplish the FY77 MCA program within programmed dollar amounts.

In addition, new phenomena impacted the District: the institution of sole source selection of contractors in Korea, which precluded collusive bidding practices among the Korean contractors, and the compromise between the District and the ROK Government's desire to limit awards to Korean firms, resulting in joint venture A-E firms which are only now becoming fully productive.

Thriving on these problems, the Far East District has successfully met the challenges of FY76-77 with the same determination and enthusiasm that the District has displayed throughout its previous 18 year history.

34. USAEDFE, Bulletin No. 23, 14 December 1977, p.5; Interviews, Donald D. Morris, 20 January 1978, Donnie Moon, 28 December 1977.

35. Letter, COL Bunker to BG Roush, 27 February 1978, p.1.

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APPENDIX A

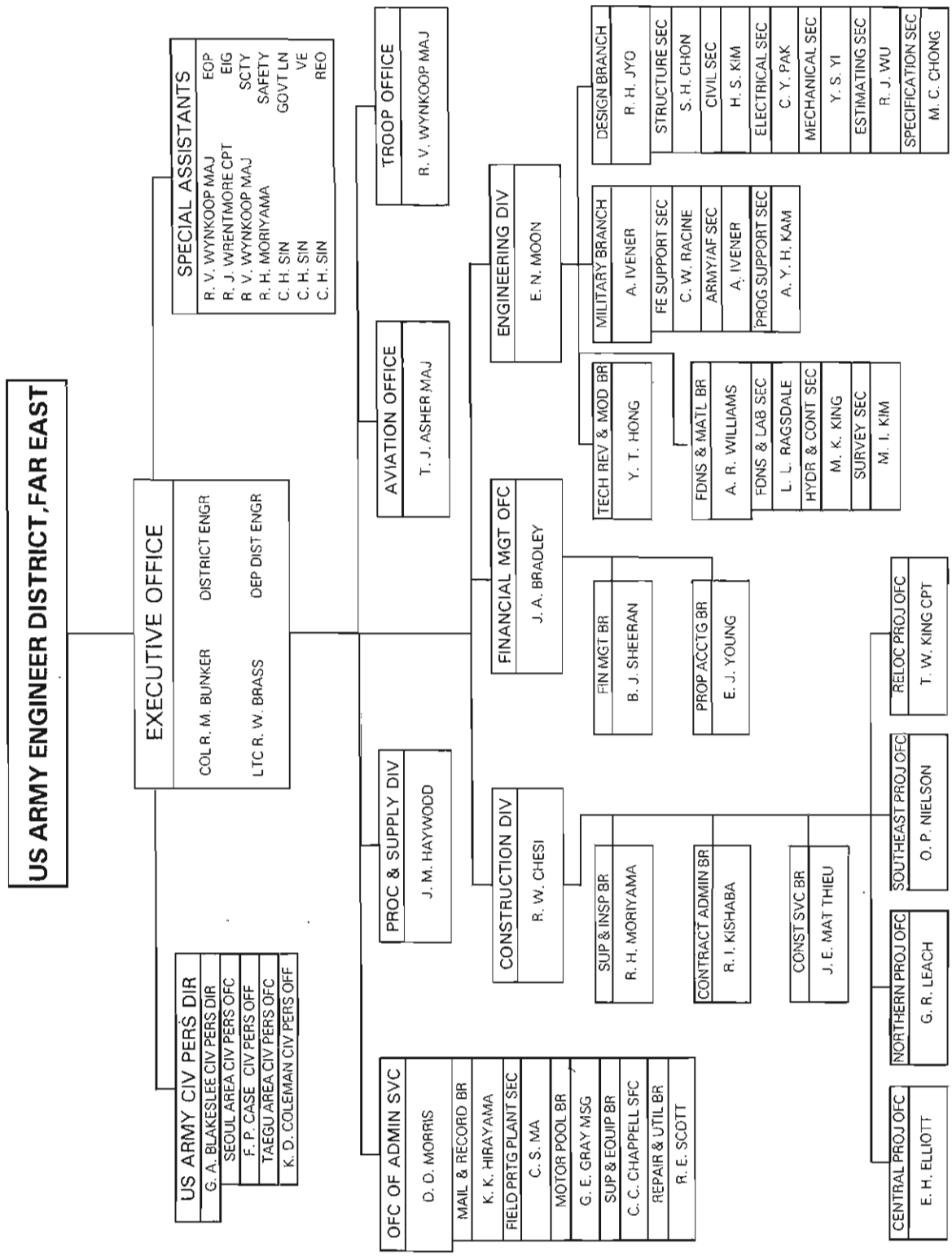
FAR EAST DISTRICT ENGINEERS
1976-1977

Colonel Ames S. Albro, Jr.
August 1975 to April 1977

Lieutenant Colonel Ronald W. Brass
April 1977 to July 1977

Colonel Robert M. Bunker
July 1977-Present

APPENDIX B
FED Organization Charts



CONSTRUCTION DIVISION

1 SUPV CIVIL ENGR	GS-14
1 PROJ ENGR (DEPUTY)	O- 3
1 CONST INSP	E- 7
1 CIVIL ENGR	KGS-12
1 SEC TYP	KGS- 5

SUPERVISION & INSP BR

1 SUPV CIVIL ENGR	GS-13
1 CIVIL ENGR	GS-12
1 MECH ENGR	GS-11
1 CIVIL ENGR ASST	SP- 4
2 CIVIL ENGR	KGS-12
1 MECH ENGR	KGS-12
1ELEC ENGR	KGS-12
1 SAFETY SPEC	KGS-11
