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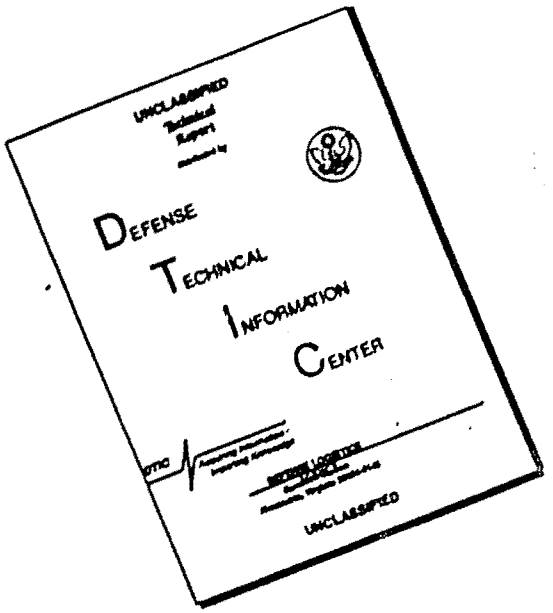


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DEPARTMENT OF THE ARMY
OFFICE OF THE ADJUTANT GENERAL
WASHINGTON, D.C. 20310

Revised
29 July 1969

IN REPLY REFER TO

AGAM-P (M) (24 Feb 69) FOR OT UT 684166 5 March 1969



SUBJECT: Operational Report - Lessons Learned, Headquarters, 34th Engineer Battalion (Construction), Period Ending 31 October 1968

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2. Information contained in this report is provided to insure appropriate benefits in the future from lessons learned during current operations and may be adapted for use in developing training material.

BY ORDER OF THE SECRETARY OF THE ARMY:

Kenneth G. Wickham

KENNETH G. WICKHAM
Major General, USA
The Adjutant General

1 Incl
as

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DEPARTMENT OF THE ARMY
HEADQUARTERS, 34TH ENGINEER BATTALION (CONSTRUCTION)
APO San Francisco 96289

EBD-CO 4 November 1968

SUBJECT: Operational Report of 34th Engineer Battalion (Construction) for Period Ending 31 October 1968, CSFOR-65.

THRU: Commanding Officer
79th Engineer Group
ATTN: EGE-3
APO 96491

Commanding General
20th Engineer Brigade
ATTN: AVBI-OS
APO 96491

Commanding General
United States Army, Vietnam
ATTN: AVHCG-DST
APO 96375

Commanding General
United States Army Pacific
ATTN: GPOP-OT
APO 96588

TO: Assistant Chief of Staff for Force Development
Department of the Army (ACSFOR DA)
Washington, D.C. 20310

Section I, Significant Organization Activities

A. General: During the period 1 August - 31 October, the 34th Engineer Battalion successfully accomplished various engineer construction projects in the III Corps Tactical Zone. The battalion was primarily engaged in various operational support missions to include construction of six (6) hardstands, an infiltration

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resistance fence, power plant revetments, perimeter defense bunkers, an aircraft resupply pad, and a MUST hospital site. The batalion was also engaged in construction and maintenance of lines of communication, construction support of two cantonment areas, construction of a power distribution system and a power plant, construction of flightline facilities for fixed and rotary wing aircraft, construction of billets for advisory teams, construction of a microwave relay station, and rehabilitation of a service club. During the reporting period, the greatest part of the battalion's vertical construction effort was accomplished at Phu Loi and Lai Khe. Horizontal construction was concentrated at Phu Loi and Phuoc Vinh.
Also this reporting period, this battalion has experienced a change in TOE's. The Battalion and companies will now operate under TO&E's 5-115G, 5-116G, 5-117G and 5-118G with MTO&E's 5-116G, 5-117G and 5-118G. These changes decreased the authorized enlisted personnel strength by 6. The significant changes in grade structure was an increase of 92, largely in the engineer construction companies, in the number of grade E5 personnel authorized and a corresponding decrease in the number of grade E4 personnel authorized. There was no change in authorized officer and warrant officer strength.
A civilianization program was also begun in the Battalion. In this program, 204 TO&E positions will be filled by 306 local nationals. The majority of these nationals will receive on the job training. This program was started on 15 Oct 68 and at the end of this period, 26 local nationals had been hired.

