NMCB FOUR

DEPLOYMENT COMPLETION REPORT OKINAWA 1998

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From: Commanding Officer, U.S. Naval Mobile Construction Battalion FOUR
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Ref: (a) COMSECONDNCB/COMTHIRDNCBINST 3121.1A (draft)
(b) OPORDER 04-98 (Okinawa Deployment 98-04)

Encl: (1) NMCB FOUR Deployment Completion Report

1. Enclosure (1) is forwarded in accordance with reference (a).

2. Per reference (b), NMCB FOUR deployed to Okinawa, Japan from 2 June 1998 to 15 January 1999, with Details deployed to mainland Japan in Atsugi, Iwakuni, Sasebo, and Yokosuka; to Korea in Pohang and Chinhae; and to Hawaii. A Civic Action Team was deployed to the island of Pohnpei in the Federated States of Micronesia, as well. NMCB FOUR also deployed seven Deployments for Training (DFTs) throughout the deployment including Alaskan Roads, Pohang Water Wells, K-16 Expeditionary Air Field (EAF) in Seoul, Korea, Humanitarian Civic Assistance missions to Vladivostok, Russia and Indonesia, and exercise support during RIMPAC in Hawaii and Foal Eagle in Korea.

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CDR, CEC, USN

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CHAPTER ONE

EXECUTIVE SUMMARY

ADMINISTRATIVE:

The Administrative and Special Staff provided exceptional support to the Battalion during the 1998 Far East Deployment. While tracking and taking care of the nearly 580 personnel in the Battalion, the divisions within the department assisted in service record tracking, retention, public affairs, medical and dental care, SCWS attainment, educational services, MWR, Embark, discipline, and drug and alcohol abuse prevention. These shops provided mission oriented support to the mainbody, seven detachments, and seven deployments for training teams scattered across the Pacific Rim. The Battalion's critical project operations were significantly enhanced through the diligent efforts of all within the Administrative Department.

TRAINING/READINESS:

The battalion performed over 3,200 mandays of physical, tactical and general military training. The military training consisted of tactical and defensive measures, classroom and practical application provided by the 3rd Battalion, 3rd Marines. A four-day Field Exercise (Kennel Bear-98) was held at the Central Training Area, Okinawa Japan. During this exercise both USMC advisors and THIRD NCB evaluators expressed commendatory remarks, especially since NMCB FOUR was the first Battalion to successfully execute a tactical retrograde. Four Command Post Exercises were executed during deployment, along with two crew-served weapons live fire shoots, rifle and pistol ranges, and Embark/Mount Out Control Center drills (MOCC). The deployment's military training concluded with a one-week Jungle Warfare Training evolution attended by 90 Battalion personnel and sponsored by the Marines. This focused on improving small unit tactics and integrity and included patrols, land navigation, mines and booby traps, hasty and free repelling, and concluded with a squad integrity endurance course.

During the deployment, the Battalion erected a Medium Girder Bridge (MGB) with the USMC 9TH Engineering Support Battalion (ESB). This helped the Battalion hone specialty skills required to support the MAGTF in the event of contingency operations. Additionally, the Battalion supported SEAL Operations in RIMPAC-98, supported MEF operations in Exercise Ulchi Focus Lens (UFL) in Korea, supported SEAL operations again in Exercise Foal Eagle in Korea, and participated in Exercise Freedom Banner, a Maritime Pre-positioned Force off-load exercise.

OPERATIONS:

The Seabees of NMCB FOUR completed nearly 29,000 mandays of quality construction and repair projects for customers throughout the Pacific during the 1998 Okinawa Deployment. This production was the result of work at the Okinawa Mainbody site, seven Pacific Detail sites, seven DFT sites, and a Civic Action Team. Operational highlights at the Okinawa Mainbody site included construction of an ATM Facility for Seabees at Camp Shields, a road repair project in the Jungle Warfare Training Center, the construction of an outdoor roller hockey rink at Camp Kinser, and construction to expand the footprint of the MWR Warehouse located on Camp Shields. Construction on the Detail sites was superb, as well. The 33,000 square foot MWR Tension Fabric Structure at Detail Iwakuni, Waterwell Facility in Detail Sasebo, Seabee Det Facility at Detail Yokosuka, and MWR Warehouse in Detail Chinhae, are all excellent examples of the high caliber construction executed by the Seabees of FOUR. In addition, construction of two berthing PEBs for Marine Exercises at Det Pohang, PEB and Batting Cage construction at Detail Hawaii, and Radio Station Renovation work on the Civic Action Team all helped to cap an enormously successful deployment throughout the Pacific.

Perhaps what truly set this deployment apart, however, were the many DFTs the Battalion was called upon to deploy throughout the Pacific deployment. Joint operations with other services during road construction in DFT Alaska and temporary parking apron construction in DFT K-16, Seoul Korea, helped demonstrate our quick response and contingency construction skills. Support of and cooperation with other

nations exercised in DFT Indonesia and DFT Russia demonstrated not only Seabee expertise, but their flexibility to adapt quickly to unique operational environments. Finally, exercise support provided to the tri-services in DFT RIMPAC ’98 and DFT Korea as well as Water Well support in Pohang, Korea further demonstrated Seabee capabilities and contingency construction proficiency.

SUPPLY/EQUIPMENT:

The 1998 Okinawa Deployment proved to be very successful for the Supply Department. After turnover, the Supply Department hit the ground running. Supply orchestrated a “Road to Recovery Plan” to tackle one of the most formidable tasks: pushing the inventory validities of the Supply Outlets above the Type Commander’s Force Goal of Ninety-five percent. In fact, during the THIRD Naval Construction Brigade's mid-deployment Logistics Management Assessment, the Battalion displayed an inventory validity of 99.9%. The Automotive Repair Parts personnel also processed two Unit Loads (UL’s) which consisted of adding 2710 new items to the shelf and deleting 350 items.

CHAPTER TWO

ADMINISTRATION

ADVANCEMENTS

	E4	E5	E6	Total
Time in Rate Eligible	111	119	41	271
Completed Prerequisite	102	116	40	258
Participated	102	116	40	258

RETENTION

	Eligible	Not eligible	Re enlisted
1st Term	44	0	16
2nd Term	17	1	5
Career	17	1	10

MEDICAL:

The Battalion Medical Department provided quality and compassionate medical support and consultation to the mainbody as well as details and DFTs throughout the Pacific. Mainbody medical support for more than 300 Seabees was provided by a Medical Officer, one HMC, one HM1, two HM2's, two HM3's and one HN. Two IDC's were deployed to Detail sites in Pohang, Korea and a Civic Action Team site on Pohnpei, Federated States of Micronesia. Ensuring the Battalion's readiness and good health, the Medical Department treated over 1000 personnel in sick call, administered 825 vaccinations, and performed 29 physical exams. The Medical Department's efficiency was improved, as well, through an aggressive immunization tracking program and with the establishment of computer access to Okinawa's Naval Medical Clinic for lab results, prescription writing, and radiology requests. Readiness was improved by 20 percent during the first two months of tracking. Five categories, including tetanus, yellow fever, influenza, JEV, and physicals were improved to over 98 percent complete.

DENTAL:

The Dental Department, consisting of one Dental Officer, a DT2 and a DT3, was responsible for exceeding the dental readiness goal of 95%. During the deployment, the Dental Department exceeded expectations by maintaining an average battalion dental readiness of 99%. This was achieved through careful predeployment planning efforts: Class III patients were completed, Detail personnel were deployed at 100% dental readiness and mainbody personnel were projected out by one month in scheduling their annual dental exam. The Dental Department was also responsible for maintaining an accurate data base recall system known as the Dental Management Information System (DENMIS), ensuring all reporting and departing personnel were accounted for within DENMIS. Patient reports were generated for all mainbody personnel identifying those individuals requiring their annual dental exam. By projecting ahead one month, excellent dental readiness was maintained.

The dental department treated over 300 mainbody personnel providing over 1500 dental procedures throughout the deployment. Approximately two days per week were set aside for cleanings. Our Dental Officer and Dental LPO established a good rapport with USNDC Camp Foster and USNH Camp Lester Dental departments for more complex treatment in the areas of oral surgery, periodontics, endodontics and prosthetics. On Wednesdays, the Dental Officer participated in Oral and Maxillofacial Surgery as part of his continuing education and in preparation for residency training. The dental

technicians stood duty in rotation with the medical personnel as duty corpsmen. During FEX (Operation Kennel Bear), the dental department assisted medical personnel in the operation of the Battalion Aid Station (BAS), treating actual emergencies ranging from minor cuts to heat and cold injuries. The dental personnel also assisted with simulated battle wounds, ranging from minor burns to "expectant" casualties. The Dental Officer provided triage support.

A Memorandum of Understanding (MOU) was established for receipt of supplies and equipment maintenance through the Third Dental Battalion. This ensured an availability of supplies and equipment. As of 1 October 1998, requests for dental funds are submitted to the Third Naval Construction Brigade for approval. The Third Dental Battalion has agreed to implement Camp Shields dental equipment into their preventive maintenance (PM) register system. This MOU should be updated by each battalion, and is coordinated through 3rd NCB. Previously, the PM's had been conducted by the NMCB dental technicians, who are not trained to perform this task based on the level of training received through basic DT "A" School. Finally, the dental technicians completed an overall dental equipment inventory ensuring 100% accountability.

CHAPTER THREE

TRAINING/ARMORY/COMM

SCW QUALIFICATION REPORT

	Assigned	Previously Qualified	Qualified on Deployment	Total Qualified @ End of Deployment
E1 – E6	529	35	19	44
E7 – E9	37	25	3	26
O1 – O5	23	8	5	13
				83

Note: Previously Qualified and Qualified on Deployment do not sum to Total Qualified due to transfer of qualified personnel during deployment.

M-16 QUALIFICATION

	Assigned	Previously Qualified	Qualified on Deployment	Total Qualified @ End of Deployment
E1 – E6	529	368	161	161
E7 – E9	37	32	5	5
O1 – O5	23	21	2	2
				168

Note: Previously Qualified and Qualified on Deployment do not sum to Total Qualified since qualifications earned prior to deployment expire upon redeployment to homeport.

9MM QUALIFICATION

	Assigned	Previously Qualified	Qualified on Deployment	Total Qualified @ End of Deployment
E1 – E6	529	135	91	91
E7 – E9	37	27	12	12
O1 – O5	23	13	9	9
				112

Note: Previously Qualified and Qualified on Deployment do not sum to Total Qualified since qualifications earned prior to deployment expire upon redeployment to homeport.

CHAPTER FOUR

OPERATIONS

1. **SAFETY**

SAFETY SUMMARY

	Jun 98	Jul 98	Aug 98	Sep 98	Oct 98	Nov 98	Dec 98	Jan 99	Total
Fatalities	0	0	0	0	0	0	0	0	0
# Lost Work Days	2	2	1	12	11	0	30	0	58
# Lost Day Cases	2	1	1	8	4	0	1	0	17
# Light Duty Days	55	157	189	114	168	51	94	42	870
# Light Duty Cases	5	17	17	10	13	6	16	1	85
# First Aid Mishaps	10	23	13	15	17	18	16	2	114
#Govt Vehicle Mishaps	2	7	4	6	1	1	1	2	24
Total Number Mishaps	19	48	35	39	35	25	34	5	240
Govt Vehicle Repair Costs	50	3416	1300	850	100	150	0	250	6116
Govt Vehicle Miles Driven	34.4k	52.4k	69.8k	80.5k	96k	69.3k	79.3k	35	516.7k

ON-DUTY MISHAPS

	Jun 98	Jul 98	Aug 98	Sep 98	Oct 98	Nov 98	Dec 98	Jan 99	Total
First Aid Mishaps	6	7	5	13	15	12	12	1	71
Cases Light Duty	3	5	3	5	6	4	7	0	33
Light Duty Days	18	31	47	38	46	34	32	0	246
Cases Lost Work Days	2	1	1	8	0	0	0	0	12
Lost Work Days	2	2	1	12	0	0	0	0	17
Fatalities	0	0	0	0	0	0	0	0	0

OFF-DUTY MISHAPS

	Jun 98	Jul 98	Aug 98	Sep 98	Oct 98	Nov 98	Dec 98	Jan 99	Total
First Aid Mishaps	4	16	8	2	2	6	4	1	43
Cases Light Duty	2	12	14	5	7	2	9	1	52
Light Duty Days	37	126	142	76	122	17	62	42	624
Cases Lost Work Days	0	0	0	0	4	0	1	0	5
Lost Work Days	0	0	0	0	11	0	30	0	41
Fatalities	0	0	0	0	0	0	0	0	0

2. **PROJECT SUMMARIES**

The following pages contain project summaries for the Mainbody, Detail, as well as DFT sites.

MAINBODY
OKINAWA, JAPAN

Left: Seabees complete run to sewer.

Below: Project nearing completion.

REPAIR/UPGRADE SEWER LINES
JK7-877

Intended to replace the existing sewer lines which were severely degraded, the project was undertaken in July by NMCB FOUR at Naval Communications Detachment, Awase. An unusually high water table created the biggest challenge for the crew. This project was turned over to NMCB FIVE at 90% WIP.

Project Data

Personnel:	4 – 6 personnel
Duration:	June 1998 – January 1999
Mandays:	594
Material Cost:	$20,359
Cost Savings:	$21,641
Specifications:	Replace approximately 1,950 linear feet of 3” and 8” concrete sewer line with approximately 340 linear feet of 3” PVC and 1,600 linear feet of 8” PVC sewer line. Install 2 manholes, 2 lift stations and connect to local municipal line. Remove and dispose of existing septic tank. Restore all areas to original condition including planting grass and replacing asphalt.

Left: Seabees expose existing galvanized water line in preparation for its removal.

Below: New PVC water line installed in the trench.

REPAIR/UPGRADE WATER LINE
JK7-879

The Battalion worked on the project at Naval Communications Detachment, Awase, focused on replacing the existing water line. The crew assigned to this project were young and inexperienced. The crew leader was a UTCN. He did an excellent job leading the crew to complete the tasking. One particular challenge encountered on the project included a high water table.

Project Data

Personnel:	8 – 12 personnel
Duration:	June 1998 – December 1999
Man days:	479
Material Cost:	$5,336
Cost Savings:	$7,164
Specifications:	Replace 2,500 linear feet of existing galvanized water line with an equal amount of PVC water line and associated valve boxes and thrust blocks. Restore all locations to the original condition including grass and asphalt.

Left: Steelworker welds diagonal bracing inside a Ship Separator at White Beach.

Below: A separator awaits sandblasting and painting following welding.

CONSTRUCT TWO SHIP SEPARATORS
JK7-880

The project to construct two Ship Separators, located at White Beach Naval Activity was turned over from NMCB SEVENTY-FOUR at 54% complete. Assembling the watertight structures provided a large amount of welding experience for steelworkers. The prime challenges were the extraordinary summer heat while welding, and the difficulty of moving the large steel pontoons to sandblast, prime and paint.

Project Data

Personnel:	2 - 4 personnel
Duration:	January 1998 – December 1998
Mandays:	587
Material Cost:	$87,649
Cost Savings:	$190,000
Specifications:	Construct two 35 foot by 14 foot by 5 foot pontoons for use as ship separators. Work includes welding of steel frame, diagonal bracing, and deck plates, application of two coats of anti-rust paint and installation of rubber bumpers.

.

Left: Concrete is placed for the slab of the 782 Gear Washrack located at Camp Hansen.

Below: The completed washrack.

CONSTRUCT 782 GEAR WASHRACK
JK7-882

A 782 Gear Washrack was constructed at Camp Hansen for Marine Corps personnel to clean their 782 gear when returning from the field. This standard design has been used elsewhere on the island and can serve ten personnel at a time. Construction provided a great training opportunity to fabricate rebar, place concrete and CMU block, and make utility connections.

Project Data

Personnel:	5 personnel
Duration:	June 1998 – September 1998
Mandays:	203
Material Cost:	$18,000
Cost Savings:	$66,000
Specifications:	Scope of work includes construction of a reinforced concrete pad, construction of a CMU block wall with metal grating attached, and fabrication of a silt interceptor. Utility work included the installation of 10 hose bibs and connection of water supply and drainage.

Left: Crew places concrete for the roof.

Below: The nearly completed Picnic Pavilion at Camp Hansen.

CONSTRUCT PICNIC PAVILION
JK7-884

NMCB FOUR constructed a picnic pavilion located near the Barracks and Galley at Camp Hansen. The facility will provide an area for Marines to congregate after hours out of the weather. This project provided excellent training in forming, placing and finishing concrete. The intricate design for steel and concrete for the hip roof required thorough planning prior to execution.

Project Data

Personnel:	4-7 personnel
Duration:	June 1998 – December 1998
Mandays:	450
Material Cost:	$21,000
Cost Savings:	$146,000
Specifications:	Construct a 750 square foot open sided concrete picnic pavilion. Scope of work included construction of footers, grade beams and a reinforced concrete slab that was tied into the structural columns and roof. A drainage area was constructed surrounding the slab. The site was cleared to improve water run-off.

Left: The crew places concrete for the floor slab for the MWR Warehouse at Camp Shields.

Below: Installation of formwork for the concrete roof is in progress.

MWR WAREHOUSE
JK7-888

The MWR Warehouse Project was undertaken to provide a new facility on Camp Shields for Commander Fleet Activities, Okinawa. It was turned over from NMCB SEVENTY-FOUR at 27%. NMCB FOUR carried the project to 71% before turning it over to NMCB FIVE for completion. A technically challenging project, the building will extend the storage capabilities of an existing warehouse. Difficult weather and soil conditions challenged the crew during the backfill and compaction stages. Also challenging was the complex installation of steel and formwork for the concrete roof.

Project Data

Personnel:	12-25 personnel
Duration:	January 1998 – July 1999
Mandays:	1689
Material Cost:	$200,000
Cost Savings:	$549,000
Specifications:	Construct a 40 foot by 100 foot reinforced concrete structure. Activities include placement of 200 cubic yards of concrete for the slab, columns and roof; 2500 CMU blocks for the walls; roll-up doors, flush doors, windows, interior and exterior painting, rough and finish electrical, and a fire sprinkler and alarm system.