1 GEN SUP SPEC	KGS- 9
1 ENGR DRAFT	KGS- 5
1 CONT SUP CLK	KGS- 5

CONTRACT ADMIN BR

1 SUPV CIVIL ENGR	GS-13
1 CONTR ASST	GS- 7
4 CIVIL ENGR	KGS-12
1 CIVIL ENGR TECH (T)	KGS- 7
1 ENGR TECH (T)	KGS- 7
1 CONTR ADMIN CLK	KGS- 6
1 CONTR ADMIN CLK	KGS- 5
1 CLK TYP (T)	KGS- 4

CONST SVCS BR

1 PROG ANAL OFF	GS-12
1 PROG ANAL OFF	GS- 9
1 ENGR TECH	KGS- 9
1 ACCTG TECH	KGS- 7
1 PROG ASST	KGS- 7
1 STAT ASST	KGS- 5

NORTHERN PROJ OFC

1 SUPV CIV ENGR TECH	GS-12
4 PROJ ENGR	O- 3
2 CONST INSP	E- 7
1 SUPV ENGR TECH	GS-11
2 GEN ENGR	KGS-12
5 GEN ENGR	KGS-11
1CIVIL ENGR	KGS-11
1 ENGR TECH	KGS-11
3 CONST INSP (T-3)	KGS- 9
1 SEC TYP	KGS- 5
1 CONTR ADMIN CLK	KGS- 4
1 CLK TYP (T)	KGS-4

CENTRAL PROJ OFC

1 SUPV CIV ENGR TECH	GS-12
4 PROJ ENGR	O- 3
2 CONST INSP	E- 7
3 GEN ENGR	KGS-12
1 GEN ENGR	KGS-11
4 CIV ENGR (T-2)	KGS-11
2 ENGR TECH	KGS-11
1 ELEC ENGR	KGS-11
1 GEN ENGR	KGS- 9
1 CIVIL ENGR (T)	KGS- 9
1 ENGR TECH (T)	KGS- 9
1 SEC TYP	KGS- 5
1 CLK TYP	KGS- 4
1 CLK TYP (T)	KGS-3

SOUTHEAST PROJECT OFC

1 SUPV CIV ENGR	GS-12
1 CONST INSP	E- 7
1 CIVIL ENGR	KGS-12
1 GEN ENGR	KGS-12
1 GEN ENGR (T)	KGS-11
1 CIVIL ENGR TECH	KGS-11
2 CIVIL ENGR (T)	KGS-11
2 ENGR TECH (T)	KGS- 9
1 ENGR DRAFT	KGS- 7
1 CLK TYP (T)	KGS- 3
1 AUTO MECH	KWB- 5

RELOC PROJ OFC

3 PROJ ENGR	O- 3
1 CONST INSP	E- 7
2 CONST FMN	E- 6
1 WAREHOUSEMAN	WG- 6
2 GEN ENGR	KGS-12
3 GEN ENGR (T-2)	KGS-11
1 CIVIL ENGR	KGS-11
1 ELEC ENGR	KGS-11
3 GEN ENGR (T)	KGS- 9
1 CIVIL ENGR	KGS- 9
1 SEC TYP	KGS- 4
1 SUP CLK TYP (T)	KGS- 4
1 CLK TYP (T)	KGS- 4