B. Command: Major changes include the departure of Major Wilfrid E. Gelinas, Batalion S-3, to USACAV; and the arrival of Major Robert E. Petty as Executive Officer. Major Thomas R. Bennett moved from Battalion Executive Officer to Battalion S-3. 1LT Dennis G. Hubbes replaced 1LT Patrick Garzalla, who returned to CONUS, as Battalion S-4. 1LT James A Sandeen replaced Cpt Richard A Roquemore, who is going to be an R & R liason officer, as Headquarters Company Commander. 1LT James R. Lape replaced 1LT Dean Stefanides, who returned to CONUS, as Company A Commander. 1LT Donald Becker replaced Cpt Richard A Roquemore, who went to Headquarters Company, as Company C Commander. Cpt Daniel D Danaher replaced 1LT James Lape as assistant S-3. Cpt Norman A Dobbs replaced Cpt Don L Renfro, who returned to CONUS, as Company B Commander.

C. Personnel, Administration, and Morale:

1. The average strength for the battalion for the quarter was 775, 89.3% of authorized strength. The average officer strength was 35, 92.2% of authorized. There is currently a rotational hump for officers in July 1969, and a rotational hump for enlisted men in April 1969. There are significant personnel shortages in the MOS of 05C, 31G, 36K, 51C, 51H, 51K, 52D, 52F, 62B, 63A, 71T, 76A, 76Q, 82A, and 94A.

2. Major efforts during the period were concentrated on in-processing and out-processing and updating all personnel records. 90 personnel completed their tour. 104 personnel were in processed.

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3. A vigorous safety program remained in effect during the period. Special emphasis was placed on weapons safety and defensive driving.

4. During this period, there were 98 Article 15's and 6 Special Court Martials.

5. There were no significant medical problems among the battalion personnel. There were no cases of Malaria. 37 cases of VD were noted among the battalion personnel.

6. There were 7 Congressional Inquiries this period, 2 of which were initiated by soldiers themselves.

7. A total of seventy-three awards were received by personnel in this battalion during the period. The following awards were received: six (6) Bronze Stars, nineteen Army Commendation Medals, three (3) Purple Hearts, and forty-five (45) 20th Engineer Brigade Certificates of Achievement.

8. The morale of the unit has remained high. Movies are being shown five nights a week. Battalion NCO and Officers' Lounges were opened this period and the Battalion EM club is still operating.

L. Intelligence and Counterintelligence:

1. Intelligence reports from the Base Defense Officer, Phu Loi, are processed by the Battalion S-2. In addition local base commanders provide intelligence data for elements of the battalion at base camps separate from the battalion headquarters. These reports, along with intelligence documents from the 79th Engineer Group, 20th Engineer Brigade, II FFORCEV, and higher headquarters, are utilized for planning local security requirements.

2. This headquarters continues to handle personnel security actions, e.g., validations of clearances up to and including TOP SECRET, granting of CONFIDENTIAL clearances, and approval of interim SECRET clearances.

3. The 34th Engineer Battalion assumed responsibility for a sector of the Phu Loi Base Camp Perimeter. Castle Sector includes 11 defense bunkers and two (2) guard towers. A TOC bunker was built containing the communication and operation sections for the sector and the Battalion. Also at Lai Khe, B Company furnishes guards for three (3) defense bunkers and two (2) guard towers.

4. This unit provides a 50-man Ready Reaction Force for employment as required by the base commander at Phu Loi and a 50-man Ready Reaction Force for employment in the defense sector.

M. Plans, Operations, and Training:

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1. The 34th Engineer Battalion remained heavily committed on construction projects in RVN. During the period, two (2) platoons (minus) from C Company and one (1) platoon (minus) from D Company were moved to Phuoc Vinh. At the end of the reporting period, approximately two-thirds of the battalion strength was located at Phu Loi, with the battalion headquarters. The remainder of the battalion was positioned as follows: one company at Lai Khe, one company (minus) and one platoon (minus) at Phuoc Vinh, the quarry section of A Company at Nui Ba Den, and 714th Engineer Detachment (PL) at Lai Khe. In addition various equipment and personnel were on TDY to other base camps within the 79th Engineer Group AOR.

2. The battalion continued to gain experience in both vertical and horizontal construction. During the reporting period, 13950 SF of building were completed, 687cy of concrete were placed, 86,917cy of laterite and earth fill were hauled, graded, and compacted, and 1562 LF of culverts were installed.

