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AUTHORITY

AGO D/A ltr dtd 29 Apr 1980

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

IN REPLY REFER TO

AGAM-P (M) (23 Aug 68) FOR OT RD 682115 27 August 1968

SUBJECT: Operational Report - Lessons Learned, Headquarters, 577th Engineer Battalion, Period Ending 30 April 1968

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Kenneth G. Wickham

KENNETH G. WICKHAM
Major General, USA
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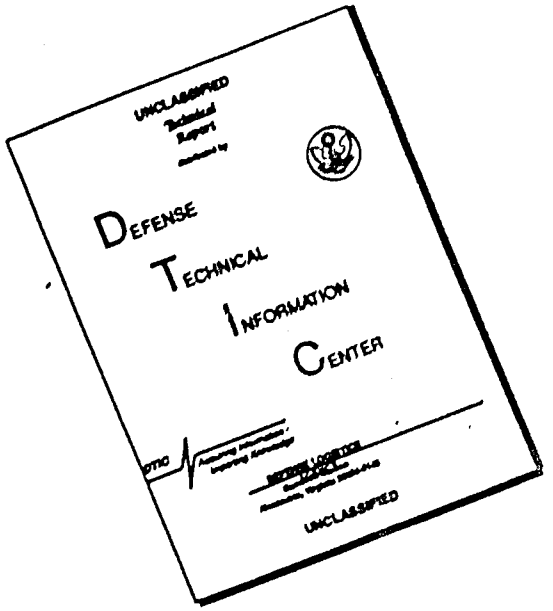

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5

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DEPARTMENT OF THE ARMY
HEADQUARTERS, 577TH ENGINEER BATTALION (CONSTRUCTION)
APO US FORCES 96316

EGACBD-3 30 April 1968

SUBJECT: Operational Report of 577th Engineer Battalion (Construction), for Period Ending 30 April 1968, RCS CSFOR-65 (R1)

THRU: Commanding Officer
35th Engineer Group
APO 96238

Commanding General
18th Engineer Brigade
ATTN: AVDC-C
APO 96377

Commanding General
United States Army, Vietnam
ATTN: AVHGC (DST)
APO 96375

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

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

FOR OTRD
682115

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1. Section 1, Operations: Significant Activities.

a. Attached as inclosure 1 is a chart of the organization of the 577th Engineer Battalion (Const) with its attached units.

b. This unit engaged in ninety days of operations during the period. Mandatory and special training were conducted after normal working hours or were integrated into the daily work

c. Activities: The country-wide Tet offensive began on 1 February. An attack employing small arms and rockets was made against the section of Free World Forces (FWF) Cantonment perimeter defended by this unit on 3 February 1968. The attack, which directly threatened the Phu Hiep Army Airfield, was repulsed without casualties. On 3 February, a 290M tractor and a ¼ ton truck both hit mines near the construction site for bridge QL-1-238, resulting in 3 personnel WIA, one ¼ ton truck w/radio destroyed and one 290M tractor damaged. On 4 February, the battalion supported the 173rd Airborne Brigade by installing one 45' fixed span to replace a Bailey Bridge blown by the Viet Cong. During the period 9-13 February the battalion supported the Vietnamese in their repair of the main irrigation canal (CQ 007352) of the Hieu Xuong District, which had been destroyed by artillery fire. Eight hundred cubic meters of selected armor stone (one to three foot diameter boulders) were hauled to the site and individually placed to form the toe of slope for the levee of the elevated canal. On 11 February, Company B, deployed from the FWF Cantonment area to a ROKA Cantonment on QL-1 (CQ 218327) to begin upgrading the road. On 16 February the 2nd Construction Platoon, D Company, supported the 23rd Division (ARVN) in opening QL-21, by removing nine wood and stone barriers and repairing bypasses. Company C, completed a 16,000 SY M8A1 parking apron for the 203rd Aviation Company, at the Phu Hiep Army Airfield on 17 February. Vietnamese villages covering 109,500 SY's which were destroyed during the Tet offensive were cleared and leveled by bulldozers on 18 and 19 February to aid in rebuilding. The 15 KM long interior road network in the FWF Cantonment was completed on 21 February. The 577th Engineer Battalion suffered 2 WIA when the perimeter came under attack from an estimated platoon size enemy element, on 20 February. The same night the perimeter was infiltrated, at an unknown point, by enemy sapper personnel carrying satchel charges. Three OV-1 Mohawk aircraft were damaged and eleven holes were blown in the runway. On 27 February, one platoon of the 553rd Engineer Company (FB) was detached from the 577th Engineer Battalion and attached to the 937th Engineer Group at Pleiku. Work began on 3 March to remove the remains of the old French concrete bridge, QL-1-239. which had been destroyed by the enemy in 1966. This bridge will be replaced by an eight hundred and forty foot long steel stringer bridge with a concrete deck. On 5 March the float bridge on the Ban Thach River, QL-1-239, was moved to a new location approximately 50 feet downstream from its previous location to make room for the construction of the new bridge. As a result of the attacks on the perimeter in late February it became necessary to revise the entire defensive plan for our section of the FWF Cantonment perimeter. A new line of defensive positions was begun on 6 March, 300 meters out.