Left: Downed fence before repairs

Below: Completed fence with new concrete footers.

AWASE FENCE REPAIRS
JK8-803

The project consisted of repairing 300 feet of typhoon damaged fence at Naval Communications Detachment, Awase. Reusing existing materials, the fence was repaired to maintain security on the installation's perimeter. Originally planned as a CO Discretionary project, the work was converted to a tasked project at 45-day review.

Project Data

Personnel:	4 personnel
Duration:	July 1998 - September 1998.
Mandays:	154
Materials Cost:	$2,797
Cost Savings:	$50,000
Specifications:	Remove typhoon damaged fence and poles. Dig 25 holes 33 inches deep x 30 inches wide, build forms for each pole, set poles in concrete and reset fence. Backfill with existing soil, finish grade and compact.

Left: A builder uses a whirly-bird to finish a concrete slab.

Below: The completed Roller Hockey Rink at Camp Kinser.

CONSTRUCT ROLLER RINK
JK8-808

This project, constructed at Camp Kinser, helped increase the Camp's MWR facilities. Even before the project was completed, local roller hockey teams were marking the progress of construction. With the nearest rink nearly an hour away at Kadena Air Base, it was extremely difficult for local youth to practice and compete in local leagues. Despite unseasonable wet weather, the crew gained valuable training in the construction of large concrete pads.

Project Data

Personnel:	6-11 personnel
Duration:	June 1998 – November 1998
Mandays:	559
Material Cost:	$94,000
Cost Savings:	$182,000
Specifications:	Construct a 75 foot by 180 foot roller hockey rink. Scope of work included clearing and grading the site, installing a wire mesh reinforced concrete slab with curbs, and constructing a protective barrier consisting of a galvanized steel pipe railing, and composite plastic arena boards. Finish work included the installation of a chain link fence and assembly of benches for the players.

Left: D-7 Dozer spreads crushed coral base for road repair.

Below: Vibratory roller compacts base for VTOL pad repair.

JWTC REPAIRS
JK8-816

The project consisted of repairs to three different areas of the Jungle Warfare Training Center, Camp Gonsalves, Okinawa. The roadwork was originally planned as a CO Discretionary project. It was changed to a tasked project at 45-day review along with the addition of repairs to a wire rope bridge and repair of an Expeditionary Air Field.

The roadwork included repairs to 3.2 kilometers of unimproved roads on JWTC. The road was scarified and a 6" compacted lift was added to the lower level areas. As much as a 12" compacted lift was added to the extremely hilly areas due to the large clay content in the soil. Drainage ditches were widened and made deeper to greatly improve flow during the heavy storm season. Working on extremely steep slopes, the project presented unique safety challenges.

Removal and Replacement of the certified VTOL Pad consisted of removal of 9,216 SF of AM-2 matting and repairing the base material by adding a 4" compacted lift. Meticulous grading standards and blue top stakes were used to achieve a high quality product. Marines assigned to Marine Wing Support Squadron 172 were assigned the task of removing, replacing and certifying the finished product.

The bridge replacement included removal of existing wire ropes spanning a 75-foot gorge in JWTC. New ropes were installed for two bridges and included replacement of guide wires and connections.

Project Data

Personnel:	10 personnel
Duration:	June 1998 – October 1998
Mandays:	240
Materials Cost:	$38,954
Cost Savings:	$78,240
Specifications:	Scarify and regrade all roads to improve drainage. Place a 6-12" compacted lift of crushed coral, grade to create a crown and compact. Remove existing 86' x 86' VTOL pad constructed of AM-2 matting. Grade and compact sub-base, provide 4" crushed coral lift, finish grade and compact. Reinstall AM-2 matting. Repair two 75' wire rope bridges to include replacement of all 3 main lines, guide wires, and connections.

Left: Seabees lay out CMU blocks for the walls of the ATM enclosure at Camp Shields.

Below: The completed ATM building.

CONSTRUCT ATMS CAMP SHIELDS AND CAMP HANSEN JK8-817/JK8-818

The construction of an ATM Enclosures greatly enhance the Quality of Life for Seabees stationed at Camp Shields and Marines stationed at Camp Hansen. This project also provided indispensable training in basic builder skills including concrete footers, slabs, columns and roof, CMU block walls, and utility connections. The crew was challenged by the need to design, acquire materials, and complete the project in less than four months.

Project Data

Personnel:	5 -7 personnel
Duration:	September 1998 – December 1998
Mandays:	500
Material Cost:	$40,000
Cost Savings:	$162,500
Specifications:	Construct a 125 square foot facility to house a Navy Federal Credit Union automatic teller machine. Project includes a reinforced concrete foundation, slab, columns and roof, CMU block walls, rough and finish electrical, installation of telephone service and an A/C unit, floor tile, and installation of an exterior booth. Exterior painting, alarm installation, and ATM installation were performed by contractor.

CO DISCRETIONARY
MAINBODY

PROJECT LISTING

REPLACE CANINE TRAINING OBSTACLES	70
CESE SUPPORT FOR VARIOUS PROJECTS	81
JUNGLE WARFARE OBSTACLE REPAIR	9
TYPHOON RECOVERY SUPPORT	7
GRAVEL PARKING LOT	44
ROLLER RINK BENCHES	57
FENCE DEMOLITION	2
HENOKO PAD	67
SEABEE IN THE COMMUNITY	170
TOTAL MANDAYS	**507**

Top left: Installing roller rink penalty box.

Above: Alfa Company completes a crane lift for Air Force Communications Squadron on Kadena AFB.

Left: Constructing basketball court.

CAMP MAINTENANCE
MAINBODY

CAMP MAINTENANCE TASKING

ESA	803
SJO	616
MCD	896

MCD PROJECTS

PROJECT LISTING	**MD**
DISPATCH REPAIR	9
CTR AIRLINE	8
STEAM CHST	5
CONST MORTAR RACK	8
REGROUT SHOWER	4
INSTALL HAZMAT DOORS	4
INSTALL HASP	11
UPGRADE PA SYSTEM	0
GALLEY SHELVES	19
CHECK LOCKSETS	20
REPLACE AC	2
ROAD MARKERS	24
INSTALL EXIT LIGHTS	2
INSTALL EXIT LIGHTS	3
REPLACE FLOOR TILE	8
REPLACE AWNINGS	0
PAINT DOORS	11
FLOOR MATS	1
REPLACE LIGHTS	18
RELOCATE CAMP FURNITURE	68
PAINT 3RD DECK	415
PERIMETER FENCE	11
INSTALL CAT 5 CABLE	4
TRAFFIC SIGNS	52
BUILD SHELVES	7
RELOCATE COFFEE HOUSE	32
PLACE CONCRETE SIDEWALK	47
MISCELLANEOUS MCD PROJECTS	103
TOTAL MCD PROJECT MANDAYS EXPENDED	**896**

Above: Fire Marshal conducts monthly fire extinguisher inspections.

Below: Drawing materials for a Camp Maintenance MCD project.

LABOR DISTRIBUTION SUMMARY
MAINBODY OKINAWA

Month	**Jun 98**	**Jul 98**	**Aug 98**	**Sep 98**	**Oct 98**	**Nov 98**	**Dec 98**	**Total**	**%Total**
Direct Labor MDs	511	1521	1572	1371	1249	2166	2047	10437	66%
Indirect Labor MDs	153	347	331	287	264	489	323	2194	14%
Readiness/Training	28	209	244	980	789	298	673	3221	20%
Total	692	2077	2147	2638	2302	2953	3043	15852	100%
# Personnel	300	333	334	343	354	352	354		
# Direct Labor	98	102	104	112	112	112	112		
# Workdays	7	22	22	27	21	26	24		
% Direct Labor[1]	78%	83%	85%	89%	89%	83%	89%		
MD Capability[2]	772	2525	2574	3402	2646	3276	3024		
Availability Factor[3]	70%	69%	71%	69%	77%	75%	90%		

NOTES:
1. %Direct Labor = Direct Labor/Total
2. MD Capability = (# Direct Labor) x (# Workdays) x (1.125)
3. Availability Factor = (Direct Labor MDs) / (MD Capability)

DETAIL
ATSUGI, JAPAN

Left: Preparing to hoist and hang cable braces to support overhead grounding wire.

Below: Completed project

HAZWASTE STORAGE FACILITY
AG6-836

The Project provided a storage facility for the Naval Air Facility's hazardous waste. Remaining materials were procured locally and through local excess. Scope was provided by ROICC for completion. Most materials to complete the punchlist were on hand but obtaining the remaining materials caused a delay in completing the punchlist items.

Project Data

Personnel: 6

Duration: March 1998- November 1998

Mandays: 312

Material Cost: $30,500

Cost Savings: $6,539

Specifications: This project consisted of completing the facility including replacing short bolts on structural steel with correct size bolts, grouting around the base of all the columns to seal the gap between the column and concrete footer, relocating the emergency shower/eye wash station, placing the concrete ramp from the road to the building, installing the grounding grid and lightening protection system and installing missing sag rods.

Left: Erection of Battery Shop roof in progress

Below: Completed project

BATTERY SHOP
AG6-837

This project was turned over from NMCB SEVENTY-FOUR at 94%. The Project provided a storage area for the Naval Air Facility's used batteries. Remaining materials were procured locally and through local excess. Scope was provided by ROICC for completion.

Project Data

Personnel:	3
Duration:	November 1998
Mandays:	770
Material Cost:	$134,000
Cost Savings:	$125,450
Specifications:	This project included completing the facility including building a stand for the double sink, installing all finish plumbing for the sink, hanging the double gates on the holding tank enclosure area with all hardware, installing missing fence hardware, and building a small roof over the holding tank containment pit.

Left: Setting formwork for fuel berm

Below: Completed project.

FUEL TANK BERM BLDG. 67
AG7-845

NMCB FOUR started and completed this project. The project corrected a previous environmental safety discrepancy caused by the lack of a spill containment area for a fuel tank on NAF. All materials were procured locally or through local excess. Due to unmarked utilities, the oil/water separator had to be turned 90 degrees and drain lines rerouted. Additionally, access to the building was restricted by the Air Force security.

Project Data

Personnel:	3
Duration:	October 1998 - December 1998
Mandays:	70
Material Cost:	$8,000
Cost Savings:	$22,750
Specifications:	This project consists of building a concrete containment pit and oil/water separator, running a new fuel feed line from the tank to the inside generator, and installing a 4’ H x 12’ L cast-in-place concrete retaining wall.

Left: The beginning of siding installation.

Below: Completed project.

WAREHOUSE ADDITION BLDG. 939
AG7-846

NMCB FOUR was the second Battalion to work on this project. The project provided additional furniture storage area for NAF's Family Housing Division. Materials were procured locally or through local excess. This project included the welding of additions onto the purlins in order to make them fit to the existing builiding.

Project Data

Personnel:	7
Duration:	March 1998- October 1998
Mandays:	832
Material Cost:	$60,200
Cost Savings:	$270,400
Specifications:	This project consists of erecting structural steel on both sides of the existing PEB, installing corrugated steel sheeting for the roof and the ends of the additions, a personnel door on each addition, installing the sag rods, and building a concrete retaining wall on one side.

Left: Forming grade beams for facility

Below: The completed structure

CONSTRUCT SEABEE DET FACILITY
AG7-847

This project was started by NMCB FOUR and turned over to NMCB FIVE for completion at 85% WIP. The Project is intended to provided spaces for the Seabee Detail. Materials were procured locally, through local excess and CONUS. The anchor bolt pattern the design engineer laid out on the blue prints did not coincide with the manufacturer's design which required an alternate method of anchoring the building. Typhoons caused major delays on this project.

Project Data

Personnel:	9
Duration:	June 1998 – February 1999
Mandays:	823
Material Cost:	$118,000
Cost Savings:	$267,475
Specifications:	This project consists of placing a 40'x100' concrete pad for the PEB and a 36'x74' concrete pad for the MLO Yard with a chain link fence, erecting a 14'x40'x100' PEB, frame half of interior for office spaces, lounge and heads, sheetrock and finish the walls, install underslab and finish utilities (water and electrical).

OIC DISCRETIONARY
CAMP MAINTENANCE
DETAIL ATSUGI

PROJECT LISTING

ADMIN HANDRAILS	9
HSL-51 SIDEWALK	31
SECURITY DOG TRAINING	1
CAMP FUJI WIND SCREENS	24
BEQ 1290 FENCE POSTS	35
CAMP MAINTENANCE	50
TOTAL MANDAYS	**150**

Above: Completed gutter repair.

Above right: Stairs and safety rail installed by the Det.

Lower right: Sidewalk installation for HSL51

LABOR DISTRIBUTION SUMMARY
DETAIL ATSUGI

Month	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98	Total	% Total
Direct labor MDs	113	173	183	249	306	279	293	1596	70%
Indirect Labor MDs	45	103	93	47	47	53	60	448	19%
Readiness/Training	18	44	49	42	25	39	26	243	11%
Total	176	320	325	338	378	371	379	2287	100%
# **Personnel**	17	17	17	17	18	18	18		
# Direct Labor	13	13	13	13	14	14	14		
# Workdays	11	25	23	24	23	21	24		
% Direct Labor[1]	74%	68%	73%	86%	88%	86%	84%		
MD Capability[2]	161	366	336	351	362	331	378		
Availability Factor[3]	81%	59%	69%	83%	91%	96%	84%		

Direct Labor Mandays represent mandays expended on all DL tasking except Training. Total Direct Labor mandays expended is sum of Direct Labor mandays and Readiness/Training mandays.

NOTES:
1. %Direct Labor = (Total Direct Labor MDs)/(Total MDs)
2. MD Capability = (# Direct Labor) X (# Workdays) X (1.125)
3. Availability Factor = (Total Direct Labor MDs) / (MD Capability)

DETAIL
CHINHAE, KOREA

Left: Seabees finish concrete for the MWR Warehouse at Commander Fleet Activities Chinhae, Korea.

Below: Preparing to sheet the outside of the building.

MWR WAREHOUSE
KO7-822

This project was started by NMCB FOUR's Det Chinhae and turned over to NMCB FIVE at 59% WIP. The Project provides a storage facility for the Activity's MWR Department. Activities during construction included forming concrete foundations and erecting a Pre-Engineered Building. Challenges for the crew included weather (two typhoons), procuring materials from CONUS, and acquiring additional equipment (man lift) for sheeting the building.

Project Data

Personnel:	5 – 10 personnel from NMCB FOUR Detail Chinhae.
Duration:	September 1998 – December 1998
Manday:	355
Material Cost:	$83,000
Cost Savings:	$115,375
Specification:	Construct a 3000 square foot facility for use as a MWR Warehouse Facility. Project includes concrete slab and underslab utilities, erection of a Pre-Engineered building, rough and finish electrical and plumbing.

Left: Seabees place CMU block for the Waste Reclamation Center in Chinhae, Korea.

Below: Nearly completed building.

WASTE RECLAMATION CENTER
KO6-814

Turned over from NMCB SEVENTY-FOUR at 48% WIP, NMCB FOUR's Detail took the project to completion for Commander Fleet Activities Chinhae, Korea. The facility significantly improved the Activity's environmental protection capabilities. The building required skilled finish work such as CMU block, concrete bond beams, and welding. Challenges for the crew included procuring materials from CONUS, locally procuring Hazmat and Design Change Directive for the steel truss support system.

Project Data

Personnel:	5 – 7 personnel
Duration:	March 1998 – December 1998
Manday:	890
Material Cost:	$75,186
Cost Savings:	$290,000
Specification:	Construct a 1,112 square foot facility for use as a Waste Reclamation Center. Project includes concrete slab and underslab utilities, placement of CMU block walls, fabrication and placement of metal frame roof trusses, rough and finish electrical and plumbing.

OIC DISCRETIONARY
CAMP MAINTENANCE
DETAIL CHINHAE

PROJECT LISTING

CARPET POST OFFICE	14
MLO LAYDOWN AREA	14
MWR YOUTH CENTER	48
MWR HAUNTED HOUSE	16
CAMP MAINTENANCE	24
TOTAL MANDAYS	**116**

The kids of Commander Fleet Activities enjoy the grand opening of the MWR Youth Center

LABOR DISTRIBUTION SUMMARY
DETAIL CHINHAE

Month	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98	Total	% Total
Direct labor MDs	138	198	257	172	220	207	116	1308	77%
Indirect Labor MDs	9	38	22	42	25	42	46	224	13%
Readiness/Training	10	29	28	23	12	38	31	171	10%
Total	157	265	307	237	257	287	193	1703	100%
# Personnel	16	16	15	16	16	16	17		
# Direct Labor	11	11	11	11	11	11	12		
# Workdays	11	25	23	24	23	21	24		
% Direct Labor[1]	98%	86%	93%	82%	90%	85%	76%		
MD Capability[2]	136	309	285	297	285	260	324		
Availability Factor[3]	109%	73%	100%	66%	81%	94%	45%		

Direct Labor Mandays represent mandays expended on all DL tasking except Training. Total Direct Labor mandays expended is sum of Direct Labor mandays and Readiness/Training mandays.

NOTES:
1. %Direct Labor = (Total Direct Labor MDs)/(Total MDs)
2. MD Capability = (# Direct Labor) X (# Workdays) X (1.125)
3. Availability Factor = (Total Direct Labor MDs) / (MD Capability)

DETAIL
HAWAII

Left: Interior of completed room

Below: Exterior of completed facility

CREDO PHASE II
HW6-811

CREDO (Chaplain Religious Enrichment Development Operation) provides military members and their families an opportunity to step out of the fast pace of life for a short time and experience personal and spiritual renewal and growth. Counseling and marriage enrichment programs are also included in the operation. This project provides more berthing rooms for CREDO at the Marine Corps Base, Kaneohe.

Project Data

Personnel:	10
Duration:	June 1998 – October 1998
Mandays:	583
Material Cost:	$95,000
Cost Savings:	$189,500
Specifications:	Completely remodel the interior and exterior of two 20’ x 48’ pre-engineered buildings. Project included the complete replacement of the main electrical feed for the two buildings. Each building contains four new berthing rooms consisting of gypsum walls with textured finish and vinyl-coated wainscot, individual air-conditioning, suspended ceiling, and carpeting. Project was located 40 minutes one-way from Detail Site at Marine Corp Base, Kaneohe. Crews berthed in local Marine barracks.