3. The battalion operated a prefabrication shop utilizing local civilian labor at Phu Loi. This shop produced twenty-two (22) 6-head showers, fifteen (15) 4-head showers, eighteen (18) 6-hole latrines, ten (10) 4-hole latrines, eight (8) 2-hole latrines, one (1) 40' x 60' building, one (1) 40' x 50' building, one (1) 40' x 100' building, and one (1) 20' x 40' building.

4. The reporting period continued through the monsoon season, 22% of the days available were lost due to the rainfall at Phu Loi, which significantly hampered horizontal construction. Vertical construction was not significantly effected. Phu Loi received 35.02 inches of rain during the reporting period causing twenty (20) days of horizontal construction and six (6) days vertical construction to be lost. Lai Khe received 38.92 inches of rainfall and lost thirty-six (36) days of horizontal construction and nine (9) days of vertical construction. Phuoc Vinh received 46.63 inches of rainfall and lost fourteen (14) days of horizontal construction and four (4) days of vertical construction.

5. A resume of major construction projects assigned to the battalion is as follows:

a. During the reporting period, LCC upgrading was begun on QL-13. The battalion is responsible for 26.6 km of roadway from Phu Cuong to Lai Khe. Work this period consisted of hauling, grading, and compacting 29,888cy of laterite to upgrade the sub-base of 10.4 km of roadway, and placing 50' of 24" culvert. The recent increase in MER and OSMN projects has necessitated diversion of effort from this project. During the latter portion of the period minimum effort has directed toward this task.

b. Work was begun on the MUST hospital MER at Lai Khe. Work this period consisted of hauling, grading and compacting 5475cy of laterite, cutting 5000LF of drainage ditches, and installing 2000 LF of guard rail.

c. Construction of MER Hardstands was of high priority at Phu Loi. The MER hardstand for the 82nd Airborne was begun with cutting of drainage ditches, and hauling, grading and compacting 564cy of laterite. The MER hardstand for

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the 3/197th Artillery was completed with 3050cy of laterite hauled, graded and compacted. The MER hardstand for the 758th S & S Co was completed with 2441cy of laterite hauled, graded and compacted. MER hardstand construction was also begun at Lai Khe. Extensive laterite haul, placement and compaction will be required for 10 hardstands. This reporting period 9725cy of laterite have been placed.

d. Work continued this period on the power distribution system at Lai Khe. At the end of the period, the following work had been accomplished: 502 of 700 poles required were set, 57050 LF of 95000 LF required right of way were cleared, 65200 LF of primary wire of 180,000 LF required and 117800 LF of secondary wire of 500,000 LF have been strung.

e. Concurrently with the power distribution system, work is 97% complete on the power plant at Lai Khe. The power supply facility consists of 4 generators, which are in place and operational, and is capable of producing 2000 kw of power at maximum output.

f. Work was begun this period on the Infiltration Resistance Fence at Lai Khe. This project entails installing 10,100 LF of cyclone fence and 900 LF of triple concertina fence. To date, 801 poles have been set, 8200 LF of fence have been installed, 390 ea double outriggers have been installed, and 11800 ft of barbed wire has been strung.

g. Construction was begun on perimeter defense positions at Phuoc Vinh for base camp defense. To date 35 of 54 bunkers have been completed to include prefab construction, placement on site, and back filling.

h. Construction was completed this period on a perimeter road at Phu Loi. This period 15235cy of laterite were hauled, graded and compacted. The road is 10.5 km in length and required 35950cy of laterite. The road is used extensively for perimeter defense at Phu Loi.

i. Airfield maintenance was performed during the period at Phu Loi and Phuoc Vinh. Monthly airfield inspections were conducted to determine the status and repair required of the airfields. Maintenance was performed on taxiways at Phu Loi by replacing 562 sections of M8A1 matting and application of 85 gal of non-skid compound to 6675 LF of taxiway. At Phuoc Vinh, an Ammo and POL off-load area was constructed with 1535cy of laterite.

k. In addition to the above listed projects, the following were accomplished during the reporting period: a CH47 resupply pad was completed at Phu Loi, three (3) Mohawk revetments were built at Phu Loi, work was accomplished on MACV advisor billets, laterite pits were operated at three base camp locations, laterite pits were operated along QL-13 to minimize haul distances, work was accomplished on flightline facilities at Phu Loi, and work was accomplished on a 4000 SF Service Club at Phu Loi.