from the existing perimeter, and in a militarily stronger position. Bunkers were employed in lieu of the old guard towers. On the 5th and 6th of March the cantonment again came under attack. The enemy utilized small arms, 34 rounds of 82mm mortar and B-40 rockets in the attack. Six 577th Engineer Battalion personnel were WIA defending the perimeter. Three UH-1 helicopters at the Phu Hiep Army Airfield were damaged by mortar fire. The day following the second attack, Military Intelligence reported that six enemy had been killed and nine enemy wounded as a result of this action. On 8 March priority construction was initated on four revetments and a 4,800 SY landing area for CH-54 Skycrane helicopters. A dog kennel, capable of accomodating 22 sentry dogs, was begun at the FWF Cantonment on 11 March. On 12 March, the 2nd Construction Platoon, D Company, supported the 9th Infantry Division (ROKA) in the opening of QL-21 by removing enemy road obstacles and performing minor road repair. On 16 March, a 75 Ton Eagle Primary rock crusher was put into operation at Port Line, Vung Ro Bay, giving the battalion a total of three rock crusher complexes producing rock for QL-1. The asphalt platoon, after completion of an extensive training program, began paving operations on QL-1 on 20 March. By the 3rd week in March, the total battalion effort being spent in the upgrading program had risen to over 60% of that available. The majority of the battalion's hauling equipment was engaged in hauling select fill from borrow sources to raise and widen the road and in hauling blast rock to the three rock crusher complexes to be crushed into base course rock. Squad size elements were engaged in the placement of culverts, keeping ahead of the main road work. At this time the majority of the earth work on other major projects was restricted to night shift operations. A shortage of dozers and front loaders impeded the progress of hauling elements. On 25 March work was begun on the ammunition storage facilities at the FWF Cantonment. This facility will consist of twenty-two sand cement pads with protective berms and 15,000 LF of roadway. To complete the project both roadway and pads will receive a 1½ inch lift of asphaltic concrete. The CH-54 Skycrane facilities were completed on 2 April. Commendation for rapid and quality construction was received from the 35th Engineer Group Commander. On 2 April work was begun on the 120 foot long steel stringer bridge No. QL-1-236. Bridge QL-1-238, another 120 foot steel stringer bridge, was completed by Company B, on 3 April. On 4 April it was dedicated to PFC Farrel R. Carew, 553rd Engr Co (FB), who was KIA in defense of bridge QL-1-239, on 30 August 1967. During the period 15-18 April, in anticipation of a mission to upgrade route LTL 7B, a 5 man reconnaissance team performed a detailed reconnaissance of the 67 miles, from Tuy Hoa (CQ 161462) to Phu Tuc (BQ 508598). Security was provided by the 173rd Airborne Brigade. On 19 April BOD was met on the 66 pad heliport for the Phu Hiep Army Airfield. The first mile of asphalt paving on QL-1 was completed on 20 April. Work was begun on the construction of a 13,000 BBL POL storage facility at the FWF Cantonment on 22 April. This facility will provide bulk storage of JP-4, mogas and diesel fuel as well as both wholesale and retail distribution services. The destruction and removal of the old bridge at QL-1-239, was completed and the pile driving phase for the new bridge begun on 22 April. This bridge will consist of fourteen, sixty foot spans and will be constructed by driving 18 inch circular steel piles from a causeway built across the river.

d. Summary: The majority of the work effort of the battalion through out the period was focused in the upgrading of Vietnamese National Highway QL-1. This project involves the upgrading to MACV Standard (24 foot wide asphalt concrete travelway) of over 50 miles of road extending from Ninh Hoa (BP 968813) to Chap Chai Mountain (CQ 144500). Over thirty new bridges varying in length from 20 feet to 840 feet must be designed and constructed. During the reporting period one major bridge QL-1-239 was completed and two others, QL-1-236 and QL-1-239 were initiated; over 162,000 CY of select fill and 35,000 CY of base course rock were hauled and placed on the road and 25 culverts were installed. In support of this project the rock crushers produced 52,368 CY of crushed rock.

2. Section 2, Lessons Learned: Commander's Observations, Evaluations, and Recommendations.

a. Personnel.

Personnel Shortages In Key MOS's.

(a) OBSERVATION: The capability of the construction battalion to perform its mission effectively is reduced by lack of qualified personnel in critical MOS's.

(b) EVALUATION: The following strength figures for critical MOS's are as of the end of the reporting period and are typical of shortages during the quarter:

MOS	JOB TITLE	AUTHORIZED STRENGTH	ASSIGNED STRENGTH
51C30	Structures Specialist	6	1
51H40	Construction Foreman	30	12
51K20	Plumber	37	13
51F20	Electrician	37	19
62A10	Engineer Equipment Assistant	60	35
62E30	Grader Operator	18	0
63A10	Mechanical Maintenance Apprentice	14	2
81B20	Construction Draftsman	6	3
82A10	Rod and Tape Man	4	0

In these MOS's the battalion had an average strength of 40%. This necessitated assigning untrained personnel from less critical positions to these jobs, which markedly reduced the effectiveness of the battalion to produce timely, good quality construction. The single MOS shortage that is most detrimental is 51H40 (grade E-6). With 60% shortage in this position, construction projects cannot be properly supervised. Particularly in view of the lack of engineering education and experience within the platoon leader group, an excessive amount of time is required by company commanders and battalion staff and commander in supervising to insure acceptable progress and quality construction.