Left: Forming for the trench sump.

Right: The completed wash pad and equipment shed.

A-19 WASH RACK
HW6-822

This washrack is a special design used to clean pesticides off equipment used on the golf course in Pearl Harbor. As the equipment returns from applying the pesticide, it comes through the wash rack. The equipment is washed down with water, which is captured and then recycled. No water is lost and there is no discharge to a sanitary sewer system.

Project Data

Personnel:	8
Duration:	June 1998 – October 1998
Mandays:	434
Material Cost:	$60,000
Cost Savings:	$141,000
Specifications:	Construct a 30’ X 44’ concrete pad including sumps, grates, steel columns with a corrugated steel roof for a closed-loop, zero-discharge, wastewater-recycling system. Install a new electrical disconnect, panel box and water service. Construct a 45 foot service road from the wash rack to the hazardous material storage facility. Contractor labor was used to install the plumbing for the zero-discharge, wastewater-recycling system.

Left: Site after existing slab was removed and fill and compaction was completed.

Right: Exterior view of the completed facility.

CONSTRUCT PEB
HW6-881

This Project provided another building to park electric golf carts at the NAS Barbers Point Golf Course while the carts' batteries are being recharged.

Project Data

Personnel:	7
Duration:	June 1998 – September 1998
Mandays:	402
Material Cost:	$49,000
Cost Savings:	$130,000
Specifications:	Demolish existing concrete slab with an asphalt pad under it, place new subgrade and concrete slab. Construct a new 25' by 75' PEB with two roll-up doors and one personnel door. Install all new electrical service and charging stations.

Left: Floor area of the old restroom on the second deck, which had to be removed.

Below: The new floor and newly framed walls for the same area.

RENOVATE BOQ
HW7-831

Located on the submarine base at Pearl Harbor, the Lockwood Hall Bachelor Officers Quarters is an historic facility originally constructed in the 1930's. The top two floors of the north wing of the BOQ consisted of rooms that did not have private bathrooms or adequate floor space. The rooms need to be upgraded and refurbished to meet current standards for senior officer quarters. This project was turned over to NMCB FIVE at 23% WIP.

Project Data

Personnel:	11
Duration:	June 1998 – August 1999
Mandays:	446
Material Cost:	$300,000 (Estimated for total project)
Cost Savings:	$144,950
Specifications:	Demolition of 18 existing rooms and two bathrooms to transform them into 10 modernized and expanded rooms with individual bathrooms and kitchenettes. The work will include metal stud framing, gypsum wallboard, ceramic tile, finish carpentry, and rough and finish utilities. The Public Works Center and contractors will work side-by-side with Seabees installing carpeting, air conditioning, performing lead and asbestos removal, core-drilling through structural beams for utility runs, etc.

Left: Seabees float newly placed concrete at batting cage

Below: The completed facility

BATTING CAGES
HW6-875

NAS Barbers Point requested a new 6-position outdoor batting cage. The batting cage will be coin-operated and located near an existing racquetball court and snack bar.

Project Data

Personnel:	9
Duration:	June 1998 – December 1998
Mandays:	508
Material Cost:	$97,000
Cost Savings:	$165,000
Specifications:	Construct a concrete foundation (approximately a 100' diameter circle) including various slopes, curbs, and sumps. Install six batting machines, ball elevator, and equipment shelter. An additional pad for the batting positions is also included, as well as all the poles and nets for the cage, batting machines, and all necessary control systems.

Left: The interior of one of the finished office areas.

Below: Exterior of the facility nearing completion.

RANGE USER FACILITY
HW7-842

This project is located at the Pacific Missile Range Facility on the island of Kauai and involves the construction of a 40’ X 75’ pre-engineered building to be used as offices for various range users. It has three large offices, a male and female restroom and a small kitchen area.

Project Data

Personnel:	10
Duration:	September 1998 – December 1998
Mandays:	700
Material Cost:	$100,000
Cost Savings:	$200,000
Specifications:	Concrete foundation, erection of 40’ x 75’ PEB, and all associated interior work. The interior will consist of gypsum board walls, dropped ceilings, vinyl floor tile and associated plumbing and electrical.

Left: Columns for the picnic pavilion.

Below: The completed gas bottle storage facilities.

PICNIC PAVILION
HW7-847

This project is located at the NISMF (Naval Inactive Ship Maintenance Facility) in Pearl Harbor. It will provide a nice place near the harbor for personnel to eat lunch or have picnics and parties. In addition to the picnic pavilion, the project includes building two small storage sheds for oxygen and acetylene bottles.

Project Data

Personnel:	6
Duration:	October 1998 – December 1998
Mandays:	287
Material Cost:	$45,000
Cost Savings:	$93,000
Specifications:	Demolish an existing 14’ X 48’ metal structure and replace it with a 24’ X 50’ concrete block column and metal roof structure to be used as a picnic pavilion. It also involves constructing two new concrete block and chain-link fence buildings with metal roofs for gas bottle storage areas.

Left: Preparation of the forms for the building slab in progress.

Below: The completed facility.

QUICK FIELD HEAD
HW7-844

The Quick Field is an athletic complex located in the industrial section of Pearl Harbor. The restroom facilities at this location needed to be upgraded to accommodate the current usage of the facilities. The interior of the facility was finished with a new STO-LITE finish that is similar to stucco but is applied with less labor, is easier to maintain, and does not have the efflorescence problems of stucco.

Project Data

Personnel:	9
Duration:	September 1998 – December 1998
Mandays:	322
Material Cost:	$39,000
Cost Savings:	$105,000
Specifications:	This project consists of demolishing an existing concrete restroom facility and replacing it with a 21’4” X 20’8” concrete block restroom facility featuring handicap accessibility and water saving fixtures. Also included are state-of-the-art motion detectors for controlling the lighting and for hands-free actuation of the urinals, commodes, and sinks.

Left: Interior of facility being demolished.

Below: New underslab utilities being installed.

RENOVATE BLDG 42
HW8-883

This project is intended to correct the lack of a gym facility or locker room on Naval Security Group Activity, Kunia. This project will convert an existing restroom facility into a men and women's locker room, complete with an attached laundry room. It is located near the sports fields and next to the site of a new fitness center. This project was turned over to NMCB FIVE at 44% WIP.

Project Data

Personnel:	10
Duration:	September 1998 – April 1999
Mandays:	287
Material Cost:	$81,000
Cost Savings:	$162,500
Specifications:	Demolish interior of an existing CMU building including interior walls and floor. Install new floor, restroom fixtures, lights, and showers. Add a small room for washers and dryers. Add new entrances to the locker rooms.

Left: Preparation of the lanai structure.

Below: The completed facility.

CINC LANAI
HW8-896

At the CINCPACFLT boathouse area there was no place to barbecue except at an old masonry pit that was not protected from inclement weather. As part of an overall plan to improve the aesthetics and functionality of this highly visible public relations area, a new cooking lanai and storage area were constructed.

Project Data

Personnel:	5
Duration:	August 1998 - September 1998
Mandays:	128
Material Cost:	$18,000
Cost Savings:	$41,000
Specifications:	Level existing site, bring in fill and compact and place sod on all exposed earth. Construct a split-face CMU block and cast-in-place table. Install an 11’ x 13’ lanai and portable grill. Relocate water spigot and install one exterior GFCI outlet and two exterior lights. Demolish existing storage addition and construct a new 6’ x 10’ split-face addition and replace the roof. Add two interior lights and an outlet to the existing storage shed.

OIC DISCRETIONARY
CAMP MAINTENANCE
DETAIL HAWAII

PROJECT LISTING

SAND VOLLEYBALL COURT	2
INSTALL ICE MACHINE/FURNITURE	26
BUILD DUMPSTER ENCLOSURE	52
CONSTRUCT GALLEY LANAI	189
PAINT MOKAPU SCHOOL PLAYGROUND	18
INSTALL GOLF COURSE SAFETY NETS	12
RELOCATE AND REPAIR PLAYGROUND	47
INSTALL RAILINGS FOR STAIRS AT FAMILY ADVOCACY	4
CONSTRUCT SIDEWALK AT NISMF	9
CAMP MAINTENANCE	50
TOTAL MANDAYS	**409**

New playground installed in Family Housing Area.

Dumpster Enclosure with moss rock and façade and redwood walls.

New lanai at the SUBASE galley.

LABOR DISTRIBUTION SUMMARY
DETAIL HAWAII

Month	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98	Total	% Total
Direct labor MDs	303	612	658	864	614	884	915	4850	65%
Indirect Labor MDs	128	321	203	318	277	311	235	1793	24%
Readiness/Training	28	162	194	112	57	114	143	810	11%
Total	459	1095	1055	1294	948	1309	1293	7453	100%
# **Personnel**	61	61	61	61	60	62	60		
# Direct Labor	42	42	42	42	41	42	40		
# Workdays	11	25	23	24	23	21	24		
% Direct Labor[1]	72%	71%	81%	75%	71%	76%	82%		
MD Capability[2]	520	1181	1087	1134	1061	992	1080		
Availability Factor[3]	64%	66%	78%	86%	63%	101%	98%		

Direct Labor Mandays represent mandays expended on all DL tasking except Training. Total Direct Labor mandays expended is sum of Direct Labor mandays and Readiness/Training mandays.

NOTES:
1. %Direct Labor = (Total Direct Labor MDs)/(Total MDs)
2. MD Capability = (# Direct Labor) X (# Workdays) X (1.125)
3. Availability Factor = (Total Direct Labor MDs) / (MD Capability)

DETAIL
IWAKUNI, JAPAN

Left: Crew works on the installation of the over 2500 linear feet of conduit which encased the electrical wiring for power to the four arresting gear sump pump panels (no hard hats permitted due to close proximity to operational airfield).

Below: Finished sump pump panel

INSTALL POWER AT ARRESTING GEAR
IW7-844

Install 4 sump pump electrical panels at the MCAS Airfield arresting gear pits to allow the Air Operations department automated pumping of these pits during rainy and typhoon seasons. In the past these pits were pumped manually by grounds crew personnel using generators and portable pumps. The installation of the 4 automated pumps now require less maintenance, less mandays expended on manual pumping and increase the reliability of the arresting operation. The project was completed three months ahead of schedule.

Project Data

Personnel:	5-6 personnel
Duration:	June 1998-August 1998
Mandays:	331
Material Cost:	$59,000
Cost Savings:	$91,000
Specifications:	NMCB FOUR took this project from zero to 100% WIP. Project scope consisted of the installation of 4 sump pump power panels, 1 power distribution panel, 2 handholes, 2 manholes, 15,000 linear feet of 4/0 AWG and #8 AWG low voltage cable and 2500 linear feet of 4” PVC conduit.

Left: Site number two on move-in day.

Below: New streamlined installation with the added features of a new pad, improved drainage and landscaping.

TRANSFORMER VAULTS
IW7-845

NMCB FOUR took these two distinct transformer vault renovations from zero to 100% WIP completing one month ahead of schedule. A very technically challenging project, these two vaults fed two of the bases 6 aircraft hangers and the Air station's entire ground electronics facility. Challenges included designing a complete temporary power distribution plan including high and low voltage feeds. The detail quickly designed a safe, efficient and reliable temporary power plan upon it's arrival in Iwakuni.

Project Data

Personnel:	4-5 personnel
Duration:	June 1998-October 1998
Mandays:	608
Material Cost:	**$**209,000
Cost Savings:	$78,000
Specifications:	Project scope consisted of the installation of two enclosed transformer vaults to replace 2 antiquated open type vaults to include the removal of fencing, high and low voltage cabling, open-type transformers, air-break fused cutouts and the removal of existing concrete pads. In addition to the new vaults, the installation included the placement of two new concrete pads, the placement of two new man-holes, conduit, high and low voltage cabling, low voltage breakers and high voltage air-break switch apparatus.

Left: Crew works on compacting one of the many trenches on this project in preparation for conduit installation.

Below: Site in its finished condition with pop-up panel and new manhole in the forefront. MALS-12 VANS shown in rear.

IW7-849
MALS 12 VAN PAD RELOCATION

NMCB FOUR took this project from zero to 100% WIP. This site was constructed to move the Marine Air Logistics Squadron from their temporary location to a permanent location complete with power, water and communications. Challenges included installing used components, which did not fit the original site plan. Many of the components were damaged and had been subjected to weathering for several. To overcome this, the detail re-fabricated many components including sending all panels and transformer to the paint shop for resurfacing.

Project Data

Personnel:	4-5 personnel
Duration:	June 1998-October 1998
Mandays:	333
Material Cost:	**$**65,000
Cost Savings:	$98,000
Specifications:	Project scope consisted of the grading and leveling of a 81’ X 274’ site, the installation of 1- 250KVA, 6600V transformer, 7’ X 10’ X 15” concrete pad, 4,200 linear feet of 2” and 4” conduit, 4 power distribution panels, 9 pop-up distribution panels, 9 - 3’ X 3’ X 8” concrete pads, 4 handholes, 250 linear feet of water line, 2 hose-bibs w/ facets, and 16,000 linear feet of 4/0 AWG and 500MCM low voltage cable.

Left: Truss erection.

Below: Exterior of finished structure. Inset photo shows interior view of structure.

TFS MWR ROLLER HOCKEY RINK/MULTI PURPOSE FACILITY IW7-856

NMCB FOUR took this project from zero to 100% WIP finishing 2 weeks ahead of schedule. As an additional project added at the 45 day review, the Detail quickly rallied around this project and set to learning the ins and outs of constructing a 33,000 sq. ft. facility that was the largest structure ever built by NMCBs deployed to Iwakuni in recent history. This high profile project will house all future MWR events such as concerts, balls and other quality of life functions upon MCAS Iwakuni as well as function as a top notch Roller Hockey Rink facility.

Project Data

Personnel:	10-16 personnel
Duration:	September 1998-December1998
Mandays:	435
Material Cost:	**$**650,000
Cost Savings:	$121,000
Specifications:	Project consisted of the placement of 1240 linear feet of concrete formwork, the placement of a 240 cubic meter monolithic pad, removal of 1560 cubic meters of earthen fill and the erection of a 142’ X 224’ X 45’ high Tension Fabric Structure. Structure included the installation of 12’ roll up door, 12 personnel doors, 4 large exhaust fans, 16-1000W high-pressure sodium lighting fixtures. Also included were the installation of 16 outlets, a 400 Amp custom built power distribution panel and the installation of a dry-pipe fire protection system comprising of 870 individual components to include 185 sprinkler heads, riser, air compressor, back-flow preventor and drainage system.

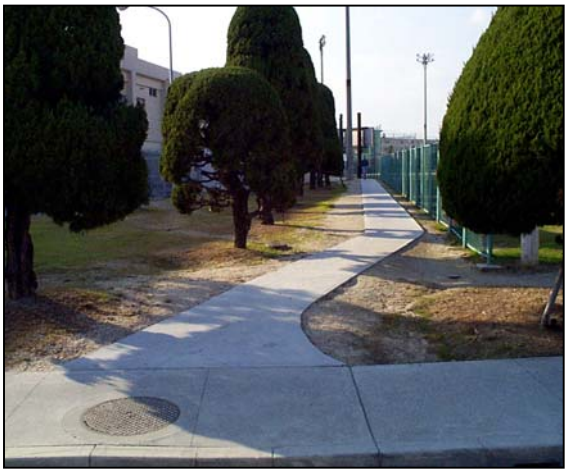
OIC DISCRETIONARY
CAMP MAINTENANCE
DETAIL IWAKUNI

PROJECT LISTING

INSTALL 368' SIDEWALK AT MCAS BRANCH MEDICAL CLINIC	40
INSTALL FENCING AT TRANSFORMER VAULTS	35
REPAIR ASPHALT AT MALS-12	15
REPAIR SIDEWALK AT MCAS FRONT GATE	22
TOTAL MANDAYS	**112**

CAMP MAINTENANCE

PAINT DET SPACES INTERIOR	76
RELOCATE FENCE AT DET SPACES	40
TOTAL MANDAYS	**116**



Above: Placing sidewalk at Branch Medical Clinic.

Above right:The completed project.

Right: Placing sidewalk at MCAS front gate.

LABOR DISTRIBUTION SUMMARY
DETAIL IWAKUNI

Month	**Jun-98**	**Jul-98**	**Aug-98**	**Sep-98**	**Oct-98**	**Nov-98**	**Dec-98**	**Total**	**% Total**
Direct labor MDs	120	276	256	298	238	277	217	1682	75%
Indirect Labor MDs	7	64	62	44	30	33	42	282	13%
Readiness/Training	24	39	33	70	41	48	10	265	12%
Total	151	379	351	412	309	358	269	2229	100%
# Personnel	23	23	23	21	20	18	16		
# Direct Labor	15	16	15	16	14	12	11		
# Workdays	11	25	23	24	23	21	24		
% Direct Labor[1]	95%	83%	82%	89%	90%	91%	84%		
MD Capability[2]	186	450	388	432	362	284	297		
Availability Factor[3]	77%	70%	74%	85%	77%	114%	76%		

Direct Labor Mandays represent mandays expended on all DL tasking except Training. Total Direct Labor mandays expended is sum of Direct Labor mandays and Readiness/Training mandays.

NOTES:
1. %Direct Labor = (Total Direct Labor MDs)/(Total MDs)
2. MD Capability = (# Direct Labor) X (# Workdays) X (1.125)
3. Availability Factor = (Total Direct Labor MDs) / (MD Capability)

DETAIL
POHANG, KOREA

Left: Installing sheeting for Building 1.

Below: Completed PEB.

CONSTRUCT EXERCISE PEB's
PK7-833

Turned over from NMCB SEVENTY-FOUR, NMCB FOUR useably completed the project to erect exercise PEB's at Commander Naval Forces Korea, Detail Pohang. The PEB's will be used to house Marines conducting exercises on base. A technically challenging project, the building is aesthetically beautiful and highlights the skilled finish work of which the Seabees are capable. Challenges included erecting metal sheeting without prior experience and acquiring American-brand materials in Korea.