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1. Complete listings of operational support missions, O&MA and MCA projects assigned to the battalion at the close of the reporting period are listed in inclosures 3 and 4 respectively.

6. Formal training consisted of orientation for new personnel arriving in - country. New personnel attended a replacement training school at Phu Loi and Di An. Also battalion orientation classes were held every other Sunday. In country orientation for new personnel of Company B was given at Lai Khe.

7. Command Information topics were conducted weekly by the Company Commanders or their representative.

8. Character Guidance was conducted on a monthly basis by the Company Commanders or their representatives for personnel at Phu Loi, Lai Khe, and Phuoc Vinh. Attendance for the battalion averaged 93% of the personnel present for duty.

9. Range firing was conducted monthly through the reporting period. Personnel were afforded the opportunity to fire their assigned weapons for familiarization. Also personnel were instructed on the safety principles of the M-16 Rifle, .45 caliber Pistols, M-79 Grenade Launchers, and M-60 Machine Guns.

10. Special classes were conducted on weapons safety, defensive driving, mine warfare, and convoy procedures by each company. Also classes for drivers, operators and motor pool personnel were conducted on vehicle maintenance.

F. Logistics:

1. Critical shortages of materials were: 12-2 Electrical Wire, Connector Receptacles, 30 amp and 125 amp breaker boxes, ½" nuts, 11/16" square washers -2½"w, and dimensional lumber of 2" and 4" size.

2. During this reporting period, this battalion experienced a change in TO&E's. The following TO&E's are in effect now: TO&E's 5-115G, 5-116G, 5-117G, and 5-118G with MTO&E's 5-116G, 5-117G and 5-118G. Due to these changes, the number of TO&E items this battalion is short has not been determined at the end of the period.

3. During this reporting period the battalion received the following TO&E items: two (2) 5-ton tractor, one (1) 5-ton wrecker, one (1) radiacmeter, IM 9A/UD, three (3) generator set, 3kw, two (2) tractors, 290m, wheeled, twenty-nine (29) 10-ton tractors, and one (1) scraper, towed.

4. Combat losses during this period were: one (1) mine detector set and one (1) semi-trailer, 25-ton.

5. Command emphasis has continued in the areas of supply accountability and

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reports of survey. During the period, nine reports of survey were initiated. It is anticipated that this number will decrease during the next reporting period. Battalion also became the appointing authority for reports of survey involving the battalion.

6. The battalion cumulative dead line rate at the end of this reporting period was 5.1% which has constituted a decrease of 0.2% since the last quarterly report. The decrease is due mainly to increased emphasis in the battalion on maintenance .

7. An inventory shows that PLL items on hand are at 62% fill, a drop of 8.2% from last quarter. This is due to the slow filling of 12 & 17 priorities for replenishing PLL stockage.

G. Force Development:

C Company (-) and a General Construction Plt (-) of D Company were relocated from Phu Loi to Phuoc Vinh to augment the construction effort at Phuoc Vinh. The Earthmoving Platoon of C Company remains at Phu Loi.

H. Command Management:

1. The projects and missions assigned to the battalion are managed by the Battalion Operations Officer. Daily operations meetings are held at battalion and company levels to discuss problems and project priorities, to coordinate survey requirements, and to coordinate equipment for efficient utilization. A fixed-wing aircraft is occasionally available for one-half day periods, for liaison and inspection visits.

2. Daily battalion staff meetings are held to discuss battalion policies and operations. Monthly command-staff meetings are held to assist in keeping all personnel informed of the current battalion status.

3. When a project directive is received, a battalion directive is assigned to the appropriate company. The S-3 section accomplishes the design and drafting to accompany the battalion directive. The company is then responsible for submitting a complete Bill of Materials (BOM), construction plan, construction schedule, drainage plans and safety plan to the S-3 section for approval. A project officer within the S-3 section checks for quality control and resolves problems that might arise. In addition, close coordination with base development boards is maintained for planning purposes.

I. Inspector General: No formal complaints were received during this period by the acting IG, the Battalion Executive Officer. Nine informal complaints were received.

J. Information: The 34th Engineer Battalion (Const) receives the following newspapers: The Army Reporter, The Castle Courier, and The Pioneer. The Pacific Stars and Stripes is distributed daily throughout the 34th Engineer Battalion.