(c) RECOMMENDATION: That DA alter training and assignment allocations to provide sufficient strength in these critical MOS's.

b. Operations.

(1) Phased Road Upgrading.

(a) OBSERVATION: During the upgrading operation on highway QL-1 it was imperative that the flow of traffic not be stopped. Bypasses could not be easily constructed because the surrounding terrain was predominately comprised of rice paddies and swamps. Therefore, a phased construction procedure was adapted to meet this requirement (see inclosure 2).

(b) EVALUATION: The following seven phase construction schedule proved to be effective:

(1) Phase I: One side of the existing narrow road is grubbed to allow scrapers to eject sand fill at the extreme edge of the final road shoulder. Sand fill is hauled and compacted bringing one side of the road to sand grade while one-way traffic is maintained on the opposite side.

(2) Phase II: An 8" x 12' slot is cut into the sand fill which acts to cradle the aggregate and prevent excessive side spillage.

(3) Phase III: A 10" uncompacted lift of 3" minus rock is placed in the slot with scrapers.

(4) Phase IV: One-way traffic is diverted to the new rock surface and grubbing, filling, and compacting operations are completed on the opposite side.

(5) Phase V: The base course slot is now formed on the new sand fill.

(6) Phase VI: Base course is placed on the remaining half of the roadway.

(7) Phase VII: The entire section is wetted, rolled and choked.

(c) RECOMMENDATION: In areas where major subgrading is to be done and the road cannot be closed or a bypass built, a phased system of construction must be used.

(2) Driving Sheet Pile Wall With a Template.

(a) OBSERVATION: When driving sheet pile it is difficult to control the alignment of the individual piles and to prevent them from binding against one another.

(b) EVALUATION: The construction of a template has been found to be a rapid, efficient and effective solution to this problem. A template was made by driving two 12" x 12" timbers and then fastening two 12" steel stringers to the outside of the pile (see inclosure 3). The piles are then placed between the stringers one at a time until the whole row is standing in place. It is necessary to plumb and tack weld the first two piles to the stringer in order to establish the exact alignment. Once all of the piles

are in place the free air hammer can be used to quickly drive the piles. After all but the first two piles have been driven the tack welds are broken and the remaining piles are driven. The template can then be recovered.

(c) RECOMMENDATION: The use of a template in driving sheet pile will will save time, effort and will insure correct alignment.

(3) Production of Soil Cement.

(a) OBSERVATION: The production of sand cement with a Barber Green Continuous Mix Asphalt Plant is feasible with limitations.

(b) EVALUATION: The Barber Green Continuous Mix Asphalt Plant was successfully used at night to produce sand cement. This machine is equipped with a water spray system in the pug mill. Sand is supplied through the regular hoppers, but the dryer is not heated. Cement is supplied through the fines feeder. The greatest difficulty was experienced in controlling the quantity of water entering the pug mill, as the entire plant runs on a quantity-time basis. Pressure fluctuations in the water supply cause the quantity of water to vary from time to time. This problem was solved by the use of a large surge tank for the supply of water and by requiring one man to constantly monitor the water meter to check for flow variations. The rate of production of this plant is also dictated by the ability of the loading crew to keep it supplied with cement. At the maximum rate over 250 tons of sand cement can be turned out per hour. The bulking effect from the sand which tends to overload the hot elevator and cause breakdowns prohibits operation during or immediately after a rainfall.

(c) RECOMMENDATION: When properly handled, the Barber Green 150 TPH Asphalt Plant, model KA 60, has the capability of batching large quantities of sand cement.

(4) Use of Coral Sumps.

(a) OBSERVATION: Coarse coral is a satisfactory substitute for crushed rock in the construction of mess hall and shower drain sumps.

(b) EVALUATION: The use of clean crushed rock for mess hall and shower sumps has been a standard construction practice. In certain locations crushed rock is extremely difficult to obtain. At Ninh Hoa, a deposit of coarse-grained coral was found and used in lieu of crushed rock in a mess hall sump. Its high porosity made it a very good filtering material and enabled the sump to accomodate a large volume of fluid.

(c) RECOMMENDATION: When available, coarse-grained coral can be used in mess hall and shower sumps as an effective substitute for crushed rock.

(5) Compacting Equipment.

(a) OBSERVATION: The vibratory plate compactor is an efficient tool for compacting sand in hard to get at places.

(b) EVALUATION: A commercial type vibratory plate compactor ("Whacker") was borrowed from the Air Force, Red Horse Squadron, for use in compacting fill around culverts. This piece of equipment required one man to operate and compacted the wet sand approximately four times as rapidly as and more effectively than a single air-compressor-driven backfill tamper. This is a simple, easy to maintain, low cost item of equipment for which there is no effective substitute.

(c) RECOMMENDATION: Due to the constant demand for use of our air-compressors for other projects and the large number of culverts which must be installed it is strongly recommended that this piece of equipment be made available to every engineer construction squad.

c. Training. None

d. Intelligence. None

e. Logistics.