Project Data

Personnel:	11 Personnel
Duration:	June 1997 - December 1998
Mandays:	2411
Material Cost:	$202,749
Cost Savings:	$784,000
Specifications:	Finish two PEB's, one 40'x 80' and 40'x 100'. Project includes concrete apron, landscaping, metal sheeting, interior finish, mechanical and electrical installation.

Left: A Seabee uses a bull float on one of the MEC-P Tent Pads.

Below: Completed Tent Pads on which GP-Mediums will be erected.

MEC-P TENT PADS
PK6-831

Turned over at 35% by NMCB SEVENTY-FOUR, NMCB FOUR completed twenty more tent pads for the Marine Expeditionary Camp, Pohang, enabling Marines to erect GP-Medium tents. The Project's equipment shelter had to be relocated often to ensure easy access to tools. Challenges included irregular concrete slump from Korean vendors and varying grade elevations.

Project Data

Personnel: 6 Personnel

Duration: June 1998-September 1998

Mandays: 613

Material Cost: $ 88,418

Cost Savings: **$**200,000

Specifications: Place 20 16'6" x 32'6" concrete pads to be used as GP medium tent decks on Marine Expeditionary Camp-Pohang**.**

Left: Installing pole mounted insulators.

Below: Completed power substation at MEC-P.

ELECTRICAL DISTRIBUTION
PK6-832

This project, turned over to NMCB FIVE at 94% for completion, provides electrical power to Marine Expeditionary Camp-Pohang. Challenges include installing transformer banks, running primary and secondary power distribution lines.

Project Data

Personnel: 3 Personnel

Duration: September 1998- December 1998

Mandays: 782

Material Cost: $ 106,632

Cost Savings: $254,000

Specifications: Install 45' utility poles, cross arms, guy strain supports, associated isolation air switches, primary conductors, pole/pad- mounted transformers and secondary conductors to service entrance.

OIC DISCRETIONARY
CAMP MAINTENANCE
DETAIL POHANG

Above: Repairing Secondary Lines for BEQ area.

PROJECT LISTING

CNFK SINKHOLE	2
HYESIMWON ORPHANAGE CONCRET PAD	10
DEMO FUEL STATION/EXERCISE FOAL EAGLE	6
LINE HAUL FOR K-16 EAF PROJECT	12
CONSTRUCT STEPS AT CAMP CARROL	32
PAINTED BEQ	12
LINE HAUL MAN-LIFT TO CHINHAE	7
CAMP MAINTENANCE	63
TOTAL MANDAYS	**144**

LABOR DISTRIBUTION SUMMARY
DETAIL POHANG

Month	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98	Total	% Total
Direct labor MDs	32	187	156	314	282	448	299	1718	59%
Indirect Labor MDs	98	132	173	178	141	124	198	1044	35%
Readiness/Training	7	24	28	22	32	27	33	173	6%
Total	137	343	357	514	455	599	530	2935	100%
# **Personnel**	22	22	25	31	31	32	30		
# Direct Labor	10	10	13	19	19	20	19		
# Workdays	11	25	23	24	23	21	24		
% Direct Labor[1]	28%	62%	52%	65%	69%	79%	63%		
MD Capability[2]	124	281	336	513	491	472	513		
Availability Factor[3]	31%	75%	55%	65%	64%	101%	65%		

Direct Labor Mandays represent mandays expended on all DL tasking except Training. Total Direct Labor mandays expended is sum of Direct Labor mandays and Readiness/Training mandays.

NOTES:
1. %Direct Labor = (Total Direct Labor MDs)/(Total MDs)
2. MD Capability = (# Direct Labor) X (# Workdays) X (1.125)
3. Availability Factor = (Total Direct Labor MDs) / (MD Capability)

DETAIL
SASEBO, JAPAN

Left: Seabees pour a concrete apron into the PEB.

Below: The completed PEB.

EOD PEB
SA5-825

A new start project, the crew had their challenges before the deployment got underway with planning and estimating this 20 X 48 foot PEB from a shop drawing for the Explosive Ordnance Disposal Division. A unique design using Japanese sheeting attached to a Pascoe frame gave Detail Sasebo's Steelworkers a challenge in matching Metric with English. The building sits atop a 6-foot stem wall and the interior is split with a partition wall to accommodate two Departments, EOD and Port Operations.

Project Data

Personnel:	8 personnel
Duration:	June 1998 - September 1998
Mandays:	461
Material Cost:	$26,972
Cost Savings:	$149,825
Specifications:	Construct a 20 X 48 foot pre-engineered building for the Explosive Ordnance Department. Project includes concrete stem walls with under slab electrical conduit, a Pascoe rigid frame PEB with Japanese roof and wall sheeting, interior drywall finish, two Japanese roll up doors and two high security personnel doors.

Left: Seabees test the electrical panel box at one of the well heads.

Below: Line B and D connecting to the redistribution tank.

HARIO WATERWELL
SA6-832

Three Battalions worked on this project located at the Hario Village housing complex. A technically challenging project, it shows the versatility of the Seabees and plays a major role in the quality of life for the residents at Hario Housing, providing a reliable water source for local residents. Challenges for the crew included planning and estimating, material procurement, and electrical connections.

Project Data

Personnel:	7 personnel
Duration:	May 1997 - December 1998
Mandays:	1917
Material Cost:	$60,900
Cost Savings:	$623,000
Specifications:	Complete the installation of two water wells to support the incoming Japanese water supply for the Hario Housing Village. This project included 2,000 feet of ductile iron water piping, all electrical installation for the well heads and the control building, installing a 1500 gallon water tank, two transfer pumps, testing, and disinfecting the entire system.

Left: Project during mast erection phase.

Below: Mast erection complete.

LIGHTNING MAST PROTECTION
SA7-840

The first of two Sasebo projects with similar work, consisted of erecting six 25-Meter masts around an ordnance storage facility for protection from lightning strikes. The least complicated of the five buildings to erect mast around, the crew used this project for their learning curve. Challenges for the crew included redesigning the mast foundation forms and the precision fabrication and setting of the anchor bolts. Innovation was the key to this project using round manufactured foundation forms in place of plywood fabrication. This saved both time and money.

Project Data

Personnel:	5 personnel
Duration:	June 1998 - September 1998
Mandays:	270
Material Cost:	$33,940
Cost Savings:	$87,750
Specifications:	Erect six lightning masts around an ordnance storage building at Maebata Ordnance Depot. Project included six foot sloped mast excavation, placing 600 feet of grounding cable for connecting the mast to the grounding grid, setting round Sonotube forms, and fabricating RST with stainless steel anchor bolt cages. Also tasked was erecting the 25-Meter masts using a 75-ton crane.

Left: An NMCB FOUR Equipment Operator compacts subgrade.

Below: Final concrete pad.

CONCRETE PADS
SA7-842 PHASE I

The concrete pads were desperately needed to enhance the work area of the Det's MLO yard. Challenges for the crew included the excavation of 150-meters of rock and debris filled soil, backfilling and compacting to grade with aggregate, and finishing the large pads to a smooth consistent finish.

Project Data

Personnel:	5 - 8 personnel
Duration:	December 1998 - December 1998
Mandays:	143
Material Cost:	$29,264
Cost Savings:	$46,475
Specifications:	Install 84-Meters of 8-inch thick concrete to cover 5,000 square feet of yard. Project included excavation of 14-inches of earth, backfill and compact to 8-inches, placing 84 cubic meters of concrete in three separate pours, and installing joint sealer.

Left: Seabees installing c-channel for the roof.

Below: Completed facility.

HAZARDOUS STORAGE FACILITY
SA7-842 PHASE II

A new start project, the crew met their challenges in designing the formwork for the columns and beams. The project provided a needed hazardous material storage facility at the Seabee Camp. Other challenges encountered included the CMU walls, drainage catch basins, Japanese roof sheeting, and the concrete apron for access.

Project Data

Personnel:	5 personnel
Duration:	September 1998 - December 1998
Mandays:	330
Material Cost:	$18,800
Cost Savings:	$107,250
Specifications:	Construct a hazardous storage facility for detail Sasebo's MLO yard. Project included placing 600 CMU block atop an 8-inch foundation stub wall, forming and placing columns and beams to encase the CMU block, floor slabs with catch basins, installing Japanese roof sheeting, and placing a concrete apron.

Left: Seabees lay grounding cable.

Below: Mast erection complete.

LIGHTNING MAST PROTECTION
SA7-847

The crew met many challenges in the excavation process with the most difficult being digging through a five-foot rock bed for the Mast foundation at building 707. Together there were 14 Masts at 15-meter and 10-meter heights to be installed around four ordnance buildings. The construction methods were of the same type as the crew's first project, using Sonotube forms vice plywood forms. The innovative method enabled the project to finish 21 days ahead of schedule.

Project Data

Personnel:	5 personnel
Duration:	September 1998 - December 1998
Mandays:	343
Material Cost:	$86,636
Cost Savings:	$111,475
Specifications:	Erect twelve 15-meter and two 10-meter Lightning Masts around four ordnance storage buildings for Maebata Ordnance Facility. The project included extensive excavation through a rock filled landscape, setting Sonotube forms with RST and Stainless Steel anchor bolt cages, placing and connecting 1,000 feet of grounding cable, and pouring 25 cubic Meters of concrete for the Mast foundations.

OIC DISCRETIONARY
CAMP MAINTENANCE
DETAIL SASEBO

PROJECT LISTING

CONSTRUCT PAVILION AT FAMILY SERVICE CENTER	28
REPAINT CM SHOP FLOOR	15
SELF HELP PUNCH LIST SA7-838	20
REHAB COMMUNITY CHURCH	28
CONCRETE ANCHORS FOR OPERATION DISTANT THUNDER	14
MISCELLANEOUS OIC DISCRETIONARY	15
CAMP MAINTENANCE	50
TOTAL MANDAYS	**170**

Above: Concrete Anchors fabricated in support of Operation Distant Thunder in Korea.

Below: Pavilion for Family Service Center

LABOR DISTRIBUTION SUMMARY
DETAIL SASEBO

Month	**Jun-98**	**Jul-98**	**Aug-98**	**Sep-98**	**Oct-98**	**Nov-98**	**Dec-98**	**Total**	**% Total**
Direct labor MDs	86	237	235	294	366	423	306	1947	73%
Indirect Labor MDs	48	108	69	74	43	51	36	429	16%
Readiness/Training	18	33	33	61	56	40	51	292	11%
Total	152	378	337	429	465	514	393	2668	100%
# **Personnel**	26	26	25	25	25	24	24		
# Direct Labor	16	16	16	16	16	16	16		
# Workdays	11	25	23	24	23	21	24		
% Direct Labor[1]	68%	71%	80%	83%	91%	90%	91%		
MD Capability[2]	198	450	414	432	414	378	432		
Availability Factor[3]	53%	60%	65%	82%	102%	122%	83%		

Direct Labor Mandays represent mandays expended on all DL tasking except Training. Total Direct Labor mandays expended is sum of Direct Labor mandays and Readiness/Training mandays.

NOTES:
1. %Direct Labor = (Total Direct Labor MDs)/(Total MDs)
2. MD Capability = (# Direct Labor) X (# Workdays) X (1.125)
3. Availability Factor = (Total Direct Labor MDs) / (MD Capability)

DETAIL
YOKOSUKA, JAPAN

Left: Gradebeams are formed for the new Seabee Headquarters building.

Below: Seabees installing the exterior sheeting, interior framing, and rough electrical.

CB DET HEADQUARTERS
YO6-839

This new Headquarters Facility for the Detail was constructed with a Pre-Engineered Building that includes a mezzanine. The first deck consists of the MLO office and warehouse, the Central Tool Room, a male/female head facility. The mezzanine deck will be the administrative spaces consisting of the OIC, AOIC, Ops, QC/Safety, and the training room. Some of the challenges encountered were the discrepancies between the PEB manufacturer's and designer's prints. Fortunately, the ROICC office provided timely decisions. This project was turned over to NMCB FIVE at 63% WIP.

Project Data

Personnel:	7 - 10 personnel
Duration:	July 1998– August 1999
Mandays:	1006
Material Cost:	$ 250,000
Cost Savings:	$ 327,000
Specifications:	Construct a 40' x 125' PEB with mezzanine. Project includes placement of concrete for the foundation, concrete for the slabs on both the first and mezzanine decks including the ramps and stoops. Office spaces were framed utilizing a metal stud system. Underslab utilities were installed for the head facilities and concrete sewer pipes were laid and tapped into the existing sewer manhole. Electrical work includes the installation of first and second deck conduits and receptacle boxes, excavating for underground conduit from the building, across the road, and terminating at the transformer shed. Fire alarm conduit and boxes were also installed.

Left: Members of Detail Yokosuka place concrete for the ATM's foundation.

Below: Final product with the NFCU ATM machine installed. The ATM began full operations on 14 December.

CONSTRUCT ATM ENCLOSURE
YO6-847

This structure was constructed to house two ATM machines, one from Navy Federal Credit Union and one from Nation's Bank, in order to provide convenient customer service to the Ikego Housing area residents. Before the start of construction, a site adaptation was performed to fit this structure to its current location. Currently, one bank has already connected the ATM and is operational.

Project Data

Personnel: 5 personnel

Duration: June 1998 – November 1998

Mandays: 254

Material Cost: $ 42,000

Cost Savings: $ 82,500

Specifications: This 5370 mm x 2780 mm structure was constructed with Concrete Masonry Units in a stack bond pattern and an overhead concrete roof. A texture cote finish was installed on the exterior portion of the wall. Interior finish work includes installation of a pedestal for the ATM machine, the flooring was covered with Vinyl Composition Tile, and walls sealed and painted. Electrical work includes the installation of interior and exterior lighting system, receptacle boxes, and telephone outlets. PWC Yokosuka provided the final connection of the A/C System and power hook-up.

Left: Detail Yokosuka provided acoustical tile and gypsum wallboard interior finish in the old garage.

Below: The new PEB addition to the Fire House.

CONSTRUCT PEB GARAGE, FIRE STATION
YO7-850

This PEB structure, built by two battalions, is being utilized by the fire station as a shelter for a new fire truck. Constructed adjacent to the old garage, a partition wall was provided with double doors to provide personnel access to and from their bunkroom.

Project Data

Personnel:	4 personnel
Duration:	November 1997 – December 1998
Mandays:	899
Material Cost:	$ 96,000
Cost Savings:	$ 292,000
Specifications:	NMCB FOUR's tasking include the installation of a roll-up door and the replacement of the roof gutter system in accordance with the Design Change Directive from ROICC. Additional work included the installation of acoustical ceiling and the installation of gypsum wallboard inside the old garage space.

Left: U ditch and curbing goes in around the parking lot.

Below: SEABEES place another course on the retaining wall.

CONSTRUCT PARKING LOT PROJECT
YO8-862

Due to the influx of personnel to Pacific Meteorology and Oceanography Facility, this project is being constructed to offset their requirement for more parking space. The parking area has a 10% slope lengthwise and a 5% slope crosswise. In addition, a concrete block retaining wall was constructed alongside the access road. This project will be turned over to NMCB FIVE.

Project Data

Personnel:	3-4 personnel
Duration:	June 1998 – April 1999
Mandays:	517
Material Cost:	$ 95,000
Cost Savings:	$ 168,000
Specifications:	Construct a 30m x 16m asphalt parking lot to include a 22m x 40m access road. Work includes cutting approximately 1500 cubic meters of existing soil, placement of 250 cubic meters of aggregate for the base and sub-base course. U-ditches and curb were installed around the parking area and access road. A 100 square feet concrete block retaining wall along the access road was also constructed as erosion control. A contractor will complete the 2” asphalt pavement and striping.

Left: Original structure had to be demolished.

Below Left: Columns for Gazebo being installed.

Below: Final product resulted in many kudos from the local community and Base Commander.

CONSTRUCT GAZEBO
YO8-863

This project included the demolition of a deteriorated 8' x 12' gazebo and erection of a new 35' Deerfield Hexagonal laminated wood beam pavilion at Kosano Park. Considered to be a high visibility project due to its location, this project earned praises from the Base Community because of the quality workmanship and the timely completion of the project.

Project Data

Personnel:	4 personnel
Duration:	September 1998 – November 1998.
Mandays:	175
Material Cost:	$ 15,000
Cost Savings:	$ 56,875
Specifications	Construct a 35' hexagonal laminated wood beam pavilion at Kosano Park. Project includes digging 4' diameter by 5' deep column foundations and the placement of a monolithic $35m^3$ concrete slab. A metal roof was installed after the placement of tongue and groove roof decking.

OIC DISCRETIONARY
DETAIL YOKOSUKA

PROJECT LISTING

INSTALL LOCKERS AT FLEET REC CENTER	28
INSTALL SIDEWALK ALONG	27
ASSEMBLE AND INSTALL PLAYGROUND EQUIPMENT	27
DRILL CONDUIT HOLES FOR CNFJ	03
INSTALL SIDEWALK INFRONT OF CPO CLUB	14
INSTALL SIDEWALK AND STEPS AT IKEGO HOUSING	06
INSTALL SIDEWALK CURB A DAIEI GATE	03
INSTALL FORMICA FOR GALLEY DOORS	06
TOTAL MANDAYS	**112**

Above: Detail Yokosuka installs a sidewalk at the Dry Cleaners in an area that was muddy and unsafe.

Above: After resetting the rubber matting, new playground equipment was installed for the Berkley Housing complex.

Right: A new sidewalk was installed to provide access to the CPO Club from the parking lot.

CAMP MAINTENANCE
DETAIL YOKOSUKA

PROJECT LISTING

MONTHLY CAMP HOUSEKEEPING	7
REPLACE GATE VALVE AT HAZMAT CONTAINMENT	2
REPLACE FLOOR TILE AT THE CM SHOP	6
REPAIR ROLL-UP DOOR AT MLO WAREHOUSE	9
INSTALL PAVILION INSIDE COMPOUND	11
INSTALL PARKING STOPS	2
REMOVE INTERIOR FENCE AND HAZMAT GATE	10
INSTALL PLYWOOD BOARD ALONG ARP WALL AT CM SHOP	1
REPLACE DEEP SINK AT CM SHOP	2
TOTAL MANDAYS	**51**

Right: Revitalized pavilion installed to provide a sheltered break area.