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The battalion receives the following magazines: Army, Commander's Digest, The Army Digest, Aviation Digest, and Research and Development. Hometown news releases and unit news stories are submitted through the 34th Engineer Battalion on a weekly basis.

K. Civic Affairs:

1. During the reporting period the battalion continued the Civic Action Program. The Battalion Surgeon continued to support the Phu Cuong Hospital through the MEDCAP Program. Heavy project commitments of the units of the battalion have precluded extensive expenditure of effort for civic action construction.

2. At the end of the reporting period, the battalion employed a total of 414 local national civilians. A program has been set up to increase the number of local civilians employed for utilization in TO&E positions in the battalion.

3. Local Nationals are employed as shown below:

| | | O&MA | MCA | AIK | HOUSE MAID |
|---|---|---|---|---|---|
| "A" Co, | Hq Co, Phu Loi | 73 | 155 | 13 | 46 |
| "B" Co, | Lai Khe | 0 | 10 | 6 | 24 |
| "C" Co, | Phuoc Vinh | 14 | 12 | 6 | 15 |
| "C" Co, | Phu Loi | 0 | 0 | 0 | 9 |
| "L" Co, | Phu Loi | 0 | 3 | 0 | 28 |
| | TOTAL | 87 | 180 | 25 | 122 |

Section II. Lessons Learned: Commander's Observations, Evaluations, and Recommendations.

A. Personnel. None

B. Operations.

1. Bending of Re-Bar for Aircraft Revetments constructed of M8A1 matting.

(a) Observation: During the monsoon season a large number of internally braced revetments have shown signs of failure or have collapsed completely.

(b) Evaluation: Upon further investigation it has been noted that in some of the failure cases, the weight of the wet laterite used as fill material was sufficient to cause the rebar to break at the bent portion where it locks into the matting. From the appearance of the bent portion of the bar, it was obvious that heat had been applied to bend the bar.

(c) RECOMMENDATION: When bending the rebar it is imperative to use a "Cold" bend method. If a bend is heated the temper is drawn from the steel, causing a significant loss of tensile strength at the bend.

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2. Placing Ceramic Tile to fit a desired configuration.

(a) Observation: Ceramic tile is difficult to break into a desired configuration.

(b) Evaluation: Vietnamese ceramic tile is very difficult to break into any desired configuration including a straight line. Experimentation shows that the tile must be notched through the ceramic portion of the tile before a desired cut can be made. The tile is composed of a cement type base with the ceramic overlaid in the desired color and pattern. The ceramic portion is much stronger than the cemented part of the tile.

(c) Recommendation: To cut Vietnamese ceramic tile, use a sharp chisel to notch the line of the desired cut through the ceramic portion and then a sharp tap will give a clear desired break.

3. Attachment of cyclone fence to pipe.

(a) Observation: Cyclone fence is difficult to attach to smooth pipe.

(b) Evaluation: Cyclone fence is difficult to attach to a smooth pipe. Ordinarily a special post is used, however many times the special post is not available. Two inch pipe makes a very good substitute if the fence can be attached to it. Wire was tried but later on it was found to sag too much.

(c) Recommendation: It was found that cyclone fence could be tack welded to the post to provide strong support by using an electric arc welder normally on the contact maintenance truck.

4. Waterproofing of Aircraft Revetments.

(a) Observation: The present Monsoon Season has brought out the fact that more work is needed to adequately water proof aircraft revetments when they are constructed on compacted laterite pads.

(b) Evaluation: Although the top of the revetment is covered to shed water, the laterite used to fill the revetments becomes saturated due to capillary attraction. The cohesive force between laterite fill in the revetments and the laterite pads is greater than the surface tension of water thereby causing the water to be drawn into the revetments. This influx of water puts added strain on the revetment bracing and is often the cause of revetment failure.

(c) Recommendation: To insure that water is not attracted into aircraft revetments from below, it is necessary to line the bottom of revetments with a non-permeable surface. An adequate and expedient surfacing is 15 lb. roofing felt.

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5. Drainage of aircraft Revetments.

(a) Observation: When building revetments using M8A1 Matting, problems have been encountered with getting proper drainage within the revetments itself.