(1) Shortage of Critical Items of TOE Construction Equipment.

(a) OBSERVATION: The battalion was hendered continuously in its accomplishment of the construction mission by shortages in critical items of TOE construction equipment.

(b) EVALUATION: Among the shortages of major TOE items of equipment in this battalion and attached units are the following:

ITEM	AUTHORIZED	ON HAND 30 APRIL
Dozer, Full Tracked	25	16
Scoopleader	14	9
20-Ton Crane	13	9
10-Ton Truck Tractor	31	6
25-Ton Semi-Trailer	43	24
Bituminous Distributor	4	1
Water Distributor	8	3

The impact of these critical shortages is a significant reduction in mission capability for the battalion. Following actions have been taken in attempts to alleviate this problem:

(1) Valid requisitions and follow-up actions are in effect at the Cam Ranh Bay Depot.

(2) Available equipment is operated two shifts per day where feasible.

(3) Equipment is borrowed on hand receipt from other units when available.

(4) Normal density reports are submitted to 35th Engineer Group.

(5) Frequent command inquiries have been made.

(C) RECOMMENDATION: That these critical items be made available.

(2) Shortage of Critical Items of Special Non-TOE Construction Equipment.

(a) OBSERVATION: This battalion is often hindered in mission capability due to the lack of specialized items of construction equipment not authorized by TOE.

(b) EVALUATION: Projects directed to this battalion often call for the use of specialized items of construction equipment not authorized by TOE. Many of these items are essential to the efficient execution of the construction mission and cannot be affectively substituted for by TOE equipment. The vibratory plate compactor, for example, is the only item which will efficiently compact earth in hard-to-get-at places such as around culverts and inside of forms. A traxcavator (track mounted front-end loader) would eliminate a major deadline problem as well as double quarry efficiency. Rubber-tired front loaders must operate in rock quarries although not intended for such use. They average one or more flat tires per day, which results in each piece of equipment being down for two hours while the tire is replaced. This often will hold up the loading of the 50 or more dump trucks and a rock-haul train, costing much lost construction time and effort. Other items of equipment which are needed in Vietnam, but are not available to this battalion are listed below. The justification for each of these items is readily evident in almost every construction battalion in Vietnam.

(1) D9 Dozers
(2) Transit-Mix Concrete Trucks
(3) Vibratory Rollers
(4) Track Drills with 600 CFM Air Compressors
(5) Angle-Dozer Blades
(6) Backhoes
(7) Shovel Fronts for 20-Ton Cranes
(8) 60-Ton Semi-Trailers

(c) RECOMMENDATION: That a system be established to provide, with parts and maintenance support, items of critically needed specialized construction equipment.

(3) Repair Parts Supply.

(a) OBSERVATION: The single most critical problem affecting the battalion continued to be the supply of repair parts for equipment and vehicles.

(b) EVALUATION: Experience in this unit shows that, of all normal parts requisitions, 7% are invalidated in support channels, and 38% are never filled. For Red Ball Express (RBE) and Red Ball Expanded (RBX) requisition, 8% are invalidated and 35% are never filled. Time required

to receive fills on normal requisitions varies from 30 to 60 days, and on RBE and RBX requisitions, 15 to 20 days. The battalion has had an average of between 4,000 and 7,000 separate line items due out for the past 11 months. In order to maintain effective equipment availability it is mandatory to resort to "scrounging" and controlled cannibalization after requisitions are submitted. Of all deadlined equipment, approximately 90% are awaiting parts. Since equipment availability is the crux of the construction battalion's mission capability, this critical parts problem is a severe limitation on mission accomplishment. Further complications are caused by the fact that Cam Ranh Bay Depot periodically cancels all outstanding parts requisitions, causing a new lead time for fills on these parts and resulting in equipment remaining deadline longer. In addition, unit PLL and ASL cannot be maintained at authorized levels (this battalion's ASL for engineer equipment parts presently shows 38% of line items filled completely and 21% partially on hand) due to non-availability of parts re-supply. This situation causes increased demand for RBE and RBX parts and also results in longer deadline time. The following actions have been taken to alleviate this problem:

(1) Valid requisitions and follow-up are in effect for parts required.

(2) Battalion parts ASL is continually up-dated for FSN changes.

(3) Controlled cannibalization is employed.

(4) An "expediter" staff to locate and draw repair parts is maintained at Cam Ranh Bay Depot.

(c) RECOMMENDATION: That necessary measures be taken to improve the responsiveness of the repair parts supply system.

(4) Hydraulic Leaks, Hough H-90-CM Payloader.

(a) OBSERVATION: Hydraulic leaks at the swivel joint on the clam cylinder on the Hough H-90-CM Payloader were a constant problem.

(b) EVALUATION: These leaks were found to be caused by lack of flexibility in the metal hydraulic line. Replacing this line and swivel joint with a flexible hose eliminated the problem.

(c) RECOMMENDATION: That the swivel joint and metal hydraulic line on the clam cylinder of this equipment be replaced by flexible hose.

(5) Repair and Modification of a 1944, Five-to-Eight-Ton Roller.

(a) OBSERVATION: Modification of out-of-date equipment using available parts and components can provide badly needed items of equipment.