Left: After removing the fence to increase the area of the compound, a sidewalk was installed.

LABOR DISTRIBUTION SUMMARY
DETAIL YOKOSUKA

Month	Jun-98	Jul-98	Aug-98	Sep-98	Oct-98	Nov-98	Dec-98	Total	% Total
Direct labor MDs	119	356	381	334	352	529	633	2704	68%
Indirect Labor MDs	84	175	160	150	120	111	70	870	22%
Readiness/Training	31	63	53	68	63	62	58	398	10%
Total	234	594	594	552	535	702	761	3972	100%
# Personnel	34	35	35	33	33	34	35		
# Direct Labor	23	24	24	22	22	24	25		
# Workdays	11	25	23	24	23	21	24		
% Direct Labor[1]	64%	71%	73%	73%	78%	84%	91%		
MD Capability[2]	285	675	621	594	569	567	675		
Availability Factor[3]	53%	62%	70%	68%	73%	104%	102%		

Direct Labor Mandays represent mandays expended on all DL tasking except Training. Total Direct Labor mandays expended is sum of Direct Labor mandays and Readiness/Training mandays.

NOTES:
1. %Direct Labor = (Total Direct Labor MDs)/(Total MDs)
2. MD Capability = (# Direct Labor) X (# Workdays) X (1.125)
3. Availability Factor = (Total Direct Labor MDs) / (MD Capability)

CIVIC ACTION TEAM
04-26
POHNPEI
FEDERATED STATES OF MICRONESIA

Left: Renovation of the Pohnpei State Government Radio Station in Progress.

Below: Radio Station Renovation nearing completion.

RADIO STATION RENOVATION
PNI-0066

The renovation of the Island's only government owned Radio Station (V6-AH) was one of the largest projects undertaken in the Civic Action Team's 30-year history on the island. Completion of the project by NMCB FOUR Seabees not only provided an aesthetically pleasing workplace for Station employees, but also provided a secure and climate-controlled facility to house the newly-purchased $80,000 transmitter. Material procurement on the remote island of Pohnpei as well as unorthodox construction methods used in the Station's original construction were among the challenges encountered on the project.

Project Data

Personnel:	4 Seabees, 4 Foreign National Apprentices
Duration:	June – October 1998
Mandays:	400
Material Cost:	$23,000
Cost Savings:	$130,000
Specifications:	Renovate a 2500 square foot Radio Station. Project includes demolition/construction of interior walls, installation of sound-proof sheetrock, re-routing of plumbing for relocated head, installation of floor tile, carpeting, removal/re-installation of all electrical circuits, installation of all interior lights, interior painting, exterior painting, installation of exterior and interior windows, installation of downspouts and gutters.

Left: Initial clearing stages before constructing parking lot.

Below: Parking lot complete.

POHNPEI STATE GOVERNMENT PARKING LOT
PNI-0009

The Pohnpei State Government Parking Lot Project involved the construction of a 50,000 square foot parking lot adjacent to the Governor's Office for government-owned vehicles. The project created the first-ever parking area for vehicles near the Government facilities. Both funding and materials were readily available for the project.

Project Data

Personnel:	2 Seabees, 2 Foreign National Apprentices
Duration:	June – August 1998
Mandays:	78
Material Cost:	$15,000
Cost Savings:	$25,400
Specifications:	Clear 50,000 square feet of scrub brush and trees, remove 16'x32' concrete slab and abandoned vehicle, place 1100 cubic yards of fill, level, grade area, place coral base, and rock cap in the construction of a parking lot. In addition, construct a 300 foot road in front of the lot.

Left: Installing the french drain underneath the courts.

Below: Both sand volleycourts without net installed.

POHNPEI STATE BEACH VOLLEYBALL COURT
PNI-0083

The Pohnpei State Beach Volleyball Court Project was the first project of its kind on the island. The project not only provided a recreational facility for the island, but also strengthened the state government's bid to host the upcoming Microgames in the year 2000, as the two volleyball courts were constructed to U.S. Olympic Committee standards. Challenges encountered on the project included delays in project funding as well as procurement of sand fine enough to meet customer's needs.

Project Data

Personnel:	3 Seabees, 3 Foreign National Apprentices
Duration:	July – October 1998
Mandays:	80
Material Cost:	$17,500
Cost Savings:	$26,000
Specifications:	Construct two sand volleyball courts, including the excavation of 1100 cubic yards of fill from a 100'x100' area, 3' deep; placement of 375 cubic yards of ¾" rock, french drain, 10,000 square feet of geo-tec fabric, 750 cubic yards of sand; and erection of four net posts.

Left: CAT Team Seabees and Apprentices place concrete on the Ohwa Basketball Court Project.

Below: The finished basketball court.

OHWA BASKETBALL COURT
PNI-0029

The Ohwa Basketball Court Project provided the village of Ohwa, along with surrounding villages, an outstanding recreation facility. The court is one of the only facilities of its kind on the east coast of the island. The Team used excess materials from DRMO on Guam to construct the basketball posts, while the customer funded the concrete.

Project Data

Personnel:	4 Seabees, 4 Foreign National Apprentices
Duration:	October – November, 1998
Mandays:	100
Material Cost:	$9,000
Cost Savings:	$32,500
Specifications:	Construct a 40’x80’ basketball court; construct and erect goal posts at each end of court; grade area surrounding court, along with constructing a road to the court.

Left: Exterior of Pre-Engineered Building under construction.

Below: Fully-functional shops within the Maintenance PEB.

SHOPS PEB
8PN-212

The Shops PEB Project was one of the final projects in the completion of the CAT Team Camp, Camp Combs. The PEB houses the CESE Maintenance, Builder, Electrician, Utilitiesman, and Steel Shops. The project allowed the existing shops, housed in an abandoned warehouse and inadequate for the shops' needs, to be vacated and moved to an outstanding facility. Dividing labor resources between this critical in-camp project and community projects with a small staff was a challenge, causing the project to span the majority of the deployment.

Project Data

Personnel:	5 Seabees, 5 Foreign National Apprentices
Duration:	June - November, 1998
Mandays:	292
Material Cost:	N/A
Cost Savings:	$95,000
Specifications:	Complete interior construction of 40' x 100' Pre-Engineered Building, including interior electrical, utilities, construction of office spaces, mezzanine deck, staircase, and shelving.

TECHNICAL ASSISTS
CAMP MAINTENANCE
CIVIC ACTION TEAM 04-26 POHNPEI

PROJECT LISTING

KOLONIA BALLFIELD FENCE	6
MADOLENIHMW SPORTSFIELD	7
STATE GYM ELECTRICAL REPAIRS	4
U.S. EMBASSY FLAGPOLE	5
STATE PARK IMPROVEMENTS	7
U.S. EMBASSY WINDOWS	3
STATE TRACK DRAINAGE	8
SAPALAP SCHOOL PLAYGROUND	11
CLEAR PLAYGROUND SITE - LUKOP	9
SENPEHN DRAINAGE	2
CAMP COMBS ELECTRICAL UPGRADE	30
LATTICE SKIRTING INSTALLATION	20
ROOM PAINTING	27
CESE LAYDOWN AREA	39
ADMIN PARKING/MLO	12
CAMP MAINTENANCE	254
TOTAL MANDAYS	**444**

Civic Action Team 04-26 Pohnpei uses their equipment assets to assist the Island Community.

Left: Complete installation of lattice skirting around camp berthing huts.

Right: CAT Team Seabees work together to upgrade the Camp's electrical capabilities

NMCB FOUR
DFTs

Left top: Members of DFT Alaska drill a 30' hole to prepare the hill for blasting operations.

Left bottom: DFT Alaska participated in 40 separate blasts expending over 56,000 pounds of explosives.

Below: DFT Alaska relocated the rock crushers to a new site that could accommodate both the primary and secondary crushers.

DFT ALASKA (AL8-400)

Twenty personnel from NMCB FOUR participated in Operation Alaskan Road. This is a multi-year, Joint Task Force training operation funded by Innovative Readiness Training resources to construct a 14.7 mile road out of solid rock on Annette Island for the Metlacatla Indian Community. NMCB FOUR personnel worked in ardous conditions to complete tasking of quarry, crusher and surveying operations in support of the road project located in Southeast Alaska. The Joint Forces Engineering Component Command consisted of Army Combat Engineers, and Explosive Ordnance Disposal Team, the 7th Engineering Support Battalion, and rotating reserve units from the Army National Guard.

Project Data

Personnel: 20 personnel from Mainbody Okinawa

Duration: June 1998 – September 1998

Mandays: 1051

Material Cost: N/A

Cost Savings: $342,000

Specifications: Provided centerline drilling and blasting support for a 3000-meter section of the road. Operated primary rock crusher to provide 4" minus material and secondary rock crusher to provide 2.5" minus material in support of road construction operations. Provided survey support for 3500 meters of road construction, including slope stakes, clearing limits and reference points. Several minor camp maintenance projects were also completed.

Left: Seabees operate drill rig.

Below: Adding drill steel to the rig.

DFT POHANG, KOREA

NMCB FOUR Water Well Drilling Team deployed from Camp Shields Okinawa to the Marine Expeditionary Camp, Pohang, Korea. Tasking included drilling one production water well for permanently assigned and exercising camp personnel.

Project Data

Personnel:	10 personnel - 7 EO's, 2 CM's and 1 CE
Duration:	June 1998 – August 1998
Mandays:	419
Material Cost:	$12,500
Cost Savings:	$113,750
Specifications:	Complete a 500' foot production water well for Marine Expeditionary Camp Pohang, Korea. Project includes drilling a 500' well, installing 8" PVC casing and .025 slotted screen, placement of filter pack around casing and screen, develop and install 2' drop pipe

Left: A Russian roofer is instructed in the proper methods of applying roof.

Below: The roof nearing completion.

DFT RUSSIA

Seven personnel from NMCB FOUR participated in Exercise Cooperation from the Sea. This was a joint exercise between the Russian and the United States Navy held at Vladisvostok, Russia. In conjunction, Community Relations (COMREL) projects were tasked to both Seabees and Marines while in port to encourage teamwork and promote the relationship between these two countries. Seabee tasking involved replacing the roof of an orphanage for children with Tuberculosis.

Project Data

Personnel: 7 personnel from Detail Iwakuni and Mainbody Okinawa

Duration: July 1998 – August 1998

Mandays: 114

Material Cost: $2,500

Cost Savings: N/A

Specifications: Construct a 25’ x 100’ wood roof decking with a bituminous covering for the facility. Work includes installing 6” x 6” girder beams and placing 1” x 6” planks for the decking. Rolls of bituminous roof covering was heated with a propane torch to melt the binder in order to adhere to the deck.

Left: DFT members hand mixing cement for an electrical generator mounting pad.

Below: Completed wardroom of the Bulemo Clinic, utilized as a dental care area by the DENCAP Team.

DFT INDONESIA

Thirteen Seabees were sent into the austere environment of Luwuk, in the Suluwesi Province of Indonesia in October and November for a Humanitarian Civic Assistance Project. Seabees provided badly needed repairs to a medical clinic, including roof replacement, floor tiling, and upgrades to water and electrical service. Additionally, the DFT supported the efforts of the 3rd Medical Battalion and 3rd Dental Battalion from Okinawa who provided critical health care to the local community.

Project Data

Personnel: 13 personnel from Detail Chinhae and Mainbody Okinawa

Duration: October 1998 – November 1998

Mandays: 300

Material Cost: $8,900

Cost Savings: N/A

Specifications: Project work included repairs to two Medical/Dental Clinics. The smaller required placement of 1350 square feet of ceramic tile, installation of two sinks to include all plumbing to supply such needs, installation of 15 lights and 15 receptacles. This work was performed by local Indonesian contractors. The larger clinic required placement of 5000 square feet of ceramic tile, installing 4800 square feet of roof sheeting, 60 light fixtures, 45 receptacles and 400 linear feet of romex wire all attached to the city power as well as an additional hand pump, new pump housing, a bigger water reservoir (650 liter), a water heater, and an additional hand pump for nurses quarters.

Left: A sniper target Seabees built in support of RIMPAC '98.

Below: A Marine advisor and Seabees test water just purified through the ROWPU.

DFT RIMPAC '98

DFT RIMPAC was conducted in July/Aug by ten Seabees from Detail Hawaii, in support of SEAL unit CSST-1, which involved Naval units from several Pacific Rim nations. The DFT proved to be an outstanding opportunity to hone skills in embarkation and base camp construction in support of contingency operations.

Project Data

Personnel:	10 personnel from Detail Hawaii
Duration:	July 1998 – August 1998
Mandays:	152
Material Cost:	$1,200
Cost Savings:	N/A
Specifications:	Augment CSST-1 in camp support at Marine Corp Base, Kaneohe. Setup laundry unit and showers facility. Purify water using reverse osmosis water purification unit (3000D), and provide other camp maintenance functions as assigned. Assist as range safety observers, build sniper targets, and act as opposition forces in hostage, downed pilot, and other scenarios.

Left: Seabees assist with C-5 offload in Pohang Korea.

Right: A Seabee installs a water heater during the construction of a shower facility in Chinhae, Korea

DFT FOAL EAGLE

Five Seabees from NMCB FOUR participated in Deployment for Training FOAL EAGLE ’98, in support of CSST-1. The exercise was completed alongside a Task Group and Task Unit from Naval Special Warfare Group ONE. Projects completed included the construction of a 150-man tent camp, shower and head facility, field galley, laundry skids, as well as assistance with power distribution, tactical operations, target construction, vehicle maintenance, transportation, CBR training and embark.

Project Data

Personnel:	5 personnel from Mainbody Okinawa
Duration:	October 1998 - November 1998
Mandays:	182
Material Cost:	N/A
Cost Savings:	N/A
Specifications:	DFT members tasked with supporting CSST-1 with base camp construction along with associated support including power distribution, vehicle maintenance, transportation, tactical ops, and embark.

Left: Parking apron in progress looking South-South West.

Below: Seabees and Marines installing AM-2 matting.

DFT K-16

Twenty-four Seabees from NMCB FOUR, augmented by 20 members from USMC 9th Engineering Support Battalion, Okinawa, deployed to K-16 Air Base in Seoul, Korea, to complete a 290,000 square foot helicopter parking apron using AM-2 matting. Construction of the apron was to support permanent facility construction on Base and an increase in Base squadron support. The DFT deployed 22 October 1998 and completed all project work by 24 December 1998. Civil Engineer Support Equipment assets were obtained from Detail Pohang, U.S. Air Force War Reserve, and the U.S. Army 17th Aviation Brigade. All costs were funded by the 8th Army through the 17th Aviation Brigade.

Project Data

Personnel: 24 Seabees from Mainbody Okinawa, 20 Marines from 9th ESB Okinawa.

Duration: October 1998 – January 1999

Mandays: 1,145

Costs: $27,925

Cost Savings: $622,000 labor and equipment lease costs

Specifications: Construct a temporary helicopter parking apron on a 7.1-acre site adjacent to an active runway. The site work includes clearing and grubbing 7,000 cubic yards of spoil, rough grading and sub-base compaction, placement of 5,200 cubic yards of fill material, fine grading, and compaction of the base. Place 290,000 square feet of AM-2 matting, over 12,000 sheets, to include the parking apron, fuel access road, taxiway access ramp, and sidewalk. Painting and marking of the apron and aircraft tiedowns will be installed by follow on contract or public works forces.