APPENDIX B
Organization Charts FED

ENGINEERING DIVISION

1 SUPV CIVIL ENGR	GS-810-14
1 DEPUTY	0- 4
1 SECRETARY	KGS-318-06

MILITARY BRANCH

1 SUPV CIVIL ENGR	GS-810-13
1 SUPV CIVIL ENGR	GS-810-12
1 SEC (TYPING)	KGS-318-05

FE SUPPORT SECTION

1 CIVIL ENGR	GS-810-12
1 CIVIL ENGR	KGS-810-12
2 PROJ ENGR	0- 3
1 MECH ENGR	KGS-830-11
1 ELEC ENGR	KGS-850-11
1 ARCH ENGR	KGS-808-11
1 ENGR TECH	KGS-802-09
1 CLK (TYP)	(T) KGS-301-04

ARMY/AF SECTION

1 CIVIL ENGR	GS-810-12
1 CIVIL ENGR	GS-810-12
1 CIVIL ENGR	0- 3
1 CLK (TYP)	KGS-301-04

PROG SUPPORT SECTION

1 CIVIL ENGR	GS-810-11
1 ENGR PROG ANAL	KGS-345-11
1 ENGR PROG ANAL	KGS-345-07
1 CLK (TYP)	(T) GS-301-04

DESIGN BRANCH

1 SUPV CIVIL ENGR	GS-810-13
1 SUPV CIVIL ENGR	GS-810-12
1 SEC (TYPING)	KGS-318-05

STRUCT SECTION

1 ARCH ENGR	GS-808-12
1 STRUCT ENGR	KGS-810-12
1 ARCH ENGR	KGS-808-12
2 ARCH ENGR	KGS-808-11
1 STRUCT ENGR	KGS-810-09
1 ARCH ENGR	(T) KGS-808-05

CIVIL SECTION

1 CIVIL ENGR	KGS-810-12
1 CIVIL ENGR	KGS-810-12
3 CIVIL ENGR	KGS-810-11
2 CIVIL ENGR	(T) KGS-810-05

ELEC SECTION

1 ELEC ENGR	KGS-850-12
1 ELEC ENGR	KGS-850-12
2 ELEC ENGR	KGS-850-11
1 ELEC ENGR	KGS-850-09
1 ELEC ENGR	(T) KGS-850-07

MECH SECTION

1 MECH ENGR	KGS-830-12
1 MECH ENGR	KGS-830-12
2 MECH ENGR	KGS-830-11
1 MECH ENGR	(T) KGS-830-05

SPEC SECTION

1 CIVIL ENGR	KGS-810-12
2 SPEC CLK	KGS-301-06

ESTIMATING SECTION

1 SUPV CIVIL ENGR	GS-810-12
1 CIVIL ENGR	KGS-810-12
1 CIVIL ENGR TECH	GS-810-11
4 CIVIL ENGR	KGS-810-11
1 ENGR TECH	(T) KGS-802-05

FOUNDATION & MAT BR

1 SUPV CIVIL ENGR	GS-810-13
1 SUPV CIVIL ENGR	GS-810-12
1 ACCT 8 BUD ASST	GS-501-07
1 SEC (TYPING)	KGS-318-05

FOUNDATIONS & LAB SECTION

1 SUPV CIVIL ENGR	GS-810-12
1 SUPV CIVIL ENGR	KGS-810-11
1 CIVIL ENGR TECH	KGS-802-11
2 ENGR TECH	KGS-802-09
4 ENGR TECH	KGS-802-07
1 CHEM ENGR TECH	(T) GS-802-05
1 CORE DRL OPR LDR	KWB-5729-07
1 DRV/CORE DRL OPR	KWB-5729-06
1 DRV/CORE DRL OPR	KWB-5729-05
1 DRIVER/HVY	KWB-5703-05
1 LABORER HVY	(T) KWB-3502-03