(b) EVALUATION: A 1944, model five-to-eight-ton roller was found to have a faulty engine. The roller was badly needed at the time and a replacement engine was not available. It was decided to attempt to replace the original engine with an engine from a three-quarter ton truck. The conversion was successfully made after changing the electrical system from a 6 volt to 24 volt system, enlarging the engine compartment and modifying the motor mounts and flywheel. This installation proved fully operable.

(c) RECOMMENDATION: A three-quarter ton truck engine can be adapted to power this type roller with minor modifications.

(6) Water Temperature Gauges for Clark 290M Tractor.

(a) OBSERVATION: The water temperature gauge tube (FSN 6685-925-1149) for a Clark 290M tractor is very easily broken by vibrations during normal operation, and because of its location it is also vulnerable to accidental breaking during routine maintenance on the engine. Due to non-availability of these gauges a standard electrical transmitter unit (FSN 6685-335-9508) was installed as a temporary substitute to avoid excessive down time.

(b) EVALUATION: The substitute items measures the water temperature and it has proven to be more durable and more readily available than the specified items. EIR was submitted.

(c) RECOMMENDATION: That a standard ordnance electrical type temperature gauge system is an acceptable substitute for the pressure type found on the Clark 290M tractor when the standard part is not available.

(7) Use of Substitute Parts on "Quickway" 20-Ton Crane.

(a) OBSERVATION: On at least three occasions standard replacement parts were not available when a "Quickway" 20-ton mounted crane (model No. M200) belonging to this unit became deadlined because of a defective clutch hydraulic cylinder. It was found that a brake master cylinder (FSN 2530-737-3718) from a 3/4-ton truck is an acceptable substitute for either the primary or secondary clutch hydraulic cylinder on the crane.

(b) EVALUATION: Satisfactory service has resulted when the 3/4-ton truck brake master cylinder has been substituted for both the primary and secondary clutch system.

(c) RECOMMENDATION: That a master brake cylinder can be substituted for the clutch hydraulic cylinder on a "Quickway" 20-ton truck mounted crane as a temporary substitute until the correct part can be obtained.

(8) Hot Oil Heaters.

(a) OBSERVATION: The hot oil heaters manufactured by Hopkin Volcanic Specialties Company, model 200S, have never operated automatically or manually since arriving in this unit in November 1967.

(b) EVALUATION: The main problem areas are the program controller, water and dust entering the electrical system, inadequate wiring diagrams and trouble shooting instructions in technical manuals, and the fact that maintenance and operator personnel have received no qualifing training on this item. It was learned that another unit operating the same hot oil heater had resorted to jamming the program controller relays to manually operate their heater. Technical assistance from two civilian contract consultants has produced no help on the repair of the electrical system. Direct and general support maintenance units in this area do not have trained maintenance personnel nor the capability to test the electrical system. A letter in March 1967 to Headquarters, 35th Engineer Group requested a factory representative be sent for repair of the heater and to conduct classes on maintenance, repair and trouble shooting. When in operation, the program controller receives constant vibration from the 15 KW generator mounted on the rear of the trailer, causing malfunction of relays. During operation, the heaters shut off frequently because the low oil mercury switch, which is located in the surge tank is actuated. This was caused by the hot oil returning to the surge tank and superheating the air in the surge tank, which in turn caused oil to be forced out of the surge tank, causing the low oil switch to operate. An EIR was forwarded explaining the above problems and as a result, Modification Work Order 5-3895-264-30/1 is now under development.

(c) RECOMMENDATION: Remove the 15 KW generator from the trailer and operate it on the ground, which will stop the relays of the program controller from fluctuating.

(1) A CONUS maintenance course on hot oil heaters should be included for all 62B mechanics.

(2) To eliminate the surge tank problem, this unit installed a 24" section of 3/8" copper tubing (FSN 4710-277-5527), two 3/8" x 1/4" male half unions (FSN 4730-278-8450) and two 3/8" female unions (FSN 4730-333-3560) between surge tank and reservoir tank at the highest point. This allows air to pass freely between surge tank and reservoir tank. This repair requires about one hour of a machinist's time.

(3) Manuals should state that generator should be placed on the ground before continuous operation of the hot oil heater and should be expanded to include more detailed diagrams and instructions.

f. Organization. None

g. Other.

(1) Civilian Rock Haul Contract.

(a) OBSERVATION: US man and equipment hours can be saved for more critical or skilled military construction tasks if a civilian contractor can be obtained to handle routine continuous type hauling.

(b) EVALUATION: Vietnamese civilian contractor hauling is valuable for continuous type hauling between two static points such as between quarry and crusher sites. However, when needed as a substitute for military trucks they have the following problems which effect their capability

to haul and which may interfere with the operation of military units:

(1) Language Barrier: Few truck drivers understand English. If they are given simple directions on the project site it often will lead to confusion and sometimes to misunderstanding and personal conflict.

(2) Maintenance: Contractor trucks are variable in type and condition. Few have four wheel drive, some are almost 30 years old, others are modern new trucks. Parts support is extremely difficult for a mixed organization such as this. As a result there are many breakdowns on the job which affect production and sometimes interfere with other work. In addition one can seldom count on a fixed number of trucks being available at any given time.