CHAPTER FIVE

SUPPLY/LOGISTICS/EQUIPMENT

1. **OUTLET SUMMARIES:**

a. ORGANIZATION: Supply department personnel operated the following outlets: Enlisted Dining Facility, CPO Mess, Wardroom, BEQ, CPOQ, BOQ, CTR, CSR, ARP, 782/Infantry Gear Issue, Supply Office, Disbursing, Barber Shop, MLO, and TOA Warehouse. Extensive material support was provided to Details at Pohang, Chinhae, Sasebo, Iwakuni, Yokosuka, and Atsugi. Limited support was provided to Detail Hawaii. One Storekeeper was provided to support supply operations for Details Chinhae and Pohang. Detail Yokosuka and Detail Atsugi also shared one Storekeeper to cover their supply needs. The other Details provided an OF-13 to handle their supply operations.

b. SUPPLY OFFICE: The supply office was a keystone of the stores and financial side of supply management. The camp was granted $1.5M to operate for FY 98 and $1.4M for FY 99. Seven SK's and three Japanese Nationals processed over 6,000 requisitions during this deployment; of these, over 2,000 were high priority documents. In addition, the supply office managed over $500,000 in deployment per diem/TAD funds.

c. TABLE OF ALLOWANCE: The TOA in Camp Shields is all containerized except for short shelf life items and other items that are deferred from pack and buy. The last TOA change out was in September 1996. These containers are under the cognizance of the 3NCB Det OIC (Camp Czar). As one of the most vital items relating to the Battalion's operational mobility, the importance of an adequate, updated, and functional TOA cannot be overemphasized. The Training TOA is accessible to the resident battalion to support Field Exercise and required training during the deployment.

d. HAZARDOUS MATERIAL: The HAZMAT crew consisted of two personnel who worked out of the Material Liaison Office. In support of Alpha/Bravo Company shops and main body/camp maintenance projects, received, stored and issued HAZMAT materials and MSDS's as well as maintained supplies of oxygen and gases for their use. A new system was worked out with CFAO for them to provide a Japanese National with funding to support the Camp Shields HAZWASTE program. All HAZWASTE funding now comes directly from CINCPACFLT to CFAO.

e. CENTRAL TOOL ROOM (CTR): The CTR staff consisted of seven personnel tasked with the support of main body and camp maintenance projects. CTR was responsible for management of all hand and power tools, tradesman's tool kits, inventory, and scheduled preventative maintenance. CTR managed a $1.2 million inventory consisting of 207 TOA and 40 augment tool kits, 620 shelf stock line items, 97 electrical tools and 96 gas/pneumatic power tools. CTR completed a wall to wall inventory with a goal of reaching 100% accountability. In addition to their normal workload, CTR supported the deployment of seven Deployments For Training (DFT's) including Russia, Indonesia and Korea. During the Logistic Management Assessment, CTR received an inventory validity rate of 100%, an outstanding achievement.

f. MATERIAL LIAISON OFFICE (MLO): MLO gainfully employed 10 personnel throughout most of NMCB FOUR's deployment. The outlet was responsible for ordering, tracking, receipt, storage, issue, delivery, inventory and management of all project and camp maintenance material. MLO managed a budget of $420K in funds for mainbody's 12 tasked projects as well as $749K for the initial start of NMCB FIVE mainbody tasked projects. MLO tracked $1.4M in funding for five of the battalion's detachment sites and took the lead on resolving all financial challenges. An effective liaison with the Third NCB and 31st NCR, MLO ensured funding and materials, both local and CONUS, arrived at mainbody and Det sites on or ahead of schedule. Building a network of material procurement sources for the NCF in Okinawa, NMCB FOUR was the first to establish business with the Kadena AFB Eagle Hardware Store. Stocking a wide variety of construction materials and possessing BPA's with the local economy, Eagle Hardware is an alternate source by which to obtain local materials. During the Logistic Management Assessment and throughout the deployment, MLO received and maintained a 100% construction material inventory

validity. Never complacent with status quo, MLO always strove for process improvement. This fact was evidenced through a variety of implemented ideas including a revised EAC reporting format, valuable reports developed by MLO for tracking project funds, fiscal year roll-over funding statuses, and add-on/reorder tracking reports.

g. CENTRAL STOREROOM: CSR is no longer in the business of stocking consumable items. DSSC located at Camp Foster supports all consumable needs of the Camp. This outlet handles the shipping and receiving of all incoming and outgoing cargo for Camp Shields, and is manned by one Storekeeper. All shipments of materials under 70 pounds and no larger than 108 inches in length and girth in support of the Detail sites are sent using the MPS Postal System which normally takes 5 to 7 days to reach the destination. Bulky shipments are processed through FISC Yokosuka Det Okinawa Shipping and Receiving Branch which results in a slightly longer lead time. Shipment of Civil Engineer Support Equipment is handled through MTMC at Naha Port and Camp Kinser. Unaccompanied Baggage shipments are processed through Personal Property (TMO Office) at Kadena.

h. CUU AND 782/INFANTRY GEAR ISSUE: All gear in this outlet is checked out individually and personnel are required to sign a pay checkage form (DD 139) at time of check out. Pay checkage forms are then returned to the individual upon return of the gear. This process is necessary to make certain that the gear gets returned to supply and helps instill accountability

i. AUTOMOTIVE REPAIR PARTS (ARP): There are two Storekeepers and two augments (one CM and one EO) assigned to this outlet. They support all of Alfa Company's Civil Engineer Support Equipment (CESE) maintenance requirements. A challenge in itself, a road to recovery process was put in place to re-establish the accountability of 16,000 line items of repair parts. After four months of intense wall to wall inventorying, 100% validity and accountability was re-established and evidenced during the THIRD Naval Construction Brigade's Logistics Management Assessment in October 1998. Also, during the deployment, Automotive Repair Parts (ARP) processed Unit Loads (UL's) RO3 and RO5 by receiving, stocking and posting 2,710 new items for new equipment and deleting 350 line items of obsolete repair parts and turning the old parts into DRMO.

j. FOOD SERVICE: The galley has improved service by leaps and bounds this deployment drawing positive comments from the 3rd Naval Construction Brigade inspectors that NMCB FOUR has the best galley in the NCF. The 3rd Brigade was so impressed with the high level of moral and teamwork that they adopted the NMCB FOUR Food Service Training program as a model for other Battalions to follow.

Another item worth mentioning was the policy change to allow the Camps to take full ration credit for all Seabees starting 01 AUG 98. Since this change, the galley has been able to serve a wide variety of both healthy and palatable meals to support our hard working Seabees. Included in these high quality meals were several special meals ranging from crab legs and lobster to T-bone steaks and shrimp. The galley has also been able to offer many extra items including a varied choice of beverages, many different types of fresh fruit, a multiple item salad bar, and a newly added and very popular potato bar. Several special meals were also hosted in the Wardroom including several Flag Officers and other guests.

The S4, S4A, and 3rd NCB Det OIC interviewed 90 civilian workers and hired 19 workers plus two supervisors to work in the galley. This action allowed the Battalion to pull out the Food Service Attendants (FSA's) that previously worked in the Galley and reassign them to in-rate jobs.

k. DISBURSING: The new implementation of the Defense Joint Military pay System (DJMS) on 01 JAN 98 kicked off a variety of pay challenges that carried over into the beginning of deployment. The Disbursing Clerks worked extremely hard and effectively reduced the number of pay challenges from 456 down to single digits. New software systems offered real-time online access to members' pay accounts providing greater customer service and on-the-spot answers to members' pay questions. This new system increased the efficiency of the disbursing customer turnover and helped ease the members' worries about pay leading to increased morale.

Disbursing paid out $500K in deployment per diem to the main body personnel and Det's. Funds were obtained from Nations Bank of Texas located on Kadena, AFB. The Crow's Nest provides a personal check cashing service of $100 per person per day, and for convenience, disbursing also provided check cashing privileges for the battalion. NMCB FOUR Disbursing did not offer currency exchange, but this service was available at the Crow's Nest.

l. POSTAL: We offered a full service post office that included shipping packages and letter mail, postal money order sales, stamps sales, shipping and packing materials, etc. Outgoing mail is distributed to Kadena, AFB. Incoming mail is retrieved from the CFAO postal facility. Stamp stock requisitions are dealt with through Yokosuka, Japan. Turn around time is approximately one to two weeks.

m. BERTHING: Camp Shields was undergoing major barracks renovations during our deployment. These changes were necessary for the long term maintenance and improvement for the Camp. However, the renovations did create somewhat of a crunch for the Battalion personnel, especially during the turnover. Normally, we have E5's and above in single rooms and E4's and below, two to a room. During this deployment, we had some E5's and above two to a room and some E4's and below three to a room.

Currently, the top two decks of building 7216 are completely renovated and outfitted with new furniture. The lower two decks will be overhauled during NMCB FIVE's deployment. The new rooms are a great improvement in appearance and functionality over the old rooms.

The assignment of a Barracks Petty Officer (BPO) and two augments significantly improved the quality of the barracks common spaces and PSE management. The E-6 BPO proved to be an outstanding liaison with the other E-6 deck petty officers responsible for each deck. This system helped give ownership and provided the E-6's a valuable leadership opportunity and a chance to shine.

n. BARBERSHOP. One barber was provided to service over 300 mainbody personnel. Twice a week, hours of operation was extended beyond normal working hours to provide services for project personnel.

2. **EQUIPMENT:**

EQUIPMENT POPULATION (ORGANIC AND AUGMENT)

Vehicles	**Beep**	**Jun 98**	**Jul 98**	**Aug 98**	**Sep 98**	**Oct 98**	**Nov 98**	**Dec 98**	**Beep**
In Service	179	179	206	188	178	161	169	170	162
In Preservation	122	121	122	146	146	139	138	144	140
Total	301	300	328	334	324	300	307	314	302

PM & INTERIM REPAIR ERO SUMMARY

Month	**Repairs**	**PM**	**Total**	**PM:INT Ratio**
Jun 98	33	21	54	0.64:1
Jul 98	30	117	147	3.90:1
Aug 98	18	128	146	7.11:1
Sep 98	6	72	78	13.67:1
Oct 98	31	67	98	2.16:1
Nov 98	46	86	132	1.87:1
Dec 98	45	103	148	2.29:1
Total	209	594	803	2.84:1

EQUIPMENT AVAILABILITY STATUS (ORGANIC ONLY)

	Beep	**Jun 98**	**Jul 98**	**Aug 98**	**Sep 98**	**Oct 98**	**Nov 98**	**Dec 98**	**Beep**
On Deadline									
Auto	10	7	3	9	6	6	11	6	3
Construction	3	2	4	3	3	3	1	1	11
MHE	1	0	0	2	1	1	2	1	2
Total	14	9	7	14	10	10	14	8	16
% Availability	88%	88%	83%	76%	84%	83%	80%	84%	N/A

APPENDIX 1

LESSONS LEARNED

1. **KEYWORD: ADMINISTRATION**

a. ITEM: SARAHLITE (USAF) Message Processing System

(1) DISCUSSION: 18TH Communications Squadron Kadena AB Japan provides this user-friendly system. System requirements and processes are similar to USN MFT program. Training is available during turnover or as required and User Manual is available.

The advantage of this system is that it is compatible with Microsoft Word Software.

Disadvantages of this system are:

(a) Outgoing/Incoming messages are transmitted to / received from 18TH Communications Squadron which requires Duty Admin run to Kadena with floppy disk.

(b) Incoming messages require distribution via installed Email system. Classified message processing requires Duty Admin run to Kadena to pick-up Classified Diskettes. Messages need to be downloaded onto stand alone computer (with removable hard drive) and then printed.

(2) RECOMMENDATION: No recommendation as this is the only message service available to Okinawa based commands. Turnover training and familiarization is a must, in addition to SOP Turnover.

b. ITEM: PERSONNEL: SOURCE DATA SYSTEM

(1) DISCUSSION: The Source Data System (SDS 3A) is currently unusable due to software incompatibility between USN MTF Editor and USAF Sarahlite Editor system. This incompatibility hinders use of DMRS automated message processing and SDS Input. These problems hinder the total usage of this automated Personnel System requiring Resident Battalion to utilize outmoded Manual transmission systems.

(2) RECOMMENDATION: Since the Sarahlite Editor system is a USAF system, not much can be done to change that aspect. A viable alternative would be to negotiate a Memorandum of Understanding (MOU) with PSD Okinawa via PSA Far East. This MOU would outline the process where those records held by Resident Battalion would be downloaded into the PSD Okinawa database. Once that is completed, the Resident Battalion would use Reflections Software to access the database and allow for a wide array of transactions to be completed using the PSD as a host. This would also allow the Resident Battalion to access a wide spectrum of personnel database information for use in compiling reports, managing personnel and ensuring real time data exchange between the Resident Battalion and the SDS database. This would also enhance use of automated messaging systems designed to reduce manhours used in processing MTF messages etc.

2. KEYWORD: TRAINING/ARMORY/COMMUNICATIONS

a. ITEM: Leadership training

(1) DISCUSSION: The Communication Officer, Chief, CMS Custodian and Primary Alternate are not trained in the capabilities, limitations, and implementation of their gear or material. Need development and implementation of a more realistic communication plan (according to the Marine's advisors/evaluators during the last Oki FEX what we had was not very realistic). Also need identification of equipment/material for use in accomplishment of command's communication.

(2) RECOMMENDATION: The NMCBs at one time sent Communication Officers and Chiefs through part of the Marine Corps' course; development of a communication applications course may prove useful for the senior personnel (E-7 and above). As a minimum, designated CommO and Comm Chief must attend Comm Course 964.1 at 31st NCR.

b. ITEM: Communicator training

(1) DISCUSSION: The communicators/technicians are not trained in all the capabilities of their gear. The communicator training course 964.1 given by 31st NCR does not teach how to:

(a) Use the KL-43
(b) Use a DTD (AN/CYZ-10, etc)
(c) Frequency hop with the AN/PRC-119 (The Marines are now using it.)
(d) Use of the other cryptographic gear in their various configurations (such as the KY-57, HYP-57, HYX-57, KY-99, other SINCGARS configurations with various accessories and wire configurations) is only touched upon briefly.
(e) Use/setup(install)/repair the AN/GRC-231

(2) RECOMMENDATION: The 964.1 Field Communications Course needs to be updated to reflect current training requirements of the communicators/technicians. Also the development of a PQS System for the various Communications Positions/Watches may be advisable.

c. ITEM: FEX

(1) DISCUSSION: The communication technicians are not used in a realistic manner.

(a) In an ideal contingency situation, the Camp's Ant Farm would be up to 2 miles away from the COC and ACOC, allowing greater Camp security.

(b) Also in an ideal situation, a communication repair/spare equip/battery supply area would be established in the main camp away from the Ant farm. The communication technicians, however, do not often have the time resource available to deal with equipment repair issues. In a real contingency environment, however this need for equipment repair would be critical. Experience in homeport has shown that there often is not the availability of test equipment to allow for the establishment or use of a field communication repair station. At deployment sites, field exercises usually are too short for this repair capability to be setup and there is usually more than enough equipment for use as ready spares so repair can wait for return to the shop for repair.

(2) RECOMMENDATION: Have a TRICON of some type set up for use as a communication repair station (as the Armory has for it's weapons). If it is of a sufficient size, it can also serve as a transport box/storage unit if shelving was added. This Repair Station would be located somewhere within the main encampment.

d. ITEM: Equipment support

(1) DISCUSSION: As the deployed battalion in Camp Shields provides equipment support to multiple visiting and augment units and since the site's Tab-A is limited, it is critical that equipment requests are submitted in advance to ensure requirements can be met.

(2) RECOMMENDATION: Ensure that all equipment requirements are calculated far enough in advance to allow time to submit requests to the III MEF G4 for support of any additional assets required.

e. ITEM: Frequency Coordination

(1) DISCUSSION: The CFAO Frequency Coordinator Billet was gapped and filled by a person who did not know the job or have the time to perform it.

(2) RECOMMENDATION: While this problem is now corrected by the arrival of a new Frequency Coordinator at CFAO, the solution that NMCB FOUR used should be noted. Should the CFAO billet be gapped again for any reason, the first POC to use for Temporary Frequencies is the III MEF G6 Frequency Coordinator who is currently GYSGT Avery and can be reached at 622-7720.

f. ITEM: Contingency Operations

(1) DISCUSSION: The communication shop has no way to properly pack up the equipment in a timely manner. There are no boxes/crates to properly store the equipment for transport in a TRICON/trailer.

(2) RECOMMENDATION: Use storage boxes on shelves in TRICONs. The equipment would then be readily deployable. The TRICONs could be stored in a warehouse or in a small shelter behind the comm shop. The contents of the TRICONs could be rearranged as needed to support any type of deployment requirement.

g. ITEM: Typhoon Conditions

(1) DISCUSSION: The SINCGARS equipment, the AN/PRC-119 in particular, experienced problems making contact between units when they were located in separated buildings. This problem is due to the high metal content of the reinforced concrete walls in our buildings. The Motorola Saber Radios were also affected; but to a lesser degree—transmissions could still be received. Our OE-254 and RC-292 antennae are not physically capable of withstanding the high winds and the AN/GRA-39 systems (which would allow placing the radio outside with an anchor) would not be advisable since this would require someone to go outside to change batteries and troubleshoot on a regular basis.

(2) RECOMMENDATION: Some form of antenna that can withstand Typhoon Conditions should be mounted on the roofs of buildings such as the barracks, headquarters and any other buildings that will be manned during the storm.

h. ITEM: Ammunition Requisitioning

(1) DISCUSSION: The ordering of ammo for FEX weapons qualifications and CSW live fire is very complicated and cumbersome. Too many point of contacts.

(2) RECOMMENDATION: Ensure all ammunition is ordered well in advance for all evolutions. Have the deployed Battalion provide the points of contact at the midpoint of deployment to the incoming Battalion.

i. ITEM: Electronic Data Storage

(1) DISCUSSION: Since photographs are now taken with digital cameras, they must be transported by disk. The 3-1/2"floppy disks do not have enough memory to do this efficiently.

(2) RECOMMENDATION: Provide “ZIP” drives for each DET site, and a few for Mainbody so they can also be issued to DFT’s.

3. **KEYWORD: SUPPLY/LOGISTICS/EQUIPMENT**

a. ITEM: Rain Gear

(1) DISCUSSION: One of the challenges during this deployment was not having enough rain gear on hand to support DFT/DET and mainbody personnel. Rain gear was received late in the deployment. Typically, even when raingear is on hand, it is not readily available to the members during the very beginning and end of the deployment due to turnover. Also, homeport presents a special challenge because there is usually not enough rain gear for both homeport Battalions, and homeport still has a lag time on the front and back end so the gear can be checked out and turned into the Regiment.

(2) RECOMMENDATION: It would make a big difference to NCF personnel if rain gear was issued as part of the regular uniform issue. The members would keep and be responsible for their gear during their tour and then turn it back in when they leave the Battalion. This practice would make rain gear available to everyone no matter where they were in the Deployment/Homeport rotational cycle. Most times during foul weather, project personnel continue to work without proper protection particularly when first starting or ending a homeport or deployment. Having rain gear readily available for all troops would help reduce illnesses due to weather exposure and increase available construction man-days. Keeping the gear assigned to the member for his whole tour (usually several years) would also greatly reduce the time spent being issued and returning gear at the beginning and end of each deployment or homeport. In fact, this plan would add about 2500 man-hours back to the construction effort. At $20 per hour, that's like getting $50,000 per year per Battalion or about a half a Million Dollars for the NCF.

b. ITEM: Training TOA

(1) DISCUSSION: There is never enough equipment and material to support training exercises. Very limited equipment is in Ready-For-Issue condition available to support field exercises and other exercises necessary for the Battalion's training. For example, Jungle Warfare Training requires leather gloves with inserts for all of the members. These items are not available in the training TOA. We were lucky enough this deployment (after much coordination) to borrow the required items from a Marine unit. This solution will not always be possible.

(2) RECOMMENDATION: Replace all Non-Ready-For-Issue equipment in the TOA and add required materials to support other exercises (i. e. Jungle Warfare Training).

c. ITEM: IMPAC Card Purchase

(1) DISCUSSION: Despite a good working relationship with both CFAO and Marine Corps Contracting, their priorities are not the same as ours. Unfortunately, this situation led to relatively long lead times for procurements. NMCB FOUR was issued four IMPAC Cards. This innovation cut the lead-time of purchases under $2,500 dollars tremendously. However, the cards did not arrive until six weeks into the deployment and they had to be turned in six weeks prior to departure to allow time for the bills to clear. This reduced the effective time that we could use the card from seven months to four or about 43%.

(2) RECOMMENDATION: A plan should be worked out so that the Battalions receive the IMPAC cards during turnover and turn them in at turnover to allow more usable time.

d. ITEM: Micro SNAP is not available to remote users.