(b) Evaluation: When constructing a revetment, normally the interior section of the revetment is shaped to provide drainage through the open end of the revetment. During the construction of the revetment, especially during the monsoon season, the shape of the laterite interior is altered sufficiently to cause drainage problems.

(c) Recommendation: Prior to placing the 1st row of matting, construct "french" drains under the revetment wherever water build up might occur within the revetment. The french drains if placed properly will drain off any water that might accumulate within the revetment. This method is especially useful when a requirement for a revetment causes the open end to be facing against the natural drainage.

6. Drainage in Earthmoving Work.

(a) Observation: Drainage is the most important design factor of an earthmoving project.

(b) Evaluation: A project should not be started until proper drainage has been accomplished. In the rainy season this calls for prior planning. Since water runs down hill the ditch should start at the bottom to allow day to day drainage of the project in cases where several days are required for the ditch completion. However, equipment such as pans work much more effectively going down hill. Therefore the ditch should be worked in increments from the lowest end toward the highest so that rain one night will not result in a water filled trench that would be impossible to work.

(c) Recommendation: Work large pond ditches that require several days work in increments from low grade to high ground so that day to day drainage of the ditch is accomplished.

7. ESTIMATING NON-SKID COMPOUND

(a) Observation: Due to the inconsistency in the coverage of non-skid compound for use of M8A1 matting it is difficult to estimate the quantity required for a given area.

(b) Evaluation: During shipment and storage the seals on the barrels may be damaged allowing the cutting compound to leak out or evaporate. This reduces the coverage of a can of non-skid compound from 600 SF anywhere down to 0. It was found that approximately 14% of the cans used had this defect.

(c) Recommendation: In estimating the area that is to be covered by the non-skid compound a factor of 15% should be used to insure sufficient coverage by each barrel.

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8. Repair of cracks on the 25 ton lowbed trailer.

(a) Observation: It has been noted recently that cracks having been noted on the bend of the gooseneck of the trailer, lowbed 25-ton, M172A1.

(b) Evaluation: In an attempt to repair the hairline cracks along the bend in the M172A1, a weld was made along the crack. We have found however, that a straight weld will not hold the type of weight carried by the trailer.

(c) The hairline crack must first be ground out with a small notch on both sides of the metal and then welded so that the welds blend together. This method will unsure a strong, lasting bond.

9. Replacement Parts on Bucket Loaders.

(a) Observation: Problems have been encountered recently with expedient replacement of parts.

(b) Evaluation: Recent leakage problems with the hydraulic fittings on the steering post of a Bucket Loader left us short of replacement parts but through trial it was found that certain hydraulic couplings normally used on the Chinook Helicopter will mount as direct exchange fittings.

(c) Recommendation: That in the event that breakdowns of this nature should occur, a possible expedient source of parts is Chinook Aviation Units.

10. Placement of burial type tanks above ground.

(a) Observation: Recently it was necessary to place burial tanks, used as fuel storage tanks for a power plant, above ground.

(b) Evaluation: When it becomes necessary to locate burial tanks above ground a protective coating should be applied to the exterior to prolong the usefulness of the tanks.

(c) Recommendation: In the absence of an asphaltic paint, peneprime can be used. It adheres well to the surface of the tank, and is relatively easy to apply. Our observations have concluded that peneprime weathers very well and will require very little reapplication over a period from 6 months to a year.

11. Proper Preparation of Sub-base for Matting.

(a) Observation: On a recent project, M8A1 matting on a taxiway was found to have buckled and failed in many places.

(b) Evaluation: These failures are caused by improper grading and compaction of the sub-base and by not providing adequate drainage for the area before laying the matting.

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(c) Recommendation: Uniform compaction should be obtained of the sub-base material prior to placement of the matting. The area should be properly drained prior to compaction and a drainage plan should be provided to insure sub-base failure will not occur.

12. Monsoon Protection.

(a) Observation: Recently during a severe storm a partially constructed building had to be secured to preclude wind damage and flying objects.

(b) Evaluation: Cables or rope proved too cumbersome and awkward to effectively secure sheet metal roofing and other material likely to be blown away by the wind. Also the required tension to secure the cables would damage the roofing.

(c) Recommendation: Cargo nets used by aviation units were draped over the top of the roof. The light weight and large area covered made them ideal for this operation. The nets were anchored by steel pickets driven into the ground.