(3) Contract Limitation: In order to protect the government, limitations must be written into the contract which affect the flexibility of both the user and the contractor to perform the necessary work.

(c) RECOMMENDATION: That civilian contract haul be used when continuous hauls of large quantities of material are required and US hauling carability is not available.

JOHN R. MC DONALD
LTC, CE
Commanding

3 Incl
1. Organization Chart, 577th EBC
2. Phase Construction Diagram
3. Sheet Pile Template Diagram

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EGA-3 (15 May 1968) 1st Ind Maj Pierce/tb/2003
SUBJECT: Operational Report - Lessons Learned (RCS-CSFOR-65) (R-1) for Quarterly Period ending 30 April 1968.

DA, Headquarters, 35th Engineer Group (Const), APO 96238, 23 May 1968

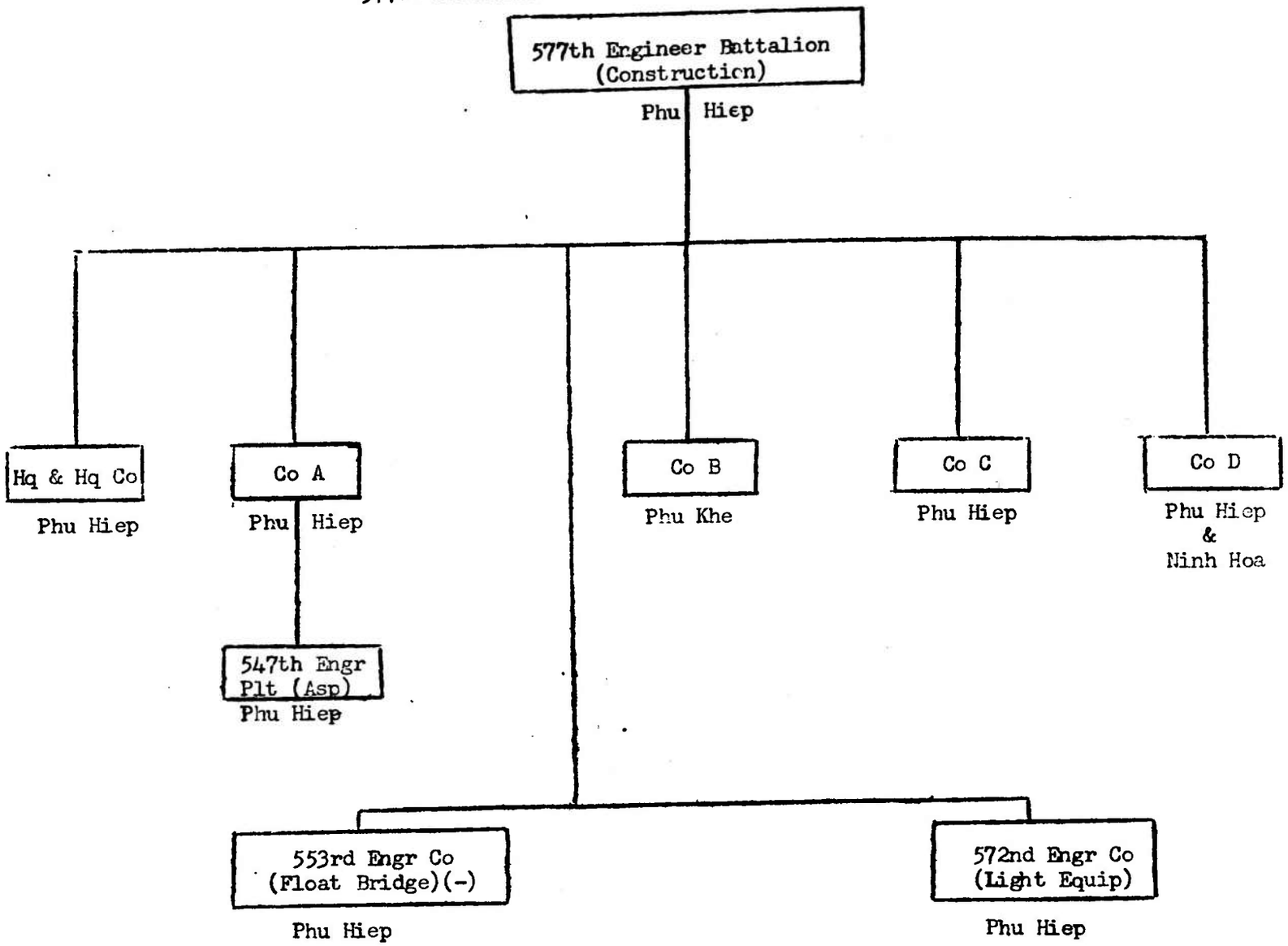
TO: Commanding General, 18th Engineer Brigade, Attn: AVBC-C, APO 96377

1. The Operational Report - Lessons Learned for the 577th Engineer Battalion (Const) has been reviewed by this headquarters and is considered an excellent summary of the Battalion's operations during the reporting period ending 30 April 1968.

2. The remarks of the Battalion Commander are concurred in, with an additional comment reference Section 2, Part e., Item (1). Although not all items listed have been placed on the Periodic Logistics Report (listing all critical shortage of equipment and the corresponding requisition number), the necessary action has been taken to correct this matter.

