

July 30, 1973

To : Dr. Robert M. Martin, Chief of Party
University of Hawaii Contract Team

From : *John W. Rantala*
John W. Rantala, Procurement & Logistics Officer
University of Hawaii Contract Team

Subject: Monthly Report for July, 1973

Activities/Accomplishments:

The arrival of Dr. Robert M. Martin, the new Chief of Party, led to orientation visits to the five Fa Ngum School sites. The two schools still under construction were examined and discussed in some detail. An intensive effort is being made by OICC, PWD, EDU and the UH to profit from past experience. Many improvements have been made in plans and all new decisions are reviewed very carefully, for we are very much aware that a poor decision today will be tomorrow's problem.

I. Fa Ngum Pakse

A. Irrigation Water

The availability of an enormous amount of water from the Mekong River, which borders the school property, did not provide an easy solution for the school's irrigation water. The 100 ft. variation from high to low water level, the swift current, the difficulty of installing a pump, delivering power to it and providing adequate security presented installation costs, operation and maintenance problems that could not be handled within the funds available.

A decision was made to request raw water from the French-built filtration plant of Nam Pa Pa Lao. The requests of Education/USAID and the negotiations of PWD with Nam Pa Pa were rewarded with an affirmative answer, providing the French Engineers agreed that the proposal was feasible. Figure 1 shows Mr. Fittro (center picture in Safari suit) negotiating directly with French Engineers at the filtration plant.

The answer was, "Yes, it is possible and practical". It was decided to use the water which is pumped from the Mekong through pumps installed in the tower shown in figure 2. This water is transported by large pipes under the catwalk shown in figure 3 to the filtration plant shown in figure 4.

The raw water is pumped by the large, deep well pumps installed inside at the top level of the tower, shown in figure 5. The water is pumped into the settling tanks and treated with alum to speed sedimentation. See figure 6. After settling, the water is filtered through sand and chemically treated for purification.

Raw water for Fa Ngum irrigation will be taken from a 14" pipe from approximately the point marked (x) in figure 7. This tap of a 4" pipe into a 14 inch pipe requires a 14" x 14" tee, 4" reverse flow valve and 4" gate valve. These are in process of procurement by the OIX contractor.

The 4" pipe starting at approximately point (x) in figure 8 will take water across (under) the road to approximately point (x) in figures 9 and 10. The 4" line is to deliver water to a 15,000 gallon ground tank that will be protruding approximately 2 feet out of the ground. The location of this tank will provide for a sedimentation drain to the river bank at approximately point (x) in figure 11.

The recent construction of the RIG-built Principals's cottage shown in figure 12 presents a minor problem. The cottage is in close proximity to the ground tank. Consideration should be given to landscaping & ground contouring so as to minimize the unsightliness of the tank.

Further details of this irrigation system are reported in my June 1973 monthly report. There is little doubt that the system will work as designed, however its expedient construction is not such a matter of certainty. We have as yet had no confirmation on the availability, ETA and target date for installation of the necessary 14" cast iron pipe fittings. Construction of other portions of the system must proceed on faith.

Other Donors

It is noteworthy that the availability of raw water from the Nam Pa Pa Lao filtration plant is, in effect, a very substantial contribution by French engineering and commodity assistance to the Fa Ngum School, Pakse.

B. Landscaping I. River Fronts

The landscaping of the river front slope to provide a scenic path, shaded benches and river/mountain views, is a task of substantial dimensions in terms of money and time. The present terrain shown in figures 13 & 14, has been largely created by loose, uncompacted fill. It appears possible that the slope might be terraced into two and three levels, appropriately planted and connected by pebble covered paths. It is unlikely that these path, benches and viewpoints would be used by students passing between classes, but rather by students relaxing, eating lunch and simply strolling to enjoy the view. It therefore seems necessary that a rather straight sidewalk should be laid on the crest of the slope from the science building to the auditorium and on to the Home Economics/ Agriculture building.

It seems possible that the landscaping (after terracing) might be handled as a summer student work program. It would be advisable, however, to get professional assistance in planning the project. The development of the Activity Plan might well be an instructional project in agriculture. Student participation in the planning and actual doing of the campus beautification project would have solid instructional value.

2. Soccer Field

The slight error in elevations established for PWD grading has resulted in a rather high and steep slope shown in figure 15. This slope of approximately 35° and 1½ meters height will require ~~sodding~~ or quick-sprouting ground cover preparatory to later grass seeding. Heavy rains are already eroding lesser slopes of the Fa Ngum campus area.

C. Construction

The contractor is moving very rapidly on the construction of the Home Economics/Agriculture Building shown in figure 16. The large septic tank over which the toilet bldg. is to be constructed is shown in the foreground of figure 17. Indications are that these two buildings will be ready for the opening of school in October 1973.

In view of the very porous condition of the soil and its obvious ability to percolate water very readily, we wonder about the need for two very large leaching fields that have been excavated preparatory to filling with sand and other porous fill. The size of these leach fields are shown in figure 18. Are they really necessary? Wouldn't smaller leach pits with effluent drains to the river be adequate?

The two story groupe scolaire type buildings are already at the stage of pouring the second story columns as shown in figures 19 and 20. The shop building shown in figure 21 will soon be at the roofing stage. A shortage of 10 ft. aluminum roofing sheets necessitates the use of 12 ft. sheets with a slight loss in materials for a large gain in time.

The one story science bldg. and agricultural implements bldg. have reached the stage of pouring the columns as shown in figures 22 and 23.

The agricultural land part of which is shown in figure 24 has been levelled and could already be prepared for some type of grass or other covering growth. This would help halt erosion and provide mulch for discing into the soil at a later date.

II. Fa Ngum Luang Prabang

A. Construction and Maintenance

The school buildings shown in the panoramic picture of figure 25 are nearing the final stage of completion. The auditorium bldg. shown in figure 26 needs only paint and completion of the electrical work for the stage.

The science bldg. shown in figure 27 has been the source of plumbing and window hardware problems. The leaky plumbing has been repaired and the faulty window hardware is in process of replacement by students and instructors working in the summer School Improvement Project. Students and instructors of this project are shown making a bicycle parking stand and key tags in figures 28, 29 & 30.

6. Horticultural & Landscaping

Flowers. With our assistance we already implemented a rather extensive program of various beautiful flowers. Hundreds of plants were thriving in the main greenhouse shown in Figure 31. Others had already been transplanted. Field crops of corn and highland rice, shown in Figure 32 & 33, were also thriving. In one field of papaya plants were already 2 feet high and the beginning of an orchard was showing promising signs of development.

In the fields some very good crops of rice had been raised. The soil is fertile, and with adequate water and good weeding, with the benefit of the year around attention and hard work of the staff, it is possible to produce a very good crop of rice at all times of the year. The staff are very interested in the soil and the soil administration is being studied by the staff. The staff are also interested in the soil and the soil administration is being studied by the staff. The staff are also interested in the soil and the soil administration is being studied by the staff.

7. The Greenhouse

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