(1) DISCUSSION: The Micro SNAP system is designed for customers to order their requirements remotely. Currently, SNAP system is not available for end users. Supply Petty Officers are still using the manual 1250-1 to order their needs and causing unnecessary delays. Also, the ARP custodian must leave ARP and go to the Supply Office to process his paperwork. Having Micro SNAP capability in ARP would allow him to use dead time between issues inputting data which would greatly increase his efficiency. In addition, Micro SNAP has many managerial tools such as tracking current status of requisitions, budget status, availability of material and even communicating supply concerns through

Micro SNAP email. This system has proven to be an effective way to communicate needs to supply quicker and save time in dealing with supply department.

(2) RECOMMENDATION: Micro Snap should be made available for the end users through the LAN system.

e. ITEM: FY-99 HAZMAT funding for disposal.

(1) DISCUSSION: A policy change moved the funding for the FY-99 HAZMAT Program for Camp Shields to CINCPACFLT's control rather than THIRD Naval Construction Brigade. This new policy left Camp Shields without HAZMAT funding for a ten week period while CINCPACFLT worked out the funding details

(2) RECOMMENDATION: This issue should be worked out. As of January 1999 CFAO will be taking over Camp Shields HAZMAT Program and will be working the funding issue through CINCPACFLT. CFAO is also providing a HAZWASTE expert co-located with the resident Battalion's MLO office to focus on HAZWASTE disposal.

f. ITEM: Helpful facts about Okinawa construction material.

(1) DISCUSSION: Some basic planning lessons pertaining to Okinawa have been learned which are outstanding guidelines to remember.

(2) RECOMMENDATION: Keep the following in mind for ordering materials:

(a) Duplex nails and masonry horizontal reinforcing are not locally available.

(b) CAAR requests for concrete and aggregates should be submitted 14 days in advance and cancellations need to be minimized. If a cancellation is necessary it should be done at minimum 48 hours prior, inclement weather excluded.

(c) Concrete is procured in cubic meters, all other aggregates are calculated in cubic yards.

(d) Concrete slump tests are ordered in centimeters vise inches.

(e) MLO's Host National Employees do not work on Saturdays, Okinawa or U.S. holidays. Therefore concrete should not be scheduled on those days as Host National Employees will not be available to cancel or relay information to the vendor if necessary.

(f) A local transient mixer holds up to 6 cubic meters of concrete.

(g) Concrete orders of over $2.5K have to be processed through Contracts.

(h) It requires at minimum, two weeks to process a contract. Four weeks if contract is over $10,000.

(i) All receipts received on the project sites for direct delivery of materials from vendor needs to be forwarded to MLO the same day in order for billing to be completed.

(j) There is no CMU half-block available on island

g. ITEM: Local procurement of HAZMAT material.

(1) DISCUSSION: Locally procured HAZMAT material does not always come with an MSDS, or if it does it may be available only in Japanese, or may not contain the required transportation information. Also, Det's in Korea can not procure HAZMAT locally because MSDS's are not available. We also found that procuring Korea's HAZMAT locally in Okinawa and then shipping to Korea presented many challenges. It is extremely difficult and time consuming getting locally purchased Japanese HAZMAT sent to Korea.

(2) RECOMMENDATION: Ensure vendor has an English MSDS for product before procuring and that it contains the required transportation information. ALL HAZMAT for Korea projects should be procured from CONUS.

h. ITEM: Procurement of CONUS materials.

(1) DISCUSSION: While the Eagle Hardware Store at Kadena AFB is a very useful additional resource for stock shelf items and procurement through local BPA's, they are not an efficient and reliable source to use for procuring items from CONUS. We have found that their regular delivery time by surface, which is the primary mode of delivery, takes well over 4 months. Delivery by Priority Air costs a substantial amount and will still take 2-3 weeks or more. Additionally they do not have a sufficient tracking system in place.

(2) RECOMMENDATION: If an item is required to come from CONUS, order through 31st NCR. Reserve Eagle Hardware for items they have on their shelves.

i. ITEM: Expired MRE's.

(1) DISCUSSION: We carry a large quantity of MRE's on hand. Although we do use some for FEX and typhoon conditions, the battalions do not consume them rapidly enough forcing us to have them re-certified by the Army vet. This process is tedious and time consuming and prevents the Seabee in the field from receiving the freshest available meal. Brigade has authorized us to decrease our quantity on hand due to the vast availability of MRE's throughout the island.

(2) RECOMMENDATION: Keep reduced quantity of MRE's or format method to rotate stock.

j. ITEM: Unavailability of a reefer truck.

(1) DISCUSSION: We currently do not have a reefer truck and are contracting out for food delivery. The camp is scheduled to start using a prime vendor in March 99. This new supplier would include the food delivery service and would eliminate the need for a day to day reefer truck. However, one is still needed for the Field Exercise (FEX). We constructed a makeshift reefer truck with a stake truck, reefer box, and a generator to get us through the FEX.

(2) RECOMMENDATION: The Camp should rent a reefer truck for use during the Field Exercise and include its cost in the FEX budget.

k. ITEM: Crane Program

(1) DISCUSSION: Maintaining an effective crane program continues to be a challenge for NCF units. The experience and training program for crane personnel does not fully prepare them for the stringent requirements the Navy focuses on its crane operations. The crane training manuals used by NCTC are outdated (1987) and do not use the new P-307 requirements. The Redbook also needs to be updated to reference the new P-307. Additionally, the lack of crane tasking seriously limits the amount of practical experience.

(2) RECOMMENDATION: Battalion personnel need more complete and current crane training in Homeport. Crane tasking needs to be increased to maintain the Crane Crew's skills.

l. ITEM: Work at JWTC

(1) DISCUSSION: The equipment operator work in the Jungle Warfare Training Center (Formerly NTA) is some of the best work available to Alfa Company personnel in the Okinawa theater of operations. The working conditions, however, are hard on the equipment and require attention to detail to avoid mishaps. Future Okinawa deployments will likely continue to see road work at JWTC.

(2) RECOMMENDATION: Ensure supervisory personnel assigned to JWTC tasking are trained in all aspects of the equipment they are working on. Evaluate Safety Plans carefully and ensure all personnel assigned are familiar with its contents. Team junior operators with senior ones to ensure there is ample experience on site to deal with the challenging JWTC terrain.

4. **KEYWORD: DETAIL ATSUGI**

a. ITEM: Supply.

(1) DISCUSSION: The NMCB Detail at Atsugi is not a priority to FMED supply; they are very unwilling to lend any support at all. This is further complicated by the fact that all local contractor brochures are written in Japanese and require translation, which is further complicated in that all descriptions for add-on BM's must be made extremely detailed so that NAF supply can explain what is actually needed to local vendors. The additional detailed description requires additional time from the NMCB Supply Petty Officer to prepare the requisitions.

(2) RECOMMENDATION: It would be highly recommended for the NMCB Detail to avoid trying to use FMED for material support; instead go directly through the NAF Atsugi supply department which was very willing to lend support. It would also be good to add one indirect labor to this Detail to accommodate the additional time and research required to prepare the requisitions.

b. ITEM: Tool Support

(1) DISCUSSION: Detail Atsugi has no tool kits assigned, all kits are sub-custody from Detail Yokosuka. Any additional requirements (e.g. welder) are supported through Public Works or NAF Atsugi. We have experienced great support.

(2) RECOMMENDATION: The arrangement here is working very well and nothing is foreseen to change this so long as all items are well maintained and the rapport, punctuality and working relationship of the NMCB Detail and local facilities remains good.

c. ITEM: CESE

(1) DISCUSSION: Detail Atsugi has no CESE assigned. Public Works does provide 3 vehicles including fuel and maintenance (1 pick-up truck and 2 passenger vans) to the Det. at no cost, any additional vehicles or equipment are provided to us as a "C" assigned vehicle checked out on a day to day basis. We have experienced great support.

(2) RECOMMENDATION: The arrangement here is working very well and nothing is foreseen to change this so long as all equipment is well maintained and the rapport, punctuality and working relationship of the NMCB Detail and Public Works Transportation remains good.

5. **KEYWORD: DETAIL CHINHAE**

a. ITEM: Steel for project KO7-822 (MWR Warehouse) and KO6-814 (Waste Reclamation).

(1) DISCUSSION: The steel for the mezzanine deck that was to be locally purchased did not meet the specifications. This forced a delay in construction.

(2) RECOMMENDATION: Items of this nature should be researched to ensure specifications are met.

b. ITEM: Fire Sprinkler System.

(1) DISCUSSION: Currently all fire protection systems being installed by the Naval Construction Force are procured in CONUS with technical representative. CONUS systems do not match local systems.

(2) RECOMMENDATION: Purchase fire protection systems locally.

c. ITEM: HAZMAT

(1) DISCUSSION: All HAZMAT for our projects was to be procured from Okinawa and shipped to us since no MSDS's were available for products from Korea. We have since learned that we can get MSDS's from the manufactures and have them translated to English.

(2) RECOMMENDATION: All HAZMAT for projects should be procured locally from manufactures with MSDS's, and then have the MSDS's translated. Battalion can also use Fleet Industrial Supply Center and have all HAZMAT shipped directly here and not routed through Okinawa.

6. **KEYWORD: DETAIL HAWAII**

a. ITEM: Regionalization

(1) DISCUSSION: All naval facilities on Oahu are being transferred to the Commander, Naval Base Pearl Harbor. The PWC CO will be the facilities manager for all naval activities. The OIC of the CBU will be the Seabee Coordinator for the island – all self help divisions at all bases will report to CBU OIC. The CBU OIC will report to the PWC. The vision is to have the CBU and the detail co-located, though there is still discussion on the exact relationship between the CBU and the detail. This is an area to watch closely, as current material purchasing and other procedures could change dramatically and alter the staff requirements for the detail. A particular concern was a recommendation to make the detail OPCON to the CBU.

(2) RECOMMENDATION: Many ideas have been expressed on how the units should operate. Brigade needs to be included in these discussions to make sure that the OPLAN requirements can still be met, and that NCF interests are adequately expressed and preserved

b. ITEM: Tool Support

(1) DISCUSSION: Detail Hawaii has 125 tool kits located on three different islands: Oahu, Kauai, and Hawaii (the big island). The detail manages these tools for their own use and also for reserve units that may come to Hawaii to complete a project. Because of this, the detail works closely with Brigade N3 and N4 coordinating how many kits are needed in various locations, condition of the kits, shipping kits, etc. All the Seabee units in the area (Detail, CBU 413, Self Help) share tools as required. In addition, the detail borrows some tools from PWC toolroom. There are also many gasoline-powered tools in the inventory (power screeds, whirly birds, vibratory sleds, generators, etc.) that are in continual need of maintenance and repair. The tool program works well. It is a very large program that requires continual coordination and follow-up.

(2) RECOMMENDATION: An experienced SK is recommended for the detail to help coordinate issues with Brigade and to insure the tool program is implemented effectively. In addition, a mechanic with small engine experience is highly recommended due to the large number of gasoline-powered tools in the inventory.

c. ITEM: CESE

(1) DISCUSSION: The Detail has 28 pieces of CESE assigned. There are a sufficient number of crew vehicles. Other than a bulldozer or any line haul assets, the detail has most of the construction equipment required. All other equipment needed was available for local rental. CBU 413 has a bulldozer and one tractor-trailer which can be borrowed when necessary.

(2) RECOMMENDATION: This arrangement is working well. No changes are required.

d. ITEM: Material Support

(1) DISCUSSION: All material for all projects in Hawaii is customer purchased. Although this reduces the administrative burden for the detail, it leaves the detail in a position of not controlling project funds. This occasionally leads to disagreements over what material or consumable tools are truly required for projects. Also, the detail is often not kept aware of the balance of funds remaining for a project, thus not always able to suggest methods of accomplishing the tasking at reduced cost when necessary.

(2) RECOMMENDATION: Funds for projects should be sent directly to PWC purchasing department, with the total balance available given to the detail. The detail SK can then manage OPTAR logs for each project, keeping both the detail and the customer apprised of the current balance. This allows the detail to make sure the correct material is purchased, ensure proper project fiscal management is provided, and helps eliminate finger pointing on incorrect or late material delivery. Two of the ten projects

we completed this deployment were funded this way. They were the projects with the smallest number of material problems.

7. **KEYWORD: DETAIL IWAKUNI**

a. ITEM: Using Regimental BM's in Homeport

(1) DISCUSSION: The Detail used Regimental BM's during the homeport planning phase. We used the regiment's BM in homeport to run the BM/MTO bounce and generate add-on BM's. Once the DET arrived in Iwakuni, they were furnished with local BM's only. Regimental BM's are not used in Iwakuni to order materials. The base uses local Japanese employees to plan and estimate all Seabee tasked projects. These P&E personnel generate a local BM and all material is ordered from this local BM. Using the Regiment's BM is misleading, as this is not the material that is ordered; therefore the BM/MTO bounce becomes inaccurate. PMSR's are of no use in Iwakuni either, as the local BM numbers in no way bounce with the regiments BM numbers. The Det encountered problems in homeport as NMCB 74 generated a "homemade" PMSR using local BM numbers. When the Det attempted to bounce these numbers using the Regimental supplied BM, none of the numbers matched, making it extremely difficult to determine just what material sat on the shelf in Iwakuni and which needed to put on an add-on BM.

(2) RECOMMENDATION: Obtaining the local BM's from the Facilities Operations Chief early in the planning phase and using these to build add-on BM's is the most efficient and effective way to avoid material shortages. The deployed Detail should never generate a PMSR and assign random numbers, as this will only confuse the Battalion in homeport, which is in the P&E phase. Finally, the Regiment must understand that the materials ordered in Iwakuni are ordered off the local BM and the most effective way to P&E the project is using the local BM. Normally, all projects in Iwakuni are funded directly by the air station, as such, no 3rd Brigade funding for materials flows through Iwakuni.

b. ITEM: Tool support

(1) DISCUSSION: Tools when ordered from mainbody, which were consumed or in need of survey were very slow to get to the detail, or were not received at all,. The detail arrived with approximately $2400 worth of outstanding requisitions passed on from NMCB 74. Although 1250's were filled out during turnover, most of the $2400 in tools were never received by the detail.

(2) RECOMMENDATION: We must smooth out the process of ordering tools to replace those that are broken or consumed. The current system leaves CTR without shelf stock tools and leaves tool kits short of tools for far too long. Currently, several replacement tools have been on order for over a year and have not been received at the detail site.

c. ITEM: Funding for long distance phone calls

(1) DISCUSSION: The Det currently uses long distance phone service on a cost reimbursable basis on an agreement between MCAS Iwakuni and the 3rd Brigade. This policy is stated in the ISSA between the station and the Det. The Det's long distance service was cut off during the deployment after non-payment of its bill for the past 4 years. The AOIC was able to convince the station to restore this service but the telephone office in Iwakuni wants payment and all bets are off as to how long it will have long distance service. The station is currently billing the Det for all long distance calls placed after 01NOV98.

(2) RECOMMENDATION: The THIRD Brigade, with the assistance of the Det should provide adequate funding in the future to take care of this issue. Although the Det makes maximum use of DSN and has a very small bill each month, the Station's Cost Reduction Initiative states that the base will be reimbursed for all cost reimbursable items in the ISSA's of its tenant commands.

8. **KEYWORD: DETAIL POHANG**

a. ITEM: Tool Support

(1) DISCUSSION: The Detail has a very limited project augment tool and equipment allowance. Several of our tools were borrowed from the PWC CTR, the maintenance shop, and the CFAY Self-Help shop.

(2) RECOMMENDATION: Purchase equipment and tools that are commonly used (e.g. wacky packer). Although PWC and Self-help have been very supportive of the Seabees, it would be much more efficient to be self-reliant for many of these items.

b. ITEM: Deploying to Pohang, Korea

(1) DISCUSSION: Locally procured material is difficult to procure due to language barrier. 98% of all construction materials are available in Korea, if you can speak Korean. The majority of receipt documents arrive in Korean.

(2) RECOMMENDATION: Deploying with Korean-speaking Seabee or Storekeeper.

c. ITEM: MLO Storage.

(1) DISCUSSION: Inadequate storage facilities exist at Marine Expeditionary Camp-Pohang for MLO.

(2) RECOMMENDATION: Procure and install Tension Fabric Structure or Pre-engineered Building.

9. **KEYWORD: DETAIL SASEBO**

a. ITEM: Female Head

(1) DISCUSSION: There is only one head facility in the Det spaces, which is shared by both men and women.

(2) RECOMMENDATION: A camp maintenance project should be implemented to convert the utility closet next to the head into another restroom facility.

b. ITEM: Computer Assets

(1) DISCUSSION: The Det does not have the computer assets to accommodate the amount of work done on the CBCM program. Project supervisors are forced to install the program on their personal computers so they can complete their work. Three 486 computers are needed to run the CBCM program as well as an additional printer for CBCM print outs.

(2) RECOMMENDATION: Three computers along with another printer would be very beneficial.

c. ITEM: Project Planning

(1) DISCUSSION: Project packages were not started until late in homeport, which caused the planning team to rush and not do a thorough estimation of the project. This created large amounts of rework on the project packages before the 45-day review.

(2) RECOMMENDATION: The project planning stage should start before FEX. It is very time consuming just gathering all the paper work to start a project package. If the package binder was put together before FEX, the crews would at least have a head start and could spend more time concentrating on the planning phase

d. ITEM: CBCM Computers

(1) DISCUSSION: Not enough CBCM computers are available.

(2) RECOMMENDATION: The det needs a minimum of two computers with the CBCM program.

e. ITEM: Mail

(1) DISCUSSION: Using the Battalion's mailing address takes 10 to 14 days for letters and parcels to arrive due to the fact that the mail was sent from San Francisco, to Okinawa, then on to Sasebo.

(2) RECOMMENDATION: Use the COMFLTACT Sasebo mailing address during the Okinawa deployments, it takes five to seven days for letters and parcels. Mail will be sent directly here from the San Francisco hub vice going to Okinawa then on to Sasebo.

f. ITEM: Rental CESE Equipment

(1) DISCUSSION: The Det site is not equipped with the necessary CESE to meet the needs of every project. Since it is not feasible for Brigade to provide such equipment, it is important to locate equipment outside the Det to substitute for this deficiency.