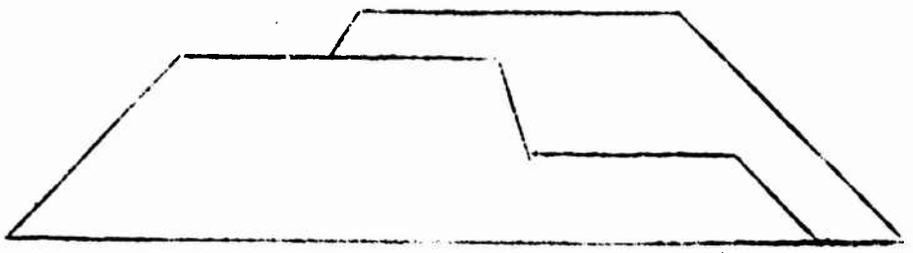
JOHN A. HUGHES
Colonel, CE
Commanding

ORGANIZATIONAL CHART
577TH ENGINEER BATTALION (CONST) AND ATTACHED UNITS

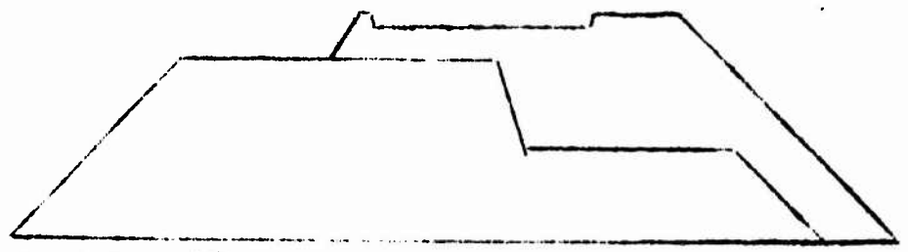


PHASED ROAD CONSTRUCTION

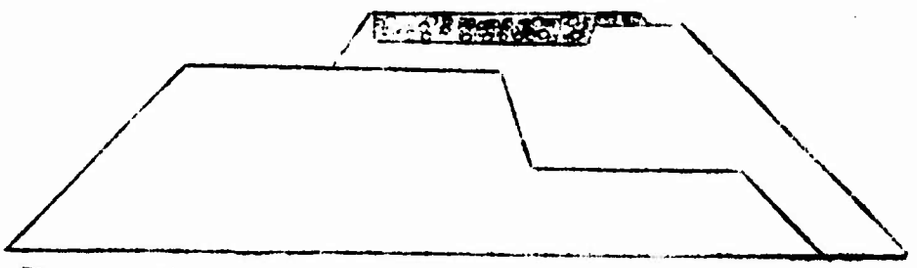
EXISTING PROFILE



PHASE I - GRUB AND FILL W/ SAND



PHASE II - CUT KEYWAY W/ GRADER



PHASE III - LAY BASECOURSE

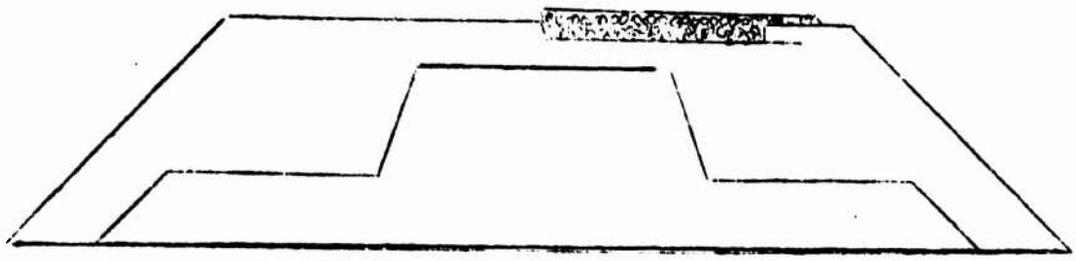
LEGEND

ROCK 3"