C. Training. None

D. Intelligence. None

E. Logistics. None

F. Organization. None

Edward P Stefanik
EDWARD P STEFANIK
LTC, CE
Commanding

4 Incls
1 - Organization Chart
~~2 - Overlay of 34th Engr Bn Area of Operation and Line of Communications Responsibility~~
~~3 - Operational Support Missions~~
~~4 - CAP and MCA Construction Projects~~
Incl 2 - 4 wd Hq DA

AGE-CO (4 Nov 68) 1st Ind
SUBJECT: Operational Report of 34th Engineer Battalion (Construction) for Period Ending 31 October 1968

DA, HEADQUARTERS, 79TH ENGINEER GROUP, APO 96491, 18 November 1968

TO: Commanding Officer, 20th Engineer Brigade, ATTN: AVBI-OS, APO 96491

1. The Operational Report of the 34th Engineer Battalion (Construction) has been reviewed and additional comments are as follows:

a. Reference Section II, paragraph B1: The failure of the rebar was caused by increased erosion to the rebar due to the "hot bend" surface being partially oxidized by heat and having no protective waterproofing to prevent further oxidation. It is mandatory to waterproof "hot bend" joints to prevent additional deterioration and eventual failure because of the exposed and unprotected joint. "Hot Bend" joints are much more suceptible to oxidation and subsequent erosion than cold bend joints. If the "hot bend" joint is desired, painting of the rebar with peneprime or other waterproofing material is required.

b. Reference Section II, paragraph B3: Due to the relative softness of the metal in cyclone fence, arc-welding is very difficult. A more acceptable solution is to use rebar and lace it through the fencing and weld either the rebar to the post or use straps between the rebar and the post.

c. Reference Section II, paragraph B11: The problem is further compounded when too much fill is added at one time. Ideally a lift of 6"-8" is the most desirable and workable with the compaction equipment available. The monsoon season creates numerous problems if a heavy lift is added that cannot be compacted and sealed within a short period of time. The sudden rain storms prevalent during the monsoon season will create a soft condition and result in failures which will require removal of the material.

d. Reference Section II, paragraph B12: Using filled sand bags to secure sheet metal roofing provides an effective solution to the prevention of storm damage.

2. This report is considered to be an adequate summary of the battalions operational experience during the report period.

Richard L. West

RICHARD L. WEST
Colonel, CE
Commanding

AVBI-CS (4 Nov 68) 2nd Ind
SUBJECT: Operational Report - Lessons Learned, RCS CSFOR-65(R1) for Quarterly Period Ending 31 October 1968

DA, HEAD QUARTERS, 20TH ENGINEER BRIGADE, APO 96491 10 December 1968

TO: Commanding General, United States Army Vietnam, ATTN: AVHEN-MO, APO 96375

1. Submitted in accordance with USARV Regulation 525-15, dated 13 April 1968.

2. Subject Report for the 34th Engineer Battalion (Construction) has been reviewed and is considered adequate.

FOR THE COMMANDER:

RICHARD E. TAYLOR
1LT, AGC
Assistant Adjutant

AVHGC-DST (4 Nov 68) 3d Ind
SUBJECT: Operational Report of 34th Engineer Battalion (Construction) for Period Ending 31 October 1968, CSFOR-65.

HEADQUARTERS, UNITED STATES ARMY, VIETNAM, APO San Francisco 96375 10 JAN 1969

TO: Commander in Chief, United States Army, Pacific, ATTN: GPOP-DT, APO 96558

This headquarters has reviewed the Operational Report-Lessons Learned for the quarterly period ending 31 October 1968 from Headquarters, 34th Engineer Battalion (Construction) and concurs with the report as modified by the 1st Indorsement.

FOR THE COMMANDER:

A.R. GUENTHER
CPT. AGC
ASST. ADJUTANT GENERAL

Cy furn:
HQ 20th Engr Bde
HQ 34th Engr Bn (Const)

GPOP-DT (4 Nov 68) 4th Ind
SUBJECT: Operational Report of HQ, 34th Engr Bn (Const) for Period Ending 31 October 1968, RCS CSFOR-65 (R1)

HQ, US Army, Pacific, APO San Francisco 96558 30 JAN 1969

TO: Assistant Chief of Staff for Force Development, Department of the Army, Washington, D. C. 20310