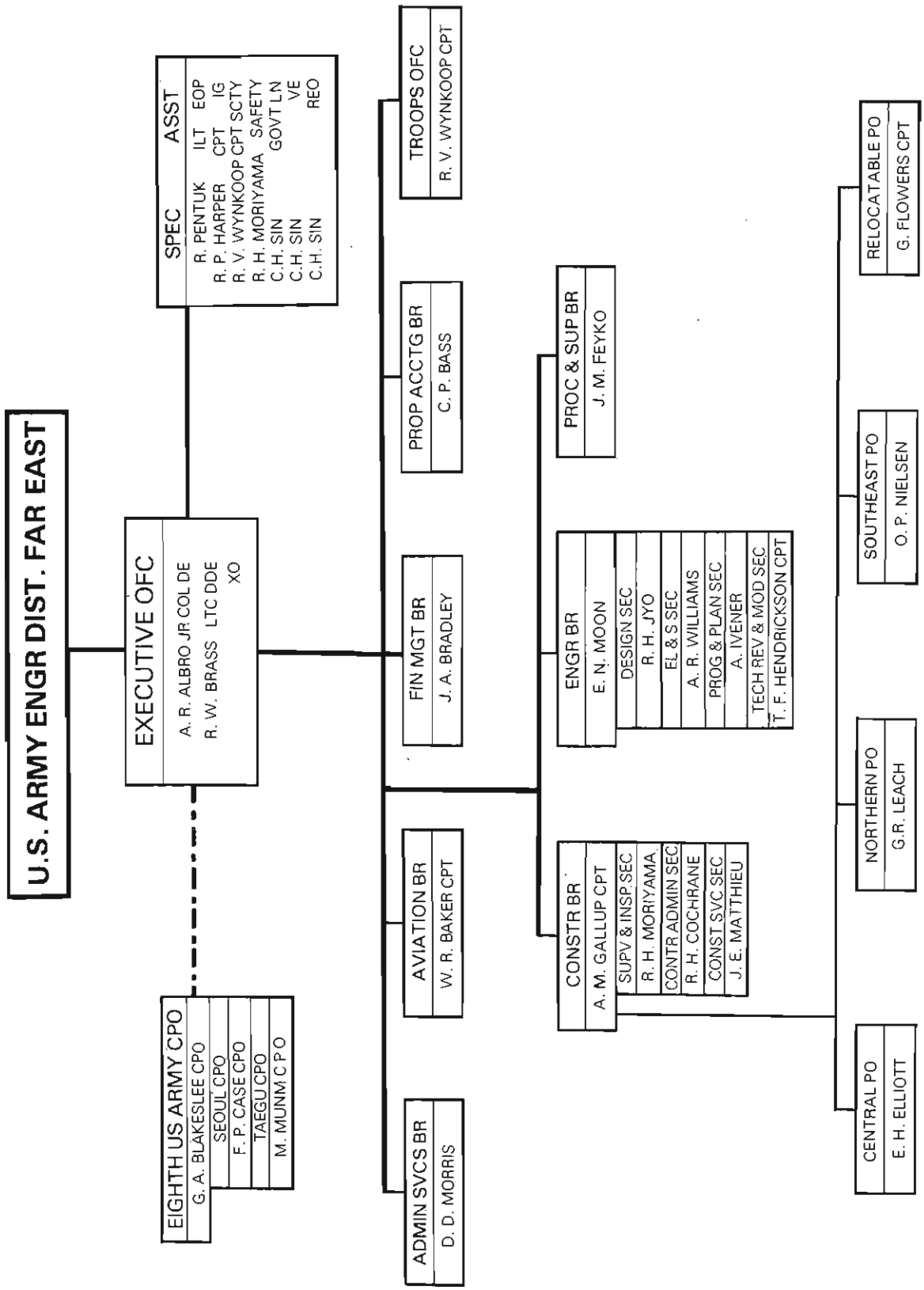
SURVEY SECTION

1 SUPV CIVIL ENGR TECH	KGS-802-11
3 ENGR TECH	KGS-802-09
7 ENGR TECH	(T) KGS-802-07
1 ENGR AIDE	(T) KGS-802-05

HYDROLOGY & CONST UNIT

1 SUPV CIVIL ENGR	GS-810-12
1 CIVIL ENGR TECH	KGS-802-11
1 GEOLOGIST	(T) kGS-1350-09
1 ENGR TECH	GS-802-09
2 CORE DRL OPR LDR FRMN	KWB-5729-09
1 ENGR EO MECH LDR FRMN	KWB-5803-09
1 ENGR EQ OPR	KWB-5716-07
1 CORE DRL OPR LDR	KWB-5729-07
1 WELL PUMP MECH	KWB-5339-07
3 DRIVER/CORE DRL OPR	KWB-5729-06
1 ENGR EQ MECH	(T) KWB-5803-06
1 DRIVER/HVY	(T) KWB-5703-05
1 DRV/CORE DRL OPR	(T) KWB-5729-05
2 CORE DRL OPR HLPR	(T) KWB-5729-04
2 LABORER HVY	(T) KWB-3502-03

TECH REV & MOD BRANCH

1 SUPV GEN ENGR	KGS-801-13
1 PROJ ENGR	0- 3
1 ELEC ENGR	KGS-850-12
1 MECH ENGR	KGS-830-12
1 ARCHITECT	KGS-808-12
1 MECH ENGR	KGS-830-09
1 ENGR TECH	(T) KGS-802-05
1 ENGR DFTSM	(T) KGS-818-05
1 CLK (TYP)	(T) KGS-301-03

APPENDIX B
FED Organization Charts