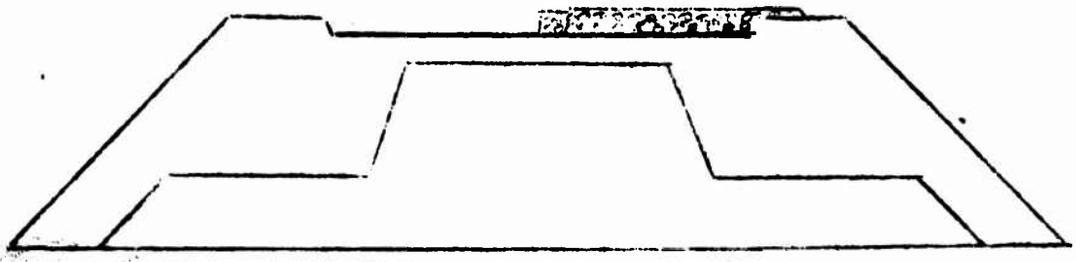
SAND FILL

NO SCALE

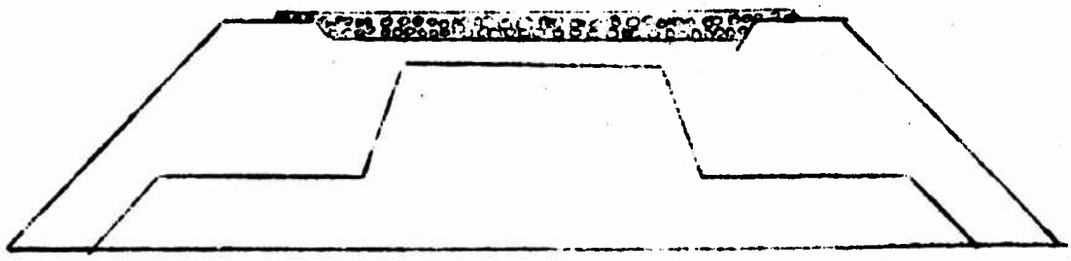
IDC I II



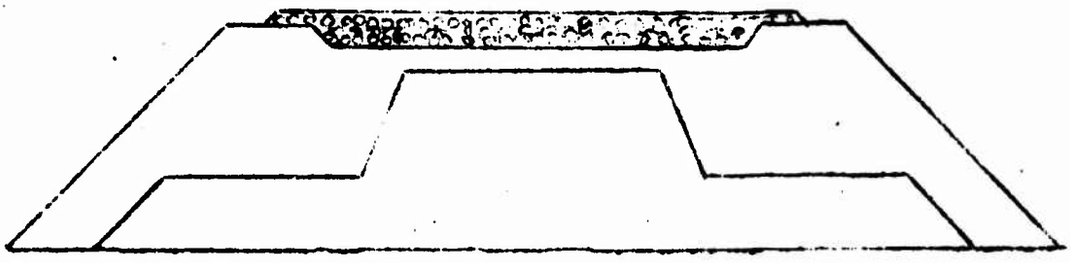
PHASE IV - REROUTE TRAFFIC, GRUB AND FILL LEFT



PHASE V - CUT KEYWAY



PHASE VI - LAY BASECOURSE



PHASE VII - WET, ROLL, ADD CHOKER

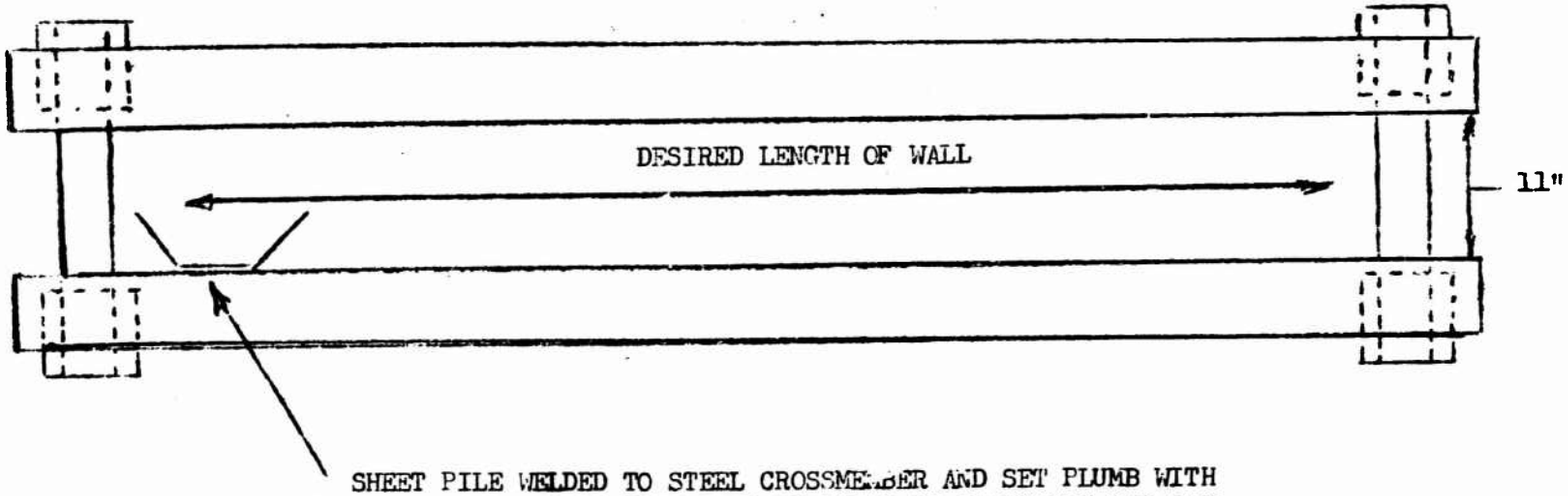
LEGEND

ROCK 3"-

SAND FILL

NO SCALE

SHEET PILE TEMPLATE



SHEET PILE WELDED TO STEEL CROSSMEMBER AND SET PLUMB WITH A FOUR FOOT LEVEL. THIS PILE DOES NOT HAVE TO BE DRIVEN BUT CAN BE STABILIZED AT THE BOTTOM BY DIGGING A HOLE AND COMPACTING AROUND THE PLUMBED PILE.

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SUBJECT TITLE _____

FOR OT RD # _____

PAGE # _____

ITEM 3

SUBJECT TITLE _____

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PAGE # _____

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