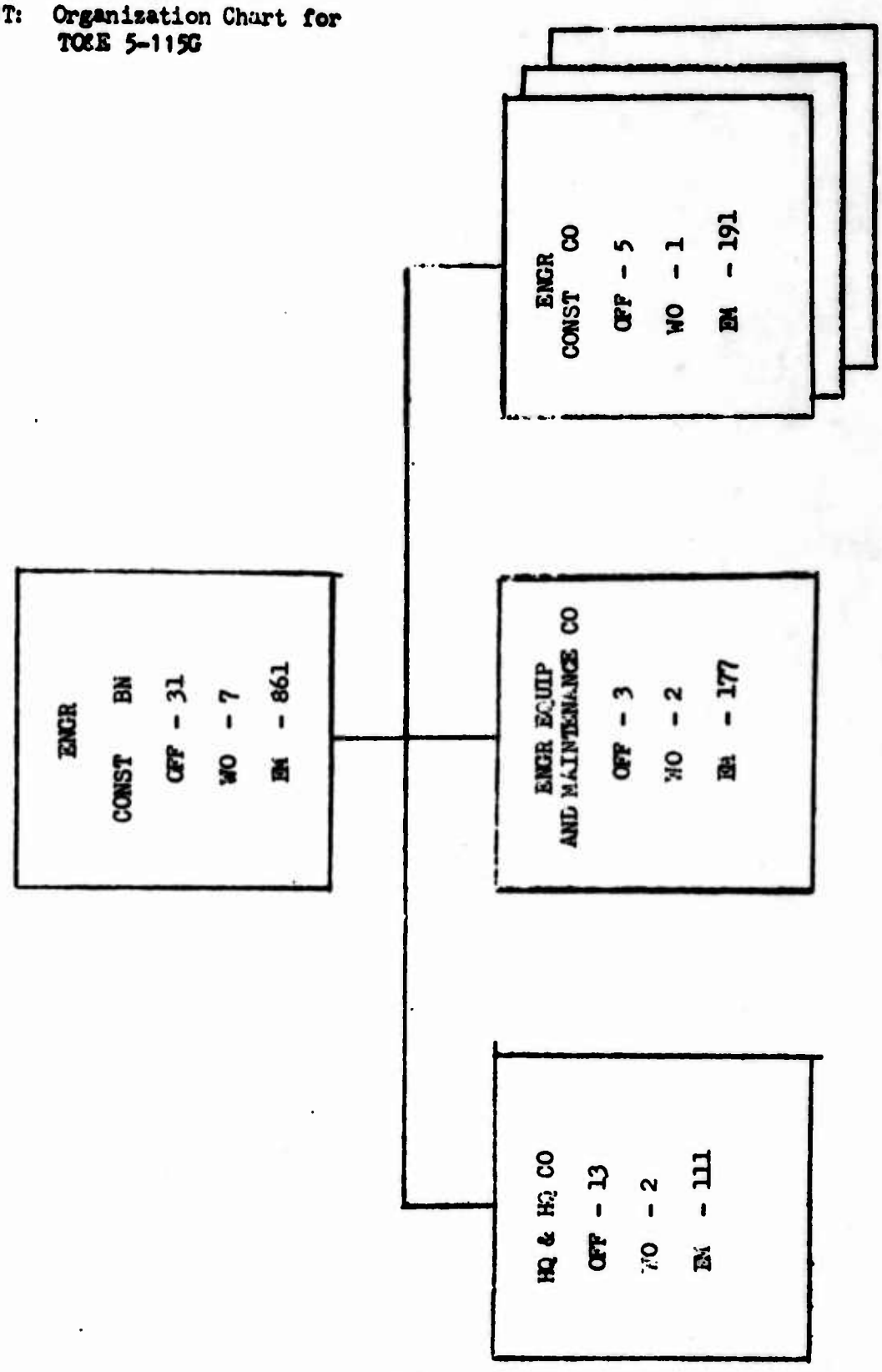
This headquarters has evaluated subject report and forwarding indorsements and concurs in the report as indorsed.

FOR THE COMMANDER IN CHIEF:

C. L. SHORTT
CPT, AGC
Asst AG

Inclosure 1 to Operational Report of 34th Engineer Battalion (Construction) for Period Ending 31 October 1968, RCS-CSFOR-65.

SUBJECT: Organization Chart for TO&E 5-115G



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5. AUTHOR(S) (First name, middle initial, last name)

CO, 34th Engineer Battalion

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