(2) RECOMMENDATION: During this deployment we were very successful in renting equipment to improve project efficiency. Since most Seabee equipment is too large to operate in small places, the Japanese mini excavators proved an invaluable asset. Therefore, it is very important to establish point of contacts to rent equipment as well as utilize the equipment available from Public Works.

g. ITEM: MLO

(1) DISCUSSION: Local procurement of technical materials such as electrical and mechanical items takes much longer than expected to receive on site. FISC contracting buyers and vendors are confused because of differences between American and Japanese terminology. The standard and American measurements and common abbreviations are also not fully understood by FISC. These factors contribute to long and unnecessary delays in material procurement.

(2) RECOMMENDATION: It was highly efficient to send members from the Det to visit a vendor's shop, find the material they need, and make a list in Japanese terminology of the materials which would compare to the BM. This list would then be given to MLO to draw up a requisition worded in both Japanese and American terminology. Material that would normally take a month or more to procure, now arrives in just a few days. This process also makes the buyer and vendor's job much easier, which results in a better working relationship with FISC contracting.

h. ITEM: CTR

(1) DISCUSSION: The lack of certain power tools conflicted with job site requirements. Public Works has an adequate assortment of tools but Det personnel have problems scheduling the usage of them. If Public Works wasn't using the tools they would lend them to the Det. However, the Det should not have to rely on Public Works to provide common tools such as concrete vibrators and other power tools.

(2) RECOMMENDATION: Large and expensive equipment such as concrete saws and compaction units should be borrowed from Public Works as needed. The Det should be supplied with grinders, concrete vibrators, and other frequently used tools. This would eliminate having to rely on Public Works to accomplish our mission. Tools that are checked out through Public Works should be routed through CTR, where a designated individual could maintain accountability and ensure that the tool is properly maintained.

10. **KEYWORD: DETAIL YOKOSUKA**

a. ITEM: Tool Support

(1) DISCUSSION: The Detail has a very limited project augment tool and equipment allowance. Several of our tools were borrowed from PWC CTR, maintenance shop and from CFAY Self-Help shop.

(2) RECOMMENDATION: Purchase equipment and tools that are commonly used (e.g. wacky packer). Although PWC and Self-help have been very supportive of the Seabees, it would be much more efficient to be self-reliant for many of these items.

b. ITEM: Project Materials

(1) DISCUSSION: It has been a common practice to purchase materials from CONUS and augment them with local products to reduce costs. However, metric and standard materials differ in sizes. This creates problems since adapters, when available, must also be procured to make it usable. Also, another disadvantage of using CONUS materials is the lead-time required for replacement parts. Despite having a PWC Shop Store in the area, many items were not available and created delays due to the incompatibility problems.

(2) RECOMMENDATION: Limit procurement of CONUS materials to structural items. Electrical and plumbing materials, including fixtures, should be procured locally.

c. ITEM: Concrete Placement

(1) DISCUSSION: Most Japanese concrete companies do not provide additional chutes for placing concrete.

(2) RECOMMENDATION: Purchase aluminum constructed concrete chutes for each detachment site in Japan to improve concrete placement training and reduce the dependency on more expensive pump trucks.

d. ITEM: ADP Equipment

(1) DISCUSSION: Currently, the new ADP equipment uses a Windows NT operating system. Windows NT is not compatible with several systems including the CBCM program, the Kodak digital cameras, and the HP Officejet printers.

(2) RECOMMENDATION: Provide Windows 95 software to the Det sites until new drivers and updated programs are available to allow for the complete utilization of the more secure Windows NT.

e. ITEM: GSA Purchases

(1) DISCUSSION: The PEB was originally planned to be purchase by others. However, it ended up being procured locally using Det project funding. A GSA contract was used to perform this purchase. Later on, the project funding suddenly became negative. This sudden drop in available funding was a result of a large unknown surcharge tacked on by GSA.

(2) RECOMMENDATION: When using GSA services, check to see if any surcharges will be added later for the materials you are purchasing.

11. **KEYWORD: CIVIC ACTION TEAM 04-26 POHNPEI**

a. ITEM: Homeport Training

(1) DISCUSSION: Unlike previous years, training for the Civic Action Team was left to the Battalion during the 1997-98 homeport. There were only three requirements specified by Detachment Civic Action Teams Guam for training, which included a HAZMAT Transport Class, Outboard Engine Repair Class, and Small Purchase Class. Other than this required training, there was minimal guidance for preparing the Team for the unique Civic Action Team Duty, where cross-rate skills and experience is a must. The Team had no quotas for any classes and was left trying to squeeze into SCBT courses and in-house training courses which "might" help prepare the Team (in addition to being required to complete all survivability skills training requirements and complete a major homeport project). While some of the training the Team received was helpful, a more defined and diverse training schedule would have better prepared the Team for the deployment.

(2) RECOMMENDATION: Third Brigade should either bring back the regimented cross-rate block training which all CAT Team members received (administered by the 31st NCR), or Detachment Civic Action Teams Guam should publish a slate of required, and recommended, training which will prepare the Team for the upcoming deployment.

b. ITEM: Team Selection

(1) DISCUSSION: As the Civic Action Team site on Pohnpei is a rotating site between all three services, and since the Guam Battalions are the only Battalions which deploy to the CAT site on Palau, NMCB FOUR rarely deploys with a Civic Action Team. While a Battalion which routinely deploys to the CAT Palau site every other deployment may have sufficient turnover as to the needs of a CAT Team staffing, NMCB FOUR had little experience in staffing such a Team. Assignments were made that did not match up to the unique needs of a CAT Team, including significant in-rate experience, leadership, and independence, as well as the ability to perform tasks outside their rate.

(2) RECOMMENDATION: In order to properly communicate the needs of Civic Action Team staffing, the Battalion should communicate early (towards the end of the previous deployment) with Detachment Civic Action Teams Guam to ensure proper guidance is given with regards to Team assignments.

c. ITEM: Community Project Funding

(1) DISCUSSION: CAT 04-26 Pohnpei broke new ground in community project funding by completing two projects where "contracts" were established with the State government customer and the Civic Action Team. After the Civic Action Team's estimates were provided, the customer would have projects approved and money reserved through the State's Department of Finance (DOF). When the project was executed, the CAT Team would charge items at local shops to the specific contract number, assigned by the DOF. The vendors would then receive payment from the Department of Finance direct, thereby removing the Civic Action Team from the payment loop. The major requirements of the Team was the accurate accounting of all receipts and that the budget was not exceeded without prior approval. This saved the Team from relying on customers directly purchasing materials, a process which often results in significant delays and errors.

(2) RECOMMENDATION: This process of establishing project "contracts" should continue.

d. ITEM: Relations with the Construction Management Division.

(1) DISCUSSION: In reference to the prior lessons learned, a major stipulation with executing projects under contract with the State Government is that they are subject to review and approval by the State's Construction Management. Prior to this time, when the customer directly funded projects, the only review and final approval was by the customers themselves. This made design, scope, and material, project

time-line changes very easy. The oversight by the Construction Management Division Office was a new experience and it was learned that they had many requirements similar to a ROICC Office on the Bases Seabees deploy to.

(2) RECOMMENDATION: The Construction Management Division Office needs to be well-informed on Civic Action Team projects. Keeping an open relationship with this Office will help deter problems in project execution and funding.

e. ITEM: Team Size.

(1) DISCUSSION: The project backlog on the island of Pohnpei and the small size (approx. 7 direct labor with apprentice augment) of the Team indicate the need for greater staffing. The experience of working in a remote environment is an excellent training opportunity for Seabees but would have to be weighed against the fact that these resources would not support U.S. shore installation Brigade tasking.

(2) RECOMMENDATION: CAT Team size could be increased to approximately 20 personnel if the labor resources are available.

12. **KEYWORD: DFT OPERATION ALASKAN ROAD**

a. ITEM: Primary and Secondary Rock Crushers

(1) DISCUSSION: The crushers are extremely old and require constant, intensive maintenance to keep them running. If rotational units are used to operate the crusher on a two week basis, no ownership will be established and continuous major breakdowns will likely result from a lack of preventative maintenance. Currently, the overall condition of the engines is above average. However, the main clutches on the PTO drives are worn and should be replaced soon.

(2) RECOMMENDATION: Replacement of at least one of the crushers should be pursued at the earliest opportunity.

b. ITEM: Parts Support

(1) DISCUSSION On several occasions, parts were identified as failing and in need of replacement. However, these parts were not actually ordered until the part failed. This caused unnecessary down time and excessive wear on the equipment. Additionally, common replacement spare parts were also in short supply.

(2) RECOMMENDATION: Overall parts support needs improved to reduce down time on equipment. An adequate supply of spare parts should be purchased ahead of the construction season.

c. ITEM: Rock Drills Mechanic Support

(1) DISCUSSION: The rock drills require constant maintenance due to the heavy use they receive. Again, spare parts are critical to this process.

(2) RECOMMENDATION: Assigning a trained mechanic full time to perform preventive maintenance and repairs would increase rock drill equipment availability

d. ITEM: Blasting program

(1) DISCUSSION: The combination of civilian, Navy and EOD standards and policies created confusion and reduced the overall safety of the blasting program.

(2) RECOMMENDATION: An in-depth Blasting SOP needs to be developed by JFECC based on the DOD requirements. This will improve both the safety and the training value of the blasting program. Strict adherence to this SOP needs to be enforced for both military and civilian personnel involved in the program.

e. ITEM: Radios

(1) DISCUSSION: Currently there are several different civilian and military radios in use on and around the project site. These radios are used by personnel both directly and indirectly associated with the project. Strict control of the radios around the explosives proved to be extremely hard to maintain.

(2) RECOMMENDATION: Overall safety for the blasting program would be greatly enhanced by discontinuing the use electric blasting caps.

f. ITEM: Safety Program

(1) DISCUSSION: JFECC needs to get more involved with the Safety Program. It is understood that this is a training evolution is in a hazardous environment which contributed to the type and number of accidents. However, rarely did we see corrective actions being made from the lessons learned to reduce future accidents.

(2) RECOMMENDATION: A dedicated Safety Officer needs to be hired. This program will not work if it left as a collateral duty of the Environmental Officer. Also, to eliminate any possible conflict of interest, the Safety Officer should report directly to Commander, JFECC in lieu of the Operations Officer.

13. **KEYWORD: DFT WATER WELL POHANG, KOREA**

a. ITEM: Hard Cone Drill Bits

(1) DISCUSSION: Drilling in the area of Pohang, Korea was difficult and time consuming due to the rock formations encountered during operations. Drilling was performed with 12 ¼" medium and 12 ¼" hard tri-cone bits. Hard cone bits were purchased through the project funds because the hard bits are not part of the standard water well collateral equipment.

(2) RECOMMENDATION: Add hard cone bits to the collateral equipment lists for all water well rigs.

b. ITEM: IWTD Hammer Training

(1) DISCUSSION: The water well driller's course does not include training with the IWTD down the hole hammer. Seabees need specific training and experience in this area of water well operations.

(2) RECOMMENDATION: Add instruction with the IWTD down the hole hammer to the water well driller's course.

14. **KEYWORD: DFT RUSSIA**

a. ITEM: Communication Authorization

(1) DISCUSSION: When the NCF has a DFT embarked aboard ship, a letter signed by the CO of the Battalion ordering the DFT OIC to maintain daily contact with the Mainbody will ease communication issues. This puts the ship on notice that all communications are of an official nature and are necessary for successful completion of the DFT mission.

(2) RECOMMENDATION: Provide a letter signed by the Battalion CO to all DFTs embarked on ship to allow daily communication with Mainbody.

b. ITEM: Computer Assets

(1) DISCUSSION: Computer assets are scarce aboard ship. Providing the DFT OIC with a printer, in addition to the provided laptop will improve the OIC's ability to communicate with the Mainbody and create normal correspondence. Due to the large amount of photos taken by the DFT, a 'Zip Drive' is absolutely necessary for storing photos.

(2) RECOMMENDATION: Provide a laptop computer, printer, and zip drive for shipboard DFT's.

c. ITEM: Alfa Rosters

(1) DISCUSSION: The OIC should take at least 10 Alpha rosters with him/her upon embarkation. Each element of the MEU as well as the ship's Operations Officer will want an Alpha roster. The following minimal information should be contained on the Alpha roster: Full name including middle initial, rank, SSN, unit, blood type, berthing compartment and lifeboat assignment. Berthing compartment and lifeboat assignment are categories that will filled in upon embarkation.

(2) RECOMMENDATION: Prepare at least copies of Seabee Alpha rosters before any shipboard deployment.

d. ITEM: Passing the Word

(1) DISCUSSION: The AOIC, if E6 or below, should berth with E5 and below members of the DFT. This will enable the OIC and the AOIC to maintain command and control of DFT personnel.

(2) RECOMMENDATION: Berth any Seabee E6 personnel with Seabee E5 and below to enforce chain of command and enhance communication. Hold quarters twice daily, once in the morning, once in the afternoon to pass the word.

e. ITEM: Training Materials

(1) DISCUSSION: There is sufficient down time while underway to conduct some solid training in the above areas. Personnel pursuing a SCWS pin should bring their study materials. Underway periods are perfect for getting ahead on studying.

(2) RECOMMENDATION: OIC and AOIC should bring sufficient training supplies to conduct SCWS, in rate and BCS training while underway.

15. **KEYWORD: DFT INDONESIA**

a. ITEM: Diplomatic Clearances

(1) DISCUSSION: DFT personnel travel was slowed by not having diplomatic clearances upon entering the country.

(2) RECOMMENDATION: Diplomatic clearances should be provided for all DFT personnel prior to their country entry.

b. ITEM: Material and Tool Logistics

(1) DISCUSSION: Tools were not on site prior to the Team's arrival, thereby delaying project progress.

(2) RECOMMENDATION: All material and tools should be on site prior to the arrival of DFT personnel. Personnel can therefore begin work once they step off the plane.

c. ITEM: Berthing and Messing

(1) DISCUSSION: Tents and cots brought in specifically for the DFT meant delays in embark evolutions.

(2) RECOMMENDATION: If at all possible, have the local Army (ABRI) provide tents and cots. This will allow the C130 to carry more supplies into country, and will also provide less of a transportation problem when you have to truck the tools and equipment two days.

d. ITEM: Funding

(1) DISCUSSION: Electronic transfers caused a delay in the availability of money for procurement.

(2) RECOMMENDATION: All money should be readily available upon arrival in country. Furthermore, a Storekeeper should be sent along with the DFT in order to better manage the money and receipts.

e. ITEM: Tasking

(1) DISCUSSION: Seabees expended time in trying to support power requirements for the Medical and Dental Teams. They could have been better supported if this would have been outlined in the Execution Order.

(2) RECOMMENDATION: A better-defined tasking should be outlined in the Execution Order.

f. ITEM: Contract Services.

(1) DISCUSSION: This service provided transportation, laundry services, and evening meals. This was a service to Seabees that we do not normally receive, and without it, we would have had to bring more support people, and support equipment, which would have limited the airlift in.

(2) RECOMMENDATION: Should a similar exercise be conducted in the future with similar capabilities, these services should continue.

g. ITEM: Communication.

(1) DISCUSSION: Communication available to the team could only be achieved after a three-hour road trip into town utilizing a phone center, or via U.S. Embassy using the ARBI radio system through repeaters.

(2) RECOMMENDATION: Future DFT sites should draw SATCOM gear.

16. **KEYWORD: DFT FOAL EAGLE**

a. ITEM: Command and Control

(1) DISCUSSION: The Warning Order instructed the DFT to support both the CSST and the local NMCB FOUR details. This left a small margin of flexibility to support discretionary preparation items for the exercise. The benefit to the details is not significant enough to make a real difference for them, however, CSST could have kept DFT personnel employed consistently with good work. DFT personnel were slowed by not having diplomatic clearances upon entering the country.

(2) RECOMMENDATION: The DFT should be OPCON to CSST for the duration of the exercise. If extra time is available, the DFT could go the NMCB DETs at the discretion of CSST.

b. ITEM: CBR Training

(1) DISCUSSION: CBR training was outstanding. Instructors were subject matter experts and training materials included very current information

(2) RECOMMENDATION: Contact EOD TEU TWO and request copies of training aids. This will greatly improve our ability to survive in a CBR environment.

c. ITEM: Administration and Logistics

(1) DISCUSSION: Operational commitments during the exercise required extensive travel from Chinhae to Pohang and Camp Carroll. This caused DFT personnel to miss meals and live out of pocket for approximately two weeks.

(2) RECOMMENDATION: Do not have DFT personnel living out of pocket. Inquire from CSST if advance perdiem or, in this case Partial Meal Rate (PMR), is authorized and/or recommended. If so, secure these funds prior to DFT departure from point of departure.

17. **KEYWORD: DFT K-16 EAF**

a. ITEM: Support Coordination

(1) DISCUSSION: This DFT was heavily dependent upon support from the local Army commands. Many support issues such as berthing, consumables sources, etc. were not firmed up prior to our arrival on site. Additionally, the military exercise season in Korea severely taxes billeting in the area. The major exercises, including Foal Eagle and UFL, leave little room for additional SEABEES in the area.

(2) RECOMMENDATION: Pay particular attention to logistics planning when operating in a Joint Service arena. Secure support requirements and agreements in writing whenever possible. Continue to utilize pre-AP trips, where possible to work logistics issues. Coordinate future Korea DFT's around major exercises to avoid support requirement conflicts with exercise personnel.

b. ITEM: NCF CESE in Korea

(1) DISCUSSION: There are many opportunities in the Korean Theater for NCF CESE operations but there is limited equipment available in Pohang. An increased equipment suite would broaden the NCF's ability to accept work in the area without having to pay expensive embark costs from Okinawa. Any increase in equipment, of course, should be equaled by an increase in mechanic support for Pohang.

(2) RECOMMENDATION: Stage a larger complement of equipment in Pohang to support tasking in Korea. Increase CM's assigned to Pohang to maintain a 6 to 1equipment to CM ratio.